



2023 PROJECT FUNDING REQUEST FORM

Number: **23001**

Project Cost: **\$719,600**

Project Name: **Angus Glen C.C. Pool Repair - Construction**

Commission: Community Services

Repair/Replace

Department: Recreation Services

Useful Life: 50 Pre Approval:

Project Mgr: Kerry Wakefield / Colby Brygidyr

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to repair the main pool tank at Angus Glen C.C. During the COVID-19 pandemic, the pool was closed and drained and extensive time without water caused the concrete walls, waterproof membrane, and grout to dry and shrink more than it typically would during a normal shutdown for maintenance. The drier conditions of the materials followed by a quick fill with cold water as per industry standard resulted in cracking of the concrete shell. This resulted in water leaking through the concrete tank in a number of areas around the tank, predominantly in the deep end where the water filled first. Phase 1 is underway, where a consultant (Aquatic Design & Engineering) has been retained to investigate the extent of the issue. This project is to request funding for the second phase of the project.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	600,000	0
Internal Charges:	48,000	0
External Consulting:	0	0
Contingency %: 10	60,000	0
Sub Total:	708,000	0
HST Impact:	11,616	0
Total Project Cost:	719,600	0

NOTES

The main tank pool is original and was constructed in 2006. The purpose of the concrete tank is to hold and maintain water in a safe manner within the pool environment. Due to the leaks experienced while reopening the Angus Glen pool, a condition assessment of the main pool tank was completed. Further investigation and preliminary findings indicate that extensive repair is warranted.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL		
Operating Funded Life Cycle	719,600	719,600	0	0	0	719,600	0
TOTAL FUNDING	719,600				719,600	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number: **23002**

Project Name: **Centennial C.C. Pool Repair - Construction**

Project Cost: **\$981,700**

Commission: Community Services

Repair/Replace

Department: Recreation Services

Useful Life: 50 Pre Approval:

Project Mgr: Janice Carroll / Colby Brygidyr

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to repair and replace the tiles and waterproofing of the main pool tank at Centennial C.C. During the COVID-19 pandemic, the pool was closed and drained and extensive time without water caused the concrete walls, waterproof membrane and grout to dry and shrink more than it typically would during a normal shutdown for maintenance. The same conditions also caused the underwater light casing and seals to crack. The drier conditions of the materials followed by a quick fill with cold water as per industry standard resulted in cracking of the concrete shell. This resulted in water leaking through the concrete tank in a number of areas around the tank, predominantly in the deep end where the water filled first. This project is to request funding for second phases of work. The first phase is underway, where a consultant is conducting tests and make repair recommendations. The second phase is to repair according to the consultant recommendations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	810,000	0
Internal Charges:	75,000	0
External Consulting:	0	0
Contingency %: 10	81,000	0
Sub Total:	966,000	0
HST Impact:	15,682	0
Total Project Cost:	981,700	0

NOTES

The tiles on the main tank pool are original and constructed in 1968. Due to the leaks experienced, a condition assessment indicates that replacement was warranted. A consultant has been retained to investigate the extent of the repair and a contractor will be retained to complete the necessary repair to the main pool tank. The pool tank is at the end of its lifecycle and will require replacement within the next few years.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Construction			TOTAL		
Operating Funded Life Cycle	981,700	981,700	0	0	0	981,700	0
TOTAL FUNDING	981,700					981,700	0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$237,600

Project Name: Markham Pan Am Centre Pool Filter Refurbishment

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval:

Department: Recreation Services

Category: Minor

Project Mgr: Edward Migue

Cost Validation: External peer review

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to refurbish the components within the two (2) pool filtration tanks at Markham Pan Am Centre. The components being replaced for the pool filtration tanks are utilized to remove insoluble matter from the swimming pool to ensure for clear, safe and hygienic water to all participants. The work will consist of parts and labour required to open the pool filters.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	200,000	0
Internal Charges:	0	0
External Consulting:	12,300	0
Contingency %: 10	21,230	0
Sub Total:	233,530	0
HST Impact:	4,110	0
Total Project Cost:	237,600	0

NOTES

The existing pool filtration tanks were installed in 2014. A condition assessment conducted by a third party consultant indicates that multiple parts within the filtration tank require replacement. The project consists of replacing multiple filter elements (septums, o-rings, gaskets, etc.) and labour to ensure that the filtration system meets its life cycle. Annually, Pan Am hosts 42 swim meets and events. Water quality issues have been mitigated with short term solutions, but these will not be sustainable.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>						
Operating Funded Life Cycle	237,600	237,600	0	0	0	237,600	0
TOTAL FUNDING	237,600					237,600	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="1,766,400"/>
				Amount Incl HST <input type="text" value="237,600"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Recreation Arena Refrigeration Gasket Replacement**

Project Cost: **\$35,600**

Commission: Community Services

Repair/Replace

Department: Recreation Services

Useful Life: 10 Pre Approval:

Project Mgr: Mike Hasted

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the gaskets within the plate and frame heat exchanger at Centennial C.C. The heat exchanger is a critical piece of refrigeration equipment. Its performance directly affects efficiency and safety. The manufacturer of the heat exchanger recommends replacement of the gasket every 7-10 years based on condition assessment. Constant exposure to ammonia speeds the aging process of the rubber gaskets and thus can compromise sealing efficiency.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	35,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	35,000	0
HST Impact:	616	0
Total Project Cost:	35,600	0

NOTES

The existing plate and frame heat exchanger was last installed in 2009 at Centennial C.C. The gaskets are original. Based on condition assessment, replacement is warranted. Constant exposure of the gaskets to ammonia speeds the natural aging process of the rubber gaskets and thus can compromise sealing efficiencies. The amount requested is consistent with recent quote.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	35,600	0	0	0	0	0	0
TOTAL FUNDING	35,600					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="2,154,400"/>
				Amount Incl HST <input type="text" value="35,600"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number: 23005

Project Cost: \$7,883,200

Project Name: Asphalt Resurfacing

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval:

Department: Operations - Roads

Category: Minor

Project Mgr: Zoyeb Vahora

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
 5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Asphalt resurfacing of roads throughout the City utilizing a pavement management program to select rehabilitation candidates. The overall goal is to maintain an acceptable pavement condition index and user satisfaction by implementing cost effective strategies designed to extend pavement life and reduce overall maintenance costs of the road network. Other work includes interlock, material testing, route and seal, steel, and AC index. Various strategies are utilized on a site specific basis to reach program goals.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	7,746,869	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>7,746,869</u>	<u>0</u>
HST Impact:	<u>136,345</u>	<u>0</u>
Total Project Cost:	<u>7,883,200</u>	<u>0</u>

NOTES

Asphalt Resurfacing of approximately 19.5 km of two and four lane roads. 5.4 km of two and four lane roads of pavement preservation. There is no substantial backlog in this program. The 2021 pavement laser condition survey, conducted biannually, identifies 75.7% of the road network as good or better (long term target 80%). AC Index component is \$176K and will be adjusted at the time of award, dependent on the current price of crude oil.

<u>SOURCE(S) OF FUNDING (\$)</u>		<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>	
	0	0	0	0	0	0	0	
Operating Funded Life Cycle	7,883,200	0	0	0	0	0	0	
TOTAL FUNDING	<u>7,883,200</u>					<u>0</u>	<u>0</u>	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: 7,679,700
				Amount Incl HST 7,883,200
				Year in the study 2023

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Request amount is higher than life cycle due to increased cost of crude oil impacting the components of the asphalt mix. The additional request amount of \$200K is an estimate and is subject to change.

Project	Asphalt Resurfacing
2023 Capital Request	\$7,883,200
Funding Source	Life Cycle Reserve
Description of Program	Asphalt resurfacing of roads throughout the City utilizing a pavement management program to select rehabilitation candidates. The overall goal is to maintain an acceptable pavement condition index and user satisfaction by implementing cost effective strategies designed to extend pavement life and reduce overall maintenance and reconstruction costs of the road network.
Project Rationale	Condition assessment is conducted bi-annually to determine specific locations. This is followed by a detailed visual inspection by Operations staff which verifies the laser condition assessment. Identified in the Life Cycle Reserve Study.
Legislative Requirement	O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highways outlines patrol and maintenance requirement related to roadway infrastructure inclusive of asphalt pavement and sidewalk.
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	
Alignment to the Strategic Plan	Properly paved and well maintained roads help reduce accidents and promotes safe movement of traffic reducing traveling time. Contracts within this program call for reharvesting and recycling of construction materials. Strategies include warm mix designs which lowers emissions and utilizes recycled aggregate.



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$88,000

Project Name: Boulevard Repairs

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval:

Department: Operations - Roads

Category: Annual

Project Mgr: Taylor Thomson

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose of this project is to maintain boulevard areas in good condition to minimize hazards for pedestrians. Repairs to boulevards throughout the City are for interlock brick pavers only (does not include concrete, curb or asphalt).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	86,485	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	86,485	0
HST Impact:	1,522	0
Total Project Cost:	88,000	0

NOTES

Some of the larger repairs include Main Street Markham, Kenilworth Gate and Abberly, 438 Raymerville, Calvert Park, and Colborne St. Installation cost is \$36/m2. The budget allows for 2402 SqM to be repaired. This is an annual program. There is no substantial backlog within this program and the boulevards are in a state of good repair. 3 year avg is \$51K. Unit cost is consistent with recent award plus inflation.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	88,000	0	0	0	0	0	0
TOTAL FUNDING	88,000					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="88,000"/>
				Amount Incl HST <input type="text" value="88,000"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$27,400

Project Name: Bridge Structure Preventative Maintenance - Roads

Repair/Replace

Commission: Community Services

Useful Life: 30 Pre Approval:

Department: Operations - Roads

Category: Annual

Project Mgr: Taylor Thomson

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual preventative maintenance of the 27 City owned bridge/culvert structures on an as required basis. Work to be carried out on an as required basis which includes fill and grade bridge approaches, route and seal cracks on bridge decks, concrete sealer application, concrete patches on approach.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	26,900	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	26,900	0
HST Impact:	473	0
Total Project Cost:	27,400	0

NOTES

Locations to be determined upon condition assessment. There is no substantial backlog and Bridge structures are in a state of good repair. Operations is responsible for preventative maintenance on bridges/culverts such as minor grading, patching, sealing of bridge approaches and bridge decks, while Environmental Services is responsible for its inspection/rehabilitation and replacement. Amount requested is consistent with the 2022 Life Cycle Reserve Study update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	27,400	0	0	0	0	0	0
TOTAL FUNDING	27,400					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Life Cycle resides in Environmental Services (\$54,800) and is split 50:50 between Roads and Parks.				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$162,200

Project Name: Emergency Repairs

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval:

Department: Operations - Roads

Category: Annual

Project Mgr: Dennis King/ Anthony Leocata

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Visual inspection

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Emergency repairs to guiderails, guide cable, storm sewers, entrance features, outfalls, inlets, and cross connections as required. These repairs could be necessary due to motor vehicle accidents, winter maintenance, and damage from storm water or pipe/road failures.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	159,365	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	159,365	0
HST Impact:	2,805	0
Total Project Cost:	162,200	0

NOTES

Examples of work done in previous years; Storm Sewer Repairs - 20 Heritage, 12 Vanwood, Silver Aspen, Main Street Markham, and Main Street Unionville- 3yr avg \$149K. This is an annual program.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>		
Operating Funded Life Cycle	162,200	0	0	0	0	0	
TOTAL FUNDING	162,200				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text" value="162,200"/>
				Amount Incl HST <input type="text" value="162,200"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Localized Repairs - Curb & Sidewalk**

Project Cost: **\$929,700**

Commission: Community Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Taylor Thomson

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance repairs to sidewalks, curbs, and catch basins throughout the City as identified by staff. Ensure that deficient sections are repaired to minimize trip and fall incidents and reduce associated liability to the City. The purpose of the concrete curb is to channel storm water into the storm sewer system.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	913,620	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	913,620	0
HST Impact:	16,080	0
Total Project Cost:	929,700	0

NOTES

Specific locations to be determined upon completion of condition audit in 2022. 3 year avg is \$844K. Amount requested is higher due to growth and more deficiencies identified, consistent with the amount in the 2022 Life Cycle Reserve Study Update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	929,700	0	0	0	0	0	0
TOTAL FUNDING	929,700					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="929,700"/>
				Amount Incl HST <input type="text" value="929,700"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project	Localized Repairs – Curb and Sidewalk
2023 Capital Request	\$929,700
Funding Source	Life Cycle Reserve
Description of Program	Maintenance repairs to sidewalks, curbs, multi-use paths (MUP) and catch basins throughout the City as identified by staff through road patrol. Ensure that deficient sections are repaired to minimize trip and fall incidents, ponding/drainage issues, and reduce associated liability to the City. The purpose of conducting repairs to our concrete curbs are to removed damaged sections (hit by vehicles) and to ensure the channelization of storm water into the storm sewer system.
Project Rationale	Addresses minor repair locations of curb, sidewalk, MUP failures in order to reduce the City's liability, protect against claims of negligence and extend the Life Cycle. Identified in the Life Cycle Reserve Study.
Legislative Requirement	O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highways outlines patrol and maintenance requirement related to roadway infrastructure inclusive of asphalt pavement and sidewalk.
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	Localized Repairs Concrete/Asphalt, Asphalt Resurfacing
Related Maps	n/a
Alignment to the Strategic Plan	Program ensures roads and boulevards are made safe for all cyclists, pedestrians and vehicular traffic. Program removes hazards, deficiencies, and reduces risk to the City by replacing with new concrete. This program promotes safety, reduces liability and encourages walkability within the community.



