THE CITY OF DAWSON

COMMITTEE OF THE WHOLE MEETING #CW21-02

DATE: WEDNESDAY February 3, 2021
TIME: 7:00 PM
LOCATION: City of Dawson Council Chambers – Safe Spacing rules apply

1. **CALL TO ORDER**

2. **ACCEPTANCE OF ADDENDUM & ADOPTION OF AGENDA**
   a) Committee of the Whole Agenda CW21-02

3. **MINUTES**
   a) Committee of the Whole Meeting Minutes #CW21-01 of January 13, 2021

4. **BUSINESS ARISING FROM MINUTES**
   a) Committee of the Whole Meeting Minutes #CW21-01 of January 13, 2021

5. **SPECIAL MEETING, COMMITTEE, AND DEPARTMENTAL REPORTS**
   a) RFD- Water Metering
   b) RFD- Eliza Building (Chief Isaac)
   c) IR- Dome Road Draft Engagement Materials

6. **BYLAWS & POLICIES**
   a) Zoning Bylaw Amendment No. 11 (2021-01)
   b) Zoning Amendment No 5 (2020-15)

7. **CORRESPONDENCE**
   a) RCMP Monthly Policing Report- November 2020
   b) City of Dawson 2020 Audit Plan
   c) Public Airports Act review

8. **PUBLIC QUESTIONS**

9. **IN CAMERA**
   a) Land related matter

10. **ADJOURNMENT**

MINUTES OF COMMITTEE OF WHOLE MEETING CW21-01 of the Council of the City of Dawson called for 7:00 PM on Wednesday, January 13, 2021, City of Dawson Council Chambers

PRESENT:	Mayor	Wayne Potoroka
	Councillor	Stephen Johnson
	Councillor	Bill Kendrick
	Councillor	Natasha Ayoub
	Councillor	Molly Shore
REGRETS:		
ALSO PRESENT:	CAO	Cory Bellmore
	EA	Elizabeth Grenon
	CDO	Stephanie Pawluk
	PWM	Gagan Sandhu

Agenda Item: Call to Order

The Chair, Wayne Potoroka called the meeting to order at 7:00 p.m.

Agenda Item: Agenda

CW21-01-01 Moved by Mayor Potoroka, seconded by Councillor Shore that the agenda for Committee of the Whole meeting #CW20-18 be accepted as presented.
Carried 5-0

Agenda Item: Minutes

a) Committee of Whole Meeting Minutes CW20-18 of December 2, 2020

CW21-01-02 Moved by Councillor Kendrick, seconded by Mayor Potoroka that the minutes of Committee of the Whole meeting #CW20-18 of December 2, 2020 be accepted as amended.
Carried 4-1

Change “Carried 4-0” to “Carried 5-0” for Resolution CW20-18-01.

Agenda Item: Business Arising from Minutes

a) Committee of Whole Meeting Minutes CW20-18 of December 2, 2020

Council discussed whether it needed to be reflected in the minutes if someone has participated in the meeting by phone or electronically.

Council asked for an update on the waste collection data.- CAO explained that data has been collected for 3 consecutive weeks and is still ongoing.

Council inquired about the Dawson City Recreation Center Engagement and if the questions asked by Council were answered or if they were going to get a copy of the answers.- CAO explained that the comments were provided to the consultant so they could make changes to the Draft Engagement Plan. Public engagement was planned for January but is now scheduled for March. Council asked what the delay was?- CAO said she would look into it.

Council asked when they would be getting a copy of the Socio-Economic Study (Ladue Study) and the geotechnical study.- CAO explained that it would be coming soon, final draft edits are being done.

Agenda Item: Special Meeting, Committee and Departmental Reports

a) RFI- Lot 33-2 Dome Road, Driveway: License of Occupation

CW21-01-03 Moved by Councillor Kendrick, seconded by Councillor Ayoub that Committee of the Whole:
a) forward to Council for approval to amend the access plan of Subdivision Application #19-048 on the condition that the property owner constructs a 12-inch culvert at the intersection of the driveway and the Dome Road, and
b) forward to Council to direct administration to enter into a License of Occupation with the Owners of Lot 33-2, Dome Road Subdivision for the purposes of formalizing the property's access plan.
Carried 5-0

Council inquired if a 12-inch culvert would be an appropriate size for this situation and if it was chosen because that is the standard size.- Administration will look into it.

Council asked if $1 was a common amount in LOO's. – Yes, but it also depends on the situation and the property.

What happens to the LOO if the property is sold? – LOO's don't carry with the property like an easement.

b) RFD- Material for New Water Reservoirs

CW21-01-04 Moved by Mayor Potoroka, seconded by Councillor Ayoub that Committee of the Whole forward to Council to approve steel bolted tanks as the tank construction material for the new reservoirs to be constructed at the corner of Dugas street and 5th Ave and direct administration to proceed with the design and construction.
Carried 5-0

Council inquired who had indicated from the City the desire for using steel and was consideration given for the carbon footprint of each construction material over its lifetime.

Council also asked what new infrastructure like this would do to the City's CMG.

Agenda Item: Bylaws & Policies

a) Zoning Bylaw Amendment No. 11 (2021-01)

CW21-01-05 Moved by Councillor Shore, seconded by Councillor Ayoub that Committee of the Whole forward Zoning Bylaw Amendment No. 11, #2021-01 to Council for First Reading.
Carried 5-0

In the footer, change Zoning Bylaw Amendment No. 5 to No. 11.

Council discussed/inquired about allowing Renewable Energy Systems as a permitted use in all Zones.

