



Budget Committee Agenda

Meeting Number 3
November 10, 2020, 9:00 AM - 12:00 PM
Live streamed

	Pages
1. CALL TO ORDER	
2. DISCLOSURE OF PECUNIARY INTEREST	
3. APPROVAL OF MINUTES	2
4. Capital Budget Review	
4.1. Capital Budget Process Review - Deferred Capital Projects	14
4.2. 2021 Capital Budget Review - Continue from Operations - Roads, Project 21129, page 349	15
4.3. Additions and Follow Up Items	563
a) 21179 Milliken Mills CC Main Pool Variable Frequency Drive Installation	
b) 21180 Recreation Waste Heat Recovery Systems	
c) 21181 Elgin Mills - Victoria Square Blvd. to McCowan Road (Design)	
d) 21017 Secondary Plan - General	
4.4. Next Steps	
5. NEW BUSINESS	
6. NEXT MEETING DATE	
7. ADJOURNMENT	



Budget Committee Minutes

Meeting Number 2

November 6, 2020, 9:00 AM - 12:00 PM

Live streamed

Members	Councillor Amanda Collucci, Chair	Councillor Keith Irish
	Councillor Andrew Keyes, Vice-Chair	Councillor Reid McAlpine
	Mayor Frank Scarpitti (ex-officio)	Councillor Karen Rea
	Deputy Mayor Don Hamilton	Councillor Khalid Usman
	Regional Councillor Jack Heath	
Regrets:	Councillor Khalid Usman	
Roll Call	Regional Councillor Jack Heath	Biju Karumanchery, Director of Planning and Urban Design
	Councillor Isa Lee	Graham Seaman, Director, Sustainability & Asset Management
	Andy Taylor, Chief Administrative Officer	Catherine Biss, Chief Executive Officer, Markham Public Libraries
	Trinela Cane, Commissioner, Corporate Services	Morgan Jones, Director, Operations
	Arvin Prasad, Commissioner of Development Services	Lisa Chen, Senior Manager, Financial Planning & Reporting, Financial Services
	Claudia Storto, City Solicitor and Director of Human Resources	Mark Visser, Senior Manager of Financial Strategy & Investments
	Joel Lustig, Treasurer	Jay Pak, Senior Financial Analyst
	Bryan Frois, Chief of Staff	Alison Yu, Senior Financial Analyst
	Rob Cole, Acting Chief Information Officer	Veronica Siu, Senior Business Analyst
	Adam Grant, Deputy Fire Chief	Richard Fournier, Manager of Parks and Open Space,
	Phoebe Fu, Director of Environmental Services	Rachel D Fell, Program Coordinator, Art Gallery
	Mary Creighton, Director of Recreation Services	Laura Gold, Council and Committee Coordinator
	Christina Kakaflikas, Director of Economic Growth, Culture & Entrepreneurship	
	Brian Lee, Director, Engineering	

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1. CALL TO ORDER

The Budget Committee convened at 9:03 AM with Councillor Amanda Collucci in the Chair.

2. DISCLOSURE OF PECUNIARY INTEREST

There were no disclosures of pecuniary interests.

3. APPROVAL OF MINUTES

Moved by Councillor Reid McAlpine

Seconded by Councillor Karen Rea

That the Minutes from the November 3, 2020 Budget Committee Meeting be approved as presented.

Carried

3. CAPITAL BUDGET REVIEW

Development Services Capital Budget Items

Culture

Staff provided the following responses to inquiries from the Committee:

Capital Budget No.	Project	Discussion
21001	Culture Public Art Master Plan Implementation - Phase 2 of 3	<p>Staff advised that the funds will be used for acquisition and maintenance of the Public Art Collection, and also include preparatory work towards a joint project with Metrolinx (two underpasses at Kennedy and Denison), and Phase one of a Pan Am Centre project.</p> <p>The preparatory work for the Metrolinx project needs to be done to permit for the installation of the digital art platform, and light based artwork in the underpasses. These projects will be brought forward to Council for approval, and will go through a public consultation process as per the Markham Public Art Master Plan.</p>

Moved by Councillor Reid McAlpine

Seconded by Councillor Andrew Keyes

That the Budget Committee approve the Culture Capital Budget Item No. 21001.

Carried

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Moved by Councillor Reid McAlpine

Seconded by Councillor Andrew Keyes

That the Budget Committee approve the Museum Capital Budget Item Nos. 21002, and 21003; and,

That the Budget Committee approve the Theatre Capital Budget Item 21005; and further,

That the Budget Committee approve the Art Centre Capital Budget Item No. 21008.

Carried

Art Centres.

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21007	Gallery Lobby Maintenance	<p>Staff advised that maintenance is being done to the Varley Art Gallery lobby to make the space more attractive and functional to program participants and renters. The work includes: 1) painting the brick walls; 2) upgrading the floor tiles; and 3) installing a flat screen television and a new sound system.</p> <p>Committee expressed concern with the painting of the brick in the Gallery lobby due to it being a very permanent solution, as it is difficult to remove paint from brick should there be a desire to do so in the future.</p> <p>If this work is necessary, Staff should consider installing drywall as opposed to painting.</p> <p>Committee requested that the concern regarding the painting of the brick be discussed with Gallery Staff, and that Staff report back on the outcome of the discussion at future Budget Committee meeting.</p> <p>The decision on this item was deferred until Staff report back on the matter.</p>

Planning

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Staff provided the following responses to Committee inquiries:

Capital Budget Item	Project	Discussion
21012	Housing Strategy – Inclusionary Zoning	<p>Staff advised that the financial and market analysis needs to be updated so that the Inclusionary Zoning for Markham’s Housing Strategy can be implemented. This is required by the proposed <i>Community Benefits Legislation</i>.</p> <p>It was anticipated that the work would be completed in less than 12 months.</p> <p>The City is currently working with developers to include affordable housing in their developments.</p>
21013	Langstaff Master Plan and Secondary Plan Review	<p>Staff advised that various types of expertise are required to undertake secondary plan work. In order to obtain these skillsets internally, the City would have to hire multiple staff to undertake the work, therefore Staff seek the assistance of external consultants.</p> <p>The cost of undertaking the secondary plan work is consistent with the amount other municipalities, and developers spend on similar types of work.</p>
21014	Markham Centre Community Energy Plan	<p>Staff advised that the development of the Community Energy Plan is a required component of the Markham Centre Secondary Plan Study Update. York Region will not approve the updated Secondary Plan without the completion of the plan.</p> <p>The Energy Plan created for the Future Urban Area will be used to help develop this plan.</p>
21015	Parkland Study Update	Staff advised that the City is required (under <i>Bill 197, COVID Economic Recovery Act</i>) to create a new Parkland Dedication By-Law to continue to charge the alternate parkland rate of \$500 per hectare.
21017	Secondary Plans – General	Staff advised Committee that this item could be withdrawn based on the identification of an alternate funding source. Committee requested more detail and Staff will report back.

Moved by Councillor Karen Rea

Seconded by Councillor Reid McAlpine

That the Budget Committee approve the Planning Capital Budget Item Nos. 21009 to 21018.

Carried

Design

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21019	Berczy Beckett Park (Cherna Ave.) - Design & Construction	<p>Staff Advised that the DC background study, the type of park, and input from the Ward Councillor are some factors considered when determining a park's amenities. The City is working on standardizing the amount spent per park type. Staff are also working to ensure parkland provided to the City is in good condition, and has no significant grading issues, as resolving these types of issues adds to both the design and construction cost of the park. For example, to resolve a grading issue at Berzy Park a retaining wall is required to be built.</p> <p>There was discussion that the size of the park will have a factor on the cost per hectare as well due to mobilization costs.</p>

Moved by Councillor Reid McAlpine
 Seconded by Councillor Keith Irish

That the Budget Committee approve the Design Capital Budget Item Nos. 21019-21023 be approved.

Carried

Engineering

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21024	Copper Creek Drive Reconfiguration (Road Diet)	<p>Staff agreed to consider adding flexible bollards at the intersections to separate the cyclists and other vehicles..</p> <p>Committee expressed concern regarding the public perception of converting a four lane road to a three lane road if it may need to be converted back to a four lane road in the future.</p> <p>Staff advised that the Ward Councillor was consulted on the reconfiguration of the road, and indicated that the community is in support of the project, as speeding is currently an issue on the road.</p>

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21027	Installation of Way Finding Signs at Rouge Valley Trail	<p>Staff advised that the design and location of the wayfinding signs have already been decided, but that the City can hold off on creating and installing the signs until issues are resolved with Parks Canada in regards to the potential re-naming of the trail, and the creation of the trail loop. Staff will have further meetings with Regional Councillor Heath on the Parks Canada trail issues.</p> <p>Committee agreed to approve the project but requested that staff report back to Development Services Committee prior to proceeding with the project.</p> <p>There was a brief discussion on cyclists being courteous to pedestrians when using multiuse pathways, and on streamlining wayfinding signs for all of Markham's trails.</p> <p>It was requested that staff also report back to the Development Services Committee on the streamlining of trail signage, including wayfinding signs, warning signs (e.g. slippery bridge), and signs encouraging cyclist and pedestrians to be courteous to each other when using multiuse pathways.</p> <p>Brian Lee will advise Councillor Karen Rea regarding pavement marking on the Rouge Valley Trail.</p>
21030	Markham Cycles & Active Transportation Awareness Program	<p>Staff clarified that Markham Cycles asked the City for \$30K in 2020, but that the City agreed to provide it with \$15K. The same amount is recommended in 2021. Markham Cycles is aware that \$15k is included in the 2021 budget.</p>
21038	Sidewalk Program (Design)	<p>Staff briefly explained the components required to design the sidewalks.</p> <p>Brain Lee will discuss offline with Regional Councillor Jack Heath how this project relates to the City's project to improve the connectivity of arterial roads.</p>

Moved by Councillor Reid McAlpine

Seconded by Councillor Karen Rea

That the Budget Committee approve the Engineering Capital Budget Item Nos. 21024 to 21041 and 21178 (excluding project 21027) be approved.

Carried

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Moved by Councillor Karen Rea

Seconded by Councillor Reid McApline

That the Budget Committee approve the Engineering Capital Budget Item 21027 Installation of Way Finding Signs at Rouge Valley Trail with the understanding that staff report back to Council on the implementation details prior to proceeding with work.

Carried

CAO's Office Capital Budget Items***Human Resources***

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21043	Diversity Action Plan Refresh	<p>Committee suggested that the Diversity Action Plan should be completed at an accelerated rate without compromising the integrity of the project.</p> <p>It was noted that Markham's Diversity Action Plan is to ensure inclusion of people of all races, religions, and abilities. The Anti-Black Racism Strategy is one component of the Plan.</p>

Moved by Councillor Reid McAlpine

Seconded by Councillor Karen Rea

That the Budget Committee approve the CAO Office's (Human Resources) Capital Budget Item No. 21043 be approved.

Carried

Corporate Services Capital Budget Items***ITS***

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21044	ITS Life Cycle Asset Replacement	Staff advised that Council recently approved the replacement of desktop phones citywide. This project is for the replacement of IT hardware and software assets at the end of their lifecycle, which includes the replacement of smartphones

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Moved by Councillor Reid McAlpine

Seconded by Councillor Keith Irish

That the Budget Committee approve the ITS Capital Budget Item No. 21044.

Carried

Moved by Councillor Andrew Keyes

Seconded by Councillor Karen Rea

That the Budget Committee approve the Finance Capital Budget Item Nos. 21045, and 21046.

Carried

Asset Management

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21050	Cornell C.C. Parking Garage – Construction	Staff advised that it was not anticipated that the Cornell Community Centre Parking Garage would require this type of work at this time in its life cycle. The work is required as the roof of the parking garage is leaking and damaging the concrete. This is occurring due to the roof top sealant being damaged. There is also special maintenance unique to concrete structures that the City will be undertaking. Staff are confident that this solution will resolve the problem, and provide the City with the lowest annual cost of ownership.
21051	Corporate Security Operations & System Upgrades	Staff advised that in order to be in compliance with <i>Bill 168</i> the City continues to update its corporate security operations and system to ensure that staff feel safe in their workspace, and to provide evidence for investigations.
21055	Operations Facilities Repair and/or Replacement Projects	Staff advised that this work needs to be done to protect Operations staff from injuring themselves.

Moved by Councillor Reid McAlpine

Seconded by Councillor Karen Rea

That the Budget Committee approve the Asset Management Capital Budget Item Nos. 21047 to 21062.

Carried

Community Services Capital Budget Items:

Fire & Emergency Services

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Item	Discussion
21069	Replacement of Equipment due to Staff Retirement	Staff advised that equipment for 12 new firefighter is needed due to anticipated retirements, and that equipment of the retired firefighters is kept as spare inventory.

Moved by Councillor Keith Irish
 Seconded by Councillor Andrew Keyes

The the Budget Committee approve the Fire & Emergency Capital Budget Item Nos. 21064 – 21070.

Carried

Recreation Services

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21079	Cornell C.C. Heat Exchanger Replacement	Staff advised that the anticipated life cycle of an asset is included in the Life Cycle Reserve. This date is used as a placeholder to flag that a condition assessment needs to be conducted to determine if the asset's life cycle can be extended or if the asset needs replacement.
21091	Recreation Lifeguard Chair Replacement	Staff advised that the high cost of the lifeguard chair is due to it being made from stainless steel, being a specialized item, and the base of chair needing to be cemented to the floor.

Staff advised that there will be two additional Recreational Capital Budget Projects, which will be added to the next meeting agenda. These projects were originally going to be funded by another funding source.

In response to a Committee inquiry, staff advised that the City has not purchased any autonomous floor scrubbers at this time, as more research is required due to changes in the technology requirements.

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Moved by Councillor Andrew Keyes

Seconded by Councillor Keith Irish

That the Budget Committee approve the Recreation Capital Budget Item Nos. 21072 to 21098.

*Carried****Markham Public Library***

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21099	Library Collections	<p>Staff advised that the Library Collections Capital Budget item was revised based on feedback from the General Committee. A Staff Memorandum outlining the changes was presented to Committee.</p> <p>The Collection Budget was reduced by approximately \$400K, with \$200k of the funds re-allocated to purchasing e-books versus print books. The budget was able to be reduced, as four branches are projected to remain closed in 2021.</p>

Moved by Councillor Reid McAlpine

Seconded by Councillor Karen Rea

That the Budget Committee approve the Library Capital Budget Item No. 21099, and 21100.

*Carried****Operations – Roads***

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21101	Asphalt Resurfacing	Staff advised that Markham's road network is performing well with the current pavement condition results of 73%, and that to reach a target of 80% would be very costly to the municipality.
21106	Citywide Ditching Program	Staff agreed to provide Members of Council with the location details for the 2021 Citywide Ditching Program.

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Moved by Councillor Keith Irish

Seconded by Councillor Reid McAlpine

That the Budget Committee approve the Operation-Road Capital Budget Item Nos. 21101 to 21115.

Carried

Operations – Parks

Staff provided the following responses to Committee inquiries:

Capital Budget No.	Project	Discussion
21120	Boulevard/Park Trees Replacement	Staff advised that there is currently a backlog of trees to be planted, which staff are working on addressing. Building Markham's Future Together addresses protecting Markham's tree canopy through the creation of a Forestry Management Plan in 2022. Memorandums for both the Emerald Ash Borer and the Tree's for Tomorrow programs will be presented to Council as updates in early 2021.
21122	Cemetery Fence Repair/Replacement	A Member noted that some of the residents in the Thornhill Community would like to see the fence replaced with a wrought iron fence rather than chain link fence, and that there should be some kind of consistency in approaching these type of matters in heritage districts. The Ward Councillor was satisfied with the project as presented.
21128	Trees for Tomorrow	Staff advised that an update will be provided to the General Committee on the Trees for Tomorrow Program in early 2021.

Moved by Councillor Keith Irish

Seconded by Councillor Reid McAlpine

That the Budget Committee approve the Operation-Parks Capital Budget Item Nos. 21116 to 21128.

Carried

5. New Business

There was no new business.

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6. Next Meeting Date

The next meeting of the Budget Committee will be held on Tuesday, November 10, 2020.

7. Adjournment

The Budget Committee adjourned at 12:05 PM.

Department	Project Name
1 Economic Development	Econ. Dev. Investment Attraction Video & Marketing Campaign
2 Theatre	Theatre Wheelchair Ramp & Stairs
3 Planning	Biodiversity Strategy
4 Planning	Markham Centre Civic Square Study
5 Planning	Metrolinx Major Mackenzie GO Station Assessment
6 Planning	Natural Heritage System Study - Phase 2 of 2
7 Planning	Employment Land Secondary Plans
8 Engineering	Brownfield Policy Update
9 Engineering	Downstream Improvements Program (Construction)
10 Engineering	Elgin Street Sidewalk Property Acquisition
11 Engineering	Future Urban Area Water Booster Station Class EA Study
12 Engineering	Metrolinx Major Mackenzie GO Station Assessment
13 Engineering	Rouge Valley Trail (Kennedy Road North) - Construction
14 Engineering	Secondary Plan Transportation Studies for FUA Employment Block
15 Engineering	Secondary Plan Transportation Studies for Hwy 404 North (Employment)
16 Engineering	Secondary Plan Transportation Studies for Milliken Centre
17 Engineering	Sidewalk Program (Construction)
18 Engineering	Victoria Square Construction Phase 1 of 3
19 Engineering	Traffic Assets Replacement - Annual
20 Engineering	2022 Development Charges Background Study Update
21 Engineering	City Wide Water and Wastewater Servicing Update
22 Engineering	Development of Road Safety Strategy
23 Engineering	MESP for FUA Employmt. Block Secondary Plan
24 Recreation Services	Angus Glen C.C. Rubber Floor Replacement
25 Recreation Services	Clatworthy Arena Marquee Replacement
26 Recreation Services	Cornell C.C. Lighting Replacement
27 Recreation Services	Milliken Mills C.C. Lift Replacement
28 Recreation Services	Milliken Mills C.C. Maintenance Equipment Replacement
29 Recreation Services	Milliken Mills C.C. Mechanical Replacement
30 Recreation Services	Recreation Environics Analytics
31 Recreation Services	Recreation Fitness Rubber Floor Replacements
32 Recreation Services	Recreation Touchless Device Replacement
33 Recreation Services	Thornlea Pool Drinking Fountain Replacement
34 Recreation Services	Water Street Senior Centre Wood Floor Replacement
35 Recreation Services	Water Street Senior Centre Washroom Fixture Replacement
Total	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Projects Under Consideration								
Development Services								
Culture								
21001	Culture Public Art Master Plan Implementation Phase 2 of 5	204,700					204,700	Public Art Acq. Res. Fund
	TOTAL Culture	204,700	-	-	-	-	204,700	
Museum								
21002	Museum - Various Buildings	86,300		86,300				
21003	Museum Maintenance	36,700		36,700				
	TOTAL Museum	123,000	-	123,000	-	-	-	
Theatre								
21005	Theatre Stage & Building Maintenance	43,800		43,800				
	TOTAL Theatre	43,800	-	43,800	-	-	-	
Arts Centres								
21007	Gallery Lobby Maintenance	29,200		29,200				
21008	Gallery McKay Heating and Cooling System	5,300		5,300				
	TOTAL Arts Centres	34,500	-	34,500	-	-	-	
Planning								
21009	Consultant Studies	72,000			64,800		7,200	Development Fees
21010	Designated Heritage Property Grant Program -2021	30,000					30,000	Designated Heritage Prop Grant
21011	Heritage Façade Improvements/Sign Replacement - 2021	10,000		10,000				
21012	Housing Strategy - Inclusionary Zoning	50,900			45,810		5,090	Development Fees
21013	Langstaff Master Plan and Secondary Plan Review	508,800			457,920		50,880	Development Fees
21014	Markham Centre Community Energy Plan	161,700			145,530		16,170	Development Fees
21015	Parkland Study Update	101,800			91,620		10,180	Development Fees
21016	Planning & Design Staff Salary Recovery	786,300			786,300			
21017	Secondary Plans - General	101,800			91,620		10,180	Development Fees
21018	Yonge Corridor Secondary Plan	203,500			183,150		20,350	Development Fees
	TOTAL Planning	2,026,800	-	10,000	1,866,750	-	150,050	
Design								
21019	Berczy Beckett Park (Cherna Ave.) - Design & Construction	405,400			364,860		40,540	Parks Cash-in-Lieu; Note 1
21020	Blodwen Davies Park - Construction	1,681,800			1,513,620		168,180	Parks Cash-in-Lieu
21021	Celebration Park - Construction	7,585,300			6,826,770		758,530	Parks Cash-in-Lieu
21022	Green Lane Park - Design and Construction	501,300			451,170		50,130	Parks Cash-in-Lieu; Note 2
21023	Yonge and Grandview Park - Design and Construction	581,400			523,260		58,140	Parks Cash-in-Lieu; Note 3
	TOTAL Design	10,755,200	-	-	9,679,680	-	1,075,520	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Engineering								
21024	Copper Creek Drive Reconfiguration (Road Diet)	152,900			152,900			
21025	Cycling & Pedestrian Advisory Committee (CPAC)	25,400			16,510		8,890	Non-DC Growth
21026	Engineering Staff Salary Recovery	713,700			713,700			
21042	Hwy 404 Collector Road (Design)	1,475,000			1,475,000			
21027	Installation of Way Finding Signs at Rouge Valley Trail	182,900			118,885		64,015	Non-DC Growth
21028	LPAT Transportation Peer Review	344,300			344,300			
21030	Markham Cycles & Active Transportation Awareness Program	15,300			9,945		5,355	Non-DC Growth
21031	Markham Cycling Day	10,200			6,630		3,570	Non-DC Growth
21032	New Traffic Signals (Design)	59,100			59,100			
21033	Secondary Plan Transportation Studies for Langstaff Gateway	576,300			576,300			
21034	Secondary Plan Transportation Studies for Yonge Corridor	576,300			576,300			
21035	Servicing & SWM Study for the Highway 404 N. Sec. Plan	344,300			344,300			
21036	Servicing & SWM Study for Yonge Corridor Sec. Plan	514,900			514,900			
21037	Servicing and SWM Study for Langstaff Secondary Plan	514,900			514,900			
21038	Sidewalk Program (Design)	509,400			509,400			
21039	Smart Commute Markham-Richmond Hill	76,300			76,300			
21040	Streetlight Program (Construction)	497,800			497,800			
21041	Various walking & cycling initiatives	45,800			29,770		16,030	Non-DC Growth
21178	Traffic Operational Improvements - Annual	51,800	51,800					
	TOTAL Engineering	6,686,600	51,800	-	6,536,940	-	97,860	
	TOTAL Development Services	19,874,600	51,800	211,300	18,083,370	-	1,528,130	
CAO, Legal & HR								
Human Resources								
21043	Diversity Action Plan Refresh	101,800	101,800					
	TOTAL Human Resources	101,800	101,800	-	-	-	-	
	TOTAL CAO, Legal & HR	101,800	101,800	-	-	-	-	
Corporate Services								
ITS								
21044	ITS Life Cycle Asset Replacement	1,739,900		1,391,900			348,000	\$104k WW, \$244k Dev./Build. Fee
	TOTAL ITS	1,739,900	-	1,391,900	-	-	348,000	
Finance								
21045	Development Charges Background Study	122,100			109,890		12,210	Non-DC Growth
21046	Internal Project Management	943,700			943,700			
	TOTAL Finance	1,065,800	-	-	1,053,590	-	12,210	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Asset Management								
21047	Building Condition Audit - FTE	149,800		149,800				
21048	Civic Centre Repair and/or Replacement Projects	366,900		366,900				
21050	Cornell C.C. Parking Garage - Construction	1,996,800	1,095,096		782,704		119,000	Carryforward from Project 20117
21051	Corporate Security Operations & System Upgrades	584,400		584,400				
21052	Fire Facilities Repair and/or Replacement Projects	38,000		38,000				
21053	Library Facilities Repair and/or Replacement Projects	44,900		44,900				
21054	Municipal Building Backflow Prevention - Annual Testing	20,400		20,400				
21055	Operations Facilities Repair and/or Replacement Projects	538,100		538,100				
21056	Operations Fuel Sites Monitoring	72,200	72,200					
21057	Other Facilities Repair and/or Replacement Projects	51,000		51,000				
21058	Parking Lot Light Replacement	89,800		89,800				
21059	Roofing Maintenance and Repair	122,400		122,400				
21060	Roofing Replacement Projects	757,400		757,400				
21061	Satellite Community Centre Repair and/or Replacement	15,300		15,300				
21062	Tennis Clubhouse Repair and/or Replacement Projects	6,700		3,350			3,350	Tennis Club
	TOTAL Asset Management	4,854,100	1,167,296	2,781,750	782,704	-	122,350	
	TOTAL Corporate Services	7,659,800	1,167,296	4,173,650	1,836,294	-	482,560	
Community & Fire Services								
Fire & Emergency Services								
21064	Air Cylinders 45+ Minutes Replacement	101,700		101,700				
21065	Arizona Vortex Tripod Replacement	7,400		7,400				
21066	Bunker Gear Life Cycle Replacement	89,200		89,200				
21067	Firefighting Tools & Equipment Replacement	101,700		101,700				
21068	Hazardous Materials Photo Ion Detector Replacement	5,400		5,400				
21069	Replacement of Equipment due to Staff Retirements	99,600		99,600				
21070	Rescue Equipment - Thermal Image Cameras	19,000		19,000				
	TOTAL Fire & Emergency Services	424,000	-	424,000	-	-	-	
Recreation Services								
21072	Angus Glen C.C. Arena Seating Replacement	221,800					221,800	Gas Tax
21073	Angus Glen C.C. Sand Filter Component Replacement	45,600		45,600				
21074	Angus Glen C.C. Snow Pit Heating Coil Replacement	57,000		57,000				
21075	Angus Glen Tennis Centre Court Re-Painting	40,700		40,700				
21076	Armadale C.C. Gym Interior Door	13,200		13,200				
21077	Camp Chimo High Ropes and Harness Replacement	8,100		8,100				
21078	Centennial C.C. Mechanical Replacement	121,500					121,500	Gas Tax
21079	Cornell C.C. Heat Exchanger Replacement	12,200					12,200	Gas Tax
21080	Heintzman House Washroom Refurbishment	37,000					37,000	Gas Tax
21081	Markham Village C.C. Dehumidification Unit Replacement	84,800					84,800	Gas Tax
21082	Markham Village C.C. Security System Replacement	32,100		32,100				
21083	Mt. Joy C.C. Arena Compressor Replacement	167,900					167,900	Gas Tax
21084	Mt. Joy C.C. Gas Monitor Replacement	5,200		5,200				
21085	Old Unionville Library Doors and Frames Replacement	44,800					44,800	Gas Tax
21086	Recreation AED Program Replacement	6,000		6,000				
21087	Recreation Aquatics Equipment Replacement	19,000		19,000				

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2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21088	Recreation Exterior Walkways Replacement	163,800					163,800	Gas Tax
21089	Recreation Fitness Equipment Replacement	161,800		161,800				
21090	Recreation Floor Cleaning Machine Replacements	18,300		18,300				
21091	Recreation Lifeguard Chair Replacement	34,800		34,800				
21092	Recreation Pool Grouting Replacement	11,000		11,000				
21093	Recreation Program Equipment Replacement	53,600		53,600				
21094	Recreation Tables and Chairs Replacement	34,000		34,000				
21095	Rouge River C.C. Mechanical Replacement	297,900					297,900	Gas Tax
21096	Thornhill C.C. Ice Equipment Replacement	6,300		6,300				
21097	Thornhill C.C. Retaining Wall Installation	330,700	198,420				132,280	Disaster Mit. Adaptation Fund
21098	Thornhill C.C. Rubber Floor Replacement	158,800		158,800				
	TOTAL Recreation Services	2,187,900	198,420	705,500	-	-	1,283,980	
Markham Public Library								
21099	Library Collections	2,806,300		2,806,300				
21100	Library Furniture, Equipment & Shelving Replacement	146,700		146,700				
	TOTAL Markham Public Library	2,953,000	-	2,953,000	-	-	-	
Operations - Roads								
21101	Asphalt Resurfacing	3,657,900		-			3,657,900	Gas Tax; Note 4
21102	Boulevard Repairs	58,400					58,400	Gas Tax
21103	Bridge Structure Preventative Maintenance - Roads	25,800		25,800				
21104	City Owned Entrance Feature Rehabilitation/Replacement	10,200		10,200				
21105	City Owned Fence Replacement Program	63,900		63,900				
21106	Citywide Ditching Program	91,400		91,400				
21107	Don Mills Storm Channel	35,400		35,400				
21108	Emergency Repairs	143,300		143,300				
21109	Guiderail- Install/Repair/Upgrade	90,900					90,900	Gas Tax
21110	Incremental Growth Related Winter Maintenance Vehicles	459,000			459,000			
21111	Localized Repairs - Curb & Sidewalk	876,400					876,400	Gas Tax
21112	Localized Repairs - Parking Lots	119,200		119,200				
21114	Retaining Wall Repair Program	80,200		80,200				
21115	Storm Water Retention Pond Maintenance Program	51,900		51,900				
	TOTAL Operations - Roads	5,763,900	-	621,300	459,000	-	4,683,600	
Operations - Parks								
21116	Backstop and Outfield Fence Replacement	144,000					144,000	Gas Tax
21117	Beaupre Park Waterplay Replacement	190,700					190,700	Gas Tax
21118	Bleachers (Metal) Replacements	22,900		22,900				
21120	Boulevard/Park Trees Replacement	359,400		359,400				
21121	Bridge Structure Preventative Maintenance in Parks	25,800		25,800				
21122	Cemetery Fence Repair/Replacement	40,700		40,700				
21123	City Park Furniture / Amenities	175,000		175,000				
21124	Court Resurfacing/Reconstruction/Maintenance	176,900		94,600			82,300	Tennis Clubs
21125	Fence (Tennis Courts)	135,800					135,800	Gas Tax
21126	Floodlights, Poles & Cross Arms Replacement	820,700					820,700	Gas Tax
21127	Goal Posts Replacement- Ashton Meadows Park	20,700					20,700	Gas Tax
21128	Markham Trees for Tomorrow	121,500					121,500	Landscape Recovery

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21129	Pathways Resurfacing	142,700					142,700	Gas Tax
21130	Playstructure Replacement	366,800					366,800	Gas Tax
21131	Recycling Containers Replacement (Yr 4 of 10)	16,900		16,900				
21132	Relamping & Fixtures Refurbishment	40,100		40,100				
21133	Shade Structure Rehabilitation and/or Replacement	111,700		111,700				
21134	Sportsfield Maintenance & Reconstruction	140,300		140,300				
21135	Stairway Repairs	229,200		229,200				
TOTAL Operations - Parks		3,281,800	-	1,256,600	-	-	2,025,200	
Operations - Fleet								
21136	Corporate Fleet Growth - Non-Fleet	10,200			10,200			
21137	Corporate Fleet Refurbishing	37,000		37,000				
21138	Corporate Fleet Replacement - Fire	2,723,900		2,723,900				
21139	Corporate Fleet Replacement - Ice Resurfacing Machine	102,100		102,100				
21140	Corporate Fleet Replacement - Non-Fire	1,334,800		1,334,800				Note 6
21141	Corporate Fleet Replacement - Waterworks	216,200					216,200	Waterworks
21142	New Fleet - Parks	45,800			45,800			
TOTAL Operations - Fleet		4,470,000	-	4,197,800	56,000	-	216,200	
Operations - Utility Inspection & Survey								
21143	Survey Monument Replacement	28,200		28,200				
TOTAL Operations - Utility Inspection & Survey		28,200	-	28,200	-	-	-	
Operations - Business & Technical Services								
21144	Growth Related Park Improvements	478,300			430,470		47,830	Non-DC Growth
TOTAL Operations - Business & Technical Services		478,300	-	-	430,470	-	47,830	
Environmental Services - Infrastructure								
21145	Bridges and Culverts - Condition Inspection	81,000		81,000				
21146	MNRF Monitoring for Capital Projects at Water Crossings	27,600		27,600				
21147	Small Culverts Replacement (8 Structures) - Construction	215,700		215,700				
21148	Storm & Sanitary Pumping Stations - Equipment Inspection	116,000		40,700			75,300	Waterworks Reserve
21149	Storm and Sanitary Sewer CCTV Inspection	652,800		215,100			437,700	Waterworks Reserve
21150	Stormwater Sewer Pipes Emergency Repairs	56,100		56,100				
21151	Streetlights - Miscellaneous Requests	101,800	101,800					
21152	Structures Program-Full-time Staff	148,100		148,100				
21153	Toogood Pond Dam - Rehabilitation Works	437,400		437,400				
21154	Toogood Pond Dam - Structural Inspection	9,800		9,800				
TOTAL Environmental Services - Infrastructure		1,846,300	101,800	1,231,500	-	-	513,000	
Environmental Services - Stormwater								
21155	Don Mills Channel - Flood Proofing Site Investigation	124,900					124,900	Stormwater Fee
21156	Don Mills Channel Flood Control Program -Pond Design/CA	1,160,000					1,160,000	SW Fee \$696k, DMFA Grant \$464k
21157	Erosion Restoration Program	898,800		314,500	584,300			
21158	Oil Grit Separators (OGS) - Inspection and Cleaning	219,800					219,800	Gas Tax
21159	Swan Lake Chemical Treatment	259,500		259,500				

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21160	SWM Pond Cleaning Design & CA - ID#47 & #119	152,600					152,600	Gas Tax
21161	SWM Ponds - Condition Inspection	26,500		26,500				
21162	Water Quality Improvements	41,100		41,100				
21163	Water Quality Monitoring	28,100		28,100				
21164	West Thornhill Flood Control Implementation - Ph 3B Cons.	4,029,600					4,029,600	Stormwater reserve
21165	West Thornhill Flood Control Implementation - Ph 4A Cons.	15,655,900					15,655,900	\$2M Gas tax;\$13.7M SW reserve
TOTAL Environmental Services - Stormwater		22,596,800	-	669,700	584,300	-	21,342,800	
Environmental Services - Waste								
21166	Incremental Growth Related Waste Management Vehicles	102,000			102,000			
TOTAL Environmental Services - Waste		102,000	-	-	102,000	-	-	
Environmental Services - Waterworks								
21167	Cathodic Protection of Ductile Iron Watermains	493,100					493,100	Waterworks Reserve
21168	CI Watermain Rehabilitation / CIPP Lining - Construction & CA	6,623,300					6,623,300	Waterworks Reserve
21169	CI Watermain Replacement - Design	447,700					447,700	Waterworks Reserve
21170	CI Watermain Replacement-West Thornhill Ph 3B	4,036,300					4,036,300	Waterworks Reserve
21171	Curb Box Inspection and Replacement Program	714,900					714,900	Waterworks Reserve
21172	Royal Orchard Sanitary Upgrades (West Thornhill - Ph. 4A)	3,471,000				3,471,000		
21173	Sanitary Sewers - Rehabilitation	1,405,000					1,405,000	Waterworks Reserve
21174	Wastewater Flow Monitoring	122,200					122,200	Waterworks Reserve
21175	Water Meters - Replacement Program	1,013,200					1,013,200	Waterworks Reserve
21176	Watermain Leak Detection Program	37,500					37,500	Waterworks Reserve
TOTAL Environmental Services - Waterworks		18,364,200	-	-	-	3,471,000	14,893,200	
TOTAL Community & Fire Services		62,496,400	300,220	12,087,600	1,631,770	3,471,000	45,005,810	
Corporate Wide								
21177	Corporate Capital Contingency	1,362,500	5,200	30,400	1,206,461		120,439	Various Other Internal; Note 7
TOTAL Corporate Wide		1,362,500	5,200	30,400	1,206,461	-	120,439	
TOTAL Projects Under Consideration		91,495,100	1,626,316	16,502,950	22,757,895	3,471,000	47,136,939	
Pre-Approved Projects								
Development Services								
Theatre								
21004	Theatre Fire Alarm 2 Stage Conversion	25,400		25,400				
TOTAL Theatre		25,400	-	25,400	-	-	-	
Design								
21019	Berczy Beckett Park (Cherna Ave.) - Design & Construction	59,800			53,820		5,980	Parks Cash-in-Lieu; Note 1
21022	Green Lane Park - Design and Construction	48,000			43,200		4,800	Parks Cash-in-Lieu; Note 2
21023	Yonge and Grandview Park - Design and Construction	56,500			50,850		5,650	Parks Cash-in-Lieu; Note 3

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
	<u>TOTAL Design</u>	164,300		-	147,870		16,430	
Engineering								
21029	Markham Centre Trail Phase 1B Construction	816,000			530,400		285,600	Section 37
	<u>TOTAL Engineering</u>	816,000		-	530,400		285,600	
	<u>TOTAL Development Services</u>	1,005,700	-	25,400	678,270		302,030	
Corporate Services								
Asset Management								
21049	Civic Centre Vestibule Repairs and/or Replacements	290,700		290,700				
21063	Theatre-HVAC Replacement	2,000,000		91,200			1,908,800	Gas Tax
	<u>TOTAL Asset Management</u>	2,290,700		381,900	-		1,908,800	
	<u>TOTAL Corporate Services</u>	2,290,700		381,900	-		1,908,800	
Community & Fire Services								
Fire & Emergency Services								
21071	SCBA Decontamination Machine	63,300	63,300					
	<u>TOTAL Recreation Services</u>	63,300	63,300	-			-	
Operations - Roads								
21101	Asphalt Resurfacing	3,157,900		100,000			3,057,900	Gas Tax; Note 4
21113	Parking Lots- Rehabilitation	678,900					678,900	Gas Tax; Note 5
	<u>TOTAL Operations - Roads</u>	3,836,800	-	100,000	-	-	3,736,800	
Operations - Parks								
21119	Block Pruning Initiative - Year 2 of 3	1,017,600	1,017,600					
	<u>TOTAL Operations - Parks</u>	1,017,600	1,017,600	-				
Operations - Fleet								
21140	Corporate Fleet Replacement - Non-Fire	285,900		285,900				Note 6
	<u>TOTAL Operations - Fleet</u>	285,900		285,900				
	<u>TOTAL Community & Fire Services</u>	5,203,600	1,080,900	385,900	-	-	3,736,800	
Corporate Wide								
Corporate Wide								
21177	Corporate Capital Contingency	194,600		12,200			182,400	Gas Tax; Note 7
	<u>TOTAL Corporate Wide</u>	194,600	-	12,200	-		182,400	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
	TOTAL Corporate Wide	194,600	-	12,200	-	-	182,400	
	TOTAL Pre-Approved	8,694,600	1,080,900	805,400	678,270	-	6,130,030	
	TOTAL Projects Under Consideration	100,189,700	2,707,216	17,308,350	23,436,165	3,471,000	53,266,969	

Notes:

- 1) The overall project budget is \$465,200. The pre-approval request of \$59,800 is for consulting work only.
- 2) The overall project budget is \$549,300. The pre-approval request of \$48,000 is for consulting work only.
- 3) The overall project budget is \$637,900. The pre-approval request of \$56,500 is for consulting work only.
- 4) The overall project budget is \$6,815,800. The pre-approval request of \$3,157,900 is to commence procurement of contracts earlier to potentially attain better pricing. Funding split of Life Cycle vs. Gas Tax funding has been updated since Council approval of the Capital Pre-Approval Report from \$224,340; \$2,933,560 to \$100,000; \$3,057,900
- 5) Funding source has been updated since Council approval of the Capital Pre-Approval Report from fully Life Cycle funded to fully Gas Tax funded
- 6) The overall project budget is \$1,620,700. The pre-approval request of \$285,900 is to commence procurement of articulating loader earlier to potentially attain better pricing.
- 7) The overall project budget is \$1,557,100. The pre-approval request of \$194,600 represents the contingency amounts required for all project pre-approval requests.



2021 CAPITAL BUDGET

a) Project Summary by Department

Development Services

Culture	Projects Under Consideration	
Museum	Projects Under Consideration	
Theatre	Projects Under Consideration	Pre-Approval
Arts Centre	Projects Under Consideration	
Planning	Projects Under Consideration	
Design	Projects Under Consideration	Pre-Approval
Engineering	Projects Under Consideration	Pre-Approval

CAO, Legal & HR

Human Resources	Projects Under Consideration	
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Corporate Services

ITS	Projects Under Consideration	
Finance	Projects Under Consideration	
Asset Management	Projects Under Consideration	Pre-Approval

Community and Fire Services

Fire and Emergency	Projects Under Consideration	Pre-Approval
Recreation Services	Projects Under Consideration	
Markham Public Library	Projects Under Consideration	
Operations-Roads	Projects Under Consideration	Pre-Approval



2021 CAPITAL BUDGET

Community and Fire Services (cont'd)

Operations-Parks	Projects Under Consideration	Pre-Approval
Operations-Fleet	Projects Under Consideration	Pre-Approval
Operations-Utility Inspection	Projects Under Consideration	
Operations-Business & Tech	Projects Under Consideration	
ES – Infrastructure	Projects Under Consideration	
ES – Stormwater	Projects Under Consideration	
ES – Waste	Projects Under Consideration	
ES – Waterworks	Projects Under Consideration	

Corporate Wide

Corporate Wide	Projects Under Consideration	Pre-Approval
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CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Projects Under Consideration								
Development Services								
Culture								
21001	Culture Public Art Master Plan Implementation Phase 2 of 5	204,700					204,700	Public Art Acq. Res. Fund
	TOTAL Culture	204,700	-	-	-	-	204,700	
Museum								
21002	Museum - Various Buildings	86,300		86,300				
21003	Museum Maintenance	36,700		36,700				
	TOTAL Museum	123,000	-	123,000	-	-	-	
Theatre								
21005	Theatre Stage & Building Maintenance	43,800		43,800				
	TOTAL Theatre	43,800	-	43,800	-	-	-	
Arts Centres								
21007	Gallery Lobby Maintenance	29,200		29,200				
21008	Gallery McKay Heating and Cooling System	5,300		5,300				
	TOTAL Arts Centres	34,500	-	34,500	-	-	-	
Planning								
21009	Consultant Studies	72,000			64,800		7,200	Development Fees
21010	Designated Heritage Property Grant Program -2021	30,000					30,000	Designated Heritage Prop Grant
21011	Heritage Façade Improvements/Sign Replacement - 2021	10,000		10,000				
21012	Housing Strategy - Inclusionary Zoning	50,900			45,810		5,090	Development Fees
21013	Langstaff Master Plan and Secondary Plan Review	508,800			457,920		50,880	Development Fees
21014	Markham Centre Community Energy Plan	161,700			145,530		16,170	Development Fees
21015	Parkland Study Update	101,800			91,620		10,180	Development Fees
21016	Planning & Design Staff Salary Recovery	786,300			786,300			
21017	Secondary Plans - General	101,800			91,620		10,180	Development Fees
21018	Yonge Corridor Secondary Plan	203,500			183,150		20,350	Development Fees
	TOTAL Planning	2,026,800	-	10,000	1,866,750	-	150,050	
Design								
21019	Berczy Beckett Park (Cherna Ave.) - Design & Construction	405,400			364,860		40,540	Parks Cash-in-Lieu; Note 1
21020	Blodwen Davies Park - Construction	1,681,800			1,513,620		168,180	Parks Cash-in-Lieu
21021	Celebration Park - Construction	7,585,300			6,826,770		758,530	Parks Cash-in-Lieu
21022	Green Lane Park - Design and Construction	501,300			451,170		50,130	Parks Cash-in-Lieu; Note 2
21023	Yonge and Grandview Park - Design and Construction	581,400			523,260		58,140	Parks Cash-in-Lieu; Note 3
	TOTAL Design	10,755,200	-	-	9,679,680	-	1,075,520	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Engineering								
21024	Copper Creek Drive Reconfiguration (Road Diet)	152,900			152,900			
21025	Cycling & Pedestrian Advisory Committee (CPAC)	25,400			16,510		8,890	Non-DC Growth
21026	Engineering Staff Salary Recovery	713,700			713,700			
21042	Hwy 404 Collector Road (Design)	1,475,000			1,475,000			
21027	Installation of Way Finding Signs at Rouge Valley Trail	182,900			118,885		64,015	Non-DC Growth
21028	LPAT Transportation Peer Review	344,300			344,300			
21030	Markham Cycles & Active Transportation Awareness Program	15,300			9,945		5,355	Non-DC Growth
21031	Markham Cycling Day	10,200			6,630		3,570	Non-DC Growth
21032	New Traffic Signals (Design)	59,100			59,100			
21033	Secondary Plan Transportation Studies for Langstaff Gateway	576,300			576,300			
21034	Secondary Plan Transportation Studies for Yonge Corridor	576,300			576,300			
21035	Servicing & SWM Study for the Highway 404 N. Sec. Plan	344,300			344,300			
21036	Servicing & SWM Study for Yonge Corridor Sec. Plan	514,900			514,900			
21037	Servicing and SWM Study for Langstaff Secondary Plan	514,900			514,900			
21038	Sidewalk Program (Design)	509,400			509,400			
21039	Smart Commute Markham-Richmond Hill	76,300			76,300			
21040	Streetlight Program (Construction)	497,800			497,800			
21041	Various walking & cycling initiatives	45,800			29,770		16,030	Non-DC Growth
21178	Traffic Operational Improvements - Annual	51,800	51,800					
TOTAL Engineering		6,686,600	51,800	-	6,536,940	-	97,860	
TOTAL Development Services		19,874,600	51,800	211,300	18,083,370	-	1,528,130	
CAO, Legal & HR								
Human Resources								
21043	Diversity Action Plan Refresh	101,800	101,800					
TOTAL Human Resources		101,800	101,800	-	-	-	-	
TOTAL CAO, Legal & HR		101,800	101,800	-	-	-	-	
Corporate Services								
ITS								
21044	ITS Life Cycle Asset Replacement	1,739,900		1,391,900			348,000	\$104k WW, \$244k Dev./Build. Fee
TOTAL ITS		1,739,900	-	1,391,900	-	-	348,000	
Finance								
21045	Development Charges Background Study	122,100			109,890		12,210	Non-DC Growth
21046	Internal Project Management	943,700			943,700			
TOTAL Finance		1,065,800	-	-	1,053,590	-	12,210	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Asset Management								
21047	Building Condition Audit - FTE	149,800		149,800				
21048	Civic Centre Repair and/or Replacement Projects	366,900		366,900				
21050	Cornell C.C. Parking Garage - Construction	1,996,800	1,095,096		782,704		119,000	Carryforward from Project 20117
21051	Corporate Security Operations & System Upgrades	584,400		584,400				
21052	Fire Facilities Repair and/or Replacement Projects	38,000		38,000				
21053	Library Facilities Repair and/or Replacement Projects	44,900		44,900				
21054	Municipal Building Backflow Prevention - Annual Testing	20,400		20,400				
21055	Operations Facilities Repair and/or Replacement Projects	538,100		538,100				
21056	Operations Fuel Sites Monitoring	72,200	72,200					
21057	Other Facilities Repair and/or Replacement Projects	51,000		51,000				
21058	Parking Lot Light Replacement	89,800		89,800				
21059	Roofing Maintenance and Repair	122,400		122,400				
21060	Roofing Replacement Projects	757,400		757,400				
21061	Satellite Community Centre Repair and/or Replacement	15,300		15,300				
21062	Tennis Clubhouse Repair and/or Replacement Projects	6,700		3,350			3,350	Tennis Club
	TOTAL Asset Management	4,854,100	1,167,296	2,781,750	782,704	-	122,350	
	TOTAL Corporate Services	7,659,800	1,167,296	4,173,650	1,836,294	-	482,560	
Community & Fire Services								
Fire & Emergency Services								
21064	Air Cylinders 45+ Minutes Replacement	101,700		101,700				
21065	Arizona Vortex Tripod Replacement	7,400		7,400				
21066	Bunker Gear Life Cycle Replacement	89,200		89,200				
21067	Firefighting Tools & Equipment Replacement	101,700		101,700				
21068	Hazardous Materials Photo Ion Detector Replacement	5,400		5,400				
21069	Replacement of Equipment due to Staff Retirements	99,600		99,600				
21070	Rescue Equipment - Thermal Image Cameras	19,000		19,000				
	TOTAL Fire & Emergency Services	424,000	-	424,000	-	-	-	
Recreation Services								
21072	Angus Glen C.C. Arena Seating Replacement	221,800					221,800	Gas Tax
21073	Angus Glen C.C. Sand Filter Component Replacement	45,600		45,600				
21074	Angus Glen C.C. Snow Pit Heating Coil Replacement	57,000		57,000				
21075	Angus Glen Tennis Centre Court Re-Painting	40,700		40,700				
21076	Armadale C.C. Gym Interior Door	13,200		13,200				
21077	Camp Chimo High Ropes and Harness Replacement	8,100		8,100				
21078	Centennial C.C. Mechanical Replacement	121,500					121,500	Gas Tax
21079	Cornell C.C. Heat Exchanger Replacement	12,200					12,200	Gas Tax
21080	Heintzman House Washroom Refurbishment	37,000					37,000	Gas Tax
21081	Markham Village C.C. Dehumidification Unit Replacement	84,800					84,800	Gas Tax
21082	Markham Village C.C. Security System Replacement	32,100		32,100				
21083	Mt. Joy C.C. Arena Compressor Replacement	167,900					167,900	Gas Tax
21084	Mt. Joy C.C. Gas Monitor Replacement	5,200		5,200				
21085	Old Unionville Library Doors and Frames Replacement	44,800					44,800	Gas Tax
21086	Recreation AED Program Replacement	6,000		6,000				
21087	Recreation Aquatics Equipment Replacement	19,000		19,000				

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21088	Recreation Exterior Walkways Replacement	163,800					163,800	Gas Tax
21089	Recreation Fitness Equipment Replacement	161,800		161,800				
21090	Recreation Floor Cleaning Machine Replacements	18,300		18,300				
21091	Recreation Lifeguard Chair Replacement	34,800		34,800				
21092	Recreation Pool Grouting Replacement	11,000		11,000				
21093	Recreation Program Equipment Replacement	53,600		53,600				
21094	Recreation Tables and Chairs Replacement	34,000		34,000				
21095	Rouge River C.C. Mechanical Replacement	297,900					297,900	Gas Tax
21096	Thornhill C.C. Ice Equipment Replacement	6,300		6,300				
21097	Thornhill C.C. Retaining Wall Installation	330,700	198,420				132,280	Disaster Mit. Adaptation Fund
21098	Thornhill C.C. Rubber Floor Replacement	158,800		158,800				
	TOTAL Recreation Services	2,187,900	198,420	705,500	-	-	1,283,980	
Markham Public Library								
21099	Library Collections	2,806,300		2,806,300				
21100	Library Furniture, Equipment & Shelving Replacement	146,700		146,700				
	TOTAL Markham Public Library	2,953,000	-	2,953,000	-	-	-	
Operations - Roads								
21101	Asphalt Resurfacing	3,657,900		-			3,657,900	Gas Tax; Note 4
21102	Boulevard Repairs	58,400					58,400	Gas Tax
21103	Bridge Structure Preventative Maintenance - Roads	25,800		25,800				
21104	City Owned Entrance Feature Rehabilitation/Replacement	10,200		10,200				
21105	City Owned Fence Replacement Program	63,900		63,900				
21106	Citywide Ditching Program	91,400		91,400				
21107	Don Mills Storm Channel	35,400		35,400				
21108	Emergency Repairs	143,300		143,300				
21109	Guiderail- Install/Repair/Upgrade	90,900					90,900	Gas Tax
21110	Incremental Growth Related Winter Maintenance Vehicles	459,000			459,000			
21111	Localized Repairs - Curb & Sidewalk	876,400					876,400	Gas Tax
21112	Localized Repairs - Parking Lots	119,200		119,200				
21114	Retaining Wall Repair Program	80,200		80,200				
21115	Storm Water Retention Pond Maintenance Program	51,900		51,900				
	TOTAL Operations - Roads	5,763,900	-	621,300	459,000	-	4,683,600	
Operations - Parks								
21116	Backstop and Outfield Fence Replacement	144,000					144,000	Gas Tax
21117	Beaupre Park Waterplay Replacement	190,700					190,700	Gas Tax
21118	Bleachers (Metal) Replacements	22,900		22,900				
21120	Boulevard/Park Trees Replacement	359,400		359,400				
21121	Bridge Structure Preventative Maintenance in Parks	25,800		25,800				
21122	Cemetery Fence Repair/Replacement	40,700		40,700				
21123	City Park Furniture / Amenities	175,000		175,000				
21124	Court Resurfacing/Reconstruction/Maintenance	176,900		94,600			82,300	Tennis Clubs
21125	Fence (Tennis Courts)	135,800					135,800	Gas Tax
21126	Floodlights, Poles & Cross Arms Replacement	820,700					820,700	Gas Tax
21127	Goal Posts Replacement- Ashton Meadows Park	20,700					20,700	Gas Tax
21128	Markham Trees for Tomorrow	121,500					121,500	Landscape Recovery

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21129	Pathways Resurfacing	142,700					142,700	Gas Tax
21130	Playstructure Replacement	366,800					366,800	Gas Tax
21131	Recycling Containers Replacement (Yr 4 of 10)	16,900		16,900				
21132	Relamping & Fixtures Refurbishment	40,100		40,100				
21133	Shade Structure Rehabilitation and/or Replacement	111,700		111,700				
21134	Sportsfield Maintenance & Reconstruction	140,300		140,300				
21135	Stairway Repairs	229,200		229,200				
	TOTAL Operations - Parks	3,281,800	-	1,256,600	-	-	2,025,200	
Operations - Fleet								
21136	Corporate Fleet Growth - Non-Fleet	10,200			10,200			
21137	Corporate Fleet Refurbishing	37,000		37,000				
21138	Corporate Fleet Replacement - Fire	2,723,900		2,723,900				
21139	Corporate Fleet Replacement - Ice Resurfacing Machine	102,100		102,100				
21140	Corporate Fleet Replacement - Non-Fire	1,334,800		1,334,800				Note 6
21141	Corporate Fleet Replacement - Waterworks	216,200					216,200	Waterworks
21142	New Fleet - Parks	45,800			45,800			
	TOTAL Operations - Fleet	4,470,000	-	4,197,800	56,000	-	216,200	
Operations - Utility Inspection & Survey								
21143	Survey Monument Replacement	28,200		28,200				
	TOTAL Operations - Utility Inspection & Survey	28,200	-	28,200	-	-	-	
Operations - Business & Technical Services								
21144	Growth Related Park Improvements	478,300			430,470		47,830	Non-DC Growth
	TOTAL Operations - Business & Technical Services	478,300	-	-	430,470	-	47,830	
Environmental Services - Infrastructure								
21145	Bridges and Culverts - Condition Inspection	81,000		81,000				
21146	MNRF Monitoring for Capital Projects at Water Crossings	27,600		27,600				
21147	Small Culverts Replacement (8 Structures) - Construction	215,700		215,700				
21148	Storm & Sanitary Pumping Stations - Equipment Inspection	116,000		40,700			75,300	Waterworks Reserve
21149	Storm and Sanitary Sewer CCTV Inspection	652,800		215,100			437,700	Waterworks Reserve
21150	Stormwater Sewer Pipes Emergency Repairs	56,100		56,100				
21151	Streetlights - Miscellaneous Requests	101,800	101,800					
21152	Structures Program-Full-time Staff	148,100		148,100				
21153	Toogood Pond Dam - Rehabilitation Works	437,400		437,400				
21154	Toogood Pond Dam - Structural Inspection	9,800		9,800				
	TOTAL Environmental Services - Infrastructure	1,846,300	101,800	1,231,500	-	-	513,000	
Environmental Services - Stormwater								
21155	Don Mills Channel - Flood Proofing Site Investigation	124,900					124,900	Stormwater Fee
21156	Don Mills Channel Flood Control Program -Pond Design/CA	1,160,000					1,160,000	SW Fee \$696k, DMFA Grant \$464k
21157	Erosion Restoration Program	898,800		314,500	584,300			
21158	Oil Grit Separators (OGS) - Inspection and Cleaning	219,800					219,800	Gas Tax
21159	Swan Lake Chemical Treatment	259,500		259,500				

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
21160	SWM Pond Cleaning Design & CA - ID#47 & #119	152,600					152,600	Gas Tax
21161	SWM Ponds - Condition Inspection	26,500		26,500				
21162	Water Quality Improvements	41,100		41,100				
21163	Water Quality Monitoring	28,100		28,100				
21164	West Thornhill Flood Control Implementation - Ph 3B Cons.	4,029,600					4,029,600	Stormwater reserve
21165	West Thornhill Flood Control Implementation - Ph 4A Cons.	15,655,900					15,655,900	\$2M Gas tax;\$13.7M SW reserve
TOTAL Environmental Services - Stormwater		22,596,800	-	669,700	584,300	-	21,342,800	
Environmental Services - Waste								
21166	Incremental Growth Related Waste Management Vehicles	102,000			102,000			
TOTAL Environmental Services - Waste		102,000	-	-	102,000	-	-	
Environmental Services - Waterworks								
21167	Cathodic Protection of Ductile Iron Watermains	493,100					493,100	Waterworks Reserve
21168	CI Watermain Rehabilitation / CIPP Lining - Construction & CA	6,623,300					6,623,300	Waterworks Reserve
21169	CI Watermain Replacement - Design	447,700					447,700	Waterworks Reserve
21170	CI Watermain Replacement-West Thornhill Ph 3B	4,036,300					4,036,300	Waterworks Reserve
21171	Curb Box Inspection and Replacement Program	714,900					714,900	Waterworks Reserve
21172	Royal Orchard Sanitary Upgrades (West Thornhill - Ph. 4A)	3,471,000				3,471,000		
21173	Sanitary Sewers - Rehabilitation	1,405,000					1,405,000	Waterworks Reserve
21174	Wastewater Flow Monitoring	122,200					122,200	Waterworks Reserve
21175	Water Meters - Replacement Program	1,013,200					1,013,200	Waterworks Reserve
21176	Watermain Leak Detection Program	37,500					37,500	Waterworks Reserve
TOTAL Environmental Services - Waterworks		18,364,200	-	-	-	3,471,000	14,893,200	
TOTAL Community & Fire Services		62,496,400	300,220	12,087,600	1,631,770	3,471,000	45,005,810	
Corporate Wide								
21177	Corporate Capital Contingency	1,362,500	5,200	30,400	1,206,461		120,439	Various Other Internal; Note 7
TOTAL Corporate Wide		1,362,500	5,200	30,400	1,206,461	-	120,439	
TOTAL Projects Under Consideration		91,495,100	1,626,316	16,502,950	22,757,895	3,471,000	47,136,939	
Pre-Approved Projects								
Development Services								
Theatre								
21004	Theatre Fire Alarm 2 Stage Conversion	25,400		25,400				
TOTAL Theatre		25,400	-	25,400	-	-	-	
Design								
21019	Berczy Beckett Park (Cherna Ave.) - Design & Construction	59,800			53,820		5,980	Parks Cash-in-Lieu; Note 1
21022	Green Lane Park - Design and Construction	48,000			43,200		4,800	Parks Cash-in-Lieu; Note 2
21023	Yonge and Grandview Park - Design and Construction	56,500			50,850		5,650	Parks Cash-in-Lieu; Note 3

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
	<u>TOTAL Design</u>	164,300		-	147,870		16,430	
Engineering								
21029	Markham Centre Trail Phase 1B Construction	816,000			530,400		285,600	Section 37
	<u>TOTAL Engineering</u>	816,000		-	530,400		285,600	
	<u>TOTAL Development Services</u>	1,005,700	-	25,400	678,270		302,030	
Corporate Services								
Asset Management								
21049	Civic Centre Vestibule Repairs and/or Replacements	290,700		290,700				
21063	Theatre-HVAC Replacement	2,000,000		91,200			1,908,800	Gas Tax
	<u>TOTAL Asset Management</u>	2,290,700		381,900	-		1,908,800	
	<u>TOTAL Corporate Services</u>	2,290,700		381,900	-		1,908,800	
Community & Fire Services								
Fire & Emergency Services								
21071	SCBA Decontamination Machine	63,300	63,300					
	<u>TOTAL Recreation Services</u>	63,300	63,300	-			-	
Operations - Roads								
21101	Asphalt Resurfacing	3,157,900		100,000			3,057,900	Gas Tax; Note 4
21113	Parking Lots- Rehabilitation	678,900					678,900	Gas Tax; Note 5
	<u>TOTAL Operations - Roads</u>	3,836,800	-	100,000	-	-	3,736,800	
Operations - Parks								
21119	Block Pruning Initiative - Year 2 of 3	1,017,600	1,017,600					
	<u>TOTAL Operations - Parks</u>	1,017,600	1,017,600	-				
Operations - Fleet								
21140	Corporate Fleet Replacement - Non-Fire	285,900		285,900				Note 6
	<u>TOTAL Operations - Fleet</u>	285,900		285,900				
	<u>TOTAL Community & Fire Services</u>	5,203,600	1,080,900	385,900	-	-	3,736,800	
Corporate Wide								
Corporate Wide								
21177	Corporate Capital Contingency	194,600		12,200			182,400	Gas Tax; Note 7
	<u>TOTAL Corporate Wide</u>	194,600	-	12,200	-		182,400	

CITY OF MARKHAM
2021 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
	TOTAL Corporate Wide	194,600	-	12,200	-	-	182,400	
	TOTAL Pre-Approved	8,694,600	1,080,900	805,400	678,270	-	6,130,030	
	TOTAL Projects Under Consideration	100,189,700	2,707,216	17,308,350	23,436,165	3,471,000	53,266,969	

Notes:

- 1) The overall project budget is \$465,200. The pre-approval request of \$59,800 is for consulting work only.
- 2) The overall project budget is \$549,300. The pre-approval request of \$48,000 is for consulting work only.
- 3) The overall project budget is \$637,900. The pre-approval request of \$56,500 is for consulting work only.
- 4) The overall project budget is \$6,815,800. The pre-approval request of \$3,157,900 is to commence procurement of contracts earlier to potentially attain better pricing. Funding split of Life Cycle vs. Gas Tax funding has been updated since Council approval of the Capital Pre-Approval Report from \$224,340; \$2,933,560 to \$100,000; \$3,057,900
- 5) Funding source has been updated since Council approval of the Capital Pre-Approval Report from fully Life Cycle funded to fully Gas Tax funded
- 6) The overall project budget is \$1,620,700. The pre-approval request of \$285,900 is to commence procurement of articulating loader earlier to potentially attain better pricing.
- 7) The overall project budget is \$1,557,100. The pre-approval request of \$194,600 represents the contingency amounts required for all project pre-approval requests.



