

CAPITAL FUND - 2017 Capital Projects

		2017	
		Budget	IT
		Recommended	Reserve
		(\$000s)	(\$000s)
General Government	Page		
Information Technology			
Network Upgrades	145	25	25
GIS Enhancements	148	40	40
Server and Storage Replacements	150	50	50
Communication Infrastructure Renewal	152	25	25
Security Cameras	154	20	20
Secondary Site & Data Replication	156	20	20
Website/ Service Enhancements	158	15	15
Virtualization	169	25	25
Door Access Controls	160	20	20
Multi-function Devices and Printers	162	50	50
Subtotal		290	290

CAPITAL FUND - 2017 Capital Projects

		2017			MACA
		Budget	Formula		Capital
		Recommended	Funding	Grants	Grant
		(\$000s)	(\$000s)	(\$000s)	(\$000s)
Community Services	Page				
Arenas					
Multiplex Multi-use Flooring	243	50	50		
Parks/Trails					
Yellowknife Rotary Park -Trail Extension	183	20	10		10
Lakeview Cemetery Expansion	244	340			340
Moyle Park - Multi-use Sport Pad	246	30	30		
Surfacing of Niven Lake Trail	248	210	210		
Tennis Courts - Resurfacing	249	100			100
Pool					
Re-siding of Exterior Walls	251	230	150	80	
Subtotal		980	450	80	450



CAPITAL FUND - 2017 Capital Projects

Department/Division: Community Services/Facilities Division
Project: Multiplex – Multi-Use Flooring

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		50,000		50,000
O&M				
Other O&M Expenses				
Total:				
Formula Funding		50,000		50,000
Grants				

Purpose

To purchase a Terracover floor covering for converting the Shorty Brown Arena from an ice surface to one which will allow for non-ice activities.

Background

In 2010 the City received a grant to purchase an ice cover for the Ed Jeske Arena in the Multiplex. This multi-use cover (Terracover) allows the City the flexibility to cover and protect the ice surface while making it possible for non-ice activities (bingos, tradeshow, concerts etc.) to take place. Currently, only the Ed Jeske Arena has a full ice cover, with corners that are custom made to fit that rink only. If the City were to purchase another set of corners, specifically designed for the Shorty Brown rink, the same cover could be used in both the Ed Jeske Arena and the smaller Shorty Brown Arena, thereby opening the use of the smaller rink to non-ice events as well. The City, therefore, proposes the purchase of Terracover corners custom-fitted to the Shorty Brown Arena.

This project will allow the City to manage its assets wisely by strategically investing in infrastructure to optimize function and service.

Triple Bottom Line

Social

By creating a more diverse facility, the City will give residents more access to public programs, services and spaces.

Economic

By managing our assets properly we will be able to maximize use of the facility, which should result in increased revenue.

Environmental

This project will allow the Department to maintain and enhance services and programs to the community.

Operational Impact

There will be no operational impact.

CAPITAL FUND - 2017 Capital Projects

Department/Division: Community Services/Facilities Division
 Project Lakeview Cemetery Expansion

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		340,000		340,000
O&M Expenses				
Total:				
MACA Capital Grant		340,000		340,000
Grants				

Purpose

To expand the Lakeview Cemetery to meet the interment needs of the community.

Background

Lakeview Cemetery has been in use since the late 1940s. There are approximately 15 to 20 interments annually, a number which has been steadily increasing over the past few years. The active area of the cemetery covers an area of 17,500 square meters which, until recently, has been adequate for interments, including cremations and regular casket burials. In 2009, the area was expanded to the west, requiring the removal of trees and addition of topsoil. This expansion used up the last of the easily accessible land, and it is now necessary to undertake further development of the cemetery to ensure it continues to meet the needs of the community.

In 2015 a Lakeview Cemetery Expansion study was completed by Hilton Landmarks Inc. The study recommended that the City expand the cemetery in two phases as illustrated below. In 2017 the first phase of expansion will occur in Area 1 (see map below). This will cover an area of 2.3 acres and allow for 1725+ casket lots. Area 1 will provide up to 75+ years of casket burials for the community. Expansion into Area 1 will cost \$340,000. Area 2 will cover 2.11 acres developable land but at a cost of \$1,317,165 and will provide for 1,660

in-ground burials.

