

**CAPITAL FUND - 2018 Capital Projects**

		2018 Budget Recommended (\$000s)	Formula Funding (\$000s)	Grants (\$000s)	IT Reserve (\$000s)
<b>General Government</b>	<b>Page</b>				
<b>Administration</b>					
Destination Marketing	131	350	70	280	
		350	70	280	-
<b>Information Technology</b>					
Network Renewal and Expansion	136	52			52
GIS Maintenance & Enhancements	140	46			46
Server and Storage Renewal and Expansion	143	53			53
Phone System	236	40			40
Satellite Imagery/ LIDAR	238	66			66
Communication Infrastructure Renewal	145	20			20
Security Cameras	147	21			21
Secondary Site & Data Replication	149	12			12
MED In-Car Computers	240	34			34
MED Web Apps	242	25			25
Website/ Online Service	244	29			29
Website Refresh	246	50			50
Virtualization	151	28			28
Door Access Controls	153	12			12
Multi-function Devices and Printers	155	53			53
Disk Expansion	248	34			34
Plotter	250	15			15
Stanton Equipment Relocation	159	100			100
<b>Subtotal</b>		690	-	-	690

## CAPITAL FUND - 2018 Capital Projects

Department/Division      Corporate Services / Information Technology  
Project                              Phone System

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		40,000	40,000	80,000
O&M Expenses				
Total:				
IT Reserve		40,000	40,000	80,000
Formula Funding				
Grants				

### Purpose

To replace the City's telephone system infrastructure.

### Background

The City's telephone system is a hybrid of NorthwTel services and City-owned Toshiba equipment within each facility. The exact vintage of the City-owned infrastructure is uncertain as it predates current staff and the existing financial system.

A study conducted in 2009 recommended retaining the hardware in place at the time and augmenting it with software to provide integrated communication features. The iLink product was introduced however, there was a low adoption rate of the advanced functionality and the application became increasingly time-consuming and costly to maintain so, in 2016, it was replaced with a simple voicemail appliance.

Since the 2009 study, many desk sets have been replaced. However, now the aging backend infrastructure has outlived its life expectancy, resulting in service restrictions and reliability concerns. Therefore it is recommended that it be replaced in 2018 and 2019.

This project helps ensure that the appropriate telephone infrastructure is in place to support the organization as it works toward all City Council Goals, Objectives, and Actions. It does so by contributing to the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements
- Provide secure, high-availability network services
- Support the efficient and effective operation of all information systems

It also addresses these Information Technology Division objectives:

- Supply ongoing leadership to support and sustain the City's information technology infrastructure
- Provide City employees with the appropriate hardware and software tools to enable them to do their jobs efficiently and effectively



- Acquire and deploy new and replacement components in a timely and cost effective manner
- Adopt increasingly stringent industry-standard security and data protection practices and procedures

### **Triple Bottom Line**

#### Social

N/A

#### Economic

Solid, reliable telephone services are crucial, and must be maintained in the most efficient and effective manner possible.

#### Environmental

N/A

### **Operational Impact**

It will be more cost effective and will present a lower risk to the City to acquire, configure, and maintain this telephone infrastructure in a planned and orderly fashion, than to experience unplanned and possibly extended service outages

## CAPITAL FUND - 2018 Capital Projects

Department/Division    Corporate Services / Information Technology  
 Project                      Satellite Imagery / LIDAR

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		65,950		65,950
O&M Expenses				
Total:				
IT Reserve		65,950		65,950
Formula Funding				
Grants				

### Purpose

To continue the City's planned and incremental investment in its geographic information system (GIS).

### Background

Orthophotos, digital aerial photographs with uniform scale and minimal distortion, are an important part of a GIS because they provide an accurate representation of the earth's surface. In 2006, the City began acquiring high resolution colour digital orthophotography and incorporating it into CityExplorer. It provides the base mapping for the City's database, and its high spatial accuracy and resolution have made it a powerful and popular tool for both staff and citizens. As well, the layer is often used to create new information layers, and to help keep existing layers current and accurate.

In 2006, the City also acquired high resolution elevation data. The data was captured using LIDAR, which enabled the creation of several datasets, including the bare earth model, vegetation, elevation, building footprints, building heights, and contour lines.

The high resolution imagery and elevation data are used regularly

throughout the organization. For example:

- The GIS group uses aerial photos to update CityExplorer's Building layer. High resolution imagery enables tracing of building footprints, and LIDAR information allows the building heights to be captured. This provides the basis for 3D and land development modeling
- Taxation and Assessment staff members refer to the imagery to verify the existence of specific property improvements and developments
- The Engineering group relies on aerial photos for conducting preliminary site studies, and on elevation data for planning future developments; the latter is especially valuable when producing accurate grading plans

Given the wide usage of this data and the need to keep it current, biannual acquisitions were planned and data was collected on schedule in 2008. However, since 2008, budget restraints have limited the opportunities to collect new data, and updated information was not gathered until 2012, and 2015 respectively. Likewise, the planned 2017 acquisition has been postponed until 2018 to facilitate other projects.



Since the 2015 data collection effort, the city landscape has changed significantly and because the current data does not reflect these changes, it no longer meets user requirements, particularly in regions of high interest such as the Con Mine area, Block 501, Niven Lake, Grace Lake, Giant Mine, and the Solid Waste Facility. Therefore, it is important that the imagery and elevation data be updated so that it can continue to serve the needs of the various stakeholders.

This project helps to ensure that appropriate geographical data is in place to provide the tools and services required by employees throughout the organization, and to deliver services to citizens and stakeholders. It does so by contributing to the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements
- Support the efficient and effective operation of all information systems
- Provide efficient, effective, and timely geomatics services to citizens and stakeholders.

It also addresses these Information Technology Division objectives:

- Supply ongoing leadership to support and sustain the City's information technology infrastructure
- Provide City employees with the appropriate hardware and software tools to enable them to do their jobs efficiently and effectively
- Acquire and deploy new and replacement components in a timely and cost effective manner
- Adopt increasingly stringent industry-standard security and data protection practices and procedures

### **Triple Bottom Line**

#### Social

N/A

#### Economic

This project is a strategic investment in the City's Information Technology infrastructure. It benefits staff, clients, and stakeholders by providing them with the most current, accurate, and complete data possible.