2021 PROJECT FUNDING REQUEST FORM

Number: **21001**

Project Cost: **\$204,700**

Project Name: **Culture Public Art Master Plan Implementation Phase 2 of 5**

Commission: Development Services

New Asset/Expansion

Department: Culture

Useful Life: 0 Pre Approval:

Project Mgr: Niamh O'Laoghaire

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

With Council's approval of the Public Art Master Plan and Implementation Plan, funding is now required to implement the plan. This will be a recurring expense for 5-years to meet the objectives of the Master Plan, funded by reserves. In 2021 it will fund maintenance of the Public Art Collection and work towards a joint project with Metrolinx (two underpasses at Kennedy and Denison) and Phase one of a Pan Am Centre project.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	201,200	732,000
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	201,200	732,000
HST Impact:	3,541	12,883
Total Project Cost:	204,700	744,900

NOTES

Phase 2 funded by the Reserve Fund: Public Art Acquisition (balance: \$2.35M). Coll.Maint. \$18,000, acquisitions for Civic Centre \$7,200 Projects: 2 Metrolinx underpasses at Kennedy+Denison to implement digital art platform + light-based art work. (\$70,000). Preparations for major installation at Pan Am site \$100,000.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
Reserve Fund	204,700	0	0	0	0	744,900	
TOTAL FUNDING	204,700				0	744,900	

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: <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: Markham Public Art Implementation Plan

Total Project Cost Table

	Project Number(s)	Past Projects (Actual/Forecast \$)	Current Project (Budget \$)	Future Projects (Forecast \$)	Total (\$)
Project Component 1	19001 and 20002	\$ 197,262			\$ 197,262
Project Component 2			\$ 204,700		\$ 204,700
Project Component 3				\$ 750,000	\$ 750,000
Total (\$)		\$ 197,262	\$ 204,700	\$ 750,000	\$ 1,151,962
Description of Project	Implement the Markham Public Art Master Plan				
What was completed in the past? Include timeline of works done.	In November 2019 the Council approved the Markham Public Art Master Plan and in February 2020 the Public Art Implementation. In 2020 \$70,000 remained in project 19001 and \$249,300 was received to begin implementation for a combined total of \$319,300. Due to the COVID-19 situation 3 activities were delayed (Varley temporary installation, Unionville streetscape and Pan Am centre preparation). The Program was able to implement the community outreach and engagement portions. Expenses in 2020: Public Art Curator Salary (\$58,400). Online Public Art Seminars and DeLimit, speculative Competition (\$31,312). Collections maintenance and repair, plicy revision (\$35,150). Metrolinx underpass digital project consultation (\$10,000). Collections Maintenance and acquisition (indoor) \$25,000; Education and outreach (\$15,000); Public art summit (\$20,000). Combined total: \$197,262. Remaining balance of \$122,038 (\$319,300 - \$197,262) will be returned to source.				
Current project objective	In 2021: Implement projects delayed from 2020 (Varley Temporary Installation, Unionville Streetscape, Pan Am Centre preparation) (\$122,000). Pan Am Centre commission competition (\$15,000). Metrolinx underpass digital art platform technical design (\$25,000) Markham Centre projects with Parks and Opens Space Development (\$45,000). Combined total (\$204,700).				
Description of future work required. Include estimated timing.	2022-2024: Ongoing implementation of the Master Plan as outlined and as opportunities arise, \$250,000 for each of 3 years.				



2021 PROJECT FUNDING REQUEST FORM

Number: **21002**

Project Cost: **\$86,300**

Project Name: **Museum - Various Buildings**

Commission: Development Services

Repair/Replace

Department: Museum

Useful Life: 0 Pre Approval:

Project Mgr: Vicky Chan/Cathy Molloy

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Building maintenance for selected buildings on the museum site in order to keep them in a state of good repair.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	75,000	0
Internal Charges:	10,000	0
External Consulting:	0	0
Sub Total:	85,000	0
HST Impact:	1,320	0
Total Project Cost:	86,300	0

NOTES

\$5,000 - Hoover House (windows)
\$20,000 - Pest control for entire site
\$60,000 - Mount Joy School (fire alarm panel)

SOURCE(S) OF FUNDING (\$)	Components					HST	TOTAL	Future Phases
	Budget	Hoover House	Pest Control	Fire Alarm				
Operating Funded Life Cycle	86,300	5,000	20,000	60,000	1,300	86,300	0	
TOTAL FUNDING	86,300					86,300	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: <input type="text" value="144,800"/>
				Amount Incl HST: <input type="text" value="86,300"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21003**

Project Cost: **\$36,700**

Project Name: **Museum Maintenance**

Commission: Development Services

Repair/Replace

Department: Museum

Useful Life: 0 Pre Approval:

Project Mgr: Cathy Molloy

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Building maintenance for selected buildings to keep them in a good state of repair.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	36,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	36,100	0
HST Impact:	635	0
Total Project Cost:	36,700	0

NOTES

Pavilion roll-wall replacement, \$25,000, Update Fire Safety plan \$5,000, Sump-pump replacement Mount Joy \$3,000, Annual radio replacment program \$2,500, Mop-sink replacement Mount Joy \$600.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Mount Joy	Pavilion	Site-Radio	Site-Fire Plan		
Operating Funded Life Cycle	36,700	3,650	25,500	2,500	5,050	36,700	0
TOTAL FUNDING	36,700					36,700	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: <input type="text" value="87,700"/>
				Amount Incl HST <input type="text" value="36,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21005**

Project Cost: **\$43,800**

Project Name: **Theatre Stage & Building Maintenance**

Commission: Development Services

Repair/Replace

Department: Theatre

Useful Life: 5 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

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project consists of stage rigging safety inspections, audio analyzer replacement, box office cabinet replacement, 1 box office ticket printer replacement, greenroom ceiling drywall repair and replacement of our motorized projection screen.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	43,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	43,000	0
HST Impact:	757	0
Total Project Cost:	43,800	0

NOTES

Amount requested is consistent with life cycle. Useful life varies depending on item 5-15 years. Stage rigging safety inspections (\$4,000), Audio analyzer replacement which allows the measurement of decibel levels during performances to remain in the approved safe volume range and allows identification of problem frequencies causing microphone interference quickly. (\$10,000) Replacement of 1 box office ticket printer (\$2,000), box office cabinet replacement (\$5,000), greenroom ceiling drywall repair and paint (\$4,000). motorized projection screen replacement (\$18,000)

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	43,800	0	0	0	0	0	0	
TOTAL FUNDING	43,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA				Life Cycle
Name	Year	Amount	Amount in Study	
				Amount in Study: <input type="text" value="2,739,100"/>
				Amount Incl HST <input type="text" value="43,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21007**

Project Cost: **\$29,200**

Project Name: **Gallery Lobby Maintenance**

Commission: Development Services

Repair/Replace

Department: Arts Centres

Useful Life: 20 Pre Approval:

Project Mgr: Niamh O'Laoghaire

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance of the Varley Art Gallery Lobby, now extremely run down. Repaint walls for brightness and replace floor for improved sanitation, particularly in a post COVID-19 environment. Upgrade communications via a wall mounted flat screen and an improved sound system to create a clean, multi-functional space attractive to the community to renters and program registrants.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	28,850	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	28,850	0
HST Impact:	305	0
Total Project Cost:	29,200	0

NOTES

During winter, the uneven tiled floor shows all mud and salt, despite daily mopping, creating an unclean appearance. Refinishing the floor, painting the walls and upgrading the sound system will have a dramatic effect, creating a clean, functional, and much easier to maintain lobby. Costs: Removal and disposal of floor tiles \$5,000; Supply and install vinyl plank flooring \$7,400; supply and install waterproof, industrial grade baseboard \$1,750; Paint all foyer, lobby and corridor brick walls \$3,200; Flat screen TV and media player \$1,500; Sound system, \$10,000 Total: \$28,850.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	29,200	0	0	0	0	0	0
TOTAL FUNDING	29,200					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="130,000"/>
				Amount Incl HST <input type="text" value="29,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21008**

Project Cost: **\$5,300**

Project Name: **Gallery McKay Heating and Cooling System**

Commission: Development Services

Repair/Replace

Department: Arts Centres

Useful Life: 20 Pre Approval:

Project Mgr: Niamh O'Laoghaire

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replace current heating/cooling system installed in 2005 which requires regular technical support. A new one is needed in order to create a safe and healthy customer-friendly environment that will continue to attract art class registrations, kinder campers, exhibition renters and office tenants.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	5,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,200	0
HST Impact:	92	0
Total Project Cost:	5,300	0

NOTES

Replace the McKay heating/cooling unit (Luxaire Acclimate 9.5) installed 2005, with a new, more efficient model. The McKay Art Centre's current heating/cooling unit is nearing the end of its life. Its functioning is very poor and requires regular technical support. Varley staff receive complaints from renters regarding both heating and cooling in the building. The Varley requests \$5,600 to purchase and install a new system to create a safe, healthy and customer-friendly environment that will continue to attract art class registrations, kinder campers, exhibition renters and office tenants.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	5,600					
Operating Funded Life Cycle	5,300	0	0	0	0	0	0
TOTAL FUNDING	5,300				0	0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="5,600"/>
				Amount Incl HST <input type="text" value="5,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21009**

Project Cost: **\$72,000**

Project Name: **Consultant Studies**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Biju Karumanchery

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This recurring account allows staff to respond to strategic opportunities and unplanned needs that arise throughout the year where specialized consultant services are needed.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	70,755	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	70,755	0
HST Impact:	1,245	0
Total Project Cost:	72,000	0

NOTES

This account is intended to allow staff to respond to unanticipated needs and strategic opportunities. The projected 3-year average spend (2017-2019) is \$72K.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
DCA	64,800	0	0	0	0	0	0
Development Fees	7,200	0	0	0	0	0	0
TOTAL FUNDING	72,000					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
General Government - Various Studies	2021	64,800	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		64,800	1,593,063	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:

Funds are included in the studies section of the D.C. Background Study.



2021 PROJECT FUNDING REQUEST FORM

Number: **21010**

Project Cost: **\$30,000**

Project Name: **Designated Heritage Property Grant Program -2021**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: Pre Approval:

Project Mgr: Regan Hutcheson

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Grant assistance (50/50) to a maximum of \$5,000/property for restoration work on designated properties. Program was extended by Council for three years (2020-2022)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	30,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	30,000	0
HST Impact:	0	0
Total Project Cost:	30,000	0

NOTES

Program was initiated in 2010 for four years (2010-2013) at \$30,000 per year. It was renewed for another three years (2014-2016) and for an additional three years (2017-2019 and 2020-2022) all at \$30,000 per year. Project classified as major due to 2 year timeline granted to property owners.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget			TOTAL		
Heritage Reserve	30,000	0	0	0	0	0	0
TOTAL FUNDING	30,000				0		0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21011**

Project Cost: **\$10,000**

Project Name: **Heritage Façade Improvements/Sign Replacement - 2021**

Commission: Development Services

Studies/Pilot Programs _____

Department: Planning

Useful Life: _____ Pre Approval:

Project Mgr: Regan Hutcheson

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual grants to commercial property owners in heritage areas to make improvements to facades. Matching grant of up to \$10,000 for non-heritage and up to \$15,000 for heritage buildings. Approval will allow City to continue with the program, as approved by Council.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	0	0
Total Project Cost:	10,000	0

NOTES

It is recommended that for 2021, the amount be \$10,000 based on 2020's actual requirement. Category is Major as projects can take up to two years to complete and provide grant. 2021 project to be funded from \$10k remaining unused from the 2020 program, which was returned to Life Cycle as per the June 9th Council Report.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	10,000	0	0	0	0	0	0
TOTAL FUNDING	10,000					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21012**

Project Cost: **\$50,900**

Project Name: **Housing Strategy - Inclusionary Zoning**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Darryl Lyons

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Approximately \$50,000 will be required to update the consultant's financial and market analysis necessary to implement inclusionary zoning. The need for the updated financial analysis stems from the community benefits charge (CBC) legislation which is yet to be finalized.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	50,000	0
HST Impact:	880	0
Total Project Cost:	50,900	0

NOTES

This project relates to project 19020 Housing Strategy with a budget of \$100,000, which has been substantially completed. The updated financial analysis is needed in order for the City to implement inclusionary zoning as per provincial regulation.

SOURCE(S) OF FUNDING (\$)		Components					TOTAL	Future Phases
Funding Type	Budget							
DCA	45,810	0	0	0	0	0	0	
Development Fees	5,090	0	0	0	0	0	0	
TOTAL FUNDING	50,900					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
General Government - Various Studies	2021	45,810	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		45,810	1,593,063	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:

Funds are included in the studies section of the DC Background Study.



2021 PROJECT FUNDING REQUEST FORM

Number: **21013**

Project Cost: **\$508,800**

Project Name: **Langstaff Master Plan and Secondary Plan Review**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Dave Miller

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To review and update the Master Plan, and the Secondary plan, including a review of Urban Design. This work will be done in consultation with Senior levels of Government adjoining Municipalities, external agencies, stakeholders such as landowners and the public.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	500,000	0
Sub Total:	500,000	0
HST Impact:	8,800	0
Total Project Cost:	508,800	0

NOTES

External consultants to coordinate the updates, amendments, review and approvals. Any future requirements will be determined following the update. Costs include retaining an external Project Manager.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	457,920	0	0	0	0	0	0
Development Fees	50,880	0	0	0	0	0	0
TOTAL FUNDING	508,800					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
General Government - Various Studies	2021	457,920	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		457,920	1,593,063	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:

Funds are included in the studies section of the DC Background Study.

Langstaff Gateway Master Plan & Secondary Plan Review 2021 Budget Request

The Approved Master Plan and Secondary Plan provides for:

1. A compact, complete, integrated, sustainable, vibrant, well designed, transit oriented, high density urban centre
2. Variety of housing options, employment, cultural / community facilities, shopping, & connections to higher order transit
3. Up to 32,000 residents (15,000 dwelling units) & 15,000 jobs, to be phased and linked to transit



47 hectares (116 acres)



The Mater Plan & Secondary Plan Should be reviewed prior to development beyond the first phases in the East & West Precincts

The review and commenting process to support the first phase (1A) of development in both the West (Condor) and East (Kylemore) Precincts, under the in-force Secondary Plan, has presented some implementation challenges for the developers, City and related agencies. Such challenges include the site topography, relative to the construction of the planned street network including grade separations at the C.N.R. tracks which bisect the area, the integration of Pomona Creek into the community structure, and a changing market for residential and non-residential (e.g. office and retail) development.



The Master Plan & Secondary Plan should be reviewed before proceeding with development beyond Phase 1A

This includes a review of:

1. Development phasing and ultimate build-out
2. Community structure including: street and block network
3. Transportation priorities and parking supply
4. Yonge Street Subway extension station locations and direct connections
5. Grade-separated crossings of the C.N.R. tracks
6. Networked community infrastructure (including district energy & utilidor)
7. Parks and open space including Pomona Creek
8. Schools and other civic uses



Master Plan & Secondary Plan review cost is estimated at approx. \$500,000

The 2009 to 2011 Master Plan & Secondary Plan budget was approximately \$880,000 (not including HST)*

Based on staff's recent experiences with the costs of other Secondary Plan reviews, the anticipated Planning Department costs to review the Master Plan and Secondary Plan for the Langstaff Gateway area will be approximately \$500,000.

*This doesn't include the Transportation or Civil Engineering component. The Civil Eng, was contracted and paid for by the developers. (Likely why we didn't get complete information about the grading challenges wrt the grade separated crossings at the time.)



2021 PROJECT FUNDING REQUEST FORM

Number: **21014**

Project Cost: **\$161,700**

Project Name: **Markham Centre Community Energy Plan**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval:

Department: Planning

Category: Minor

Project Mgr: Stephen Lue and Parvathi Nampoothiri

Cost Validation: Other(specify in Notes)

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The development of the Community Energy Plan ("CEP") to evaluate energy and emissions as a required and important component of the Markham Centre Secondary Plan Study Update. The scope of work involves the evaluation of Markham's North District's CEP model and its adaption to a high-density Growth Centre environment. The modelling would analyze and recommend the energy and greenhouse gas ("GHG") emission targets for Markham Centre and would include the requirements to minimize GHG emissions through compact urban design; address energy-efficient building operation, design and construction; and identify opportunities for on-site energy generation, connections to the Markham District Energy infrastructure, and renewable energy options.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	13,140	0
External Consulting:	146,000	0
Sub Total:	159,140	0
HST Impact:	2,570	0
Total Project Cost:	161,700	0

NOTES

The CEP is a requirement of the York Region Official Plan and the City's 2014 Official Plan and the Municipal Energy Plan. The CEP must be completed in order for York Region's approval of the updated Secondary Plan. Validation of the budget resulted from Staff's discussion with external consultants and City departments involved in the North District CEP, based on the comparison of past scope of work, tasks and budget. This work is supplemental to project 18026 Markham Centre Secondary Plan Update.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
DCA	145,530	0	0	0	0	0	
Development Fees	16,170	0	0	0	0	0	
TOTAL FUNDING	161,700				0	0	

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

DCA/LIFE CYCLE DETAILS

DCA			Amount in	Life Cycle
Name	Year	Amount	Study	
General Government - Various Studies	2021	145,530	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		<u>145,530</u>	<u>1,593,063</u>	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21015**

Project Cost: **\$101,800**

Project Name: **Parkland Study Update**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Biju Karumanchery

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

As a result of Bill 197, COVID19 Economic Recovery Act the Province has introduced legislation which will require certain actions on the part of the municipality. Existing parkland by-laws establishing an alternative rate will expire two years following Bill 197 coming into effect. Accordingly, municipalities will have two years to pass a new parkland dedication by-law if they wish to continue charging an alternative rate. Markham will have to amend the scope of the current Parkland Study to include additional matters in order to prepare a new Parkland Dedication By-law that can be defended at the LPAT.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	101,800	0

NOTES

Staff assume that the additional work will cost approximately \$100,000 over and above the budget set aside for the current Parkland Acquisition Study (project 16008 with budget of \$208.2k and \$11.5k remaining)

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget	TOTAL					
DCA	91,620	0	0	0	0	0	
Development Fees	10,180	0	0	0	0	0	
TOTAL FUNDING	101,800	0	0	0	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
General Government - Various Studies	2021	91,620	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		91,620	1,593,063	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21016**

Project Cost: **\$786,300**

Project Name: **Planning & Design Staff Salary Recovery**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Biju Karumanchery

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose is to recover salaries of Planning and Urban Design Staff which relate to growth related works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	786,300	0
External Consulting:	0	0
Sub Total:	786,300	0
HST Impact:	0	0
Total Project Cost:	786,300	0

NOTES

A significant amount of time is spent by planners (both development and policy staff) and urban designers on growth related hard infrastructure such as roads, storm water ponds, bridges etc. during the subdivision and secondary plan process and in one-off construction projects such as bridge construction and street re-construction. This project is to recover salaries of existing staff that assist in the delivery of growth related hard infrastructure.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	786,300	0	0	0	0	0	0
TOTAL FUNDING	786,300					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Studies		786,300	669,300	Amount Incl HST <input type="text"/>
TOTAL FUNDING		786,300	669,300	Year in the study <input type="text"/>

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

DC funding is included under the hard services studies of the Development Charges Background Study.



2021 PROJECT FUNDING REQUEST FORM

Number: **21017**

Project Cost: **\$101,800**

Project Name: **Secondary Plans - General**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Biju Karumanchery/Marg Wouters

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Funds are required to cover overages in secondary plan studies resulting from circumstances including low budget estimates and expanded scope of work as directed by Council.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	101,800	0

NOTES

These funds would also be used as follows: \$50,000 to top up the 2019 budget approval of the Markville Secondary Plan; \$25,000 to fund additional natural heritage work for the Milliken Secondary Plan, and \$25,000 to coverage additional public engagement meetings for the Markham Road-Mount Joy Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
DCA	91,620	0	0	0	0	0	0
Development Fees	10,180	0	0	0	0	0	0
TOTAL FUNDING	101,800					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
General Government - Various Studies	2021	181,620	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		181,620	1,593,063	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:

Funds are included in the studies section of the DC Background Study.



2021 PROJECT FUNDING REQUEST FORM

Number: **21018**

Project Cost: **\$203,500**

Project Name: **Yonge Corridor Secondary Plan**

Commission: Development Services

Studies/Pilot Programs

Department: Planning

Useful Life: 0 Pre Approval:

Project Mgr: Biju Karumanchery

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 2014 Official Plan requires a secondary plan to be prepared for the Yonge Steeles Key Development Area. However, in anticipation of the Yonge North Subway Extension, there is a need to plan comprehensively for the entire Yonge Corridor from Steeles Avenue to the Langstaff Gateway.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	200,000	0
Sub Total:	200,000	0
HST Impact:	3,520	0
Total Project Cost:	203,500	0

NOTES

Consultants will be retained to undertake the studies. This request is for planning and urban design services only. Cost estimate is based on other similar secondary plan studies.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
	0	0	0	0	0	0	0
DCA	183,150	0	0	0	0	0	0
Development Fees	20,350	0	0	0	0	0	0
TOTAL FUNDING	203,500					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
General Government - Various Studies	2021	183,150	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		183,150	1,593,063	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:

Funds are included in the studies section of the DC Background Study.



2021 PROJECT FUNDING REQUEST FORM

Number: **21019**

Project Cost: **\$465,200**

Project Name: **Berczy Beckett Park (Cherna Ave.) - Design & Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.44 acre (0.17 ha) park located at the west end of Cherna Ave. Includes tree protection measures for existing tree during construction. Program amenities include retaining wall, shade structure & associated landscape works. This will be the last park in the Berczy subdivision.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	370,000	0
Internal Charges:	37,800	0
External Consulting:	50,000	0
Sub Total:	457,800	0
HST Impact:	7,392	0
Total Project Cost:	465,200	0

NOTES

Cost per ha is \$2,736,470 (\$465,200/0.17 ha) or \$1,057,273 per acre. Annualized operating cost is \$1,559 (0.17 ha x \$9170/ha) starting in 2022. Estimated in-service date: Q2 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	418,680	0	0	0	0	0	0
Parks Cash-in-Lieu	46,520	0	0	0	0	0	0
TOTAL FUNDING	465,200					0	0

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

DCA/LIFE CYCLE DETAILS

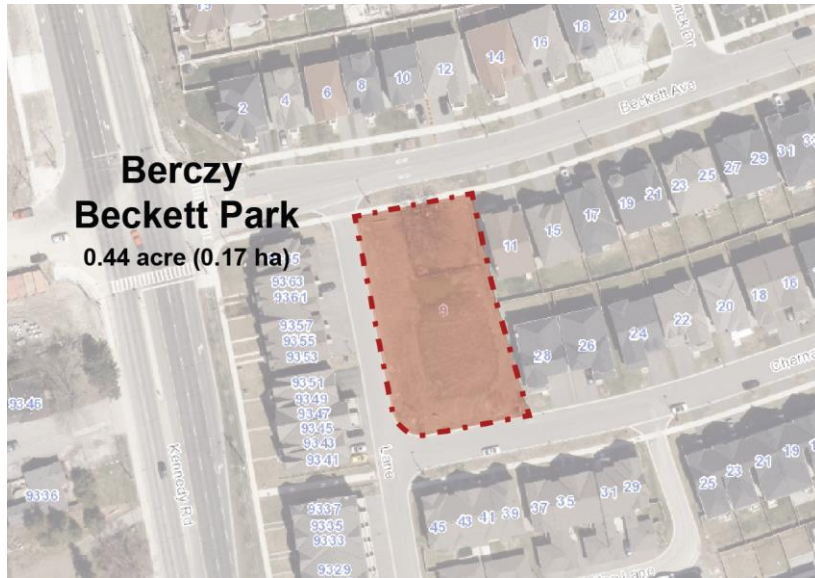
DCA Name	Year	Amount	Amount in Study	Life Cycle
Parks - Berczy Beckett Neighbourhood Park	2017	418,680	661,500	Amount in Study: <input type="text"/>
TOTAL FUNDING		418,680	661,500	Amount Incl HST <input type="text"/>
				Year in the study <input type="text"/>

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

The amenities are less than anticipated in DCBS.

Berczy Beckett Park

Design & Construction



Ward 6

Features:

- Tree protection measures for existing tree construction
- Shade structure
- Retaining wall
- Associated landscape works

- Estimated in service date: Q2 2022



2021 PROJECT FUNDING REQUEST FORM

Number: **21020**

Project Cost: **\$1,681,800**

Project Name: **Blodwen Davies Park - Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to construct the 6.42 acre (2.6ha) park at 335 Donald Cousens Parkway. Anticipated park amenities include Tennis Courts, Jr/Sr Playground, Shade Structure and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,500,000	0
Internal Charges:	135,000	0
External Consulting:	20,000	0
Sub Total:	1,655,000	0
HST Impact:	26,752	0
Total Project Cost:	1,681,800	0

NOTES

Cost per ha is \$646,846 (\$1,681,800/2.6 ha) or \$261,963 per acre. Annualized operating cost is \$23,842 (2.6ha x \$9,170) starting in 2022. Estimated in service date: Q3 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity. Design Consultant has previously been hired and design development is underway for tender in Q1 2021.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	TOTAL				Future Phases	
DCA	1,513,620	0	0	0	0	0	0
Parks Cash-in-Lieu	168,180	0	0	0	0	0	0
TOTAL FUNDING	1,681,800				0	0	0

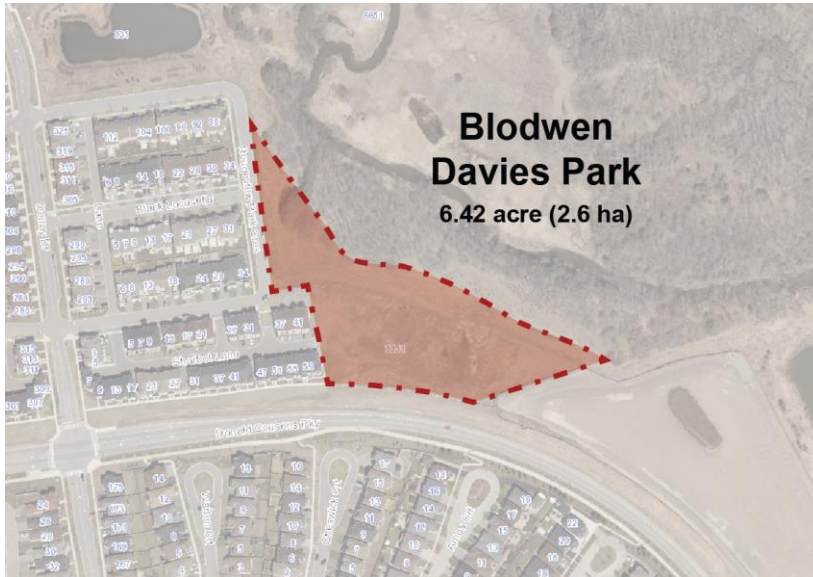
OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
Parks - Upper Greensborough Parkway Park	2021	1,513,620	2,021,447	Amount in Study: <input type="text"/>
TOTAL FUNDING		<u>1,513,620</u>	<u>2,021,447</u>	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:

Blodwen Davies Park - Construction



Ward 5

Features:

- Tennis courts
- Jr./Sr. playground
- Shade structure
- Associated landscape works

- Estimated in service date: Q3 2022



2021 PROJECT FUNDING REQUEST FORM

Number: **21021**

Project Cost: **\$7,585,300**

Project Name: **Celebration Park - Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To hire contractors to build the 25.5 acre /10.3 ha Celebration Park. Program includes Combined Washroom/Pavilion Building, Maintenance Building, Cricket Pitch (lit), Cricket Batting Cages (lit), Junior & Senior play, Water Play, Community Gathering Space w/ Stage, Parking Lot(s), Shade Structure(s) and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,785,000	0
Internal Charges:	630,000	0
External Consulting:	50,000	0
Sub Total:	7,465,000	0
HST Impact:	120,296	0
Total Project Cost:	7,585,300	0

NOTES

Cost per ha is \$757,680 (\$7,804,100/10.3 ha) or \$306,043 per acre. Annualized operating cost is \$94,451 (10.3ha x \$9,170/ ha) starting in 2023. Estimated in-service date: Q3 2023. Consultant has been hired, scope of the consultant PO must be adjusted to reflect revised scope of construction. Anticipate design to be ready for tender Q2 2021.

SOURCE(S) OF FUNDING (\$)		Components						Future Phases
Funding Type	Budget					TOTAL	Phases	
DCA	6,826,770	0	0	0	0	0	0	
Parks Cash-in-Lieu	758,530	0	0	0	0	0	0	
TOTAL FUNDING	7,585,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA			Amount in	Life Cycle
Name	Year	Amount	Study	
Parks - Celebration Park Phase 2	2017	230,491	230,491	Amount in Study: <input type="text"/>
Parks - Celebration Park Phase 2 Standalone Washroom	2017	358,470	358,470	Amount Incl HST <input type="text"/>
Parks - Celebration Park Phase 2	2017	2,798,749	2,798,749	Year in the study <input type="text"/>
Parks - Celebration Park Phase 2 Soccer	2017	635,004	635,004	
TOTAL FUNDING		<u>4,022,714</u>	<u>4,022,714</u>	

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

As part of the Q1 2020 status of capital council report, \$3.2M was returned to DC reserve from Kirkham Drive park (former name of Celebration Park) (projects 9350 & 13011).

Celebration Park - Construction



Total Project Cost (\$)

9350 - Kirkham Drive Park – Two Soccer Fields (Celebration Park)	\$1,025,300
13011 – Kirkham Drive Park Phase 2 Construction (Celeb. Park)	<u>\$3,544,300</u>
Total Approved	\$4,569,600
LESS Total Return in 2020	\$3,599,804

Total Committed (Design, Site Preparation)	\$969,796
PLUS 2021 Budget Request	
Celebration Park – Construction	\$7,585,300

Total Project Cost: \$8,555,096



2021 PROJECT FUNDING REQUEST FORM

Number: **21022**

Project Cost: **\$549,300**

Project Name: **Green Lane Park - Design and Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.79ac (0.32ha) park at the south east corner of Green Lane and Harold Lawrie Lane. Anticipated amenities include Jr/Sr playground, half basketball, shade structure and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	450,000	0
Internal Charges:	40,500	0
External Consulting:	50,000	0
Sub Total:	540,500	0
HST Impact:	8,800	0
Total Project Cost:	549,300	0

NOTES

Cost per ha is \$1,716,563 (\$549,300/0.32ha) or \$691,900 per acre. Annualized operating cost is \$2,934 (0.32ha X \$9,170). Estimated in service date: Q3 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	494,370	0	0	0	0	0	0	
Parks Cash-in-Lieu	54,930	0	0	0	0	0	0	
TOTAL FUNDING	549,300					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
Parks - Yonge Canac Park	2021	494,370	696,807	Amount in Study: <input type="text"/>
TOTAL FUNDING		494,370	696,807	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:

Green Lane Park

Design & Construction



Ward 1

Features:

- Jr/Sr. Playground
- Half Basketball
- Shade Structure
- Associated landscape works

- Estimated in service date: Q3 2022



2021 PROJECT FUNDING REQUEST FORM

Number: **21023**

Project Cost: **\$637,900**

Project Name: **Yonge and Grandview Park - Design and Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.73ac (0.29 ha) park located at the South east corner of Yonge St. and Grandview Ave. Anticipated park amenities include Junior/ Senior playground, plaza area, shade structure, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	530,000	0
Internal Charges:	47,700	0
External Consulting:	50,000	0
Sub Total:	627,700	0
HST Impact:	10,208	0
Total Project Cost:	637,900	0

NOTES

Cost per ha is \$2,199,655 (\$637,900/0.29 ha) or \$873,836 per acre. Annualized operating cost is \$2,659 (0.29ha x \$9,170). Estimated in service date: Q3 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	574,110	0	0	0	0	0	0	
Parks Cash-in-Lieu	63,790	0	0	0	0	0	0	
TOTAL FUNDING	637,900					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
Parks - Yonge Devron Park	2020	574,110	613,974	Amount in Study: <input type="text"/>
TOTAL FUNDING		574,110	613,974	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:

Yonge and Grandview Park

Design & Construction



Ward 1

Features:

- Jr./Sr. Playground
 - Plaza Area
 - Shade Structure
 - Pathways
 - Associated landscape works
-
- Estimated in service date: Q3 2022



2021 PROJECT FUNDING REQUEST FORM

Number: **21024**

Project Cost: **\$152,900**

Project Name: **Copper Creek Drive Reconfiguration (Road Diet)**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 15 Pre Approval:

Department: Engineering

Category: Minor

Project Mgr: Justin Chin

Cost Validation: Other(specify in Notes)

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Copper Creek Drive is a 4-lane collector road, with bicycle lanes and a posted 50 km/h speed limit. Local area residents have repeatedly been concerned about vehicle speeding and pedestrian safety. In response, City staff are currently preparing a detailed design involving converting the existing 4-lane cross-section with standard bicycle lanes, to a 3-lane cross-section (one travel lane per direction; centre turn lane; buffered bike lanes). A formal pedestrian crossover is also proposed between 9th Line and Stonechurch. Because speeding is the main factor contributing to concerns, reducing the number of lanes would be the most impactful and sustainable approach. The need for the road diet is driven by increase in growth related traffic, cyclists and pedestrians. Travel demand will continue to grow on Copper Creek Drive for the foreseeable future. The original design is a 4 lane road and the higher travel demand, particularly in volumes of active transportation, was not envisaged, which results in this project to redistribute the road cross section for all users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	130,400	0
Internal Charges:	20,212	0
External Consulting:	0	0
Sub Total:	150,612	0
HST Impact:	2,295	0
Total Project Cost:	152,900	0

NOTES

Vehicle operating speeds on Copper Creek ranges from 60 - 70 km/h. Staff have implemented speed radar boards there, but their impact has been limited due to the 4-lane cross-section. Traffic signals and stop controls at multiple locations along the corridor were also considered. However none meet Provincial warrant criteria.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Pavement Marking	Signage	PXO	Internal Chg	TOTAL	
DCA	152,900	76,320	5,488	50,880	20,212	152,900	0
TOTAL FUNDING	152,900					152,900	0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$20,000	\$0	\$20,000

DCA/LIFE CYCLE DETAILS

DCA			Amount in	Life Cycle
Name	Year	Amount	Study	
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		152,900	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		<u>152,900</u>	<u>11,325,356</u>	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:

WHY HAVE A ROAD DIET?

New two-way left turn lane makes it easier to make left turns into side streets and driveways

Speeding can be reduced by lane reconfiguration, improving neighbourhood liveability

Enhanced cycling facilities provide a more comfortable environment for people who would like to cycle

Studies show the neighbourhoods that invest in walking and cycling infrastructure have higher property values





Proposed PXO Location

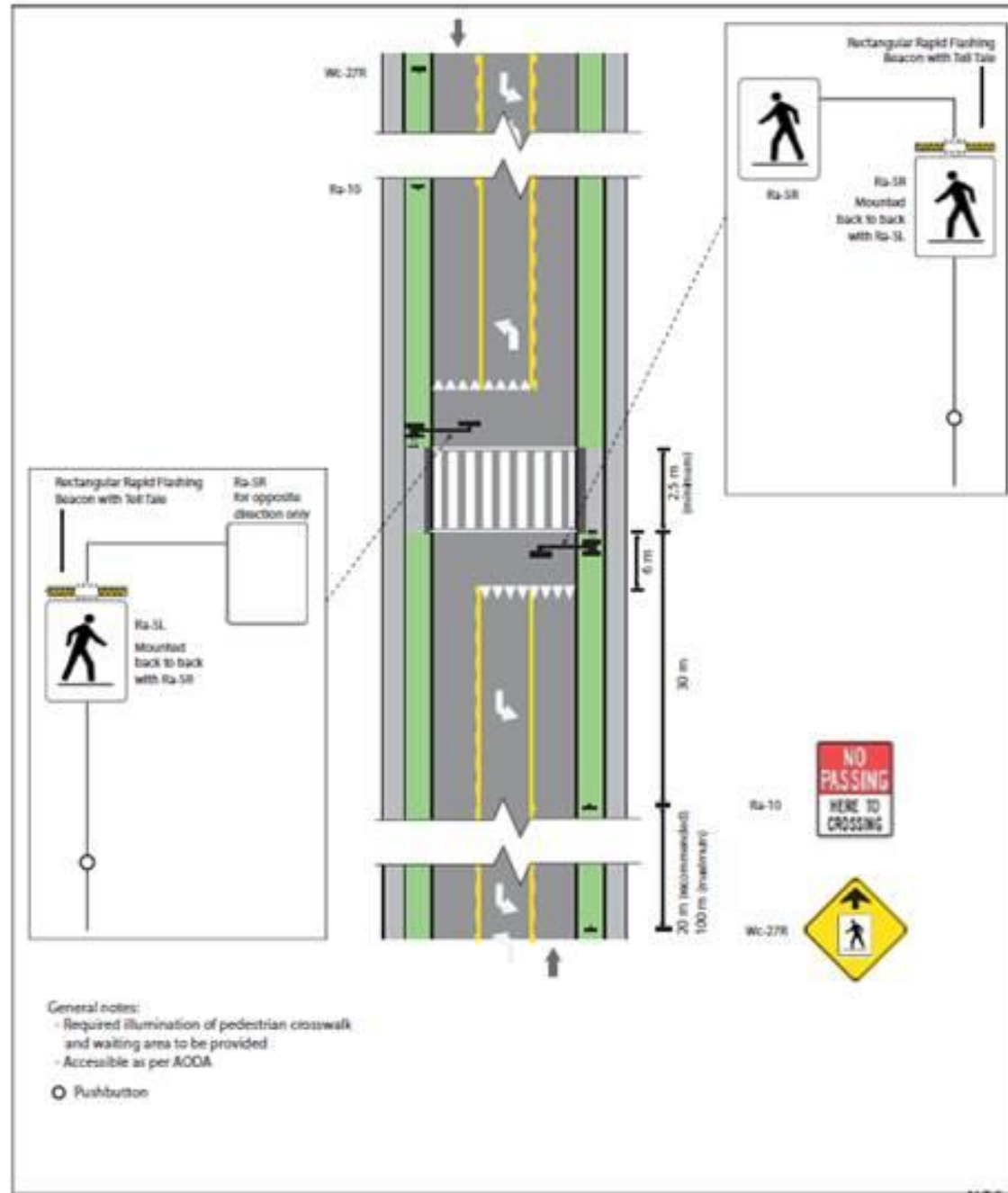


Figure 22: Pedestrian Crossover Level 2 Type B – Mid-block (3-lane with centre 2-way left-turn lane)



2021 PROJECT FUNDING REQUEST FORM

Number: **21025**

Project Cost: **\$25,400**

Project Name: **Cycling & Pedestrian Advisory Committee (CPAC)**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval:

Department: Engineering

Category: Annual

Project Mgr: Fion Ho

Cost Validation: External peer review

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

CPAC was established in September 2003, as per the direction of the Transportation Committee. In the Terms of Reference, the specific duties of CPAC is to include, but not limited, the following: (i) Advising staff of various departments and Council on the design, development and delivery of cycling and pedestrian policies, programs and facilities to promote and enhance cycling and walking in walking; (ii) Compiling research and statistics on cycling and pedestrian issues; (iii) Working with local neighborhoods by collecting and distributing information related to cycling and walking; (iv) Promoting an increased public awareness of cycling and walking as environmentally forms of transportation; (v) Assisting in fundraising opportunities; (vi) Discussing and resolving and issues between cyclists and pedestrians; (vii) Assisting in the integration of bicycle and pedestrian facilities into significant development proposals as they arise.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	25,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,000	0
HST Impact:	440	0
Total Project Cost:	25,400	0

NOTES

SOURCE(S) OF FUNDING (\$)		Components					TOTAL	Future Phases
Funding Type	Budget							
DCA	16,510	0	0	0	0	0	0	
Non-DC Growth	8,890	0	0	0	0	0	0	
TOTAL FUNDING	25,400					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA			Amount in	Life Cycle
Name	Year	Amount	Study	
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		16,510	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		<u>16,510</u>	<u>11,325,356</u>	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21026**

Project Cost: **\$713,700**

Project Name: **Engineering Staff Salary Recovery**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval:

Department: Engineering

Category: Annual

Project Mgr: TBD

Cost Validation: Other(specify in Notes)

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Cost recovery for Capital Works and Transportation staff on projects related to Region of York or Metrolinx projects. The list of projects are as follows: Metrolinx Steeles Grade Separation, RER, Metrolinx RTP, Region of York EA for Kennedy Road, McCowan Road and 16th Avenue, Region of York Design for the Hwy 404 Mid-block Crossing at 16th Avenue and York Region design for six locations, CPAC, Yonge Subway and Smart Commute.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	713,720	0
External Consulting:	0	0
Sub Total:	713,720	0
HST Impact:	0	0
Total Project Cost:	713,700	0

NOTES

This request is based on staff with varying percentage of time allocated to work on various shared projects with Region and Metrolinx.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
DCA	713,700	0	0	0	0	0	0
TOTAL FUNDING	713,700					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		713,700	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		713,700	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21027**

Project Cost: **\$182,900**

Project Name: **Installation of Way Finding Signs at Rouge Valley Trail**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Henry Sung

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This request is for Rouge Valley Trail proposed Improvements construction which will include signage implementation program to provide both cyclist and pedestrians a consistent information leading them along their route. The signage including directional signs, interpretative signs, mapping, pavement marking and symbols; the final signage plan remain to be finalized.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	147,850	0
Internal Charges:	22,516	0
External Consulting:	9,758	0
Sub Total:	180,124	0
HST Impact:	2,774	0
Total Project Cost:	182,900	0

NOTES

225 signs - \$78k
 13 special maps - \$9k
 7 interpreter signs -\$35k
 Information signs - \$25k
 Operating impacts will be determined at the time of construction award.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	118,885	0	0	0	0	0	0	
Non-DC Growth	64,015	0	0	0	0	0	0	
TOTAL FUNDING	182,900					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
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		118,885	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		118,885	11,325,356	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21028**

Project Cost: **\$344,300**

Project Name: **LPAT Transportation Peer Review**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Joseph Palmisano

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Budget to hire external transportation consultant to assist staff in reviewing development applications appealed to the Local Planning Appeal Tribunal (LPAT) and to help prepare the City's position at related mediations and hearing.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	39,000	0
External Consulting:	300,000	0
Sub Total:	339,000	0
HST Impact:	5,280	0
Total Project Cost:	344,300	0

NOTES

Current appeals include:
1. Yonge-Steeles - NW corner in Vaughan - \$225K
2. Aryeh Development - SE corner of Hwy 7 & Warden - \$75K
These appeals include both Transportation and Servicing components.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	344,300	0	0	0	0	0	0	
TOTAL FUNDING	344,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		344,300	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		344,300	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21030**

Project Cost: **\$15,300**

Project Name: **Markham Cycles & Active Transportation Awareness Progra**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval:

Department: Engineering

Category: Annual

Project Mgr: Fion Ho

Cost Validation: Other(specify in Notes)

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Active Transportation Awareness program is to support, promote and encourage active transportation in Markham.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	15,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	15,000	0
HST Impact:	264	0
Total Project Cost:	15,300	0

NOTES

Markham's contribution to joint project with TCAT for Markham Cycles \$15K. (Region is contributing \$30K).

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	9,945	0	0	0	0	0	0
Non-DC Growth	5,355	0	0	0	0	0	0
TOTAL FUNDING	15,300					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
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		9,945	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		9,945	11,325,356	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21031**

Project Cost: **\$10,200**

Project Name: **Markham Cycling Day**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Fion Ho

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The request is for the Annual Markham Cycling day, which has grown from a children cycling event started in 2008 with less than 100 participants into a community and major GTA event that attracted over 1800 registrants in 2019.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	176	0
Total Project Cost:	10,200	0

NOTES

The project has a bigger budget but Markham will contribute \$10K only and the rest will be fundraised.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	TOTAL				Future Phases	
DCA	6,630	0	0	0	0	0	0
Non-DC Growth	3,570	0	0	0	0	0	0
TOTAL FUNDING	10,200					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
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		6,630	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		6,630	11,325,356	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21032**

Project Cost: **\$59,100**

Project Name: **New Traffic Signals (Design)**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 30 Pre Approval:

Project Mgr: Justin Chin

Category: Major

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

Cost Validation: External peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design for new traffic signals at the following two intersections: (1) Bur Oak @ Alfred Paterson; (2) Bur Oak @ Hammersley. These intersections meet the Provincial criteria to warrant traffic signals and are therefore recommended by staff in order improve intersection safety, operations and accommodate future growth needs. The intersection will also include civil works to incorporate design elements as per the Accessibility for Ontarians with Disabilities Act (AODA). Design is to be completed in 2021 and construction in 2022.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	530,340
Internal Charges:	8,250	73,653
External Consulting:	50,000	31,820
Sub Total:	58,250	635,813
HST Impact:	880	9,894
Total Project Cost:	59,100	645,700

NOTES

Total costs specified in the DCA Study is identified as follows for each intersection, listed under "Intersection Improvements": Bur Oak/Hammersley (Future Signalized Intersections (7) at Wismer); Bur Oak/Alfred Paterson (Future Signalized Intersections (4) @ Greensborough).