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$157,000

Project Name: Localized Repairs - Parking Lots

Repair/Replace

Commission: Community Services

Useful Life: 8 Pre Approval:

Department: Operations - Roads

Category: Minor

Project Mgr: Taylor Thomson

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Ongoing maintenance and repairs of municipal parking lots throughout the City. Includes repairs to concrete and asphalt infrastructure, maintenance holes and catchbasin adjustments and asphalt resurfacing.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	154,285	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	154,285	0
HST Impact:	2,715	0
Total Project Cost:	157,000	0

NOTES

2023 locations: Markham Village Arena (2,050 m2) and Main Street Markham Fire Station 97 (1,439 m2) . This is an annual program. There is no substantial backlog in this program. 3 year avg is \$157K.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	157,000	0	0	0	0	0	0
TOTAL FUNDING	157,000					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="126,400"/>
				Amount Incl HST <input type="text" value="157,000"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Amount requested increased to align with the 3 yr average to allow for more area to be done at he Markham Village Arena which will push out the total rehab of the parking lot in Life Cycle by 5-10 years.				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$45,800

Project Name: Parking Lots- Rehabilitation

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval:

Department: Operations - Roads

Category: Minor

Project Mgr: Zoyeb Vahora

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Complete rehabilitation of selected municipal parking lots throughout the City. Includes removal and replacement of concrete, interlock and asphalt infrastructure, as well as maintenance holes and catch basin adjustments.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	44,990	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	44,990	0
HST Impact:	792	0
Total Project Cost:	45,800	0

NOTES

Rehabilitation of Fire Station 91 (1,345 m2). There is no backlog in the program. The parking lots are in a state of good repair. Unit cost is consistent with recent award plus inflation.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>	<u>Future Phases</u>	
Operating Funded Life Cycle	45,800	0	0	0	0	0	
TOTAL FUNDING	45,800				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="81,600"/>
				Amount Incl HST <input type="text" value="45,800"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="185 Main Street (\$21K) and 22 Washington (\$15K) deferred based on condition assessment."/>				



2023 PROJECT FUNDING REQUEST FORM

Number: **23012**

Project Cost: **\$1,049,900**

Project Name: **AODA Playground Refurbishments - Year 1 of 4**

Commission: Community Services

Repair/Replace

Department: Operations - Parks

Useful Life: 0 Pre Approval:

Project Mgr: Dean McDermid

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of safety surfacing along with associated elements to make playgrounds fully accessible and AODA compliant. This 4 year project will address playgrounds currently with sand safety surfacing installed from 2015 and later and will run in parallel to the yearly capital life cycle replacement project for Playstructures & Rubberized Surface Replacement. There are 17 locations in the first year where the play surface will be upgraded to Engineered Wood Fiber (EWF) to be compliant with AODA standards.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	984,947	2,750,039
Internal Charges:	0	0
External Consulting:	46,791	0
Contingency %: 0	0	0
Sub Total:	<u>1,031,738</u>	<u>2,750,039</u>
HST Impact:	<u>18,159</u>	<u>48,401</u>
Total Project Cost:	<u>1,049,900</u>	<u>2,798,400</u>

NOTES

This is a Citywide 4 year program with locations selected based on current accessibility by ward. There is currently a backlog of playgrounds which require refurbishment to be fully AODA compliant by 2025. This project requires removal of sand surfacing and replacement with EWF, in addition to installing drainage, curbs, entrance ramps, and paved pathways to access the playground. Funding source is Ramp Up Reserve, as approved by Council.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Ramp Up	1,049,900	0	0	0	0	0	2,798,400
TOTAL FUNDING	<u>1,049,900</u>					<u>0</u>	<u>2,798,400</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project	AODA Playground Refurbishments
2023 Capital Request	\$1,049,900
Funding Source	Life Cycle Reserve
Description of Program	Replacement of safety surfacing along with associated elements to make playgrounds fully accessible and AODA compliant. This 4 year project will address playgrounds with sand safety surfacing from 2015 forward and will run in parallel to the yearly capital lifecycle replacement project for Playstructures & Rubberized Surface Replacement. There are 17 locations in the first year with a total of 19 playstructures being refurbished in the first year.
Project Rationale	Playground safety surfacing is required to meet AODA guidelines to meet the CSA guidelines (Z614-07 Children's Play spaces and Equipment).
Legislative Requirement	City playground safety surfacing is required to be CSA – Canadian Standards Association CAN/CSA-Z614-07 certified at the time of installation and throughout the useful life. Monthly inspections by certified playground inspectors combined with a yearly third party inspector ensure compliance
History	This project is reflective of AODA requirements for compliant playground surfacing by the end of 2025. Play structures are identified for inspection after 17 years of service with the total number of structures yearly being reflective of growth which occurred 17
Future Phases	\$2,798,400
Total Project Cost	\$3,848,300
Related Projects	n/a
Related Maps	n/a
Alignment to the Strategic Plan	The City provides safe use of outdoor recreation facilities for families which aligns with the guidelines established in the Integrated Leisure Master Plan.

Park Name	Park Address	Ward	Area	Surfacing	Pit size	Curb Type	Curb Length	Class	Built	Replaced	Fences	Drainage	Sod	Curbs	Pathways	EWF	Ramps	Remove Sand	Park Total
Springdale Park	45 Norwich Drive	4	3	Granite Sand	433	Grass	102m	Sr.		2016	\$6,000	\$2,500	\$4,000	\$18,360	\$900	\$15,155	\$3,500	\$5,196	\$55,611
John Baird Woods	145 Mingay Drive	4	3	Granite Sand	520	Curb	179m	Jr./Sr.	2017		\$6,000	\$2,500	\$4,000			\$18,200	\$3,500	\$6,240	\$40,440
Alma Walker Park	31 Wooten Way North	4	4	Granite Sand	544.41	Grass	89m	Jr./Sr.		2018	\$6,000	\$2,500	\$2,000	\$16,020		\$19,043.50	\$3,500	\$6,492.92	\$55,556
Armstrong Park	25 Major Button's Drive	4	4	Granite Sand	308.19	Grass	141m	Jr./Sr.		2018	\$6,000	\$2,500	\$2,000	\$25,380	\$42,000	\$10,787	\$3,500	\$3,698.28	\$95,865
Robinson Park	46 Robinson Street	4	3	Granite Sand	487	Grass	135m	Jr./Sr.		2018	\$6,000	\$2,500	\$2,000	\$24,300	\$7,500	\$17,045	\$3,500	\$5,844	\$68,689
Stargell Park	17 Stargell Crescent	4	3	Granite Sand	310	Grass	71m	Jr./Sr.		2018	\$6,000	\$2,500	\$2,000	\$12,780	\$1,500	\$10,580	\$3,500	\$3,720	\$42,580
Amber Glen Park	9 Empire Street	4	4	Granite Sand	221.53	Grass	79m	Sr.		2019	\$6,000	\$2,500	\$2,000	\$14,220	\$1,500	\$7,753.55	\$3,500	\$2,658.36	\$40,132
Morgan Park (North Pool)	11 Parkway Avenue	4	4	Granite Sand	395.84	Grass	77m	Jr./Sr.		2019	\$6,000	\$2,500	\$2,000	\$13,860		\$13,854.40	\$3,500	\$4,750	\$46,464
Morgan Park (South)	11 Parkway Avenue	4	4	Granite Sand	601.44	Wood	97m	Jr./Sr.		2019	\$6,000	\$2,500	\$4,000	\$17,460	\$10,500	\$21,050.40	\$3,500	\$7,217	\$72,228
Reesor Park	73 Wooten Way North	4	4	Granite Sand	385.74	Grass	83m	Sr.		2020	\$6,000	\$2,500	\$2,000	\$14,940	\$13,500.90	\$13,500.90	\$3,500	\$4,620	\$60,562
											Fences	Drainage	Sod	Curbs	Pathways	EWF	Ramps	Remove Sand	
Leitchcroft Park	381 South Park Road	8	1	Granite Sand	421.1	Curb	120m	Jr./Sr.		2017	\$6,000	\$2,500	\$4,000			\$14,738.50	\$3,500	\$5,053.20	\$35,792
Risebrough Park	97 Risebrough Circuit	8	2	Granite Sand	309.3	Wood	70m	Sr.		2017	\$6,000	\$2,500	\$4,000	\$12,600	\$1,800	\$10,825.50	\$3,500	\$4,911.60	\$46,137
Wilclay Park (East)	54 Hillcroft Drive	8	2	Granite Sand	94.85	75% Stone, 25% Curb	124m	Jr.	2017		\$6,000		\$4,000			\$3,319.75	\$3,500	\$1,138.20	\$17,958
Armada Park	2401 Denison Street	8	2	Granite Sand	439.5	50% Wood, 50% Asphalt	125m	Sr.		2018	\$6,000	\$2,500	\$3,000	\$22,500		\$15,382.50	\$3,500	\$5,274	\$58,157
Randall Park (North)	70 Randall Avenue	8	2	Granite Sand	231.8	60% Curb, 40% Grass	101m	Jr.		2018	\$6,000	\$2,500	\$4,000	\$18,180	\$2,100	\$8,113	\$7,000	\$2,781.60	\$50,675
Randall Park(South)	70 Randall Avenue	8	2	Granite Sand	93	Grass	80m	Sr.		2018	\$6,000	\$2,500	\$2,000	\$14,400	\$4,800	\$3,255	\$3,500	\$1,116	\$37,571
Highgate Park	37 Highgate Drive	8	2	Granite Sand	390	Wood	78m	Sr.		2019	\$6,000	\$2,500	\$4,000	\$14,040		\$13,650	\$3,500	\$4,680	\$48,370
Middleton Park	49 Risebrough Circuit	8	2	Granite Sand	188	Grass	49m	Sr.		2019	\$6,000	\$2,500	\$2,000	\$8,820	\$4,800	\$6,580	\$3,500	\$2,256	\$36,456
Van Horne Pond	71 Pond Drive	8	1	Granite Sand	225	Curb	57m	Sr.		2019	\$6,000	\$2,500	\$4,000			\$7,875	\$3,500	\$2,700	\$26,575

Funded by Ramp-Up - New project in 2023
For Pre-approval 100%

New Project Year 1 of 4	\$935,817
External Consulting	\$46,791
Contingency - 5%	\$49,130
Total Pre-Tax	\$1,031,738
HST Impact	\$18,159
Total Project Cost	\$1,049,897

Total Project (4 year) - inc. Contingency, External Consulting, HST Impact	\$3,848,337
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Market conditions uncertain;
Potential revision on cost

2023	Year 1	\$1,049,897
	Year 2	\$1,096,822
	Year 3	\$1,029,821
	Year 4	\$671,797
		\$3,848,337



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Boulevard/Park Trees Replacement**

Project Cost: **\$942,300**

Commission: Community Services

Repair/Replace

Department: Operations - Parks

Useful Life: 50 Pre Approval:

Project Mgr: Josh Van Kemp

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Boulevard/Park replacement tree planting is an annual program which enables the City to replace approximately 1150 dead, diseased or damaged trees. Cost per tree is approximately \$595 to plant with 2 year warranty and \$110 to grind the stump in preparation for planting. This funding will be requested each year to address tree loss through damage, accidents and normal mortality.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	810,750	0
Internal Charges:	117,263	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	928,013	0
HST Impact:	14,269	0
Total Project Cost:	942,300	0

NOTES

This is an annual program and funds will be requested each year. A 3-year review (2019-2021) of blvd/park trees removed an avg of 1,150 trees per year, therefore the number of stumps removed & trees planted will be increased to maintain a minimum 1:1 ratio of replacement to support the Council approved canopy coverage goal of 30%. 5 inspections are required for site, stump and tree planting condition/warranty inspections each year. 3 dedicated seasonal staff will be required each year to ensure accurate planning & quality control. Current 2022 cost of a seasonal parks labourer is approx. \$39K for a 150 day contract.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	942,300	0	0	0	0	0	0
TOTAL FUNDING	942,300					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="385,400"/>
				Amount Incl HST <input type="text" value="942,300"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Life cycle is based on 700 trees at rate of \$424 to plant and \$106 to grind the stump.				

Project	Boulevard/Park Tree Replacement
2023 Capital Request	\$942,300
Funding Source	Life Cycle Reserve
Description of Program	Boulevard/Park replacement tree planting is an annual program to replace dead, diseased or damaged trees with mortality averaging 1150 trees. Cost per tree is approximately \$595 to plant with 2 year warranty and \$110 to grind the stump in preparation for planting. This funding will be requested yearly to address the previous year tree loss and add replacement canopy working to our goal of 30%.
Project Rationale	Boulevard/Park replacement tree planting is an annual program which enables the City to replace approximately 1150 dead, diseased or damaged trees. A 3-year review (2019-2021) of blvd/park trees removed an average of 1,150 trees per year, therefore the number of stumps removed & trees planted will be increased to maintain a minimum 1:1 ratio of replacement to support the Council approved canopy coverage goal of 30%. 5 inspections are required for site, stump and tree planting condition/warranty inspections each year.
Legislative Requirement	n/a
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	\$942,300
Related Projects	n/a
Related Maps	n/a
Alignment to the Strategic Plan	Safe & Sustainable Community



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: Court Resurfacing/Reconstruction - Markham Tennis Club

Project Cost: \$236,900

Commission: Community Services

Repair/Replace

Department: Operations - Parks

Useful Life: 7 Pre Approval:

Project Mgr: Dean McDermid

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Rebuilding and resurfacing of all Markham Tennis Club courts based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	232,776	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>232,776</u>	<u>0</u>
HST Impact:	4,097	0
Total Project Cost:	<u>236,900</u>	<u>0</u>

NOTES

The total cost of resurfacing and rebuilding the 6 courts at Markham Tennis Club (Reesor Park) will be shared equally between Markham Tennis Club, The City of Markham and Premier Racquet Club. Markham Tennis Club court replacement and resurfacing will proceed subject to satisfactory club and private company finance review and agreement of both parties to undertake repayment. This is an asset based program and is subject to condition assessment.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	78,968	0	0	0	0	0	0
Other External	157,932	0	0	0	0	0	0
TOTAL FUNDING	<u>236,900</u>					<u>0</u>	<u>0</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="379,700"/>
				Amount Incl HST <input type="text" value="79,000"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
The resurfacing of three courts at Markham Tennis Club have been accelerated from 2024 to 2023 while the other three courts have been changed from resurfacing to rebuilding to address new drainage issues. The other tennis courts scheduled for resurfacing/reconstruction are included as part of a separate project request.				