#### Environmental

N/A

### **Operational Impacts**

Without access to current orthophotos, staff will have to resort to site visits to obtain up-to-date information. This is a more time consuming process, and considerably less thorough in that information obtainable from an aerial view and LIDAR data is more accurate and complete than that gleaned from on-the-ground observations. Alternately, they risk basing recommendations and decisions on outdated data.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division    Public Safety / Municipal Enforcement Division  
 Project                      MED In-Car Computers

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		33,400		33,400
O&M Expenses				
Total:				
IT Reserve		33,400		33,400
Formula Funding				
Grants				

### Purpose

To purchase new in-car laptops for Municipal Enforcement vehicles, to be used by officers as mobile workstations, allowing them to spend more time on patrol.

### Background

The Municipal Enforcement Division operates four patrol vehicles in which the officers spend most of their day. The officers rely heavily on computers to document occurrences or to retrieve information such as motor vehicle information. Patrol cars have been equipped with laptop computers since 2010, allowing officers to be more efficient and spend more time on the street instead of in the office. Under the City's Evergreen policy these computers are due for replacement after four years of service. These computers, unlike office computers, are operated in extreme weather conditions and are prone to malfunction; past experience has indicated that by the fourth year of service the computers are not reliable.

Reliable computers are important for officer safety, as they allow officers to have immediate access to information on dangerous individuals, dogs, stolen vehicles, etc., which allows them to take proper precautions when

dealing with these situations. Officers also rely heavily on these computers to access motor vehicle information on persons and vehicles during traffic stops, which is a large component of their work day. Access to by-laws and GNWT legislation by computer is also essential, with the alternative being carrying around large binders with this information. The patrol cars are equipped with a global positioning system which contributes to the safety of the officers and requires a reliable computer in the patrol vehicle. It also allows officers to monitor each other, and is used for dispatching purposes which reduces the need to use radio communications.

The current in-car laptops were purchased for the four patrol vehicles in 2014 and 2015, with replacement scheduled for year four, in 2018.

### Triple Bottom Line

#### Social

This new equipment will ensure that interruptions to essential emergency services for residents are minimized, contributing to a safe community (through patrols or investigations).



### Economic

This project is a strategic investment in MED's essential equipment. Improvement and maintenance of mobile equipment is vital to continuing the provision of essential safety services to Yellowknife residents and those agencies or organizations that request our services (other City divisions, RCMP, School Boards).

### Environmental

Allowing the laptop replacement will assist in land protection, for violations from littering on the road to incident investigations under the Un-sightly Lands By-law or other municipal by-laws.

### **Operational Impacts**

Aging technology (infrastructure) has higher operational costs. In the case of electronic equipment operating at extreme temperatures in the vehicles, the malfunction and subsequent down-time of the equipment will adversely affect MED and Corporate Services staff. This project should result in less operational time spent by Corporate Service staff trouble-shooting this equipment.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division    Public Safety / Municipal Enforcement Division  
 Project                      MED Web Apps

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		25,000		25,000
O&M Expenses				
Total:				
IT Reserve		25,000		25,000
Formula Funding				
Grants				

### Purpose

To redevelop the Municipal Enforcement Division's Snowmobile and Summons applications using current technology that is secure and supportable.

### Background

The Municipal Enforcement Division uses Snowmobile applications to issue, track, and manage snowmobile registrations, and to provide the RCMP with appropriate snowmobile registration information. These activities are required under the 1993 Snowmobile By-law that stipulates that all snowmobiles operated within city limits must be registered. The Division uses the Summons application to produce long form information and summonses for outstanding parking tickets. When parking tickets go unpaid there is a legal requirement to produce several legal documents to compel the parking offender to attend court to answer to the parking ticket. Without this process in place people would not legally have to pay parking fines. A database that correlates and prints these legal documents is required in order for the City of Yellowknife to meet this legal obligation. Thus these applications are critical to the operations of the Municipal Enforcement Division.

The current applications were custom-developed for the City in 2003, and updated in 2011/2012 when the original underlying technologies became obsolete. They should be redeveloped again by 2018 to ensure they remain secure and supportable.

### Triple Bottom Line

#### Social

The replacement of these web applications allows for the control and monitoring of activities that contribute to the dynamism of the community. Without these systems, restrictions could be placed on activities of citizens of Yellowknife.

#### Economic

This project is a strategic investment in MED's essential equipment. Improvement and maintenance of these web applications allows for continued service and the collection of revenue for these activities.

#### Environmental

The only alternative to web based applications is manual recording using paper and pen, which is environmentally unfriendly.





**Operational Impact**

Aging technology (infrastructure) has a higher operational cost. Web based applications are continually changing and need to be updated to meet security requirements.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division: Corporate Services / Information Technology  
 Project Website / Online Services

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		28,670	30,100	58,770
O&M Expenses				
Total:				
IT Reserve		28,670	30,100	58,770
Formula Funding				
Grants				

### Purpose

To incrementally enhance online service delivery to provide focused citizen services and streamline internal operations.

### Background

Electronic services are an accepted – and expected – way to provide information, conduct business, and engage citizens. The City has established a good foundation with its website content, eServices portfolio, City Explorer mapping tools, open data portal, and Click Fix YK and PingStreet applications. Staff and citizens have embraced these service offerings and thus enabled the organization to provide related services more efficiently and effectively.

There are many opportunities to build on this foundation and expand the City's online services, thereby improving its customer services and streamlining its operations. This project seeks to follow the successful approach proven with many other Information Technology components and ensure regular, incremental funding to facilitate consistent, manageable, and beneficial improvements to the City's online service offerings.

In 2016, the Division improved online services by adding Suggestions /

Community Feedback functionality to obtain citizen input, deploying the PlaceSpeak community engagement tool to create another avenue for stakeholder involvement, and launching additional PingStreet tiles that provide citizens with mobile access to the Rec Guide, the Notification Centre, Virtual City Hall, and Cemetery Plot information.