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	59,100	0	0	0	0	0	645,700
TOTAL FUNDING	59,100					0	645,700

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$6,000	\$0	\$6,000

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
Hard - Intersection - Future Signalized Intersections (4) - Greensborough		29,550	1,038,589	Amount in Study: <input type="text"/>
Hard - Intersection - Future Signalized Intersections (7) - Wismer		29,550	2,869,534	Amount Incl HST <input type="text"/>
TOTAL FUNDING		59,100	3,908,123	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21033**

Project Cost: **\$576,300**

Project Name: **Secondary Plan Transportation Studies for Langstaff Gatewa**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Joseph Palmisano

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In conjunction with the budget request for the Planning component, this request is for the transportation component of the secondary plan development studies for the Langstaff Gateway.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	67,500	0
External Consulting:	500,000	0
Sub Total:	567,500	0
HST Impact:	8,800	0
Total Project Cost:	576,300	0

NOTES

Cost Validation: based on similar transportation studies for secondary plans.
Requirement validation: Planning has been directed to prepare a Secondary plan for the Langstaff Gateway. A Transportation study is required to prepare to support and inform the development concept for the Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	576,300	0	0	0	0	0	0	
TOTAL FUNDING	576,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		576,300	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		576,300	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21034**

Project Cost: **\$576,300**

Project Name: **Secondary Plan Transportation Studies for Yonge Corridor**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Joseph Palmisano

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In conjunction with the budget request for the Planning component, this request is for the transportation component of the secondary plan development studies for the Yonge Corridor (includes Yonge Steeles & Yonge North).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	67,500	0
External Consulting:	500,000	0
Sub Total:	567,500	0
HST Impact:	8,800	0
Total Project Cost:	576,300	0

NOTES

Cost Validation: based on similar transportation studies for secondary plans.
Requirement validation: Planning has been directed to prepare a Secondary plan for the Yonge Corridor. A Transportation study is required to prepare to support and inform the development concept for the Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	576,300	0	0	0	0	0	0	
TOTAL FUNDING	576,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		576,300	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		576,300	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21035**

Project Cost: **\$344,300**

Project Name: **Servicing & SWM Study for the Highway 404 N. Sec. Plan**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Farshed Kawasia

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Retain a consultant to prepare a servicing and stormwater management study to support the update of the Highway 404 North Secondary Plan to identify options for: municipal servicing; stormwater management including surface, sub-surface water, and fluvial geomorphology; terrestrial and aquatic habitat, and provide a framework for the protection of the natural environment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	39,000	0
External Consulting:	300,000	0
Sub Total:	339,000	0
HST Impact:	5,280	0
Total Project Cost:	344,300	0

NOTES

Cost validation: based on similar servicing studies for secondary plans.
Requirement validation: Planning has been directed to prepare an update for the Highway 404 North Secondary Plan. A servicing and stormwater management study is required to be prepare to support and inform the update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	344,300	0	0	0	0	0	0	
TOTAL FUNDING	344,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		344,300	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		344,300	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21036**

Project Cost: **\$514,900**

Project Name: **Servicing & SWM Study for Yonge Corridor Sec. Plan**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Farshed Kawasia

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Retain a consultant to prepare a servicing and stormwater management study to support the development of a secondary plan for the Yonge Corridor (Yonge-Steeles and Yonge- North (Royal Orchard)) area to identify options for: municipal servicing; stormwater management including surface, sub-surface water, and fluvial geomorphology; terrestrial and aquatic habitat, and provide a framework for the protection of the natural environment

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	57,000	0
External Consulting:	450,000	0
Sub Total:	507,000	0
HST Impact:	7,920	0
Total Project Cost:	514,900	0

NOTES

Cost validation: based on similar servicing studies for secondary plans.
Requirement validation: Planning has been directed to prepare a Secondary Plan for the Yonge Corridor. A servicing and stormwater management study is required to be prepared to support and inform the development concept for the Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	514,900	0	0	0	0	0	0
TOTAL FUNDING	514,900					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		514,900	10,602,000	Amount in Study: <input type="text"/>
TOTAL FUNDING		514,900	10,602,000	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21037**

Project Cost: **\$514,900**

Project Name: **Servicing and SWM Study for Langstaff Secondary Plan**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Farshed Kawasia

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Retain a consultant to prepare a servicing and stormwater management study to support the development of a secondary plan for the Langstaff area to identify options for: municipal servicing; stormwater management including surface, sub-surface water, and fluvial geomorphology; terrestrial and aquatic habitat, and provide a framework for the protection of the natural environment

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	57,000	0
External Consulting:	450,000	0
Sub Total:	507,000	0
HST Impact:	7,920	0
Total Project Cost:	514,900	0

NOTES

Cost validation: based on similar servicing studies for secondary plans.
Requirement validation: Planning has been directed to prepare a Secondary Plan for Langstaff. A servicing and stormwater management study is required to be prepare to support and inform the development concept for the Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	514,900	0	0	0	0	0	0	
TOTAL FUNDING	514,900					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		514,900	10,602,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		514,900	10,602,000	Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21038**

Project Cost: **\$509,400**

Project Name: **Sidewalk Program (Design)**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Mark Siu

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To complete the detailed design for new sidewalk in various areas within City to provide pedestrian and links to the City's sidewalk network. The number of locations to be designed for this budget will be based on the information provided to and approved by DSC in November 2018. Locations 1) Parkway Ave - Orchard St to Paramount Rd, 2) Carlton Rd - Warden Ave to Braitewaite Rd, 3) Heritage Rd - McCowan Rd to Laidlaw Blvd, 4) Crown Steel Dr - 14th Ave to Royal Crest Ct, 5) Royal Crest Crt - Crown Steel Dr to Birchmount Rd, 6) McIntosh Dr - Woodbine Avenue to Apple Creek Blvd, 7) Roxbury St - Horstman St to 14th Ave , 8) Riviera Dr - Rodick Rd to 14th Ave.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	61,150	0
External Consulting:	440,536	0
Sub Total:	501,686	0
HST Impact:	7,753	0
Total Project Cost:	509,400	0

NOTES

Based on estimates from previous projects. An estimated 5.2 km will be designed as part of this request. Unit cost is consistent with recent award plus inflation. Locations are subject to change upon Director's approval based on design and site condition.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	509,400	0	0	0	0	0	0	
TOTAL FUNDING	509,400					0	0	

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

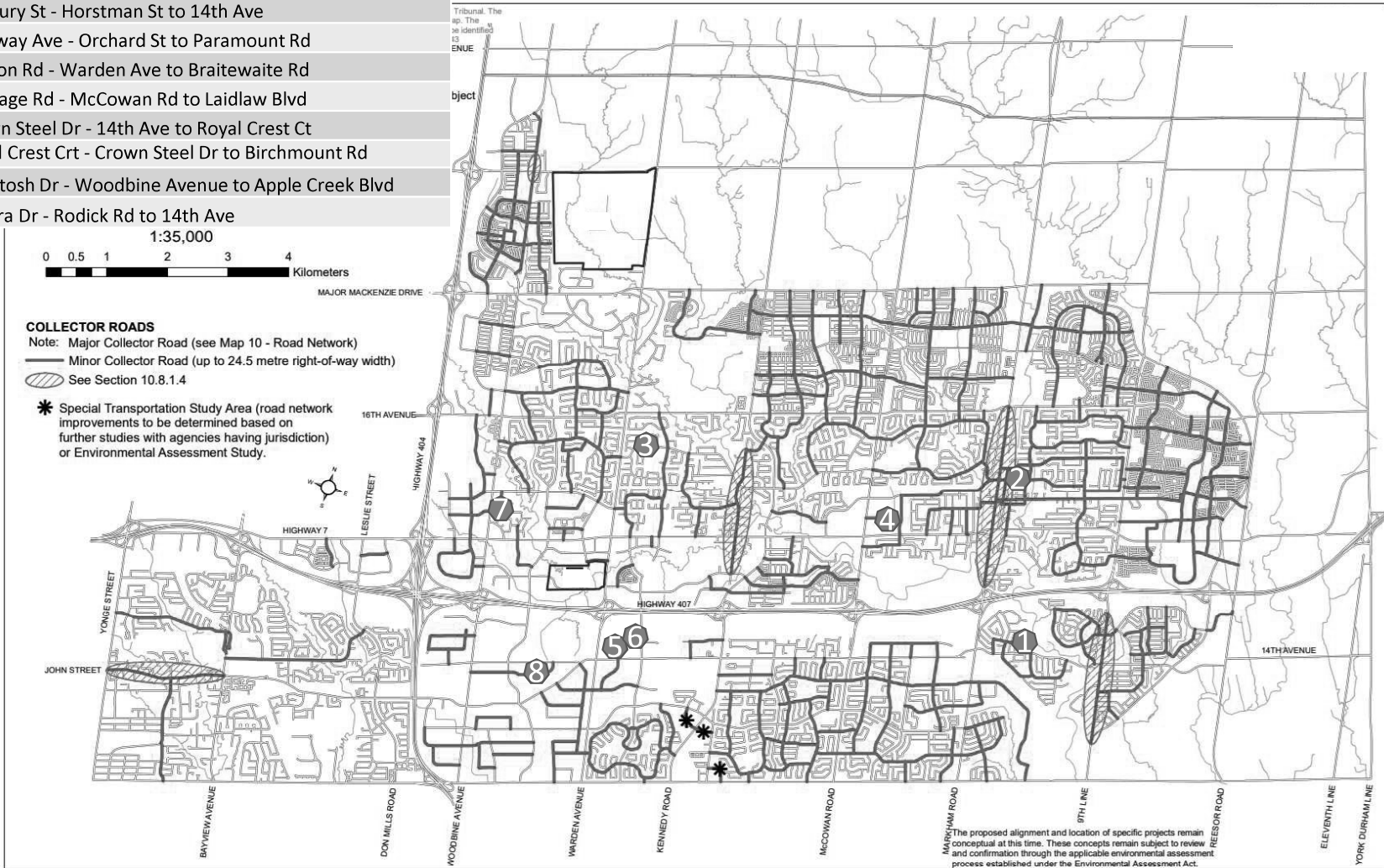
DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
Hard - Miscellaneous new sidewalks		509,400	2,019,500	Amount in Study: <input type="text"/>
TOTAL FUNDING		509,400	2,019,500	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:

2021 Sidewalk Design Program

- | | |
|---|---|
| 1 | Roxbury St - Horstman St to 14th Ave |
| 2 | Parkway Ave - Orchard St to Paramount Rd |
| 3 | Carlton Rd - Warden Ave to Braitewaite Rd |
| 4 | Heritage Rd - McCowan Rd to Laidlaw Blvd |
| 5 | Crown Steel Dr - 14th Ave to Royal Crest Ct |
| 6 | Royal Crest Crt - Crown Steel Dr to Birchmount Rd |
| 7 | McIntosh Dr - Woodbine Avenue to Apple Creek Blvd |
| 8 | Riviera Dr - Rodick Rd to 14th Ave |



Path: Q:\Geomatics\Departments\Planning\Policy\MBS27 New OPCMB Approved Schedules Nov 2017\Map 11\Map 11 Minor Collector Road Network.mxd

The proposed alignment and location of specific projects remain conceptual at this time. These concepts remain subject to review and confirmation through the applicable environmental assessment process established under the Environmental Assessment Act.



2021 PROJECT FUNDING REQUEST FORM

Number: **21039**

Project Cost: **\$76,300**

Project Name: **Smart Commute Markham-Richmond Hill**

Commission: Development Services

Studies/Pilot Programs

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Fion Ho

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Markham is a founding member and funding partner of Smart Commute Markham-Richmond Hill. Other funding partners are York Region and City of Richmond Hill. Smart Commute Markham-Richmond Hill offers services and programs to local employers and their employees to reduce use of private cars in commuting to and from work. Alternative modes includes carpooling, transit incentives, cycling, telework, emergency ride home program and more.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	76,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	76,300	0
HST Impact:	0	0
Total Project Cost:	76,300	0

NOTES

This is an annual program and relies on all three funding partners contributing our mutually agreed-upon share of the operation of Smart Commute.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	76,300	0	0	0	0	0	0
TOTAL FUNDING	76,300					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		76,300	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		76,300	11,325,356	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:

Smart Commute initiatives

The Smart Commute initiative provides transportation demand management services to employers and businesses and has many “chapters” across the GTHA. The collective aim is to help the employees of these businesses find better ways to get to/from work other than driving alone. That requires many indirect programs and initiatives to encourage, promote, educate on carpooling, transit, walking and cycling.

In terms of KPIs, attached is the 2020 workplan of Smart Commute Markham Richmond Hill that includes performance targets.

Smart Commute “chapters” across the GTHA have different organizational forms. Some are operated by municipalities, Chamber of Commerce/Boards of Trade, non-profits, and for-profit. The common element is that they are all subsidized by the benefiting municipalities. There has been previous detailed reviews by Metrolinx to try to understand the organizational differences and help determine if there are some that are more efficient than others. Sadly, there is no clear answer.

In the case of Smart Commute Markham Richmond Hill, it was originally set up in 2004 to serve the employers and businesses around the Hwy 7/404/407 area and due to the contiguous development there, the political decision was made to share a single operation and the cost of it. Because of the political nature of its set up, SCMRH is operated jointly through the Markham and Richmond Hill Boards of Trade.

Smart Commute Markham, Richmond Hill

Overview for City of Markham (as of September 2020)



Explore your options

Explore your options



What is Smart Commute Markham, Richmond Hill?

- Smart Commute Markham, Richmond Hill (SCMRH) is a workplace and community travel program of York Region, in partnership with the cities of Markham and Richmond Hill. We operate as a Transportation Management Association managed by the Markham and Richmond Hill Boards of Trade.
- We connect Markham and Richmond Hill workplace employees with sustainable commute options that meet their needs. In collaboration with employers, local municipalities, and partners, we deliver innovative, cost-efficient Transportation Demand Management (TDM) strategies that contribute to employer business and sustainability goals and local policy priorities.
- The Smart Commute Workplace Program has shown great success throughout the Greater Toronto and Hamilton Area (GTHA), where employees from Smart Commute workplaces drive alone nearly 19.2%* less than the average commuter.

*Source: Transportation Tomorrow Survey, 2016

Explore your options



TDM during COVID-19



Since the provincial government-mandated COVID-19 restrictions began in March 2020, the SCMRH team and more than 85% of our workplaces have adopted telework as the main mode of commuting.

With a significant decrease in workplace employees travelling to work, our focus has shifted from promoting commuting by carpool and public transit to providing support for working from home and encouraging active transportation when possible.

Ongoing TDM services delivery, custom webinars and TDM guides distributed to SCMRH workplaces and community since March 2020:

- Navigating the New Normal brochure and two-part webinar series
- Telework Policy Guide for Employers
- Cycling Webinar Series
- Special edition newsletter in March, offering tips for teleworking and virtual support for route planning and best practices

Explore your options



2020 Completed Custom TDM Projects/Programs

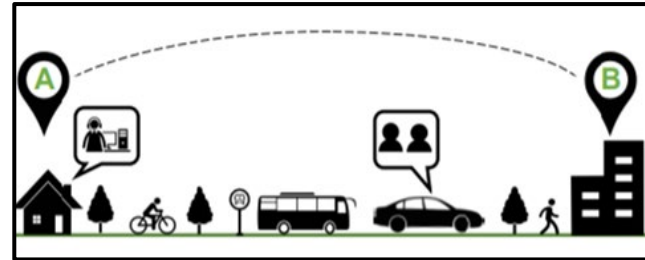
Winter Commute Week



238 individuals pledged to try a new mode of commuting.

39.4% commuted sustainably: 35% carpooled, 35% took public transit, 12% teleworked, and 7% walked.

Navigating the New Normal



Guide featured tips and support on commuting sustainably during COVID-19 restrictions.

Two webinars promoted to 62 SCMRH and Board of Trade workplaces.

Carpool Mix 'n Mingle Guide



Completed June 2020

Telework Policy Guide for Employers

Telework Policy Guide for Employers



Smart Commute Markham, Richmond Hill

Completed July 2020

Virtual Bike Ride Campaign



Campaign encouraged commuting and recreational cycling in lieu of Bike to Work Day.

Received photo submissions and cycling tips from Markham and Richmond Hill.

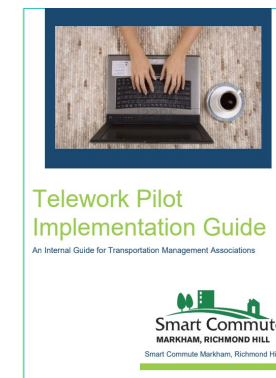
Cycling Webinar Series



Eight webinars delivered to over 100 SCMRH workplace employees.

Topics included: Cycling Safety, Rules of the Road, and Cycling in York Region, featuring representative from YRT.

Internal Telework Policy Guide



Completed July 2020

Shuttle Bus Program Report

Smart Commute Markham, Richmond Hill Shuttle Bus Program



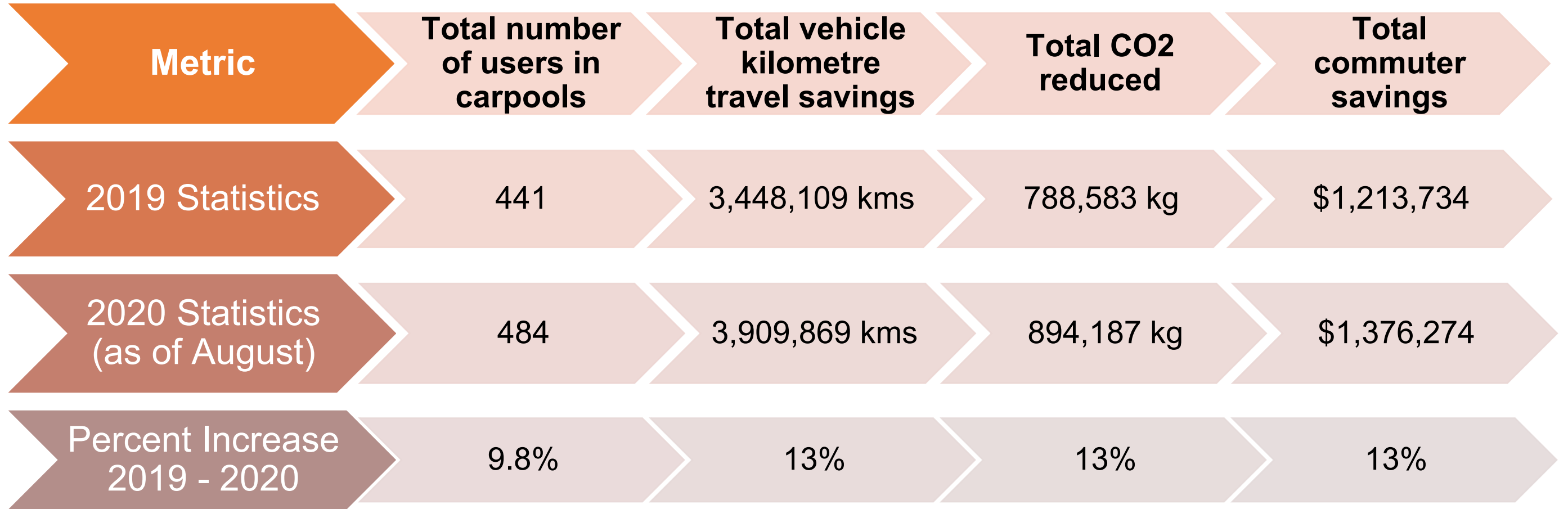
Smart Commute MARKHAM, RICHMOND HILL

Currently in progress

Explore your options



Carpool Parking Pass Program Statistics



Note: Statistics are based on SCMRH workplaces in Markham and Richmond Hill

Explore your options



Workplace and Community Engagement*

Custom TDM Workshops/Community and Workplace Outreach Events	Total
Custom TDM Workshops and Resources <ul style="list-style-type: none"> - CAN-BIKE sessions - Cycling 101/Active Transportation Workshops - Employee Commuter Options Workshops - New in 2020: <ul style="list-style-type: none"> o Cycling Webinar Series (four topics delivered to three Markham workplaces and over 85 participants) o Navigating the New Normal Webinar Series o Transit Options survey and outreach with YRT at WSP Thornhill o Custom workplace brochures for ten Markham workplaces 	84
Workplace Hosted Events	30
TDM Outreach Events during SCMRH Annual Campaigns <ul style="list-style-type: none"> - New in 2020: <ul style="list-style-type: none"> o Winter Commute Week (February), Virtual Bike Ride Campaign (June), and Design the New Normal, in partnership with SCNTV and SCCY (July-August) 	56
Community engagement events <ul style="list-style-type: none"> - Markham Board of Trade events - Markham Mayor’s Annual Luncheon and Business Address - Markham Cycling and Advisory Committee meetings and Active Transportation Master Plan update webinars 	33
Total Events	203



Clockwise from top left: Lunch ‘n Learn workshop at Qualcomm; Orientation Welcome Fair at Seneca College - Markham Campus; Carpool Mix ‘n Mingle at Crown Property - Cochrane Drive; Transit Options survey with YRT at WSP Thornhill.
The aforementioned events occurred either in late 2019 or early 2020, prior to COVID-19 workplace restrictions.

*2019-2020 Statistics

Explore your options



SCMRH Workplaces



Join these Markham and Richmond Hill Workplaces in the Smart Commute Program!

65% of Markham's top 20 employers are Smart Commute workplaces

Source: Markham Voice, 2019 Spring Issue.

MARKHAM'S TOP 20 EMPLOYERS

- IBM Canada Ltd
- TD Financial Group
- City of Markham
- Markham Stouffville Hospital
- The Miller Group
- AMD Technologies Inc.
- CGI Information Systems
- Homelife Landmark Realty Inc.
- TD Insurance
- AVIVA Canada
- Allstate Insurance
- Johnson & Johnson Inc.
- CAA South Central Ontario
- Enercare Home Services
- WSP Canada Group Ltd.
- Autolive Electronics Canada Inc.
- Honda Canada
- First Student Canada
- Costco Wholesale Canada Ltd.
- GM Canada Technical Centre

Explore your options



Workplace Success Story: Crown Property Management

- Corporate Sponsor Workplace since 2017.
- Three property locations in Markham (Allstate Corporate Centre, 675 Cochrane Drive and 101 McNabb Street) featuring prominent corporate tenants including Allstate Insurance, General Motors, Huawei and TD Insurance.
- All three CROWN property locations in Markham have achieved a 2019 **Gold Smart Commute Workplace Designation**. Each property features electric vehicle charging stations and on-site sheltered bike parking. Dedicated carpool parking spaces are available at the Allstate Corporate Centre and 675 Cochrane locations whereas 101 McNabb facilitates an exclusive shuttle bus service for tenants.
- **Carpool Parking Pass Program (CPPP):** Crown has implemented the CPPP at Allstate Corporate Centre (2017) and 675 Cochrane (2019) with 33 registered users forming 12 carpool groups. As of August 2020, CPPP Crown tenants have saved 21 parking spaces, 527,040 vehicular kilometres travelled, reduced 120,534 kg in CO2, which has resulted in \$185,518 in commuter savings.
- **Bike Share Feasibility Study completed late 2019:** SCMRH delivered a Bike Share Feasibility Study to explore the option of implementing a bike share program at the Allstate Corporate Centre location for tenant employees. More than one third of tenant employees were interested in having the program implemented and biking during the work day.
- SCMRH hosted three on-site promotions during Earth Week for all three Crown Markham property locations and two carpool mix & mingles to promote carpool parking at Allstate Corporate Centre and 675 Cochrane.



Earth Week promotion in April 2019 at Allstate Corporate Centre.

Explore your options



New Workplaces: Estee Lauder Companies and Comfort Inn



Estee Lauder Companies

Markham locations: 100 Alden Road, 200 Bentley Street, and 145 Idema Road
Date of signed agreement: August 2019



Comfort Inn Toronto Northeast

8330 Woodbine Avenue
Date of signed agreement: February 2020

- Referred by the **City of Markham's Economic Development** department, in 2018 SCMRH provided TDM consultation to ELC's planned relocation to Hillmount Road in Markham.
- **Workplace Travel Survey** was conducted in November and December 2019, resulting in a **67% response rate**.
- Data analysis performed and a comprehensive survey report, including TDM recommendations, was delivered to ELC in January 2020.
- **218 personalized travel plans** customized for carpoolers and public transit users to access the Hillmount Road site.
- **Custom workplace brochure** of sustainable commuting amenities at the Hillmount site was created and shared with all ELC employees in April 2020, which received very positive feedback.
- Custom TDM resources, webinars and virtual route planning support using the new online trip tracking tool are planned in 2020/2021 for ELC employees.

- Initial consultation phone meeting was conducted with Comfort Inn management in January 2020.
- Site is currently undergoing a redevelopment and will feature retail and commercial properties, hotels and restaurants.
- **Custom workplace brochure** of sustainable commuting amenities at the current location was created and shared with employees in June 2020.
- SCMRH plans to continue supporting redevelopment efforts in 2020 with a private network on the new online trip tracking tool.

Explore your options



SCMRH Workplaces

	2019	2020	Percentage Variance (2019-2020)
Total number of SCMRH workplaces*	62	62	--
Number of SCMRH workplace employees**	81,091	78,037	-4%
Total number of SCMRH workplaces in Markham	42	42	--
Number of SCMRH workplaces employees in Markham	60,948	58,105	-5%

*In 2020, Comfort Inn Toronto Northeast joined SCMRH. Seneca College - Markham Campus started the relocation to Newnham campus throughout 2020.

**Percentage decrease due to the relocation of Seneca College - Markham campus to Newnham campus, which had more employees than Comfort Inn.

Explore your options



Workplace TDM Programming Planned for 2021

Service/Workshop	Estimated Outreaches	Estimated Engagement
Workplace-hosted Virtual Active Transportation Challenge	4 – 5	20 - 30 participants per challenge
Commute-related Lunch ‘n Learn or Webinar	3 - 5	15 – 20 employees per workplace
Custom Workplace Commuter Brochure	--	3 - 5 brochures
Cycling Workshop and Webinars	8 -10	15 – 20 employees per workplace
Comprehensive Survey Promotion*	2 - 3	20 – 25 employees per workplace
Online Trip Tracking Tool Webinars	5 - 8	20 - 25 employees per workplace

*To be determined. Onsite outreaches and workshops may be replaced with virtual activities.

Explore your options



Online Trip Tracking Tool Planned for 2021

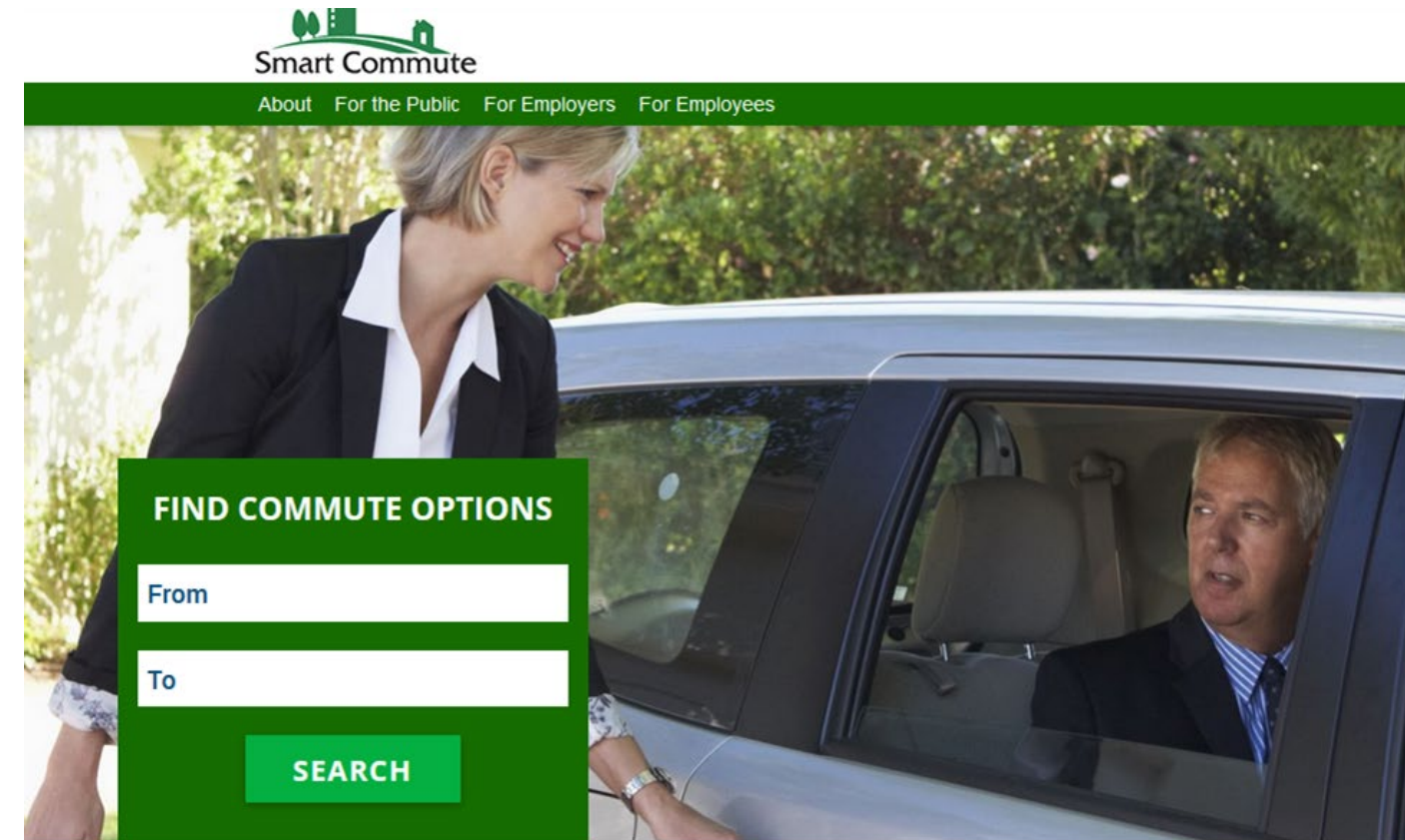
Smart Commute will be launching a **new upgraded online trip tracking tool** in a collaborated effort between the Regional Smart Commute group and all Smart Commute TMAs across the GTHA.

The new tool is more than just a carpool matching forum – it is a true travel options portal where users can instantly find information on various options to get from A to B. Included in users' search results will not only be carpool partner matches, but options for vanpools, bike, walking and transit buddy matching.

In addition to being able to explore travel options, users will also be able to log trips and receive rewards.

Users will also have the ability to find one-off single trip carpool matches or a regular carpool partner. The new tool's sophisticated matching will find passengers close to a driver's origin, destination and drive route, according to schedule and personal preferences.

Smart Commute is currently in the final stages of preparing for the launch of the new online trip tracking tool.



Find a sustainable, healthy way to commute.



Carpool



Transit



Cycle



Walk



Telework

Explore your options



Online Trip Tracking Tool Planned for 2021



Estimated annual new members registered

260 – 295
(Average based on 2019 – 2020 statistics)



Estimated annual sustainable trips logged

5,025 – 5,655
(Average based on 2019 – 2020 statistics)



Estimated annual number of registered carpoolers*

47 – 95
(Average based on 2019 – 2020 statistics)



Estimated mode shift

*Based on the Carpool Parking Pass Program
Note: COVID-19 taken into account for estimations

1 – 1.5% decrease in SOV

Explore your options



Ride and Seek Campaign - September 14 to October 9, 2020





Ride & Seek SCAVENGER HUNT

www.york.ca/rideandseek



Pledge to ride • Visit landmarks • WIN great prizes!
GET TO KNOW YOUR COMMUNITY!

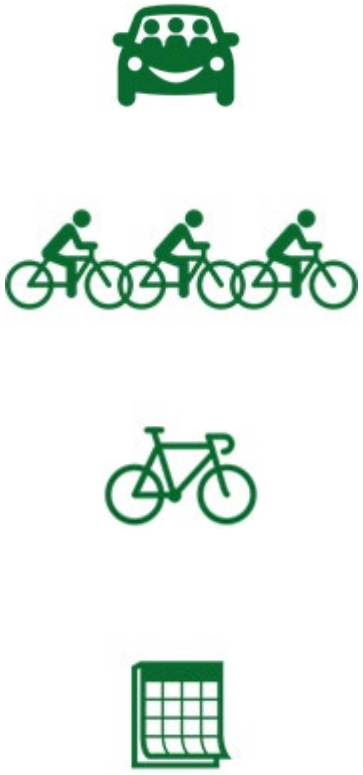
The Ride and Seek Campaign is a collaboration with Smart Commute Central York (SCCY) and Smart Commute North Toronto, Vaughan (SCNTV), with full support from York Region.

York Region workplace employees and the community are encouraged to explore the region’s nine municipalities, and share photos of their bike at over 80 pre-selected landmarks between September 14 and October 9. A webinar with maps of landmarks, suggested bike routes, and cycling resources will be provided. Participants are also encouraged to submit their suggestions for increased bike parking and improvements to cycling infrastructure in Markham during the campaign. Bike parking submissions will be made available to City's staff for future planning.

Explore your options



Annual Campaigns Planned for 2021



Campaign	Estimated Outreaches**	Estimated Trips Logged/Participants**	Estimated Resources Provided
Winter Commute Week (February)	2-3 webinars	200 trips logged	Deliver electronic posters/postcards to 62 SCMRH workplace champions for internal distribution to employee population
Bike to Work Day (Last Monday in May)	1 main event or smaller group rides*	50 participants for main event; 10 participants for smaller group rides	
Bike Month (June)	5-10 cycling webinars; virtual trip logging challenge	150-250 trips logged	
Smart Commute Month (September)	TBD*	600-700 survey responses	







*Depending on government regulations for public gatherings at the time, SCMRH will plan and deliver an event accordingly to meet safety requirements.

**Due to COVID-19 restrictions, estimated numbers of participants at events are reduced. To be determined in early 2021.

Explore your options



Communications Planned for 2021

Mode of Communication	Frequency/number of postings
 E-newsletter – direct workplace employees and community	Quarterly (Winter, Spring, Summer and Fall) to 3,304 SCMRH subscribers
 Facebook, Twitter, Instagram and YouTube posts	40-45 per year Two to four videos per year
 Commuter-related blog posts	Four to six posts per year
 Website updates (campaigns, webinars, blogs, etc)	Four to six updates per year
 Advisory committee meetings or electronic updates (provides feedback and guidance on TDM programming)	Four per year
 Annual presentations to region and municipalities	As requested



Community-based and Stakeholder TDM Programming Planned for 2021

SCMRH is committed to the following in delivering custom TDM services:

- Continue to collaborate with York Region District School Board, York Catholic District School Board and York Region Health, and other Smart Commute TMAs in York Region to engage elementary and secondary school students in Markham to deliver programming (e.g., Winter Walk to School Day, Bike to School Week, iWalk to School Day)
- Liaise with advocacy and community groups that promote active transportation (e.g., Markham Cycles and mode-specific pilots)
- Work with stakeholders near rapid transit corridors, mobility hubs, or transit terminals (e.g., work with York Region Transit to highlight first and last mile infrastructure to transit hubs during Bike to Work Day)
- Partner with municipalities' economic development departments and land developers to deliver TDM services for new developments in Markham
- Continue to leverage Markham Board of Trade's member base and work with the organization to provide TDM Consultations and transportation solutions for large, medium and small companies



2021 Funding

Funder/sponsorship from workplaces	Amount
York Region	\$80,000
City of Markham	\$75,000
City of Richmond Hill	\$50,000
Enhanced Services/Corporate Sponsorship	\$3,820*
Estimated Enhanced Services/Corporate Sponsorship	\$12,650**
TOTAL	\$221,470

*Pre-paid sponsorship based on multi-year agreements between 2019 and 2021.

**Estimated figures to be confirmed and based on figures in the 2020 work plans.

Explore your options

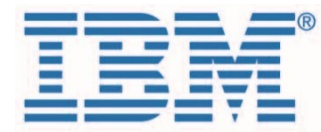


Thank You to Our Funders, Sponsors & Partners

FUNDERS



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Resolution

- That the presentation provided by Wincy Tsang, Manager, Smart Commute Markham, Richmond Hill Transportation Management Association (TMA) entitled “Smart Commute Markham, Richmond Hill Overview for City of Markham (as of **October 2020**)”, be received; and,
- That staff be authorized to issue a purchase order to Smart Commute Markham, Richmond Hill for the amount of \$75,000; and,
- That the Regional Municipality of York, the City of Richmond Hill and Smart Commute Markham, Richmond Hill be advised accordingly; and,
- That staff be authorized and directed to do all things necessary to give effect to this resolution.





2021 PROJECT FUNDING REQUEST FORM

Number: **21040**

Project Cost: **\$497,800**

Project Name: **Streetlight Program (Construction)**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Mark Siu

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To provide and enhance the lighting on streets through additional streetlights.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	387,200	0
Internal Charges:	59,817	0
External Consulting:	43,232	0
Sub Total:	490,249	0
HST Impact:	7,576	0
Total Project Cost:	497,800	0

NOTES

Based on estimates from previous projects. Location 1) Grandview - Dudley Ave to Henderson Ave, 2) Dudley Ave - Meadowview Ave to Grandview Ave, 3) Lee Ave - Kennedy RD to Brimley RD. Note that the locations are tentative and subject to change based on design and site conditions. Upon Director's approval, staff to be able to revise location if required provided that the budget is not impacted. Operating impacts will be determined at the time of construction award.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	497,800	0	0	0	0	0	0
TOTAL FUNDING	497,800					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - Illumination - City-wide Illumination Requires		497,800	3,344,000	Amount Incl HST <input type="text"/>
TOTAL FUNDING		497,800	3,344,000	Year in the study <input type="text"/>

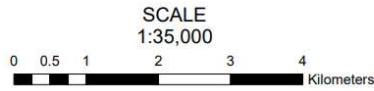
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2021 Streetlight Construction Program

- | | |
|---|--|
| 1 | Grandview Ave – Dudley Ave to Henderson Ave |
| 2 | Dudley Ave – Meadowview Ave to Grandview Ave |
| 3 | Lee Ave - Kennedy Rd to Brimley Rd |

OFFICIAL PLAN Map 11 - Minor Collector Road Network is subject to Appeal Nos. 2. (Issue 53) and 20. (Issue 264)

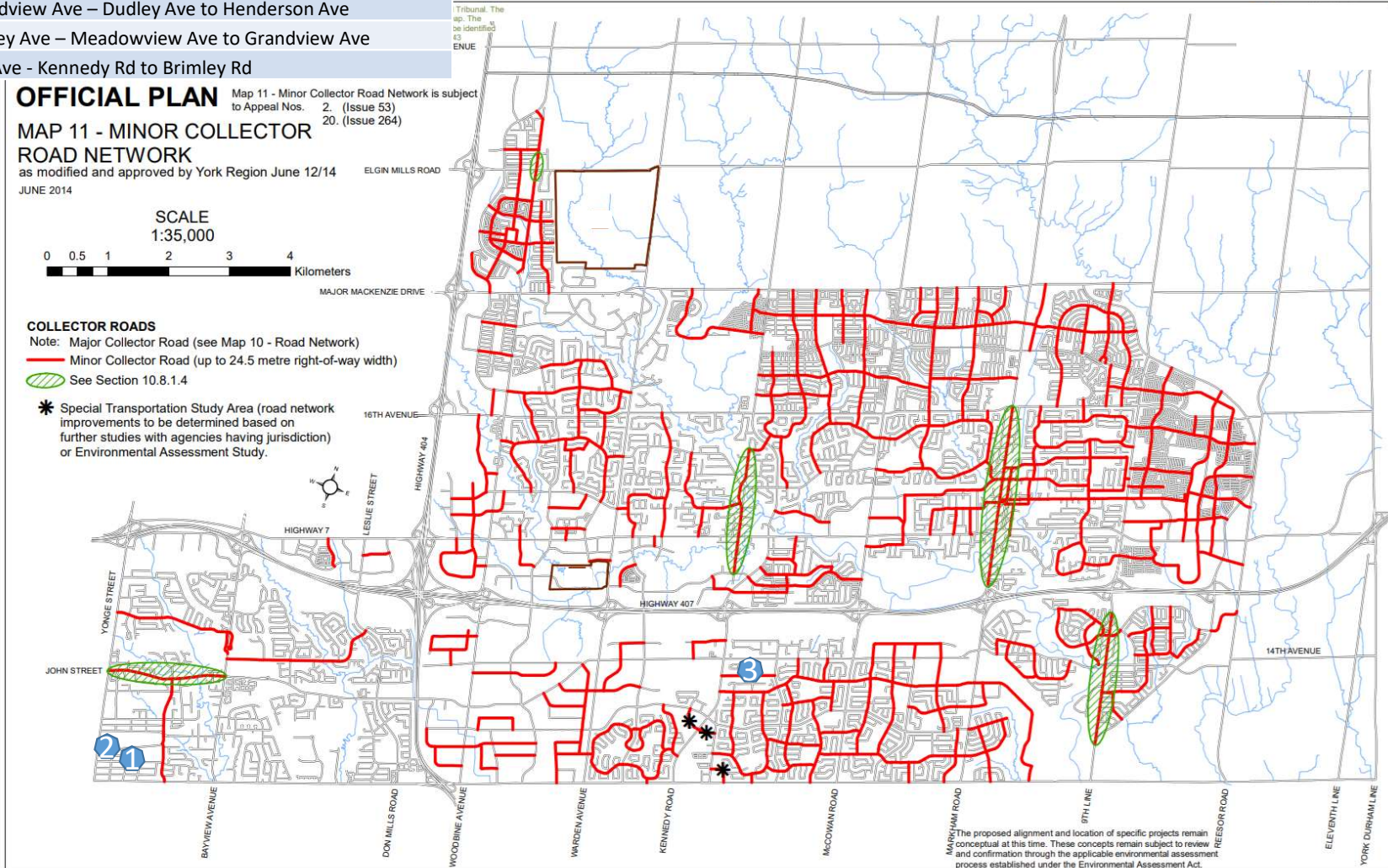
MAP 11 - MINOR COLLECTOR ROAD NETWORK
as modified and approved by York Region June 12/14
JUNE 2014



COLLECTOR ROADS

- Note: Major Collector Road (see Map 10 - Road Network)
- Minor Collector Road (up to 24.5 metre right-of-way width)
 - ▨ See Section 10.8.1.4

* Special Transportation Study Area (road network improvements to be determined based on further studies with agencies having jurisdiction) or Environmental Assessment Study.



The proposed alignment and location of specific projects remain conceptual at this time. These concepts remain subject to review and confirmation through the applicable environmental assessment process established under the Environmental Assessment Act.

Path: Q:\Geomatics\Departments\Planning\Policy\MIS27 New OPCMB Approved Schedules Nov 2017\Map 11\Map 11 Minor Collector Road Network.mxd



2021 PROJECT FUNDING REQUEST FORM

Number: **21041**

Project Cost: **\$45,800**

Project Name: **Various walking & cycling initiatives**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Fion Ho

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In June 2020 council directed staff to implement temporary bike network expansion to fill gaps in the cycling network. This request includes Villages & Valley Loop branding and signage, Thornhill Urban Loops branding and signage, Milliken Urban Loops branding and signage.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	45,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	45,000	0
HST Impact:	792	0
Total Project Cost:	45,800	0

NOTES

Project estimates: 80 signs @ \$150 per sign = \$12K + Pavement marking (shallows) \$3K. Each project is \$15K. 3 projects = \$45K x 3 estimated at \$45K to design, manufacture and install signs.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	29,770	0	0	0	0	0	0	
Non-DC Growth	16,030	0	0	0	0	0	0	
TOTAL FUNDING	45,800					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
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		29,770	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		29,770	11,325,356	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21042**

Project Cost: **\$1,475,000**

Project Name: **Hwy 404 Collector Road (Design)**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Marija Ilic

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Detailed Design for Honda Blvd extension from the Trans Canada Pipeline (TCPL) to Elgin Mills (Road C1 19th Ave to Road D, Road D – Circular intersection to Woodbine Ave, Road E1 – Road D to Woodbine by-pass) see attached Map.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	24,575,520
Internal Charges:	141,136	2,506,672
External Consulting:	1,310,750	2,011,041
Sub Total:	1,451,886	29,093,233
HST Impact:	23,069	467,923
Total Project Cost:	1,475,000	29,561,200

NOTES

404 North Collector Roads (EA) will be filed by fall 2020. Detailed Design is to be completed for the remaining section of Honda Blvd.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	1,475,000	0	0	0	0	0	29,561,200	
TOTAL FUNDING	1,475,000					0	29,561,200	

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
Hard - Roads - Honda Blvd - Extension to 19th Avenue	2020	1,475,000	401,200	Amount in Study: <input type="text"/>
TOTAL FUNDING		1,475,000	401,200	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:

Approved DC Background study only includes Honda Blvd as a collector road and as per DCBS it will be funded 80% by developer.

HWY 404 NORTH COLLECTOR ROADS - DESIGN

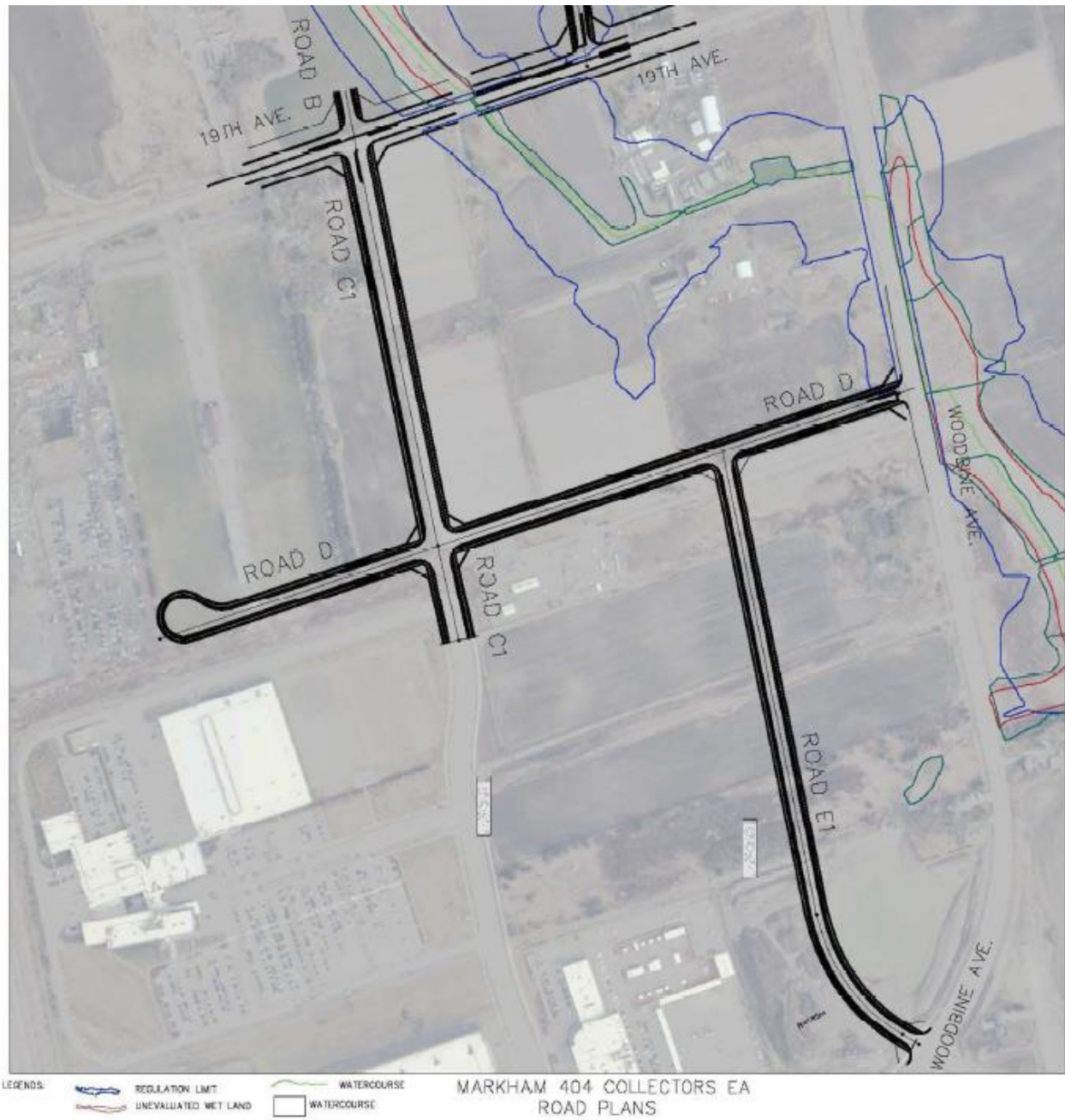


Exhibit 6-11: Recommended Collector Road Alignments



2021 PROJECT FUNDING REQUEST FORM

Number: **21178**

Project Cost: **\$51,800**

Project Name: **Traffic Operational Improvements - Annual**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: David Porretta

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project accommodated ad-hoc initiatives and requests that arise throughout the year from staff, residents or Council to improve traffic operations and safety for all users of the City's transportation network. Improvements include sign and traffic control devices, pavement markings for roadways and cycling facilities, and minor concrete and asphalt civil works to address and/or enhance pedestrians and cyclist safety.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	50,904	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	50,904	0
HST Impact:	896	0
Total Project Cost:	51,800	0

NOTES

Budget request includes traffic control signs/devices/equipment (\$20k); road/cycling pavement markings (\$15k), minor concrete/asphalt civil works (\$15k).

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
Tax	51,800	0	0	0	0	0	
TOTAL FUNDING	51,800				0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$15,000	\$0	\$15,000

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				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:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21043**

Project Cost: **\$101,800**

Project Name: **Diversity Action Plan Refresh**

Commission: CAO, Legal & HR

Studies/Pilot Programs

Department: Human Resources

Useful Life: 0 Pre Approval:

Project Mgr: Mona Nazif

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

A consultant will be hired to assist with refresh of City's Diversity Action Plan - a strategic action that is endorsed in this Council term's strategic plan. The consultant will work with staff to: consult with internal/external stakeholders; analyze key comparators/relevant data/consultation results; formulate recommendations; draft final documents, reports and presentations.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	101,800	0

NOTES

It is anticipated that this project will take approximately 18 months or less. Budget is estimated with reference to a variety of internal strategic plans, such as the original Diversity Action Plan, ILMP Refresh, Older Adult Strategy Plan and Markham Municipal Energy Plan- Getting to Zero strategic plan development. The original Diversity Action Plan was for 2010 to 2019. Total project anticipated to cost \$125k, \$100k will be funded from this project and \$25k funded from the 2021 operating budget.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Tax	101,800	0	0	0	0	0	0	
TOTAL FUNDING	101,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21044**

Project Cost: **\$1,739,900**

Project Name: **ITS Life Cycle Asset Replacement**

Commission: Corporate Services

Repair/Replace

Department: ITS

Useful Life: 6 Pre Approval:

Project Mgr: Sugun Rao

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Documentation of life cycle years

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace IT hardware and software assets that are due for replacement based on condition assessment. Some of the assets have been discontinued by Manufacturer and replacement is required in order to avoid any service interruptions.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,611,496	0
Internal Charges:	100,000	0
External Consulting:	0	0
Sub Total:	1,711,496	0
HST Impact:	28,362	0
Total Project Cost:	1,739,900	0

NOTES

The request includes replacement of the following:
 1. Data Centre Core Network Switches, 2. Data Centre Server Hardware and Storage System (for Data Backup), 3. IT Infrastructure Vulnerability Assessment, 4. Smartphones Replacement, 5. Internal Charges - Staff for Project Resources
 The \$55,000 operating budget impact is for additional HW and SW maintenance expenses.
 For details, see supporting document.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
Building Fees	104,400	0	0	0	0	0	
Development Fees	139,200	0	0	0	0	0	
Operating Funded Life Cycle	1,391,900	0	0	0	0	0	
Waterworks	104,400	0	0	0	0	0	
TOTAL FUNDING	1,739,900				0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$55,000	\$0	\$55,000

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				
				Amount in Study: <input data-bbox="1349 153 1474 180" type="text" value="3,281,500"/>
				Amount Incl HST <input data-bbox="1349 203 1474 231" type="text" value="1,391,900"/>
				Year in the study <input data-bbox="1349 247 1474 275" 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; padding: 5px;"> <p>The amount requested is less than Life Cycle Reserve Study due to assessment of 2021 resource capacity that is impacted by delayed implementation of 2020 projects, changes in project prioritization and condition assessments.</p> </div>				

DETAILS FOR CAPITAL PROJECT IT LIFECYCLE ASSET REPLACEMENT

Item	Source of Funding						
	Quantity	Total Costs	Life Cycle	Water Works	Building	Engineering	Planning
2021 IT Lifecycle Asset replacement							
1 Datacentre Core Network Switch Replacement. <i>Replacement of 8+ years old Primary and Secondary Data Centre Core Network switches. The switches are critical hardware that could have major services outage impact. Covering existing hardware under maintenance services contract will incur additional operating budget impact. In addition, these switches do not allow us to implement enhanced security control and are identified as high Cyber Security Risk. The Total cost includes hardware, required licenses and Professional services for Implementation and operating budget impact</i>	237	\$836,000	\$668,800	\$50,160	\$50,160	\$33,440	\$33,440
2 Data Centre Server Hardware and Storage System (for Data Backup) Replacement: <i>1. Replacement of 7+ years old backup Disk Storage System in both Primary and Backup data centre is needed in order to obtain extended support and maintenance services on these hardware. If the equipment is not replaced, the City could incur significant costs for extended support and maintenance services. In addition, disk usage on these storage system has continued to increase. The lack of sufficient free disk space will cause backup failure. 2. Primary and Secondary Data Centre Server hardware are 8+ years old. The hardware are listed as end of life by Manufacturer, incurring significant costs to cover the hardware on Warranty and Maintenance. Total cost includes server hardware, disk storage system, software, user licenses and Implementation.</i>	1	\$693,496	\$554,797	\$41,610	\$41,610	\$27,740	\$27,740
3 IT Infrastructure Vulnerability Assessment <i>Conduct a comprehensive Vulnerability Assessment exercise on the City Network to find deficiencies as a result of new risks and vulnerabilities being introduced when new IT system are added to the network and in the view of more intrusive cyber attacks. In addition, the Auditor had recommended that the city should conduct these assessments on a regular basis. Last vulnerability assessment was conducted in year 2016.</i>	1	\$55,000	\$44,000	\$3,300	\$3,300	\$2,200	\$2,200
4 City Wide Smartphone Replacement <i>Lifecycle replacement of 20% of corporate smartphones. Mainly due to wear and tear related issues such as degrading battery life.</i>	135	\$27,000	\$21,600	\$1,620	\$1,620	\$1,080	\$1,080
5 Internal Charges - 1 Staff for Project Resources <i>This resource is required in order to implement IT Capital Projects</i>		\$ 100,000	80,000	6,000	6,000	4,000	4,000
Total		\$1,711,496	\$1,369,197	\$102,690	\$102,690	\$68,460	\$68,460
HST Impact		1.76% \$28,362	\$22,690	\$1,702	\$1,702	\$1,134	\$1,134
Total with HST Impact		\$1,739,858	\$1,391,887	\$104,391	\$104,391	\$69,594	\$69,594



2021 PROJECT FUNDING REQUEST FORM

Number: **21045**

Project Cost: **\$122,100**

Project Name: **Development Charges Background Study**

Commission: Corporate Services

Studies/Pilot Programs

Department: Finance

Useful Life: 5 Pre Approval:

Project Mgr: Kevin Ross

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To commence a Development Charges Background Study for the Hard Services, Soft Services and Area Specific Development Charge by-laws prior to the expiration of the current by-laws. Development charges by-laws expire after 5 years.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	120,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	120,000	0
HST Impact:	2,112	0
Total Project Cost:	122,100	0

NOTES

In accordance with the Development Charges Act, 1997 new development charge by-laws must be enacted every 5 years. The City's current Hard Services, Soft Services and Area Specific bylaws will expire in December 2022.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	TOTAL					
DCA	109,890	0	0	0	0	0	0
Non-DC Growth	12,210	0	0	0	0	0	0
TOTAL FUNDING	122,100					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: <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:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21046**

Project Cost: **\$943,700**

Project Name: **Internal Project Management**

Commission: Corporate Services

Studies/Pilot Programs

Department: Finance

Useful Life: 0 Pre Approval:

Project Mgr: Kevin Ross/Graham Seaman

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project to allocate internal resource costs to Development Charges associated with the administration and procurement management aspects of capital growth. This project represents 90% of the total costs and the remaining 10% will be funded from the Operating Budget.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	943,700	0
External Consulting:	0	0
Sub Total:	943,700	0
HST Impact:	0	0
Total Project Cost:	943,700	0

NOTES

Requirement validation: Internal resource costs of 10 staff associated with capital growth (development charges) projects.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	943,700	0	0	0	0	0	0	
TOTAL FUNDING	943,700					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21047**

Project Cost: **\$149,800**

Project Name: **Building Condition Audit - FTE**

Studies/Pilot Programs

Commission: Corporate Services

Useful Life: 1 Pre Approval:

Department: Asset Management

Category: Annual

Project Mgr: Atiq Rahman

Cost Validation: Internal peer review

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This is a recovery for a Facility Engineering position. The building audit program aims to audit approximately 200,000 sq. ft facility every year, with plan to audit all of 2 million sq. ft facility portfolio once every 10 years. These audits are required to create and update life cycle inventories and replacement plans for each building. Approximately 800,000 sq. ft facility was audited in last 3 years. Staff identified that using an internal staff position is more cost effective than outsourcing the same work as this position is able to complete other projects and services as needed.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	149,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	149,800	0
HST Impact:	0	0
Total Project Cost:	149,800	0

NOTES

\$149,800 - Salary Recovery for one Senior Facility Engineer. Amount is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Salary Recovery					
Operating Funded Life Cycle	149,800	149,800	0	0	0	149,800	0
TOTAL FUNDING	149,800					149,800	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: <input type="text" value="1,462,100"/>
				Amount Incl HST <input type="text" value="149,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21048**

Project Cost: **\$366,900**

Project Name: **Civic Centre Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 5 Pre Approval:

Project Mgr: Jason Ramsaran

Category: Major

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

Cost Validation: Published guidelines

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Civic Centre Facility in a state of good repair and in alignment to the Asset Management Plan/Policy. Items 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. Budget request is subject to change, based on condition assessment in previous year.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	360,588	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	360,588	0
HST Impact:	6,346	0
Total Project Cost:	366,900	0

NOTES

\$243,100 - Flooring/carpet for various areas
 \$7,500 -Kitchen equipments
 \$81,600 - Exterior bollards (1990) and railings (2006)
 \$34,700 - Mechanical (pumps, plumbing, buidling equipments)

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Flooring and Carpeting	Furniture and Equipment	Exterior Site Features	Mechanical		
Operating Funded Life Cycle	366,900	243,100	7,500	81,600	34,700	366,900	0
TOTAL FUNDING	366,900					366,900	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: <input type="text" value="868,800"/>
				Amount Incl HST <input type="text" value="366,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: 21050

Project Cost: \$1,996,800

Project Name: Cornell C.C. Parking Garage - Construction

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 25 Pre Approval:

Project Mgr: Dana Honsberger

Category: Major

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This multiyear project is to address significant leaks at the Cornell C.C. parking garage. Phase 1 includes an engineering investigation to determine the best solution to address ongoing structural and maintenance issues. Phase 1 also included design work for the structure. Phase 2 will be on-going structural and maintenance repairs, and solution to the P3 deck coating.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,865,392	0
Internal Charges:	87,400	0
External Consulting:	11,000	0
Sub Total:	<u>1,963,792</u>	<u>0</u>
HST Impact:	33,024	0
Total Project Cost:	<u>1,996,800</u>	<u>0</u>

NOTES

Due to space and parking limitations, Cornell C.C. has a 3 storey parking structure that support users visiting the community centre. In 2018, the parking garage experienced significant leaks along the existing joints in its precast concrete panels and the garage also had significant damage to the traffic topping at the P3 level. This project includes two phases; design and construction. Cost estimates are preliminary and may change.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Cost	Chargeback	Consulting	HST	TOTAL	
Carry Forward	119,000	111,167	5,209	656	1,968	119,000	0
DCA	782,704	731,189	34,259	4,311	12,945	782,704	
Tax	1,095,096	1,023,020	47,932	6,033	18,111	1,095,096	0
TOTAL FUNDING	<u>1,996,800</u>					<u>1,996,800</u>	<u>0</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: <input style="width: 80px;" type="text"/>
				Amount Incl HST <input style="width: 80px;" type="text"/>
				Year in the study <input style="width: 80px;" type="text"/>

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



BUILDING MARKHAM'S FUTURE TOGETHER
2020 – 2023 Strategic Plan



Cornell C.C. Parking Garage Rehabilitation

August 21, 2020





Agenda

- Background
- Current Conditions
- Required Repairs
- Proposed Solutions
- Recommendation
- 2020 Budget and Scope
- Moving Forward (2020 and 2021 Budget)
- Future Maintenance and Repairs Table

Background

- Cornell Parking Garage was constructed in 2012
- Parking spaces 305
- Average daily usage in 2019 was approximately 877 vehicles.
- Original construction cost was approximately \$10,000,000.