Agenda Item: Correspondence

CW21-01-06 Moved by Councillor Kendrick, seconded by Councillor Shore that Committee of the Whole acknowledges receipt of correspondence from:
a) RCMP Monthly Policing Report- November 2020
b) HAC Minutes #20-21
c) Sara Davis, Fund Administrator, Community Services, Infrastructure Development RE: Dawson Infrastructure Priorities
d) John Streicker, Minister of Community Services RE: Municipal Safe Re-start Funding
e) John Streicker, Minister of Community Services RE: Proposed Energy-Efficiency Retrofit Loan Program
provided for informational purposes.
Carried 5-0

Council noted that on the table for Dawson Priorities it says that the Dawson Recycling Depot was cancelled and asked why that was.- CAO explained that the table was provided by YG and not the City and was unsure why it says cancelled.

CW21-01-07 Moved by Mayor Potoroka, seconded by Councillor Shore that Committee of the Whole direct administration to respond to the Yukon Government regarding Dawson infrastructure priorities.
Carried 5-0

CW21-01-08 Moved by Councillor Ayoub, seconded by Councillor Shore that Committee of the Whole direct administration to respond to the Yukon Government, with the City of Dawson's approval of the Comprehensive Municipal Grant breakdown for the Municipal Safe Restart Funding.
Carried 5-0

CW21-01-09 Moved by Mayor Potoroka, seconded by Councillor Shore that Committee of the Whole forward to Council to appoint Kim McMynn as the City of Dawson Official to be a representative on the Yukon Government Energy-Efficiency Retrofit Loan Program joint working group.
Carried 5-0

Agenda Item: Public Questions

Dan Davidson-

Q: Waste collection, where are we were at with it and what is needed from the public?
A: Still collecting data but need more time to get all the information. For now, we are status quo. If people's garbage is getting missed please call the City.

Q: It is rumored that the HAC has reviewed a development permit for the construction of new portables at the school. How many new and where will they be located?
A: The City hasn't received a Development Permit Application yet.

Q: Any updates on a new Lagoon, i.e., location and development?
A: The City has not heard from YG yet about those details. Administration will find out from YG what the timeline is.

Agenda Item: In Camera

CW21-01-10 Moved by Mayor Potoroka, seconded by Councillor Johnson that Committee of the Whole move into a closed session for the purposes of discussing a land related matter as authorized by section 213 (3) of the *Municipal Act*.
Carried 5-0

CW21-01-11 Moved by Mayor Potoroka, seconded by Councillor Johnson that Committee of the Whole reverts to an open session of Committee of the Whole and proceeds with the agenda.
Carried 5-0

Agenda Item: Adjournment

CW21-01-12 Moved by Councillor Johnson, seconded by Councillor Kendrick that Committee of the Whole meeting CW21-01 be adjourned at 9:15 p.m. with the next regular meeting of Committee of the Whole being February 3, 2021.
Carried 5-0

THE MINUTES OF COMMITTEE OF WHOLE MEETING CW21-01 WERE APPROVED BY COMMITTEE OF WHOLE RESOLUTION #CW21-02-__ AT COMMITTEE OF WHOLE MEETING CW21-02 OF FEBRUARY 3, 2021.

Wayne Potoroka, Chair

Cory Bellmore, CAO

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Water Meter Supply/Installation and Meter Reading Program	
PREPARED BY:	Gagan Sandhu, Public Works Manager	**ATTACHMENTS:**
DATE:	February 3, 2021	Greenwood Engineering Solutions/Urban System – City of Dawson Water Metering Program Summary Report
RELEVANT BYLAWS / POLICY / LEGISLATION:		

RECOMMENDATION

That Committee of the Whole provide feedback on the Draft Water Metering Program Summary Report

That Committee of the Whole forwards to council approval for administration to retain Greenwood/Urban System to:

- develop a Request for Proposal (RFP) for the procurement of water meter supply/installation and Automated Meter Reading (Drive-By) program for the City of Dawson that includes that the meter location to be upstream of the customers' bleeders
- assist with facilitating public education and engagement of the program to gain public buy-in and understanding

ISSUE / PURPOSE

This program will achieve 2 main goals:

Develop a revenue stream which is sustainable for operations, maintenance, and ultimate replacement of water infrastructure, along with equitable customer billing based on consumption, and

Water conservation.

In addition, the benefit to the City of Dawson to collect water data includes optimizing water system operations.

BACKGOUND SUMMARY

A water metering program and rates review has been a council priority for several years. This was initiated by the desire to ensure an efficient water delivery system and an equitable rate structure.

City of Dawson engaged Greenwood/Urban System to recommend options for:

Meter Types, Meter Reading Technologies, Installation Options, and Procurement as well as to complete a Water Rates review.

ANALYSIS / DISCUSSION

Meter types, reading technologies and installation would be best sourced through a comprehensive Request for Proposals (RFP) to select a proponent.

Staff is looking for Council comments and will incorporate the appropriate comments in the RFP.

Some notes to be considered:

For ease of maintenance, a balanced meter type needs to be considered versus a more complex system,

Polymer meters installed on vertical axis needs to be considered,

Keeping to a single manufacturer will ensure standardization, and

AMR (Drive-By) will require minimum staffing costs.

Although it adds some complexity in billing (calculating bleeder flows and subtracting from total consumption), upstream installation would encourage more diligent bleeder behavior within the customer base as they would be charged for total consumption during non-bleeding months. During winter months, a standardized bleeder rate, to be deducted from the meter reading, can be developed as part of the overall water rate structure.