No enhancements or new services will be added in 2017.

Potential plans for 2018 and 2019 could include an eBook module to convert City publications to web-friendly formats, a demographic report generator to provide easy access to Yellowknife-related census data, a tourism directory, an online donations tool, live chat functionality to augment current Customer Services, and an available lands and buildings tool. As well, based on the high usage rate of PingStreet services, additional tiles for trail information, business and contact directories, and City facility information could be considered, along with the addition of beacon/geo-fencing capabilities. Specific enhancements and additions will be finalized closer to the implementation timeframe, based on requirements and potential return on investment.



### **Triple Bottom Line**

This project helps to ensure that appropriate online services are in place to enhance citizen and stakeholder interactions with the City, thus improving service levels and streamlining staff operations. It does so in the context of the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements
- Support the efficient and effective operation of all information systems

It also addresses these Information Technology Division objectives:

- Supply ongoing leadership to support and sustain the City's information technology infrastructure
- Acquire and deploy new and replacement components in a timely and cost effective manner
- Provide clients with additional tools and resources to enable them to better utilize the City's information technology infrastructure

### Social

In 2017, the City's online offerings will be status quo; no new features or services will be added, and the existing services will be offered provided no investment is required to maintain them.

In 2018 and 2019 this project will aim to expand the portfolio of electronically delivered services, consistent with the expectations of many Yellowknife citizens and stakeholders.

### Economic

Online services enable the City to provide services and information at a lower cost than traditional delivery methods and in a manner that is attractive and convenient for many citizens and stakeholders.

### Environment

Increased electronic service delivery could reduce the amount of paper used by the City and distributed throughout the community.

### **Operational Impact**

In 2017, no operational impact is expected. However if technical issues arise with any of the existing online services they will be taken offline until resources are allocated to restore them. This may result in increased pressures on service delivery units throughout the organization as staff will have to manually provide services that were previously delivered electronically.

In 2018 and 2019 it is anticipated that this project could improve customer service and streamline more operations within the organization. The specific advantages will depend on available funding and current requirements.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division      Corporate Services / Information Technology  
 Project                      Website Refresh

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		50,000		50,000
O&M Expenses				
<b>Total:</b>				
IT Reserve		50,000		50,000
Formula Funding				
Grants				

### Purpose

To continue the City's planned and incremental enhancements of its online presence and services.

### Background

The City's website plays a critical role in the City's service delivery. It offers a wealth of information to citizens and stakeholders, provides an array of online services, and is becoming an increasingly popular consultation tool.

The City's website was completely redesigned in 2014 and since that time has been incrementally enhanced to meet new and emerging needs. It is recommended that a refresh be done in 2018 to incorporate improved technology, simplify management and maintenance to fine-tune the user experience to meet evolving expectations, and to expand offerings to address growing requirements.

This project helps ensure that the appropriate information technology infrastructure is in place to support the organization as it works toward all City Council Goals, Objectives, and Actions. It does so by contributing to the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements, for both internal and external users
- Support the efficient and effective operation of all information systems

It also addresses these Information Technology Division objectives:

- Supply ongoing leadership to support and sustain the City's information technology infrastructure
- Provide City employees with the appropriate hardware and software tools to enable them to do their jobs efficiently and effectively
- Acquire and deploy new and replacement components in a timely and cost effective manner
- Adopt increasingly stringent industry-standard security and data protection practices and procedures



**Triple Bottom Line**

Social

N/A

Economic

This project will improve the City's communication capabilities and create a richer and more interactive experience for the organization's website visitors.

Environmental

Increasing online service offerings and encouraging their use could reduce the amount of paper used and received by the City.

**Operational Impact**

This project will not have a measurable impact on the O&M budget, but it will provide improved tools for content providers and simplify their workload. As well, expanded services should help direct citizens to self-serve offerings, freeing staff time for more complex or complicated tasks.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division    Corporate Services / Information Technology  
 Project                      Disk Expansion

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		33,560		33,560
O&M Expenses				
<b>Total:</b>				
IT Reserve		33,560		33,560
Formula Funding				
Grants				

### Purpose

To expand the City's disk storage capacity to meet burgeoning demands.

### Background

As workgroups throughout the organization increasingly turn to technology to streamline their operations, it places increasing demands on the City's Information Technology infrastructure. This is especially evident with respect to disk storage capacity, where requirements have grown exponentially in recent years. This trend is expected to continue, and even escalate.

Regular incremental investments in the City's disk storage systems have enabled them to keep pace and accommodate much of this growth. However, in 2016 it became apparent that the demands had outpaced the growth and available disk space dropped dramatically. IT began reallocating and reassigning disk space in an effort to extend the life of the current system, but it is anticipated that by 2018 these measures will no longer suffice and that an additional investment in disk space will be required.

This project helps ensure that the appropriate information technology

infrastructure is in place to support the organization as it works toward all City Council Goals, Objectives, and Actions. It does so by contributing to the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements
- Provide secure, high-availability network services
- Support the efficient and effective operation of all information systems, for both internal and external users
- It also addresses these Information Technology Division objectives:
  - Supply ongoing leadership to support and sustain the City's information technology infrastructure
  - Provide City employees with the appropriate hardware and software tools to enable them to do their jobs efficiently and effectively



- Acquire and deploy new and replacement components in a timely and cost effective manner
- Adopt increasingly stringent industry-standard security and data protection practices and procedures

### **Triple Bottom Line**

#### Social

N/A

#### Economic

Providing adequate disk space will ensure that the City can properly and securely store its rapidly growing body of data and information. It will also simplify disk management, freeing IT staff time for more productive tasks.

#### Environmental

N/A

### **Operational Impact**

This project will not have a measurable impact on the O&M budget, but it will provide adequate capacity to meet current and future storage requirements.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division      Corporate Services / Information Technology  
 Project                              Plotter

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		15,000		15,000
O&M Expenses				
<b>Total:</b>				
IT Reserve		15,000		15,000
Formula Funding				
Grants				

### Purpose

To replace the City's wide-format multifunction device, commonly referred to as the Plotter.