Current Condition

- The traffic topping on the P3 level is damaged causing leaks along the precast concrete beams with metal connectors.
- This allows salt to penetrate into the concrete causing deterioration, and water to penetrate which freezes and thaws causing concrete to potentially spall
- Engineering assessments (by consultants specializing in parking garages) done in 2019 confirm:
 - Structural integrity has not been compromised
 - Garage is in serviceable condition
 - Deterioration of topping & vertical elements are generally in line with the age of the structure
 - Condition of the garage does not pose an immediate risk with respect to structural safety



Required Repairs

The parking structure is in need of maintenance & repair due to wear and tear from vehicles, rain, snow, snow removal operations, de-icing chemicals, and abrasion from sand and other materials tracked in.

Waterproofing

- Damage is accelerated and heightened due to type of topping we currently have.
- The original control joint sealant material is no longer elastic and is contributing to widespread water leakage and chloride contamination.
- The P3 level traffic deck coating is no longer waterproof and is affecting the topping below.

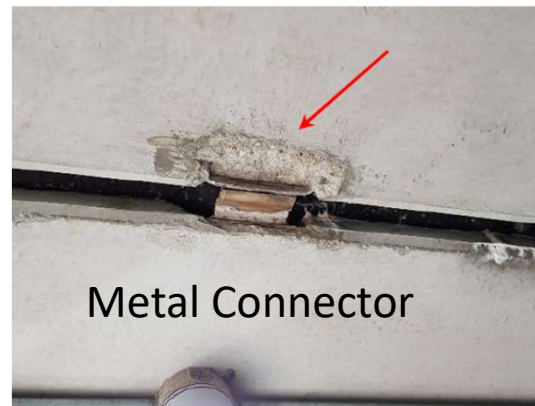




Required Repairs

Structural Repairs

- Structural deterioration is mainly limited to a few precast concrete beams with metal connectors between them. This deterioration is related to corrosion from ongoing leaks.
- Precast wall panel deterioration has allowed water to penetrate the thin brick veneer causing it to crack and loosen.





Total Cost of Annual Ownership Model

- Solution Implementation Cost = capital cost as approved by Council
- Life Cycle Costs over 60 yrs (A) = cost to replace component (B)
- Maintenance/Repairs over 60 yrs = cost which includes:
chipping/repairing concrete, deck coating repairs, control joint sealant repair, concrete panel repairs with brick, etc. (C)
- Cost per year after construction = **total cost of annual ownership**
(Life Cycle Costs over 60 yrs + Maintenance/Repairs over 60 yrs) / 60yrs (B+C)/A



Proposed Solutions

Options	Description	Cost (includes 1% yearly inflation)
1) New Precast Parking Level w/ Heated Deck	Add another precast parking level with a heated deck to help melt ice and snow. Requires extension of existing stairwells and elevator.	<ul style="list-style-type: none"> • Construction Cost = <u>\$4,826,000</u> • Life Cycle Costs over 60 yrs (A) = \$24,063,964^(B) • Maintenance/Repairs over 60 yrs = \$7,596,699^(C) • Cost per year after construction = \$527,678^{(B+C)/A}
2) Steel Roof Structure	Addition of a steel roof structure that incorporates a standard roof, roofing membrane that covers the surface of the roof.	<ul style="list-style-type: none"> • Construction Cost = <u>\$2,199,500</u> • Life Cycle Costs over 60 yrs (A) = \$15,550,015^(B) • Maintenance/Repairs over 60 yrs = \$7,814,703^(C) • Cost per year after construction = \$389,412 ^{(B+C)/A}



BUILDING MARKHAM'S FUTURE TOGETHER

2020 – 2023 Strategic Plan



Options	Description	Cost (includes 1% yearly inflation)
3) Steel Roof Structure w/ Metal Roof and Solar Panels	Add a steel roof structure over the P3 level that will support a full solar array field.	<ul style="list-style-type: none"> • Construction Cost = <u>\$3,590,000</u> • Life Cycle Costs over 60 yrs (A) = \$24,999,563^(B) • Maintenance/Repairs over 60 yrs = \$9,627,729^(C) • Cost per year after construction = \$577,122^{(B+C)/A}
4) Replace existing traffic deck coating with like for like	Replaces deteriorated patches of P3 deck coating with similar coating. Doesn't withstand plow abrasion.	<ul style="list-style-type: none"> • Construction Cost = <u>\$530,000</u> • Life Cycle Costs over 60 yrs (A) = \$11,554,191^(B) • Maintenance/Repairs over 60 yrs = \$6,530,116^(C) • Cost per year after construction = \$301,405 ^{(B+C)/A}
5) Methyl Methacrylate Traffic Deck Coating Recommended	Involves replacing existing P3 deck coating with new system that is more durable against snow plow use.	<ul style="list-style-type: none"> • Construction Cost = <u>\$1,230,000</u> • Life Cycle Costs over 60 yrs (A) = \$9,576,587 ^(B) • Maintenance/Repairs over 60 yrs = \$6,457,448^(C) • Cost per year after construction = \$267,234^{(B+C)/A}



Recommendation

The methyl methacrylate traffic deck coating is recommended due to:

- Lowest annual total cost of ownership
- Replacement of this coating occurs every 14 years minimizing shut down time of the facility
- Cure time of this product is faster, again minimizing the shut down time of the facility
- This product is considered more durable than the current traffic deck coating
- Option involves completely removing the existing traffic deck coating system and installing a new system that is more durable and intended for snow plow use.



2020 Budget & Scope

- Budget Request - **\$249,000**
 1. Allocated for engineering investigations to determine the best solution to address ongoing structural issues
 2. Design of the recommended solution
- To date **\$61,018** has been spent on engineering investigation and loose concrete and loose brick removal.
- **\$68,600** allocated to retain consultant, design, tender documents.
- Budget Remaining = **\$119,000** reduce current account #20117 by this amount and carry forward into 2021 project



Moving Forward

2021 Construction & Repairs

Project Funding Request = **\$1,996,816** with HST Impact

Cost of Project - \$1,748,450

Internal Charges - \$87,400

External Consulting - \$11,000

Carry Forward - \$119,000 precast panel repair

- 3-4 months Construction – emphasis on minimizing disruption to facility
- Top deck will be closed for parking during new topping/surface construction
- No permit required



Future Maintenance & Repairs (Continuity Table)

(As per Consultant Estimates)

Work Item	Short Term Repairs						Long Term Repairs				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
P3 Traffic Deck Coating Replacement		\$1,200,000									
Precast Wall Panel Targeted Repairs		\$224,500									
Precast Wall Panel Over Cladding					\$400,000						
Precast Wall Panel Loose Brick Removals	\$50,000	\$10,000	\$10,000	\$10,000							
Loose Overhead Concrete Removal	\$15,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Control Joint Sealant Replacement		\$150,000				\$15,000			\$15,000		
Structural Repairs for Precast Double-Tee Connectors and Structural Connectors		\$80,000				\$50,000			\$30,000		
P2 Traffic Deck Coating Repairs		\$5,000		\$10,000		\$280,000					
P3 Traffic Deck Coating Repairs									\$110,000		
Miscellaneous Repairs Allowance			\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Capital Costs		\$1,424,500			\$400,000						
Operation Costs	\$65,000	\$255,000	\$25,000	\$35,000	\$15,000	\$360,000	\$15,000	\$15,000	\$170,000	\$15,000	\$15,000
Total	\$65,000	\$1,679,500	\$25,000	\$35,000	\$415,000	\$360,000	15,000	\$15,000	\$170,000	\$15,000	\$15,000



2021 PROJECT FUNDING REQUEST FORM

Number: **21051**

Project Cost: **\$584,400**

Project Name: **Corporate Security Operations & System Upgrades**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 7 Pre Approval:

Project Mgr: Eric Lizotte

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Funding required to complete various corporate security upgrades at various City Facilities, in order to meet requirements under Bill 168. This program typically includes security audits, access control, CCTV, gates, policy protocol and procedure development and training. Funding request includes a contracted staff (security expert) to lead security initiatives.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	514,190	0
Internal Charges:	61,200	0
External Consulting:	0	0
Sub Total:	575,390	0
HST Impact:	9,050	0
Total Project Cost:	584,400	0

NOTES

\$497,800 - City Wide Security & System Upgrades - FS, 8100 Warden, Gallery, Ops Yards, Mkhm Village Library, and various other locations.
\$25,400 - Markham Museum Collections Building (security cameras and appurtenances) *\$61,200 - Internal Chargeback.
Project scope may be adjusted to meet/comply with the overall corporate security policy, standards, guidelines and goals. Staff are expecting an increasing trend in security expenditures based on findings from security consultant.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Security Operations & System Upgrades	Internal Chargeback	Markham Museum	0		
Operating Funded Life Cycle	584,400	497,800	61,200	25,400	0	584,400	0
TOTAL FUNDING	584,400					584,400	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: <input type="text" value="1,462,100"/>
				Amount Incl HST <input type="text" value="584,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



Before



After



High definition view, clearly see faces and actions



Before

After



Clear labels, all cameras working, visible from Civic Centre



BUILDING MARKHAM'S FUTURE TOGETHER 2020 – 2023 Strategic Plan



C-Cure to S2 upgrade

Before

After

More detail, web based, photo ID, quick action



Fire Station 93 – failing/failed camera





2021 PROJECT FUNDING REQUEST FORM

Number: **21052**

Project Cost: **\$38,000**

Project Name: **Fire Facilities Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 15 Pre Approval:

Project Mgr: Jason Vasilaki

Category: Minor

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

Cost Validation: Published guidelines

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the fire facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repairs or/and 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. Budget request is subject to change, based on condition assessment in previous year.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	37,343	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	37,343	0
HST Impact:	657	0
Total Project Cost:	38,000	0

NOTES
 \$7,400 FS 91 - Caulking (2013) & Painting - Apparatus Bay Floor (2015)
 \$4,100 FS 96 - Repair Damaged Wall (2012)
 \$6,100 - Fire Training Centre - windows (1988)
 \$20,400 Furniture & equipment replacements where needed

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	ES91	ES96	Fire Training Centre	Furniture, Equipments	TOTAL	
Operating Funded Life Cycle	38,000	7,400	4,100	6,100	20,400	38,000	0
TOTAL FUNDING	38,000					38,000	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: <input type="text" value="108,400"/>
				Amount Incl HST <input type="text" value="38,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21053**

Project Cost: **\$44,900**

Project Name: **Library Facilities Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 10 Pre Approval:

Project Mgr: Jason Vasilaki

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the library facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or 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. Budget request is subject to change, based on condition assessment in previous year.

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

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	39,112	0
Internal Charges:	5,100	0
External Consulting:	0	0
Sub Total:	44,212	0
HST Impact:	688	0
Total Project Cost:	44,900	0

NOTES
 \$39,800 Thornhill Village Library - change tables and safety features (2006) \$14,000; fire alarm panel (2006) \$25,000
 \$5,100 Internal Chargeback

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Thornhill Village Library</u>	<u>Internal Chargeback</u>				
Operating Funded Life Cycle	44,900	39,800	5,100	0	0	44,900	0
TOTAL FUNDING	44,900					44,900	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 Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="158,000"/>
				Amount Incl HST <input type="text" value="44,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21054**

Project Cost: **\$20,400**

Project Name: **Municipal Building Backflow Prevention - Annual Testing**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 1 Pre Approval:

Project Mgr: Jason Vasilaki

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Testing of all backflow devices within Markham facilities must be completed, annually as outlined in By-law 2007-142. Budget request is subject to change based on requirements identified in the previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	20,047	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,047	0
HST Impact:	353	0
Total Project Cost:	20,400	0

NOTES

\$20,400 Testing all backflow devices installed within Markham facilities

Amount is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Testing					
Operating Funded Life Cycle	20,400	20,400	0	0	0	20,400	0
TOTAL FUNDING	20,400					20,400	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: <input type="text" value="1,462,100"/>
				Amount Incl HST: <input type="text" value="20,400"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21055**

Project Cost: **\$538,100**

Project Name: **Operations Facilities Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 15 Pre Approval:

Project Mgr: Dana Honsberger

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Operations Facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or 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. Budget request is subject to change, based on condition assessment in previous year.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	478,675	0
Internal Charges:	51,000	0
External Consulting:	0	0
Sub Total:	529,675	0
HST Impact:	8,425	0
Total Project Cost:	538,100	0

NOTES

\$57,900 – Central, Millennium/Milne Parks Shops, greenhouses (counters, sealant, doors, overhead doors, water heater, electrical, asphalt, ventilation, poly flooring (1987 to 2000))
\$104,000 - Princess & West Parks Shop (kitchen and washroom equip, office/lunch room furniture (1990 to 2006), Building envelope/siding (1973), overhead door/electrical (1990)
\$325,200 - 555 Miller Ave & Sign Shop (various mech/ventilation and electrical items, air handling unit (1990), drywall and stairs (1988), table saw (1991) *\$51,000 Internal Chargeback.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Central & Milne shop, grnhouse	Princess & West shop	555 Miller Ave. Sign shop	Int. Chargeback	TOTAL	
Operating Funded Life Cycle	538,100	57,900	104,000	325,200	51,000	538,100	0
TOTAL FUNDING	538,100					538,100	0

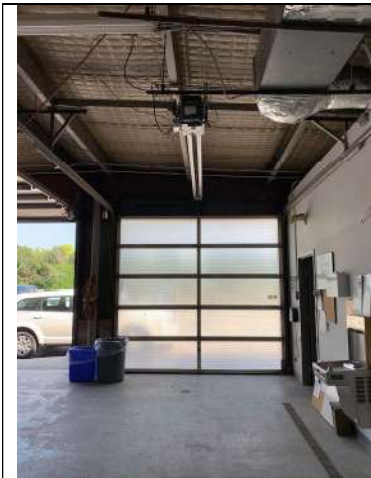
OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

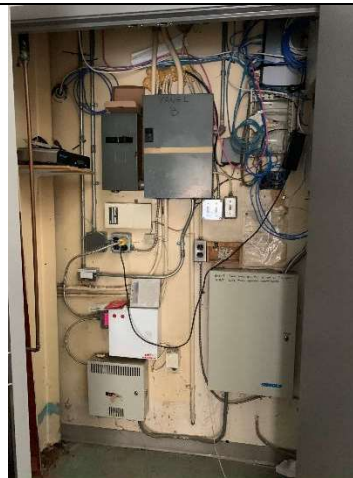
DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="538,100"/>
				Amount Incl HST <input type="text" value="538,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Operations Facilities Life Cycle Repair/Replacement 2021 Budget Backup Pictures

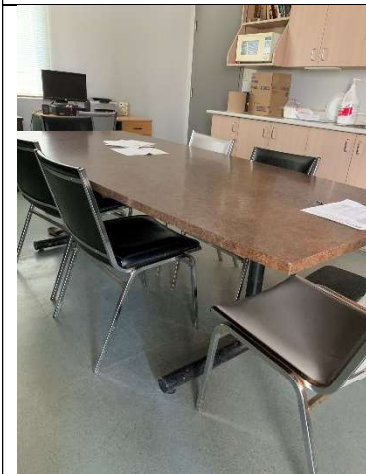
West Park Shop



Overhead Doors



Electrical Panel



Lunchroom Table



Metal Siding



Metal Siding

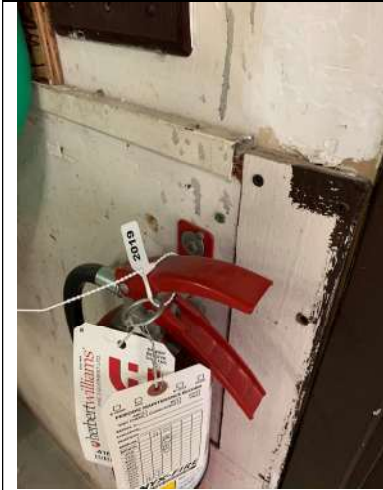


Brick Veneer



Painted metal door with frame

Milne Park Shop



Wood walls



Wood walls



Electrical Distribution



Washroom exhaust fan



D.H.W. System

Princess Street Parks Shop



Metal siding



Metal siding

Central Park Shop



Lunch room counter



Windows



Central greenhouse overhead door



Central greenhouse asphalt



Northeast greenhouse circulating fan



Northeast greenhouse thermostat



Southeast greenhouse Poly flooring above gravel

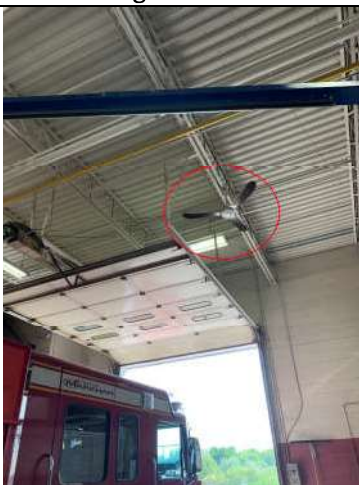
555 Miller Ave - Main Building



Air handling unit



Vehicle wash bay heater



Fire bay circulating fans



Fire bay pneumatic compressor air dryer



Garage door disconnect



Electrical disconnect switch

555 Miller Ave – Sign Shop



Wall exhaust fan



Table saw



North shop heater



Washroom ceiling drywall



Workshop stairs



2021 PROJECT FUNDING REQUEST FORM

Number: **21056**

Project Cost: **\$72,200**

Project Name: **Operations Fuel Sites Monitoring**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 0 Pre Approval:

Project Mgr: Vicky Chan

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is a carryover from the 2015 Fuel Facilities project (#15261). Removal of the old fuel tanks has resulted in further testing and monitoring required by The Ministry of the Environment, Conservation and Parks (MECP) at 555 Miller and 428 John Street. This is year 2 of a projected 3 year monitoring program.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	10,000	30,000
Internal Charges:	0	0
External Consulting:	61,000	0
Sub Total:	71,000	30,000
HST Impact:	1,250	528
Total Project Cost:	72,200	30,500

NOTES

This is year 2 of a projected 3 year monitoring program. Further testing may include further delination requirements by MECP. These are estimates only and requirements by legislative authorities (MECP) may change depending upon test results.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
Tax	72,200	72,200	0	0	0	72,200	0
TOTAL FUNDING	72,200				72,200	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21057**

Project Cost: **\$51,000**

Project Name: **Other Facilities Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 10 Pre Approval:

Project Mgr: Khwaja Waker

Category: Minor

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain various other facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or 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. Budget request is subject to change, based on condition assessment in previous year.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	50,118	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	50,118	0
HST Impact:	882	0
Total Project Cost:	51,000	0

NOTES
\$51,000 - Foundation (1990) at Elson Miles Farmhouse (tenanted site).

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	<u>Elson Miles Farmhouse</u>			TOTAL		
Operating Funded Life Cycle	51,000	51,000	0	0	0	51,000	0
TOTAL FUNDING	51,000					51,000	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: <input type="text" value="53,300"/>
				Amount Incl HST <input type="text" value="51,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21058**

Project Cost: **\$89,800**

Project Name: **Parking Lot Light Replacement**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 25 Pre Approval:

Project Mgr: Khwaja Waker

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This work allows for replacement of the parking lot light poles including underground wiring and fixture at City owned properties. Poles for replacement are identified through another program (Parking Lot light poles/fixtures Inspection) that occurs every 5 years to meet illumination standards for safety and liability. Poles and fixtures are audited once every 5 years to identify the poles/fixtures to be replaced through this program. Replacement fixtures will be LED and darksky compliant.

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

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	78,223	0
Internal Charges:	10,200	0
External Consulting:	0	0
Sub Total:	88,423	0
HST Impact:	1,377	0
Total Project Cost:	89,800	0

NOTES

\$79,600 Citywide parking lot light poles, fixtures and underground cable replacement, incl. Victoria Square CC (1975)
\$10,200 Internal Chargeback
Amount is consistent with the 2020 Life Cycle Reserve Study update.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Parking lot light replacement</u>	<u>Internal Chargeback</u>				
Operating Funded Life Cycle	89,800	79,600	10,200	0	0	89,800	0
TOTAL FUNDING	89,800					89,800	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="1,462,100"/>
				Amount Incl HST <input type="text" value="89,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21059**

Project Cost: **\$122,400**

Project Name: **Roofing Maintenance and Repair**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 1 Pre Approval:

Project Mgr: Michael Ryan

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project scope includes annual routine maintenance and on demand roof leak repairs at all City of Markham facilities. Maintenance and repair helps ensure maximum utility or life of our roof systems.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	120,283	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	120,283	0
HST Impact:	2,117	0
Total Project Cost:	122,400	0

NOTES

\$122,400 - Roofing Maintenance and Repair
Historic average is \$70.3K. By increasing to \$120K, average roofing replacement budget can be reduced from \$1M range to an average of \$500K range, which has been reflected in 2020 and 2021 requests.
Amount requested is consistent with 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Roofing Repair and Maintenance					
Operating Funded Life Cycle	122,400	122,400	0	0	0	122,400	0
TOTAL FUNDING	122,400					122,400	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: <input type="text" value="122,400"/>
				Amount Incl HST <input type="text" value="122,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21060**

Project Cost: **\$757,400**

Project Name: **Roofing Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 20 Pre Approval:

Project Mgr: Michael Ryan

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes roofing and accessories replacement works at various locations throughout the City in 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. Budget request is subject to change, based on condition assessment in previous year.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	676,101	0
Internal Charges:	69,400	0
External Consulting:	0	0
Sub Total:	745,501	0
HST Impact:	11,899	0
Total Project Cost:	757,400	0

NOTES
 \$287,600 - Armadale Community Centre (1996)
 \$275,400 - Varley Art Gallery - East and West Roof Areas (1996)
 \$125,000 - City wide (consulting for on demand 2021/2022 roofing projects) and Roof chimney replacement at Heintzman House
 \$69,400 Internal Chargeback.
 Amount is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Armadale BUR	Varley Art Gallery	Heintzman House and City Wide On Demand	Int. Chargeback		
Operating Funded Life Cycle	757,400	287,600	275,400	125,000	69,400	757,400	0
TOTAL FUNDING	757,400					757,400	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: <input type="text" value="757,400"/>
				Amount Incl HST: <input type="text" value="757,400"/>
				Year in the study: <input type="text" value="2021"/>

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

2021 Budget Request Back-up Pictures

Heintzman House – Chimney Repairs



Photo 1: Brick spalls at the larger chimney.



Photo 2: View of the larger chimney from the opposite direction, structural support installed at the chimney.



Photo 3: Brick spalls at smaller chimney.



Photo 4: Smaller chimney is not quite vertical.

Armadale Community Centre – Roof Replacement



Photo 1: Roof repair to address leak.



Photo 2: Water ponding on the roof.



Photo 3: Membrane blueberries, indicative of an older roof.



Photo 4: Membrane ridge, potential location for future leak.



Photo 5: Membrane blister, potential location for future leak.



Photo 6: Sealant Deterioration at gas line penetration.

Varley Art Gallery – Roof Replacement



Photo 1: Deteriorated insulation beneath ballast (stones).



Photo 2: Vegetation on roof indicative of roof poor drainage.



Photo 3: Split in the sealant between the precast panels and metal flashing.



Photo 4: Ballast reducing sheet (black material) deteriorated, should be sandwiched between the ballast (stones) and insulation (Pink material).



2021 PROJECT FUNDING REQUEST FORM

Number: **21061**

Project Cost: **\$15,300**

Project Name: **Satellite Community Centre Repair and/or Replacement**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 15 Pre Approval:

Project Mgr: Sameem Shah

Category: Minor

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the satellite community centres in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or 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. Budget request is subject to change, based on condition assessment in previous year.

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

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	15,035	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	15,035	0
HST Impact:	265	0
Total Project Cost:	15,300	0

NOTES

\$15,300 - Victoria Square - Consultant to design renovation of existing washrooms for accessibility compliance. Any upgrades beyond standard finishes are the responsibilities of the Board

<u>SOURCE(S) OF FUNDING (\$)</u>		<u>Components</u>					<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>	<u>Victoria Square CC</u>			<u>TOTAL</u>		
Operating Funded Life Cycle	15,300	15,300	0	0	0	15,300	0
TOTAL FUNDING	15,300				15,300	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="65,600"/>
				Amount Incl HST <input type="text" value="15,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21062**

Project Cost: **\$6,700**

Project Name: **Tennis Clubhouse Repair and/or Replacement Projects**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 10 Pre Approval:

Project Mgr: Sameem Shah

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Tennis Clubhouses in a state of good repair and in alignment to the Asset Management Plan/ Policy. Items for repair or/and 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. Budget request is subject to change, based on condition assessment in previous year. Amount requested is consistent with 2020 Life Cycle Reserve Study update.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,584	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	6,584	0
HST Impact:	116	0
Total Project Cost:	6,700	0

NOTES

\$5,200 Armadale Tennis Clubhouse building envelope and windows (1995)
 \$1,500 Pomona Valley Tennis Clubhouse interior flooring and washroom painting (2000), interior corridor and South Lounge painting (2009), exterior painting (2006), cabinets (2005)
 As per Tennis Clubhouse Policy, 50% of the costs to be funded by respective club. Tennis clubhouse repair and/or replacement will proceed subject to satisfactory club finance review.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Armadale	Pomona Valley				
Operating Funded Life Cycle	3,350	2,600	750	0	0	3,350	0
Other External	3,350	2,600	750	0	0	3,350	0
TOTAL FUNDING	6,700					6,700	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: <input type="text" value="10,800"/>
				Amount Incl HST <input type="text" value="3,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21064**

Project Cost: **\$101,700**

Project Name: **Air Cylinders 45+ Minutes Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 15 Pre Approval:

Project Mgr: Chris Nearing

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Legislative life cycle replacement of 47 carbon fibre breathing air cylinders for Self Contained Breathing Apparatus (SCBA). This request combines the 2021 replacement of 24 units and the 2022 replacement of 23 units in order to meet the minimum order requirement of 42 units.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	99,900	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	99,900	0
HST Impact:	1,758	0
Total Project Cost:	101,700	0

NOTES

Carbon fibre wrapped air cylinders for self contained breathing apparatus must be replaced every 15 years according to Legislation. 24 cylinders are due for replacement in 2021 and 23 cylinders are due for replacement in 2022 @ \$2,163.83/unit. Current inventory is 286 x 45 min, 10 x 60 min, 4 x 15 min cylinders. Amounts and units are consistent with the 2021 Life Cycle Reserve Study update. These units were last replaced in 2006/2007.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget	TOTAL				
Operating Funded Life Cycle	101,700	101,700	0	0	0	101,700	0
TOTAL FUNDING	101,700					101,700	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: <input type="text" value="101,800"/>
				Amount Incl HST <input type="text" value="101,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21065**

Project Cost: **\$7,400**

Project Name: **Arizona Vortex Tripod Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 5 Pre Approval:

Project Mgr: Chris Nearing

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of 1 portable technical rescue equipment (versatile anchoring/pulley device) that has multiple use applications in technical rescue situations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	7,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	7,300	0
HST Impact:	128	0
Total Project Cost:	7,400	0

NOTES

Typically the Vortex is used as an edge transition in high angle rescues, but is also suitable for confined space and any difference in elevation rescues. There are two units in service department wide @\$7,400/unit. This unit was last replaced in 2016. Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	7,400	0	0	0	0	0	0	
TOTAL FUNDING	7,400					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="7,400"/>
				Amount Incl HST <input type="text" value="7,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$89,200

Project Name: Bunker Gear Life Cycle Replacement

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 7 Pre Approval:

Project Mgr: Chris Nearing

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of 32 sets of bunker gear purchased in 2014. Request based on condition assessment in 2020 and legislative requirement to provide firefighters with structural firefighting protective equipment (bunker suit). Legislation: Health and Safety Act; Employer to maintain equipment and Section 21 Guidance Notes, Section 4 outlines standards for personal protective equipment. NFPA 1971 Standard on protection Ensembles for Structural Firefighting, minimum level of protection from thermal, physical, environmental and blood-borne pathogens. MFES has a contract for the supply and delivery of bunker gear 2018-2022.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	87,627	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	87,627	0
HST Impact:	1,542	0
Total Project Cost:	89,200	0

NOTES

Project cost is based on unit price of \$2,787 x 32 suits, as per vendor quote on 8/25/2020. Total inventory including spare bunker suits approx. 410 sets (suits ordered at 7 year mark to maintain adequate spare equipment, eliminates purchasing 2 full sets of bunker gear for each firefighter).

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	89,200	0	0	0	0	0	0	
TOTAL FUNDING	89,200					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: <input type="text" value="75,900"/>
				Amount Incl HST <input type="text" value="89,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="Budget requested reflects updated quote provided by vendor on August 25, 2020."/>				



2021 PROJECT FUNDING REQUEST FORM

Number: **21067**

Project Cost: **\$101,700**

Project Name: **Firefighting Tools & Equipment Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 1 Pre Approval:

Project Mgr: Chris Nearing

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual replacement and purchase of firefighting tools & equipment. Examples include but are not limited to the following: hose, ladders, nozzles, hand tools, water rescue equipment, ropes, fire extinguishers, hydraulic rescue tools, oxygen equipment, air cylinders, SCBA masks & breathing valves, portable pumps, electric & gas operated saws, cribbing, hose appliances, portable radios, medical bags, fans, thermal camera & related equipment, laser temperature probes, travel restraint and lock out kits.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	99,982	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	99,982	0
HST Impact:	1,760	0
Total Project Cost:	101,700	0

NOTES

Purchases occur due to condition assessment/legislative requirements/circumstances. Because of the nature of the department activities, equipment may require purchase/replacement due to damage and condition, beyond economical repair or technological change. Amount is consistent with the 2021 Life Cycle Reserve Study update. This project funding meets the current needs of the Fire Department and keeps all tools and equipment in a good state of operational order.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	101,700	0	0	0	0	0	0
TOTAL FUNDING	101,700					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: <input type="text" value="101,800"/>
				Amount Incl HST <input type="text" value="101,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21068**

Project Cost: **\$5,400**

Project Name: **Hazardous Materials Photo Ion Detector Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 5 Pre Approval:

Project Mgr: Chris Nearing

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life Cycle replacement of 1 photo ionization detector. Air monitoring equipment is required for hazardous material response, and also utilized during every structure fire response to monitor hydrogen cyanide levels, which is a product of combustion.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	5,292	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,292	0
HST Impact:	93	0
Total Project Cost:	5,400	0

NOTES

Amount is based on most recent award price. This unit was last replaced in 2016.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	5,400	0	0	0	0	0	0	
TOTAL FUNDING	5,400					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: <input type="text" value="4,700"/>
				Amount Incl HST <input type="text" value="5,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Amount is based on most recent award price, and amount will be updated in the next Life Cycle Reserve Study.				



2021 PROJECT FUNDING REQUEST FORM

Number: **21069**

Project Cost: **\$99,600**

Project Name: **Replacement of Equipment due to Staff Retirements**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 1 Pre Approval:

Project Mgr: Chris Nearing

Category: Annual

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

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase of personal protective clothing, uniforms and equipment for each recruit following the retirement of a firefighter. Legislation: OH&S 25.(2)(h) An employer shall take every precaution reasonable in the circumstances for the protection of a worker. Section 21 Guidance Notes, Section 4 in its entirety outlines standards for personal protective equipment and practices to protect firefighters. NFPA 1971 Standard on Protective Ensembles for Structural Firefighting, establishes minimal levels of protection from thermal, physical, environmental and blood-borne pathogens.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	97,920	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	97,920	0
HST Impact:	1,723	0
Total Project Cost:	99,600	0

NOTES

The cost of personal protective clothing, uniforms and equipment is approximately \$8,300 per firefighter based on 2020 quotations. Forecasted estimate of 12 retirements for 2021. Some retiree equipment is repurposed as spare.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	99,600	0	0	0	0	0	0
TOTAL FUNDING	99,600					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: <input type="text" value="99,600"/>
				Amount Incl HST <input type="text" value="99,600"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21070**

Project Cost: **\$19,000**

Project Name: **Rescue Equipment - Thermal Image Cameras**

Commission: Community & Fire Services

Repair/Replace

Department: Fire & Emergency Services

Useful Life: 10 Pre Approval:

Project Mgr: Chris Nearing

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life Cycle replacement of two thermal image cameras last replaced in 2011.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	18,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	18,700	0
HST Impact:	329	0
Total Project Cost:	19,000	0

NOTES

Thermal Image Cameras(TIC's) give firefighters the ability to view an infrared image through smoke and other low visibility atmospheres encountered in firefighting. They are utilized to search for victims, detect the seat of a fire and to detect smouldering fires inside a wall as well as detecting overheating electrical wiring. Total inventory is 16 cameras, assigned to all front run apparatus, Command vehicles and one spare. Project cost is based on unit price of \$9,489 x 2 units as per quote received in July 2020.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	19,000	0	0	0	0	0	0	
TOTAL FUNDING	19,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="18,200"/>
				Amount Incl HST <input type="text" value="19,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$221,800

Project Name: Angus Glen C.C. Arena Seating Replacement

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing arena spectator seating at Angus Glen C.C. The seating is located in both the West and East arena pads. The spectator seating provides a comfortable space for patrons and spectators to sit and watch games, activities and programs on the arena pad.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	218,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	<u>218,000</u>	<u>0</u>
HST Impact:	3,837	0
Total Project Cost:	<u>221,800</u>	<u>0</u>

NOTES

The existing arena spectator seating was installed in 2003. There are 450 seats maximum being replaced, the seats are connected on a frame so they cannot be replaced individually, they have to be replaced by row. A condition assesment shows the seats have wear and tear in the hinges and cracking of the seat itself. The useful life of the seats has been surpassed by three (3) years. The configuration of seating will be reviewed to take into consideration social distancing measures in light of COVID19. The amount requested is consistent with the recent quote.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
	<u>Funding Type</u>	<u>Budget</u>						
Gas Tax	221,800	0	0	0	0	0	0	
TOTAL FUNDING	<u>221,800</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</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="768,500"/>
				Amount Incl HST <input type="text" value="221,800"/>
				Year in the study <input type="text" value="2021"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21073**

Project Cost: **\$45,600**

Project Name: **Angus Glen C.C. Sand Filter Component Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two components within the sand filter system. Replacements include the laterals and sand inside two (2) main pool and two (2) leisure pool high rate sand filters at Angus Glen C.C. High-rate sand filters clean water via a process known as depth filtration, meaning that dirt penetrates the sand bed and is captured in the tiny spaces between grains of sand. At the bottom of the filter is an array of laterals, which acts as a sieve. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	44,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	44,800	0
HST Impact:	788	0
Total Project Cost:	45,600	0

NOTES

The existing filters were installed in 2004. Over time, the jagged edges of the sand wear down and become smooth as the sand ages. As this happens, the sand becomes less effective as a filter media. Replacing sand and laterals is part of the preventative maintenance of a high rate sand filter system. The amount requested is consistent with the recent quote.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	45,600	0	0	0	0	0	0
TOTAL FUNDING	45,600					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: <input type="text" value="768,500"/>
				Amount Incl HST <input type="text" value="45,600"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21074**

Project Cost: **\$57,000**

Project Name: **Angus Glen C.C. Snow Pit Heating Coil Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the heating coil located inside the snow dump pit in the Zamboni room. The glycol is heated with reclaimed heat from the refrigeration plant and circulated through the coil to melt the snow that is dumped from the Zamboni after ice flooding. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	56,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	56,000	0
HST Impact:	986	0
Total Project Cost:	57,000	0

NOTES

The existing coil was installed in 2003. A condition assessment of the coil indicates replacement is warranted. The amount requested is consistent with the recent quote.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	57,000	0	0	0	0	0	0	
TOTAL FUNDING	57,000					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: <input type="text" value="768,500"/>
				Amount Incl HST: <input type="text" value="57,000"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21075**

Project Cost: **\$40,700**

Project Name: **Angus Glen Tennis Centre Court Re-Painting**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 10 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose of this project is to re-paint all four (4) tennis courts, approximately 29,000 sq ft of court surface. The up keep and maintenance of the tennis courts ensures we maintain a quality surface for match and instructional programs.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	40,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	40,000	0
HST Impact:	704	0
Total Project Cost:	40,700	0

NOTES

The existing tennis courts were constructed in 2011. Based on condition assessment of the tennis courts re-painting is warranted. The amount requested is consistent with the recent quote.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	40,700	0	0	0	0	0	0	
TOTAL FUNDING	40,700					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: <input type="text" value="68,000"/>
				Amount Incl HST <input type="text" value="40,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21076**

Project Cost: **\$13,200**

Project Name: **Armadale C.C. Gym Interior Door**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 20 Pre Approval:

Project Mgr: Ryan Hanna

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the existing gymnasium entrance's double glass doors located on the north side of the gymnasium. Also included is the installation of accessible push button linked to the double doors. This project will help support creating a more accessible entrance into the gymnasium at Armadale C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	13,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	13,000	0
HST Impact:	229	0
Total Project Cost:	13,200	0

NOTES

The existing double doors were installed in 2006. Based on condition assessment replacement is warranted. The doors are being replaced ahead of their useful life schedule as a result of extensive usage and associated damage to the doors. The amount requested is consistent with the recent quote.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	13,200	0	0	0	0	0	0	
TOTAL FUNDING	13,200					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="205,500"/>
				Amount Incl HST: <input type="text" value="13,200"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$8,100

Project Name: Camp Chimo High Ropes and Harness Replacement

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Luke Hilts

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the high ropes and harness equipment that are used by summer camp participants. Annually, Camp Chimo hosts 900 campers during the summer camp season. High ropes are an intricate part of the programming offered at the outdoor camp. Replacement of ropes will allow Chimo to also continue to program and remain open pre and post camp season in offering weekly program that are revenue generating. The ropes course is inspected on an annual basis.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	8,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	8,000	0
HST Impact:	141	0
Total Project Cost:	8,100	0

NOTES

The existing equipment was installed in 2016. A condition assessment of the high ropes and harness indicates replacement is warranted. The amount requested is consistent with the Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	8,100	0	0	0	0	0	0	
TOTAL FUNDING	8,100					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: <input type="text" value="8,100"/>
				Amount Incl HST <input type="text" value="8,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21078**

Project Cost: **\$121,500**

Project Name: **Centennial C.C. Mechanical Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: _____ Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace one (1) hot water boiler, one (1) main pool heat exchanger, one (1) wading pool heat exchanger, one (1) HVAC unit that services the boardrooms, four (4) pumps and six (6) exhaust fans. The work includes; material, labour and all other trades required for the work

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	119,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	119,400	0
HST Impact:	2,101	0
Total Project Cost:	121,500	0

NOTES

The following items were last replaced in; 1) Boiler (1996) 2) Heat Exchanger (1999) 3) HVAC (1995) 4) Pumps (2003) and 5) Exhaust Fans (2000). A condition assessment of the equipment indicates replacement is warranted. Useful life schedule has been stretched as a result of good maintenance program.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Boiler	Heat Exchanger & HVAC	Pumps	Exhaust Fan	TOTAL	
Gas Tax	121,500	40,704	25,440	27,984	27,372	121,500	0
TOTAL FUNDING	121,500					121,500	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: <input type="text" value="221,300"/>
				Amount Incl HST <input type="text" value="121,500"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21079**

Project Cost: **\$12,200**

Project Name: **Cornell C.C. Heat Exchanger Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 8 Pre Approval:

Project Mgr: Adriano Trabucco

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) heat exchangers that supply heat to the Therapy and Leisure pool at Cornell C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	12,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	12,000	0
HST Impact:	211	0
Total Project Cost:	12,200	0

NOTES

The existing heat exchangers were installed in 2012 and are located in the pool mechanical room. The two heat exchangers that maintain pool water temperature will fluctuate during operation which creates complaints from users. A condition assessment of the heat exchangers indicates replacement is warranted.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	12,200	0	0	0	0	0	0	
TOTAL FUNDING	12,200					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="267,600"/>
				Amount Incl HST: <input type="text" value="12,200"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21080**

Project Cost: **\$37,000**

Project Name: **Heintzman House Washroom Refurbishment**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: _____ Pre Approval:

Project Mgr: Martin Barrow

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace floor and wall tiles, toilets, faucet, sink, cabinet, and counter at the Heintzman House. The work includes; material, labour and all other trades required for the replacement work. The work is supported by the Heintzman board and will maintain the specific time period's appearance.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	36,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	36,400	0
HST Impact:	641	0
Total Project Cost:	37,000	0

NOTES

The existing toilet, faucet, and sink were last replaced in 1990, while the washroom cabinet, counter, and floor tile are all original and have never been replaced. A condition assessment of the fixtures indicates replacement is warranted.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Ceramic Tile	Cabinets	Counters	Fixtures	TOTAL	
Gas Tax	37,000	11,100	13,100	6,400	6,400	37,000	0
TOTAL FUNDING	37,000					37,000	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: <input type="text" value="41,500"/>
				Amount Incl HST <input type="text" value="37,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21081**

Project Cost: **\$84,800**

Project Name: **Markham Village C.C. Dehumidification Unit Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) dehumidification units in the arena at Markham Village C.C. Arena dehumidification units help remove humidity out of the air to ensure good ice quality. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	83,349	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	83,349	0
HST Impact:	1,467	0
Total Project Cost:	84,800	0

NOTES

The existing two (2) dehumidification units were installed in 2001. The two (2) units are not working at full efficiency capacity to remove moisture out of the air in the arena causing moisture collection on the glass and ice pad during fall and spring temperatures. A condition assessment of the units indicates replacement is warranted. The amount is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
Gas Tax	84,800	0	0	0	0	0	0
TOTAL FUNDING	84,800					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="130,200"/>
				Amount Incl HST: <input type="text" value="84,800"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21082**

Project Cost: **\$32,100**

Project Name: **Markham Village C.C. Security System Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 8 Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing security system at Markham Village. The system is comprised of cameras, DVR and a display monitor. The replacement of the security systems will support a safe environment for staff and users. New equipment will align with new corporate security standard. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	31,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	31,500	0
HST Impact:	554	0
Total Project Cost:	32,100	0

NOTES

The existing security equipment was installed in 2009. The replacement is required so that Security at the Civic Centre can monitor the building, current system is analog and new will be digital. Asset Management has replaced two broken cameras in 2020 cost \$1200. A condition assessment of the system indicates that replacement is warranted. The amount requested is consistent with the Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	32,100	0	0	0	0	0	0	
TOTAL FUNDING	32,100					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="130,200"/>
				Amount Incl HST: <input type="text" value="32,100"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21083**

Project Cost: **\$167,900**

Project Name: **Mt. Joy C.C. Arena Compressor Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 25 Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) arena compressors at Mt. Joy C.C. Compressors absorb the brine heat and when it begins to boil the compressor pulls the vaporized ammonia from the chiller, lowering the pressure within the chiller and further lowering the ammonia temperature. Compressors are critical to the ice making process and is central to making ice for users and participants. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	156,278	0
Internal Charges:	0	0
External Consulting:	8,682	0
Sub Total:	164,960	0
HST Impact:	2,903	0
Total Project Cost:	167,900	0

NOTES

The existing compressors were installed in 1996. A condition assessment of the compressors indicates that replacement is warranted.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Future Phases	
Gas Tax	167,900	0	0	0	0	0	
TOTAL FUNDING	167,900				0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	-\$2,581	\$0	-\$2,581

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="182,500"/>
				Amount Incl HST <input type="text" value="167,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21084**

Project Cost: **\$5,200**

Project Name: **Mt. Joy C.C. Gas Monitor Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 10 Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace one (1) Ammonia gas monitor that is located in the arena at Mt. Joy C.C. Arena gas monitors are a vital control system to monitor levels of ammonia gas in the air in the refrigeration plant. Under CSA B52 Mechanical refrigeration Code, arenas have legislative requirements for gas monitors to detect refrigerant leak.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	5,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,100	0
HST Impact:	90	0
Total Project Cost:	5,200	0

NOTES

The gas monitor at Mt. Joy C.C. was installed in 1996. A condition assessment of this unit indicates replacement is warranted. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	5,200	0	0	0	0	0	0	
TOTAL FUNDING	5,200					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: <input type="text" value="182,500"/>
				Amount Incl HST <input type="text" value="5,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21085**

Project Cost: **\$44,800**

Project Name: **Old Unionville Library Doors and Frames Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 20 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace fifteen (15) doors and frames throughout the Old Unionville Library. This replacement will help to ensure that the space remains secure. Doors being replaced are also fire-rated, which is necessary for providing a safe environment for users and staff.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	44,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	44,000	0
HST Impact:	774	0
Total Project Cost:	44,800	0

NOTES

The existing doors and frames were installed in 1997. Based on condition assessment replacement is warranted. The amount requested is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	44,800	0	0	0	0	0	0	
TOTAL FUNDING	44,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="62,200"/>
				Amount Incl HST <input type="text" value="44,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21086**

Project Cost: **\$6,000**

Project Name: **Recreation AED Program Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Jason Tsien

Category: Annual

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 2021 AED annual program will include the replacement of 11 AED trainer kits and 12 AED trainer pads. This project is to replace AED equipment city wide.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	5,900	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,900	0
HST Impact:	104	0
Total Project Cost:	6,000	0

NOTES

There are currently 54 AED units in the City of Markham. The AED units have been used 6 times since 2018. 2008 and 2016 in Centennial C.C., 2010 and 2019 at the Milliken Mills C.C., 2016 and 2018 at Angus Glen C.C. Cost per AED trainer kits are \$600 per unit (\$600 x 11 units = \$6,600) and trainer pads are \$266 per unit (\$266 x 12 = \$3,192). Price is consistent with recent staff award plus inflation. The Life Cycle Reserve Study will be adjusted accordingly in the next update. *This is an annual program and funding will be requested each year.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	6,000	0	0	0	0	0	0
TOTAL FUNDING	6,000					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="10,200"/>
				Amount Incl HST <input type="text" value="6,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21087**

Project Cost: **\$19,000**

Project Name: **Recreation Aquatics Equipment Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Jason Tsien

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This annual replacement program for aquatics equipment is for eight (8) aquatics facilities (indoor and outdoor).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	18,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	18,700	0
HST Impact:	329	0
Total Project Cost:	19,000	0

NOTES

The 3 year average spend is \$85,986. Aquatics equipment is used to support programs that are revenue generating. The Life Cycle Reserve Study will be adjusted accordingly in the next update.
*This is an annual program and funding will be requested each year.
* Funding for this project was reduced as a result of COVID19

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	19,000	0	0	0	0	0	0	
TOTAL FUNDING	19,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="87,500"/>
				Amount Incl HST <input type="text" value="19,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21088**

Project Cost: **\$163,800**

Project Name: **Recreation Exterior Walkways Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Scott Hill

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing exterior walkways located at 3 locations. 1) Angus Glen C.C; replacing interlock pavers, 2) Old Unionville Library; replacing interlock paving and grading to create positive drainage, 3) Thornlea Pool; replacing exterior concrete accessibility ramp. To maintain the safety of the community, it is important that the entrances and walkways' used to access the centres are in good condition. The work includes; material, labour and all other trades required for the work

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	149,600	0
Internal Charges:	0	0
External Consulting:	11,400	0
Sub Total:	161,000	0
HST Impact:	2,834	0
Total Project Cost:	163,800	0

NOTES

The walkways were installed in 1967 Old Unionville Library, 1975 Thornlea , and 2005 Angus Glen C.C. Based on condition assessment, the existing streetscapes warrant replacement. All interlock pavers will be replaced with concrete as per city standard.