APPROVAL		
NAME:	Cory Bellmore	**SIGNATURE:** 
DATE:	Jan 29, 2021	

GREENWOOD ENGINEERING SOLUTIONS

URBAN systems

CITY OF DAWSON

WATER METERING PROGRAM

SUMMARY REPORT

THE CITY OF DAWSON Y.T. INCORPORATED JAN. 9, 1902

December 2020

TRANSMITTAL

Report to:

City of Dawson
1336 Front Street
Dawson City, YT
Y0B 1G0

Attention: Cory Bellmore, Chief Administrative Officer

Prepared by:

Greenwood Engineering Solutions
4 Carpiquet Road
Whitehorse, YT
Y1A 0J4

Urban Systems Ltd.
200 – 286 St. Paul Street
Kamloops, BC
V2C 6G4

December 4, 2020

Adam Greenwood, P.Eng.
Project Manager

Jacob Scissons, P.Eng.
Technical Lead

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Appendices

EXECUTIVE SUMMARY

To be completed following review meeting with City.

1. INTRODUCTION

1.1 PROJECT INTENT

The City of Dawson (City) identified universal water metering as a priority initiative for its water utility. This Water Metering Program is informed by a comprehensive review of metering approaches and technologies and is designed to allow the City to optimize the operation of its water infrastructure and best service customers.

1.2 PREVIOUS METERING INITIATIVES

Meters were installed in 2002 at the residential and institutional / commercial / industrial (ICI) properties throughout the City, but were not put into service. This was partially due to public concerns about how meters would be read and how customers would be billed. Some meters remain in place, while others have been removed. The City recognizes that the benefits of the 2002 meter deployment have not been realized and is now looking to refresh the metering initiative through this Water Metering Program.

1.3 METERING DRIVERS

The primary drivers for the proposed universal metering program include:

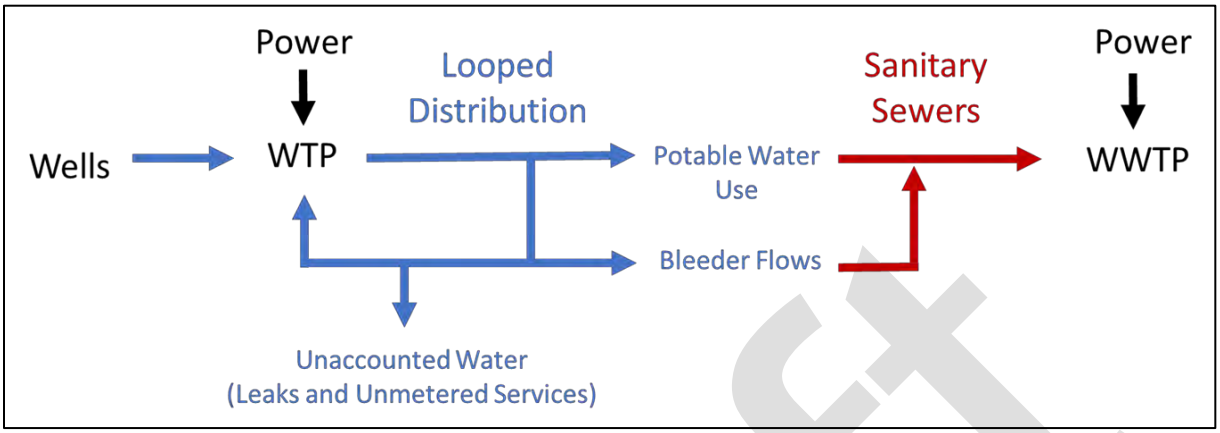
- Reduce residential per capita water use through a combination of water conservation and behavioral change;
- Support equitable billing by charging customers based on their actual water use supported by a simplified rate structure;
- Reduce power and operating costs associated with water supply and distribution;
- Optimize water system operation and management by understanding unaccounted for water use (leaks), bleeder use, and similar; and
- Collect accurate water use data to inform future infrastructure needs and sizing, including water and wastewater assets.

2. WATER SYSTEM OVERVIEW

2.1 SYSTEM CONFIGURATION

In order to maximize the benefit of implementing a water metering program, it is important to understand the broader water utility. Further, there is a correlation between water use and sewage generation that needs to be considered as the majority of the water supplied to customers is returned through the sanitary sewer network. The schematic below depicts an overview of Dawson's water and sanitary systems.