This project will allow the City to manage its assets wisely by strategically investing in infrastructure to optimize function and service.

Triple Bottom Line

Social

The cemetery is a place of respect and reflection for the residents of Yellowknife and, as such, it should be kept in a condition that is appropriate for its use.

Economic

The management of public and corporate assets is optimized and based on continuous improvement.

Environmental

To maintain, respect, preserve and enhance the current facility.

Operating Cost Impact

There will be an impact on O&M, as the area will need to be maintained as a Class A park after its completion. The anticipated expansion is 2.3 acres, with an annual O&M budget of approximately \$12,000 comprised of \$5,000 for labor and \$7,000 for materials.





CAPITAL FUND - 2017 Capital Projects

Department/Division: Community Services/Facilities Division
Project Moyle Park – Multi-Use Sport Pad

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		30,000		30,000
O&M Expenses				
Total:		30,000		30,000
Formula Funding		30,000		30,000
Grants				

Purpose

To create a multi-purpose asphalt pad which would allow for use as a basketball court in the summer months and convert to an ice rink in the winter.

Background

Through public consultation with the neighbours, the playgrounds were designed for 5 to 12 year-olds. The neighbours have since indicated that there are older children in the area who are not challenged by the play apparatus and have requested an area to play basketball and hockey. A multi-purpose asphalt pad would encourage the use of the park in all seasons, by a greater number of children.

This project will enhance the ability of the park to accommodate various age groups in all seasons and provide recreational opportunities for the older users. It will increase the opportunities for youth to be active and maintain a healthy life style.

This project will allow the City to manage its assets wisely by strategically investing in infrastructure to optimize function, service and safety.

Triple Bottom Line

Social

Yellowknife has a natural and built system that contributes to physical, social, and mental well-being of its residents.

Economic

The management of public and corporate assets is optimized and based on continuous improvement.

Environmental

By managing our assets properly we will be able to optimize the use and longevity of the park.

Operational

There will be no operational impact.





CAPITAL FUND - 2017 Capital Projects

Department/Division: Community Services / Facilities Division
 Project: Surfacing of Niven Lake Trail

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		210,000		210,000
O&M Expenses				
Total:				
Formula Funding		210,000		210,000
Grants				

Purpose

Project Description

Niven Lake Trail is approximately two kilometres in length and 2,764 square metres in area. Since the trail was created, the nearby subdivision has expanded, leading to a dramatic increase in trail use. It is proposed to widen the trail from three to four metres and asphalt it, thus making it more adaptable and safer for multi-use. Widening the trail to four metres would allow for the option of bicycle lanes. The cost to widen and pave the trail is \$210,000 (\$105 per square meter x 2,000 metres). This cost covers preparing the trail for asphalt and the asphalt itself.

Niven Lake Trail is now the City's second main commuter trail, and is used extensively by walkers, runners, and cyclists from the Niven Lake subdivision. Over the years the demand on the trail has increased along with the size of the surrounding community. In 2004 there were 71 residential units in the Niven area while, today, there are over 400 units.

This project will allow the City to manage its assets wisely by strategically investing in infrastructure to optimize function, service and safety.

Triple Bottom Line

Social

Yellowknife has a natural and built environment that contributes to the physical, mental, and social well being of all of its residents.

Economic

Yellowknife's high quality of life and attractive physical environment makes it a desirable place to live, work and invest.

Environmental

The City strives to maintain high quality trails which will remain accessible for all.

Operational Impact

There will be no additional costs for maintenance, as the trail falls within the Facilities Division's normal operations budget.



CAPITAL FUND - 2017 Capital Projects

Department/Division: Community Services/Facilities Division
 Project Tennis Courts - Resurfacing

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		100,000		100,000
O&M Expenses				
Total:				
MACA Capital Grant Grants		100,000		100,000

Purpose

To protect the integrity of the game of tennis and to ensure longevity of our assets it is proposed to re-surface the City’s eight tennis courts.

Background

The City has tennis courts at three locations in Yellowknife: Niven Beach (three courts), Somba K’e Park (three courts), and the City reservoir (two courts), all of which are heavily used by the Yellowknife Tennis Club and drop-in users. Over the past few years, the protective rubber surface on these courts has started to peel away through a combination of use and age.