SOURCE(S) OF FUNDING (\$)		Components				TOTAL	Future Phases
Funding Type	Budget	Angus Glen	Thornlea	Old Union Libr.			
Gas Tax	163,800	124,000	29,800	10,000	0	163,800	0
TOTAL FUNDING	163,800					163,800	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: <input type="text" value="883,300"/>
				Amount Incl HST <input type="text" value="163,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21089**

Project Cost: **\$161,800**

Project Name: **Recreation Fitness Equipment Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Warren Watson

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual replacement program for the fitness equipment at City owned facilities. The items being replaced are strength, cardio, and flooring equipment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	159,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	159,000	0
HST Impact:	2,798	0
Total Project Cost:	161,800	0

NOTES

The formula for replacement of equipment is based on an industry standard that states 8% of gross revenue will represent the replacement value of equipment to service membership. Fitness Revenue in 2019 was \$2.537M when multiplied by the industry standard of 8%, it equates to \$203,000. The formula used is consistent with previous years' budgets.
*This is an annual program and funding will be requested each year.
* Funding for this project was reduced as a result of COVID19

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	161,800	0	0	0	0	0	0	
TOTAL FUNDING	161,800					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: <input type="text" value="206,600"/>
				Amount Incl HST <input type="text" value="161,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21090**

Project Cost: **\$18,300**

Project Name: **Recreation Floor Cleaning Machine Replacements**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 8 Pre Approval:

Project Mgr: Bob Bell

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace floor cleaning machines located in the following locations 1) Crosby C.C; replacing one (1) Walk-Behind Floor Machine, 2) Centennial C.C - replacing one (1) Walk -Behind Floor Machine.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	18,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	18,000	0
HST Impact:	317	0
Total Project Cost:	18,300	0

NOTES

The existing floor machines for each respective building were purchased in the following years: Crosby C.C. (2000) and Centennial C.C. (2012). Based on condition assessment, the existing Floor Cleaning Machines warrant replacement. The amount requested is consistent with recent quote. 2019 repair costs for existing cleaning machines are as follows: Crosby C.C. = \$503.57 / Centennial C.C. = \$6,000.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Crosby	Centennial				
Operating Funded Life Cycle	18,300	9,150	9,150	0	0	18,300	0
TOTAL FUNDING	18,300					18,300	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="679,400"/>
				Amount Incl HST <input type="text" value="18,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21091**

Project Cost: **\$34,800**

Project Name: **Recreation Lifeguard Chair Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Adriano Trabucco

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing lifeguard chairs in the aquatics centres of the following facilities; Angus Glen C.C, Cornell C.C. and Thornlea pool. Life Guard chairs is a legislative piece of equipment used in aquatic centres. Life Guard chairs offer lifeguards an unblocked view of the water and swimmers from an elevated position. The elevated position allows for lifeguards to maintain swimmer safely.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	34,163	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	34,163	0
HST Impact:	601	0
Total Project Cost:	34,800	0

NOTES

The following lifeguard chairs were installed in the following years: Angus Glen (2005 - original), Cornell (2012 - original) and Thornlea (2006). Based on condition assessment, the existing lifeguard chairs warrant replacement. The amount request is consistent with Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Cornell	Angus Glen	Thornlea			
Operating Funded Life Cycle	34,800	11,435	10,800	12,565	0	34,800	0
TOTAL FUNDING	34,800					34,800	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: <input type="text" value="1,088,800"/>
				Amount Incl HST <input type="text" value="34,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21092**

Project Cost: **\$11,000**

Project Name: **Recreation Pool Grouting Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Eric Ho

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual program for the repair of pool grout during the pool shut down process.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	10,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,800	0
HST Impact:	190	0
Total Project Cost:	11,000	0

NOTES

Every year each pool in Markham is shut down on a rotating basis for annual maintenance and repair. These funds will support the cost of repairing and replacing grout. The amount of work required and the specific pools will be determined during each pool shutdown. The budget amount is based on the 3-year average spent \$50,100.
*This is an annual program and funding will be requested each year. The Life Cycle Reserve Study will be adjusted accordingly in the next update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	11,000	0	0	0	0	0	0	
TOTAL FUNDING	11,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="51,000"/>
				Amount Incl HST: <input type="text" value="11,000"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21093**

Project Cost: **\$53,600**

Project Name: **Recreation Program Equipment Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Jason Tsien

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual program to replace City wide program/camp equipment. Items to be replaced under this program include: preschool equipment, mats, badminton and volleyball nets, learn to skate equipment, storage carts for equipment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	52,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	52,700	0
HST Impact:	928	0
Total Project Cost:	53,600	0

NOTES

The 3 year average spent from the Annual Programs Equipment is \$109,571. The equipment being replaced supports programs that are revenue generating.
*This is an annual program and funding is requested each year. The Life Cycle Reserve Study will be adjusted accordingly in the next update.
* Funding for this project was reduced as a result of COVID19.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	53,600	0	0	0	0	0	0
TOTAL FUNDING	53,600					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="113,500"/>
				Amount Incl HST <input type="text" value="53,600"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21094**

Project Cost: **\$34,000**

Project Name: **Recreation Tables and Chairs Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 5 Pre Approval:

Project Mgr: Ryan Hanna

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual program to replace tables and chairs at all city wide recreation facilities.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	33,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	33,400	0
HST Impact:	588	0
Total Project Cost:	34,000	0

NOTES

The 3 year average spent on this replacement program is \$54,600. Tables and chairs are equipment used to support revenue generating programs and rentals.
*This is an annual program and funding will be requested each year. The Life Cycle Reserve Study will be adjusted accordingly in the next update.
* Funding for this project was reduced as a result of COVID19.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	34,000	0	0	0	0	0	0	
TOTAL FUNDING	34,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="55,600"/>
				Amount Incl HST <input type="text" value="34,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21095**

Project Cost: **\$297,900**

Project Name: **Rouge River C.C. Mechanical Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: _____ Pre Approval:

Project Mgr: Ryan Hanna

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace four mechanical units at Rouge River C.C. 1) Replace perimeter heaters that serves the Clubhouse, the Auditorium and the Poolside Lounge. 2) Replace a three ton AHU that serves the pool changeroom 3) Replace a boiler that provides heating via the perimeter heating system for the entire building and 4) Replace two hot water tanks which supply hot water to the shower in the pool change rooms and the rest of the building. The work includes; material, labour and all other trades required for the work.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	269,026	0
Internal Charges:	0	0
External Consulting:	23,730	0
Sub Total:	292,756	0
HST Impact:	5,153	0
Total Project Cost:	297,900	0

NOTES

The following items were last replaced; perimeter heaters (original - 1985), 3 ton AHU (2001), boiler (2003) and two hot water tanks (2007). Based on condition assessment replacement is warranted. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	AHU + Heater	Boiler	Hot Water Tanks	Consultant	TOTAL	
Gas Tax	297,900	186,746	63,600	23,404	24,150	297,900	0
TOTAL FUNDING	297,900					297,900	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: <input type="text" value="344,500"/>
				Amount Incl HST <input type="text" value="297,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21096**

Project Cost: **\$6,300**

Project Name: **Thornhill C.C. Ice Equipment Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: Pre Approval:

Project Mgr: Martin Barrow

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace one (1) ice edger, one (1) hose reel, and one (1) ice painting equipment at the Thornhill C.C. The equipment is used by staff to maintain ice quality and operation.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	6,200	0
HST Impact:	109	0
Total Project Cost:	6,300	0

NOTES

The existing items were purchased in 2004 (Ice Edger), 2003 (Hose Reel), and 1990 (Ice Painting Equipment). A condition assessment of the ice equipment indicates replacement is warranted. The amount is consistent with the Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Ice Edger	Hose Reel	Ice Painting Equip			
Operating Funded Life Cycle	6,300	4,000	1,400	900	0	6,300	0
TOTAL FUNDING	6,300					6,300	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="351,600"/>
				Amount Incl HST: <input type="text" value="6,300"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21097**

Project Cost: **\$330,700**

Project Name: **Thornhill C.C. Retaining Wall Installation**

Commission: Community & Fire Services

New Asset/Expansion

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Martin Barrow

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to install an 100 ft retaining wall at Thornhill C.C. A study was completed by WSP Consulting, whom investigated mitigation strategies to prevent against flooding that occurred in June & July, 2017. The total cost for cleanup and repair after the 2017 floods was \$300K, which was paid by insurance (\$100K deductible was paid by the City). This retaining wall will help mitigate floods within the Thornhill Library. The retaining wall will reside along the front of the library and will stop high volume of rain water from filling the lower emergency exit area, thus flooding the centre's basement.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	300,000	0
Internal Charges:	0	0
External Consulting:	25,000	0
Sub Total:	325,000	0
HST Impact:	5,720	0
Total Project Cost:	330,700	0

NOTES

Due to heavy rain, the high volume of rain water floods the emergency exit of the library ramp. The water overflows the plant beds, which then spills into the lower emergency exit ramp of the library. The drain at the bottom of the ramp does not have the capacity to support the volume of water which then begins to enter the building beneath the doorway into the library. This project will be partially funded (40%) by Disaster Mitigation Adaptation Funding, which is a grant received by the City of Markham for flood remediation.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	TOTAL				Future Phases	
Other External	132,280	0	0	0	0	0	0
Tax	198,420	0	0	0	0	0	0
TOTAL FUNDING	330,700				0	0	0

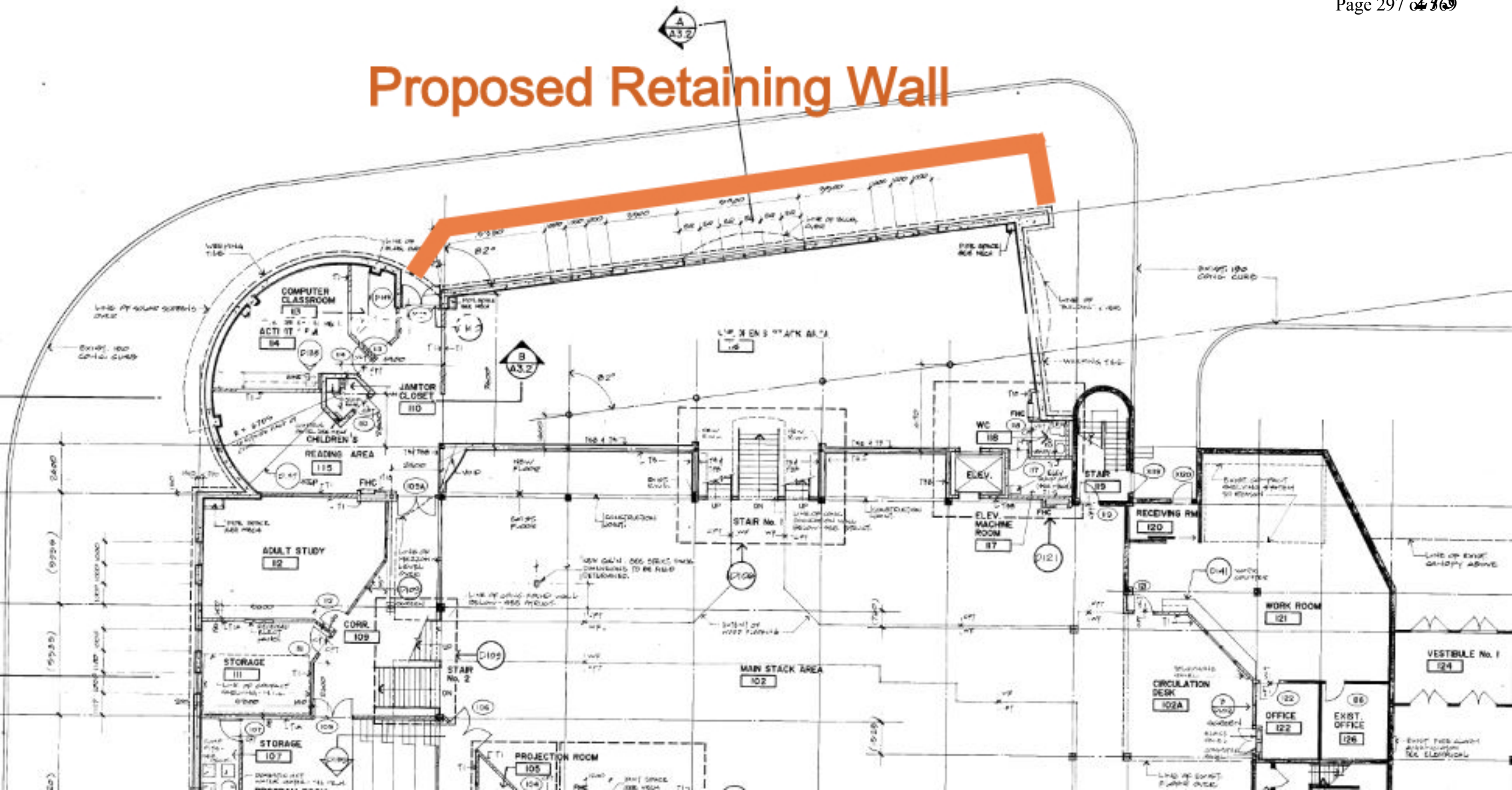
OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <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:

Proposed Retaining Wall





2021 PROJECT FUNDING REQUEST FORM

Number: **21098**

Project Cost: **\$158,800**

Project Name: **Thornhill C.C. Rubber Floor Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Recreation Services

Useful Life: 10 Pre Approval:

Project Mgr: Martin Barrow

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing rubber flooring in the West arena and arena dressing rooms at Thornhill C.C. The replacement consists of approximately 8,630 sqft of rubber flooring located at the West arena and dressing rooms. Rubber flooring is specifically used in arena applications, as it is cut resistant able to withstand heavy impact and are durable.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	156,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	156,100	0
HST Impact:	2,747	0
Total Project Cost:	158,800	0

NOTES

Existing rubber flooring was installed in 2009 at Thornhill C.C. A condition assessment of the flooring indicates replacement is warranted. The amount requested is consistent with recent award plus inflation
 *** (Recent Award) Rubber flooring costs approximately \$ 18.40 per sq ft including labour x 8,630 sq ft = \$ 158,800. Cost per unit is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	158,800	0	0	0	0	0	0	
TOTAL FUNDING	158,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="351,600"/>
				Amount Incl HST <input type="text" value="158,800"/>
				Year in the study <input type="text"/>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21099**

Project Cost: **\$2,806,300**

Project Name: **Library Collections**

Commission: Community & Fire Services

Repair/Replace

Department: Markham Public Library

Useful Life: 7 Pre Approval:

Project Mgr: Catherine Biss

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Collections are the Library's main product and are used heavily by the public, which expects currency. This requires ongoing acquisition of new materials, including those in print and non-print formats and non-English language materials, which are in high demand in Markham. In a 2020 survey of 2,521 residents, 94% indicated that it was important that MPL provides books and valued borrowing materials as the #1 Library service. A constant stream of new material is required to keep up with customer interest and demand.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	2,757,738	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,757,738	0
HST Impact:	48,536	0
Total Project Cost:	2,806,300	0

NOTES

Preliminary allocations (incl. processing): Books & Subscriptions \$960K/ Audio-visual \$315K/ French \$25K/ Multilingual \$300K/ Microfilms \$3.5K/ Periodicals \$100K/ Electronic Resources \$937K/ Processing Supplies \$180K. Figures subject to revision based on material availability, customer needs & final Library review. 25% funding (excl. processing costs) devoted to non-English materials (Multilingual, French). Cost for replacement of existing E-Resources (when invoiced in USD) based on exchange rate of 1.325 (\$537K USD\$). Pre-approval request is \$1,598,200.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Collections					
Operating Funded Life Cycle	2,806,300	2,806,300	0	0	0	2,806,300	0
TOTAL FUNDING	2,806,300					2,806,300	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: <input type="text" value="2,831,400"/>
				Amount Incl HST <input type="text" value="2,806,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2021 LIBRARY COLLECTIONS BUDGET SUPPORTING INFORMATION

The Library's Business Model for Material Selection:

MPL's business model for material selection is designed to achieve the following outcomes:

- Strong ROI on funding dollars, respecting the tax-payer's investment in library services;
- Strong library collections as a fundamental element in library service;
- Anticipating and meeting customer needs as determined by analysis of data regarding usage, trends and consumption of content, and broader trends in the publishing, retail, and public sectors;
- Alignment with the diversity of Markham's socio-demographic structure including age cohorts, language needs and preferences, and learning and leisure pursuits;
- Sector leading performance in Key Performance Indicators, including circulation per capita, collection turnover, materials as percentage of total expenditures, and visits per capita;
- Efficient use of funding dollars through a system wide approach to selection, eliminating overlap and duplication amongst the branches;
- Leveraging of alternative sources of content (i.e. online content and interlibrary loan) to satisfy long tail (non-mainstream) needs;
- High levels of use through aggressive targets for percentage of materials checked out at any given time. We want library materials to be in the hands of customers, enriching lives and supporting education.

Depth and Breadth of Library Materials:

Like all public library systems in Canada, MPL's collection policy defines the library mandate to meet the diverse information and knowledge needs of Markham residents through a collection that provides an appropriate balance of depth and breadth; meeting anticipated and expressed individual and community needs.

- **Bestsellers vs. Backlist:** Like bookstores, library "stock" includes both current bestsellers and backlist (older books still in print) items that are in demand by library customers
 - Backlist would include materials such as classics of children's literature
 - Classic board books and picture books for babies and pre-schoolers (*Goodnight Moon, Brown Bear, Brown Bear, What Do You See?*)
 - Series fiction for school aged children (*Diary of a Wimpy Kid, Dork Diaries, Geronimo Stilton, etc.*)
 - Classic children's fiction for school aged children (*Harry Potter, Anne of Green Gables, Treasure Island*)
 - Curriculum related materials (children's non-fiction books on Lands & People, Science, Technology and Math, Social Studies, etc.)
 - Backlist materials for teens such as popular teen fiction series and classics
 - Popular teen fiction (*Twilight, Divergent, The Hunger Games, The Giver, etc.*)
 - Curriculum related non-fiction (materials to support Independent Study Units)
 - Classic literature (Margaret Atwood, William Shakespeare, Harper Lee, William Golding, F. Scott Fitzgerald, etc.)
 - Backlist materials for adults such as classic literature, series fiction and non-fiction
 - Backlist of popular authors (James Patterson, Sue Grafton, Stephen King)
 - Backlist non-fiction (Health & Wellness, Travel, Food & Drink, Business and Financial Investments, Computers, Home & Garden, etc.)

- Genre fiction (Romance, Mysteries, Horror, Fantasy, etc.)
 - Backlist materials for senior adults
 - Large print (popular fiction and non-fiction titles)
 - Audiobooks
- **Linguistic Diversity:** An additional challenge for Markham, in the context of the City's high level of linguistic diversity, is to allocate adequate funding to the demand for multilingual materials in each service area.
- **Customer Purchase Suggestions:** Appropriate response to purchase suggestions by Markham residents where they meet the Library's selection criteria including ensuring that the item would be of interest of other Markham residents.
- **Fiscal Responsibility:** Our collection policy excludes purchasing niche or scholarly materials, ensuring that MPL's collection appeals to the general public and not for niche interests (we try to meet these needs through Interlibrary Loans or online databases).

Estimated budget breakdown for 2021:

Books & Subscriptions	\$960,000
Audiovisual	\$315,000
French Books	\$25,000
Multilingual	\$300,000
Microfilms	\$3,500
Periodicals	\$100,000
eResources	\$937,000
Processing & Supplies	\$180,000

Circulation in 2019 VS 2018:

Circulation	2019	2018	%+/-
Physical Circulation	4,845,118	4,905,024	(1.2)
Digital Circulation (eCirc)	731,177	555,728	31.6
Total Circ (incl. eCirc)	5,576,295	5,460,752	2.1

Electronic circulation over the past 5 years:

Years	2011	2012	2013	2014	2015	2016	2017	2018	2019
eCirculation	67,500	93,651	148,235	164,791	246,864	310,208	370,779	555,728	731,177
%Increase		38.7%	58.3%	11.2%	49.8%	25.66%	19.53%	49.88%	31.57%

As of June 2020, the Library is seeing an increase of 70% in digital circulation over the same period in 2019, a huge increase due in part to COVID 19.

CUSTOMER SATISFACTION WITH COLLECTIONS:

The number one reason for Markham residents using the library is for its collection as they continuously state in all surveys. As you can see from the chart below, our customer expectations of the content MPL provides exceeds their actual satisfaction with the collection.

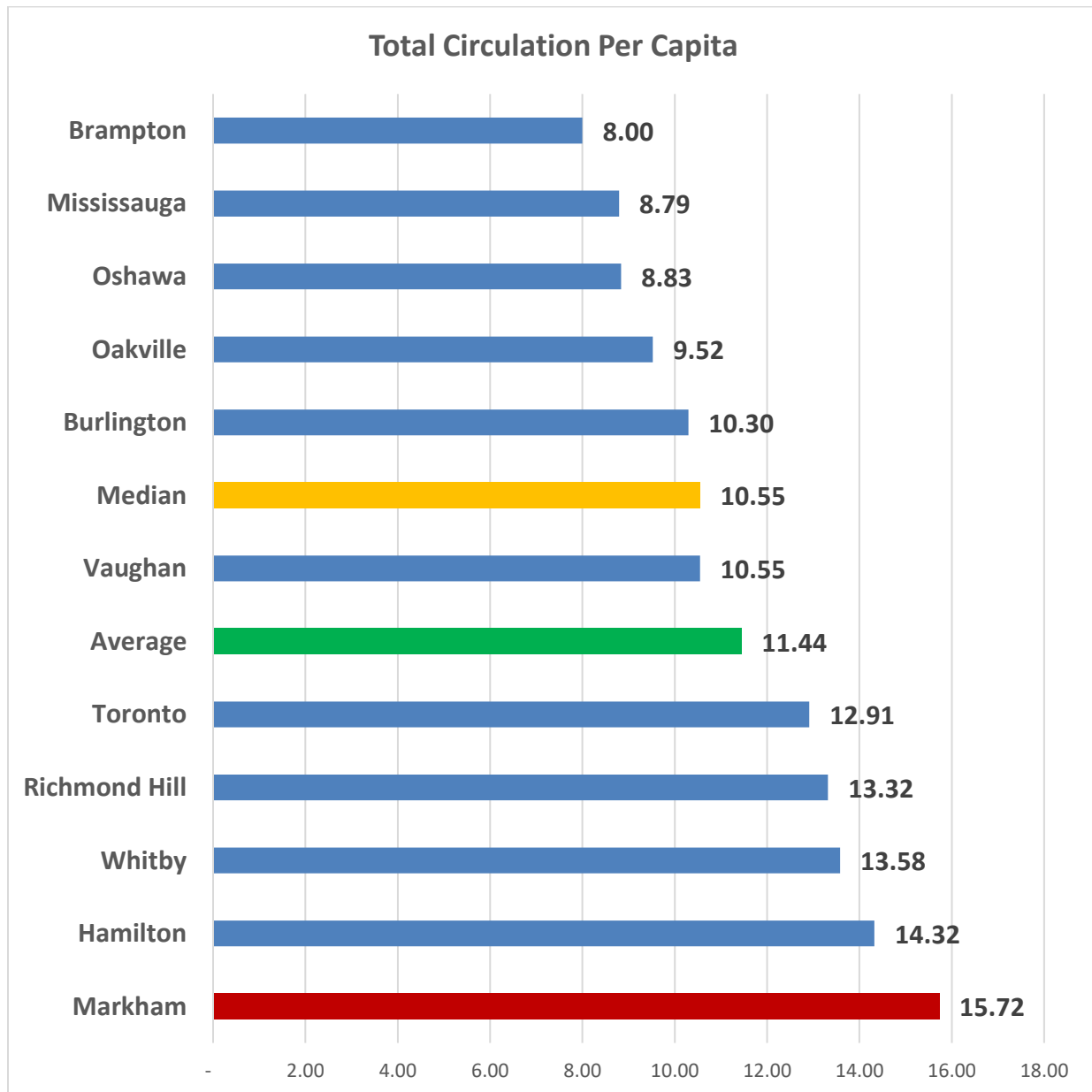
	2019
Importance	9.20/10
Satisfaction	8.03/10
Gap	1.17

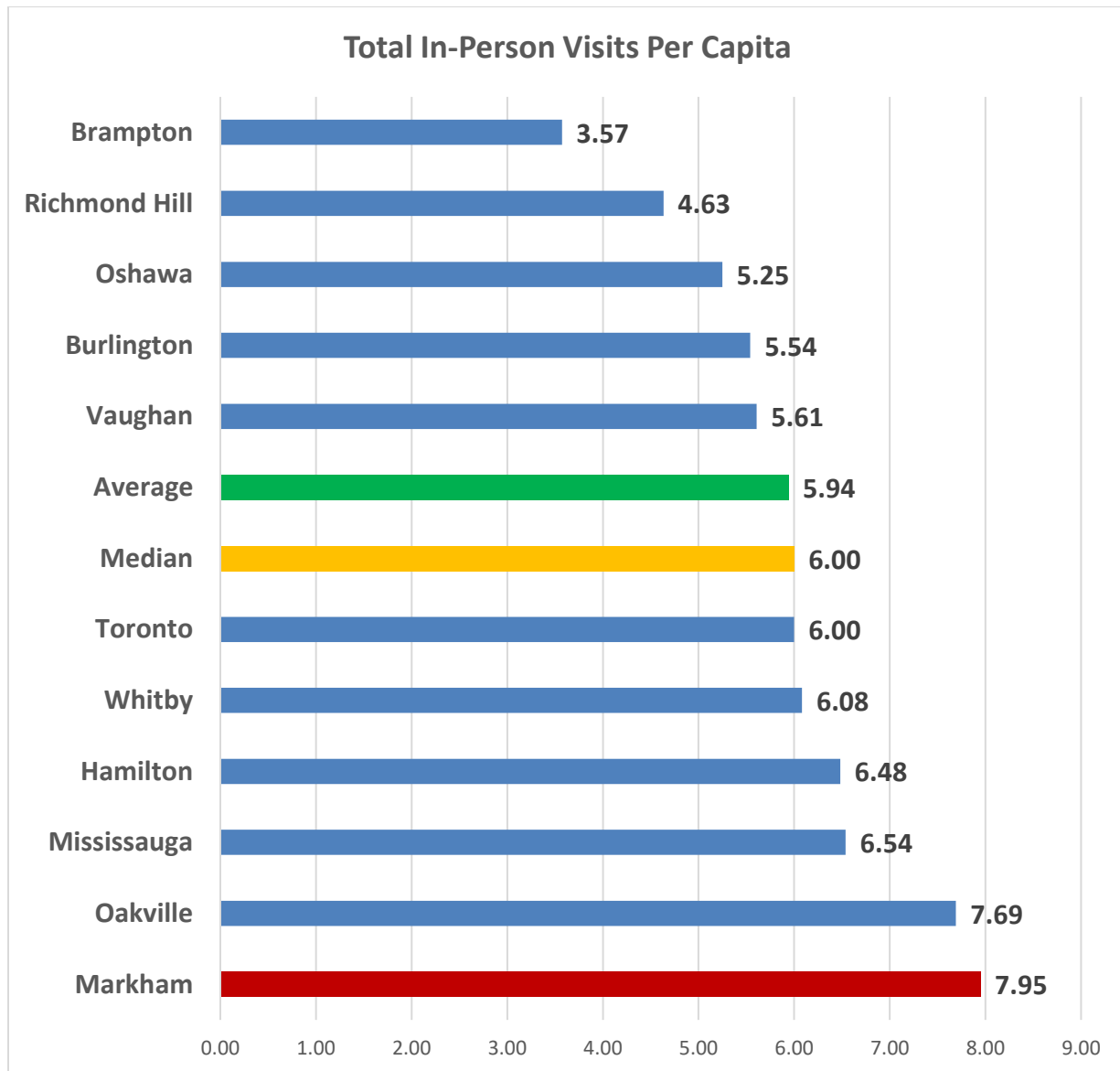
LANGUAGES COLLECTED:

- English, French, Arabic, German, Greek, Gujarati, Hebrew, Hindi, Italian, Korean, Persian, Panjabi, Russian, Spanish, Tagalog, Tamil, Urdu, and Chinese.

KEY PERFORMANCE INDICATORS

(Based on the latest 2018 statistics submitted to Ontario Ministry by Public Libraries)







2021 PROJECT FUNDING REQUEST FORM

Number: **21100**

Project Cost: **\$146,700**

Project Name: **Library Furniture, Equipment & Shelving Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Markham Public Library

Useful Life: 10 Pre Approval:

Project Mgr: Catherine Biss

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To replace furniture/shelving that is broken and/or in poor condition due to heavy usage in MPL branches. Required to maintain library facilities and operations. The public library is a high use municipal service that is valued by the community and helps make Markham a highly attractive place in which to live, work and study.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	144,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	144,200	0
HST Impact:	2,538	0
Total Project Cost:	146,700	0

NOTES

This is an annual program and funding will be requested each year. It will be shared amongst 8 facilities (\$17,500 per facility on average). The 2021 project will be used for replacement of public-facing furniture and loose furniture purchases for various locations (\$56.7K), staff area furniture (\$20K), program room/makerspace (\$30K), mobile shelving (\$40K). The replacement is in high priority due to structural damages/safety issue/ public liability risks. 3 year average spend plus CPI is \$143.8k. This amount is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Furniture	Shelving				
Operating Funded Life Cycle	146,700	106,700	40,000	0	0	146,700	0
TOTAL FUNDING	146,700					146,700	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: <input type="text" value="146,700"/>
				Amount Incl HST <input type="text" value="146,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21101**

Project Cost: **\$6,815,800**

Project Name: **Asphalt Resurfacing**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Zoyeb Vahora

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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.

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,610,428	0
Internal Charges:	89,002	0
External Consulting:	0	0
Sub Total:	6,699,430	0
HST Impact:	116,344	0
Total Project Cost:	6,815,800	0

NOTES

Asphalt Resurfacing of approximately 17.5km of two lane and four lane roads. 6.8km of four lane roads of pavement preservation which is comparable to last year's program. There is no substantial backlog in this program. Laser condition survey conducted bi-annually indicates 2019 pavement condition result shows that 72.9% of the road network is deemed good or better (target = 80%).

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL		
Gas Tax	6,715,800	0	0	0	0	0	
Operating Funded Life Cycle	100,000	0	0	0	0	0	
TOTAL FUNDING	6,815,800				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: <input type="text" value="6,815,800"/>
				Amount Incl HST: <input type="text" value="6,815,800"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project	Asphalt Resurfacing
2021 Capital Request	\$6,815,800
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	Parking Lot Rehabilitation, Localized Repairs – Concrete/Asphalt
Related Maps	..\Roads\Back Up\Asphalt Rehab\2021 Pavement Rehabilitation Locations.pdf
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.

2021 Road Rehabilitation Program

Street Name	Road-Segment ID	From	To	Length	Width
Captain Francis Drive	01473 - 001,002,003	Entirety		872	8
Colonel Marr Road	02028 - 001,002	Entirety		388.85	8
Bliss Court	00949 - 001	Entirety		50	8.5
Forester Crescent	10693 - 001 to 007	Entirety		1145	8.5
Rachel Crescent	10685 - 001 to 005			594	10.5
Ritter Crescent	07811 - 001	Entirety		464	8
Delhi Crescent	02534 - 001, 002	Entirety		640	8
Caledonia Court	01376 - 001	Entirety		60	8.5
Leahill Drive	05541 - 001	Entirety		100	6
Deanbank Drive	02461 - 001	Entirety		177	3.5
Deanbank Drive	02461 - 002	Entirety		222	8
Simonstone Boulevard East	08468 - 014,016,026,001,004,012,019,024	Dersingham Crescent North	Don Mills	1054	10.5
Brewsland Crescent	01112 - 001	Entirety		329	8
Tamarack Drive	09172 - 001, 002	Entirety		839	8
Elgin Mills Road East	10545 - 013	Victoria Square Boulevard	Warden Avenue	2049	9
Reesor Road TBC	10634 - 004,008	16th	407 ETR	2900	9
Harvest Moon Drive	04268 - 001 to 009	Entirety		1276	9
Riseborough Circuit	07803 - 001 to 022	Entirety		2118	9
Senator Reesors Drive	08303 - 001,002,003,004,005,006,007	Entirety		1362	8
Harry Corsen Place	04421 - 001	Entirety		500	8
John Dexter Place	04987 - 001	Entirety		500	8
Berczy Gate	00825 - 001	Entirety		75	8.5
Kirkham	12009 - 001	Markham Road	New Delhi Drive	135	16

Total

17.84985
km



2021 PROJECT FUNDING REQUEST FORM

Number: **21102**

Project Cost: **\$58,400**

Project Name: **Boulevard Repairs**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 10 Pre Approval:

Project Mgr: Bob O'Hara

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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).

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PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	57,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	57,400	0
HST Impact:	1,010	0
Total Project Cost:	58,400	0

NOTES

Some of the larger repairs include Kenilworth Gate, Carlton & Main Street Unionville, Wooten Way and Sir Tristram and 133 Main Street Unionville, 2783, 2831, 2867 Bur Oak. Installation cost is \$33/m2. 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 \$55K. Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	58,400	0	0	0	0	0	0	
TOTAL FUNDING	58,400					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: <input type="text" value="58,400"/>
				Amount Incl HST: <input type="text" value="58,400"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21103**

Project Cost: **\$25,800**

Project Name: **Bridge Structure Preventative Maintenance - Roads**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 30 Pre Approval:

Project Mgr: Bob O'Hara

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	25,350	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,350	0
HST Impact:	446	0
Total Project Cost:	25,800	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 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	25,800	0	0	0	0	0	0
TOTAL FUNDING	25,800					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="51,600"/>
				Amount Incl HST: <input type="text" value="25,800"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21104**

Project Cost: **\$10,200**

Project Name: **City Owned Entrance Feature Rehabilitation/Replacement**

Repair/Replace

Commission: Community & Fire Services

Useful Life: 20 Pre Approval:

Department: Operations - Roads

Category: Annual

Project Mgr: Zoyeb Vahora

Cost Validation: Third party estimate

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

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance and repair of entrance features based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	176	0
Total Project Cost:	10,200	0

NOTES

Location for 2021 is repairs to the entrance feature at 16th and McCowan. The City owns 144 features, there are 170 known to be located on private property with the remaining 17 of uncertain ownership for a total inventory of 331. Staff presented a report to Council Q2 2020 and will provide an update to Council in Fall 2020.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	10,200	0	0	0	0	0	0	
TOTAL FUNDING	10,200					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: <input type="text" value="465,500"/>
				Amount Incl HST <input type="text" value="10,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21105**

Project Cost: **\$63,900**

Project Name: **City Owned Fence Replacement Program**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 25 Pre Approval:

Project Mgr: Bob O'Hara

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To remove and replace failing fence locations throughout the City on City owned property.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	62,832	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	62,832	0
HST Impact:	1,106	0
Total Project Cost:	63,900	0

NOTES

2021 locations include McCowan and Trailridge (removal only) Kennedy -Bur Oak- Wilfred Murison (removal only), Mowatt Court, 14th Lane and Summerdale, 41 Tunney and 37 Condacuri. This is an annual program. There is no backlog in this program and the fences are in a state of good repair.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	63,900	0	0	0	0	0	0	
TOTAL FUNDING	63,900					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="131,500"/>
				Amount Incl HST <input type="text" value="63,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21106**

Project Cost: **\$91,400**

Project Name: **Citywide Ditching Program**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 25 Pre Approval:

Project Mgr: Ron Roffey/Dennis King

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual ditch restoration program per Council resolution. Program is to maintain roadside ditches & culverts which are a critical component of the broader storm drainage system. The program will protect the City's investments in road maintenance and avoid early erosion of Markham's infrastructure.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	89,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	89,800	0
HST Impact:	1,580	0
Total Project Cost:	91,400	0

NOTES

Based on the current cost estimate the ditching program would be able to maintain up to 4 linear km's per year. This is an annual program which has an average cost of \$88,000 per year. This is the first year of the program. Ditch restoration work will be undertaken as part of the annual capital road improvements program and conducted prior to undertaking road rehabilitation work on roads with rural profiles. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	91,400	0	0	0	0	0	0
TOTAL FUNDING	91,400					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="91,400"/>
				Amount Incl HST <input type="text" value="91,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21107**

Project Cost: **\$35,400**

Project Name: **Don Mills Storm Channel**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 1 Pre Approval:

Project Mgr: Dennis King

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Storm channel is located east of Woodbine between Steeles and John Street. Remove overgrowth, vegetation and debris from storm channel to ensure proper storm water conveyance. Program will include periodic clean-up of debris, garbage and excess vegetation found in the channel. It will also include channel maintenance after large storm events, and in response to dumping.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	34,741	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	34,741	0
HST Impact:	611	0
Total Project Cost:	35,400	0

NOTES

To support ongoing annual maintenance. 3 yr average is \$12K. This is an annual program. 2 site visits per year in July/Oct. Operations is responsible for minor above ground maintenance on the Don Mills storm channel such as debris and vegetation removal while Environmental Services is responsible for its flood reduction strategies and implementation. Higher funding requested this year for more frequent work which will improve water flow and volume capacity and minimize flooding and breaching of banks.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	35,400	0	0	0	0	0	0	
TOTAL FUNDING	35,400					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21108**

Project Cost: **\$143,300**

Project Name: **Emergency Repairs**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Dennis King/ Ron Roffey

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Visual inspection

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	140,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	140,800	0
HST Impact:	2,478	0
Total Project Cost:	143,300	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 \$143K. This is an annual program.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	143,300	0	0	0	0	0	0	
TOTAL FUNDING	143,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="143,300"/>
				Amount Incl HST <input type="text" value="143,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21109**

Project Cost: **\$90,900**

Project Name: **Guiderail- Install/Repair/Upgrade**

Repair/Replace

Commission: Community & Fire Services

Useful Life: 15 Pre Approval:

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

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

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Install new or repair/upgrade existing guiderail to meet new Provincial Standards and minimize maintenance. Program ensures that the City maintains safe roadways for users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	89,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	89,300	0
HST Impact:	1,572	0
Total Project Cost:	90,900	0

NOTES

153 locations identified in inventory. Guiderails are upgraded to meet standards only when they are due for replacement or if they require emergency repairs. 2 locations to be completed this year, Brimley Road, east side between Worthing Ave and Wilclay Ave and Brimley Rd west side between Cardiff Rd and Winston Rd. To date, 58 locations have been upgraded to the Provincial Standard. There is no substantial backlog in this program. This is year 4 of 10 year program during which time the remaining locations will be upgraded.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Brimley Rd East Side	Brimley Rd West Side				
Gas Tax	90,900	49,135	41,765	0	0	90,900	0
TOTAL FUNDING	90,900					90,900	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: <input type="text" value="90,900"/>
				Amount Incl HST <input type="text" value="90,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21110**

Project Cost: **\$459,000**

Project Name: **Incremental Growth Related Winter Maintenance Vehicles**

Commission: Community & Fire Services

New Asset/Expansion

Department: Operations - Roads

Useful Life: 0 Pre Approval:

Project Mgr: Raymond Law

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Development Charge (DC) funding for additional growth-related winter maintenance vehicles purchased by contractors. If winter maintenance was done in-house, these vehicles would need to be purchased by the City, so this request is to obtain DC funding to offset a portion of the capital cost included in the winter maintenance paid through Operating accounts.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	459,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	459,000	0
HST Impact:	0	0
Total Project Cost:	459,000	0

NOTES

Amount requested is as per the 2017 DC Study plus 2% inflationary increase.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	459,000	0	0	0	0	0	0	
TOTAL FUNDING	459,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21111**

Project Cost: **\$876,400**

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

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Bob O'Hara

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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 concrete curb is to channel storm water into the storm sewer system.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	861,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	861,200	0
HST Impact:	15,157	0
Total Project Cost:	876,400	0

NOTES

Specific locations to be determined upon completion of condition audit in 2020. 3 year avg is \$760K. Ask is higher due to growth and more deficiencies identified.
Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	876,400	0	0	0	0	0	0	
TOTAL FUNDING	876,400					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="876,400"/>
				Amount Incl HST: <input type="text" value="876,400"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project	Localized Repairs – Curb and Sidewalk
2021 Capital Request	\$876,400
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 and reduce associated liability to the City. The purpose of concrete curb is to channel storm water into the storm sewer system.
Project Rationale	Addresses minor repair locations of curb, sidewalk, MUP failures in order to 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.



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$119,200

Project Name: Localized Repairs - Parking Lots

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 8 Pre Approval:

Project Mgr: Bob O'hara

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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. 2021 locations: Armadale CC, Angus Glen North bus loop, Angus Glen South lot, Centennial CC.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	117,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	117,100	0
HST Impact:	2,061	0
Total Project Cost:	119,200	0

NOTES

2021 locations: Armadale CC, Angus Glen North bus loop, Angus Glen South lot. This is an annual program. There is no substantial backlog in this program. 3 year avg is \$122K. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	119,200	0	0	0	0	0	0	
TOTAL FUNDING	119,200					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: <input type="text" value="119,200"/>
				Amount Incl HST <input type="text" value="119,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21114**

Project Cost: **\$80,200**

Project Name: **Retaining Wall Repair Program**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Bob O'Hara

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repairs to failing retaining walls and other right of way structural assets on city owned property.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	78,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	78,800	0
HST Impact:	1,387	0
Total Project Cost:	80,200	0

NOTES

4 locations to be done 40 Braeside, 192 Bullock, Stirling & Digby, and Forbes Cres and Denison. This is an annual program. There is no backlog in this program. The retaining walls are in a state of good repair.
Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	80,200	0	0	0	0	0	0	
TOTAL FUNDING	80,200					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="80,200"/>
				Amount Incl HST: <input type="text" value="80,200"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21115**

Project Cost: **\$51,900**

Project Name: **Storm Water Retention Pond Maintenance Program**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 15 Pre Approval:

Project Mgr: Bob O'Hara

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Ongoing minor maintenance activities to all storm water management ponds throughout the City. The work includes repairing/replacing grates, headwalls and fences. This maintenance program will include localized repairs of identified deficiencies as reported by 2018 site inspection. Repair defective items identified from the 115 storm water management (SWM) ponds inspected in the fall of 2019.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	51,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	51,000	0
HST Impact:	898	0
Total Project Cost:	51,900	0

NOTES

Items include repairs to baffle blocks, inlets, backflow preventer, outlets, pipes and retaining walls. This is an annual program. There is no backlog in this program. Roads provide maintenance above the water line while Environmental Services provide rehabilitation below the water line. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	51,900	0	0	0	0	0	0	
TOTAL FUNDING	51,900					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="51,900"/>
				Amount Incl HST: <input type="text" value="51,900"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21116**

Project Cost: **\$144,000**

Project Name: **Backstop and Outfield Fence Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 35 Pre Approval:

Project Mgr: James Bingham

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Backstop fence and outfield fence replacement for James Edward Major #1 and Randal Park Major #1.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	141,524	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	141,524	0
HST Impact:	2,491	0
Total Project Cost:	144,000	0

NOTES

Unit cost is based on original cost of construction plus inflation. This is an annual program and funding will be requested each year for baseball and softball field's city wide. Project costs vary depending on the number of locations. There is no substantial backlog and assets are in a state of good repair. Replacement of netting and hardware only, deferred posts and structure to 2040 based on condition assessment. The backstop/outfield fence both locations was installed in 1986.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	144,000	0	0	0	0	0	0	
TOTAL FUNDING	144,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="151,200"/>
				Amount Incl HST: <input type="text" value="144,000"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$190,700

Project Name: Beaupre Park Waterplay Replacement

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 20 Pre Approval:

Project Mgr: Scott Grieves

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Splash Pad at Beaupre Park requires replacement based on condition assessment and life expectancy.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	177,400	0
Internal Charges:	0	0
External Consulting:	10,000	0
Sub Total:	187,400	0
HST Impact:	3,298	0
Total Project Cost:	190,700	0

NOTES

This is asset based program and funding will be requested as required for different locations with funding specific to the size and type of Splash Pad. This Splash Pad was first installed in 2001 and this is the first time it will be replaced.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	190,700	0	0	0	0	0	0	
TOTAL FUNDING	190,700					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="180,500"/>
				Amount Incl HST <input type="text" value="180,500"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21118**

Project Cost: **\$22,900**

Project Name: **Bleachers (Metal) Replacements**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 30 Pre Approval:

Project Mgr: James Bingham

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Large metal bleachers at Ashton Meadows and Bayview Glen Park require replacement based on condition assessment. These bleachers are safety standard certified.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	22,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	22,500	0
HST Impact:	396	0
Total Project Cost:	22,900	0

NOTES

Funding amount changes every year based on Life Cycle and actual condition assessment performed to support recommendations. There is no substantial backlog and assets are in a state of good repair. Unit cost is consistent with recent award plus inflation. Bleachers last replaced in 1991.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Budget</u>	<u>Components</u>			<u>TOTAL</u>	<u>Future Phases</u>
		<u>Ashton Meadows</u>	<u>Bayview Glen</u>			
Operating Funded Life Cycle	22,900	11,450	11,450	0	22,900	0
TOTAL FUNDING	22,900				22,900	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>
Name				Amount in Study: <input type="text" value="22,900"/>
				Amount Incl HST <input type="text" value="22,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$359,400

Project Name: Boulevard/Park Trees Replacement

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 50 Pre Approval:

Project Mgr: David Plant

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Boulevard/Park replacement tree planting is an annual program which enables the City to replace approximately 700 dead, diseased or damaged trees. Cost per tree is approximately \$400 to plant with 2 year warranty and \$100 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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	353,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	353,200	0
HST Impact:	6,216	0
Total Project Cost:	359,400	0

NOTES

The current backlog of vacant tree sites is 1824 and expected to be at 2300 by the end of 2020. This contract will address 705 trees and reduce the backlog to 1595 trees. The cost to address the remaining backlog is \$797,500.00. Amount requested is consistent with the 2020 Life Cycle Reserve Study update. 3 year avg is \$254K. The backlog is subject to the condition of the trees in any given year. The three year averaging for mortality has been consistent year over year. This represents an increased mortality of 0.2% on an inventory of 100,000 street trees.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	New Plantings	Back Log				
Operating Funded Life Cycle	359,400	179,700	179,700	0	0	359,400	0
TOTAL FUNDING	359,400					359,400	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="359,400"/>
				Amount Incl HST: <input type="text" value="359,400"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21121**

Project Cost: **\$25,800**

Project Name: **Bridge Structure Preventative Maintenance in Parks**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 30 Pre Approval:

Project Mgr: Scott Grieve

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual preventative maintenance of parks and open space bridges. Locations to be determined based on Spring 2021 condition assessment. Work includes fill and grade bridge approaches, remove and replace wooden decks on pedestrian bridges, railings and curbs.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	25,350	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,350	0
HST Impact:	446	0
Total Project Cost:	25,800	0

NOTES

This is an annual program and funds will be requested each year. There is no backlog and bridge structures are in a state of good repair. Operations is responsible for preventive minor maintenance on bridges/culverts such as minor grading, patching, sealing of bridge approaches and bridge decks, and siltation removal from culverts, while Environmental Services is responsible for its inspection/rehabilitation and replacement. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	25,800	0	0	0	0	0	0	
TOTAL FUNDING	25,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
				Amount Incl HST <input type="text"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
Life cycle resides in Environmental Services				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$40,700

Project Name: Cemetery Fence Repair/Replacement

Repair/Replace

Commission: Community & Fire Services

Useful Life: 25 Pre Approval:

Department: Operations - Parks

Category: Annual

Project Mgr: Dean McDermid

Cost Validation: Recent awards

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

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Fence repairs at Thornhill and St. Johns Cemetery (City owned cemeteries = 14) based on condition assessment to maintain a formal border between private adjacent lands and burial grounds. Thornhill Cemetery is surrounded on 3 sides with galvanized chain link fence with the 4th side being authentic wrought iron fence and masonry gate posts. Fence replacement at Thornhill Cemetery is subject to Heritage review and approval. The galvanized chain link fence will be replaced with a black vinyl chain link fence which is more in keeping with the black wrought iron entrance.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	40,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	40,000	0
HST Impact:	704	0
Total Project Cost:	40,700	0

NOTES

The 2020 capital project with a budget of \$44k was to fund the refurbishment/repair of all 4 sides of the existing fence, however, contractor determined refurbishment would not meet safety standards and hence the wrought iron fence on 1 side was replaced at the cost of \$25k. Remaining funds of \$19k will be used to supplement this project to replace the remaining 3 sides of the fence with black vinyl chain link fence, for a total cost of \$59,700. Future updates of the Life Cycle Reserve Study will reflect the cost of this replacement.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Thornhill	St John				
Operating Funded Life Cycle	40,700	27,500	13,200	0	0	40,700	0
TOTAL FUNDING	40,700					40,700	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: <input type="text" value="21,600"/>
				Amount Incl HST <input type="text" value="40,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="Thornhill Cemetery fence being replaced with black vinyl chain link fence instead of repaired."/>				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$175,000

Project Name: City Park Furniture / Amenities

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 10 Pre Approval:

Project Mgr: Matthew Busato

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This is an annual replacement program to provide for the refurbishment or replacement of City furniture in parks and Civic property such as benches, games tables, picnic tables and umbrellas, waste receptacles, bike racks, banner arms, self-watering planters and hanging baskets. Project also includes refurbishment or replacement and installation of Moloks, seasonal waste containers, tree grates and bollards/p gates.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	172,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	172,000	0
HST Impact:	3,027	0
Total Project Cost:	175,000	0

NOTES

This is an annual program. There is no substantial backlog and assets are in a state of good repair. Amount requested is consistent with the 2020 Life Cycle Reserve Study. Replacements are based on annual condition assessments at all City parks, trails, greenspace and facilities. Includes benches, waste receptacles/recycling and concrete pads for both, bike racks, planters and hanging baskets, P Gates, picnic table frames and wood/hardware, banner arms, parks information signs and plaques, seasonal decoration (LED trees), Muskoka chairs.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	175,000	0	0	0	0	0	0
TOTAL FUNDING	175,000					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: <input type="text" value="175,000"/>
				Amount Incl HST <input type="text" value="175,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21124**

Project Cost: **\$176,900**

Project Name: **Court Resurfacing/Reconstruction/Maintenance**

Commission: Community & Fire 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: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repair and resurfacing of basketball, public and club tennis courts based on condition assessment. Reconstruction- Armadale 1-4 Resurface -Centennial Basketball 1, Maintenance - Carlton Park 5-7.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	173,840	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	173,840	0
HST Impact:	3,060	0
Total Project Cost:	176,900	0

NOTES

There has been deferrals of court resurfacing/replacement at some tennis clubs but it is not causing any safety issues. The City is responsible for the annual maintenance of the clay courts 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.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Clay Court	Public Courts	Tennis Club			
Operating Funded Life Cycle	94,600	9,000	3,300	82,300	0	94,600	0
Other External	82,300	0	0	82,300	0	82,300	0
TOTAL FUNDING	176,900					176,900	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: <input type="text" value="285,700"/>
				Amount Incl HST <input type="text" value="143,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2021 Court Resurfacing/Reconstruction

17-Sep-2020

Resurface, Reconstruction or Maintenance	Component	Lifecycle Cost Inc. HST Impact City Share	Tennis Club Share Inc. HST Impact	Total Project Cost Inc. HST impact	Notes
Rebuild	Armada - #1 to #4	82,310	82,310	164,619	Tennis Club (Armada)
Resurface	Centennial Park - Basketball #1 (half)	3,321		3,321	
Clay Court Maintenance	Carlton Park - Tennis #5, #6 & #7 (Clay)	9,000		9,000	Reimbursement to Unionville Tennis Club
	Total	94,631	82,310	176,941	
	Rounded Off	94,600	82,300	176,900	

Funding Sources should be:	Budget	Clay Court	Public Courts	Tennis Club
Operating Funded Lifecycle	94,600	9,000	3,300	82,300
External Funding - Armada	82,300			82,300
Total	176,900	9,000	3,300	164,600

Notes : Locations in Lifecycle but will be deferred to 2023

Robinson - Tennis #1 & #2
Frisby - Tennis #1 & #2
Ada Mckenzie - Tennis #1 & #2
Pomona Valley - Tennis #1 to #6



2021 PROJECT FUNDING REQUEST FORM

Number: **21125**

Project Cost: **\$135,800**

Project Name: **Fence (Tennis Courts)**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 35 Pre Approval:

Project Mgr: Dean McDermid

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	133,450	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	133,450	0
HST Impact:	2,349	0
Total Project Cost:	135,800	0

NOTES

This is an annual program and funding will be requested each year. 2021 locations include Highgate, courts 1-3, Pomona Valley, courts 1-6 and Bayview Glen courts 1-2. Unit cost is based on original cost of construction plus inflation. There is no substantial backlog and the fences are in a state of good repair.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Highgate	Pomona Valley	Bayview Glen			
Gas Tax	135,800	37,900	68,300	29,600	0	135,800	0
TOTAL FUNDING	135,800					135,800	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="106,200"/>
				Amount Incl HST <input type="text" value="135,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="Highgate is accelerated from 2031"/>				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$820,700

Project Name: **Floodlights, Poles & Cross Arms Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 30 Pre Approval:

Project Mgr: James Bingham

Category: Minor

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

Cost Validation: External peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Floodlights, poles and cross arms at parks due for replacement based on condition assessment and to avoid untimely outages. This project includes the repair, removal and disposal of existing poles and floodlights, and supply and installation of new poles, cross arms and floodlights. Locations for 2021 are Carlton Park Tennis, Milliken Mills #5 Softball, Morgan Park Tennis, and Pomona Valley Tennis.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	760,824	0
Internal Charges:	0	0
External Consulting:	45,650	0
Sub Total:	806,474	0
HST Impact:	14,194	0
Total Project Cost:	820,700	0

NOTES

This is an asset based lifecycle program and funding will be requested each year. All of the Markham sports fields constructed or retrofitted since 1982 have been equipped with controlled-optic sports floodlights that are designed to control the direct illumination and to reduce the dark sky illumination. Project will be completed during 2020/2021 winter season. This project will be upgraded to LED lights generating annual savings of \$3K. There is no substantial backlog and assets are in a state of good repair.

SOURCE(S) OF FUNDING (\$)		Components						Future Phases
Funding Type	Budget					TOTAL	Future Phases	
Gas Tax	820,700	0	0	0	0	0	0	
TOTAL FUNDING	820,700					0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	-\$3,241	\$0	-\$3,241

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="973,700"/>
				Amount Incl HST <input type="text" value="820,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
The lights at the 3 tennis courts at Markham Tennis Club are being completed as part of the Tennis Bubble project managed by Asset Management.				

2021 Floodlights, Poles & Cross Arms

17-Jul-2020

Facility	Lifecycle Cost Pre-Tax	Breakdown of Project Cost (Pre-Tax)		
		Cost Inc. Contingency	Consultant	Total
Carlton Park - Tennis (North)	150,425	141,911	8,515	150,425
Carlton Park - Tennis (South)	150,425	141,911	8,515	150,425
Milliken Mills Park #5 - Softball	204,772	193,181	11,591	204,772
Morgan - Tennis	150,425	141,911	8,515	150,425
Pomona Valley - Tennis	150,425	141,911	8,515	150,425
	806,473	760,824	45,650	806,473
Total Cost pre-tax				\$ 806,473
HST Impact				\$ 14,194
Total Project Cost				\$ 820,667
Rounded Off Project Cost				820,700

Note: Reesor - Tennis (North) - \$150k pre-tax included in lifecycle but has been removed; To be done by Sustainability and Asset Management



2021 PROJECT FUNDING REQUEST FORM

Number: **21127**

Project Cost: **\$20,700**

Project Name: **Goal Posts Replacement- Ashton Meadows Park**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 30 Pre Approval:

Project Mgr: James Bingham

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Goal Posts (3 sets) at Ashton Meadows Park due for replacement based on life expectancy and condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	20,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,300	0
HST Impact:	357	0
Total Project Cost:	20,700	0

NOTES

Life cycle Program. \$6.7K per pair per location. This is an annual program and funding will be requested each year. The replacements are safety compliant. Unit prices consistent with recent award plus inflation. The goal posts at Ashton Meadows were last replaced in 1991.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	20,700	0	0	0	0	0	0	
TOTAL FUNDING	20,700					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="20,700"/>
				Amount Incl HST: <input type="text" value="20,700"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21128**

Project Cost: **\$121,500**

Project Name: **Markham Trees for Tomorrow**

Commission: Community & Fire Services

New Asset/Expansion

Department: Operations - Parks

Useful Life: 50 Pre Approval:

Project Mgr: Nory Takata

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

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 390,000 trees have been planted citywide since the program's inception.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	83,250	0
Internal Charges:	36,750	0
External Consulting:	0	0
Sub Total:	120,000	0
HST Impact:	1,465	0
Total Project Cost:	121,500	0

NOTES

This program facilitates tree planting projects that incorporate community engagement and partnership opportunities. 2019-2022 Goals
1. Increase tree canopy by 30%; 2. Partnerships
3. Outreach, Education, Promotions.
Focal point of 2021 is restoration plantings, 10,000 trees, Tree Canada, refreshed branding, social media campaign and tree education programs.
Internal chargeback for 1-150 day staff

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
Other Internal	121,500	0	0	0	0	0	0
TOTAL FUNDING	121,500					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: <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:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21129**

Project Cost: **\$142,700**

Project Name: **Pathways Resurfacing**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 15 Pre Approval:

Project Mgr: Scott Grieve

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Paving and repairs of 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. 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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	140,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	140,200	0
HST Impact:	2,468	0
Total Project Cost:	142,700	0

NOTES

Locations subject to condition assessment to be done spring 2021. There is no substantial backlog and the pathways are in a state of good repair. 3 year avg is \$126K.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	142,700	0	0	0	0	0	0	
TOTAL FUNDING	142,700					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="142,700"/>
				Amount Incl HST <input type="text" value="142,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21130**

Project Cost: **\$366,800**

Project Name: **Playstructure Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 17 Pre Approval:

Project Mgr: Scott Grieve

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of playground equipment, as required, to maintain the current standards (CSA - Canadian Standards Association CAN/CSA-Z614-07. Children's Playspaces and Equipment"). There are 4 locations to be replaced in 2021, Milliken Mills Park. Milliken Mills Park rubberized surface, Benjamin Marr South, Bruce Boyd.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	354,850	0
Internal Charges:	0	0
External Consulting:	5,592	0
Sub Total:	360,442	0
HST Impact:	6,344	0
Total Project Cost:	366,800	0

NOTES

Locations are subject to change based on condition assessment. Funding amount changes every year based on life cycle replacement of specific playstructures. There is no substantial backlog upon completion of the 2021 project. Assets are in a state of good repair. Milliken Mills playground structure will be accelerated to 2021 to coincide with the Milliken Mills rubberized surface which has been deferred to 2021 from 2020.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Gas Tax	366,800	0	0	0	0	0	0	
TOTAL FUNDING	366,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="526,500"/>
				Amount Incl HST: <input type="text" value="361,100"/>
				Year in the study: <input type="text" value="2021"/>

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

2021 PLAYGROUND

Inventory Description	Facility	Funding	Cost Pre HST
Playground - Rubberized Surface	Milliken Mills	Lifecycle	130,042
Playground Structure	Benjamin Marr South (1-Junior, 1-Senior)	Lifecycle	55,300
Playground Structure	Bruce Boyd (1-Junior)	Lifecycle	47,900
Playground Structure	Milliken Mills Park (2-Senior, 1-Junior)	Lifecycle	127,200
		Total	360,442
		HST Impact	6,344
		Total Project Cost	366,786
		Rounded Off	366,800

Playground Component

Playground Cost	354,850
Consultant - 1.5%	5,592
Total	360,442
HST Impact	6,344
Total Project Cost	366,786
Rounded Off	366,800

Included in lifecycle in 2021 but has been deferred :

Playground - Rubberized Surface	Swan Lake
Playground Structure	Clarence Chant (1-Senior)
Playground Structure	Forest Manor Parkette (1-Junior)
Playground Structure	Huntington Park (2-Senior)
Playground Structure	James Thomas Park Everett (1-Senior)
Playground Structure	Roy Walker Parkette (1-Senior)
Playground Structure	Simonston Park (1-Junior, 1-Senior)
Playground Structure	Victoria Square North (1-Senior)



2021 PROJECT FUNDING REQUEST FORM

Number: **21131**

Project Cost: **\$16,900**

Project Name: **Recycling Containers Replacement (Yr 4 of 10)**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 10 Pre Approval:

Project Mgr: Matt Busato

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of recycling containers based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	16,600	106,797
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	16,600	106,797
HST Impact:	292	1,880
Total Project Cost:	16,900	108,700

NOTES

There are approximately 500 seasonal recycling bins in parks. Project will replace these bins (purchased in 2008) with some permanent bins in high use locations and some seasonal bins. Based on 2020 costs - Steel painted drums (30) - \$26 ea = \$780, flair top ribbon containers (18) - \$800 ea = \$14,400 and lids (30)- \$40 ea = \$1200. Costs to be confirmed in spring of 2021 due to fluctuation of prices on steel costs. This is the 4th of a 10 year replacement program for recycling containers in parks. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	16,900	0	0	0	0	0	108,700	
TOTAL FUNDING	16,900					0	108,700	

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: <input type="text" value="16,900"/>
				Amount Incl HST <input type="text" value="16,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21132**

Project Cost: **\$40,100**

Project Name: **Relamping & Fixtures Refurbishment**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 10 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: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

An independent audit of electrical services in municipal parks and sportsfields identifies locations for repair/maintenance of electrical components based on condition assessment. Untimely outages may pose potential hazards.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	33,400	0
Internal Charges:	0	0
External Consulting:	6,000	0
Sub Total:	39,400	0
HST Impact:	693	0
Total Project Cost:	40,100	0

NOTES

Locations to be determined. Project scope includes bulb, defective ballast, cables, broken lens replacements. Work to completed is based on condition assessment by the lighting consultant and is location specific. This is an annual program and funding will be requested each year; 3 year average- \$35K The assets are in a state of good repair. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	40,100	0	0	0	0	0	0	
TOTAL FUNDING	40,100					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="40,100"/>
				Amount Incl HST <input type="text" value="40,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21133**

Project Cost: **\$111,700**

Project Name: **Shade Structure Rehabilitation and/or Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 35 Pre Approval:

Project Mgr: Scott Grieve

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Rehabilitation and/or replacement of shade structures (gazebo minor, major and trellis) based on condition assessment. There are 6 locations in 2021.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	109,814	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	109,814	0
HST Impact:	1,933	0
Total Project Cost:	111,700	0

NOTES

2021 locations are: Berczy Park South(Major Rehab), Simonston Park(Major Rehab),Beaupre Park (Minor), James Edward Park(Minor),Benjamin Marr Park North (Minor Rehab),Joseph Ellerby(Minor Rehab). These will be replaced with steel structures of similar form and will provide an extended life of 35 years compared to 20 years. This is as per the new standard implemented in 2017. There is currently no backlog and the assets are in a state of good repair. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	111,700	0	0	0	0	0	0
TOTAL FUNDING	111,700					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: <input type="text" value="210,700"/>
				Amount Incl HST <input type="text" value="111,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost:

Project Name: Sportsfield Maintenance & Reconstruction

Commission: Community & Fire 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

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	137,900	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	137,900	0
HST Impact:	2,427	0
Total Project Cost:	140,300	0

NOTES

There are 212 sportsfields existing in various parks and schools which consist of baseball diamonds, rugby, soccer, cricket and football fields. Fields are scheduled for renovation every year by various degrees depending on condition. Average expenditures per sportsfield vary depending on use, wear and tear and weather conditions. 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 (expire 2021). 3 year avg is \$132K.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	140,300	0	0	0	0	0	0	
TOTAL FUNDING	140,300					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: <input type="text" value="140,300"/>
				Amount Incl HST <input type="text" value="140,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21135**

Project Cost: **\$229,200**

Project Name: **Stairway Repairs**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 20 Pre Approval:

Project Mgr: Scott Grieve

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project replaces stairways citywide, based on condition assessment. Stairways offer important access points to valley land, park, parking lots and facilities.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	225,272	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	225,272	0
HST Impact:	3,965	0
Total Project Cost:	229,200	0

NOTES

2021 project will include: Sixpenny (\$77K), Christman(\$59K), Dollar Hamlet (\$33K), Toogood Pond(\$45K) and Huntington Park(\$15K). This inventory is currently being captured and will be completed by the end of 2020 and will include location specific amounts converting this to an asset based project. The assets are in a state of good repair. Unit prices consistent with recent award plus inflation. Amount requested is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	229,200	0	0	0	0	0	0
TOTAL FUNDING	229,200					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: <input type="text" value="252,200"/>
				Amount Incl HST <input type="text" value="229,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21136**

Project Cost: **\$10,200**

Project Name: **Corporate Fleet Growth - Non-Fleet**

Commission: Community & Fire Services

New Asset/Expansion

Department: Operations - Fleet

Useful Life: 7 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To purchase growth related Non- Fleet equipment such as push mowers, portable generators, cord trimmers, leaf blowers and other small tools.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	176	0
Total Project Cost:	10,200	0

NOTES

Additional equipment for additional seasonal staff based on growth. The 2 year average is \$9.6K.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>						<u>TOTAL</u>	<u>Future Phases</u>
	<u>Funding Type</u>	<u>Budget</u>						
DCA	10,200	0	0	0	0	0	0	
TOTAL FUNDING	10,200					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				
Public Works - Fleet	2021	10,200	105,300	Amount in Study: <input type="text"/>
TOTAL FUNDING		10,200	105,300	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:



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$37,000

Project Name: Corporate Fleet Refurbishing

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 3 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Equipment and vehicles require periodic refurbishing, rust proofing and corrosion protection to meet the Ministry of Transportation safety requirements and to ensure life cycle requirements are met. Program helps to mitigate maintenance costs and keeps the equipment in a state of good repair.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	36,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	<u>36,400</u>	<u>0</u>
HST Impact:	641	0
Total Project Cost:	<u>37,000</u>	<u>0</u>

NOTES

Project includes rust protection, body work and painting. Requirement Validation - condition assessment and legislative compliance. This is an annual program. 3 year average is \$36K. Amount requested is consistent with Life Cycle Reserve Study update.