MARKHAM TENNIC CLUB - REBUILDING/ RESURFACING

Inventory Description	Facility	Rebuild or Resurface	2023 Inflated - Pre-Tax Markham Share	Club Share Pre-Tax	Premium Racquet Markham Share	Total Project Cost Pre-Tax	Total Project Cost Inc. HST Impact	Comment
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #1 (North) - Rebuild	Rebuild	22,222	22,222	22,222	66,666	67,839	Revised from Resurface to Rebuild pending condition assessment; Cost provided by contractors - \$200k pre-tax for the 3 courts; Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #2 (North) - Rebuild	Rebuild	22,222	22,222	22,222	66,666	67,839	Revised from Resurface to Rebuild pending condition assessment; Cost provided by contractors - \$200k pre-tax for the 3 courts; Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #3 (North) - Rebuild	Rebuild	22,222	22,222	22,222	66,666	67,839	Revised from Resurface to Rebuild pending condition assessment; Cost provided by contractors - \$200k pre-tax for the 3 courts; Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #4 (South) - Resurface	Resurface	3,642	3,642	3,642	10,926	11,118	Revised cost provided by contractor; Accelerate from 2024- per discussion with SAM
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #5 (South) - Resurface	Resurface	3,642	3,642	3,642	10,926	11,118	Revised cost provided by contractor; Accelerate from 2024- per discussion with SAM
Court Surfacing - Tennis/ Basketball	Reesor - Tennis #6 (South) - Resurface	Resurface	3,642	3,642	3,642	10,926	11,118	Revised cost provided by contractor; Accelerate from 2024- per discussion with SAM
	TOTAL		77,592	77,592	77,592	232,776	236,873	
	TOTAL PROJECT COST (ROUNDED OFF)						236,900	

Summary:

Funding (Inc. HST Impact)	Details	Tennis Courts
Lifecycle	Resurface - 3 South Courts	11,118
External - Club	Resurface - 3 South Courts	11,118
External - Premium Racquet	Resurface - 3 South Courts	11,118
Lifecycle	Rebuild - 3 North Courts	67,839
External - Club	Rebuild - 3 North Courts	67,839
External - Premium Racquet	Rebuild - 3 North Courts	67,839
	TOTAL PROJECT COST (ROUNDED OFF)	236,873
		236,900

Cost	232,776
HST Impact	4,097
Total Project Cost Inc. HST Impact	236,873
TOTAL PROJECT COST (ROUNDED OFF)	236,900

	Tennis Courts
Rebuild	203,518
Resurface	33,355
Total	236,873
TOTAL PROJECT COST (ROUNDED OFF)	236,900



2023 PROJECT FUNDING REQUEST FORM

Number: 23014

Project Cost: \$491,000

Project Name: Court Resurfacing/Reconstruction/Maintenance

Commission: Community Services

Repair/Replace

Department: Operations - Parks

Useful Life: 7 Pre Approval:

Project Mgr: Dean McDermid

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repair and resurfacing of basketball, public and club tennis courts based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	482,514	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	482,514	0
HST Impact:	8,492	0
Total Project Cost:	491,000	0

NOTES

The City contributes to the annual maintenance of the clay courts at Unionville Tennis Club to a maximum of \$3k per court (total of \$9k per year for 3 clay courts). The total cost of resurfacing/rebuilding courts at tennis clubs is shared 50:50 between the tennis club and the City. Tennis club court replacement/rehabilitation will proceed subject to satisfactory club finance review and agreement of the club to undertake repayment. This is an asset based program and is subject to condition assessment

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Tennis Court	Basketball Court	Clay			
Operating Funded Life Cycle	383,444	311,144	63,300	9,000	0	383,444	0
Other External	107,556	107,556	0	0	0	107,556	0
TOTAL FUNDING	491,000					491,000	0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: 379,700
				Amount Incl HST 383,400
				Year in the study 2023

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Denison Park basketball court - additional \$9K required for 2 poles, backboards and nets. Legacy Park basketball court - additional \$23K due to rebuild instead of scheduled resurface based on condition assessment. 3 courts at Reesor accelerated from 2024 to 2023 (resurface). 3 courts from Reesor changed from resurfacing to rebuild. The resurfacing of three courts at Markham Tennis Club have been accelerated from 2024 to 2023 while the other three courts have been changed from resurfacing to rebuilding to address new drainage issues and are included as part of a separate project request.

2023 COURT REBUILDING/RESURFACING

Inventory Description	Facility	Rebuild or Resurface	2023 Inflated - Pre-Tax Markham Share	Club Share Pre-Tax	Total Project Cost Pre-Tax	Total Project Cost Inc. HST Impact	Comment
Court Surfacing - Tennis/ Basketball	Ada Mackenzie - Tennis #1 - Resurface	Resurface	17,615		17,615	17,925	
Court Surfacing - Tennis/ Basketball	Ada Mackenzie - Tennis #2 - Resurface	Resurface	17,615		17,615	17,925	
Court Surfacing - Tennis/ Basketball	Box Grove - Tennis #1 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Box Grove - Tennis #2 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #1 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #2 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #3 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #4 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #5 (Clay)		3,000		3,000	3,000	Not subject to HST
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #6 (Clay)		3,000		3,000	3,000	Not subject to HST
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #7 (Clay)		3,000		3,000	3,000	Not subject to HST
Court Surfacing - Tennis/ Basketball	Denison Park - Basketball #1 (full) - Resurface	Resurface	14,713		14,713	14,972	\$9k added - for two poles, backboards and nets.
Court Surfacing - Tennis/ Basketball	Frisby - Tennis #1 - Resurface	Resurface	17,615		17,615	17,925	
Court Surfacing - Tennis/ Basketball	Frisby - Tennis #2 - Resurface	Resurface	17,615		17,615	17,925	
Court Surfacing - Tennis/ Basketball	Legacy Park - Basketball #1 (full) - Rebuild	Rebuild	32,017		32,017	32,580	Updated cost - Requires rebuild instead of resurface as scheduled in
Court Surfacing - Tennis/ Basketball	Milliken Mills Park - Basketball #1(full) S - Resurface	Resurface	12,854		12,854	13,080	
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #1 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #2 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #3 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #4 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #5 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials
Court Surfacing - Tennis/ Basketball	Pomona Valley - Tennis #6 - Resurface	Resurface	8,808	8,808	17,616	17,926	Pending club consultation and financials

Inventory Description	Facility	Rebuild or Resurface	2023 Inflated - Pre-Tax Markham Share	Club Share Pre-Tax	Total Project Cost Pre-Tax	Total Project Cost Inc. HST Impact	Comment
Court Surfacing - Tennis/ Basketball	Robinson - Tennis #1 - Rebuild	Rebuild	47,192		47,192	48,023	
Court Surfacing - Tennis/ Basketball	Robinson - Tennis #2 - Rebuild	Rebuild	47,192		47,192	48,023	
Court Surfacing - Tennis/ Basketball	Sablewood - Basketball #1 (half) - Resurface	Resurface	2,618		2,618	2,665	
Court Surfacing - Tennis/ Basketball	South Unionville Park Tennis - West #1 - Resurface	Resurface	17,615		17,615	17,925	
Court Surfacing - Tennis/ Basketball	South Unionville Park Tennis - West #2 - Resurface	Resurface	17,615		17,615	17,925	
	TOTAL		376,974	105,696	482,670	491,006	
	TOTAL PROJECT COST (ROUNDED OFF)					491,000	

Summary:

Funding (Inc. HST Impact)	Details	Tennis Courts	Basketball Court	Clay Court	Total
Lifecycle	Resurface - Denison, Milliken & Sablewood		30,717		30,717
Lifecycle	Rebuild - Legacy		32,580		32,580
Lifecycle	Clay Court - Unionville TC			9,000	9,000
Lifecycle	Resurface - TC-Boxgove, Pomona, Unionville	107,556			107,556
External - Club	Resurface - TC-Boxgove, Pomona, Unionville	107,556			107,556
Lifecycle	Resurface/ Rebuild - Public Courts - Aida MacKenzie, Frisby, Robinson and South Unionville Park West	203,596			203,596
		418,708	63,297	9,000	491,005
	TOTAL PROJECT COST (ROUNDED OFF)				491,000

Cost	482,514
HST Impact	8,492
Total Project Cost inc. HST Impact	491,006
TOTAL PROJECT COST (ROUNDED OFF)	491,000

	Tennis Courts	Basketball Court	Total
Rebuild	96,045	32,580	128,625
Resurface	322,664	30,717	353,381
Clay Court Maintenance	9,000		9,000
Total	427,709	63,297	491,006
TOTAL PROJECT COST (ROUNDED OFF)	427,700	63,300	491,000



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$86,800

Project Name: Fence (Tennis Courts)

Repair/Replace

Commission: Community Services

Useful Life: 35 Pre Approval:

Department: Operations - Parks

Category: Annual

Project Mgr: Dean McDermid

Cost Validation: Internal peer review

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of perimeter fencing of tennis courts helps to protect the playing surfaces from non-court uses while maintaining the limits of play and allowing securement of the courts when not available for users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	85,334	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	85,334	0
HST Impact:	1,502	0
Total Project Cost:	86,800	0

NOTES

This is an asset based program and is subject to condition assessment. The 2023 locations are Simonston Park – (German Mills Tennis Club) and Robinson Park. Unit costs are based on original cost of construction plus inflation. There is no substantial backlog and the fences are in a state of good repair

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>		
Operating Funded Life Cycle	86,800	0	0	0	0	0	
TOTAL FUNDING	86,800				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="164,600"/>
				Amount Incl HST <input type="text" value="86,800"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number: **23016**

Project Cost: **\$125,300**

Project Name: **Markham Trees for Tomorrow**

Commission: Community Services

New Asset/Expansion

Department: Operations - Parks

Useful Life: 50 Pre Approval:

Project Mgr: Matt Busato

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Initiated in 2007, the program focuses on supporting canopy core initiatives through the engagement of community and corporate volunteers and Non-Government Organizations. The program scope is developed annually based on changing priorities that focus on education to promote and maintain the health and longevity of our urban forest. To date, over 400,000 trees have been planted citywide since the program's inception. This is an annual program and funds will be requested each year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	84,700	0
Internal Charges:	39,088	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	123,788	0
HST Impact:	1,491	0
Total Project Cost:	125,300	0

NOTES

Program focus is City tree planting projects that incorporate community engagement and partnership opportunities. 2023 Goals- 1. Tree planting to support to the City's 30% tree canopy goal 2. Continue NGO partnerships such as 10,000 Trees, Tree Canada, Friends of the Rouge and other corporate community engagement projects to promote education and stewardship opportunities. Internal Chargeback for 1 – 150 Day Staff. Funding source is Trees for Tomorrow Reserve. The balance in the Trees For Tomorrow reserve as of May 31, 2022 is \$669,768.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
	<u>Budget</u>				<u>TOTAL</u>		
Other Internal	125,300	0	0	0	0	0	0
TOTAL FUNDING	125,300				0	0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$151,300

Project Name: Pathways Resurfacing

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval:

Department: Operations - Parks

Category: Minor

Project Mgr: Dean McDermid

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Paving and repairs of aggregate pathways at various parks and locations. These locations are prone to wear and tear and washouts following heavy rain and flooding. Paving will help to alleviate this problem. Limestone pathways require additional material to be added and compacted. Locations will be assessed and determined based on condition assessment in spring. Staff will investigate environmental options for future considerations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	148,681	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>148,681</u>	<u>0</u>
HST Impact:	<u>2,617</u>	<u>0</u>
Total Project Cost:	<u>151,300</u>	<u>0</u>

NOTES

This is an annual program and funds will be requested each year. Locations are subject to condition assessment to be done in spring 2023. Condition assessments are done in early spring when total quantities and materiality of repairs is determined. Asphalt park pathways are assessed for trip edges greater than 2.0cm as outlined in Prov Leg O.Reg. 239/02 for minimum maintenance standards. There is no substantial backlog and the pathways are in a state of good repair. 3yr avg is \$128K.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>							
Operating Funded Life Cycle	151,300	0	0	0	0	0	0	
TOTAL FUNDING	<u>151,300</u>					<u>0</u>	<u>0</u>	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="151,300"/>
				Amount Incl HST: <input type="text" value="151,300"/>
				Year in the study: <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number: **23018**

Project Cost: **\$705,100**

Project Name: **Playstructure Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 17 Pre Approval:

Department: Operations - Parks

Category: Minor

Project Mgr: Dave Plant

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of playground equipment, and safety surfacing as required, to maintain the current standards (CSA – Canadian Standards Association CAN/CSA-Z614-07. Children’s Playspaces and Equipment) and AODA compliance. There are 7 structures to be completed in 2023, which require the removal of the sand surfacing and installation of Engineered Wood Fiber (EWF).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	692,951	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	692,951	0
HST Impact:	12,196	0
Total Project Cost:	705,100	0

NOTES

This is an asset based program with all locations subject to condition assessment. Funding changes yearly based on life cycle replacement of specific play structures. There is no backlog of play structure equipment upon completion of the 2023 project and the assets are in a state of good repair. There is a backlog of AODA compliant playground safety surfacing which requires removal and replacement with AODA compliant surfacing (EWF) by 2025 which will be addressed yearly with equipment replacements and a 4 year project starting in 2023.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	451,100	0	0	0	0	0	0
Ramp Up	254,000	0	0	0	0	0	0
TOTAL FUNDING	705,100					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="499,100"/>
				Amount Incl HST <input type="text" value="451,100"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Locations scheduled for 2023 replacement in Lifecycle that will be deferred based on condition assessment: Colty Corners (1-Senior), Cornell Rouge Woods (1-Junior, 1 - Senior), E.B.F. Robinson Park (1-Senior), Frederick Peterson Park (1-Junior) and South Unionville Park (1-Senior).				
Locations accelerated from 2024 to 2023 based on condition assessment: Lloyd Robertson Park (1-Senior), Mintleaf Park (2-Senior) - 1-senior and 1-junior and Peace Park (1-Senior).				

Project	Play structure & Rubberized Surface Replacement
2023 Capital Request	\$705,100
Funding Source	Life Cycle Reserve
Description of Program	Replacement of playground equipment, and safety surfacing as required, to maintain the current standards (CSA – Canadian Standards Association CAN/CSA-Z614-07. Children’s Play spaces and Equipment) and AODA compliance. There are 9 structures to be completed in 2022, 2 of them with rubberized surfacing and 13 which require the removal of the sand surfacing and installation of Engineered Wood Fiber (EWF).
Project Rationale	These structures require replacement prior to any failures occurring, based on condition assessment to meet the CSA guidelines (Z614-07 Children's Play spaces and Equipment).
Legislative Requirement	City play structures are required to be CSA – Canadian Standards Association CAN/CSA-Z614-07 certified at the time of installation and throughout their useful life. Monthly inspections by certified playground inspectors combined with a yearly third party safety audit ensures compliance.
History	This project is reflective of play structures identified in the parks lifecycle and supported by condition assessment. Play structures are identified for inspection after 17 years of service with the total number of structures yearly being reflective of growth which occurred 17 years previously.
Future Phases	This funding is requested each year based on lifecycle.
Total Project Cost	n/a
Related Projects	Play Structure Rubberized Surface Replacement
Related Maps	n/a
Alignment to the Strategic Plan	The City provides safe use of outdoor recreation facilities for families which aligns with the guidelines established in the Integrated Leisure Master Plan.