It is proposed that the City use a 100% acrylic tennis court surface for this project. This material is formulated to resist fading and will withstand a variety of weather conditions, from ice and snow to intense heat and ultraviolet light.

The tennis courts are among the City’s most popular recreational facilities over the summer months, so it is important to use good quality, durable products.

This project will allow the City to manage its assets wisely by strategically investing in infrastructure to optimize function, service and safety.

Triple Bottom Line

Social

Yellowknife has a natural and built system that contributes to physical, social, and mental well-being of its residents.

Economic

The management of public and corporate assets are optimized and based on continuous improvement.

Environmental

By managing our assets properly we will be able to optimize the use and longevity of the park.

Operational

There will be no operational impact.

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CAPITAL FUND - 2017 Capital Projects

Department/Division Community Services / Program Division
 Project Ruth Inch Memorial Pool – Re-Siding of Exterior Walls

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		230,000		230,000
O&M Expenses				
Total:		230,000		230,000
Formula Funding		150,000		150,000
Sport Grant		80,000		80,000

Purpose

To re-side the exterior of the Ruth Inch Memorial Pool to ensure that the life cycle of the Pool will be met or exceeded.

Background

Ruth Inch Memorial Pool opened its doors to the public in the fall of 1988 and continues to be popular among residents and visitors alike. The proposed project would cover the exterior walls of the building with siding. This would require the removal of a portion of the existing stucco finish to inspect for moisture penetration and damage to the insulation and vapor barrier. The building would then be resealed with rigid insulation and clad with metal siding.

A life cycle facility analysis of the Pool was conducted by Williams' Engineering identified many issues that needed to be addressed to ensure the building will meet or exceed its life expectancy. The study found that the exterior finish is showing signs of deterioration due to the combination of extreme weather outside the building and high humidity inside. If the problem with the outer walls is not dealt with soon, moisture will penetrate the walls, leading to deterioration of materials, and allowing mold and mildew to develop.

Operating Cost Impact

No O&M funds have been directed specifically to the exterior of the building. \$85,000 annual is budgeted for Building Maintenance. The

majority of the O&M building maintenance is for the interior of the building with the remaining used to cover graffiti on the exterior walls and to replace doors and windows.

Triple Bottom Line

Social

This project will provide a safe and comfortable environment for those who wish to participate in the City's programs and other recreational opportunities.

Economic

This project implements the City's asset management plan, ensuring that the Ruth Inch Memorial Pool can provide programs and services to the citizens of Yellowknife for many years to come.

Environment

By maintaining the integrity of this building, the City will reduce energy loss and its impact on the environment.

Operational Impact

None

(cont'd ...)



CAPITAL FUND - 2017 Capital Projects

		2017	
		Budget	Formula
		Recommended	Funding
		(\$000s)	(\$000s)
Public Safety	Page		
Directorate			
Wildland Fire Mitigation -Emergency Measures	188	125	125
Municipal Enforcement			
Radar Equipment Replacement	191	5	5
		130	130
Fire & Ambulance			
Fire Safety House	257	100	100
Fire Extinguisher Trainer	254	12	12
Emergency Medical Services Training Manikin	255	115	115
Propane Fueled Fire Trainer	256	90	90
		317	317
Subtotal		447	447

CAPITAL FUND - 2017 Capital Projects

Department/Division Public Safety / Fire and Ambulance Division
Project Fire Extinguisher Trainer

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		12,000		12,000
O&M				
FTE				
Other O&M Expenses				
Total:		12,000		12,000
Formula Funding		12,000		12,000
Grants				

Purpose

To purchase a training device that teaches individuals the basic use of fire extinguishers.

Background

This training equipment would enable firefighters to give fire extinguisher training to other city employees and the general public without the use of hydro-carbon fuels. This equipment makes fire extinguisher training safer and more environmentally friendly. By using this type of trainer, it eliminates the time consuming cleanup and expense associated with using an actual extinguisher which will allow the YKFD to train more people in less time, an increase in efficiency.

Triple Bottom Line

Social

The extinguisher trainer will allow for safe training in the use of the cheapest and most effective fire prevention apparatus typically found in our homes and vehicles.

Economic

The extinguisher trainer is an excellent investment in our community, not

only for YKFD staff, but City staff in any facility and for the general public during YKFD open houses or other events. Fire prevention and promotion of safe practices prevent the loss of life and property.