Figure 2.1 – Dawson Water and Sanitary System Overview



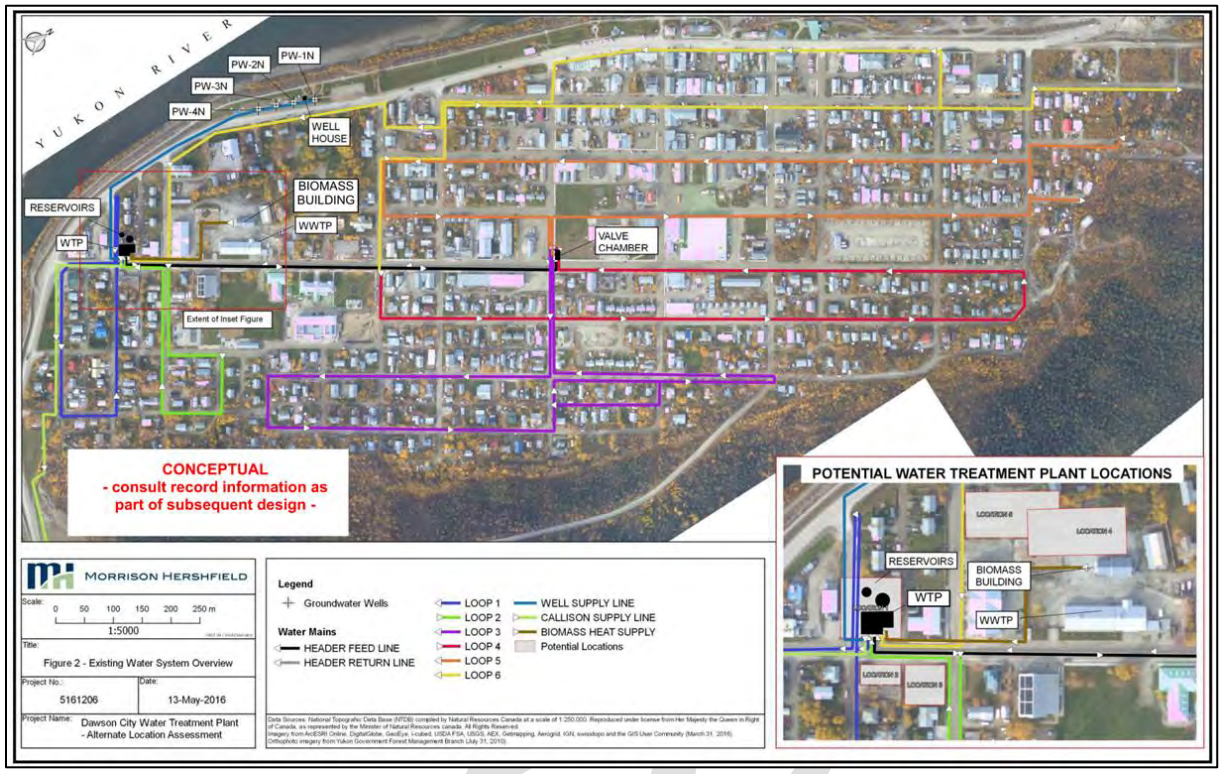
Key observations, with respect to metering, include:

- Power is required at both the water treatment plant (WTP) and wastewater treatment plant (WWTP) for pumping, controls, building HVAC, and similar. Boilers at the WTP are also used in the winter months for freeze protection and heat the potable water prior to distribution as well as recirculated water, which results in a significant energy demand. Similarly, influent at the WWTP is heated prior to treatment, which also contributes to increased energy use. Recognizing this significant energy demand, reducing water consumption with the assistance of meters is expected to have a direct benefit on operating costs of the water and sewer utilities;
- Bleeders require a demand from the water system and also contribute to flows into the sewer system. This is expected as the bleeders are intended to prevent freezing of both the water and sanitary piping. However, leveraging water meters to optimize bleeder use would provide and operational and cost benefit; and
- The looped distribution system coupled with universally deployed meters facilitates proactive leak detection to minimize unaccounted for water use. This is expanded upon below.

2.2 EXISTING DISTRIBUTION NETWORK

The City's water distribution system is configured as a network of loops as well as a couple of dead-ends. The watermain loops maintain water quality and prevent freezing as water is recirculated to / from the WTP. Each loop services a specific area / neighbourhood of customers and is also equipped with distribution bleeders. Similar to the private customer bleeders, the distribution bleeders pull water from the main and discharge it back to the sewer. The Dawson water distribution system is depicted in the figure below, which was created in 2016 as part of the new WTP design. Note that the new WTP was constructed at location 2 shown in the figure and the piping configuration between the old WTP and new WTP has changed, but the watermain loop configuration remains the same.

Figure 2.2 – Dawson Water Distribution System Overview



The looped water system configuration provides an opportunity for zone metering. If a bulk meter was installed on the main feeding a specific loop, the water use could be compared to the collective water use of the individually metered connections supplied by that loop. This facilitates a zone (loop) specific water balance vs a system wide comparison and could help identify areas where distribution system leakage may be a concern. Review of the capital costs to install zone meters suggest that zone metering may not be feasible as part of the initial meter deployment, but could be considered as a longer term option.

To realize the full benefits of a universal metering program, all services should be equipped with a meter. This includes City owned facilities and also the services supplying the distribution bleeders (City's bleeders installed on dead-ends to maintain circulation in the water system). This would help understand the water used by the distribution bleeders and distinguish such from leakage, but it would also allow the City to optimize the use of these bleeders. Meters coupled with a manual or remote operable valve are recommended so that bleeder flows could be turned on, off, or partially throttled as required.

2.3 BULK FILL STATION AND TRUCKED WATER

The City also operates a bulk water fill station, which is located at the WTP. Customers can apply for a bulk water account and are then provided with a FOB key to access the station. As the water from the bulk fill station is purchased based on a volumetric rate, the quantity of water sold is readily available. The frequency and method of recording the bulk water sales and integrating this information into the broader metered customer use should be explored further.

Some customers in West Dawson and along the Klondike Highway, outside of the piped water service area, receive trucked bulk water delivery from the City. The trucked water is sourced from the bulk water fill station at the WTP, so as discussed above, the volume of water sold for trucked delivery can be quantified and recorded.

2.4 FUTURE INFRASTRUCTURE

As previously mentioned, one of the City's metering drivers is to gather water use data / information to inform future infrastructure works. Reducing water consumption with the assistance of universal metering can help defer to need to invest in upgrading centralized infrastructure assets, but such work will ultimately be required.

Meters can provide water use data to feed into the development of design criteria for water and wastewater infrastructure. Observed average day demand (or average dry weather flow) can be quickly derived from monthly system wide meter readings. Many meters have hourly (or even 15 minute) interval data logging capabilities, which allows maximum day or peak hour demands / flows to be assessed.