2023 Playground Structure and Safety Surface

Inventory Description	Facility	2023 Inflated - Pre-Tax	Pre-Approval Amount	Comment
Playground Structure	Butternut Parkette	17,730	17,730	
Playground Structure	Hughson (1-Combined)	47,281	47,281	
Playground Structure	Joseph Ellerby (1-Senior, 1-Junior)	94,561	94,561	
Playground Structure	Ross Brown Park (1-Senior)	59,101	59,101	
Playground Structure	Lloyd Robertson Park (1-Senior)	59,124	59,124	Accelerated from 2024 to 2023 due to condition assessment
Playground Structure	Mintleaf Park (2-Senior) - s/b 1-senior and 1-junior	100,510	100,510	Accelerated from 2024 to 2023 due to condition assessment
Playground Structure	Peace Park (1-Senior)	65,036	65,036	Accelerated from 2024 to 2023 due to condition assessment
Playground Structure	AODA - Engineered Wood Fiber	249,608	249,608	
	Total	692,951	692,951	
	Total Pre - Tax	692,951	692,951	
	HST Impact	12,196	12,196	
	Total Inc. HST Impact	705,147	705,147	
	Total Project Cost (Rounded Off)	705,100	705,100	

Locations scheduled for 2023 replacement in Lifecycle that will be deferred based on condition assessment

Colty Corners (1- Senior)

Cornell Rouge Woods (1-Junior, 1 - Senior)

E.B.F. Robinson Park (1-Senior)

Frederick Peterson Park (1-Junior)

South Unionville Park (1-Senior)

Funding	Including Tax Impact
Lifecycle (7 - Playground Structures)	451,146
Ramp-Up - AODA - Engineered Wood Fiber	254,001
Total Inc. HST Impact	705,147
Total Project Cost (Rounded Off)	705,100



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$148,800

Project Name: Sportsfield Maintenance & Reconstruction

Commission: Community Services

Repair/Replace

Department: Operations - Parks

Useful Life: 5 Pre Approval:

Project Mgr: James Bingham

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life cycle program includes top dressing, grass seed, sod, fertilizer, and irrigation upgrades as per contracts. Funds within this project may be reallocated to sportsfield maintenance materials and services that require immediate attention unforeseen at time of submission such as sodding of damaged fields. Locations to be determined each spring and again at the end of playing season based on inspection.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	146,247	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	146,247	0
HST Impact:	2,574	0
Total Project Cost:	148,800	0

NOTES

This is an annual program and funds will be requested each year. There are 212 sportsfields existing in various parks and schools which consist of baseball diamonds, rugby, soccer, cricket and football fields. The lack of weeds on City fields is due largely to promoting healthy turf through sound cultural practices tailored to each field based on requirements. This is an annual program and funding will be requested each year. There is no substantial backlog within this program and assets are in a state of good repair. Project cost is based on existing contracts. 3 year avg is \$127K.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	148,800	0	0	0	0	0	0
TOTAL FUNDING	148,800					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="148,800"/>
				Amount Incl HST <input type="text" value="148,800"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: Corporate Fleet Replacement - Non-Fire - Pre Approval

Project Cost: \$2,407,000

Commission: Community Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 5 Pre Approval:

Project Mgr: Tanya Lewinberg/Tony Greco

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2023 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments were consulted with respect to the units in this program. Total units -20 units out of a total of 52 units.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	2,365,368	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>2,365,368</u>	<u>0</u>
HST Impact:	<u>41,630</u>	<u>0</u>
Total Project Cost:	<u>2,407,000</u>	<u>0</u>

NOTES

Useful life varies - 4 to 12 years based on units types. Cost Validation- Most recent purchase of similar unit type; Requirement validation - Condition assessment, vehicle reliability & down time, & operating costs. Units specified in this program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>				<u>TOTAL</u>	<u>Future Phases</u>	
	<u>Budget</u>	<u>Licensed (19)</u>	<u>Non Licensed (1)</u>				
Operating Funded Life Cycle	2,407,000	2,235,900	171,100	0	0	2,407,000	0
TOTAL FUNDING	<u>2,407,000</u>					<u>2,407,000</u>	<u>0</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="3,267,200"/>
				Amount Incl HST <input type="text" value="2,407,000"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="20 units for pre approval (out of total of 52 units) including 3 licenced units accelerated from 2024 due to condition assessment."/>				

Project	Corporate Fleet Replacement – Non Fire
2023 Capital Request	\$2,407,000
Funding Source	Life Cycle Reserve
Description of Program	2023 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units - 20 units
Project Rationale	2023 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. To maintain current service levels for all users department
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	n/a
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2023 Corporate Fleet Replacement - Non-Fire (FOR PRE-APPROVAL)

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2023 Inflated Cost	Adjustment	2023 Updated Cost	Comments	
1038	COMPACT PICK UP	95,722		ASSET MAN-Licensed	Licensed	2013	39,797		39,797	Deferred from 2021 to 2023; conversion to crew cab	
1174	FULL SIZE WINDOW VAN	85,023		OPERATIONS-Licensed	Licensed	2012	56,631		56,631	Cost based on 185-T-20 Plus 10k - toolbox and inverter, plus inflation; Deferred from 2020 to 2023; Plus 10k - toolbox and inverter	
1236	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	95,272		OPERATIONS-Licensed	Licensed	2015	123,285		123,285	Price \$101,366 adjusted to align 047-T-22 - base price \$115,814, plus Markhamizing plus inflation	
1253	FULL SIZE REG CAB PICK UP 4X4	154,946		OPERATIONS-Licensed	Licensed	2016		44,014	44,014	Accelerate from 2024 to 2023	
1272	SINGLE AXLE ALLSEASON DUMP/PLOW/WING	78,311	4,545	OPERATIONS-Licensed	Licensed	2013	289,705		289,705		
1273	SINGLE AXLE ALLSEASON DUMP/PLOW/WING	82,598	5,056	OPERATIONS-Licensed	Licensed	2013	289,705		289,705		
1274	SINGLE AXLE ALLSEASON DUMP/PLOW/WING	80,941	4,966	OPERATIONS-Licensed	Licensed	2013	298,692		298,692	2017 add Pavement Edger implement	
1422	ARTICULATED SIDEWALK TRACTOR 4X4		3,617	SIDEWALK-Non Licensed	Non Licensed	2013	168,171		168,171		
3238	FORESTRY BUCKET TRUCK	86,428	7,100	OPERATIONS / PARKS-Licensed	Licensed	2013	237,677		237,677		
3239	FORESTRY BUCKET TRUCK	88,103	7,061	OPERATIONS / PARKS-Licensed	Licensed	2013	237,677		237,677		
3326	FULL SIZE PICK UP 4X4	107,335		OPERATIONS / PARKS-Licensed	Licensed	2013	45,311		45,311	Deferred from 2021 to 2023	
3342	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	69,787		OPERATIONS-Licensed	Licensed	2016		123,285	123,285	Accelerate from 2024 to 2023 Price \$101,366 adjusted to align 047-T-22 - base price \$115,814, plus Markhamizing plus inflation	
3355	COMPACT EXTENDED CAB PICK UP	68,896		OPERATIONS-Licensed	Licensed	2013	39,797		39,797	Deferred from 2021 to 2023; conversion to crew cab	
3360	FULL SIZE SHORT BOX PICK UP 4X4	218,062		OPERATIONS-Licensed	Licensed	2013	65,327		65,327		
3377	FULL SIZE 2500 CREW CAB PICK UP 4X2 W/ 8' Box	125,789		OPERATIONS-Licensed	Licensed	2015	49,336		49,336		
6086	COMPACT CAR	66,668		ENFOR LIC-Licensed	Licensed	2014	58,444		58,444	Deferred from 2022 to 2023; conversion to PHEV hybrid - Bylaw vehicle	
6096	COMPACT CAR	76,266		CLERK-1-Licensed	Licensed	2011	58,444		58,444	Deferred from 2019 to 2023; conversion to PHEV hybrid - Bylaw vehicle	
6097	COMPACT CAR	80,732		CLERK-1-Licensed	Licensed	2011	58,444		58,444	Deferred from 2019 to 2023; conversion to PHEV hybrid - Bylaw vehicle	
7037	COMPACT CREW CAB PICK UP	77,383		WASTE-Licensed	Licensed	2011	38,650		38,650	Deferred from 2019 to 2023; conversion to crew cab	
7035	FULL SIZE 1500 REG CAB PICK UP 4X2		124,889	WASTE-1-Licensed	Licensed	2016		42,976	42,976	Accelerate from 2024 to 2023	
							Total Pre-Tax	215,093	210,275	2,365,368	
							HST Impact	37,930		41,630	
							Total Project Cost	2,193,023		2,406,998	
							Rounded Off Project Cost	2,193,000		2,407,000	

ORIGINAL PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
16	Licensed	1,986,922	34,970	2,021,892
1	Non Licensed	168,171	2,960	171,131
		2,155,093	37,930	2,193,023
17			Rounded Off - Project Cost	2,193,000

UPDATED PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
19	Licensed	2,197,197	38,671	2,235,868
1	Non Licensed	168,171	2,960	171,131
		2,365,368	41,630	2,406,998
20			Rounded Off - Project Cost	2,407,000



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: Corporate Fleet Replacement - Waterworks

Project Cost: \$108,000

Commission: Community Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 8 Pre Approval:

Project Mgr: Tanya Lewinberg/Edgar Tovilla

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Part of the Annual Fleet Replacement Program based on the Council adopted Corporate Fleet policy guidelines. Life Cycle costing targets Optimal Replacement Intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment (2 units) contained in this program have reached or surpassed the ORI. This is funded by Waterworks reserve.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	106,160	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	106,160	0
HST Impact:	1,868	0
Total Project Cost:	108,000	0

NOTES

2 units - Requirement Validation - meeting the approved replacement criteria, pending condition assessment. All units in this request will be purchased with the most recent technology available at time of purchase providing maximum fuel economy with minimal emissions.

<u>SOURCE(S) OF FUNDING (\$)</u>		<u>Components</u>				<u>Future Phases</u>	
<u>Funding Type</u>	<u>Budget</u>	<u>Licensed (2)</u>	<u>Non Fleet</u>	<u>TOTAL</u>		<u>Phases</u>	
Waterworks	108,000	105,900	2,100	0	0	108,000	0
TOTAL FUNDING	108,000					108,000	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2023 Waterworks Fleet Replacement

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Model Year	2023 Inflated Pre-Tax	Adjustment	2023 Updated Cost	Comments
2174	FULL SIZE CARGO VAN	54,196		WATER- Licensed	2014	43,052		43,052	Deferred from 2022 to 2023; Price aligned with 2188
2174	Specification Change			WATER- Licensed		8,967		8,967	Specification change to F250
2181	COMPACT VAN	56,604		WATER- Licensed	2014	48,032	(48,032)	-	Based on PD22036; Deferred from 2022 to 2024;
2182	COMPACT VAN	52,842		WATER- Licensed	2014	48,032	(48,032)	-	Based on PD22036; Deferred from 2022 to 2024;
2188	FULL SIZE CARGO VAN	57,057		WATER- Licensed	2016		43,052	43,052	Accelerate from 2024 to 2023
2188	Specification Change			WATER- Licensed			8,967	8,967	Specification change to F250
2245	PORTABLE DIESEL GENERATOR 35 KV		125	WATER- Non Licensed (Tools & Equip)	2008	63,464	(63,464)	-	Deferred from 2021 to 2024; Cost based on quote from Sommers Generators Systems
2246	FORKLIFT PROPANE POWERED		738	WATER- Non Licensed (Tools & Equip)	2010	35,587	(35,587)	-	Deferred from 2022 to 2024; PD 17120
	Waterworks Non Fleet < \$5,000 or Misc			WATER - Waterworks Non Fleet < \$5,000 or Misc		2,122		2,122	
						249,256	(143,096)	106,160	
						Total Pre-Tax		106,160	
						HST Impact		1,868	
						Total Project Cost		108,027	
						Rounded Off Project Cost		108,000	

ORIGINAL PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
3	Licensed	148,083	2,606	150,689
2	Non Licensed (Tools & Equipment)	99,051	1,743	100,794
	Waterworks Non Fleet < \$5,000 or Misc	2,122	37	2,159
		249,256	4,387	253,643
5			Rounded Off Project Cost	253,600

UPDATED PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
2	Licensed	104,038	1,831	105,869
0	Non Licensed (Tools & Equipment)		-	-
	Waterworks Non Fleet < \$5,000 or Misc	2,122	37	2,159
		106,160	1,868	108,028
2			Rounded Off - Project Cost	108,000



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: New Fleet - Parks - Pre Approval

Project Cost: \$11,200

Commission: Community Services

New Asset/Expansion

Department: Operations - Fleet

Useful Life: 8 Pre Approval:

Project Mgr: Tanya Lewinberg/David Plant

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Supply & delivery of (1) Hydraulic Snow Blower with Skid Steer.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	11,006	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	11,006	0
HST Impact:	194	0
Total Project Cost:	11,200	0

NOTES

Hydraulic snow blower with Skid Steer - For monolithic sidewalk clearing.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>		
DCA	11,200	0	0	0	0	0	
TOTAL FUNDING	11,200				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$1,629	\$0	\$1,629

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$32,600

Project Name: New Fleet - Roads

New Asset/Expansion

Commission: Community Services

Useful Life: 20 Pre Approval:

Department: Operations - Fleet

Category: Annual

Project Mgr: Tony Greco/Steven Dollmaier

Cost Validation: Third party estimate

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase of one (1) new Slip In Water Tank for "Pro-Line" Body

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	32,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	32,000	0
HST Impact:	563	0
Total Project Cost:	32,600	0

NOTES

In the winter, bridges get dirty from the sand, salt and anti-icing chemicals that are spread on roads. Salt eats away at steel, which makes up much of a bridge's structure. Spring cleaning prolongs the life of our bridges and enhance the annual bridge maintenance program. The tank will also be used for Direct Liquid Applications during the winter months to prevent snow and ice from bonding to the pavement. This will help the City staff address hot spots, areas of concern and legislation changes to the MMS within the City as currently we have to give the contractor 24 hours' notice to be deployed. This will allow staff to address within the 24hours.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>							
DCA	32,600	0	0	0	0	0	0	
TOTAL FUNDING	32,600					0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<div style="border: 1px solid black; height: 80px;"></div>				



2023 PROJECT FUNDING REQUEST FORM

Number: **23024**

Project Name: **Upfit of Fleet Services Mobile Van**

Project Cost: **\$30,500**

Commission: Community Services

New Asset/Expansion

Department: Operations - Fleet

Useful Life: 16 Pre Approval:

Project Mgr: Tony Greco

Category: Annual

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Based on operational requirements, Fleet is making the request to upfit the Fleet mobile service van unit 5121 with the following:
1.) Mobile power unit equipped with air compressor, welding unit and vehicle booster
2.) Anti-slip heavy duty flooring
3.) Shelving unit to store various supplies
4.) Rear cargo door tool holder
5.) LED track lighting front to back in cargo area
6.) Front and rear LED emergency lights for roadside safety

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PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	30,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	30,000	0
HST Impact:	528	0
Total Project Cost:	30,500	0

NOTES

Fleet currently has a full size high roof cargo van used as a mobile service vehicle to repair vehicles/equipment and breakdowns in the field and at various City facilities including Civic Centre, 8100 Warden Ave. and Markham East yard. Having a fully equipped mobile service vehicle will aid in repairing units in the field reducing the need for towing, minimizing return trips to Fleet and increasing our current service levels to the various City departments.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	30,500	0	0	0	0	0	0	
TOTAL FUNDING	30,500					0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **German Mills Meadow Environmental Monitoring Program**

Project Cost: **\$82,800**

Commission: Community Services

Studies/Pilot Programs

Department: Operations - Utility Inspection & Survey

Useful Life: 0 Pre Approval:

Project Mgr: Negar Mahmoudi

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a consultant for the management of the German Mills Meadow and Natural Habitat. Work includes condition assessment, monitoring systems to ensure that appropriate protection is provided to abutting properties and German Mills Creek. This request is to hire a consultant to monitor for 1 year to ensure methane gas concentrations are below MOE (Ministry of Environment) compliance levels and German Mills Creek is not adversely affected by the leachate.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	81,368	0
Contingency %: 0	0	0
Sub Total:	81,368	0
HST Impact:	1,432	0
Total Project Cost:	82,800	0