Environmental

This type of training apparatus allows training without the use of actual fire extinguishers, saving the environment by not over-using any product and keeping chemicals out of our eco-system.

Operational Impacts

The impact on operations both inside and outside of the YKFD (other City Departments) will be minimal.



CAPITAL FUND - 2017 Capital Projects

Department/Division Public Safety / Fire and Ambulance Division
 Project Emergency Medical Services (EMS) Training Manikin

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		115,000		115,000
O&M Expenses				
Total:		115,000		115,000
Formula Funding		115,000		115,000
Grants				

Purpose

To purchase a real-life training manikin that will help the Yellowknife Fire Division (YKFD) staff to continue to train and enhance their skill-sets.

Background

The City of Yellowknife responds to approximately 3,500 emergency calls for service annually, and more than 2,800 of those calls are for pre-hospital care (medivac, ambulance). Of all the statistics kept by the Yellowknife Fire Division, pre-hospital calls have increased every year for the past 10 years.

To ensure that YKFD staff review every possible pre-hospital scenario, training and re-certification of EMS protocols are very important. This state-of-the-art training manikin will improve our EMS delivery to the general public. It simulates working with a real patient, giving our emergency responders a chance to train and refresh their skills based on actual medical situations.

The manikin simulates all medical problems and speaks to the emergency responders describing what the patient is feeling to coincide with how the patient presents those symptoms, allowing for a better training event. In emergency services, those organizations that use new technology to train are the same organizations that are recognized for providing excellent customer service, something the City strives continuously to attain.

Triple Bottom Line

Social

The training manikin will ensure that we continue to have a safe city through the training and recertification of medical skills at the YKFD so that we can respond appropriately when a resident requires an ambulance.

Economic

The manikin is an investment in infrastructure, with the amount of money spent on equipment and training, a simulator or manikin for training towards real life scenarios will allow YKFD staff to continuously improve on their EMS skills.

Environmental

There may be some environmental benefits to obtaining a training manikin, but they cannot be determined at this time.

Operational Impacts

There should be minimal operational impacts associated with the purchase of a training manikin, aside from software or other computer updates that may be required in the future. The ability to obtain training reports from the manikin will also allow the YKFD to share those results with our contracted medical director to further enhance service to our residents.

CAPITAL FUND - 2017 Capital Projects

Department/Division Public Safety / Fire and Ambulance Division
Project Propane-Fueled Fire Trainer

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		90,000		90,000
O&M Expenses				
Total:		90,000		90,000
Formula Funding		90,000		90,000
Grants				

Purpose

To purchase a propane-fueled fire trainer to allow the Yellowknife Fire Division (YKFD) to train on exterior live fires in accordance with National Fire Protection Association (NFPA) 1001.

Background

These live fire trainers are designed to provide flexibility for emergency service providers and their training strategies. They are usually lightweight and can function as a stand-alone system or within a prop like a car, propane tank, pallet or within a dumpster. This provides different training scenarios in accordance with NFPA 1001 which is a job requirement for any fire fighter.

Fire trainers may also have an auxiliary burner connection within some of the props to allow for additional training and, to extend the life of the equipment, props are water cooled using water from the YKFD connection.

Triple Bottom Line

Social

The live fire trainer properly trained staff that can deal with a variety of fire scenarios, allowing for quick deployment in the event of an actual emergency and possibly saving more of the structure.

Economic

The fire trainer is an investment in the training of the City's staff and ensures their skills are kept up to date. This infrastructure investment is particularly important, given that the City only has 24 full-time firefighters and minimal assistance in close proximity.

Environmental

Being proactive with fire training could prevent further dollar loss to the community by limiting large fires within homes or larger buildings and allowing staff to be able to action those fire scenes more effectively.

Operational Impacts

The impact on operations outside of the Fire and Ambulance Division will be minimal. Additional propane will be required and there may be a future need for operational funding for repairs. The Division's budget should be able to accommodate this.



CAPITAL FUND - 2017 Capital Projects

Department/Division Public Safety / Fire and Ambulance Division
 Project Fire Safety House

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		100,000		100,000
O&M Expenses			1,000	
Total:				100,000
Formula Funding		100,000		100,000
Grants				

Purpose

To allow for the purchase and use of a fire safety house to enable the Yellowknife Fire Division to proactively educate youth about home fire prevention techniques.