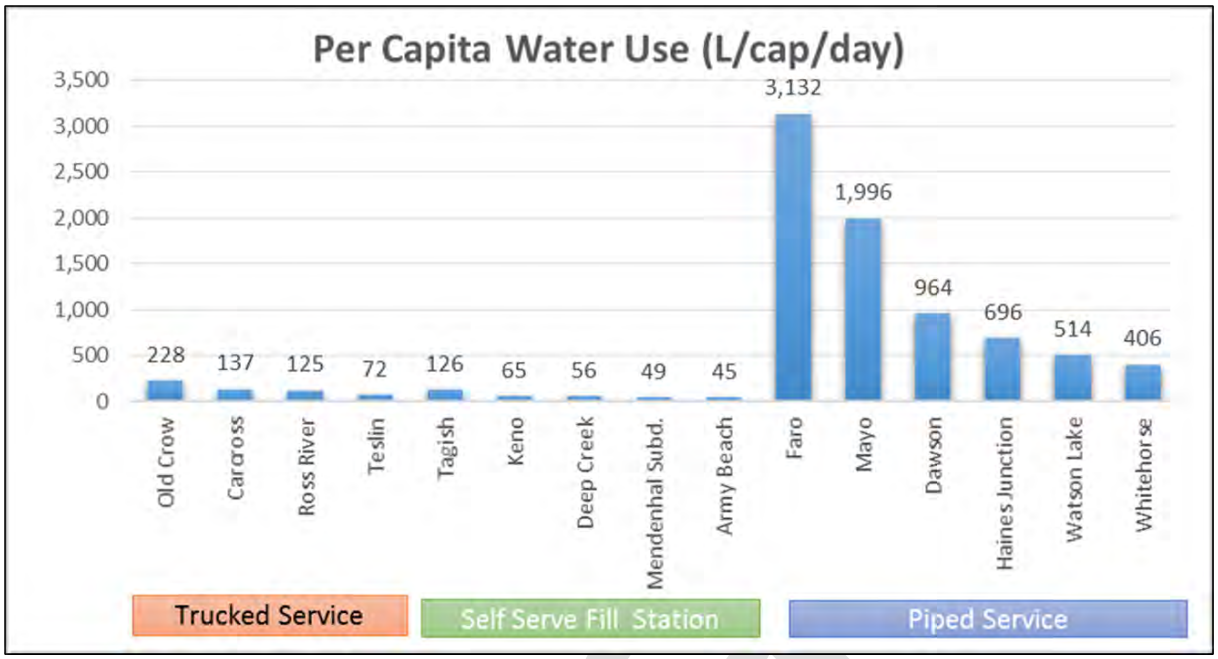
With significant capital projects planned such as the potential servicing extension to the north end of the City and proposed new sewage lagoons to replace the existing WWTP, deployment of universal metering and initiation of data collection would be beneficial. Ideally, the new / upgraded infrastructure could be sized and designed for the actual water use realized post-metering, as opposed to the historic / current water use which is expected to be at least somewhat inflated.

3. WATER USE

3.1 WATER USE IN TERRITORY

For context, historical per capita water use for a variety of Yukon communities is presented below. Of the communities with piped water service, Dawson is among the higher water consuming communities. This is expected to be largely associated with bleeder water use. Regardless, the City's intent to leverage water meters to yield reduced residential per capita water use appears to be warranted.

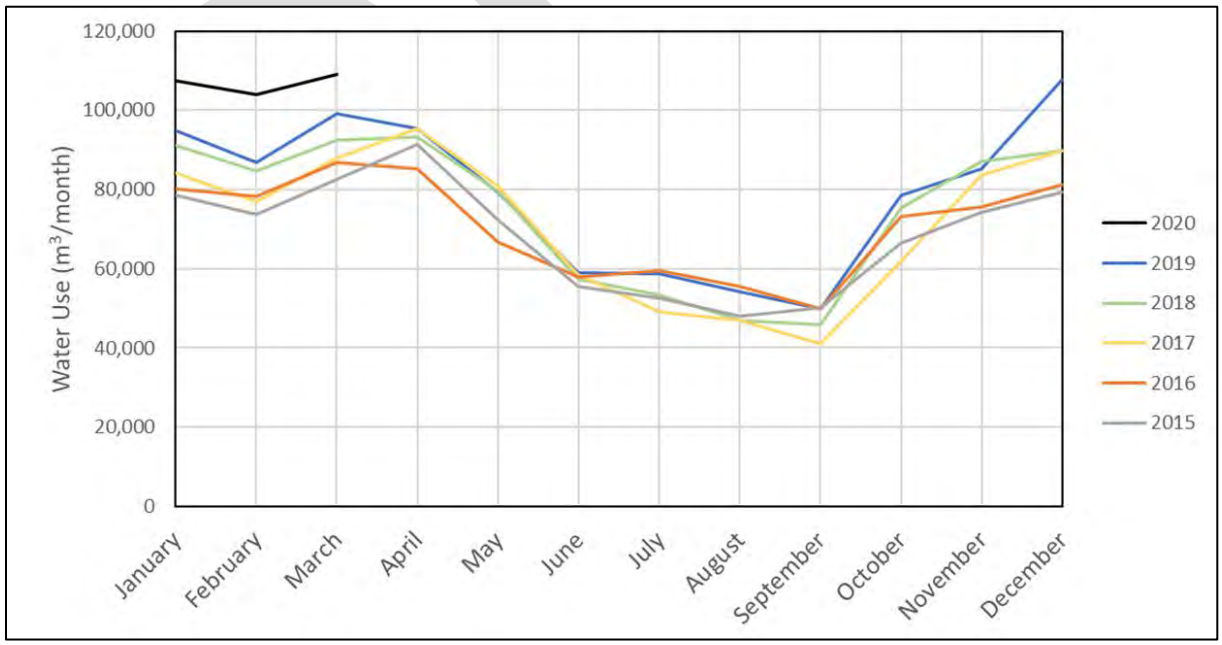
Figure 3.1 – Preliminary Review of Yukon Community Water Use in 2018



3.2 HISTORICAL WATER USE IN DAWSON

The figure below depicts the historical monthly water use for Dawson over the past five years.