NOTES

This request is for year 1 of a 3 year program.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	82,800	0	0	0	0	0	0
TOTAL FUNDING	82,800					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="357,600"/>
				Amount Incl HST: <input type="text" value="82,800"/>
				Year in the study: <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="Request is for one year monitoring."/>				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$81,600

Project Name: Bridges and Culverts - Condition Inspection

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Infrastructure

Category: Minor

Project Mgr: Hossein Sharif

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Legislative compliance

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a consultant to inspect vehicular bridges (14), pedestrian bridges (44), culverts (74) and boardwalks (9) as mandated by Public Transportation and Highway Act - Regulation 104/97 to ensure public safety. A total of 141 structures will be inspected out of 365. This program ensures inspections take place within the regulated timelines.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	80,200	0
Contingency %: 0	0	0
Sub Total:	80,200	0
HST Impact:	1,412	0
Total Project Cost:	81,600	0

NOTES

This is an annual program. There is no backlog and structures are in a state of good repair. Operations is responsible for preventative maintenance on bridges/culverts such as minor grading, patching, sealing of approaches and decks, and siltation removal from culverts, while Env. Services is responsible for its inspection, rehabilitation and replacement. Unit cost is consistent with recent award plus inflation. Amount requested is consistent with 2022 Life Cycle Reserve Study Update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	81,600	0	0	0	0	0	0
TOTAL FUNDING	81,600					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="81,600"/>
				Amount Incl HST <input type="text" value="81,600"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$756,600

Project Name: Storm and Sanitary Sewer CCTV Inspection

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Infrastructure

Category: Major

Project Mgr: Philip Zhang

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4

Requirement Validation: Condition assessment

5 6 7 8

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to determine the condition of the storm and sanitary sewers using closed circuit television (CCTV) inspection. Pipe rehabilitation/ replacement programs will be developed based on the condition inspection results. 2023 Program includes:
a) 107 km storm sewers out of total 940 km (Life Cycle funded); b) 106 km sanitary sewers out of total 931 km (Waterworks funded). Map is attached.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	676,400	3,333,000
Internal Charges:	0	0
External Consulting:	67,100	0
Contingency %: 0	0	0
Sub Total:	<u>743,500</u>	<u>3,333,000</u>
HST Impact:	<u>13,086</u>	<u>58,661</u>
Total Project Cost:	<u>756,600</u>	<u>3,391,700</u>

NOTES

This is an annual program (10 year cycle) - Phase 5 of 10. Program will be re-evaluated at the end of the 10 year cycle. External consultant is retained to identify deficiencies on CCTV inspection. Unit cost is consistent with recent award.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Contractor</u>	<u>Consultant</u>				
Operating Funded Life Cycle	262,600	238,900	23,700	0	0	262,600	1,219,700
Waterworks	494,000	449,400	44,600	0	0	494,000	2,172,000
TOTAL FUNDING	<u>756,600</u>					<u>756,600</u>	<u>3,391,700</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="262,600"/>
				Amount Incl HST <input type="text" value="262,600"/>
				Year in the study <input type="text" value="2023"/>

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

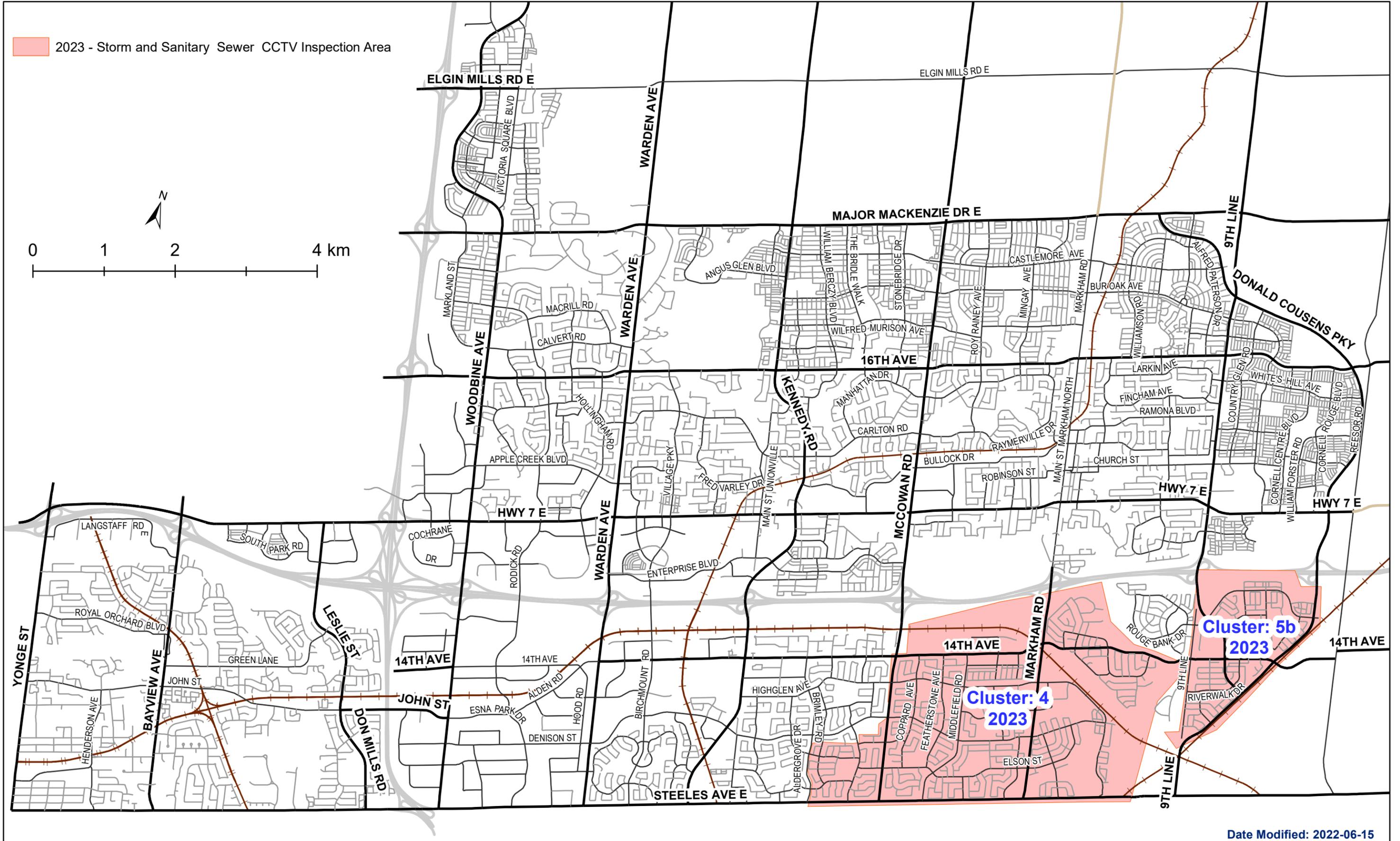
Total Cost: \$756,600
\$494,000 (65%) is funded through Sanitary Lifecycle (Water Rate)
\$262,600 (35%) is funded through Storm Lifecycle

MARKHAM STORM AND SANITARY SEWER CCTV INSPECTION

2023 - Storm and Sanitary Sewer CCTV Inspection Area



0 1 2 4 km



Cluster: 5b
2023

Cluster: 4
2023

Date Modified: 2022-06-15

Program Name: Storm and Sanitary CCTV Inspection								
Department: Environmental Services								
Phase #	Inspection year	Project #	Past	2023	Future	Total	Comments	
Phase 1	2019	#19225 / #19248/ 760-510-5300	\$524,003			\$524,003	52 km storm; 52 km sanitary; 1,400 laterals	
Phase 2	2020	#20237	\$1,585,200			\$1,585,200	90 km storm; 91 km sanitary; 6,946 laterals	
Phase 3	2021	#21149	\$652,800			\$652,800	80 km storm; 94 km sanitary	
Phase 4	2022	#22186	\$625,800			\$625,800	82.3 km storm; 80.8 km sanitary	
Phase 5	2023	#23xxx (This request)		\$756,600		\$756,600	107 km storm; 106 km sanitary	
Phase 6 to Phase 10	2024 - 2028				\$3,391,700	\$3,391,700		
Total Cost			\$3,387,803	\$756,600	\$3,391,700	\$7,536,103		
Description of Program								
Program to determine the condition of the storm and sanitary sewers using closed circuit television (CCTV) inspection								
What was completed in the past								
4 phases have been completed or in progress (out of 10 phases): \$3.39M								
Current ask								
CCTV inspection of 107 km storm sewers (out of 940 km) and 106 km sanitary sewers (out of 931 km) - \$756,600								
Future Phases								
Phases 6 to 10 between 2024 - 2028: \$3.39M								
Related 2023 Project(s)								
Sanitary Sewer Rehabilitation (#23xxx): \$846,600								
Map	Attached							



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$149,200

Project Name: Structures Program-Full-time Staff

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Infrastructure

Category: Annual

Project Mgr: Paul Ahn

Cost Validation: Other(specify in Notes)

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This funds one Senior Project Engineer (existing Permanent Full-Time staff) position.

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<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	149,200	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	149,200	0
HST Impact:	0	0
Total Project Cost:	149,200	0

NOTES

This is an annual program. The annual structures (bridges and culverts) program includes detailed visual inspection, condition survey/design, and cost effective maintenance program. The results are used to identify the structures that require rehabilitation. Rehabilitation of structures improves the overall condition and increases the service life. The amount requested is consistent with the 2022 Life Cycle Reserve Study Update. Requirement validation: This position is critical to support structures rehabilitation projects for the City-owned structures.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>							
Operating Funded Life Cycle	149,200	0	0	0	0	0	0	
TOTAL FUNDING	149,200					0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="149,200"/>
				Amount Incl HST <input type="text" value="149,200"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number: **23029**

Project Name: **West Thornhill Flood Control Implementation Ph 4B Constr.**

Project Cost: **\$14,522,500**

Commission: Community Services

Repair/Replace

Department: ES - Infrastructure

Useful Life: 100 Pre Approval:

Project Mgr: Paul Ahn

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To continue with the flood remediation program in the West Thornhill area based on Class EA study recommendations. This budget request is for upgrading the storm sewer pipes in Phase 4B area (Romfield Circuit area). See attached location map. Program is as follows:

- Est. West Thornhill program cost is \$110M (as of April 2019)
- Previous budget approved (up to 2022) represents 76% of West Thornhill Program cost.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	13,244,013	12,140,700
Internal Charges:	612,199	0
External Consulting:	425,678	0
Contingency %: 0	0	0
Sub Total:	<u>14,281,890</u>	<u>12,140,700</u>
HST Impact:	<u>240,587</u>	<u>213,676</u>
Total Project Cost:	<u>14,522,500</u>	<u>12,354,400</u>

NOTES

Requirement: Council direction to upgrade the storm sewer system in West Thornhill to 100 year level protection.

Funding Source: Stormwater Reserve. External consulting includes contract administration. The City will receive 40% of the eligible cost through DMAF Grant. Net cost to the City will be 60%.

Future phases are 4C & 4D - (Royal Orchard - between Yonge St. and Bay Thorn Dr, Wild Cherry Ln, Apple Orchard Path, Silver Aspen Dr, Normark Dr and Donalbain Cr).

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	CA	Construction	Int charge			
Gas Tax	2,000,000	0	2,000,000	0	0	2,000,000	0
Infrastructure Grant	5,564,111	173,268	5,390,843	0	0	5,564,111	0
Reserve Fund	6,958,389	259,902	6,086,288	612,199	0	6,958,389	12,354,400
TOTAL FUNDING	<u>14,522,500</u>					<u>14,522,500</u>	<u>12,354,400</u>

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

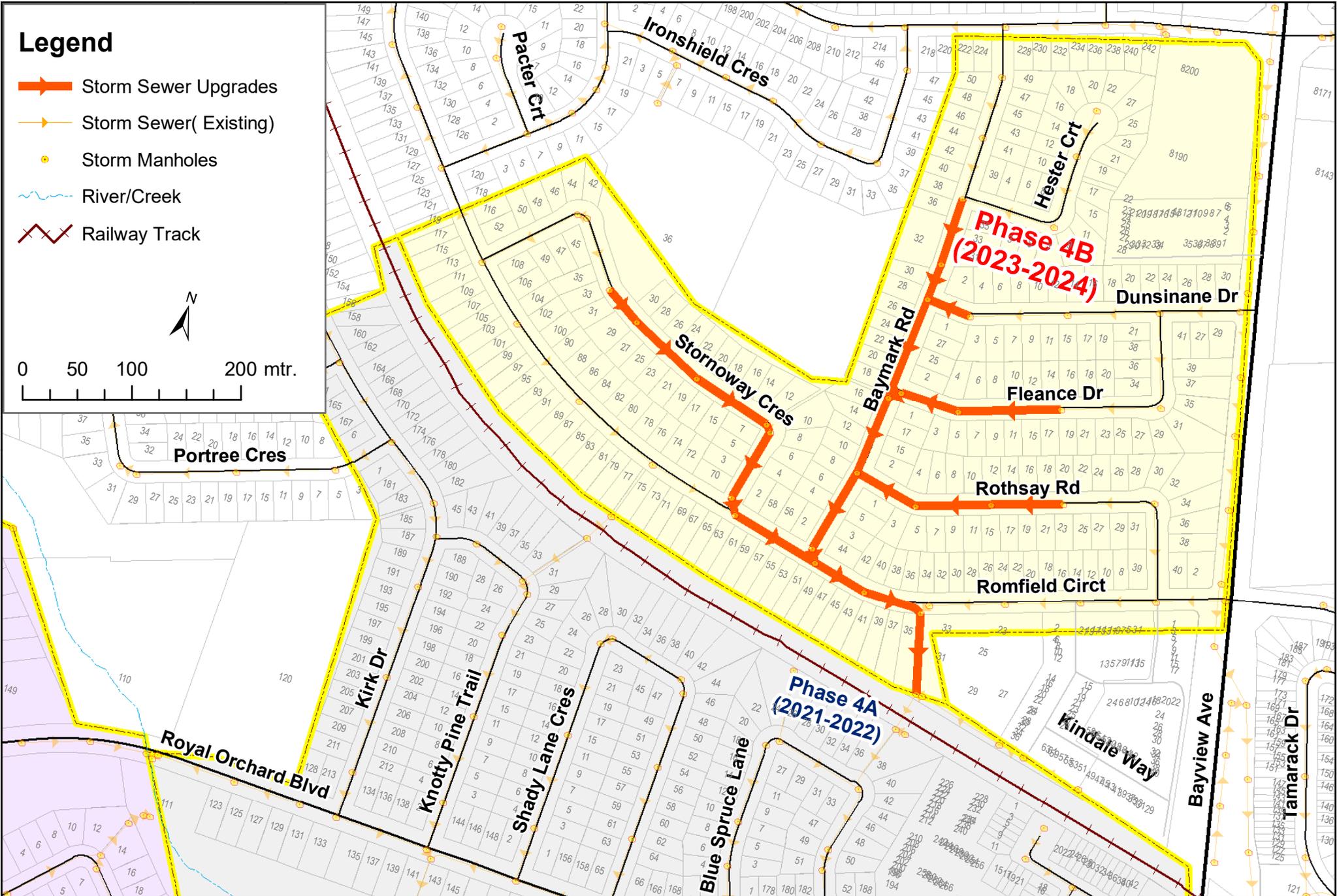
Amount Incl HST

Year in the study

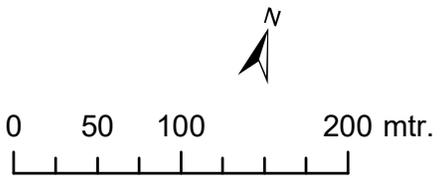
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