Background

Today's prevention activities need to be more creative to capture the attention of young audiences, and fire safety house projects have proven to be an effective way to teach our youth about fire safety. There are numerous emergency agencies in southern Canada utilizing trailers to further educate youth, by showing real examples of emergency situations within one trailer unit.

The ability to mobilize our community education and prevent program with a fire safety house trailer is paramount in educating youth and residents at community events. A fire safety house can teach children what they should do in the case of fire within their home, if they see smoke or feel a warm door. At community events, the fire safety house can be set-up to instruct residents on smoke-detector safety, the importance of planning for a potential house fire with their family or many other proactive safety techniques.

Triple Bottom Line

Social

The fire safety house will ensure that we continue to have a safe city through the education of all residents in proactive advice or direction in the event of a potential emergency within the home.

Economic

The fire safety house is a project that demonstrates the City's proactive encouragement of a creative community – educating our youth on fire safety directly at their school or community event and giving proactive solutions to residents in safety around their home.

Environmental

Being proactive with fire education saves lives and dollar loss to the community by preventing large fires within homes or larger buildings, putting less strain on essential services (personnel, water resources).

Operational Impacts

The provision of proactive education in our community should allow for less impact on our emergency personnel in the longer-term in dealing with actual emergency situations. Education in conjunction with better building practices and safety code adoption will ensure less loss of life from potential home fires.

CAPITAL FUND - 2017 Capital Projects

		2017		Downtown	
		Budget	Formula	Development	
		Recommended	Funding	Grants	Reserve
		(\$000s)	(\$000s)	(\$000s)	(\$000s)
Planning & Development	Page				
50 th Street Revitalization	259	2,100	1,100	500	500
Subtotal		2,100	1,100	500	500



CAPITAL FUND - 2017 Capital Projects

Department/Division Planning and Development
 Project 50th Street Revitalization (Streetscaping and
 50/50 Programmable Plaza)

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost	2,100,000	1,400,000	750,000	4,250,000
O&M Expenses		10,000	30,000	40,000
Total:				
Formula Funding	1,100,000	1,400,000	750,000	3,250,000
Downtown Development Reserve	500,000			500,000
Grants (CanNor)	500,000			500,000

Purpose

To revitalize the “heart” of the City (Downtown 50th Street) with targeted investment which addresses 50th Street streetscape, the redevelopment of municipally acquired lots (i.e. 50/50 corner and vacant lots), and potential partnerships with the Centre Square Mall REITs and others.

Background

Realizing Council’s vision of revitalizing the Downtown requires a committed effort including coordinated capital investment. Over the past five years the City has made significant amenity improvements on Old Airport Road and the Old Town Waterfront with investments exceeding \$5 million. Despite identifying Downtown as a higher priority in Council’s Goals and Objectives, commensurate investment in the core has not occurred. This lack of municipal investment has implications on Downtown residential growth targets as revitalization is needed to attract private sector investment. From a residential growth perspective the 2011 General Plan targets 1/3 of future development toward the Downtown over a 10 year period, with the balance toward “greenfield” areas. Over the past 5 years less than 10% of this growth has taken place in the Downtown, while “greenfield” development continues to significantly exceed targets. Similarly only 12% of the required 30% of Land Development Fund revenues (\$3.2 million of \$25 million) has been invested in “revitalization

initiatives” over the past 5 years. The proposed project is only one component of a concerted effort needed to revive the Downtown.

The project has been a result of City’s ongoing efforts to revitalize the Downtown through land assembly and redevelopment. The focus is streetscaping 50th Street, developing a programmable commercial plaza, and providing future long-term opportunities for attracting an institutional revitalization anchor. A central component of the proposed initiative entails partnership opportunities with the Centre Square Mall REITs to encourage upgrades to their building including a new entranceways, façade upgrades, windows and retrofits for expanded commercial space. It is apparent this partnership component is going to take time and require demonstrated capital commitment from the City.

In year 1 (2017) the funds allocated could be either targeted to the streetscaping portion or the programmable plaza contingent upon Council direction.

Triple Bottom Line

The project aligns with a number of plans including the Smart Growth Development Plan, the General Plan, Economic Development Strategy, and the Tourism Development Strategy.