Figure 3.2 – Dawson Historical Monthly Water Use



There is a clear seasonal trend with a nominal increase in water use year over year. Based on this data, winter water use is approximately 1.65 times greater than water use during the summer. Again, this is expected to be associated with the addition of bleeder flows during the winter.

3.3 WATER BLEEDER EDUCATION PROGRAM

The City continues to invest in educating the public about bleeder use and operation. This is a worthy initiative and supports the City's goal to realize water use reduction through behavioral change. By educating customers about the value of water, not just the financial cost, but also the social and environmental value, there will ideally be a recognition and appreciation that water is a precious resource that should not be wasted.

Bleeder education starts with simply telling residents when the bleeders should be turned on in the fall and off again in the spring to prevent pipe freezing during the cold months. However, the implementation of the universal water metering program provides the ideal opportunity to expand on the education initiative with a water conservation lens. Clear messaging should be developed with the appropriate supporting technical information so that the public understands how their water use affects the overall sustainability of their community.

4. METER CONFIGURATION OPTIONS

4.1 METER LOCATION

It has been determined that the preferred meter location is inside the home or building, as opposed to outside in a pit or chamber near the property line. This is reasonable given the cold climate in Dawson, coupled with the permafrost ground conditions, making pit / chamber installations more difficult and costly. For inside meters, some specific factors to consider include:

- Coordination for contractor access to initially install the meter and endpoint;
- Ability for City staff to access the meter for future maintenance;
- City liability associated with damage from a leaking meter;
- Noise, which can be a concern for some mechanical meters; and
- Potential for unauthorized connections upstream of the meter or bypassing of the meter.

Meter location relative to the bleeder is also an important consideration. Specific questions reviewed to assess locating meters upstream vs downstream of the bleeder include:

- Would either meter location better encourage customers to turn bleeders on in the fall and / or off in the spring?
- Is there a benefit to either meter location from a billing / water use clarity perspective?

- Would either meter location be more effective at preventing unauthorized water use from the water service or bleeder line?

The review and subsequent discussions with City staff suggest that locating the meter downstream of the bleeder is preferred. The is partially based on the desire to have the meter register and record actual domestic water use only. It would also streamline the reading / billing process, as bleeder flows would not need to be estimated / measured and deducted from the bill. Further, this provides customers with an increased appreciation of their water use habits and provides an opportunity for customer driven water conservation efforts.

The cost / benefit of installing a secondary meter on the bleeder line was also explored, but was deemed cost prohibitive as it would essentially double the price of metering each property. However, some meter / radio endpoints have the ability to support ancillary devices such as flow indicating sensors, pressure sensors, acoustic leak detectors, and similar. Such devices would not measure and record bleeder flows, but would be a means of detecting whether a particular bleeder was on or off. This will be explored further through the procurement phase.

4.2 BACKFLOW PREVENTION

Metering programs are an opportunity to advance cross connection control efforts. If there is a desire to include dual check valves on residential meter cut ins, the City will need to understand risks associated with older hot water tanks that do not have thermal expansion devices. There is also a cost premium.

Incorporation of backflow prevention devices needs to be considered in the design of the meter installation configuration. For example, meter setters can be supplied with a downstream dual check valve. For inline installations, the dual check valve would require additional lay length.

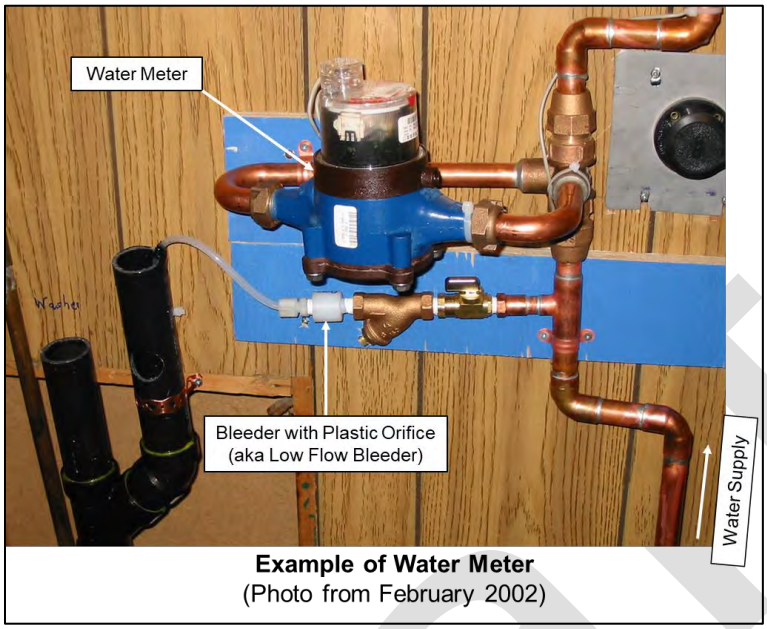
Based on discussions with the City, incorporation of backflow prevention devices is considered outside the scope of this Water Metering Program, but may be reviewed in the future.