### Background

The City's only wide-format multifunction device is used to fulfill printing, plotting, and scanning requirements for clients throughout the organization. For example, it is used to:

- Print all maps larger than 11" x 17". Maps such as these are requested by all City staff and are essential for the operations within the Fire Division, the Public Works Department, and the Planning and Development Department
- Generate all signage and banners larger than 11" x 17". City staff request these products for all types of purposes, including special events, consultations, elections, budget meetings, road closures, and citizen engagements
- Scanning documents larger than 11" x 17". For example, all copies of survey plans and building plans are generated by the device

Staff rely heavily on the Plotter and the services it provides, and expect it to be readily available. However by 2018 it will have reached the end of its useful life and will need to be replaced.

This project helps ensure that the appropriate information technology infrastructure is in place to support the organization as it works toward all City Council Goals, Objectives, and Actions. It does so by contributing to the following Information Technology Division goals:

- Provide focused, reliable, and sustainable information technology infrastructure that is responsive to current City requirements and proactive in anticipation of future requirements
- Provide secure, high-availability network services
- Support the efficient and effective operation of all information systems





It also addresses these Information Technology Division objectives:

- Supply ongoing leadership to support and sustain the City's information technology infrastructure
- Provide City employees with the appropriate hardware and software tools to enable them to do their jobs efficiently and effectively
- Acquire and deploy new and replacement components in a timely and cost effective manner
- Adopt increasingly stringent industry-standard security and data protection practices and procedures

### **Triple Bottom Line**

#### Social

N/A

#### Economic

It is more cost-effective and time-efficient to provide wide-formatting services in-house than to outsource them. Replacing this device will help ensure that adequate infrastructure is in place to meet future and anticipated client needs.

#### Environmental

N/A

### **Operational Impacts**

It will be more cost effective to replace this device in a planned manner than to experience problems that require excessive troubleshooting and repair or failures that create service outages.

CAPITAL FUND - 2018 Capital Projects

		2018 Budget Recommended (\$000s)	Formula Funding (\$000s)	Grants (\$000s)
<b>Community Services</b>	<b>Page</b>			
<b>Arenas</b>				
Painting /Re-surfacing DND GYM	253	40	40	
Fieldhouse Track Access Door	254	90	10	80
<b>Parks/Trails</b>				
Yellowknife Rotary Park -Trail Extension	174	20	20	
Ball Diamonds Upgrade	255	45	45	
Outdoor Recreation Facility	256	3,393	3,393	
Rental Equipment	258	43	43	
Somba K'e Park -Public Water Fountain	259	10	10	
Mountain Bike Trail	260	20	20	
<b>Pool</b>				
Aquatic Centre Development	261	75	64	11
Re-siding of Exterior Walls	263	230	230	
Re-tiling of Pool interior	265	20	20	
<b>Subtotal</b>		<b>3,986</b>	<b>3,895</b>	<b>91</b>



**CAPITAL FUND - 2018 Capital Projects**

---

Department/Division: Community Services / Facilities Division  
 Project: Painting / Re-surfacing DND Gym

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		40,000		40,000
O&M Expenses				
Total:		40,000		40,000
Formula Funding		40,000		40,000
Grants				

**Purpose**

To paint the walls and re-surface the floor in the DND Gym weight room.

**Background**

The Multiplex opened in 2002. In 2013 the DND gymnasium received a large scale overhaul in which the gymnasium portion of the facility received a major repair and painting of the facility.

After 14 years, the weight room portion of the facility now requires a re-painting and floor re-surfacing. This work will ensure that this area of the facility looks vibrant as well as adds to the integrity of the facility.

**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

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

Environmental

The City strives to maintain quality recreational facilities which lead to active and healthy living choices.

**Operational Impact**

There will be no impact on the operational budget for the facility.

## CAPITAL FUND - 2018 Capital Projects

Department/Division: Community Services / Facilities Division  
Project Fieldhouse—Track Access Door

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		90,000		90,000
O&M Expenses				
Total:				
Formula Funding		10,000		10,000
Grants		80,000		80,000

### Purpose

To install an access door to the upper level of the Fieldhouse to provide proper monitoring of the facility and ensure fairness to all users.

### Background

The Fieldhouse was opened to the public in the fall of 2010 and is now one of the City's most popular recreation facilities. One of the major attractions of the facility is the 240-metre track.

The access door to the track is on the upper level of the building, and while it is monitored by a video camera, it is difficult to ensure that only people who have membership cards are able to enter the track area. As a result, the City is losing revenue.

As much as possible, City staff follow up with users to ensure that fees are being paid; however, sometimes people are accessing the track without having paid a fee. To ensure controlled access to the track the City is proposing to install a glass security wall leading up the stairs to the track entrance, and to move the card pad that allows access to the bottom of the stairs. This will ensure that the entrance can be properly monitored by staff, which will contribute to increased user fee revenue and improved security for the track.

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

N/A

#### Economic

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

#### Environmental

The City strives to maintain quality recreational facilities which lead to active and healthy living choices.

### Operational Impact

There will be some impact on the O&M.



**CAPITAL FUND - 2018 Capital Projects**

---

Department/Division: Community Services/Facilities Division  
 Project: Ball Diamonds Upgrade

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		45,000		45,000
O&M Expenses				
Total:				
Formula Funding		45,000		45,000
Grants				

**Purpose**

To replace the shale at the City’s ball diamonds to contribute to a more enjoyable playing experience, while respecting the integrity of the game by improving the playing surface.

**Background**

The City directly administers five ball diamonds: two at Fritz Theil, two at Parker Field, and one at William McDonald School. Several of these diamonds use shale which requires periodic replacement and conditioning. This project will allow for the purchase of shale to address this need, and will ultimately 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

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

Environment

The City strives to maintain quality recreational facilities, which lead to active and healthy living choices.

**Operational Impact**

This project will be covered under the normal operating budget.

## CAPITAL FUND - 2018 Capital Projects

Department/Division: Community Services / Facilities Division  
 Project Outdoor Recreation Facility

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		3,393,000	1,700,000	5,093,000
O&M				
Other O&M Expenses				
Total:				
Formula Funding		3,393,000	1,700,000	5,093,000

### Purpose

The design and development of a multi-use outdoor facility to enhance the current recreational facilities within the City.