Social

Investment in the Downtown is required to improve quality of life, pride, and cultural identity. The initiative creates a safer and healthier neighbourhood for all residents by diversifying the land use mix and promoting active transportation. The project creates the opportunity for ongoing community partnerships and cooperation between business, non-governmental organizations and other levels of government. While the programmable plaza has a strong business focus it also provides an important public realm for all Yellowknife residents to enjoy. This private/public space balance in the heart of the City is vital to Yellowknife's character, identity, and cultural diversity. Without it the benefits of the social contract and broader public good are diminished along with the hope of improving the associated issues of homelessness and addictions.

Economic

Downtown investment is a "smart" allocation of capital as development in this area generates the highest tax revenues for the City while minimizing the infrastructure deficit. The proposed project revitalizes the core by encouraging business investment, tourism, and a "sense of place". The initiative provides the opportunity to address mall vacancies and adjacent underutilized properties and buildings, while providing opportunities for business incubation (i.e. food trucks, special events) and public space.

Numerous buildings in the area (on 50th and 51st Street) are in significant decline and the trend of vacancies projected five years ago continues, suggesting further redevelopment is imminent. If the broader objective of land assembly by the City, GNWT, and/or private sector continues, opportunities for institutional anchors (i.e. university, library, cultural centre) become increasingly more viable for the neighbourhood. The programmable plaza and streetscape project an optimistic future that supports this vision.

Environmental

A compact City with a mix of land uses increases active modes of transportation and reduces the number of motorized trips people take. A more pedestrian/bicycle friendly streetscape encourages active transportation. The programmable plaza would service the entire Downtown and provide a public recreation component that that future residential intensification requires.

Operational Impacts

General maintenance will be required for operations depending on the final design. Typical impacts include maintenance such as garbage pick-up, power costs, and landscaping. The latter could be reduced through irrigation and concurrent infrastructure improvements. It is envisioned that general maintenance expenses would eventually be offset through temporary and long-term lease arrangements with commercial operators (i.e. the mall), artists, vendors, and event rental space. Free events and gatherings will serve to increase the vitality of the area and incubate "start-ups", thereby encouraging the health and private sector stewardship of the Downtown.



CAPITAL FUND - 2017 Capital Projects

		2017	
		Budget	M.E.R.
		Recommended	Reserve
		(\$000s)	(\$000s)
Public Works & Engineering	Page		
Fleet Management	263		
1167-06 F250 4X4		65	65
1106-07 Polaris Snowmobile S07PT6HS		15	15
1115-07 Polaris Snowmobile S07PT6HS		15	15
1049-13 F-150 XLT		64	64
1125-04 F-150 pilot truck		36	36
1061-07 RAM 1500		37	37
1102-04 F-350 W/Service Body		43	43
2064-07 LT8500 Sterling Haul		164	164
1069-07 E-150		42	42
1160-05 60" Exmark Mower		15	15
2109-01 E-350 SD Ambulance		250	250
2120-98 Ford LT8513 Water Tanker		332	332
T014-97 Tandem Tilt Trailer		12	12
		1,090	1,090

		2017		
		Budget	Formula	Gas Tax
		Recommended	Funding	Rebate
		(\$000s)	(\$000s)	(\$000s)
	Page			
Community Energy Plan (CEP) Initiatives	206			
Energy Coordinator		100	100	
Heat Pipe from Ph#1 to WTP		150		150
Solar Panels		110		110
Community Outreach		20	20	
Interior LED Lighting		110		110
Air Source Heat Pumps		12		12
Centralized Boiler System		1,075	435	640
		1,577	555	1,022

CAPITAL FUND - 2017 Capital Projects

		2017				MACA
		Budget	Formula	M.E.R.	Gas Tax	Capital
		Recommended	Funding	Reserve	Rebate	Grant
		(\$000s)	(\$000s)	(\$000s)	(\$000s)	(\$000s)
Engineering & Garage		Page				
Traffic Lights Communications & Video Detection Equipment	217	80	80			
Roads & Sidewalks						
Road Rehabilitation	220	2,400	-			2,400
Intersection Widening & New Traffic Light Installation	264	500	500			
		2,980	580	-	-	2,400
Solid Waste Management		Page				
Landfill						
Baling Facility Mechanical Upgrades	266	25	25			
Centralized Composting Program	228	700			700	
		725	25	-	700	-
Water & Sewer Infrastructure Replacement		236	3,550		3,550	
		3,550	-	-	3,550	-
PW Subtotal		9,922	1,160	1,090	5,272	2,400