<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	37,000	0	0	0	0	0	0	
TOTAL FUNDING	<u>37,000</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</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="37,000"/>
				Amount Incl HST <input type="text" value="37,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21138**

Project Cost: **\$2,723,900**

Project Name: **Corporate Fleet Replacement - Fire**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 5 Pre Approval:

Project Mgr: Chris Nearing/Raymond Law

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2021 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 for replacement - 5 units (2 Vehicles, 3 Apparatus).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	2,676,757	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,676,757	0
HST Impact:	47,111	0
Total Project Cost:	2,723,900	0

NOTES

Useful life varies from 5 to 10 years based on units types. Requirement validation - Condition assessment, vehicle reliability & down time, & operating costs. Units specified in this replacement program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions. Project completion estimated at Q2/Q3 2022 for apparatus units due to time required to build the vehicles (built in USA). USD foreign exchange used was \$1.325 USD to CDN - USD \$654,617.

SOURCE(S) OF FUNDING (\$)	Components				TOTAL	Future Phases
	Budget	Fire	Fire Apparatus			
Operating Funded Life Cycle	2,723,900	75,972	2,647,928	0	0 2,723,900	0
TOTAL FUNDING	2,723,900				2,723,900	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: <input type="text" value="2,937,800"/>
				Amount Incl HST <input type="text" value="2,723,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2021 Corporate Fleet Replacement - Fire

Asset ID	Inventory Description	Model Year	Mileage (km)	Usage (hours)	Facility	2021 Inflated Cost	2021 Updated Cost	Project Notes
9405	COMPACT SUV FWD HYBRID-ESCAPE	2009	69,619		FIRE-1- Fire	43,030	43,030	Deferred from 2018 to 2021
9413	FULL SIZE REGULAR CAB PICKUP WITH CAP-GMC SIERRA 1500	2008	52,459		FIRE-1- Fire	31,625	31,625	Deferred from 2019 to 2021
9911	SMEAL PUMPER RESCUE SPARTON METROSTAR-	2013	120,339	5,960	FIRE-1- Fire Apparatus	867,368	867,368	US\$654,617 @\$1.325 exchange rate
9961	SMEAL PUMPER RESCUE SPARTON METROSTAR-	2013	87,907	4,207	FIRE-1- Fire Apparatus	867,368	867,368	US\$654,617 @\$1.325 exchange rate
9971	SMEAL PUMPER RESCUE SPARTON METROSTAR-	2013	78,899	3,849	FIRE-1- Fire Apparatus	867,368	867,368	US\$654,617 @\$1.325 exchange rate
						2,676,757	2,676,757	
					HST Impact	47,111	47,111	
					Total - Project Cost	2,723,868	2,723,868	
					Rounded Off - Project Cost	2,723,900	2,723,900	



2021 PROJECT FUNDING REQUEST FORM

Number: **21139**

Project Cost: **\$102,100**

Project Name: **Corporate Fleet Replacement - Ice Resurfacing Machine**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 10 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Part of the 2021 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines and condition assessment. Life cycle costing targets Optimal Replacement Intervals (ORI) which identifies the most cost effective time period for replacement. All equipment contained in this program have reached or surpassed the ORI. User Departments were consulted with respect to the units in this program. Unit for replacement - 1 ice resurfacing machine at Centennial Arena

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,300	0
HST Impact:	1,765	0
Total Project Cost:	102,100	0

NOTES

Cost Validation- most recent purchase of similar unit type. Requirement validation - vehicle reliability and down time, and operating costs. Pending condition assessment. Replacement model and make may change depending on availability. This program and funding will be requested each year. Unit specified in this replacement program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions. Amount requested is consistent with Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Future Phases	
Operating Funded Life Cycle	102,100	0	0	0	0	0	
TOTAL FUNDING	102,100				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: <input type="text" value="102,100"/>
				Amount Incl HST <input type="text" value="102,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21140**

Project Cost: **\$1,620,700**

Project Name: **Corporate Fleet Replacement - Non-Fire**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 5 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2021 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 - 31 units

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	1,592,680	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,592,680	0
HST Impact:	28,031	0
Total Project Cost:	1,620,700	0

NOTES
 Useful life varies - 4 to 12 years based on units types. Operations-Non Fleet (\$53k) includes cord trimmers, chainsaws, blowers, etc.
 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</u>	<u>Non Licensed</u>	<u>Non Fleet</u>			
Operating Funded Life Cycle	1,620,700	727,633	840,131	52,936	0	1,620,700	0
TOTAL FUNDING	1,620,700					1,620,700	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</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="2,440,500"/>
				Amount Incl HST <input type="text" value="1,620,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21141**

Project Cost: **\$216,200**

Project Name: **Corporate Fleet Replacement - Waterworks**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 8 Pre Approval:

Project Mgr: Raymond Law/Pete Englezakos/Eddy Wu

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

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 (5 units) contained in this program have reached or surpassed the ORI. This is funded by Waterworks reserve.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	212,482	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	212,482	0
HST Impact:	3,740	0
Total Project Cost:	216,200	0

NOTES

5 units - Requirement Validation - meeting the approved replacement criteria, pending condition assessment. A total of 10 units were due to be replaced of which 5 were deferred based on 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>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Licensed (4)</u>	<u>Non Licensed (1)</u>				
Waterworks	216,200	201,555	14,645	0	0	216,200	0
TOTAL FUNDING	216,200					216,200	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="335,400"/>
				Amount Incl HST <input type="text" value="216,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2021 Waterworks Fleet Replacement Program

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Category	Model Year	2021 Updated Cost	Project Notes
2164	FULL SIZE PICK UP 4X2-F 150	83,869		WATER- Licensed	2013	28,485	
2169	ONE TON FLATBED DIESEL DUMP-RAM 3500	66,852		WATER- Licensed	2008	68,453	Deferred from 2020 to 2021
2173	COMPACT CARGO VAN FWD-TRANSIT	79,073		WATER- Licensed	2012	33,752	Deferred from 2020 to 2021; Cost increased by \$472 - return to full sized cargo van
2178	CREW CAB AND CHASSIS C/W UNICEL 12' BODY-F450	86,305		WATER- Licensed	2010	67,379	Deferred from 2020 to 2021. engine rebuild in 2018
2204	STEAMER-STEAM			WATER- Non Licensed (Tools & Equip)	2011	14,413	Accelerate from 2022 to 2021
Total Pre-Tax						212,481	
HST impact						3,740	
Total Project Cost						216,221	
Rounded Off Project Cost						216,200	



2021 PROJECT FUNDING REQUEST FORM

Number: **21142**

Project Cost: **\$45,800**

Project Name: **New Fleet - Parks**

Commission: Community & Fire Services

New Asset/Expansion

Department: Operations - Fleet

Useful Life: 8 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Minor

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase and acquisition of one (1) boom mount flail mower for use on compact tractor, and two (2) electric hydraulic tandem axle dump trailers. The City currently has one (1) boom mount flail mower. The expansion of the MUP network is the primary driver of this requirement. A second unit will also allow for some fall-back redundancy for when a unit is in need of repair. The City currently does not have any dump trailers. Tasks are being performed using 1-ton dump body trucks. The addition of dump trailers would allow for the crews mulching trees to work independently of the dump truck operator.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	45,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	45,000	0
HST Impact:	792	0
Total Project Cost:	45,800	0

NOTES

Boom mount flail mower - \$25,000 (Useful life - 8 yrs)
Trailers \$10,000 ea. X 2 = \$20,000 (Useful life - 10 yrs)

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Flail Mower	Trailers				
DCA	45,800	25,400	20,400	0	0	45,800	0
TOTAL FUNDING	45,800					45,800	0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$1,800	\$0	\$1,800

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
Public Works - Fleet	2020	45,800	189,600	Amount in Study: <input type="text"/>
TOTAL FUNDING		45,800	189,600	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21143**

Project Cost: **\$28,200**

Project Name: **Survey Monument Replacement**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Utility Inspection & Survey

Useful Life: 60 Pre Approval:

Project Mgr: Negar Mahmoudi

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to replace damaged survey monuments to maintain integrity of City's survey control network. A well developed survey control network will help to achieve an efficient engineering design and construction program and also reduce layout time.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	27,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	27,700	0
HST Impact:	488	0
Total Project Cost:	28,200	0

NOTES

Total approximate survey monuments in City is 2,645. Addition through subdivision assumption process approximately 35/year.

The survey monument maintenance is an annual program hence there is no backlog and the assets are in a state of good repair. Replacement - estimated quantity is 28 horizontal at an average of \$1,000/unit. 3 year average spend is \$27k. Unit cost is consistent with recent award plus inflation. Amount requested is consistent with Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	28,200	0	0	0	0	0	0	
TOTAL FUNDING	28,200					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="28,200"/>
				Amount Incl HST: <input type="text" value="28,200"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21144**

Project Cost: **\$478,300**

Project Name: **Growth Related Park Improvements**

Commission: Community & Fire Services

New Asset/Expansion

Department: Operations - Business & Technical Services

Useful Life: 0 Pre Approval:

Project Mgr: Tanya Lewinberg

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Expressing Markham's commitment to ongoing development and enhancement of existing parks and open spaces, the Park Renaissance Program develops projects to create improvements to our existing inventory, that is ten years or older. The program's projects strive to maintain the high standards of quality reflected in Markham's newer parks with a high level of design and visual appeal as it rejuvenates Markham's older parks.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	470,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	470,000	0
HST Impact:	8,272	0
Total Project Cost:	478,300	0

NOTES

Shade Structure Windy Hill Park - \$150K.
Basketball Hoops in Ashton Meadows Park - \$20K. Lighting of the Fairtree Cricket Grounds \$300k.
A 175% increase in permitting periods (7 additional slots vs. current 4) at this site. The increases would address a significant portion of required capacity identified in the ILMP. The timing of this would be beneficial as it is anticipated that the grounds at McCowan reservoir will be out of service in 2022 due to infrastructure work that is being undertaken by the Region.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
DCA	430,470	0	0	0	0	0	
Non-DC Growth	47,830	0	0	0	0	0	
TOTAL FUNDING	478,300				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: <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:				



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$81,000

Project Name: Bridges and Culverts - Condition Inspection

Studies/Pilot Programs

Commission: Community & Fire Services

Useful Life: 0 Pre Approval:

Department: ES - Infrastructure

Category: Minor

Project Mgr: Shipra Singh

Cost Validation: Recent awards

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

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a consultant to inspect vehicular bridges (14), pedestrian bridges (44), large culverts (37) and small culverts (35) as mandated by Public Transportation and Highway Act - Regulation 104/97 to ensure public safety. A total of 130 structures will be inspected out of 350. This program ensures inspections take place within the regulated timelines. Refer to attached exhibit for inventory of structures and inspection frequency.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	79,600	0
Sub Total:	79,600	0
HST Impact:	1,401	0
Total Project Cost:	81,000	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 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget				TOTAL		
Operating Funded Life Cycle	81,000	0	0	0	0	0	0
TOTAL FUNDING	81,000				0	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: <input type="text" value="81,000"/>
				Amount Incl HST <input type="text" value="81,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project 21145 - Bridges and Culverts - Condition Inspection							
As of July 2020							
	Inspection Frequency	Inventory (2020)	2020	2021	2022	2023	2024
Vehicular Bridges	2 years	25	9	14	10	13	10
Pedestrian bridges	2 years	78	37	44	36	41	39
Boardwalks	2 years	10	10	0	10	0	10
Sub Total - Bridges		113	56	58	56	54	59
Large Culverts (over 900mm diameter)	2 to 4 years*	106	37	37	50	41	43
Small Culverts (upto 900mm diameter)	4 years*	131	26	35	16	37	36
Sub Total - Culverts		237	63	72	66	78	79
Total		350	119	130	122	132	138
Project Number			#20233	#21145			
Budget Amount			\$68,800	\$81,000			
Average Unit Rate**			\$ 578.15	\$ 623.08			
Note:							
1. If the structure is under rehabilitation/replacement program, inspection is deferred until after warranty							
2. * Some culverts are inspected every 2 years depending on their condition							
** Unit rate varies due to size of the structure							



2021 PROJECT FUNDING REQUEST FORM

Number: **21146**

Project Cost: **\$27,600**

Project Name: **MNRF Monitoring for Capital Projects at Water Crossings**

Studies/Pilot Programs

Commission: Community & Fire Services

Useful Life: 0 Pre Approval:

Department: ES - Infrastructure

Category: Annual

Project Mgr: Hossein Sharif

Cost Validation: Recent awards

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

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a Consultant to prepare reports to the Ministry of Natural Resources and Forestry (MNRF). Program commenced in 2016 as required under the Section 17, item 5e of the Endangered Species Act, 2007. Total of 17 site reports including 7 mitigation plans are required for 2021.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	27,100	0
Sub Total:	27,100	0
HST Impact:	477	0
Total Project Cost:	27,600	0

NOTES

This is an annual program. It is a requirement to submit the following to MNRF:
(a) Monitoring Reports every year for 5 years after the completion of capital works at water crossings; and
(b) Mitigation Plan Reports for some structures as determined by MNRF.
3 year average is not applicable as requirement varies each year.
Unit cost is consistent with recent award plus inflation. Amount requested is consistent with 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	27,600	0	0	0	0	0	0
TOTAL FUNDING	27,600					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="27,600"/>
				Amount Incl HST <input type="text" value="27,600"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

21146 - MNRF Monitoring for Capital Projects at Water Crossings										
		Monitoring Reports								
Year	Project Completed that requires reporting	2016	2017	2018	2019	2020	2021	2022 (Est.)	2023 (Est.)	2024 (Est.)
2015 Construction	8	8	8	8	8	8				
2016 Construction	1		1	1	1	1	1			
2017 Construction	3			3	3	3	3	3		
2018 Construction	1				1	1	1	1	1	
2019 Construction	3					3	3	3	3	3
2020 Construction	2						2	2	2	2
2021 Construction (Estimated)	2							2	2	2
Sub Total (Monitoring Reports)		8	9	12	13	16	10	11	8	7
Sub Total (Mitigation Plan, where required)						4	7	5	5	5
Total		8	9	12	13	20	17	16	13	12
Budget Amount		\$15,500	\$15,900	\$15,900	\$16,200	\$27,000	\$27,600			
Project Number		#16217	#17205	#18268	#19224	#20235	#21146			
Average Unit Rate (1)		\$ 1,938	\$ 1,767	\$ 1,325	\$ 1,246	\$ 1,350	\$ 1,624			
(1) Unit rate varies due to size of the structure										



2021 PROJECT FUNDING REQUEST FORM

Number: **21147**

Project Cost: **\$215,700**

Project Name: **Small Culverts Replacement (8 Structures) - Construction**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Infrastructure

Useful Life: 50 Pre Approval:

Project Mgr: Shipra Singh

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of 8 small corrugated steel pipe (CSP) culverts (smaller than 900 mm diameter) out of a total inventory of 237 culverts. The 8 culverts for replacement are C071, C158, C169, C181, C218, C241, C244 and C254 (Refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	197,000	0
Internal Charges:	0	0
External Consulting:	15,000	0
Sub Total:	212,000	0
HST Impact:	3,731	0
Total Project Cost:	215,700	0

NOTES

This project includes replacement of 8 small Corrugated Steel Pipes (CSP) with High Density Polyethelene (HDPE) pipes, which has a service life of 50 years compared to 30 years for CSP pipes. There is no backlog. Culverts 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 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.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Construction	Geotechnical				
Operating Funded Life Cycle	215,700	200,400	15,300	0	0	215,700	0
TOTAL FUNDING	215,700					215,700	0

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

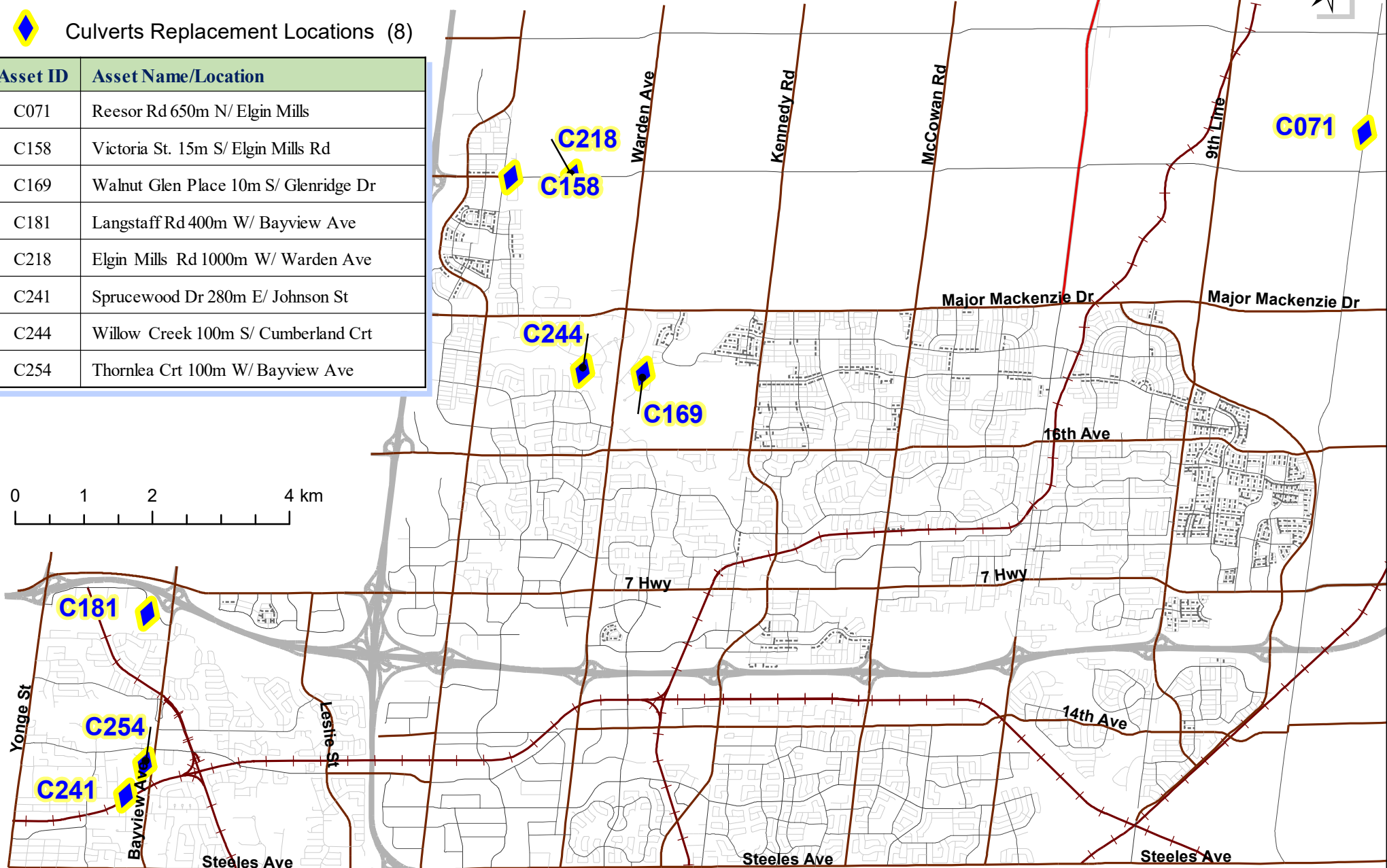
DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="215,700"/>
				Amount Incl HST <input type="text" value="215,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Legend

Culverts Replacement Locations (8)

Asset ID	Asset Name/Location
C071	Reesor Rd 650m N/ Elgin Mills
C158	Victoria St. 15m S/ Elgin Mills Rd
C169	Walnut Glen Place 10m S/ Glenridge Dr
C181	Langstaff Rd 400m W/ Bayview Ave
C218	Elgin Mills Rd 1000m W/ Warden Ave
C241	Sprucewood Dr 280m E/ Johnson St
C244	Willow Creek 100m S/ Cumberland Crt
C254	Thornlea Crt 100m W/ Bayview Ave





2021 PROJECT FUNDING REQUEST FORM

Number: **21148**

Project Cost: **\$116,000**

Project Name: **Storm & Sanitary Pumping Stations - Equipment Inspection**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Infrastructure

Useful Life: 1 Pre Approval:

Project Mgr: Eddy Wu

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Inspection of the pumps and associated equipments at two stormwater pumping stations (Enterprise Drive and 14th Ave. - Hagerman Diamond) and four sanitary pumping stations (Carlton Road, Calvert Road, Milliken Park and Kennedy Road).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	114,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	114,000	0
HST Impact:	2,006	0
Total Project Cost:	116,000	0

NOTES

This is an annual program. Consultant provided an inspection schedule and associated costs for various pumps and equipments in City's pumping stations. Amount requested is consistent with 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Storm P.S	Sanitary P.S				
Operating Funded Life Cycle	40,700	40,700	0	0	0	40,700	0
Waterworks	75,300	0	75,300	0	0	75,300	0
TOTAL FUNDING	116,000					116,000	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: <input type="text" value="40,700"/>
				Amount Incl HST <input type="text" value="40,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21149**

Project Cost: **\$652,800**

Project Name: **Storm and Sanitary Sewer CCTV Inspection**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Infrastructure

Useful Life: 0 Pre Approval:

Project Mgr: Shipra Singh

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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. 2021 Program includes:
a) 80 km storm sewers out of total 923 km (Life Cycle funded); b) 94 km sanitary sewers out of total 918 km (Waterworks funded)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	580,000	4,596,900
Internal Charges:	0	0
External Consulting:	61,500	0
Sub Total:	641,500	4,596,900
HST Impact:	11,290	80,905
Total Project Cost:	652,800	4,677,800

NOTES

This is an annual program (10 year cycle) - Phase 3 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.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Contractor	Consultant				
Operating Funded Life Cycle	215,100	186,400	28,700	0	0	215,100	1,733,700
Waterworks	437,700	403,800	33,900	0	0	437,700	2,944,100
TOTAL FUNDING	652,800					652,800	4,677,800

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: <input type="text" value="215,100"/>
				Amount Incl HST: <input type="text" value="215,100"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: CCTV Inspection Program

Department: Environmental Services

Phase #	Inspection year	Project #	Past	2021	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 <i>(This request)</i>		\$652,800		\$652,800	80 km storm; 94 km sanitary
Phase 4 to Phase 10	2022 - 2028				\$4,677,800	\$4,677,800	
Total			\$2,109,203	\$652,800	\$4,677,800	\$7,439,803	

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

2 phases have been completed or in progress (out of 10 phases): \$2.11M

Current ask**CCTV inspection of 80 km storm sewers (out of 923 km) and 94 km sanitary sewers (out of 918 km) - \$652,800****Future Phases**

Phases 4 to 10 between 2022 - 2028: \$4.67M

Related 2021 Project(s)

Sanitary Sewer Rehabilitation (#21173): \$1,405,000

Map

Attached

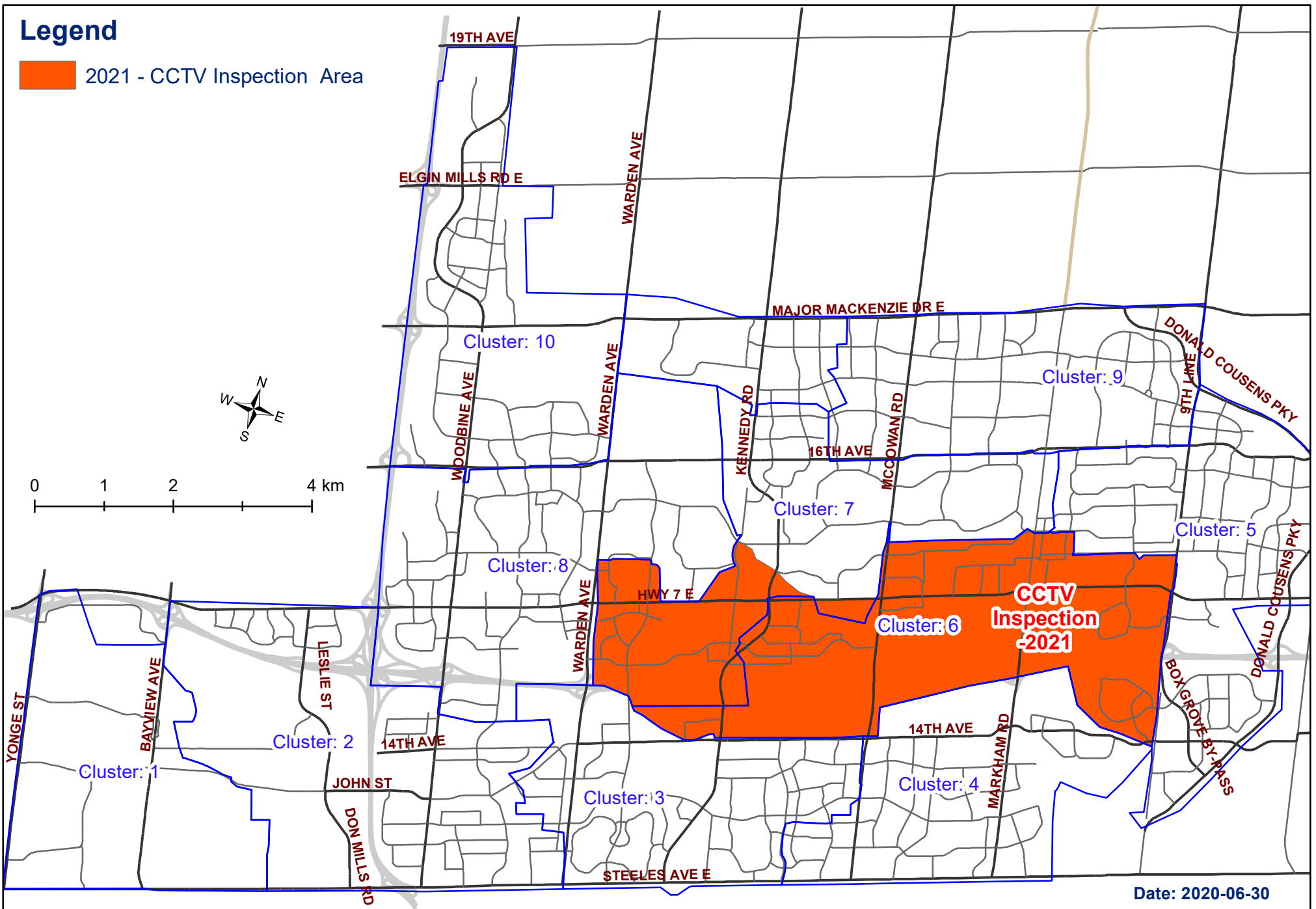
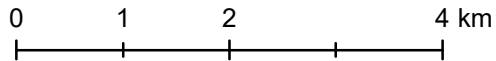


Location Map Storm/Sanitary Sewer CCTV Inspection

ES - Infrastructure (2021)

Legend

 2021 - CCTV Inspection Area



Date: 2020-06-30



2021 PROJECT FUNDING REQUEST FORM

Number: **21150**

Project Cost: **\$56,100**

Project Name: **Stormwater Sewer Pipes Emergency Repairs**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Infrastructure

Useful Life: 0 Pre Approval:

Project Mgr: Eddy Wu

Category: Annual

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to carry out repairs of storm sewer pipes as required.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	55,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	55,100	0
HST Impact:	970	0
Total Project Cost:	56,100	0

NOTES

This is an annual program to conduct emergency repair of storm sewer pipes as required. Budget amount is based on previous 3 years average spent. Previously this component was included as Emergency Repairs under Roads Operations.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Operating Funded Life Cycle	56,100	0	0	0	0	0	0	
TOTAL FUNDING	56,100					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="56,100"/>
				Amount Incl HST: <input type="text" value="56,100"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21151**

Project Cost: **\$101,800**

Project Name: **Streetlights - Miscellaneous Requests**

Commission: Community & Fire Services

New Asset/Expansion

Department: ES - Infrastructure

Useful Life: 60 Pre Approval:

Project Mgr: Prathapan Kumar

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Based on photometric analysis and evaluation against lighting level standards IES -RP8-14 (Illuminating Engineering Society) by Staff, the City will install new streetlights. Note that the lighting levels requirement varies depending on road type and pedestrian activity.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	101,800	0

NOTES

This is an annual program. Streetlights requests from the residents are reviewed for justification and are implemented to improve lighting levels in older areas. 3 year average: \$131K
Locations will be prioritized based on photometric analysis and this budget request is to install approx. 15-18 new poles with LED fixtures.
Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Tax	101,800	0	0	0	0	0	0	
TOTAL FUNDING	101,800					0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$3,040	\$0	\$3,040

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21152**

Project Cost: **\$148,100**

Project Name: **Structures Program-Full-time Staff**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Infrastructure

Useful Life: 0 Pre Approval:

Project Mgr: Prathapan Kumar

Category: Annual

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

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

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	148,100	0
External Consulting:	0	0
Sub Total:	148,100	0
HST Impact:	0	0
Total Project Cost:	148,100	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 increase the service life. Amount requested is consistent with 2020 Life Cycle Reserve Study Update. Requirement validation: This position is critical to support structures rehabilitation projects for the City-owned structures.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	148,100	0	0	0	0	0	0
TOTAL FUNDING	148,100					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="148,100"/>
				Amount Incl HST <input type="text" value="148,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21153**

Project Cost: **\$437,400**

Project Name: **Toogood Pond Dam - Rehabilitation Works**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Infrastructure

Useful Life: 30 Pre Approval:

Project Mgr: Hossein Sharif

Category: Major

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design and installation of safety boom, winches and support frames on spillway deck to permit stop log operations and carry out functional test and full flow test in accordance with 2011 MNR Guidelines as identified through 2018 Consultant's Report (Toogood Dam Safety Review).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	429,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	429,800	0
HST Impact:	7,564	0
Total Project Cost:	437,400	0

NOTES

This project includes the following:
- Conduct functional test and full flow test in accordance with 2011 MNR Guidelines
- Install safety boom, winches and support frames on spillway deck to permit stop log operations in order to provide flow management capability

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	437,400	0	0	0	0	0	0	
TOTAL FUNDING	437,400					0	0	

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

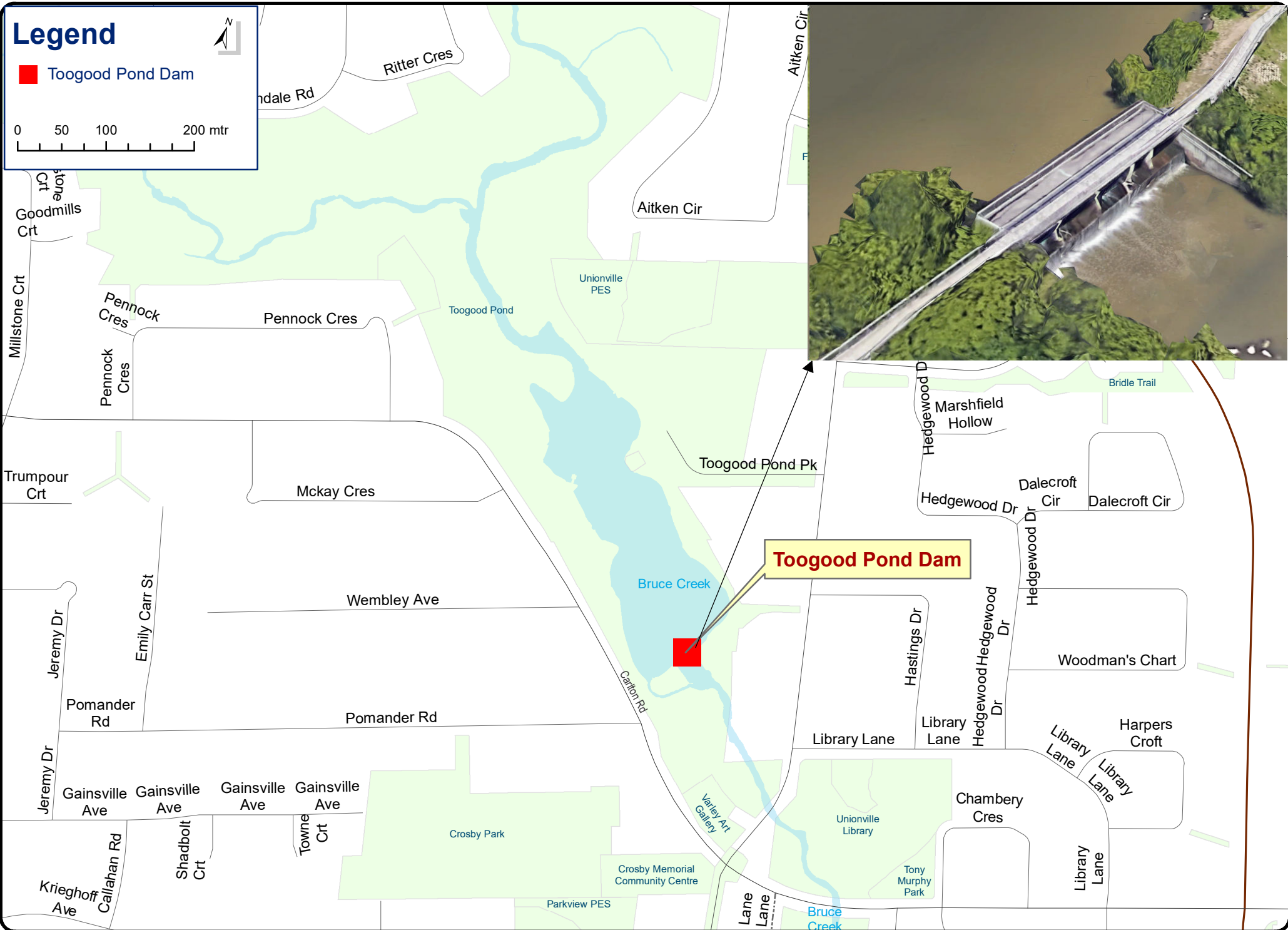
DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="437,400"/>
				Amount Incl HST <input type="text" value="437,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Legend

 Toogood Pond Dam

0 50 100 200 mtr



Toogood Pond Dam



2021 PROJECT FUNDING REQUEST FORM

Number: **21154**

Project Cost: **\$9,800**

Project Name: **Toogood Pond Dam - Structural Inspection**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Infrastructure

Useful Life: 0 Pre Approval:

Project Mgr: Hossein Sharif

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This program is to carry out visual condition inspection of Toogood Pond Dam to comply with Ontario Ministry of Natural Resources (OMNR) Guideline entitled "Public Safety Around Dams, Best Management Practices" as per 2018 Consultant's Report (Toogood Dam Safety Review). Refer to attached map.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	9,600	0
Sub Total:	9,600	0
HST Impact:	169	0
Total Project Cost:	9,800	0

NOTES

Visual condition inspection will be carried out annually while the in-water inspection for the Dam will be carried out every 5 years (last in-water inspection was carried out under #20246 in 2020). Toogood Dam was constructed in 1960. The City owns the Dam as it provides very little flood control benefit. For reference, Milne Dam is owned and operated by TRCA as it was built specifically for flood control. Amount requested is consistent with 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Operating Funded Life Cycle	9,800	0	0	0	0	0	0	
TOTAL FUNDING	9,800					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="9,800"/>
				Amount Incl HST <input type="text" value="9,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21155**

Project Cost: **\$124,900**

Project Name: **Don Mills Channel - Flood Proofing Site Investigation**

Commission: Community & Fire 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: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Don Mills Channel project includes infrastructure improvements, and a flood proofing education program as approved by Council in June 2018. The Flood Proofing Education program has a total cost of \$1.5M over a ten years (2019-2028). This request includes flood proofing site investigation of 10 sites and associated buildings and distribution of general education material.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	122,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	122,700	0
HST Impact:	2,160	0
Total Project Cost:	124,900	0

NOTES

Flood proofing program includes site investigation and general education material. 2019 capital budget request assessed 33 sites. This request is to assess 10 sites and distribution of general education material.
Funding Source: Stormwater Fee

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Reserve Fund	124,900	0	0	0	0	0	0	
TOTAL FUNDING	124,900					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:

Program Name: Don Mills Channel Flood Control Program**Department: Environmental Services**

Component	Project #	Past	2021	Future	Total
Property Acquisition		\$11,100,000	\$17,500,000		\$28,600,000
Stormwater Pond	#19259	\$300,000	\$1,160,000	\$3,440,000	\$4,900,000
Culverts				\$35,700,000	\$35,700,000
Flood Proofing Program	#19231 #21155	\$152,600	\$124,900 <i>(This request)</i>	\$1,222,500	\$1,500,000
Staffing		\$0	\$0	\$1,300,000	\$1,300,000
Total		\$11,552,600	\$18,660,000	\$41,662,500	\$72,000,000

Description of Program

Don Mills Channel Flood Control Program was approved by Council in June 2018 to provides 5 year level of protection. Total Cost \$72M includes 5 components: property acquisition, new stormwater pond, 4 culvert upgrades, flood proofing program and staffing.

What was completed in the past

As of August 2020, the following has been completed:

- 1) Property acquisition of 115/135 Torbay
- 2) Storm Pond component - demolition of buildings on 115/135 Torbay
- 3) Flood proofing program: award of consultant services for 33 site assessment & \$10k allocated to education program for area businesses

Current ask**Flood Proofing Program**

- 1) \$114,900 - Retain consultant services to conduct 10 site assessments and provide options incentive program.
- 2) \$10,000 - education/marketing material for area business

Future Phases

Staff will evaluate the result of the individual site assesement and options for incentive program and report back to Council with recommendation for any future phases.

Related 2021 Project(s)

Don Mills Channel Flood Control Program - Stormwater Pond - Design / CA (#21156): \$1,160,000

Map

N/A



2021 PROJECT FUNDING REQUEST FORM

Number: **21156**

Project Cost: **\$1,160,000**

Project Name: **Don Mills Channel Flood Control Program -Pond Design/CA**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Alan Manlucu

Category: Major

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To hire a Consultant for design, contract administration and public consultation associated with the flood control pond as part of the Don Mills Channel Flood Control Program. The pond will be designed to to reduce flooding in the area.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	3,380,503
Internal Charges:	0	0
External Consulting:	1,139,900	0
Sub Total:	1,139,900	3,380,503
HST Impact:	20,062	59,497
Total Project Cost:	1,160,000	3,440,000

NOTES

The Flood Control Pond was approved by Council in June 2018 as the first phase of the Don Mills Channel Flood Control Program. Total program cost: \$72M
Funding Source: Stormwater Fee. 40% of the project cost (\$464k) will be reimbursed through the Disaster Mitigation and Adaptation Fund (DMAF) grant. Net cost to the City (\$696k).

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
Reserve Fund	1,160,000	0	0	0	0	0	3,440,000
TOTAL FUNDING	1,160,000					0	3,440,000

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:

Program Name: Don Mills Channel Flood Control Program**Department: Environmental Services**

Component	Project #	Past	2021	Future	Total
Property Acquisition		\$11,100,000	\$17,500,000		\$28,600,000
Stormwater Pond	#19259	\$300,000	\$1,160,000	\$3,440,000	\$4,900,000
	#21156		(This Request)		
Culverts				\$35,700,000	\$35,700,000
Flood Proofing Program	#19231	\$152,600	\$124,900	\$1,222,500	\$1,500,000
Staffing		\$0	\$0	\$1,300,000	\$1,300,000
Total		\$11,552,600	\$17,624,900	\$41,662,500	\$72,000,000

Description of Program

Don Miller Channel Flood Control Program was approved by Council in June 2018 to provides 5 year level of protection. Total Cost \$72M includes 5 components: property acquisition, new stormwater pond, 4 culvert upgrades, flood proofing program and staffing.

What was completed in the past

As of August 2020, the following has been completed:

- 1) Property acquisition of 115/135 Torbay
- 2) Storm Pond component - demolition of buildings on 115/135 Torbay
- 3) Flood proofing program: award of consultant services for 33 site assessment & \$10k allocated to education program for area businesses

Current ask**Stormwater Pond - Design / Contract Administration (#21156): \$1,160,000**

Retain consultant for design, construction, contract administration and public consultation for a flood control stormwater pond as part of the Don Mills Channel Flood Control Program

Future Phases

2022 - Construction of the stormwater pond at the estimated cost of \$3,250,000

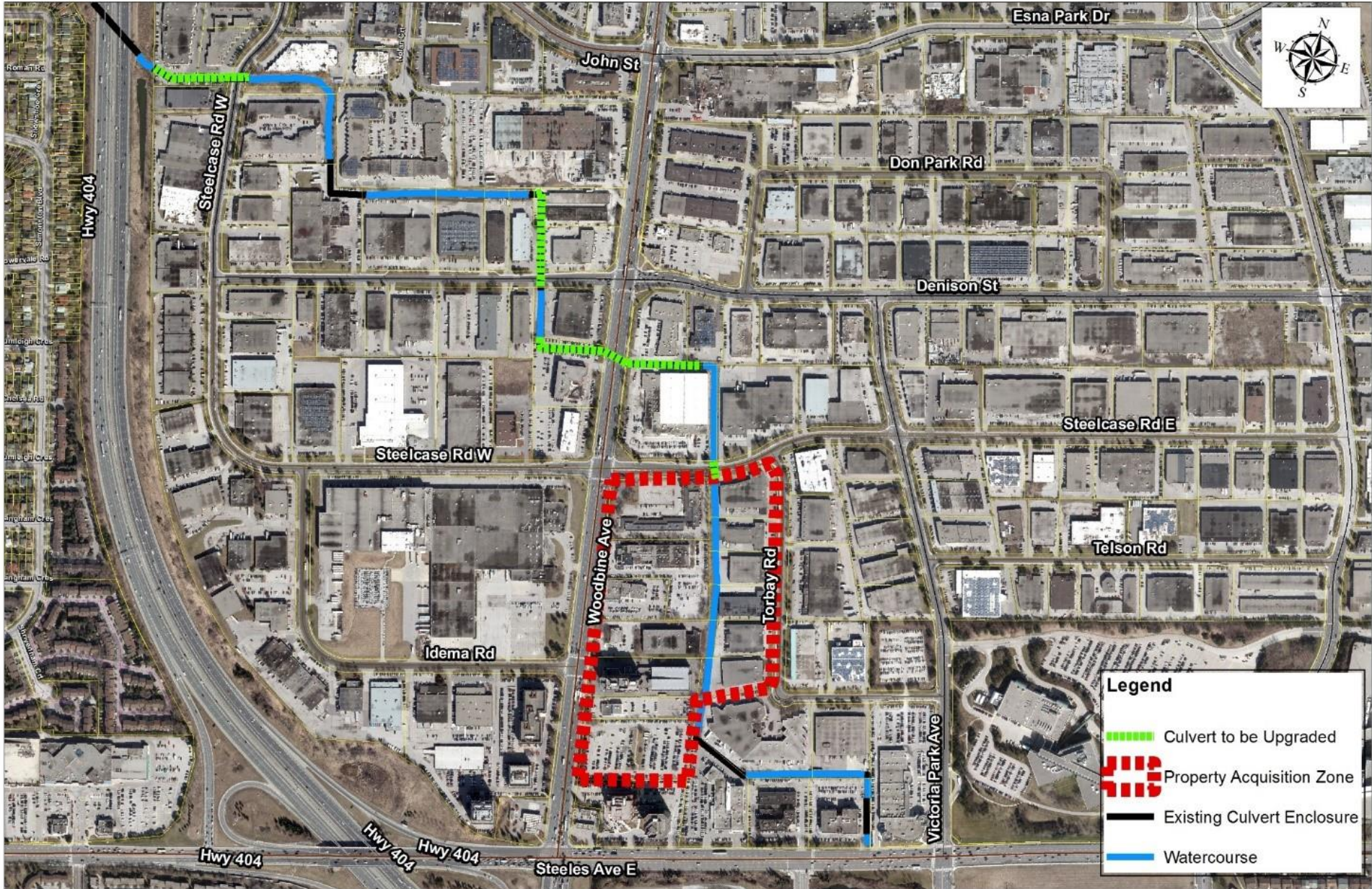
Related 2021 Project(s)

Don Mills Channel Flood Control Program - Flood Proofing Site Investigation (#21155): \$124,900

Map

N/A

Don Mills Channel Flood Control Pond – Design/CA





2021 PROJECT FUNDING REQUEST FORM

Number: **21157**

Project Cost: **\$898,800**

Project Name: **Erosion Restoration Program**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Alan Manlucu

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Erosion restoration at unplanned sites to protect the lands and/or infrastructure from failure.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	813,300	0
Internal Charges:	0	0
External Consulting:	70,000	0
Sub Total:	883,300	0
HST Impact:	15,546	0
Total Project Cost:	898,800	0

NOTES

Budget request every other year to set aside funding to restore 6-8 unplanned erosion sites since 2017. Total cost includes design, construction, contract administration and approval agency costs. Funding source: 35% Lifecycle; 65% DC

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Design + CA	Construction				
DCA	584,300	46,300	538,000	0	0	584,300	0
Operating Funded Life Cycle	314,500	24,930	289,570	0	0	314,500	0
TOTAL FUNDING	898,800					898,800	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: <input type="text" value="314,500"/>
				Amount Incl HST <input type="text" value="314,500"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: Erosion Restoration Program

Department: Environmental Services

Year	Project #	Past	2021	Future	Total
2017	#17194	\$829,100			\$829,100
2019	#19232	\$863,900			\$863,900
2021	#21157 (This Request)		\$898,800		\$898,800
2023 Onwards				varies	varies
Total		\$1,693,000	\$898,800	\$0	

Description of Program

Erosion restoration at unplanned sites to protect the lands and/or infrastructure from failure
65% from DC (\$584,300) and 35% from LC (\$314,500)

What was completed in the past

See above table

Current ask**Erosion Restoration Program (#21157): \$898,800****Future Phases**

Varies

Related 2021 Project(s)

N/A

Map

N/A



2021 PROJECT FUNDING REQUEST FORM

Number: **21158**

Project Cost: **\$219,800**

Project Name: **Oil Grit Separators (OGS) - Inspection and Cleaning**

Studies/Pilot Programs

Commission: Community & Fire Services

Useful Life: 0 Pre Approval:

Department: ES - Stormwater

Category: Minor

Project Mgr: Zahra Parhizgari

Cost Validation: Recent awards

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

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

OGS are structures consisting of one or more chambers that remove sediment, screen debris, and separate oil from stormwater run-off prior to stormwater being discharged downstream. The accumulated pollutants need to be removed as part of a regular maintenance program. The inspection program will identify the OGS that require cleaning to monitor and establish future frequency. Inventory: 40. Inspection frequency is twice a year (spring & winter).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	197,000	0
Internal Charges:	0	0
External Consulting:	19,000	0
Sub Total:	216,000	0
HST Impact:	3,802	0
Total Project Cost:	219,800	0

NOTES

This is an annual program. Future requests may be adjusted based on inspection results. Requirement Validation: Condition assessment & legislative compliance (Section 53 of Ontario Water Resources Act)

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Funding Type	Budget	Inspection	Cleaning			
Gas Tax	219,800	19,400	200,400	0	0	219,800	0
TOTAL FUNDING	219,800					219,800	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: <input type="text" value="219,800"/>
				Amount Incl HST <input type="text" value="219,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21159**

Project Cost: **\$259,500**

Project Name: **Swan Lake Chemical Treatment**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Zahra Parhizgari

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To carry out chemical treatment of Swan Lake, including project planning, contract administration, chemical treatment application and expanded monitoring after treatment is completed.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	190,000	0
Internal Charges:	0	0
External Consulting:	65,000	0
Sub Total:	255,000	0
HST Impact:	4,488	0
Total Project Cost:	259,500	0

NOTES

Chemical treatment was approved by Council in June 2020 and is required to improve the water quality at Swan Lake. Frequency of the program to be determined by Council in 2021.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Consulting	Construction				
Operating Funded Life Cycle	259,500	66,144	193,356	0	0	259,500	0
TOTAL FUNDING	259,500					259,500	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="259,500"/>
				Amount Incl HST: <input type="text" value="259,500"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21160**

Project Cost: **\$152,600**

Project Name: **SWM Pond Cleaning Design & CA - ID#47 & #119**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Stormwater

Useful Life: 20 Pre Approval:

Project Mgr: Alan Manlucu

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design and contract administration (CA) of Sediment cleaning, maintenance and repairs to 2 stormwater management (SWM) ponds: Pond #47: Roxbury Pond (Ward 7) with current sediment level: 52% and Pond #119: Angus Glen Community Centre Pond (Ward 6) with current sediment level of 58%. Refer to attached location map. SWM Ponds require maintenance to function efficiently. Sediment levels need to be monitored and when the percentage of accumulated sediment is above regulatory limits (varies depending on the pond design), ponds need to be cleaned to ensure that the approved quality control function of the pond is maintained.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	519,000
Internal Charges:	0	0
External Consulting:	150,000	0
Sub Total:	150,000	519,000
HST Impact:	2,640	9,134
Total Project Cost:	152,600	528,100

NOTES

Total inventory: 57 wet ponds
Requirement Validation: Condition assessment & Legislative compliance (Section 53, Ontario Water Resources Act).
Operations is responsible for minor above ground maintenance on SWM ponds while ES is responsible for all other aspects including inspection, sediment cleaning, rehabilitation and flood control strategies. Unit cost is consistent with recent award plus inflation. This request is for design and CA only. Construction will be requested in 2022.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
Gas Tax	152,600	0	0	0	0	0	528,100	
TOTAL FUNDING	152,600					0	528,100	

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

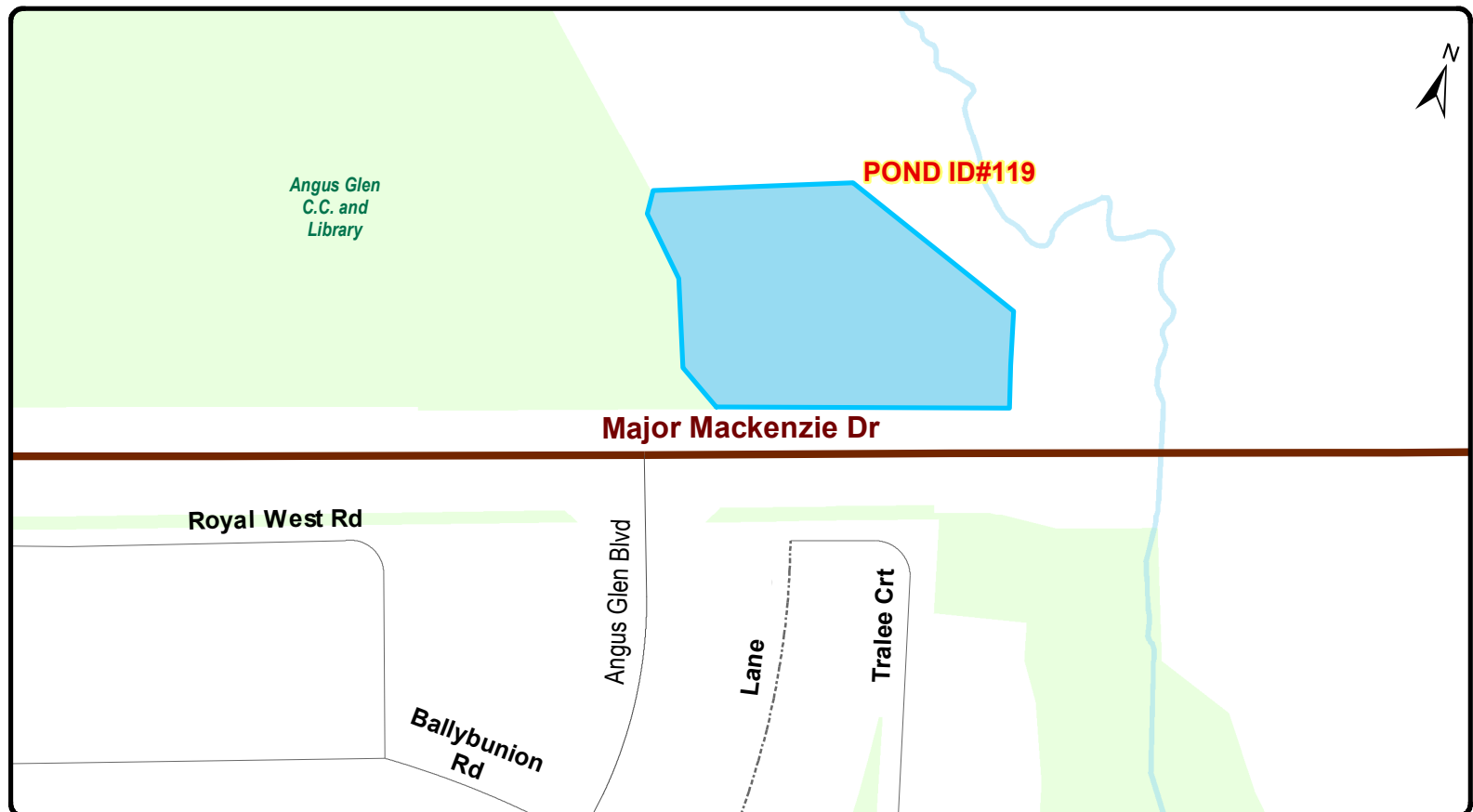
DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="680,700"/>
				Amount Incl HST <input type="text" value="680,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



Location Map SWM Pond Cleaning - Design & CA (IDs #47 & #119)

ES - Infrastructure (2021)





2021 PROJECT FUNDING REQUEST FORM

Number: **21161**

Project Cost: **\$26,500**

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

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Kate Rothwell

Category: Minor

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

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

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>2021</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	26,000	0
Sub Total:	26,000	0
HST Impact:	458	0
Total Project Cost:	26,500	0

NOTES

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

Approximately 15-17 ponds will be surveyed out of total 57 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>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>							
Operating Funded Life Cycle	26,500	0	0	0	0	0	0	
TOTAL FUNDING	26,500					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</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text" value="26,500"/>
				Amount Incl HST: <input type="text" value="26,500"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21162**

Project Cost: **\$41,100**

Project Name: **Water Quality Improvements**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Stormwater

Useful Life: 0 Pre Approval:

Project Mgr: Zahra Parhizgari

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to carry out geese control program at Swan Lake (Ward 5) and Toogood Pond (Ward 3). 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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	40,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	40,400	0
HST Impact:	711	0
Total Project Cost:	41,100	0

NOTES

This is an annual program to carry out geese control at Swan Lake and Toogood Pond.
Average 3 year expenditure (2017-2019): \$25,600
Requirement Validation: To protect the water quality.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget				TOTAL	
Operating Funded Life Cycle	41,100	0	0	0	0	0	0
TOTAL FUNDING	41,100					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="31,100"/>
				Amount Incl HST <input type="text" value="31,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				
<input type="text" value="\$10k added for geese relocation at Swan lake"/>				



2021 PROJECT FUNDING REQUEST FORM

Number: **21163**

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

Project Name: **Water Quality Monitoring**

Commission: Community & Fire 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)

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	27,600	0
Sub Total:	27,600	0
HST Impact:	486	0
Total Project Cost:	28,100	0

NOTES

Req. Validation: In June 2020, Council approved continuation of monitoring at Swan Lake. The lake needs to be monitored for 12 months followed by another 3 months of analysis and report generation for the effectiveness of the program. Unit cost is consistent with recent budget plus inflation. Amount requested is consistent with 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	28,100	0	0	0	0	0	0
TOTAL FUNDING	28,100					0	0

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				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="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21164**

Project Cost: **\$4,029,600**

Project Name: **West Thornhill Flood Control Implementation - Ph 3B Cons.**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Stormwater

Useful Life: 100 Pre Approval:

Project Mgr: Richard Kit

Category: Major

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

Cost Validation: External peer review

Requirement Validation: Other(specify in Notes)

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 3B area (east of Henderson Ave. and south of John St.). See attached location map. Program is as follows:
• Est. West Thornhill program cost - \$111M (as of April 2019)
• Previous budget approved (up to Phase 3A) represents 44.9% of West Thornhill Program cost.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	3,668,894	40,803,700
Internal Charges:	0	0
External Consulting:	291,018	0
Sub Total:	3,959,912	40,803,700
HST Impact:	69,694	718,145
Total Project Cost:	4,029,600	41,521,800

NOTES

Req. Validation: Council direction to upgrade the storm sewer system in West Thornhill to 100 year level protection.
Funding Source: Stormwater Fee. Internal charges include associated staff recoveries. External charges include contract administration. The City will receive 40% of the cost (\$1,611,840) through DMAF Grant. Net cost to the City will be 60% (\$2,417,760).