### Background

The City has a number of outdoor recreational sport facilities, including six ball diamonds, three sport (soccer) fields, a 340-metre track, eight tennis courts, one skateboard park, and 17 playgrounds. Many of these facilities are at maximum use capacity and some, such as two soccer fields and the track, do not meet minimum acceptable standards. The City is currently working on an agreement with Con Mine to obtain eight hectares of land that would be developed into a major outdoor recreational facility. This facility would accommodate a soccer field, four ball diamonds, a track, a skateboard park, a playground and tennis courts, as well as room for further development.

**Phase 1** would develop the supporting infrastructure for the outdoor recreation facility, which would include upgrading the warehouse currently on the site to accommodate the staff of the Parks Division, as well as providing an adequate storage and shipping area. The upper part of the

facility would provide storage room for all City departments. Also included in Phase 1 would be construction of washrooms and concession facilities for the facility.

**Phase 2** would entail surface preparation and development of the sport fields.

### 2018 Capital Cost

Develop Supporting Infrastructure	\$1,699,000
Develop Sports Fields	\$1,694,000
<b>Total</b>	<b>\$3,393,000</b>

**Phase 3** would entail continued development of facilities within the park including a track, skate board park, playground, tennis courts and a dog park.

### 2019 Capital Cost

Develop Sports Fields and Infrastructure	\$1,700,000
--	-------------



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

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

#### Environmental

The City strives to maintain quality recreational facilities which lead to active and healthy living choices.

### **Operational Impact**

There will be some impact on O&M.

## CAPITAL FUND - 2018 Capital Projects

Department/Division: Community Services / Facilities Division  
 Project Rental Equipment

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		43,000	20,000	63,000
O&M Expenses				
Total:				
Formula Funding		43,000	20,000	63,000
Grants				

### Purpose

To replace and enhance the current inventory of tables and chairs for use at the City Facilities and other ongoing rentals.

### Background

The Department makes tables and chairs available for a fee when renting out the arenas, parks etc. for various events. Rental of these items generates approximately \$60,000 annually for the City, under the provisions of the Fees and Charges By-law.

Due to heavy use, the equipment requires ongoing replacement, and it is proposed to replace and enhance our inventory over the next three years.

### 2018

200 tables      \$30,000  
 210 chairs      \$13,000  
**Total =      \$43,000**

### 2019

100 tables      \$15,000  
 80 chairs      \$ 5,000  
**Total =      \$20,000**

### Triple Bottom Line

#### Social

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

#### Economic

The management of corporate assets is optimized.

#### Environmental

By managing our assets properly we will be able to optimize their use and longevity.

### Operational Impact

There will no operational impact.





**CAPITAL FUND - 2018 Capital Projects**

Department/Division: Community Services / Facilities Division  
 Project Somba K'e Park – Public Water Fountain

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		10,000		10,000
O&M Expenses		500	500	1,000
Total:		10,500	500	11,000
Formula Funding		10,000		10,000
Grants				

**Purpose**

To install a public water fountain that will provide an added feature for users of Somba K'e Park and the public in general.

**Background**

For normal and special events (Farmer's Market) in the park there has been a growing demand for the installation of an outdoor water fountain. To accomplish this it is suggested to install an outdoor stone aggregate pedestal fountain, which is vandal resistant, adjacent to the current Somba K'e Building.

Due to climatic conditions, it is recommended that the fountain operate from approximately June 1<sup>st</sup> to mid/ late September to accommodate the Famer's Market.

The \$10,000 cost of the fountain will include:

- \$5,000 for the purchase of the fountain
- \$5,000 for the purchase and installation of water lines and a back-flow water prevention device.

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

Yellowknife has a natural and built system that contributes to the 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 Impact**

There will be an operational impact of \$500 per year.



## CAPITAL FUND - 2018 Capital Projects

---

Department/Division: Community Services / Facilities Division  
Project Mountain Bike Trail

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		20,000	20,000	40,000
O&M Expenses				
Total:				
Formula Funding		20,000	20,000	40,000
Grants				

### Purpose

This Community Project permits the City of Yellowknife to develop a partnership with the Yellowknife Mountain Bike Club in the development of mountain bike trails adjacent to the natural portion of the Frame Lake Trail over a two year period from 2018 – 2019.

### Background

Under the project, the City would provide the materials along with back-up and logistical support to the Mountain Bike Club as the trails are being developed over this two year period.

This project will enhance the McMahon/Frame Lake trail and provide additional opportunities for the residents and visitors to use the trails.

By working with the Mountain Bike Club on this project the Department is realizing a savings of approximately \$5,000 - \$7,000 over this two year period.

### Triple Bottom Line

#### Social

This project will provide for and sustain the Mountain Bike Club's ambition to complete this project with the City through the use of volunteers for the betterment of the community.

#### 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 enhance our current physical assets.

#### **Operational Impact**

There will be minimal operational impact and will be absorbed with the Parks O/M Budget.



## CAPITAL FUND - 2018 Capital Projects

Department/Division: Community Services  
Project Aquatic Centre Development

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		75,000	4,500,000	4,575,000
O&M Expenses				
Total:				
City Contribution		63,750	3,825,000	3,888,750
Grants		11,250	675,000	686,250

### Purpose

The development of an Aquatic Centre is a multi-year project commencing in 2018 and concluding in 2021.

The initial phase of the project will be carrying out a full public consultation including discussions with all major and minor user groups, aboriginal community and stakeholders.

Funding in 2018 will be to engage the services of a qualified service provider to carry out an extensive consultation process to determine the feasibility and community requirements of an aquatic centre. This study will identify the current and future needs of the community and the user groups to ensure that the new development will be relevant well in to the future of Yellowknife. The study will identify the various components that will comprise the facility, location and budget.

Subsequent year funding will include the development of the Architectural and Engineering phase of the project in 2019 with construction commencing in 2020 with completion in 2021.