West Thornhill Flood Control Implementation – Phase 4B Construction



- Legend**
- Storm Sewer Upgrades
 - Storm Sewer(Existing)
 - Storm Manholes
 - River/Creek
 - Railway Track



Program Name: West Thornhill Flood Control Implementation					
Department: Environmental Services					
Component	Project #	Past	2023	Future	Total
Phase 1 (East of Bayview, North of Steeles, SW of CN tracks)	#8530, #9330, #14271, #15014	\$19,310,616			\$19,310,616
Phase 2 (West of Bayview, East of Yonge, N of Steeles, S of CN Tracks)	#16210, #17201, #18279, #19232	\$26,051,767			\$26,051,767
Phase 3 (West of Bayview, East of Yonge, S of John, N of CN tracks)	#16211, #20252, #21164, #22190 (This Request)	\$26,348,353			\$26,348,353
staff recovery					
Contingency for Ph 3					
Phase 4 (Royal Orchard/ Romfield - West of Bayview, East of Yonge)	#18280, #21165, #23xxx	\$12,412,539	\$14,522,500	\$12,354,226	\$39,289,265
Total Cost		\$84,123,275	\$14,522,500	\$12,354,226	\$111,000,000
Description of Program					
To upgrade the storm sewer system in West Thornhill to 100 year level protection					
What was completed in the past					
11 phases have been completed or in progress (out of 14 phases) since 2013 - 2022: \$84.1M					
Current ask					
Phase 4B Construction (#23xxx): \$14,522,500					
Future Phases					
Phases 4C, 4D Construction 2024 - 2026 - \$12.4M					
Related 2022 Project(s)					
CI watermain Replacement - West Thornhill Phase 3C Construction (#22204): \$3,102,500					
Map					
Attached					
PROGRAM STATUS					
Phases		Project Status			
1A (Doncrest Dr and Daffodil Ave)		Total completion in Aug 2017			
1B (Laureleaf Rd, Poinsetta Dr, Multiflora Pl)		Total completion in Aug 2018			
1C (Canadiana Dr)		Total completion in Dec 2018			
2A (Grandview Ave, Brightbay Cr, Courtham Ave, Rayneswood Cr, Pineval Dr, Elspeth Pl)		Total completion in Dec 2018			
2B (Grandview Park, Henderson Ave and Proctor Ave)		Total completion in Dec 2019			
2C (Grandview Ave/ Woodward Ave/ Highland Park Blvd - between Jewll St and Yonge St, Meadow Ave, Willowdale Blvd, Dudley Ave, Jewell St)		Total completion in Nov 2021			
2D (Grandview Ave/ Woodward Ave/Highland Park Blvd - between Henderson Ave and Jewell St.; Dalmeny Rd, Delcair Cr, Henderson Ave between Grandview Ave and Dalmeny Rd)		Total completion in Nov 2021			
3A (Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)		Under warranty until Aug 2023			
3B (Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wlarton Crt)		Under warranty until Nov 2023			
4A (Royal Orchard - between Doral Gate to Pomona Creek, Kirk Dr, Knotty Pine Trail, Blus Spruce Ln, Doral Gate, Augusta Crt)		Project commenced in May 2021; Anticipated Substantial completion in Nov 2022			
3C (Clark Ave and Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)		Project commenced in May 2022;			
4B (This Request) (Romfield Cir Area)		Design 90% completed; Construction in 2023 - 2024			
4C & 4D (Royal Orchard - between Yonge St. and Bay Thorn Dr, Wild Cherry Ln, Apple Orchard Path, Silver Aspen Dr, Normark Dr, Donalbain Cr)		Design 90% completed; Construction in 2024 - 2026			



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **SWM Ponds - Condition Inspection**

Project Cost: **\$28,100**

Commission: Community Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Rob Muir

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Condition assessment of inlet/outlet control structures and measurement of sediment level on selected stormwater management (SWM) ponds in order to update the SWM Pond database, and to develop an effective pond SWM maintenance program.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	27,600	0
Contingency %: 0	0	0
Sub Total:	27,600	0
HST Impact:	534	0
Total Project Cost:	28,100	0

NOTES

This program runs every other year. Prior to request for funding for sediment cleaning, SWM ponds will be inspected and surveyed to determine maintenance requirements and priority rankings.

Approximately 15 ponds will be surveyed out of total 70 wet ponds. Operations is responsible for minor above ground maintenance on SWM ponds while Environmental Services is responsible for all other aspects including inspection, sediment cleaning, rehabilitation and flood control strategies. There is no backlog.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	28,100	0	0	0	0	0	0
TOTAL FUNDING	28,100					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="28,100"/>
				Amount Incl HST <input type="text" value="28,100"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$77,300

Project Name: Water Quality Improvements

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Stormwater

Category: Major

Project Mgr: Zahra Parhizgari

Cost Validation: Internal peer review

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to carry out the geese control program at Swan Lake (Ward 5) and Toogood Pond (Ward 3). This program is intended to manage recurring water quality complaints and to reduce nutrient loading into Swan Lake and Toogood Pond.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	76,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	76,000	0
HST Impact:	1,338	0
Total Project Cost:	77,300	0

NOTES

This is an annual program to carry out geese control at Swan Lake and Toogood Pond. Program has been enhanced on geese management, fish removal as per Markham Sub Committee report dated Nov 16, 2021 which was approved by the Council. Requirement Validation: To protect the water quality.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>							
Operating Funded Life Cycle	77,300	0	0	0	0	0	0	
TOTAL FUNDING	77,300					0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="77,300"/>
				Amount Incl HST <input type="text" value="77,300"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Water Quality Monitoring at Swan Lake**

Project Cost: **\$30,900**

Commission: Community Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Zahra Parhizgari

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This request is to continue with the water quality sampling and analysis at Swan Lake.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	30,400	0
Contingency %: 0	0	0
Sub Total:	30,400	0
HST Impact:	535	0
Total Project Cost:	30,900	0

NOTES

Requirement: In June 2020, Council approved continuation of monitoring at Swan Lake.
Unit cost is consistent with recent budget plus inflation. Amount requested is consistent with 2022 Life Cycle Reserve Study Update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>	<u>Future Phases</u>	
Operating Funded Life Cycle	30,900	0	0	0	0	0	
TOTAL FUNDING	30,900				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="30,900"/>
				Amount Incl HST <input type="text" value="30,900"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: West Thornhill Flood Control - Ph 4C & 4D Addl. Design

Project Cost: \$203,500

Commission: Community Services

Repair/Replace

Department: ES - Stormwater

Useful Life: 100 Pre Approval:

Project Mgr: Timothy Ng

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This budget request is for additional detailed design work required for Phase 4C & 4D. Map is attached.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	200,000	0
Contingency %: 0	0	0
Sub Total:	200,000	0
HST Impact:	3,520	0
Total Project Cost:	203,500	0

NOTES

Additional design is required for Phase 4C & 4D due to following:

- To accommodate new developments around Yonge Street and Royal Orchard subway station areas, revisions to original sanitary sewer alignment, and increase in capacity is required
- Excess soil management O. Reg. 406/19 has been implemented in 2022 that dictates additional testing of soils and tracking
- Storm sewer outfall redesign and diversion are required to accommodate adjacent property owners (Ladies Golf Club Toronto) and revise the original EA alignment

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Reserve Fund	203,500	0	0	0	0	0	0
TOTAL FUNDING	203,500					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

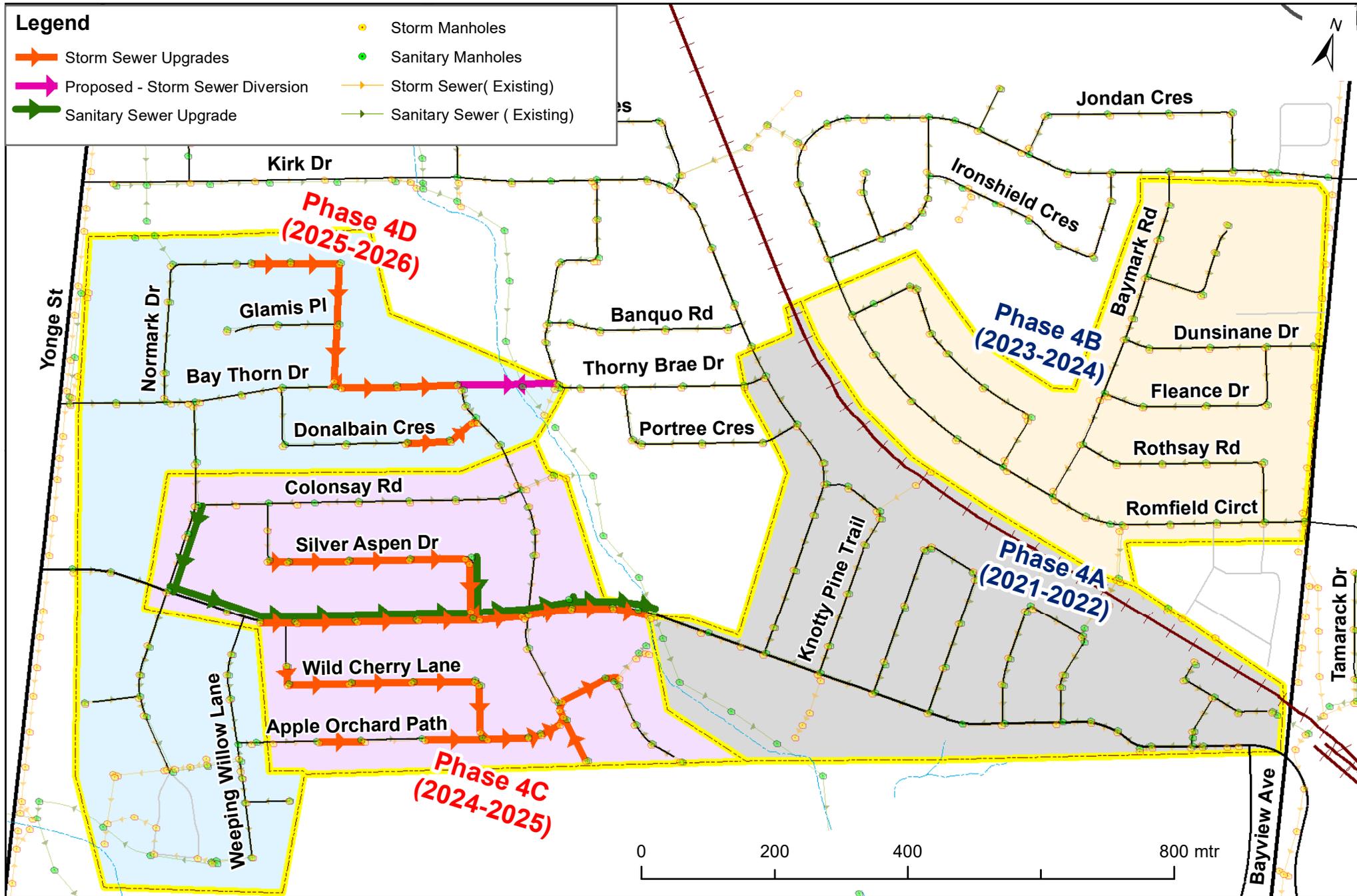
<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



West Thornhill Flood Control – Phases 4C & 4D Additional Design

Legend

- Storm Manholes (Yellow circle)
- Sanitary Manholes (Green circle)
- Storm Sewer Upgrades (Orange arrow)
- Proposed - Storm Sewer Diversion (Pink arrow)
- Sanitary Sewer Upgrade (Green arrow)
- Storm Sewer (Existing) (Thin orange line)
- Sanitary Sewer (Existing) (Thin green line)





2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$110,700

Project Name: Asset Management Analyst - Full Time Staff

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Waterworks

Category: Annual

Project Mgr: Shipra Singh

Cost Validation: Other(specify in Notes)

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This funds one permanent full time staff position.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	110,700	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	110,700	0
HST Impact:	0	0
Total Project Cost:	110,700	0

NOTES

This position will assist the IMS/ Capital Planning Manager to effectively manage data and capital planning for all ES assets with a value of \$7.6B (78% of City assets value) and enhance the service level.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>	<u>Future Phases</u>	
Waterworks	110,700	0	0	0	0	0	
TOTAL FUNDING	110,700				0	0	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="110,700"/>
				Amount Incl HST <input type="text" value="110,700"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: Cathodic Protection of Ductile Iron Watermains

Project Cost: \$995,100

Commission: Community Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 20 Pre Approval:

Project Mgr: Richard Kit

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to install corrosion protection material (anodes) to ductile iron (DI) watermains to reduce/ prevent corrosion. Renewal of corrosion protection is necessary to replace the depleted anodes (18-20 years old) and test stations. Map attached.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	977,900	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	977,900	0
HST Impact:	17,211	0
Total Project Cost:	995,100	0

NOTES

This is an annual program. Program commenced in 1993 with an avg. of 120 watermain breaks/year which has reduced to an avg. of 19 breaks/ year in last five years. Second cycle of ductile and cast iron watermains corrosion protection commenced in 2014. This request is to install anodes for approx. 20 km length of DI watermain (Refer to attached map). Unit cost is consistent with recent award plus inflation.