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	CA	Construction				
Reserve Fund	4,029,600	296,133	3,733,467	0	0	4,029,600	41,521,800
TOTAL FUNDING	4,029,600					4,029,600	41,521,800

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: <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:				

Program Name: West Thornhill Flood Control Implementation

Department: Environmental Services

Component	Project #	Past	2021	Future	Total
Phase 1 (East of Bayview, North of Steeles, SW of CN tracks)	#8530, #9330, #14271, #15014	\$19,673,405			\$19,673,405
Phase 2 (West of Bayview, East of Yonge, N of Steeles, S of CN Tracks)	#16210, #17201, #18279, #19232	\$18,187,888	\$0	\$0	\$18,187,888
Phase 3 (West of Bayview, East of Yonge, S of John, N of CN tracks)	#16211, #20252 #21164 (This Request)	\$11,019,559	\$4,029,600	\$19,077,745	\$34,126,904
Phase 4 (Royal Orchard/ Romfield - West of Bayview, East of Yonge)	#18280 #21165	\$911,803	\$15,655,900	\$22,444,100	\$39,011,803
Total		\$49,792,655	\$19,685,500	\$41,521,845	\$111,000,000
		44.9%	17.7%	37.4%	

Description of Program

To upgrade the storm sewer system in West Thornhill to 100 year level protection

What was completed in the past

8 phases have been completed or in progress (out of 14 phases) since 2013 - 2020: \$49.8M

Current ask**Phase 3B Construction of storm sewer upgrades (east of Henderson Ave. and south of John St) (#21164): \$4,029,600****Future Phases**

Phase 3C Construction 2022-2023 - \$19.1M

Phase 4B, 4C, 4D Construction 2023 - 2026 - \$22.4M

Total - \$41.5M

Related 2021 Project(s)

West Thornhill Flood Control Implementation - Phase 4A Construction (#21165): \$15,655,900

Royal Orchard Sanitary Sewer Upgrades (West Thornhill Phase 4A) (#21172): \$3,471,000

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)	Substantially completed in Nov 2019; Under warranty until 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)	Substantially completed in Nov 2019; Under warranty until Nov 2021
3A (Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)	Project commenced in May 2020; Anticipated Substantial completion in Nov 2021
3B (This Request) (Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	Design 100% completed; Construction in 2021 - 2022
3C (Clark Ave and Glen Cameron Rd - west of Henderson Ave)	Design 100% completed; Construction in 2022 - 2023
4A (Royal Orchard - between Doral Gate to Pomona Creek, Kirk Dr, Knotty Pine Trail, Blus Spruce Ln, Doral Gate, Augusta Crt)	Design 90% completed; Construction in 2021 - 2022
4B, 4C & 4D (Romfield Cir Area; 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 2023 - 2026

Location Map: West Thornhill Flood Control Implementation – Phase 3B Construction

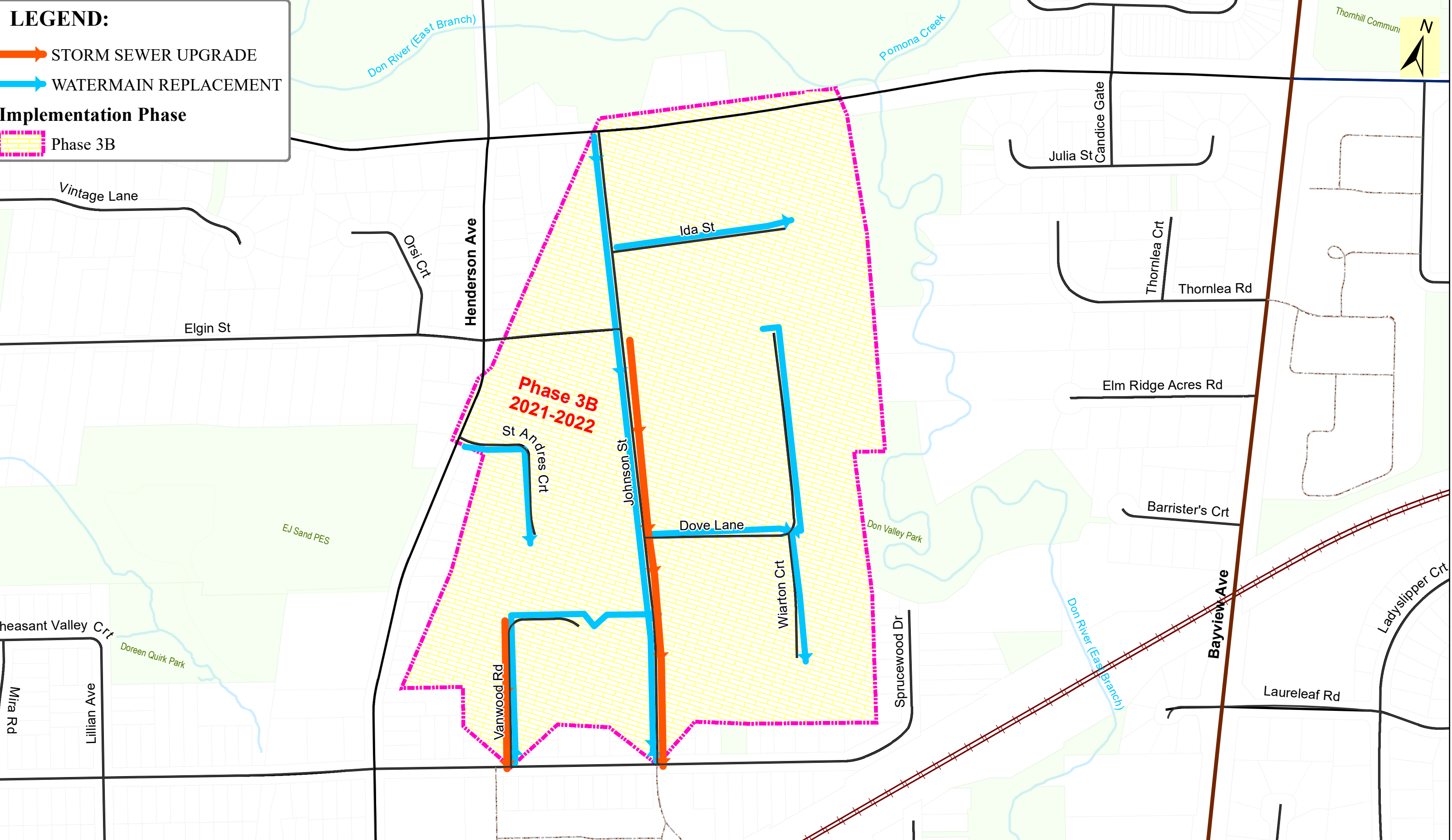
ES-Infrastructure (2021)

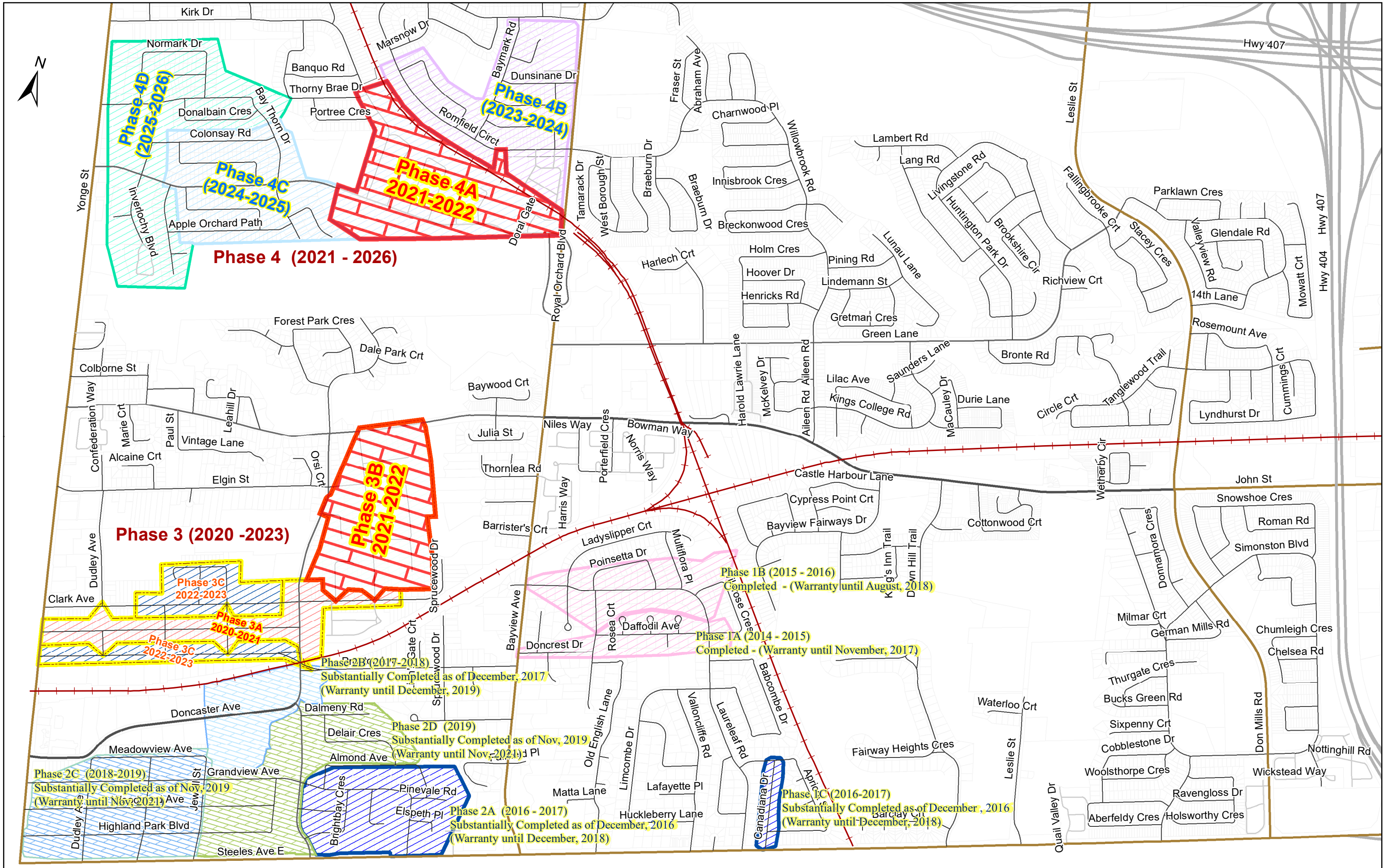
LEGEND:

- STORM SEWER UPGRADE
- WATERMAIN REPLACEMENT

Implementation Phase

- Phase 3B







2021 PROJECT FUNDING REQUEST FORM

Number: **21165**

Project Cost: **\$15,655,900**

Project Name: **West Thornhill Flood Control Implementation - Ph 4A Cons.**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Stormwater

Useful Life: 100 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)

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 4A area (west of Bayview Av. and south of CNR track). Program is as follows:
• Est. West Thornhill program cost - \$111M (as of April 2019)
• Previous budget approved (up to Phase 3A) represents 44.9% of West Thornhill Program cost.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	14,297,361	40,803,700
Internal Charges:	542,923	0
External Consulting:	554,195	0
Sub Total:	15,394,479	40,803,700
HST Impact:	261,387	718,145
Total Project Cost:	15,655,900	41,521,800

NOTES

Req. Validation: Council direction to upgrade the storm sewer system in West Thornhill to 100 year level protection.
Funding Source: Stormwater Fee and Gas Tax
Internal charges include associated staff recoveries. External charges include contract administration. The City will receive 40% (\$6,262,360) through a Federal Grant (see life cycle section for more details). Net cost to the City will be 60% (\$9,393,540).

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	CA	Construction	Internal staff			
Gas Tax	2,000,000	0	2,000,000	0	0	2,000,000	0
Reserve Fund	13,655,900	563,949	12,549,028	542,923	0	13,655,900	41,521,800
TOTAL FUNDING	15,655,900					15,655,900	41,521,800

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: <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:

Program Name: West Thornhill Flood Control Implementation
Department: Environmental Services

Component	Project #	Past	2021	Future	Total
Phase 1 (East of Bayview, North of Steeles, SW of CN tracks)	#8530, #9330, #14271, #15014	\$19,673,405			\$19,673,405
Phase 2 (West of Bayview, East of Yonge, N of Steeles, S of CN Tracks)	#16210, #17201, #18279, #19232	\$18,187,888	\$0	\$0	\$18,187,888
Phase 3 (West of Bayview, East of Yonge, S of John, N of CN tracks)	#16211, #20252, #21164	\$11,019,559	\$4,029,600	\$19,077,745	\$34,126,904
Phase 4 (Royal Orchard/ Romfield - West of Bayview, East of Yonge)	#18280 #21165 (This Request)	\$911,803	\$15,655,900	\$22,444,100	\$39,011,803
Total		\$49,792,655	\$19,685,500	\$41,521,845	\$111,000,000
		44.9%	17.7%	37.4%	

Description of Program

To upgrade the storm sewer system in West Thornhill to 100 year level protection

What was completed in the past

8 phases have been completed or in progress (out of 14 phases) since 2013 - 2020: \$49.8M

Current ask

Phase 4A Construction of storm sewer upgrades (west of Bayview Ave; and south of CNR tracks) (#21165): \$15,655,900

Future Phases

Phase 3C Construction 2022-2023 - \$19.1M

Phase 4B, 4C, 4D Construction 2023 - 2026 - \$22.4M

Total - \$41.5M

Related 2021 Project(s)

West Thornhill Flood Control Implementation - Phase 3B Construction (#21164): \$4,029,600

Royal Orchard Sanitary Sewer Upgrades (West Thornhill Phase 4A) (#21172): \$3,471,000

Map

Attached

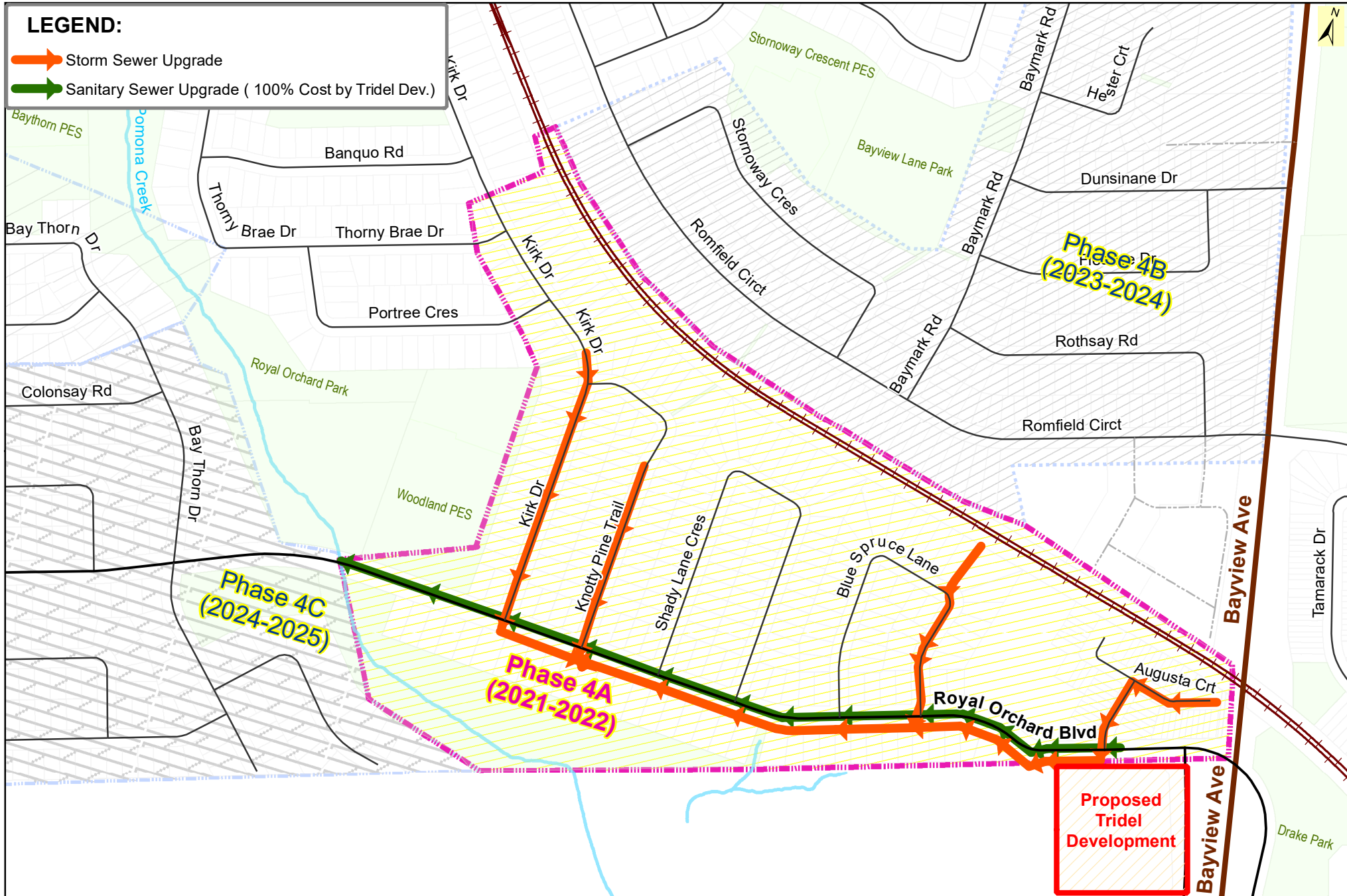
PROGRAM STATUS

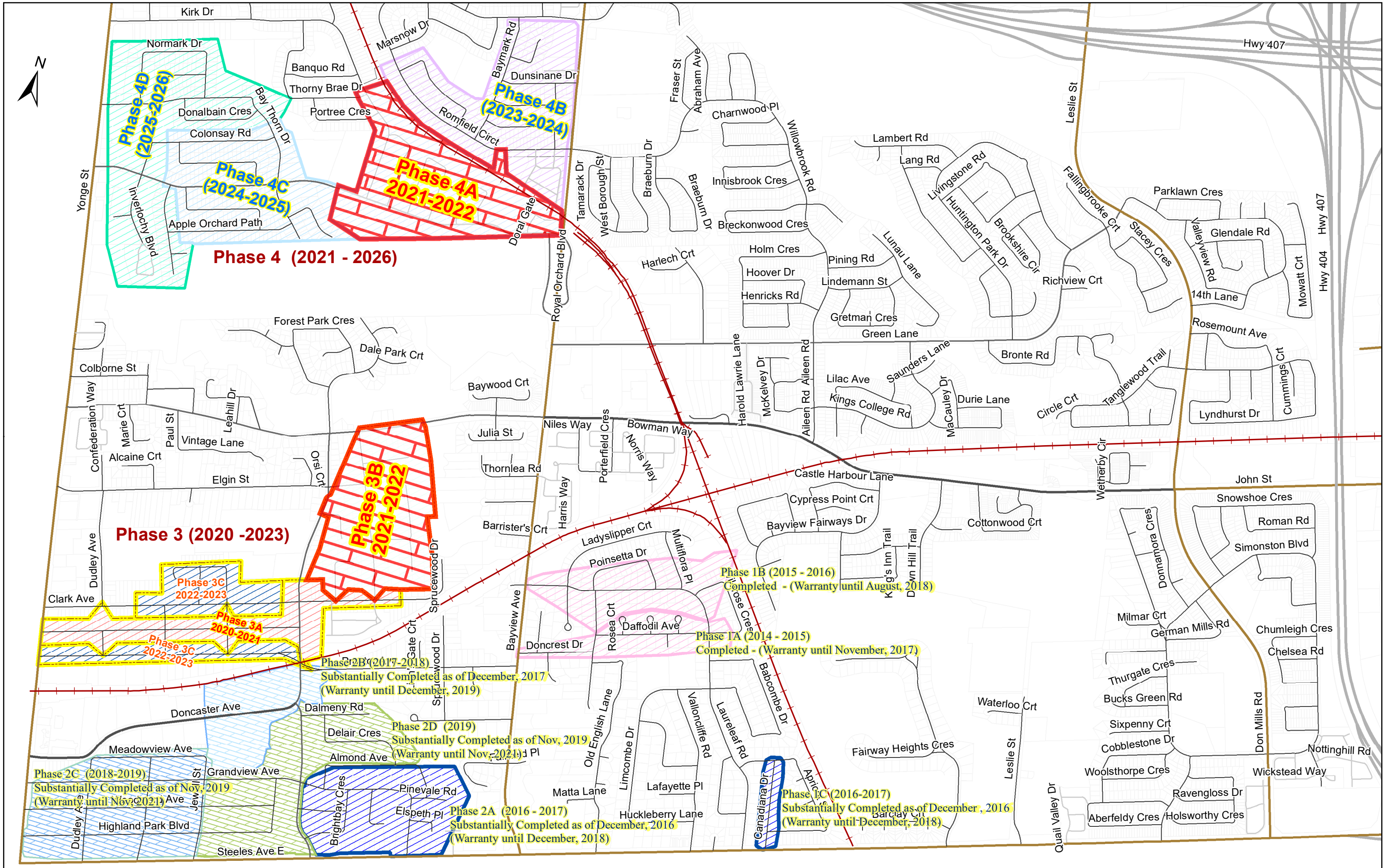
Phases	Project Status
1A (Doncrest Dr and Daffodil Ave)	Total completion in Aug 2017
1B (Laureleaf Rd, Poinsetta Dr, Multiflora Pl)	Total completion in Aug 2018
1C (Canadiana Dr)	Total completion in Dec 2018
2A (Grandview Ave, Brightbay Cr, Courtham Ave, Rayneswood Cr, Pineval Dr, Elspeth Pl)	Total completion 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 Jewell St and Yonge St, Meadow Ave, Willowdale Blvd, Dudley Ave, Jewell St)	Substantially completed in Nov 2019; Under warranty until 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)	Substantially completed in Nov 2019; Under warranty until Nov 2021
3A (Morgan Ave - between Henderson and Yonge; Clark Ave - between Henderson and Johnson)	Project commenced in May 2020; Anticipated Substantial completion in Nov 2021
3B (Johnson St, Vanwood Rd, St. Andreas Cr, Ida St, Dove Ln, Wiarthon Cr)	Design 100% completed; Construction in 2021 - 2022
3C (Clark Ave and Glen Cameron Rd - west of Henderson Ave)	Design 100% completed; Construction in 2022 - 2023
4A (This Request) (Royal Orchard - between Doral Gate to Pomona Creek, Kirk Dr, Knotty Pine Trail, Blus Spruce Ln, Doral Gate, Augusta Cr)	Design 90% completed; Construction in 2021 - 2022
4B, 4C & 4D (Romfield Cir Area; Royal Orchard - between Yonge St. and Bay Thorn Dr, Wild Cherry Ln, Apple Orchard Path, Silver Aspen Dr, Normark Dr, Donaibain Cr)	Design 90% completed; Construction in 2023 - 2026



Location Map: West Thornhill Flood Control Implementation – Phase 4A Construction

ES-Infrastructure (2021)







2021 PROJECT FUNDING REQUEST FORM

Number: **21166**

Project Cost: **\$102,000**

Project Name: **Incremental Growth Related Waste Management Vehicles**

Commission: Community & Fire Services

New Asset/Expansion

Department: ES - Waste

Useful Life: 0 Pre Approval:

Project Mgr: Claudia Marsales

Category: Annual

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

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Development Charge (DC) funding for additional growth-related waste management vehicles purchased by contractor. If waste management was done in-house, these vehicles would need to be purchased by the City, so this request is to obtain DC funding to offset a portion of the capital cost included in the waste management contract paid through Operating accounts.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	102,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	102,000	0
HST Impact:	0	0
Total Project Cost:	102,000	0

NOTES

Amount requested as per 2017 Development Charges Background Study.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
DCA	102,000	0	0	0	0	0	0	
TOTAL FUNDING	102,000					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost:

Project Name: Cathodic Protection of Ductile Iron Watermains

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 20 Pre Approval:

Project Mgr: Vikas Thakur

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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 (17-19 years old) and test stations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	435,400	0
Internal Charges:	50,000	0
External Consulting:	0	0
Sub Total:	485,400	0
HST Impact:	7,663	0
Total Project Cost:	493,100	0

NOTES

This is an annual program (Phase 3 of 17). Program commenced in 1993 with an avg. of 120 watermain breaks/year which has reduced to an avg. of 30 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. 15 km length of DI watermain (Refer to attached map). City inspector is required for 6 month period each year (\$50K). Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Construction	Internal staff				
Waterworks	493,100	443,100	50,000	0	0	493,100	0
TOTAL FUNDING	493,100					493,100	0

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

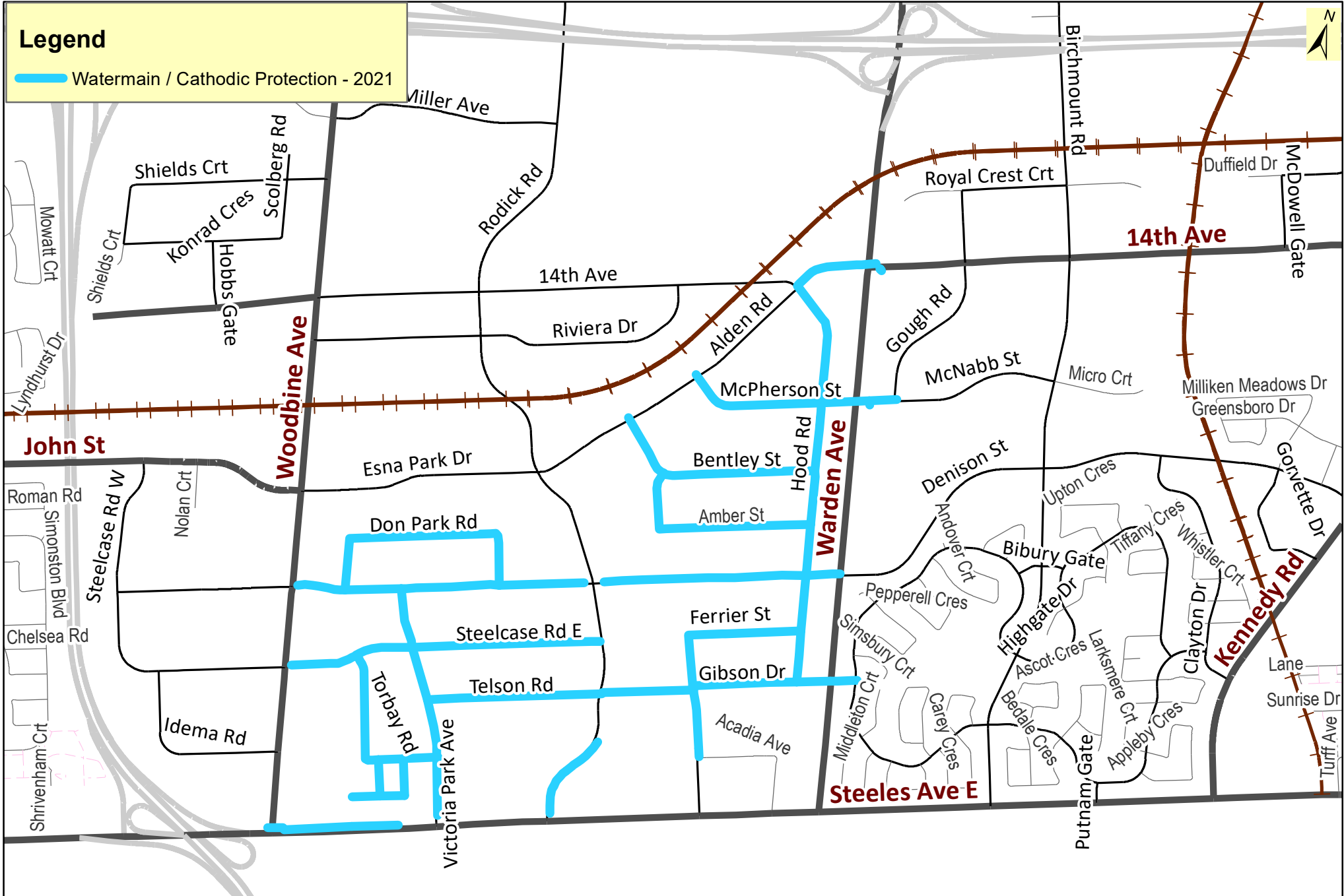
DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				Amount in Study: <input type="text" value="493,100"/>
				Amount Incl HST <input type="text" value="493,100"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



Location Map Cathodic Protection of Iron Watermains

ES - Infrastructure (2021)





2021 PROJECT FUNDING REQUEST FORM

Number: **21168**

Project Cost: **\$6,623,300**

Project Name: **CI Watermain Rehabilitation / CIPP Lining - Construction**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 90 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: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Construction and Contract Administration for rehabilitation of approx. of 4.2 km of cast iron (CI) watermain using Cured-In-Place Pipe (CIPP) lining (refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,248,900	0
Internal Charges:	0	0
External Consulting:	259,800	0
Sub Total:	6,508,700	0
HST Impact:	114,553	0
Total Project Cost:	6,623,300	0

NOTES

This is an annual program (Phase 3a of 15; ending in 2032).
Total CI Watermain: 54.1km
As part of the cast iron watermain replacement/ rehabilitation program, aged cast iron watermain will be systematically replaced with the PVC or will be rehabilitated with CIPP liner.
Cost is consistent with recent award prices plus inflation.
Total program cost has been revised to reflect the current market rates and is consistent with 2020 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	CA	Construction				
Waterworks	6,623,300	264,400	6,358,900	0	0	6,623,300	0
TOTAL FUNDING	6,623,300					6,623,300	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: <input type="text" value="11,107,300"/>
				Amount Incl HST: <input type="text" value="6,623,300"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: CI Watermain Rehabilitation / Replacement
Department: Environmental Services

Component	Project #	Past	2021	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 (This request)	\$437,100	\$6,623,300		\$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170		\$4,036,300		\$4,036,300
Phase 4a - Design (Gladiator Rd/ Bakerdale / Southdale Area)	#21169		\$447,700	\$4,675,100	\$5,122,800
Phase 4b to Phase 15	N/A			\$66,896,100	\$66,896,100
Total		\$26,095,500	\$11,107,300	\$71,571,200	\$108,774,000

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

2 phases (Phase 1 & 2) have been completed (out of 15 phases) since 2019 - \$25.7M

Phase 3a (design) completed - \$0.4M

Total (2019-2020): \$26.1M

Current ask

Phase 3a Relining of Cast Iron watermain (John St & 14th Ave end Section) (#21168): \$6,623,300

Future phases

Phase 4a (construction) (2022) - \$4.7M

Phase 4b to Phase 15 (2022- 2032) - \$66.9M

Total (2022-2032): \$71.6M

Related 2021 project(s)

Replacement of Cast Iron watermain (West Thornhill phase 3B area) (#21170): \$4,036,300

Design of Cast Iron watermain (Gladiator Rd/ Bakerdale / Southdale Area) (#21169): \$447,700

Map

Attached

PROGRAM STATUS

Phases	Project Status
Phase 1 (West Thornhill Ph 2D: Grandview Ave/ Woodward Ave/Highland Park Blvd - between Henderson Ave and Jewell St.; Dalmeny Rd, Delcarr Cr; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	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 Henderson and Johnson)	Completed in 2020
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))	Completed in 2020
Phase 3a (Construction) (This request) (John St & 14th Ave end Section (Re-Lining))	2021
Phase 3b (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Warton Crt)	2021
Phase 4a (Design) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2021
Phase 4a (Construction) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2022
Phase 4b to Phase 15 (various streets)	2022 - 2032



2021 PROJECT FUNDING REQUEST FORM

Number: **21169**

Project Cost: **\$447,700**

Project Name: **CI Watermain Replacement - Design**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 0 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: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Detailed design for replacement of approx. 2.9 km cast iron (CI) watermain in Southdale Drive area (refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	4,594,200
Internal Charges:	148,100	0
External Consulting:	294,400	0
Sub Total:	442,500	4,594,200
HST Impact:	5,181	80,858
Total Project Cost:	447,700	4,675,100

NOTES

This is an annual program (Phase 4a 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 design of cast iron watermain replacement design of 2.9km (5%) of CI watermain. Construction and contract administration costs will be requested through 2022 capital budget request.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Design	Internal staff				
Waterworks	447,700	299,600	148,100	0	0	447,700	4,675,100
TOTAL FUNDING	447,700					447,700	4,675,100

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: <input type="text" value="11,107,300"/>
				Amount Incl HST <input type="text" value="447,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: CI Watermain Rehabilitation / Replacement

Department: Environmental Services

Component	Project #	Past	2021	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	\$437,100	\$6,623,300		\$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170		\$4,036,300		\$4,036,300
Phase 4a - Design (Gladiator Rd/ Bakerdale / Southdale Area)	#21169 (This request)		\$447,700	\$4,675,100	\$5,122,800
Phase 4b to Phase 15	N/A			\$66,896,100	\$66,896,100
Total		\$26,095,500	\$11,107,300	\$71,571,200	\$108,774,000

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

2 phases (Phase 1 & 2) have been completed (out of 15 phases) since 2019 - \$25.6M

Phase 3a (design) completed - \$0.4M

Total (2019-2020): \$26.1M

Current ask**Phase 4a Design of Cast Iron watermain (Gladiator Rd/ Bakerdale / Southdale Area) (#21169): \$447,700****Future phases**

Phase 4a (construction) (2022) - \$4.7M

Phase 4b to Phase 15 (2022- 2032) - \$66.9M

Total (2022-2032): \$71.6M

Related 2021 project(s)

Phase 3a Relining of Cast Iron watermain (John St & 14th Ave end Section) (#21168): \$6,623,300

Phase 3b Replacement of Cast Iron watermain (West Thornhill phase 3B area) (#21170): \$4,036,300

Map

Attached

PROGRAM STATUS

Phases	Project Status
Phase 1 (West Thornhill Ph 2D: Grandview Ave/ Woodward Ave/Highland Park Blvd - between Henderson Ave and Jewell St.; Dalmeny Rd, Delcarr Cr; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	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 Henderson and Johnson)	Completed in 2020
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))	Completed in 2020
Phase 3a (Construction) (This request) (John St & 14th Ave end Section (Re-Lining))	2021
Phase 3b (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	2021
Phase 4a (Design) (This request) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2021
Phase 4a (Construction) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2022
Phase 4b to Phase 15 (various streets)	2022 - 2032




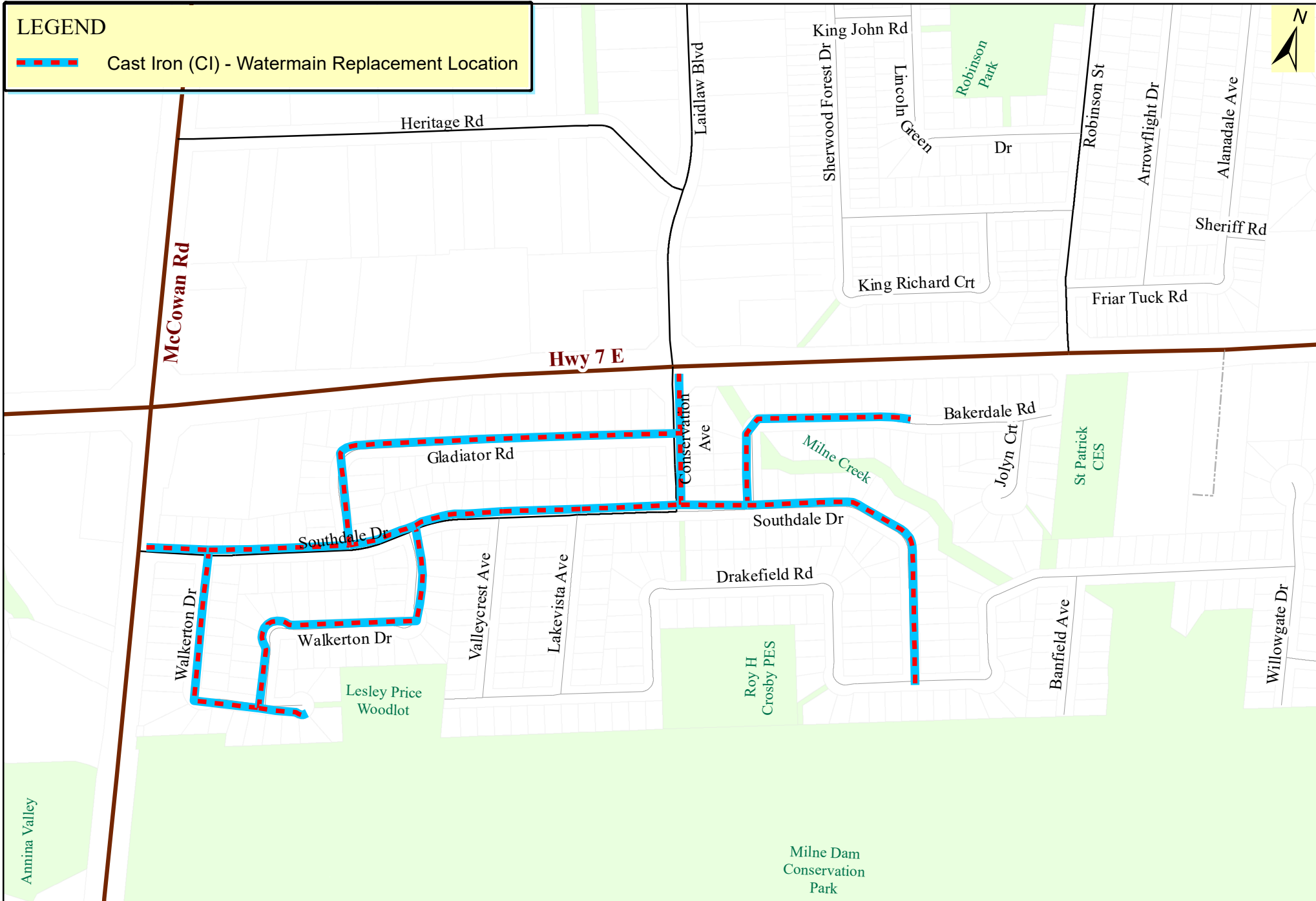
Location Map CI Watermain Replacement Design

ES - Infrastructure (2021)

Gladiator Rd / Bakerdale / Southdale / Bakerdale Area (B02)

LEGEND

 Cast Iron (CI) - Watermain Replacement Location





2021 PROJECT FUNDING REQUEST FORM

Number: **21170**

Project Cost: **\$4,036,300**

Project Name: **CI Watermain Replacement-West Thornhill Ph 3B**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 90 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: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of cast iron (CI) watermain that have reached end of the service life (Refer to attached map). As part of the cast iron watermain replacement program, aged cast iron watermain (current age 58 years; service life 60 years) will be replaced with the PVC watermain (1.6 km) with a service life of 90 years.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	3,772,500	0
Internal Charges:	0	0
External Consulting:	194,000	0
Sub Total:	3,966,500	0
HST Impact:	69,810	0
Total Project Cost:	4,036,300	0

NOTES

Total CI watermain inventory: 54.1 km as of 2019
All CI watermain will be replaced by the year 2032. There is no backlog in the watermain replacement program.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Construction	CA				
Waterworks	4,036,300	3,838,900	197,400	0	0	4,036,300	0
TOTAL FUNDING	4,036,300					4,036,300	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: <input type="text" value="11,107,300"/>
				Amount Incl HST <input type="text" value="4,036,300"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Program Name: CI Watermain Rehabilitation / Replacement

Department: Environmental Services

Component	Project #	Past	2021	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	\$437,100	\$6,623,300		\$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170 (This request)		\$4,036,300		\$4,036,300
Phase 4a - Design (Gladiator Rd/ Bakerdale / Southdale Area)	#21169		\$447,700	\$4,675,100	\$5,122,800
Phase 4b to Phase 15	N/A			\$66,896,100	\$66,896,100
Total		\$26,095,500	\$11,107,300	\$71,571,200	\$108,774,000

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

2 phases (Phase 1 & 2) have been completed (out of 15 phases) since 2019 - \$25.7M

Phase 3a (design) completed - \$0.4M

Total (2019-2020): \$26.1M

Current ask**Phase 3b Replacement of Cast Iron watermain (West Thornhill phase 3B area) (#21170): \$4,036,300****Future phases**

Phase 4a (construction) (2022) - \$4.7M

Phase 4b to Phase 15 (2022- 2032) - \$66.9M

Total (2022-2032): \$71.6M

Related 2021 project(s)

Phase 3a Relining of Cast Iron watermain (John St & 14th Ave end Section) (#21168): \$6,623,300

Phase 4a Design of Cast Iron watermain (Gladiator Rd/ Bakerdale / Southdale Area) (#21169): \$447,700

Map

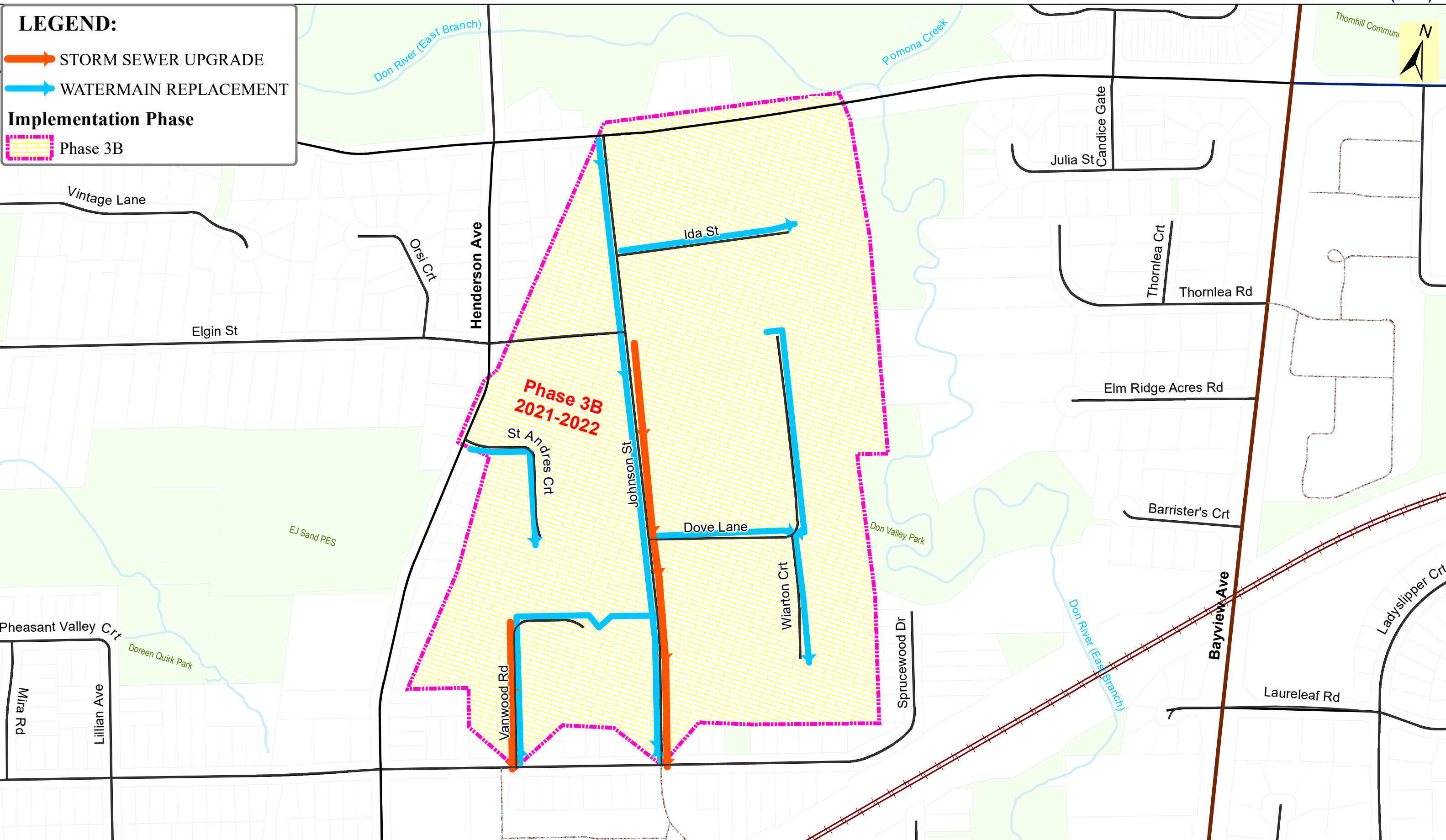
Attached

PROGRAM STATUS

Phases	Project Status
Phase 1 (West Thornhill Ph 2D: Grandview Ave/ Woodward Ave/Highland Park Blvd - between Henderson Ave and Jewell St.; Dalmeny Rd, Delcair Cr; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	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 Henderson 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))	2021
Phase 3b (This request) (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Warton Crt)	2021
Phase 4a (Design) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2021
Phase 4a (Construction) (Gladiator Rd / Bakerdale / Southdale / Bakerdale Area)	2022
Phase 4b to Phase 15 (various streets)	2022 - 2032

Location Map: Cast Iron Watermain Replacement – West Thornhill Phase 3B

ES-Infrastructure (2021)





2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$714,900

Project Name: Curb Box Inspection and Replacement Program

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 20 Pre Approval:

Project Mgr: Vikas Thakur

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to conduct inspection of curb boxes and repair /replace defective curb boxes which are normally located at the property line. Curb box/ stop valve is the main control appurtenance for the City to turn on/off water supply to the private property. Over time, curb boxes/ stop valves deteriorate and become inoperable. Proactive inspection and repairs are required to ensure continuous water supply and reduce service interruption.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	653,400	0
Internal Charges:	50,000	0
External Consulting:	0	0
Sub Total:	703,400	0
HST Impact:	11,500	0
Total Project Cost:	714,900	0

NOTES

This is an annual program.
Total inventory: 84,350 curb boxes. This request is to inspect approx. 3,913 curb boxes and replacement of approx. 25% curb boxes and damaged sidewalk bays as required (Refer to attached map). City inspector is required for 6 month period (\$50k). There is no substantial backlog and curb boxes 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>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Design</u>	<u>Internal charge</u>				
Waterworks	714,900	664,900	50,000	0	0	714,900	0
TOTAL FUNDING	714,900					714,900	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 Name</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
				Amount in Study: <input type="text" value="714,900"/>
				Amount Incl HST <input type="text" value="714,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Additional Project Information for Projects > \$500k

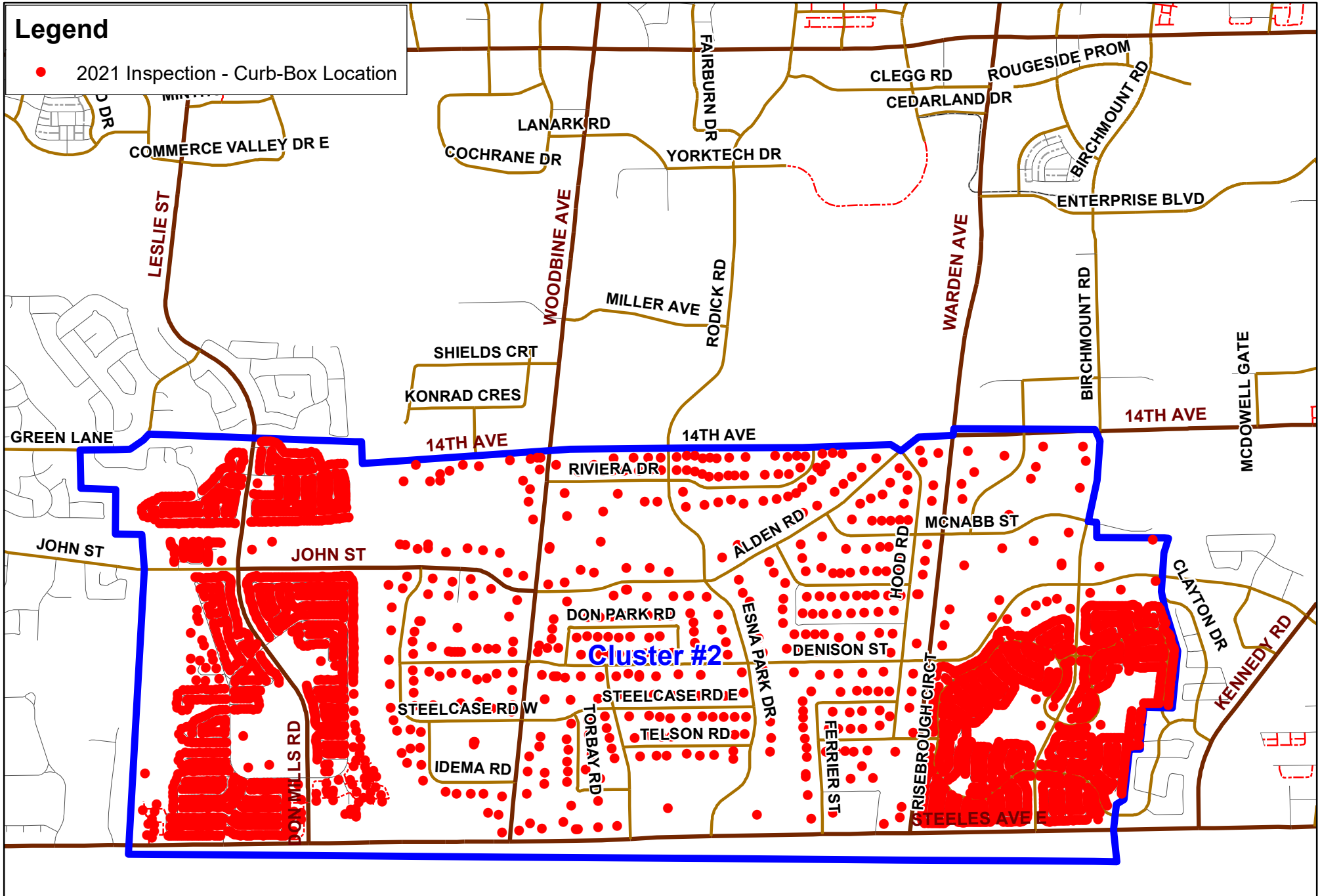
Environmental Services

Project	Curb Box Inspection and Replacement Program
2021 Capital Request (#21171)	\$714,900
Funding Source	Waterworks Reserves
Description of Program	<p>Program to conduct inspection of curb boxes and repair /replace defective curb boxes which are normally located at the property line. This is an annual program.</p> <p>Total inventory: 83,179 curb boxes. This request is to inspect approx. 3,913 curb boxes and replacement of approx. 25% curb boxes and damaged sidewalk bays as required. City inspector is required for 6 month period (\$50k).</p>
Project Rationale	Curb box/ stop valve is the main control appurtenance for the City to turn on/off water supply to the private property. Over time, curb boxes/ stop valves deteriorate and become inoperable. Proactive inspection and repairs are required to ensure continuous water supply and reduce service interruption.
Legislative Requirement	Yes – Drinking Water Quality Management System (DWQMS)
History	Historically 2,000 – 3,000 curb boxes were inspected annually
Future Phases	This is an annual program. approx. 3,300 – 4,300 curb boxes are inspected and 25% of curb boxes are replaced
Total Project Cost (incl. all phases)	Varies
Related Projects	None
Related Maps	Location Map
Alignment to the Strategic Plan	<p>Safe and Sustainable Community</p> <ul style="list-style-type: none"> • Timely rehabilitation of curb boxes reduces service interruptions, maintains water quality and supports City's vision for a sustainable community



Location Map: Curb Box Inspection and Replacement Program

ES Infrastructures 2021





2021 PROJECT FUNDING REQUEST FORM

Number: 21172

Project Cost: \$3,471,000

Project Name: Royal Orchard Sanitary Upgrades (West Thornhill - Ph. 4A)

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 50 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)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This budget request is to upgrade the sanitary sewer pipes along Royal Orchard Blvd. from Doral Gate to Region trunk sewer (West of Bayview Ave. and south of CNR track) in order to accommodate the Tridel Development Condominiums at Ladies Golf Course (refer to attached map)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	3,410,928	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	3,410,928	0
HST Impact:	60,032	0
Total Project Cost:	3,471,000	0

NOTES

Req. Validation: Capacity upgrade is required to accommodate Tridel Development Condominiums at Ladies Golf Course.
Funding Source: Tridel Development will pay the full cost of sanitary sewer upgrades as part of Site Plan Agreement. Any work would be contingent on receipt of the funds from the Developer.
Cost is consistent with recent award prices plus inflation.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
Funding Type	Budget						TOTAL	Future Phases
Developer Funding	3,471,000	0	0	0	0	0	0	0
TOTAL FUNDING	3,471,000					0	0	

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

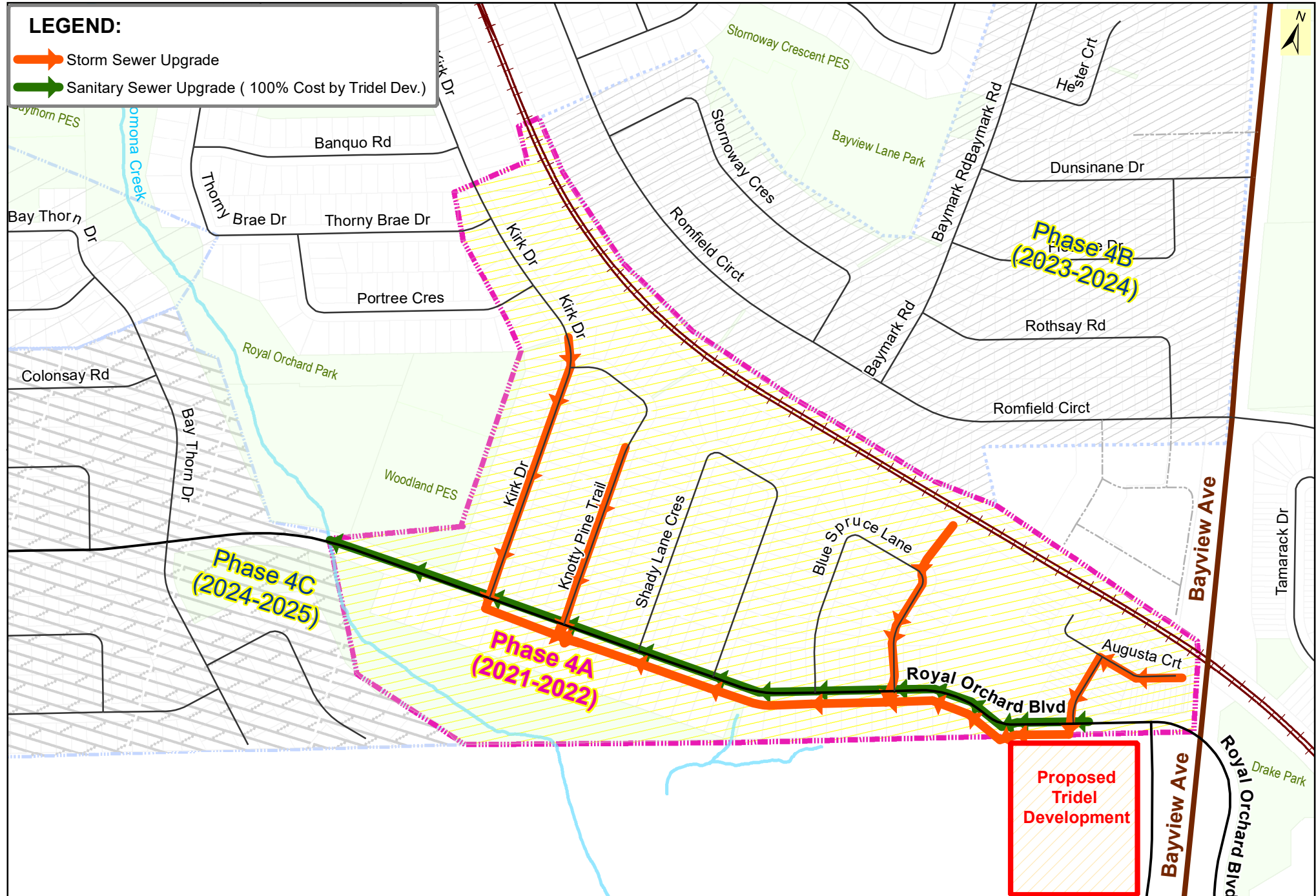
DCA/LIFE CYCLE DETAILS

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



Location Map: Royal Orchard Sanitary Upgrades (West Thornhill – Ph. 4A)

ES-Infrastructure (2021)





2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$1,405,000

Project Name: Sanitary Sewers - Rehabilitation

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 50 Pre Approval:

Project Mgr: Roseller Corcuera

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to rehabilitate the main sanitary sewer, service laterals using structural liner including repairs to manholes.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	1,321,700	0
Internal Charges:	60,000	0
External Consulting:	0	0
Sub Total:	1,381,700	0
HST Impact:	23,262	0
Total Project Cost:	1,405,000	0

NOTES

This is an annual program.
Program is to rehabilitate the main sanitary sewer, service laterals using structural liner and repairs to manholes identified through the inspection programs. City inspector required for a 8 month period (\$60K).
Sanitary sewers are in a state of good repair.