### Background

The City has made an application to the Building Canada Fund, Provincial-Territorial Infrastructure Component for the development of an aquatic centre. The funding available to the City for this project is \$12,900,000.00 which the City must match with \$4,300,000.00

(75%/25% funding). Recent research of other municipalities in the north have indicated that a budget in the range of \$30,000,000 is desirable and therefore the grant application included this amount as a project budget.

The development of an aquatic centre to meet the needs of the community would likely include a facility large enough for additional program space, the provision of a competition pool and revenue generating space to ensure the facility is sustainable and keeps the cost impact to the ratepayers to a minimum.

The current situation within the Ruth Inch Memorial Pool is that the pool has reached its capacity several years ago. There is typically a wait list of approximately 300 – 350 per session for the swim lessons sessions offered, therefore close to a 1,000 annually; the competitive swim club must send athletes to the south to train in a proper sized pool; and, the ability to generate additional funds within the facility is very limited.

## CAPITAL FUND - 2018 Capital Projects

---

The application to the Building Canada Fund identified a budget of \$30,000,000 to ensure that anticipated needs of the community and the City can be achieved. The funding from the program will be received by the City commencing in 2018 and concluding in 2020 with a total of \$12,900,000 over this period. The funding/cost will be as follows:

Year	Phase	Cost	BCF	City
2018	Public Consultation	\$75,000	\$11,250	\$63,750
2019	Architectural/ Engineering	\$4,500,000	\$675,000	\$3,825,000
2020	60% Construction	\$15,255,000	\$7,328,250	\$7,926,750
2021	40% Construction	\$10,170,000	\$4,885,500	\$5,284,500
Total		\$30,000,000	\$12,900,000	\$17,100,000

### Triple Bottom Line

#### Social

An inclusive City. The City of Yellowknife values and promotes independence and is a vital partner in creating an inclusive city where all Yellowknifers have the opportunity to take an active part in the social, economic and cultural life of the community.

#### Economic

Promoting an environment conducive to attracting, retaining and nurturing business and creating a community where citizens want to live, work and invest.

#### Environmental

N/A

### Operational Impact

It is anticipated that the project will be completed in 2021 with the full impact of the operational costs to be in effect in 2022. It is anticipated that the net operational cost of the facility will be \$1,582,000 with a recovery rate of 65%.



**CAPITAL FUND - 2018 Capital Projects**

---

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

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		230,000		230,000
O&M Expenses				
<b>Total:</b>		230,000		230,000
Formula Funding		230,000		230,000
Grants				

**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 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, allowing mold and mildew to develop.

**Triple Bottom Line**

Social

Inclusivity, safety and health: This project is designed to maintain our facilities so that The City's investments in them are maintained at a standard that will demonstrate that we care for our investments. This project will continue to strive to maintain facilities at a level that will provide a safe, comfortable and fun environment for the citizens and visitors of Yellowknife to enjoy recreation in a manner that meets the needs. This project will also ensure that residents will have a safe facility that will provide programs and recreational opportunity for all those who wish to participate.

Economic

By creating a city where citizens want to live and play, this project demonstrates the city asset management plan to ensure Ruth Inch Memorial Pool will provide programs and services to the citizens of Yellowknife for many years to come. This project supports the city's asset management plan by strategically investing in infrastructure

### Environmental

By maintaining the integrity of this building, it will help in reducing energy loss, therefore reducing our environmental footprint.

### **Operational Impact**

No O&M funds have been directed specifically to the exterior of the building. \$85,000 annually is budgeted for Building Maintenance. The majority of the O&M building maintenance is for the interior of the building with the remainder used to cover graffiti on the exterior walls and to replace doors and windows.



**CAPITAL FUND - 2018 Capital Projects**

---

Department/Division: Community Services / Facilities Division  
 Project Ruth Inch Memorial Pool - Retiling of Pool Interior

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		20,000	20,000	40,000
O&M Expenses				
Total:		20,000	20,000	40,000
Formula Funding		20,000	20,000	40,000
Grants				

**Purpose**

To retile the basin and floor of the Ruth Inch Memorial Pool.

**Background**

The Ruth Inch Memorial Pool opened its doors to the public in the fall of 1988. The pool continues to be a popular facility for residents and visitors. In 2010, the City contracted an engineering firm to do a life cycle analysis of the facility. That study identified items that needed to be addressed to ensure the facility meets or exceeds its life expectancy.

Over the past 26 years, City staff have repaired various areas of tiling at the pool. These areas have been getting larger over the years, resulting in increased O&M spending and more maintenance work to complete within the annual shut-down period.

Some pool maintenance issues that need to be addressed include:

**Tank**

- tiles are lifting and the grout has been eroded
- health concerns: inability to clean the basin properly
- safety concerns: patrons could cut themselves on the sharp, exposed edges of the tiles
- aesthetic concerns: rust stains on tiles

- maintenance concerns: water penetrating the tiles and breaking down the rebar in the slab

**Floor**

- tiles are lifting and the grout has been eroded
- health concerns: inability to clean the floor properly
- safety concerns: patrons could cut themselves on the sharp, exposed edges of the tiles
- aesthetic concerns: mismatched colors (original color is no longer visible); the facility is showing its age

**Triple Bottom Line**

Social

This project will create a safe and active City. The tiling of the pool basin and floor will reduce the possibility of lifting and broken tiles, therefore reducing the possibility of injury to patrons using the facility. It will also enhance the longevity of our facility and the ability to provide programs and services to those that wish to participate in them.

### Economic

The project falls in line with the City's Asset Management Plan, which was developed to ensure that the quality of life in our city is maintained by investing into our facilities so that they can reach or exceed their life expectancy, and to ensure longevity and safety of our facilities for the patrons to use.

### Environmental

N/A

### **Operational Impact**

There will be an impact to the O&M budget.