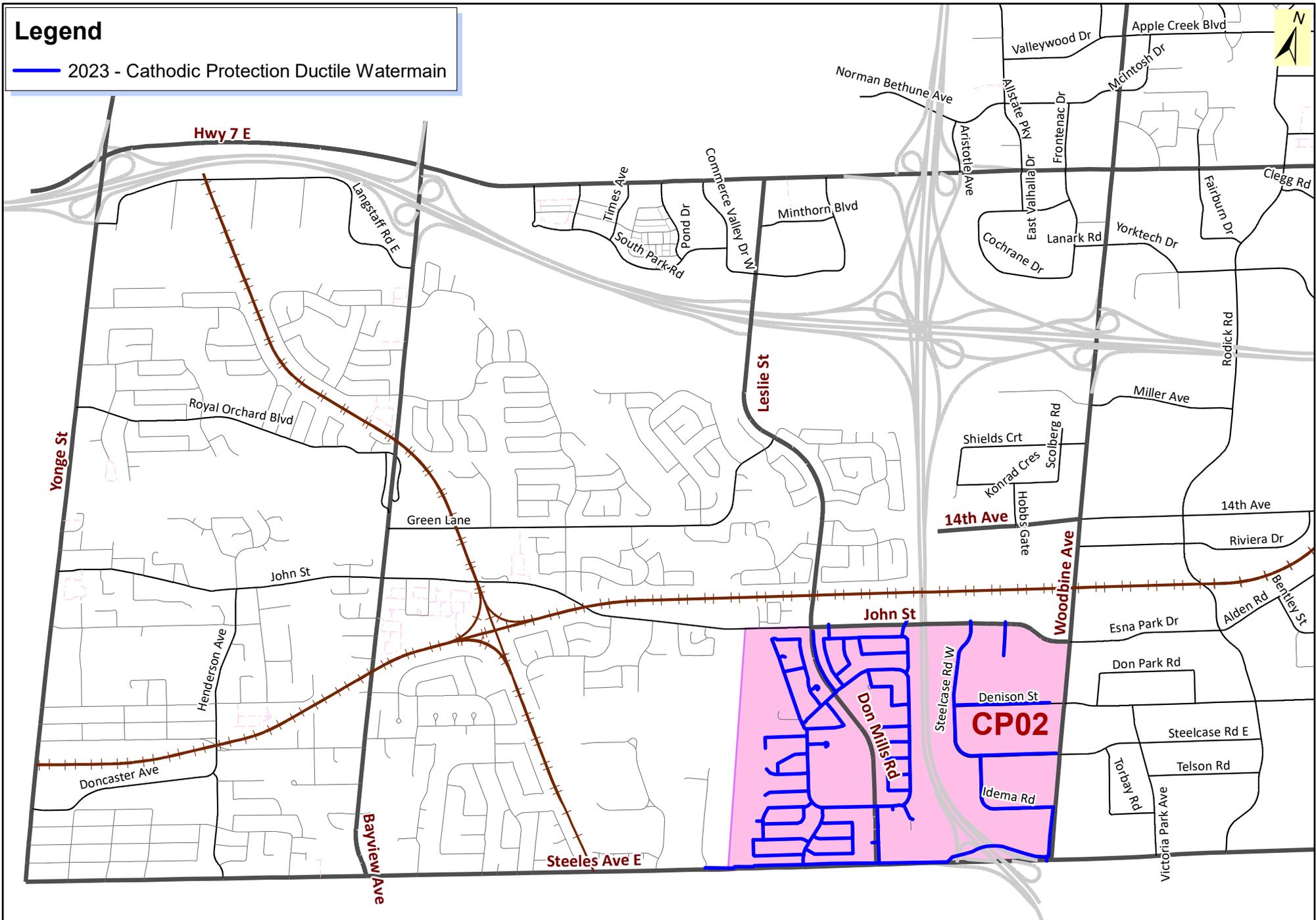
<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Waterworks	995,100	0	0	0	0	0	0
TOTAL FUNDING	995,100					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="995,100"/>
				Amount Incl HST <input type="text" value="995,100"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

MARKHAM Cathodic Protection of Ductile Iron Watermain



Program Name: Cathodic Protection of Iron Watermains						
Department: Environmental Services						
Year	Project #	Past	2023	Future	Total	Remarks
2019	#19241	\$427,800			\$427,800	10.4 km Cast Iron
2020	#20255	\$378,900			\$378,900	11 km Cast Iron
2021	#21167	\$493,100			\$493,100	15 km Ductile Iron
2022	#22201	\$444,000			\$444,000	12 km Ductile Iron
2023	#23xxx		\$995,100		\$995,100	20 km Ductile Iron
2024 Onwards				varies	varies	
Total		\$1,743,800	\$995,100			
Description of Program						
Program to install corrosion protection material (anodes) to ductile iron (DI) and Cast Iron (CI) watermains to reduce/ prevent corrosion. This is an annual program.						
What was completed in the past						
See above table						
Current ask						
\$995,100						
Future Phases						
Varies						
Related 2023 Project(s)						
N/A						
Map	Attached					



2023 PROJECT FUNDING REQUEST FORM

Number: 23036

Project Name: CI Watermain Replacement - Construction

Project Cost: \$9,811,400

Commission: Community Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 0 Pre Approval:

Project Mgr: Jawaid Khan

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of approx. 3.5 km cast iron (CI) watermain in Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area (refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	9,193,800	65,194,870
Internal Charges:	149,200	0
External Consulting:	301,300	0
Contingency %: 0	0	0
Sub Total:	<u>9,644,300</u>	<u>65,194,870</u>
HST Impact:	<u>167,114</u>	<u>1,147,430</u>
Total Project Cost:	<u>9,811,400</u>	<u>66,342,300</u>

NOTES

This is an annual program (Phase 5b of 15; ending in 2032). Total CI Watermain: 54.1 km. As part of the CI watermain replacement program, 92% of aged CI watermain will be replaced with PVC and 8% will be rehabilitated with CIPP liner. This request is for construction of 3.5km cast iron watermain. Design was requested through 2022 capital budget request.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>CA</u>	<u>Construction</u>	<u>Internal staff</u>			
Waterworks	9,811,400	306,600	9,355,600	149,200	0	9,811,400	66,342,300
TOTAL FUNDING	<u>9,811,400</u>					<u>9,811,400</u>	<u>66,342,300</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: 9,688,200
				Amount Incl HST 9,811,400
				Year in the study 2023
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Cost has been increased based on the current tender rates.				

Program Name: CI Watermain Rehabilitation / Replacement					
Department: Environmental Services					
Component	Project #	Past	2023	Future	Total
Phase 1 (West Thornhill Ph 2D; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	#19245, #19243	\$13,624,200			\$13,624,200
Phase 2 (West Thornhill Ph 3A; Laureleaf Area / Milmar Crt Area)	#19242, #20257, #20258	\$12,034,200			\$12,034,200
Phase 3a (John St & 14th Ave end Section (Re-Lining))	#20256, #21168	\$7,060,400			\$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170	\$4,036,300			\$4,036,300
Phase 4a (Gladiotor Rd / Bakerdale / Southdale / Bakerdale Area)	#21169, #22202	\$5,746,300			\$5,746,300
Phase 4b (West Thornhill Area - Phase 3C)	#22204	\$3,412,700			\$3,412,700
Phase 5a - Design (Drakefield Rd/ Banfield Ave./ Princess St. / Dublin St. Area)	#22203	\$297,200			\$297,200
Phase 5b - Construction (Drakefield Rd/ Banfield Ave./ Princess St. / Dublin St. Area)	#23xxx (This request)		\$9,811,400		\$9,811,400
Phase 6 to Phase 15	N/A			\$66,342,300	\$66,342,300
Total		\$46,211,300	\$9,811,400	\$66,342,300	\$122,365,000
Description of Program					
To replace aged cast iron watermain (current age: 58 years; service life: 60 years) with PVC watermain (service life: 90 years)					
What was completed in the past					
4 phases (Phase 1, 2, 3 & 4) have been completed (out of 15 phases) since 2019 - \$45.9M					
Phase 5a (design) completed - \$0.3M					
Total (2019-2022): \$46.2M					
Current ask					
Phase 5b - Construction (Drakefield Rd/ Banfield Ave./ Princess St. / Dublin St. Area) (#23xxx): \$9,811,400					
Future phases					
Phase 6 to Phase 15 (2024- 2032) - \$66.3M					
Related 2023 project(s)					
None					
Map					
Attached					
PROGRAM STATUS					
Phases		Project Status			
Phase 1		Completed in 2019			
Phase 2a (Design) (Laureleaf Area / Milmar Crt & Alden Rd)		Completed in 2019			
Phase 2a (Construction) (Laureleaf Area / Milmar Crt & Alden Rd)		Completed in 2020			
Phase 2b (West Thornhill Area - Phase 3A: Morgan Ave - between Henderson and Yonge; Clark Ave - between Hendwerson and Johnson)		Completed in 2020			
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))		Completed in 2020			
Phase 3a (Construction) (John St & 14th Ave end Section (Re-Lining))		Completed in 2021			
Phase 3b (Construction) (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarion Crt)		Completed in 2021			
Phase 4a (Design) (Gladiotor Rd / Bakerdale / Southdale / Bakerdale Area)		Completed in 2021			
Phase 4a (Construction) (Gladiotor Rd / Bakerdale / Southdale / Bakerdale Area)		2022			
Phase 4b (Construction) (West Thornhill Area - Phase 3C (Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)		2022			
Phase 5a - Design (Drakefield Rd/ Banfield Ave./ Princess St. / Dublin St. Area)		2022			
Phase 5b - Construction (This Request) (Drakefield Rd. / Banfield Ave./ Princess St. / Dublin St. Area)		2023			
Phase 6 to Phase 15 (various streets)		2024 - 2032			



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$312,000

Project Name: SCADA Instrumentation and Replacement

Repair/Replace

Commission: Community Services

Useful Life: 0 Pre Approval:

Department: ES - Waterworks

Category: Major

Project Mgr: Edgar Tovilla

Cost Validation: Third party estimate

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Legislative compliance

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Added/replacement of instrumentation equipment for all 5 sanitary pumping stations, and increased the cost of SCADA programming and AM Integration study.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	306,604	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>306,604</u>	<u>0</u>
HST Impact:	<u>5,396</u>	<u>0</u>
Total Project Cost:	<u>312,000</u>	<u>0</u>

NOTES

Plan to apply priorities 1 to 3 from the SUMMA Engineering report (June 2022). These priorities include: centralized SCADA system upgrade to latest version of software, new reporting software configuration (no license required), investigation of backup alarming and remote terminal units communication reliability, remote SCADA system upgrade to latest software, remote SCADA system upgrade hardware for the 5 stations, field devices comms. hardware (generator, monitor, relays, VFD), and upgrade of HMI screens, historian & Win 911 modifications.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Operating Funded Life Cycle	312,000	0	0	0	0	0	0
TOTAL FUNDING	<u>312,000</u>					<u>0</u>	<u>0</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="317,500"/>
				Amount Incl HST <input type="text" value="312,000"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$1,067,600

Project Name: Water Meters - Replacement Program

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval:

Department: ES - Waterworks

Category: Minor

Project Mgr: Vikas Thakur

Cost Validation: Recent awards

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of Residential, Multi Residential and Industrial/ Commercial/ Institutional (ICI) water meters that have reached the end of their service life.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	1,049,100	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	<u>1,049,100</u>	<u>0</u>
HST Impact:	<u>18,464</u>	<u>0</u>
Total Project Cost:	<u>1,067,600</u>	<u>0</u>

NOTES

This is an annual program. Total inventory: 83,614. This request is to replace approx. 3,927 water meters (3,800 residential, 22 multi residential and 105 ICI) and perform random testing of approx. 5% of meters for accuracy per AWWA C700 (Recommendation #1 for Improvement on Metering Practices, 2015 by Region of York). There is no substantial backlog and water meters are in a state of good repair. Unit cost is consistent with recent award plus inflation.

<u>SOURCE(S) OF FUNDING (\$)</u>		<u>Components</u>					<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>	<u>Phases</u>	
Waterworks	1,067,600	0	0	0	0	0	
TOTAL FUNDING	<u>1,067,600</u>				<u>0</u>	<u>0</u>	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="1,067,600"/>
				Amount Incl HST <input type="text" value="1,067,600"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: Water Meters - Replacement Program						
Department: Environmental Services						
Year	Project #	Past	2023	Future	Total	
2019	#19253	\$802,500			\$802,500	
2020	#20266	\$996,700			\$996,700	
2021	#21175	\$1,013,200			\$1,013,200	
2022	#22209	\$936,400			\$936,400	
2023	#23xxx		\$1,067,600		\$1,067,500	
2024 Onwards				varies	varies	
Total		\$3,748,800	\$1,067,600			
Type of Water Meter	Total Inventory (as of Jan 2022)	2023 Program				
Residential	80,897	3,800	4.7%			
Multi Residential	588	22	3.7%			
Industrial/ Commercial/ Institutional (ICI)	2,129	105	4.9%			
Total	83,614	3,927	4.7%			
Description of Program						
Replacement of Residential, Multi-Residential and Industrial/Commercial/Institutional (ICI) water meters that have reached the end of their service life (20 years)						
What was completed in the past						
See above table						
Current ask						
Water Meters - Replacement Program (#23xxx): \$1,067,600						
Future Phases						
Varies						
Related 2023 Project(s)						
N/A						
Map	N/A					



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: ITS - TXM Solution Replacement (Consultancy)

Project Cost: \$101,800

Commission: Corporate Services

Studies/Pilot Programs

Department: ITS

Useful Life: 0 Pre Approval:

Project Mgr: Ned Sirry

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

As a result of Mississauga's notification of the Property Tax Billing System (TXM) not being supported post a future TBD date, we will need to find a new solution. As we are also in the midst of looking for a new water billing solution as well, there may be an opportunity to look at bundling the systems together. In order to determine the next steps and identify future capital requirements, consultant capital is need to review and help determine solution direction.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	100,000	0
Contingency %: 0	0	0
Sub Total:	<u>100,000</u>	<u>0</u>
HST Impact:	<u>1,760</u>	<u>0</u>
Total Project Cost:	<u>101,800</u>	<u>0</u>

NOTES

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Ramp Up	101,800	0	0	0	0	0	
TOTAL FUNDING	<u>101,800</u>					<u>0</u>	

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text"/>				



2023 PROJECT FUNDING REQUEST FORM

Number: **23040**

Project Cost: **\$488,400**

Project Name: **IT Lifecycle Asset Replacement**

Repair/Replace

Commission: Corporate Services

Useful Life: 0 Pre Approval:

Department: ITS

Category: Major

Project Mgr: Sugun Rao

Cost Validation: Third party estimate

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The request is to seek pre-approval of IT Lifecycle hardware and software assets that are 8 to 10 year old and have started to fail causing unexpected service interruptions.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	480,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	480,000	0
HST Impact:	8,448	0
Total Project Cost:	488,400	0

NOTES

The pre-approval request includes replacement of the following assets:

1. Tier 1 Firewall (Primary Data Centre),
2. Computing device - For newly elected council members, Forestry department and adhoc new requests,
3. Audio Visual equipment for Council Chambers

The \$92k Non-Personnel operating budget is for the ongoing firewall subscription licenses that provide additional cyber security features. Operating budget impact is expected to start in 2023.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>		<u>Future Phases</u>
Building Fees	29,304	0	0	0	0	0	0
Development Fees	39,072	0	0	0	0	0	0
Operating Funded Life Cycle	390,720	0	0	0	0	0	0
Waterworks	29,304	0	0	0	0	0	0
TOTAL FUNDING	488,400				0		0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$92,000	\$0	\$92,000

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Staff has validated that the proceeding 2023 capital submission has sufficient life cycle funding.