<u>SOURCE(S) OF FUNDING (\$)</u>	<u>Components</u>					<u>TOTAL</u>	<u>Future Phases</u>
	<u>Budget</u>	<u>Internal</u>	<u>Construction</u>				
Waterworks	1,405,000	60,000	1,345,000	0	0	1,405,000	0
TOTAL FUNDING	1,405,000					1,405,000	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</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text" value="1,405,000"/>
				Amount Incl HST <input type="text" value="1,405,000"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Additional Project Information for Projects > \$500k**Environmental Services**

Project	Sanitary Sewers – Rehabilitation
2021 Capital Request	\$1,406,000
Funding Source	Waterworks Reserves
Description of Program	Program to rehabilitate the main sewer, service laterals using structural liner including repairs to manholes identified through CCTV inspection.
Project Rationale	Timely rehabilitation of sewer pipes will extend the service life of the sanitary sewer system and reduce maintenance cost / liabilities
Legislative Requirement	None
History	Annually \$0.9M - \$1M budget spent (based on past 3 years actuals)
Future Phases	Varies – Based on the outcome of the CCTV inspection results.
Total Project Cost all phases) (incl.	25 Years Life Cycle Cost \$45.03M
Related Projects	<ul style="list-style-type: none"> Sanitary Sewer CCTV inspection
Related Maps	-
Alignment to the Strategic Plan	<p>Safe and Sustainable Community</p> <ul style="list-style-type: none"> Effective maintenance of sanitary sewer system reduces service interruptions, sewer backups into homes and supports City's vision for a sustainable community



2021 PROJECT FUNDING REQUEST FORM

Number:

Project Cost: \$122,200

Project Name: Wastewater Flow Monitoring

Studies/Pilot Programs

Commission: Community & Fire Services

Useful Life: 0 Pre Approval:

Department: ES - Waterworks

Category: Major

Project Mgr: Lijing Xu

Cost Validation: Recent awards

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This program is to hire a Consultant to record the sanitary system flows to help quantify areas that require further investigation and remedial works to reduce the wastewater system flood risk during large storm events from inflow and infiltration (I/I). Approx. 10 locations will be monitored in 2021 (refer to attached map) to establish the level of extraneous flow into the wastewater collection system from rainfall events.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	120,100	0
Sub Total:	120,100	0
HST Impact:	2,114	0
Total Project Cost:	122,200	0

NOTES

This is an annual program. Monitoring is for 12 months, followed by another 12 months of analysis and report generation. The results will be used to determine the degree of improvement needed to minimize wastewater system flooding. Project cost is based on current contract (expires in 2023).

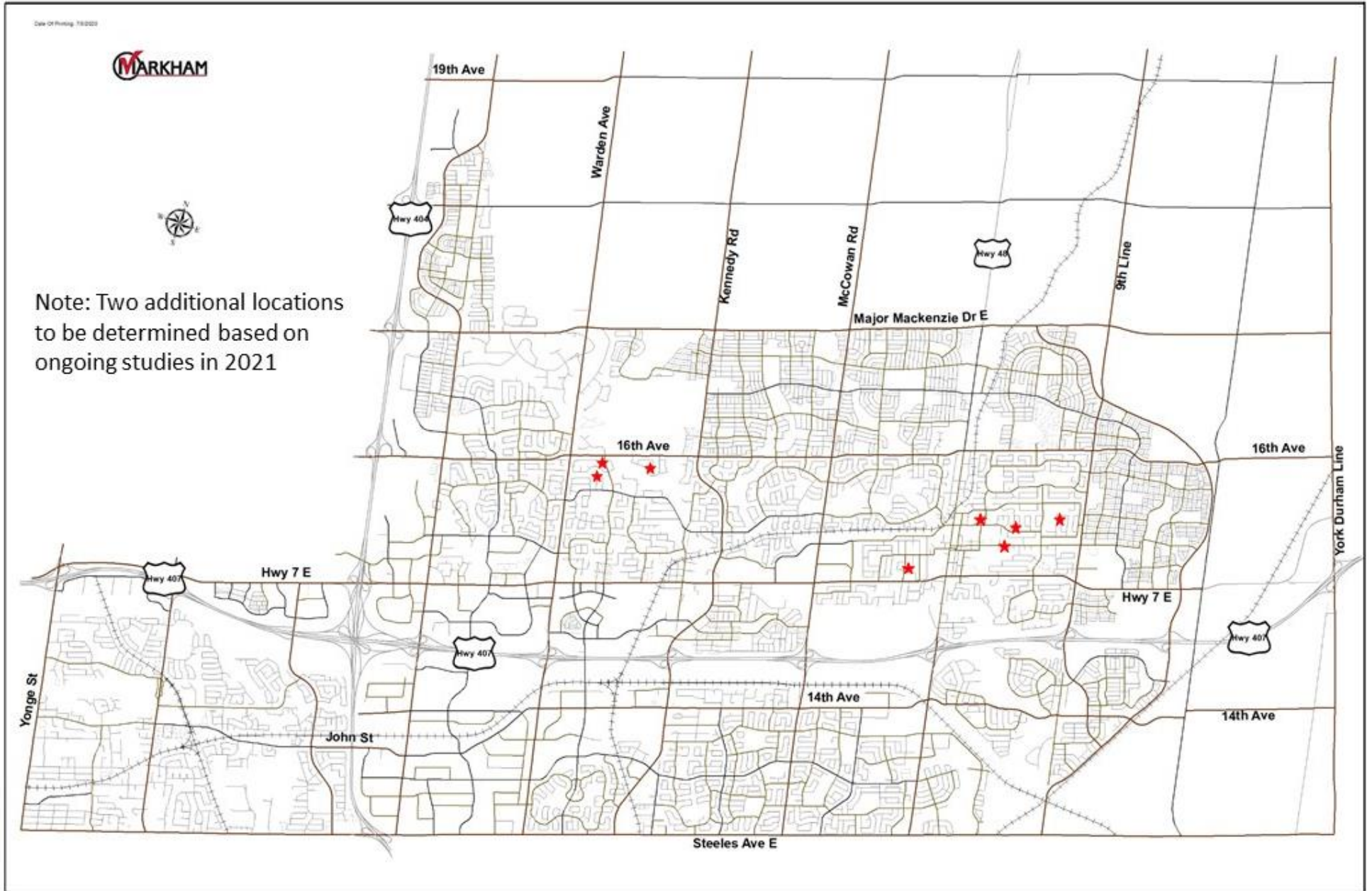
<u>SOURCE(S) OF FUNDING (\$)</u>		<u>Components</u>					<u>Future Phases</u>
<u>Funding Type</u>	<u>Budget</u>				<u>TOTAL</u>	<u>Future Phases</u>	
Waterworks	122,200	0	0	0	0	0	
TOTAL FUNDING	122,200				0	0	

<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="122,200"/>
				Amount Incl HST <input type="text" value="122,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Wastewater Flow Monitoring





2021 PROJECT FUNDING REQUEST FORM

Number: **21175**

Project Cost: **\$1,013,200**

Project Name: **Water Meters - Replacement Program**

Commission: Community & Fire Services

Repair/Replace

Department: ES - Waterworks

Useful Life: 20 Pre Approval:

Project Mgr: Vikas Thakur

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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 (20 years).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	995,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	995,700	0
HST Impact:	17,524	0
Total Project Cost:	1,013,200	0

NOTES

This is an annual program. Total inventory: 83,177. This request is to replace approx. 3,929 water meters (3,800 residential, 24 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.

SOURCE(S) OF FUNDING (\$)	Components							Future Phases
	Funding Type	Budget					TOTAL	
Waterworks	1,013,200	0	0	0	0	0	0	0
TOTAL FUNDING	1,013,200						0	0

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

DCA/LIFE CYCLE DETAILS

DCA				Life Cycle
Name	Year	Amount	Amount in Study	
				Amount in Study: <input type="text" value="1,013,200"/>
				Amount Incl HST <input type="text" value="1,013,200"/>
				Year in the study <input type="text" value="2021"/>
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	2021	Future	Total
2018	#18303	\$691,000			\$691,000
2019	#19253	\$802,500			\$802,500
2020	#20266	\$996,700			\$996,700
2021	#21175		\$1,013,200		\$1,013,200
2022 Onwards				varies	varies
Total		\$1,799,200	\$1,013,200		

Type of Water Meter	Total Inventory (as of Jan 2020)	2020 Program	2021 Program	
Residential	80,529	3,800	3,800	(4.7%)
Multi Residential	505	25	24	(4.8%)
Industrial/ Commercial/ Institutional (ICI)	2,143	105	105	(4.9%)
Total	83,177	3,930	3,929	(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 (#21175): \$1,013,200

Future Phases

Varies

Related 2021 Project(s)

N/A

Map

N/A



2021 PROJECT FUNDING REQUEST FORM

Number: **21176**

Project Cost: **\$37,500**

Project Name: **Watermain Leak Detection Program**

Commission: Community & Fire Services

Studies/Pilot Programs

Department: ES - Waterworks

Useful Life: 0 Pre Approval:

Project Mgr: Shu Min Gao

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This program is to perform leak detection on all metallic watermain within the City (total inventory of 280 km which has been reduced over the years as cast iron pipes have been replaced with PVC). The results of investigation will identify leak location to be repaired.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	36,900	0
Sub Total:	36,900	0
HST Impact:	649	0
Total Project Cost:	37,500	0

NOTES

This program is performed once every 2 years. The last program undertaken in 2019 identified a total of 20 detectable leaks (1 watermain, 19 from service connections). This prevented potential watermain breaks. Amount requested is consistent with 2020 Waterworks Reserve Study Update.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Waterworks	37,500	0	0	0	0	0	0	
TOTAL FUNDING	37,500					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text" value="41,200"/>
				Amount Incl HST: <input type="text" value="37,500"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21177**

Project Cost: **\$1,557,100**

Project Name: **Corporate Capital Contingency**

Commission: Corporate Wide

New Asset/Expansion

Department: Corporate Wide

Useful Life: 0 Pre Approval:

Project Mgr: _____

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Total amount of contingency for 2021 applicable capital projects.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,557,093	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	<u>1,557,093</u>	<u>0</u>
HST Impact:	0	0
Total Project Cost:	<u>1,557,100</u>	<u>0</u>

NOTES

Other Internal funding breakdown:
\$8,960 Non-DC Growth, \$3,800 Waterworks reserve, \$2,510 Development fee reserve

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget			TOTAL		
DCA	1,206,461	0	0	0	0	0	0
Gas Tax	182,400	0	0	0	0	0	0
Operating Funded Life Cycle	77,600	0	0	0	0	0	0
Other Internal	15,270	0	0	0	0	0	0
Parks Cash-in-Lieu	70,169	0	0	0	0	0	0
Tax	5,200	0	0	0	0	0	0
TOTAL FUNDING	<u>1,557,100</u>				<u>0</u>		<u>0</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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21004**

Project Cost: **\$25,400**

Project Name: **Theatre Fire Alarm 2 Stage Conversion**

Commission: Development Services

Repair/Replace

Department: Theatre

Useful Life: 20 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

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project aims to transition the theatre from a single stage fire alarm which forces immediate evacuations, regardless of severity, to a two stage alarm which allows for a short investigation by staff before triggering a full evacuation. This project will also address an update to the fire panel allowing each smoke/heat detector device and pull stations to be updated to an addressable device. This means that from the fire panel, staff can see exactly what device has caused an alarm for quicker investigation and response.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	25,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,000	0
HST Impact:	440	0
Total Project Cost:	25,400	0

NOTES

Amount requested is consistent with life cycle. All theatres and attractions researched have 2 stage alarms to avoid unnecessary evacuations and is considered industry standard. Fire department has been consulted and they have no concerns as long as the Ontario Fire Code Regulations are met.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
Operating Funded Life Cycle	25,400	0	0	0	0	0	0
TOTAL FUNDING	25,400					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: <input type="text" value="2,739,100"/>
				Amount Incl HST <input type="text" value="25,400"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21019**

Project Cost: **\$465,200**

Project Name: **Berczy Beckett Park (Cherna Ave.) - Design & Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.44 acre (0.17 ha) park located at the west end of Cherna Ave. Includes tree protection measures for existing tree during construction. Program amenities include retaining wall, shade structure & associated landscape works. This will be the last park in the Berczy subdivision.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	370,000	0
Internal Charges:	37,800	0
External Consulting:	50,000	0
Sub Total:	457,800	0
HST Impact:	7,392	0
Total Project Cost:	465,200	0

NOTES

Cost per ha is \$2,736,470 (\$465,200/0.17 ha) or \$1,057,273 per acre. Annualized operating cost is \$1,559 (0.17 ha x \$9170/ha) starting in 2022. Estimated in-service date: Q2 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget					TOTAL	
DCA	418,680	0	0	0	0	0	0
Parks Cash-in-Lieu	46,520	0	0	0	0	0	0
TOTAL FUNDING	465,200					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
Parks - Berczy Beckett Neighbourhood Park	2017	418,680	661,500	Amount in Study: <input type="text"/>
TOTAL FUNDING		418,680	661,500	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:

The amenities are less than anticipated in DCBS.



2021 PROJECT FUNDING REQUEST FORM

Number: **21022**

Project Cost: **\$549,300**

Project Name: **Green Lane Park - Design and Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.79ac (0.32ha) park at the south east corner of Green Lane and Harold Lawrie Lane. Anticipated amenities include Jr/Sr playground, half basketball, shade structure and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	450,000	0
Internal Charges:	40,500	0
External Consulting:	50,000	0
Sub Total:	540,500	0
HST Impact:	8,800	0
Total Project Cost:	549,300	0

NOTES

Cost per ha is \$1,716,563 (\$549,300/0.32ha) or \$691,900 per acre. Annualized operating cost is \$2,934 (0.32ha X \$9,170). Estimated in service date: Q3 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	494,370	0	0	0	0	0	0	
Parks Cash-in-Lieu	54,930	0	0	0	0	0	0	
TOTAL FUNDING	549,300					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
Parks - Yonge Canac Park	2021	494,370	696,807	Amount in Study: <input type="text"/>
TOTAL FUNDING		<u>494,370</u>	<u>696,807</u>	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21023**

Project Cost: **\$637,900**

Project Name: **Yonge and Grandview Park - Design and Construction**

Commission: Development Services

New Asset/Expansion

Department: Design

Useful Life: 25 Pre Approval:

Project Mgr: Richard Fournier

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 0.73ac (0.29 ha) park located at the South east corner of Yonge St. and Grandview Ave. Anticipated park amenities include Junior/ Senior playground, plaza area, shade structure, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	530,000	0
Internal Charges:	47,700	0
External Consulting:	50,000	0
Sub Total:	627,700	0
HST Impact:	10,208	0
Total Project Cost:	637,900	0

NOTES

Cost per ha is \$2,199,655 (\$637,900/0.29 ha) or \$873,836 per acre. Annualized operating cost is \$2,659 (0.29ha x \$9,170). Estimated in service date: Q3 2022. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	574,110	0	0	0	0	0	0	
Parks Cash-in-Lieu	63,790	0	0	0	0	0	0	
TOTAL FUNDING	637,900					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
Parks - Yonge Devron Park	2020	574,110	613,974	Amount in Study: <input type="text"/>
TOTAL FUNDING		574,110	613,974	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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21029**

Project Cost: **\$816,000**

Project Name: **Markham Centre Trail Phase 1B Construction**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Alberto Lim

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This Budget Request is for the construction of the Phase 1B of the trails on Markham Centre. This location is on the north side of Rouge River from Verdale to Birchmount Road.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	723,270	0
Internal Charges:	80,000	0
External Consulting:	0	0
Sub Total:	803,270	0
HST Impact:	12,730	0
Total Project Cost:	816,000	0

NOTES

The 2020 approved budget was not sufficient to fund the entire section of phase 1 due to new requirements (i.e. tree planting south of Rouge, permeable asphalt etc.) from Environmental agencies. Other internal is section 37 funding. Operating impacts will be determined at the time of construction award.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Budget							
DCA	530,400	0	0	0	0	0	0	
Other Internal	285,600	0	0	0	0	0	0	
TOTAL FUNDING	816,000					0	0	

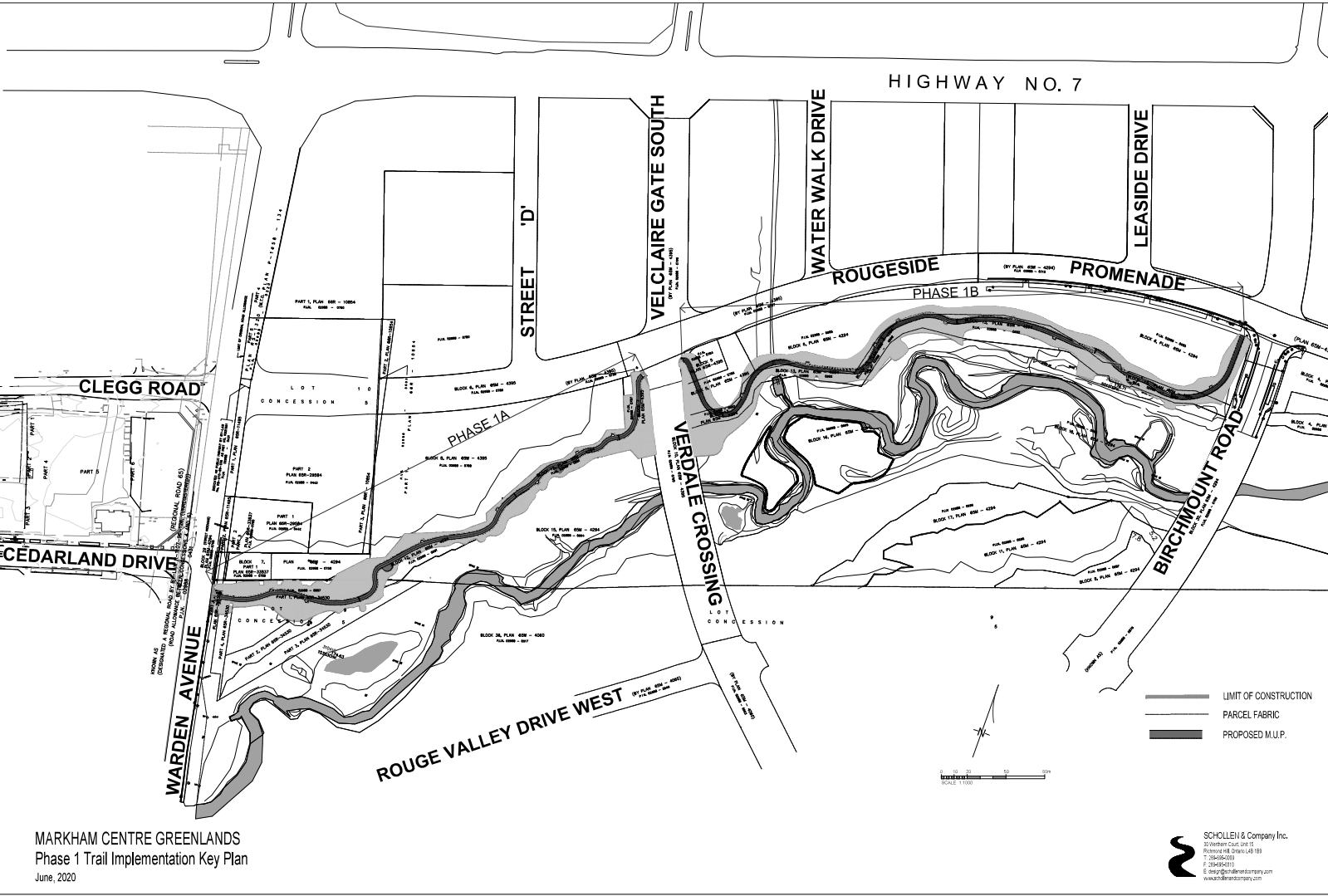
OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	\$0	\$0	\$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		530,400	11,325,356	Amount in Study: <input type="text"/>
TOTAL FUNDING		530,400	11,325,356	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:

Markham Centre Phase 1B Construction



MARKHAM CENTRE GREENLANDS
Phase 1 Trail Implementation Key Plan
June, 2020

SCHOLLEN & Company Inc.
3300 Steeles Ave. E. Unit 115
Richmond Hill, Ontario L4B 1R1
T: 905-882-0000
F: 905-882-0110
E: info@schollenandcompany.com
www.schollenandcompany.com



2021 PROJECT FUNDING REQUEST FORM

Number: **21049**

Project Cost: **\$290,700**

Project Name: **Civic Centre Vestibule Repairs and/or Replacements**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 0 Pre Approval:

Project Mgr: Sameem Shah

Category: Minor

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

Cost Validation: Published guidelines

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project includes repair/replacement of various components of the Milliken and Great Hall Entrance Vestibules of the Civic Centre to maintain the Civic Centre Facility in a state of good repair and in alignment to the Asset Management Plan/Policy. Funding request is based on actual cost of similar project and life cycle database.

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	285,672	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	285,672	0
HST Impact:	5,028	0
Total Project Cost:	290,700	0

NOTES

\$290,700 - Great Hall Entrance and Milliken Entrance vestibule repair/replacement (1988)
Amount is consistent with the 2020 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Great Hall and Milliken Vestibule					
Operating Funded Life Cycle	290,700	290,700	0	0	0	290,700	0
TOTAL FUNDING	290,700					290,700	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: <input type="text" value="868,800"/>
				Amount Incl HST: <input type="text" value="290,700"/>
				Year in the study: <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21063**

Project Cost: **\$2,000,000**

Project Name: **Theatre-HVAC Replacement**

Commission: Corporate Services

Repair/Replace

Department: Asset Management

Useful Life: 30 Pre Approval:

Project Mgr: Jason Vasilaki

Category: Major

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 3 year Theatre HVAC project began in 2019 with design & consultation and in 2020 with a class A cost estimate to allow an accurate capital budget request for 2021. The 37 year old HVAC system is original to the building and has been deemed at the end of its useful life. This project includes replacement of the venues major HVAC equipment including all air handlers and associated equipment (\$1,382,602) and the building automation system (\$424,198)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,806,800	0
Internal Charges:	80,000	0
External Consulting:	80,000	0
Sub Total:	1,966,800	0
HST Impact:	33,208	0
Total Project Cost:	2,000,000	0

NOTES

Amount requested is consistent with life cycle. There is no expected incremental operating budget impact. This project requires a 10 week shut down for the venue between August 9-October 15, 2021. System will be connected to UHS/MDE to distribute the heating & cooling and fresh air into the Theatre. Energy savings estimated at \$24,400. Incentives estimated at \$13,000.

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL		
Gas Tax	1,908,800	0	0	0	0	0	
Operating Funded Life Cycle	91,200	0	0	0	0	0	
TOTAL FUNDING	2,000,000				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: <input type="text" value="2,739,100"/>
				Amount Incl HST <input type="text" value="91,200"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



BUILDING MARKHAM'S FUTURE TOGETHER
2020 – 2023 Strategic Plan



HVAC Replacement Project

August 5, 2020



Summary

- In 2019, Sustainability & Asset Management conducted the design consultation phase to replace the HVAC systems and Building Automation System at Flato Markham Theatre.
- The HVAC equipment and BAS were original and initially installed in the 1980s. They are at the end of their service life.
- Heating and cooling supply to the existing and new HVAC systems will be by Markham District Energy via Unionville High School.
- Heating and cooling will soon be individually metered and billed for the building per agreement with School Board
- There is a need to improve energy efficiency for this facility and the newly designed systems will accomplish this requirement.



Project Details

- Five (5) large existing air handling units will be disassembled in-place and new units assembled within their respective mechanical rooms.
- Multiple crane lifts to remove and install the units through existing openings will be required.
- The amount of work is very substantial and it is anticipated to take approximately 10 weeks. This will require a complete shut down of the building.



Schedule

In consultation with Theater management and our consultant, the recommended schedule and impacts are as follows:

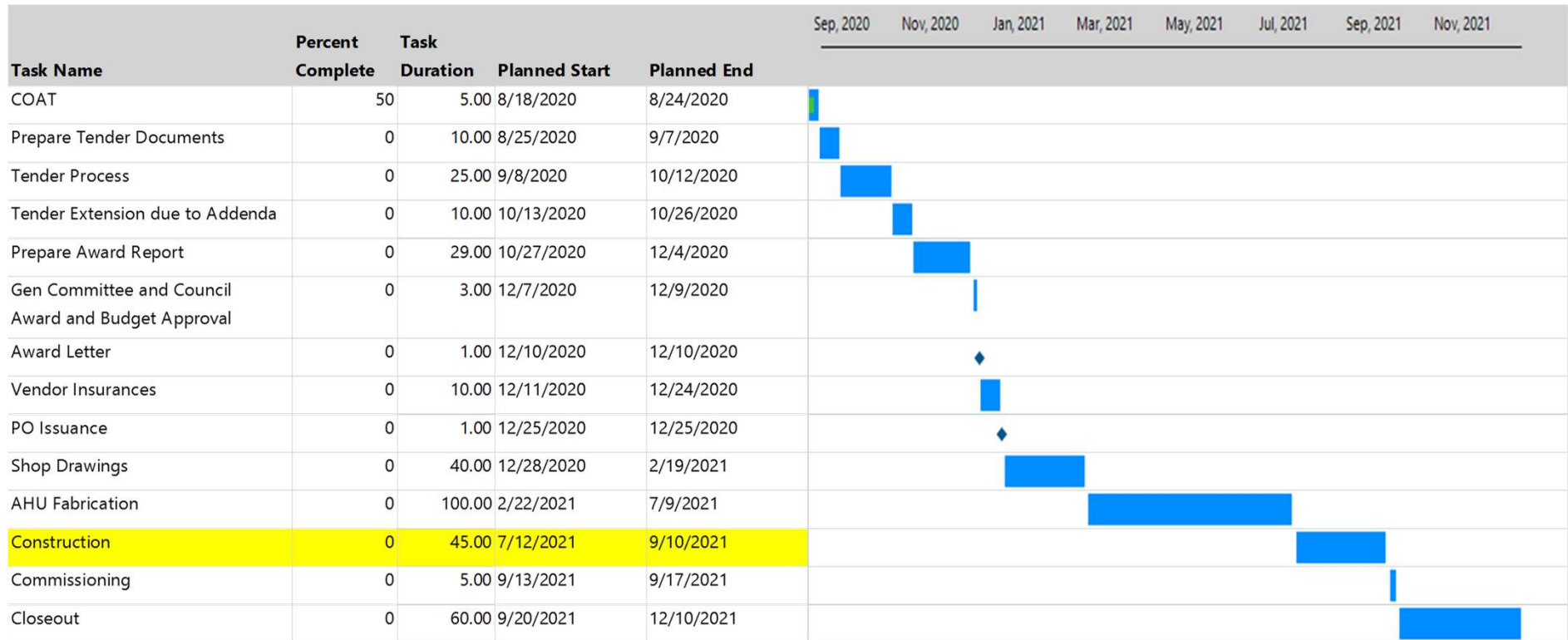
- Construction work is expected to take place beginning of July to mid-September of 2021.
- The time line above:
 - allows for sufficient factory fabrication time of the new units once procured (approximately 6 months lead time required)
 - is beneficial for moderating temperatures within the building during the HVAC shutdown (i.e. no very cold or very hot outdoor temperatures thereby saving the cost impact of temporary A/C or temporary heat)



BUILDING MARKHAM'S FUTURE TOGETHER
2020 – 2023 Strategic Plan



Potential Expedited Schedule





Theatre Closure Impacts

- The Theatre must be temporarily closed to rehearsals and performances during the work due to:
 - public safety
 - construction noise/disturbance
 - no capability to control temperature and humidity to the precise levels that performances require
- Typical season net revenue loss is anticipated to be \$120,000
- During the shutdown, Theatre staff will have to be relocated to work in a suitable location within the Civic Centre.
- The Box Office would remain open for sales but might be required to temporarily relocate also to within the Civic Centre.
- In the event the Theatre re-opens to the public before July 2021 for events that are already booked, construction will begin 1 month later, as a contingency plan.



Budget

- January 2020, a design (Class A) cost estimate was conducted based on complete drawings and specifications, which this budget request is based upon.
- Cost Estimate:

▪ Construction -	\$ 1,806,800
▪ Consulting -	\$ 80,000
▪ HST Impact (on above) -	\$ 33,200
▪ <u>Internal Charges -</u>	<u>\$ 80,000</u>
▪ Total Project Cost	\$ 2,000,000
- \$24,400 estimated annual energy efficiency savings (21% reduction)
- \$13,000 estimated one-time energy conservation incentives



2021 PROJECT FUNDING REQUEST FORM

Number: **21071**

Project Cost: **\$63,300**

Project Name: **SCBA Decontamination Machine**

Commission: Community & Fire Services

New Asset/Expansion

Department: Fire & Emergency Services

Useful Life: 10 Pre Approval:

Project Mgr: Adam Grant

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Request for 2 machines to decontaminate self contained breathing apparatus (SCBA) after exposure to harmful toxins/chemicals. The self contained cleaning process removes residue from soot and other toxins absorbed by SCBA gear (harness, facepiece, and air cylinder) in as little as 5 minutes, and is effective on steel, composite, rubber and steel.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	62,246	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	62,246	0
HST Impact:	1,096	0
Total Project Cost:	63,300	0

NOTES

After each firefighting operation, it is standard procedure for firefighters to launder their bunker gear (jacket, pants, boots) at one of two laundry stations. However, SCBA gear is currently not decontaminated after each operation. Markham Fire Services would like to include the decontamination of SCBA gear after each operation as part of standard procedure. The decontamination practice reduces the risk of developing job related cancers. Cost of each decontamination machine unit is \$31,650.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Tax	63,300	0	0	0	0	0	0	
TOTAL FUNDING	63,300					0	0	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21101**

Project Cost: **\$6,815,800**

Project Name: **Asphalt Resurfacing**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Zoyeb Vahora

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	6,610,428	0
Internal Charges:	89,002	0
External Consulting:	0	0
Sub Total:	6,699,430	0
HST Impact:	116,344	0
Total Project Cost:	6,815,800	0

NOTES

Asphalt Resurfacing of approximately 17.5km of two lane and four lane roads. 6.8km of four lane roads of pavement preservation which is comparable to last year's program. There is no substantial backlog in this program. Laser condition survey conducted bi-annually indicates 2019 pavement condition result shows that 72.9% of the road network is deemed good or better (target = 80%).

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Future Phases	
Gas Tax	6,715,800	0	0	0	0	0	
Operating Funded Life Cycle	100,000	0	0	0	0	0	
TOTAL FUNDING	6,815,800				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: <input type="text" value="6,815,800"/>
				Amount Incl HST <input type="text" value="6,815,800"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21113**

Project Cost: **\$678,900**

Project Name: **Parking Lots- Rehabilitation**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Roads

Useful Life: 20 Pre Approval:

Project Mgr: Zoyeb Vahora

Category: Minor

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

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

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	667,139	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	667,139	0
HST Impact:	11,742	0
Total Project Cost:	678,900	0

NOTES

Rehabilitation of Miller yard inside gate (19,988sqm), and German Mills/Sabiston (1170sqm). 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.

SOURCE(S) OF FUNDING (\$)	Components					TOTAL	Future Phases
	Budget	Miller Yard	Sabiston				
Gas Tax	678,900	641,400	37,500	0	0	678,900	0
TOTAL FUNDING	678,900					678,900	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: <input type="text" value="1,475,600"/>
				Amount Incl HST <input type="text" value="678,900"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

Project	Parking Lot Rehabilitation
2021 Capital Request	\$678,900
Funding Source	Life Cycle Reserve
Description of Program	Asphalt resurfacing of City owned parking lot throughout the City. The overall goal is to maintain an acceptable pavement condition and user satisfaction by implementing timely rehabilitation to extend pavement life and reduce overall maintenance and reconstruction costs of the City's assets.
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. 588/17: Asset Management Planning for Municipal Infrastructure outline asset management requirement related to Municipal infrastructure.
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	Localized Repairs - Parking Lots
Related Maps	n/a
Alignment to the Strategic Plan	Properly paved and well maintained parking lots help reduce accidents and promotes safe movement of traffic reducing within City owned facilities. Contracts within this program call for reharvesting and recycling of construction materials. Strategies include warm mix designs which lowers emissions and utilizes recycled aggregate.



2021 PROJECT FUNDING REQUEST FORM

Number: **21119**

Project Cost: **\$1,017,600**

Project Name: **Block Pruning Initiative - Year 2 of 3**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Parks

Useful Life: 0 Pre Approval:

Project Mgr: Miles Peart

Category: Major

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

Cost Validation: Third party estimate

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The City owns approximately 100,000 street trees. This is a 3 year capital project to prune City trees proactively to improve storm damage resistance and reduce residents complaints which currently are over 2,700 per year. This program will address proactive street tree pruning of 23,333 trees per year through contracted services.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,000,000	777,127
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,000,000	777,127
HST Impact:	17,600	13,677
Total Project Cost:	1,017,600	790,800

NOTES

Phase 1 is 95% complete and has made a noticeable improvement in the neighborhoods which have been completed. Once the 70,000 trees have been pruned the remaining 30,000 trees will be addressed as part of the regular operating budget. The operating budget is being increased by \$50K each year from 2020 to 2022 to ensure a total of \$150K additional operating funding is available by 2023. Currently, the tree inventory is not in a state of good repair & backlog led to this proactive approach to updating the asset.

SOURCE(S) OF FUNDING (\$)	Components						TOTAL	Future Phases
	Funding Type	Budget						
Tax	1,017,600	0	0	0	0	0	790,800	
TOTAL FUNDING	1,017,600					0	790,800	

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
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:

Project: Block Pruning 3 Year Project
Total Project Cost Table

	Project Number(s)	Past Projects (\$)	Current Project (\$)	Future Projects (\$)	Total (\$)
Project Component 1	20197		\$ 1,244,396		\$ 1,244,396
Project Component 2			\$ 1,017,600		\$ 1,017,600
Project Component 3			\$ 790,804		\$ 790,804
Total (\$)		\$ -	\$ 3,052,800	\$ -	\$ 3,052,800
Description of Project	3 year capital project to prune 70% of all City trees to improve storm damage resistance and reduce residents complaints which currently are over 2,000 ACRs per year.				
What was completed in the past? Include timeline of works done.	Year 1 program was 7 complete blocks which represented the highest risk trees. The year 1 program will be 100% complete by December 31, 2020.				
Current project objective	Year 2 of the program will be to complete 6 complete blocks which represent the next highest risk trees. The goal is to start in late fall and be complete by June 1, 2021.				
Description of future work required. Include estimated timing.	Complete block pruning of map grids E5,G4,G5,H6,J4,J5 by June 1, 2021				

Neighbourhood Tree Maintenance Project 2020, 2021 and 2022 Grids





2021 PROJECT FUNDING REQUEST FORM

Number: **21140**

Project Cost: **\$1,620,700**

Project Name: **Corporate Fleet Replacement - Non-Fire**

Commission: Community & Fire Services

Repair/Replace

Department: Operations - Fleet

Useful Life: 5 Pre Approval:

Project Mgr: Raymond Law/Peter Englezakos

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2021 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 - 31 units

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

<u>PROJECT COSTS (\$)</u>	<u>2021</u>	<u>Future Phases</u>
Cost/Quote:	1,592,680	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,592,680	0
HST Impact:	28,031	0
Total Project Cost:	1,620,700	0

NOTES

Useful life varies - 4 to 12 years based on units types. Operations-Non Fleet (\$53k) includes cord trimmers, chainsaws, blowers, etc. 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</u>	<u>Non Licensed</u>	<u>Non Fleet</u>			
Operating Funded Life Cycle	1,620,700	727,633	840,131	52,936	0	1,620,700	0
TOTAL FUNDING	1,620,700					1,620,700	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</u>	<u>Year</u>	<u>Amount</u>	<u>Amount in Study</u>	<u>Life Cycle</u>
Name				Amount in Study: <input type="text" value="2,440,500"/>
				Amount Incl HST <input type="text" value="1,620,700"/>
				Year in the study <input type="text" value="2021"/>
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:				

2021 Corporate Fleet Replacement - Non-Fire

Asset ID	Inventory Description	Model	Mileage (km)	Usage (hours)	Facility	Category	2021 Updated Cost	Project Notes
1232	ONE TON CREWCAB FLATBED DIESEL-C3500 SILV	2013	151,087		OPERATIONS-Licensed	Licensed	62,261	
1240	COMPACT SUV FWD-ESCAPE	2012	80,659		OPERATIONS-Licensed	Licensed	28,854	Deferred from 2020 to 2021
1243	SERVICE BODY SIGN TRUCK C/W POST PULLER-F 550	2013	121,123		OPERATIONS-Licensed	Licensed	90,048	
1421	3.5 YD ARTICULATING LOADER -721 D	2014		9,502	OPERATIONS-Non Licensed	Non Licensed	280,908	
1426	TRACTOR 4 WD WITH CAB-6320	2003		7,011	OPERATIONS-Non Licensed	Non Licensed	160,092	Project 18247 - life extended, deferred to 2021 to be re-submitted
1913	90 ' V BIN STOCKPILING CONVEYOR-	2010		4,370	OPERATIONS-Non Licensed	Non Licensed	90,145	Deferred from 2020 to 2021
1973	TRAILER-TRAILER	2009			OPERATIONS-Licensed	Licensed	7,632	Deferred from 2019 to 2021
1977	3 PT HITCH PTO DRIVEN SANDER-1140P	2009			SIDEWALK-Non Licensed	Non Licensed	4,897	
3321	3/4 TON 4X4 PICK UP C/W 8' SNOW PLOW	2011	121,960		OPERATIONS-Licensed	Licensed	51,378	Previously approved in 2019 (Project 19207) - to be resubmitted in 2021 due to budget shortfall; Updated price based on 090-T-20 - \$50,370 plus 2% inflation
3327	FULL SIZE PICKUP 4X4 WITH 8' ARCTIC PLOW-F250	2013	117,208		OPERATIONS / PARKS-Licensed	Licensed	42,838	
3328	FULL SIZE PICKUP 4X4 WITH 8' ARCTIC PLOW-F250	2013	112,992		OPERATIONS / PARKS-Licensed	Licensed	42,838	
3334	ONE TON CREW CAB FLATBED DIESEL-C3500 SILV	2013	81,822		OPERATIONS-Licensed	Licensed	62,242	
3344	CREW CAB DIESEL 9' DUMP	2010	68,384		OPERATIONS-Licensed	Licensed	41,377	Previously approved in 2019 (Project 19207) - to be resubmitted in 2021 due to budget shortfall; Updated price based on 090-T-20 - \$40,566, plus 2% inflation
3376	16 ` CUBE VAN	2008	93,309		OPERATIONS-Licensed	Licensed	51,328	Previously approved in 2019 (Project 19207) - to be resubmitted in 2021 due to budget shortfall; Updated price based on 090-T-20 - \$50,322 plus 2% inflation
3443	56 HP 2 WHEEL DRIVE TRACTOR C/W CAB-5225	2007		3,622	OPERATIONS-Non Licensed	Non Licensed	51,141	Deferred from 2019 to 2021
3458	4 X 4 TRACTOR LOADER	2007			OPERATIONS-Non Licensed	Non Licensed	127,500	Previously approved in 2019 (Project 19207 - \$85,200) - to be resubmitted in 2021 due to budget shortfall; Updated price based on 108-Q-20 - \$125k, plus 2% inflation
3471	ZERO TURN 60" DIESEL POWERED-ZD21F ZERO TURN	2012		1,532	OPERATIONS-Non Licensed	Non Licensed	15,814	Deferred from 2020 to 2021
3472	ZERO TURN 60" DIESEL POWERED-ZD21F ZERO TURN	2012		1,306	OPERATIONS-Non Licensed	Non Licensed	15,814	Deferred from 2020 to 2021
3493	ZERO TURN MOWER 60" DIESEL POWERED-ZD21F ZERO TURN	2012		1,676	OPERATIONS-Non Licensed	Non Licensed	15,814	Deferred from 2020 to 2021
3494	ZERO TURN MOWER 60" DIESEL POWERED-ZD21F ZERO TURN	2012		1,460	OPERATIONS-Non Licensed	Non Licensed	15,814	Deferred from 2020 to 2021
4036	ZERO TURN 60" REAR DISCHARGE DIESEL -TURN	2011		1,642	OPERATIONS-Non Licensed	Non Licensed	16,501	Deferred from 2019 to 2021
4141	ZERO TURN 60" DIESEL POWERED-ZD21F ZERO TURN	2012		1,682	OPERATIONS-Non Licensed	Non Licensed	15,814	Deferred from 2020 to 2021
4902	ELECTRIC POWERED UTILITY VEHICLE-CARRYALL 1	2011		944	OPERATIONS-Non Licensed	Non Licensed	15,347	
5350	FULL SIZE PICK UP-GMC SIERRA 1500	2008	15,451		MUSEM-1-Licensed	Licensed	31,485	Deferred from 2019 to 2021
6083	COMPACT VAN FWD-GRAND CARAVAN	2013	110,015		ENFOR LIC-Licensed	Licensed	25,284	
6084	COMPACT VAN FWD-GRAND CARAVAN	2013	96,027		ENFOR LIC-Licensed	Licensed	25,284	
6085	COMPACT VAN FWD-GRAND CARAVAN	2013	231,127		ENFOR LIC-Licensed	Licensed	25,712	
6093	COMPACT SUV FWD HYBRID-ESCAPE	2011	131,089		ENFOR LIC-Licensed	Licensed	45,365	Deferred from 2019 to 2021
6095	COMPACT VAN FWD-GRAND CARAVAN	2012	76,312		CLERK-1-Licensed	Licensed	26,994	Deferred from 2019 to 2021
6136	COMPACT CARGO VAN-GRAND CARAVAN	2013	193,246		ENFOR LIC-Licensed	Licensed	25,284	
6139	COMPACT SUV FWD -ESCAPE	2013	99,072		ENFOR LIC-Licensed	Licensed	28,854	
All	Operation Non Fleet < \$5,000 or Misc	2020			OPERATIONS- Operation Non Fleet < \$5,000 or Misc	Operation Non Fleet < \$5,000 or Misc	52,020	
Total Pre-Tax							1,592,680	
HST impact							28,031	
Total Project Cost							1,620,712	
Rounded Off - Project Cost							1,620,700	



2021 PROJECT FUNDING REQUEST FORM

Number: **21177**

Project Cost: **\$1,557,100**

Project Name: **Corporate Capital Contingency**

Commission: Corporate Wide

New Asset/Expansion

Department: Corporate Wide

Useful Life: 0 Pre Approval:

Project Mgr: _____

Category: Major

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

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Total amount of contingency for 2021 applicable capital projects.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	1,557,093	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,557,093	0
HST Impact:	0	0
Total Project Cost:	1,557,100	0

NOTES

Other Internal funding breakdown:
\$8,960 Non-DC Growth, \$3,800 Waterworks reserve, \$2,510 Development fee reserve

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Funding Type	Budget			TOTAL		
DCA	1,206,461	0	0	0	0	0	0
Gas Tax	217,400	0	0	0	0	0	0
Operating Funded Life Cycle	42,600	0	0	0	0	0	0
Other Internal	15,270	0	0	0	0	0	0
Parks Cash-in-Lieu	70,169	0	0	0	0	0	0
Tax	5,200	0	0	0	0	0	0
TOTAL FUNDING	1,557,100				0		0

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

DCA/LIFE CYCLE DETAILS

<u>DCA</u>			<u>Amount in</u>	<u>Life Cycle</u>
<u>Name</u>	<u>Year</u>	<u>Amount</u>	<u>Study</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"/>				



2021 PROJECT FUNDING REQUEST FORM

Number: **21179**

Project Cost: **\$16,600**

Project Name: **Milliken Mills C.C. Main Pool VFD Installation**

Commission: Community & Fire Services

New Asset/Expansion

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Ryan Hanna

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to install a Variable Frequency Drive on the main pool filter pump at Milliken Mills C.C. VFD's work like a dimmer switch and can be programmed to start and stop slowly, eliminating high water pressure that can damage piping and equipment. Unlike "soft start" motor starters VFD's can also be programmed to adjust speed based upon flow and to reduce flow during non-use hours, which is where the electrical savings are realized.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	16,288	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	16,288	0
HST Impact:	287	0
Total Project Cost:	16,600	0

NOTES

A Variable Frequency Drive (VFD) is a type of motor controller that allows the operator to vary the frequency and voltage supplied to the electric motor. Funding source: Markham Energy Conservation Office (MECO). E3: Annual Savings on electricity \$5,726, Payback 2.9 years

SOURCE(S) OF FUNDING (\$)		Components					Future Phases
Funding Type	Budget				TOTAL	Phases	
Other Internal	16,600	0	0	0	0	0	
TOTAL FUNDING	16,600				0	0	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	-\$4,294	\$0	-\$4,294

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				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:



2021 PROJECT FUNDING REQUEST FORM

Number: **21180**

Project Cost: **\$47,000**

Project Name: **Recreation Waste Heat Recovery Systems**

Commission: Community & Fire Services

New Asset/Expansion

Department: Recreation Services

Useful Life: 15 Pre Approval:

Project Mgr: Ryan Hanna

Category: Minor

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

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Solar Ontario was commissioned to inspect and evaluate four (community centre) swimming pools and provide an initial mechanical and economic feasibility report about the installation of pool water heat recovery systems. All of the pools were dropping water at volumes that exceeded the amounts necessary by code. In some cases the volume of water dropped was several times the necessary amount. Providing a device/machine that controls and regulates the exchange of water from the pools can and will dramatically reduce and potentially eliminate the large excesses of water being dropped from the pools.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	39,187	0
Internal Charges:	0	0
External Consulting:	7,000	0
Sub Total:	46,187	0
HST Impact:	813	0
Total Project Cost:	47,000	0

NOTES

Water Heat Recovery Systems capture lost heat from hot water going down the drain and uses it to pre-heat cold water entering the water heater. Energy is saved when using hot water at the same time it is flowing down the drain. Funding source: Markham Energy Conservation Office (MECO).

E3:
Pan Am annual savings \$3,414, payback 5.86 years
Thornhill annual savings \$5,223, payback 2.87 years

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	Consulting	Pan Am	Thornhill	Contingency	TOTAL	
Other Internal	47,000	7,123	20,352	15,225	4,274	46,974	0
TOTAL FUNDING	47,000					46,974	0

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	\$0	-\$4,319	\$0	-\$4,319

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study	Life Cycle
				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:				



2021 PROJECT FUNDING REQUEST FORM

Number: **21181**

Project Cost: **\$1,835,800**

Project Name: **Elgin Mills -Victoria Sq. Blvd to McCowan Road (Design)**

Commission: Development Services

New Asset/Expansion

Department: Engineering

Useful Life: 0 Pre Approval:

Project Mgr: Andrew Crickmay

Category: Major

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

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Detailed Design for Widening of Elgin Mills Road from Victoria Square Blvd to McCowan Road.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	0	31,058,702
Internal Charges:	156,750	3,468,977
External Consulting:	1,650,000	4,688,701
Sub Total:	1,806,750	39,216,380
HST Impact:	29,040	629,154
Total Project Cost:	1,835,800	39,845,500

NOTES

After completion of Class EA study for Elgin Mills from Victoria Square Blvd to McCowan Rd in 2020. The detailed design is recommended to be completed in anticipation of future growth within the North District. Future phase will be required for construction. Construction cost estimate will be available upon completion of detailed design. Staff negotiating with North Markham Developer group to potentially fund the Design and Construction of this section of Elgin Mills.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
Funding Type	Budget					TOTAL	Phases
DCA	1,835,800	0	0	0	0	0	43,483,200
TOTAL FUNDING	1,835,800					0	43,483,200

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

DCA/LIFE CYCLE DETAILS

DCA	Year	Amount	Amount in Study	Life Cycle
Name				Amount in Study: <input type="text"/>
Hard - Roads - Elgin Mills Rd - Victoria Square to Warden Ave	2025	611,934	10,437,827	Amount Incl HST <input type="text"/>
Hard - Roads - Elgin Mills Rd - Warden Ave to Kennedy Rd	2027	611,933	10,437,827	Year in the study <input type="text"/>
Hard - Roads - Elgin Mills Rd - Kennedy Rd to 1000m E	2026	611,933	4,794,820	
Hard - Watermain - Elgin Mills Rd (400mm) - Victoria Sq Blvd to Warden Ave	2026	0	2,034,149	
Hard - Properties Acquisition - Structures, Mid-Blocks & Ramps - Elgin Mills Rd - Victoria Square to Warden Ave	2024	0	2,452,381	
Hard - Properties Acquisition - Structures, Mid-Blocks & Ramps - Elgin Mills Rd - Kennedy Rd to 1000m E	2025	0	1,132,719	
Hard - Illumination - Elgin Mills Road - Kennedy Rd to 1000m E of Kennedy Rd		0	416,952	
Hard - Watermain - Elgin Mills Rd - Kennedy Rd to McCowan Rd	2025	0	2,065,012	

Hard - Illumination - Elgin Mills Road - Victoria Square Blvd to Warden Ave		0	904,301
Hard - Sidewalks - Elgin Mills Road - Victoria Square Blvd. to Warden Ave		0	1,781,208
Hard - Illumination - Elgin Mills Road - Warden Ave to Kennedy Rd		0	904,301
Hard - Properties Acquisition - Structures, Mid-Blocks & Ramps - Elgin Mills Rd - Warden Ave to Kennedy Rd	2026	0	2,452,381
Hard - Watermain - Elgin Mills Rd - Warden Ave to Kennedy Rd	2024	0	2,065,012
Hard - Intersection - Elgin Mills Rd - Collector Rd 'E'		0	622,296
Hard - Intersection - Elgin Mills Rd - Collector Rd 'T'		0	622,296
Hard - Intersection - Elgin Mills Rd - Collector Rd 'K'		0	622,296
TOTAL FUNDING		<u>1,835,800</u>	<u>43,745,778</u>

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



2021 PROJECT FUNDING REQUEST FORM

Number: **21017**

Project Cost: **\$101,800**

Project Name: **Secondary Plans - General**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval:

Department: Planning

Category: Major

Project Mgr: Biju Karumanchery/Marg Wouters

Cost Validation: Recent awards

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

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Funds are required to cover overages in secondary plan studies resulting from circumstances including low budget estimates and expanded scope of work as directed by Council.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS (\$)	2021	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	101,800	0

NOTES

These funds would also be used as follows: \$50,000 to top up the 2019 budget approval of the Markville Secondary Plan; \$25,000 to fund additional natural heritage work for the Milliken Secondary Plan, and \$25,000 to coverage additional public engagement meetings for the Markham Road-Mount Joy Secondary Plan.

SOURCE(S) OF FUNDING (\$)	Components						Future Phases
	Budget	TOTAL				Future Phases	
DCA	91,620	0	0	0	0	0	0
Development Fees	10,180	0	0	0	0	0	0
TOTAL FUNDING	101,800				0	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
General Government - Various Studies	2021	181,620	1,593,063	Amount in Study: <input type="text"/>
TOTAL FUNDING		181,620	1,593,063	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:

Funds are included in the studies section of the DC Background Study.