CAPITAL FUND - 2017 Capital Projects

2017 Fleet Replacement Schedule

Unit #:	Description:	Year:	Class:	Replace. Year:	Estimated Budget:	End Use:
1167-06	F250 4X4	2006	2	2016	65,000.00	Low priority role.
1106-07	Polaris Snowmobile S07PT6HS	2007	1	2017	15,000.00	Low priority role.
1115-07	Polaris Snowmobile S07PT6HS	2007	1	2017	15,000.00	Low priority role.
1049-13	F-150 XLT	2013	2	2017	64,260.00	Low priority role.
1125-04	F-150 pilot truck	2004	2	2014	36,280.00	Low priority role.
1061-07	RAM 1500	2007	2	2017	36,280.00	Low priority role.
1102-04	F-350 W/Service Body	2004	2	2014	42,850.00	Low priority role.
2064-07	LT8500 Sterling Haul	2007	4	2014	163,780.00	Trade in.
1069-07	E-150	2007	2	2017	41,600.00	Low priority role.
1160-05	60" Exmark Mower	2005	1	2017	15,300.00	Auction.
2109-01	E-350 SD Ambulance	2001	8	2017	250,000.00	Trade in.
2120-98	Ford LT8513 Water Tanker	1998	6	2017	332,350.00	Trade in.
T014-97	Tandem Tilt Trailer	1997	4	2017	11,530.00	Auction.
					1,089,230.00	

City of Yellowknife Fleet Replacement Cycle Guidelines Summary:

Class	Description:	Examples:	Life Cycle:
1	Small Equipment	Riding mower, ground thaw, line painter, snowmobiles, ATVs, etc.	Different replacement cycles dependant on use.
2	Light Duty	Cars, vans, half ton trucks, 3/4 ton trucks.	Review after 7 years, replace after 10 years.
3	Medium Duty	One ton to 5 ton trucks, includes zambonis.	Review after 6 years or 100,000 kms, replace after 10 years.
4	Heavy Duty	Trucks/ Trailers used for sanding, snow removal, waste removal, etc.	Review after 6 years or 6000 hrs, replace after 12 years.
5	Heavy Equipment	Loaders, dozers, excavators, backhoes, plows, etc.	Review after 8 years or 10,000 hrs, replace after 12 years.
6	Mobile Tractors	Heavy rollers, sander bodies, steamers, etc.	Review after 8 years or 10,000 hrs, replace after 10 years.
7	Municipal Enforcement	Cars, trucks, SUV ("sport utility vehicles").	Replace after 4 years or 100,000 kms.
8	Emergency Equipment	Fire trucks, tankers, aerial ladder, ambulance, etc.	Replaced based on industry standards and NFPA requirements.
9	Seasonal Vehicles	Any vehicle replaced but still servicable, summer trucks, etc.	Not replaced, removed disposed of if repair costs exceed \$500.
10	Stationary Engines	Used to pump water, sewage, produce emergency power.	Review after 15 years, replacement after 20 years.
11	Specialty Equipment	Graders, street sweepers, vactor trucks, etc.	Replacement depends on the use of the unit.

CAPITAL FUND - 2017 Capital Projects

Department/Division Public Works & Engineering / Roads and Sidewalks
Project Intersection Widening and New Traffic Light Installation – Kam Lake Road at
 Finlayson Drive

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		500,000		500,000
Total:				
Formula Funding		500,000		500,000
Grants				

Purpose

To complete road and intersection improvements at the Kam Lake Road and Finlayson Drive intersection, including the installation of a signalized intersection to better accommodate the flow of traffic in the area.

Background

Traffic at the intersection of Finlayson Drive and Kam Lake road has increased over the last few years due to increased development in the Kam Lake Area. This intersection is heavily used by residents of Frame Lake, Kam Lake and Grace Lake to access the City's downtown core.

In 2003 and 2012, traffic studies conducted at the intersection indicated that, while the intersection did not meet the Transportation Association of Canada (TAC) requirements for a signalized intersection, it should be monitored due to the heavy side street traffic entering the intersection from Finlayson Drive.