CAPITAL FUND - 2018 Capital Projects

---

		2018 Budget Recommended (\$000s)	Formula Funding (\$000s)
<b>Public Safety</b>	<b>Page</b>		
<b>Directorate</b>			
Wildland Fire Mitigation -Emergency Measures	180	125	125
<b>Fire &amp; Ambulance</b>			
Fire Safety Helmets	185	9	9
Fire Extinguisher Trainer	268	12	12
Emergency Medical Services Training Manikin	269	115	115
Portable Radios	186	141	141
Bunker Gear	187	10	10
Propane-Fueled Fire Trainer	271	90	90
<b>Subtotal</b>		<b>502</b>	<b>502</b>

## CAPITAL FUND - 2018 Capital Projects

---

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

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		12,000		12,000
O&M				
FTE				
Other O&M Expenses				
<b>Total:</b>		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, time consuming cleanup and expense associated with using an actual extinguisher is eliminated, which will allow the YKFD to be efficient and train more people in less time.

### Triple Bottom Line

#### Social

The extinguisher trainer will allow for the safe training of one the

cheapest and most effective fire prevention apparatus within our homes or 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 are always beneficial to the community.

#### Environmental

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

#### **Operational Impact**

There will be minimal impact on operations.



**CAPITAL FUND - 2018 Capital Projects**

---

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

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		115,000		115,000
O&M Expenses				
<b>Total:</b>		115,000		115,000
Formula Funding		115,000		115,000
Grants				

**Purpose**

To purchase a training manikin that will help the Yellowknife Fire Division (YKFD) continue to train and enhance their skills.

**Background**

The City of Yellowknife responds to approximately 3,500 emergency calls for service each year, 2,800 of which are for pre-hospital care (ie, medivac, ambulance). Over the past 10 years, pre-hospital calls have steadily increased each year.

To ensure that YKFD staff review every possible pre-hospital scenario, training and re-certifications of EMS protocols are essential. This state-of-the-art training manikin will improve the EMS delivery for patients, as it simulates working with a real patient, giving emergency responders a chance to train and review 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 as well as how the patient presents their symptoms, ultimately contributing to an effective training event. As the YKFD continue to strive to provide

superior customer service, new training technologies will ultimately contribute to enhanced customer service standards and delivery.

**Triple Bottom Line**

Social

The training manikin will contribute to the safety of Yellowknife residents, as training and recertification of medical skills at the YKFD allow EMS responders to respond more efficiently and effectively.

Economic

The training manikin would be 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 Impact**

There should be minimal operational impact, aside from software or computer updates. The ability to obtain training reports from the manikin will also allow the YKFD to share those results with our contracted Medical Director, for informational and feedback purposes.



**CAPITAL FUND - 2018 Capital Projects**

---

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

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		90,000		90,000
O&M Expenses				
<b>Total:</b>		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 the National Fire Protection Association (NFPA) 1001.

**Background**

The propane-fueled fire trainers are designed to provide flexibility with regards to training. The trainers are usually lightweight and can be utilized as a standalone system or with a prop like a car, propane tank, wood pallet or within a dumpster. This provides different training scenarios in accordance with NFPA 1001 standards, which is a job requirement for any firefighter.

The fire trainer may also have an auxiliary burner connection within some of the props, which allow for additional training, and also extends the life of the equipment. Props are water cooled using water from the YKFD connection.

**Triple Bottom Line**

Social

The fire trainer assists in properly training staff to deal with a variety of

fire scenarios, allowing for quick deployment in the event of an actual emergency, thereby possibly saving more of the structure in distress.

Economic

The fire trainer is an investment in the training of YKFD staff, and ensures that their skills are kept up to date. This infrastructure investment is particularly important given that the Fire and Ambulance Division only has 24 full-time staff and minimal mutual aid within the vicinity.

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 fire scenes more effectively.

**Operational Impact**

The impact on operations outside of the YKFD will be minimal. Additional propane will be required and there may be a need to have operational funding to repair the mechanism as required; however, this should be accommodated within the YKFD budget.

CAPITAL FUND - 2018 Capital Projects

		2018 Budget Recommended (\$000s)	M.E.R. Reserve (\$000s)
<b>Public Works &amp; Engineering</b>	<b>Page</b>		
Fleet Management	205	1,119	1,119
		1,119	1,119

		2018 Budget Recommended (\$000s)	Formula Funding (\$000s)	Other Revenue (\$000s)	Land Fund (\$000s)	Grants (\$000s)	Gas Tax Rebate (\$000s)	Community Public Infrastructure Funding (\$000s)
<b>Engineering &amp; Garage</b>	<b>Page</b>							
Traffic Lights Video Detection	209	80	80					
Transit Upgrades (Federal Funded)	211	213	53			160		
Traffic Light Installation - 44 Street & Franklin Avenue	274	500	450	50				
<b>Roads &amp; Sidewalks</b>								
McMeekan Causeway Stabilization	276	450	450					
Road Rehabilitation	213	4,500	779		850		661	2,210
		5,743	1,812	50	850	160	661	2,210

(cont'd ...)



**CAPITAL FUND - 2018 Capital Projects**

		2018 Budget Recommended (\$000s)	Formula Funding (\$000s)	Other Revenue (\$000s)	Land Fund (\$000s)	Grants (\$000s)	M.E.R. Reserve (\$000s)	Capital Fund (\$000s)	Gas Tax Rebate (\$000s)	Community Public Infrastructure Funding (\$000s)
<b>Solid Waste Management</b>	<b>Page</b>									
<b>Landfill</b>										
Centralized Composting Program	219	150						150		
		150	-	-	-	-	-	150		-
<b>Community Energy Plan (CEP) Initiatives</b>	<b>222</b>									
Sustainability Coordinator		100	100							
Interior LED Lighting		100						100		
Solar Panels		150						150		
Community Outreach		20	20							
Heat Pipe (PH#1 to WTP)		150						150		
City Hall Boiler Design		130	130							
		650	250	-	-	-	-	-	400	-
<b>Pumphouses/Liftstations (PHs/LSs)</b>	<b>211</b>									
<b>Federal Funded:</b>										
CMP/W&S		6,000				4,500		1,500		
LS#5 Piping		1,313				985		328		
SCADA System Upgrades		650				488		163		
<b>Water &amp; Sewer Infrastructure Replacement</b>	<b>231</b>	4,300							4,300	
		12,263	-	-	-	5,972	-	1,991	4,300	-
<b>PW Subtotal</b>		<b>19,925</b>	<b>2,062</b>	<b>50</b>	<b>850</b>	<b>6,132</b>	<b>1,119</b>	<b>1,991</b>	<b>5,511</b>	<b>2,210</b>

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division    Public Works & Engineering / Roads & Sidewalks  
 Project                      Traffic Light Installation – 44 Street & Franklin Avenue

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		500,000		500,000
O&M Expenses (+6%)				
<b>Total:</b>				
Developer Contribution		50,000		50,000
Formula Funding		450,000		450,000

### Purpose

To complete the installation of a signalized intersection to better accommodate the flow of traffic in the area.