4.3 PROPOSED INSTALLATION CONFIGURATION

Considering the above, the meter will need to be positioned above the sub-floor within the heated building envelope. Most houses in Dawson do not have heated crawlspaces, but rather are elevated above the ground so that air will flow freely under the building and recharge the permafrost. This means that the incoming water service lines (and outgoing sanitary laterals) are installed within insulated sleeves. It also means that meters generally need to be installed wherever the water service comes into the home, which can sometimes be in a less than ideal location such as beneath kitchen cabinets or in a linen closet, as opposed to within a utility or laundry room.

The photo below depicts a typical meter installation configuration from the 2002 deployment. It depicts a mechanical (positive displacement) meter installed horizontally on a Kornerhorn (also referred to as handy horn or yoke). The meter is also clearly downstream of the bleeder line.

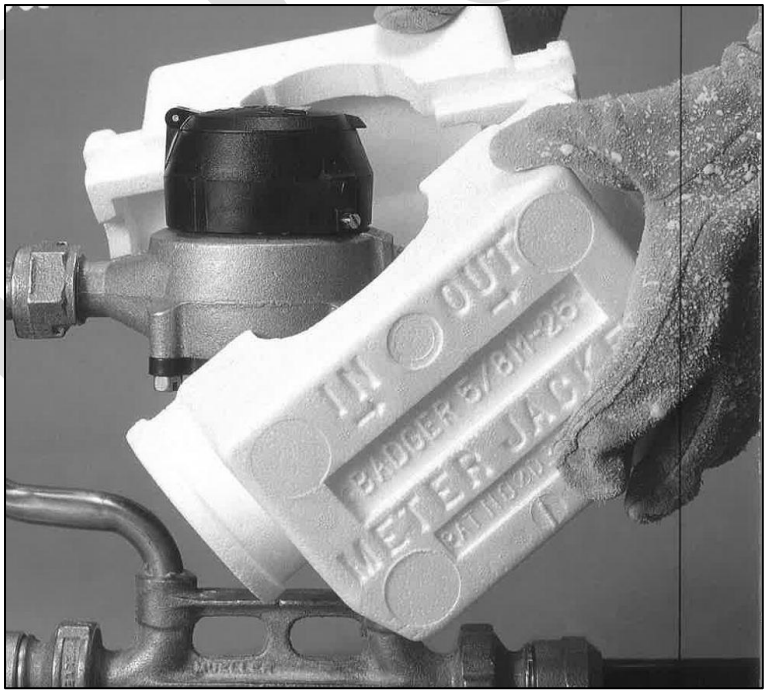
Photo 4.1- Typical 2002 Meter Installation



Example of Water Meter
(Photo from February 2002)

One of the concerns with the 2002 meter installations was condensation / moisture accumulating on the meter assembly and dripping onto the surrounding area. On similar installations elsewhere, utilities have installed meter insulation jackets to combat this issue. An example of such is depicted below.

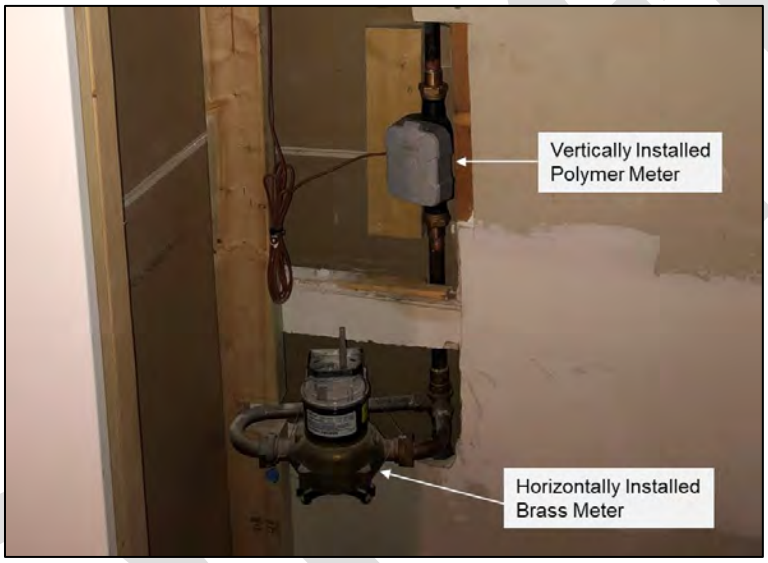
Photos 4.2 – Meter Insulation Jacket



In addition to the meter jacket, the water service piping could also be insulated. However, this adds cost and overall may be only marginally effective.

Alternate meter installation configurations were explored, and ultimately, a simple solution is identified. Leveraging the currently available metering products, which are discussed further below, using polymer / composite meters is recommended over brass bodied meters. Further, installing meters vertically (which several products are capable of) vs horizontally is recommended. The polymer meters tend to "sweat" less than brass meters. The vertical meter orientation limits the amount of ancillary piping / components and also minimizes the "drip zone". The photo below depicts a vertically installed polymer meter and a horizontally installed brass meter for a visual comparison.

Photo 4.3 – Vertical / Polymer vs Horizontal / Brass Meter Installation



The City's preferred meter body material and installation orientation is considered in the technology review below.

5. METERING TECHNOLOGY REVIEW

5.1 METERING TECHNOLOGIES

Metering technologies have evolved over the years, but at the same time there is longevity in technologies that have remained generally consistent for decades.

Mechanical (positive displacement) meters are commonly used by utilities for residential and small / mid-sized ICI customers. There are two types of positive displacement meters, oscillating piston and nutating disc, which are both used by different meter manufacturers.

Over the past decade or so, the development of solid-state meters has increased significantly. Solid-state meters have no moving parts and are comprised of single-body construction. The most common types are ultrasonic or electromagnetic meters.