DETAILS FOR CAPITAL PROJECT IT LIFECYCLE ASSET REPLACEMENT

Item	Source of Funding						
	Quantity	Total Costs	Life Cycle	Water Works	Building	Engineering	Planning
2023 IT Lifecycle Asset Replacement							
1 Tier 1 Firewall Replacement <i>Replacement of aging Tier one Firewall. (8+ year old), The replacement solution will include enhanced security features such as threat prevention, Sandblast for Zero-Day protection.</i>		\$250,000	\$200,000	\$15,000	\$15,000	\$10,000	\$10,000
2 Council Chamber - Audio Processor Replacement <i>Replacement of 10 years old Digital Audio processor and touch screen control panel in Council Chamber. The components of this asset has failed three times within a month causing service interruption during council meeting.</i>	1	\$130,000	\$104,000	\$7,800	\$7,800	\$5,200	\$5,200
3 Computing device replacement <i>Life Cycle replacement of computing device for new council members, Forestry and other adhoc requests</i>		\$100,000	\$80,000	\$6,000	\$6,000	\$4,000	\$4,000
Total		\$480,000	\$384,000	\$28,800	\$28,800	\$19,200	\$19,200
HST Impact		1.76%	\$8,448	\$6,758	\$507	\$507	\$338
Total with HST Impact		\$488,448	\$390,758	\$29,307	\$29,307	\$19,538	\$19,538



2023 PROJECT FUNDING REQUEST FORM

Number: **23042**

Project Name: **ITS - Leap Cloud (Feb Server)**

Project Cost: **\$149,600**

Commission: Corporate Services

Repair/Replace

Department: ITS

Useful Life: 2 Pre Approval:

Project Mgr: Rob Cole

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Our current portal forms are maintained in what is called LEAP (formerly FEB server). Capital costs include cost of upgrading current Leap forms to Leap version 9 and migrating forms from the current Compugen environment to a new environment on the Amazon Web Services Cloud.

This includes migrating approximately 85 existing Portal forms.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	147,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	147,000	0
HST Impact:	2,587	0
Total Project Cost:	149,600	0

NOTES

There is \$52.5k operating budget for Leap hosting in GL account 400-400-5361. The \$70k Non-Personnel Cost is incremental operating cost and is expected to start in 2024.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Building Fees	8,976	0	0	0	0	0	0
Development Fees	11,968	0	0	0	0	0	0
Ramp Up	119,680	0	0	0	0	0	0
Waterworks	8,976	0	0	0	0	0	0
TOTAL FUNDING	149,600					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$70,000	\$0	\$70,000

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number: 23043

Project Name: ITS - Microsoft 365

Project Cost: \$407,000

Commission: Corporate Services

New Asset/Expansion

Department: ITS

Useful Life: 8 Pre Approval:

Project Mgr: Sugun Rao

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Microsoft 365 (M365) has become the standard tool in our industry for efficient utilization of the office suite of tools (ie. Word, Excel, PowerPoint.) as well as for email, document collaboration, messaging. The tool is cloud based allowing for the freeing up of onsite server capacity. In addition, it provides the opportunity to further introduce Power BI, a business intelligence tool for mining data and being able to present and use this data to make critical decisions.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	300,000	0
Contingency %: 0	0	0
Sub Total:	400,000	0
HST Impact:	7,040	0
Total Project Cost:	407,000	0

NOTES

High level estimate of \$300k for consultancy and implementation services received from Microsoft based on our current environment, inclusive of a new tool to collect usage stats. Capital includes Year 1 licensing cost of \$100K. Incremental annual operating budget impact of \$100k is expected to start in 2024. This project and solution will require an additional 0.5 FTE for ongoing support. The 1 FTE Personnel Costs shown below is a combined submission of the 0.5 FTE needed for this project and 0.5 FTE needed for the Cyber Security Enhancement project. The Personnel Cost impact is expected to start in 2023.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
	<u>Budget</u>				<u>TOTAL</u>		
Building Fees	24,420	0	0	0	0	0	0
Development Fees	32,560	0	0	0	0	0	0
Operating Funded Life Cycle	325,600	0	0	0	0	0	0
Waterworks	24,420	0	0	0	0	0	0
TOTAL FUNDING	407,000				0		0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$124,625	\$100,000	\$0	\$224,625

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Staff has validated that the proceeding 2023 capital submission has sufficient life cycle funding.



2023 PROJECT FUNDING REQUEST FORM

Number: **23044**

Project Cost: **\$107,400**

Project Name: **ITS - Oracle DB Licensing**

Commission: Corporate Services

New Asset/Expansion

Department: ITS

Useful Life: 0 Pre Approval:

Project Mgr: Matt Miller

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Increase the Oracle Enterprise Edition License pool with 3 additional core licenses. These additions will allow us to expand our Oracle Database storage and processing power. This will allow us to futureproof for any additional Enterprise applications as needed. This is needed for license compliance. Hardware has already been ordered and is about to be commissioned.

CAPEX

Oracle Database Enterprise Edition License = 3 @ \$28,821 = \$86,463

Software Update License & Support = 3 @ \$6,341 = \$19,023

Total = \$105,486

Operating

Software Update License & Support = 3 @ \$6,341 = \$19,023

Total: \$19,023

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS (\$)	2023	Future Phases
Cost/Quote:	105,500	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	105,500	0
HST Impact:	1,857	0
Total Project Cost:	107,400	0

NOTES

The Non-Personnel budget impact is expected to start in 2024.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget				TOTAL		
Building Fees	6,444	0	0	0	0	0	0
Development Fees	8,592	0	0	0	0	0	0
Ramp Up	85,920	0	0	0	0	0	0
Waterworks	6,444	0	0	0	0	0	0
TOTAL FUNDING	107,400				0		0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$19,100	\$0	\$19,100

DCA/LIFE CYCLE DETAILS

DCA

Name

Year

Amount

**Amount in
Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:



2023 PROJECT FUNDING REQUEST FORM

Number: 23045

Project Cost: \$203,500

Project Name: Water Billing Transition Project - Phase 2 of 3

Studies/Pilot Programs

Commission: Corporate Services

Useful Life: 0 Pre Approval:

Department: Finance

Category: Minor

Project Mgr: Shane Manson

Cost Validation: Third party estimate

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Other(specify in Notes)

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The City's water billing is currently outsourced to Alectra Utilities until the end of 2024. Phase 1 was Discovery Phase to clearly articulate the current state and desired objectives for the water billing solution, which includes documenting requirements and provide options on the best process to to move forward. This is expected to be completed by the end of September 2022. Phase 2 requires a consultant to support and guide in the procurement, evaluation, selection and vendor negotiations of the option selected (in-house, out-sourced, or hybrid), which should be decided by the end of 2022. Phase 3 will be the implementation of the option chosen.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	200,000	0
Contingency %: 0	0	0
Sub Total:	<u>200,000</u>	<u>0</u>
HST Impact:	<u>3,520</u>	<u>0</u>
Total Project Cost:	<u>203,500</u>	<u>0</u>

NOTES

Pre-approval required of \$200K to ensure funding is intact to acquire consultant to continue to move forward with Phase 2. A separate budget will be submitted for software, systems, etc once the option has been determined and approved by Senior Management.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Consultant</u>					
Waterworks	203,500	203,500	0	0	0	203,500	0
TOTAL FUNDING	<u>203,500</u>					<u>203,500</u>	<u>0</u>

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
<u>Name</u>				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$767,000

Project Name: Roofing Replacement Projects

Repair/Replace

Commission: Corporate Services

Useful Life: 20 Pre Approval:

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Michael Ryan

Cost Validation: Internal peer review

Ward(s): CW 1 2 3 4
5 6 7 8

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes roofing and accessories replacement works at various locations throughout the City to ensure a state of good repair and in alignment to the Asset Management Plan/Policy. Roofs for replacement in the budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Condition assessment completed 2021, over a year ago, and as a result may be subject to change.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>	<u>NOTES</u>
Cost/Quote:	753,734	0	\$42,800 - Cedar Grove Community Centre - Chimney (1960) & Shingles (2003) \$724,200 - Thornhill Community Centre - Fitness Centre Flat Roof (2005) Amount is consistent with the 2022 Life Cycle Reserve Study update.
Internal Charges:	0	0	
External Consulting:	0	0	
Contingency %: 0	0	0	
Sub Total:	753,734	0	
HST Impact:	13,266	0	
Total Project Cost:	767,000	0	

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Budget</u>	<u>Components</u>				<u>TOTAL</u>	<u>Future Phases</u>
		<u>Cedar Grove Community Centre</u>	<u>Thornhill Community Centre</u>				
Operating Funded Life Cycle	767,000	42,800	724,200	0	0	767,000	0
TOTAL FUNDING	767,000					767,000	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="938,100"/>
				Amount Incl HST <input type="text" value="767,000"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2023 Budget Request Back-up Pictures

Thornhill Community Centre – Roofing (18 years olds)



Photo 1: Numerous Blisters (elevated areas) in a high traffic area. Previous patch repairs (lighter coloured membrane areas).



Photo 2: Close up of blister on Roofs at the same area as Photo 1. Significantly more blisters than what would be seen on a roof such as this.



Photo 3: Degranulation (darker areas) of the membrane which is indicative of the age. Will accelerate UV deterioration of the membrane. Previous patch repairs (lighter coloured membrane patch).



Photo 4: Blister at the roof perimeter. Note with increase in temperature blisters become larger this increases the thermal expansion/contraction of the membrane. This will increase wear on the membrane (e.g. degranulation, cracking).

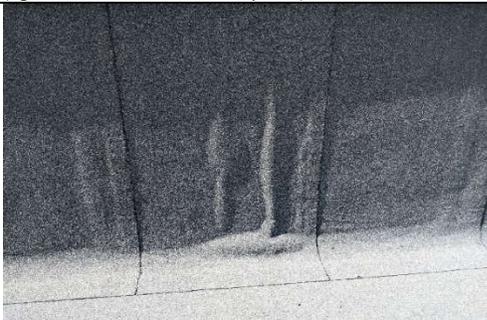


Photo 5: Blisters at the walls, widespread at walls.



Photo 6: Previous patch repairs.



Photo 7: Alligatoring (cracking) of roofing membrane.



Photo 8: Roofing membrane degranulation. Granules protect roof from UV degradation.

Cedar Grove Community Centre – Roof Replacement (19 years old)



Photo 1: Roof shingles are curling at west elevation. Sign of UV degradation.



Photo 2: Degranulation and curling of shingles at roof.



Photo 3: Widespread curling of the roofing shingles. Roof has failed.



Photo 4: Shingle curling at the east elevation.



Photo 5: Leaking at building interior, significant leak event to cause this "bubbling" of the tile.



Photo 6: Water staining at the building interior.



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$447,700

Project Name: Theatre-Dressing Room Renovations

Commission: Development Services

Repair/Replace

Department: Theatre

Useful Life: 15 Pre Approval:

Project Mgr: Andrew Rosenfarb

Category: Major

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Originally requested, approved by council, tendered and awarded in 2020-Project # 20008, this project was deferred because the facility was closed. Project includes a redesign and renovation of 6 separate dressing rooms including replacement of flooring, counters, shower stalls, tiles, plumbing fixtures, toilets, partitions, sinks/faucets, mirrors, chairs, costume racks, lighting, electrical and painting.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	360,000	0
Internal Charges:	0	0
External Consulting:	40,000	0
Contingency %: 10	40,000	0
Sub Total:	440,000	0
HST Impact:	7,744	0
Total Project Cost:	447,700	0

NOTES

Last refurbished over 15 years ago (2007), the venue's dressing rooms are in disrepair and several components have visible damage. Dressing rooms are used by both our professional artists from around the world and members of our community. For some, these rooms are one of the only few impressions they get of the Theatre and City of Markham. The theatre is requesting to renovate these spaces to better serve our clients and community. Amount is consistent with the 2023 Life Cycle Reserve Study update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
	<u>Budget</u>	<u>Design & Consultant</u>	<u>Construction</u>	<u>Contingency</u>	<u>HST Impact</u>	<u>TOTAL</u>	
Operating Funded Life Cycle	447,700	40,000	360,000	40,000	7,700	447,700	0
TOTAL FUNDING	447,700					447,700	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="1,333,700"/>
				Amount Incl HST <input type="text" value="447,700"/>
				Year in the study <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Theatre-Fire Curtain Replacement**

Project Cost: **\$111,900**

Commission: Development Services

Repair/Replace

Department: Theatre

Useful Life: 25 Pre Approval:

Project Mgr: Andrew Rosenfarb

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Original to the building (1985), the fire curtain separates the stage from the audience in the event of a fire. The fire curtain was not completely replaced after it's usefull life as the condition assesment determined that minor repairs were sufficient. Recently, the fire curtain was inspected by staff and a theatrical rigging company, it's been advised that this curtain along with it's components is due for complete replacement. This project will also replace the manual winch system which controls the movement of this fire separation barrier with an automated one.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 10	10,000	0
Sub Total:	110,000	0
HST Impact:	1,936	0
Total Project Cost:	111,900	0

NOTES

The hardware, bolts and chains that secure the equipment overhead are due for replacement. The industry standard useful life for this asset is 25 years, the current life of the curtain (37 years) is well past it's replacement time.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Supply/Install</u>	<u>HST</u>				
Operating Funded Life Cycle	111,900	110,000	1,900	0	0	111,900	0
TOTAL FUNDING	111,900					111,900	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
<u>Name</u>				Amount in Study: <input type="text" value="1,333,700"/>
				Amount Incl HST: <input type="text" value="111,900"/>
				Year in the study: <input type="text" value="2023"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2023 PROJECT FUNDING REQUEST FORM

Number:

Project Name: **Building Standards Guide Builder**

Project Cost: **\$71,200**

Commission: Development Services

New Asset/Expansion

Department: Building Services

Useful Life: 0 Pre Approval:

Project Mgr: Stephanie Di Perna

Category: Minor

Ward(s): CW 1 2 3 4
5 6 7 8

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

ITS Involved Project: Is ITS Consulted?

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Specialized guide builder software to assist building management staff in creating specific and comprehensive user guides with ease and without dedicated staff or ITS support. Currently applicants are spending upwards to 10 business days trying to figure out what is required for the different application types. There is software that will assist in building guides to assist applicants along the way with built in checklist so that the application filed the first time is correct and can be circulated for building code and zoning review.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

<u>PROJECT COSTS (\$)</u>	<u>2023</u>	<u>Future Phases</u>
Cost/Quote:	70,000	0
Internal Charges:	0	0
External Consulting:	0	0
Contingency %: 0	0	0
Sub Total:	70,000	0
HST Impact:	1,232	0
Total Project Cost:	71,200	0

NOTES

Cloud based software and future cloud based fees will be incurred (\$34,000/yr). Software name is Camino Permit Guide Solution.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>					<u>TOTAL</u>	<u>Phases</u>
Building Fees	71,200	0	0	0	0	0	0
TOTAL FUNDING	71,200					0	0

<u>OPERATING BUDGET IMPACT</u>	<u>Personnel</u>	<u>Non Personnel</u>	<u>Revenues</u>	<u>Expenditures/(Revenues)</u>
	\$0	\$34,000	\$0	\$34,000

DCA/LIFE CYCLE DETAILS

<u>DCA</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
<u>Name</u>				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