### Background

On 24 September 2010, Creative Transportation Solutions (CTS) was retained by DCC-NPP Limited Partnership to conduct a traffic impact study of a proposed development known as “Twin Pine Hill” bounded by School Draw Avenue to the east, 44th Street to the south and Franklin Avenue to the west. In the preparation of this traffic impact study, CTS consulted with City of Yellowknife officials to confirm the scope of work, as well as seek input from the Yellowknife Catholic School Board on their concerns for 44th Street.

Since 2010, the use of the land has changed significantly to what is now known as the Summit Development. It has been significantly scaled back from the original development to a 126 multi-family residential development.

A recommendation of the traffic study was that the DCC-NPP Limited Partnership contributes 20.2% towards the cost of a new traffic signal at the intersection of Franklin Avenue and 44 Street based on net increase in traffic volumes resulting from the development.

It is anticipated that the development will be fully built out in 2017 and therefore the traffic volumes would require the addition of the traffic light recommended in the study.

### Triple Bottom Line

#### Social

This project will address increasing resident concerns and observed traffic increases at this intersection and should decrease frustration. It will also create a permanent and safe crossing at Franklin Avenue.

#### 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 2017 budget season.

#### Environmental

The environmental impact of this project will be minimal, but it will reduce vehicle idle time associated with queuing at the Franklin Avenue intersection.





**Operational Impact**

The project will increase the number of traffic controlled intersections to 20, which is approximately a 6% increase in the operational budget for traffic light maintenance as well as traffic light power costs.



Photo: Aerial photograph of Franklin Avenue and 44 Street intersection.

## CAPITAL FUND - 2018 Capital Projects

---

Department/Division    Public Works & Engineering / Roads and Sidewalks  
Project                      McMeekan Causeway Stabilization

Expenditures & Funding Sources	2017 \$	2018 \$	2019 \$	Total \$
Capital Cost		450,000		450,000
O&M Expenses				
<b>Total:</b>				
Formula Funding		450,000		450,000
Grants				

### Purpose

To stabilize the abutments of the McMeekan Causeway that connects Old Town to Latham Island.

### Background

Upon inspection in 2010, it was observed that the abutments that support McMeekan Causeway have started to deteriorate. Stabilization methods must be employed to ensure that these abutments remain stable and in good condition.

Investing capital repairs at the onset of a problem will prevent a much more costly and disruptive solution in the future. In 2011 an investigation of the extent of the deterioration was performed and a design completed for stabilization of the abutments. Construction of the designed solution was planned for 2012. However, due to the water level of the lake, construction could not proceed. Revisions were made to the design in 2013 to improve constructability which also increased the cost of the project. This project was deferred due to other projects receiving higher prioritization during annual budget deliberations.

Consultation was completed with appropriate regulatory authorities to take into account any potential environmental impacts that may occur as a result of the work. City staff will work closely with other levels of government to ensure the protection of the local natural environment.

A site visit was completed in July 2016 with a local resident who made suggestions of stabilization as well as beautification of the area. Some of the areas have remained finished with gravel as shown in the aerial photo attached.

The recommended budget was based on previous estimates and is only for stabilization of the bridge structure. Any additional landscaping or beautification would require an increase in budget.

### Triple Bottom Line

#### Social

This structure is the only means of connecting Latham Island to Old Town and the rest of Yellowknife. Any failure of this structure would greatly impact the transportation to and from Latham Island which would include City services such as water delivery, sewage pump out, and garbage collection.



## CAPITAL FUND - 2018 Capital Projects

### Economic

Any downtime or failure of this structure could represent an economic impact on both residents as well as City operations.

### Environmental

This project has several environmental impacts that can be controlled, but care and consideration has to be taken when completing work in and around any water body, particularly fish bearing water bodies.

### **Operational Impact**

There are no increased operational impacts of completing this project and it will ensure a stable and maintained bridge structure.

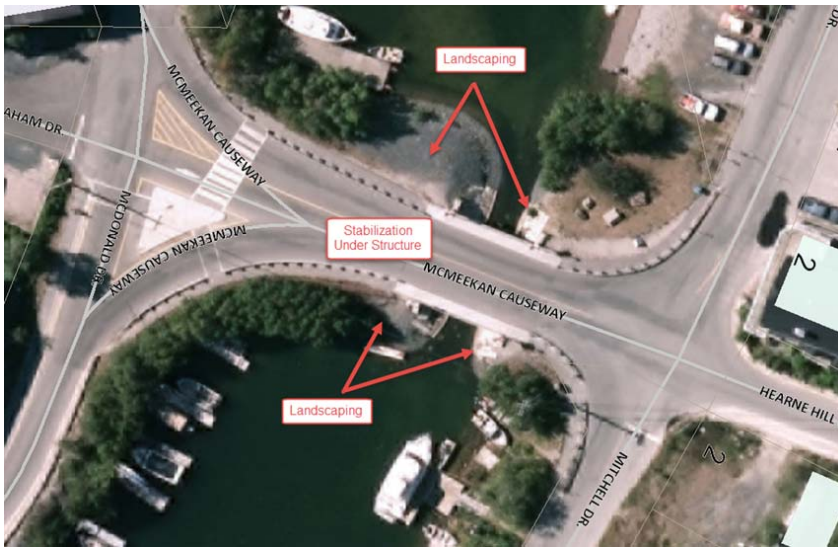


Photo: Aerial photo of the McMeekan Causeway and areas of note.



Photo: Showing erosion control methods failing causing abutment destabilization.

THIS PAGE LEFT BLANK INTENTIONALLY