In 2015 a traffic study was done for Kam Lake Road from the intersection at Old Airport Road to the proposed intersection at the Grace Lake South residential subdivision. The 2015 traffic study included current and projected traffic conditions, safety concerns, potential multi-use trail location, potential transit route and stop locations, and recommended infrastructure improvements (i.e., road widening, dedicated turning lanes, traffic lights). Preliminary findings are pending,

but staff anticipate a recommendation for another traffic light and additional lanes.

This intersection is also part of Yellowknife Transit's Route B which serves the Frame Lake area. During the morning and afternoon peak periods, transit experiences delays of up to 10 minutes in making the left turn from Finlayson Drive onto Kam Lake Road. This delay has a major impact on the transit route as it causes delays for the entire route during the peak periods of the day.

Installation of traffic lights at this intersection will include:

- widening of the Finlayson Drive to allow for turning lanes
- widening of Kam Lake Road to allow for turning lanes
- installation of traffic lights with communication and video detection equipment

The upgrades to this intersection are planned to coincide with the Annual Paving Program which is scheduled to re-do Kam Lake Road from Finlayson Drive to Deh Cho Boulevard in 2017.

Triple Bottom Line

Social

This project will address increasing resident concerns and observed



CAPITAL FUND - 2017 Capital Projects

traffic increases at this intersection and should decrease frustration and wait times while attempting to access Kam Lake Road from Finlayson Drive. It should also help to create a more efficient and on-time Route B of the City's transit system.

Economic

This project will create additional infrastructure and power requirements at this intersection. The costs indicated for this project are estimates only and may require updating during the 2016 budget season.

Environmental

The environmental impact of this project will be minimal but as mentioned it should create a more efficient and on-time Route B of the City's transit system. It should also reduce vehicle idle time associated with long waits attempting access to Kam Lake Road from Finlayson Drive.

Operational Impacts

The project will increase the number of traffic controlled intersections to 19, which is approximately a 6% increase in the operational budget for traffic light maintenance as well as traffic light power costs.



Photo: Aerial of the Kam Lake Road and Finlayson Drive intersection. Entrance to the North Slave Correctional Facility to the right.



CAPITAL FUND - 2017 Capital Projects

Department/Division Public Works & Engineering / Solid Waste
Management Division
Project Baling Facility Mechanical Upgrades

Expenditures & Funding Sources	2016 \$	2017 \$	2018 \$	Total \$
Capital Cost		25,000	25,000	50,000
Total:				
Formula Funding		25,000	25,000	50,000
Grants				

Purpose

To continue with capital investments in the Baling Facility for overall operation and maintenance of the infrastructure.

Background

This project will complete mechanical upgrades to the Baling Facility that cannot otherwise be completed by City staff during routine operation and maintenance. The equipment currently in use at the Baling Facility consists of a dust collector unit, HVAC burners, overhead doors, fire pump and sprinkler system, fire alarm system, electrical components, air compressor and boilers for in-floor heating.

Work completed under this budget allocation:

- 2003, replacement of hydraulic ram on the bailer
- 2004, replacement of overhead door
- 2007, replacement of fire suppression pump

Work proposed for 2017 and 2018:

- interior roof repairs.
- pellet boiler upgrades.
- replacement of methane gas detector

In 2006, the City completed an internal audit at the facility. Several items were noted for upgrade, repair or replacement. These items include electrical, plumbing, heating and signage which have been worked on each year, as the budget permits. Regular, planned maintenance of the

Baling Facility keeps costs down and ensures a safe work environment for employees.

Triple Bottom Line

Social

This project will provide City staff and contractors with a better working environment inside the Baling Facility.

Economic

These upgrades are investments in the solid waste infrastructure and are necessary to ensure the proper operation and maintenance of the facility.

Environmental

This project will ensure a more efficient operation of the Baling Facility building itself. Upgrades to the interior roof and the pellet boiler will help to reduce the City's greenhouse gas emissions.

Operational Impacts

Mechanical breakdowns of aging equipment can impact operating costs in several ways. Breakdowns increase the cost of staff, overtime and contractors, and impact the public by affecting operations and service delivery. Adherence to the annual maintenance schedule of the Baling Facility will result in fewer breakdowns, reduced downtime and lower costs.





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