Another evolution in metering is material type, specifically the maincase. This has largely been driven by no / low lead requirements for potable water (NSF 61). Manufacturers have developed bronze / copper alloys that meet NSF 61 requirements, so metal meters are still available. Other manufacturers have shifted to polymer composite (plastic) meter maincases, which meets NSF 61 requirements and also offer cost savings.

The latest advancement area has been the development of meters with integral ancillary devices, such as pressure sensors, temperature sensors, and remote operable valves. These features can be leveraged when the meter is coupled with a radio read system (discussed below). Interval datalogging capabilities also continue to advance, with more granular intervals possible as battery technology improves.

5.2 METER MANUFACTURERS / PRODUCTS EVALUATED

As part of this Water Metering Program, meters from the following manufacturers are evaluated:

- Neptune
- Badger
- Sensus

These manufacturers were selected based on their market presence in Western Canada including both established local technical / customer support and demonstrated product performance through local deployments. Other metering manufacturers are available, such as Master Meter, Kamstrup, and Honeywell, that the City could consider through a procurement process if desired.

5.3 EVALUATION CRITERIA

The evaluation of the various water meters includes the criteria listed below. A detailed evaluation matrix is included in **Appendix A**, which provides pertinent information regarding each of these criteria for each metering product.

<u>Materials and Dimensions</u>

- Size Range – provides an indication of potential uses for each metering product (ie. residential vs commercial uses).
- Meter Type – indicates the technology that the meter design utilizes.
- Maincase Material – indicates the use of “conventional” materials (bronze, ductile iron) vs newer materials such as polymers and plastics.

Features

- Fire Version Available – provides an indication if the meter is suitable for installation on a water service that supplies fire sprinklers or similar.
- Installation Position – indicates if the meter has to be installed horizontally or if a vertical installation (as preferred by the City) is possible.
- Data Logging Capability – outlines the ability of the meter register to log and store interval data.
- Enhanced Features – identifies capabilities of the meter, beyond collecting a read, such as transmitting alarms / flags, support of ancillary devices, and similar.

Operations and Maintenance

- Replaceable Components – indicates if the meter could be repaired / refurbished or if a complete replacement meter is required.

Support and Performance

- Support – outlines available customer and technical support associated with each manufacturer.
- Performance – provides an indication of the duration that each metering product has been used in the market.

Note that all of the meters evaluated meet applicable AWWA and NSF 61 standards.

5.4 RECOMMENDED PRODUCTS

Based on the evaluation, the following meters are recommended for residential / small commercial applications:

- Neptune MACH 10
- Badger E-Series
- Sensus iPERL

Note that the evaluation was limited to meters up to 50 mm diameter, which represents about 99% of the City's meter population. For the few larger water services / ICI customers, the City should consider options available from the manufacturer product line selected for residential / small commercial meters.

6. METER READING CONSIDERATIONS

6.1 READING TECHNOLOGY OVERVIEW

Meter reading systems can be classified most broadly as either Automated Meter Reading (AMR) or Advanced Metering Infrastructure (AMI). They are largely differentiated by how meter read data is collected.

AMR systems collect reads electronically, with minimal interaction from utility personnel. Vendor software is used to format reads for entry / upload into the utility billing system / customer information system (CIS). Systems in this category include touch read, and radio read walk-by or drive-by.

AMI (or fixed-base) systems collect reads and data automatically without human interaction with direct communication to the vendor head-end computer system and subsequently the utility computer system / CIS. Systems in this category include cellular AMI (utilizing cellular endpoints) and fixed-base radio read (utilizing radio frequency endpoints and gateways).

Touch Read systems require the utility staff member to physically visit each meter. A handheld device is used to tap a touch pad to collect the read. Note that touch read technology is becoming obsolete and is rarely recommended for new deployments. However, many existing systems still utilize touch read, and as such, vendors continue to support this technology for the time being.

Walk-by Radio Read systems still require staff to collect reads using a handheld device; however, access to the physical meter assembly is not necessary. The range of the handheld radio read devices varies, but utility personnel can typically obtain the read without entering private property.

Drive-by Radio Read systems provide the ability for collection of reads via a computer-operated data collection unit within a vehicle that is operated by utility staff. These drive-by data collectors have superior range to the handheld devices.

Fixed-base Radio Read and **Cellular** systems, which are unique to AMI, allow for meter read data to be collected automatically, without physical human interaction. Fixed-base radio read systems utilize permanently installed, centralized gateways that receive reads / data from a number of endpoints. The read data is then automatically transmitted directly to the vendor head-end computer system where it is accessible to the utility. Cellular AMI systems are similar, but do not require gateways. Each cellular endpoint communicates directly with the vendor head-end computer system and subsequently the utility. AMI systems are typically coupled with an optional customer web portal that allows customers to view and engage with their water use data.

6.2 KEY CONSIDERATIONS

Further to the above, some key considerations for the City to consider include:

- Migration – which refers to the ability to upgrade the reading system with minimal infrastructure replacement requirements, for example move from AMR to AMI. A migratable meter reading solution / system is recommended.
- Compatibility – referring to the ability for a manufacturer's endpoint to be connected to a competitor's meter. Reading systems that are compatible with a variety of meter products provide the greatest flexibility.
- Obsolescence – further to the demonstrated performance of new reading technologies / systems, it is important that the City confirm that vendors provide sufficient product obsolescence assurances, so that the City is not forced to prematurely replace system components.
- Interface Software – the ability of the manufacturer meter software to seamlessly interface with the City CIS (Diamond) is critical and should be considered a mandatory requirement.

The City is seeking a meter reading system that is reliable and allows for efficient and effective collection of meter reads. The ability to leverage datalogging and other basic features such as battery life alarms and leak / reverse flow / tamper flags is of interest to the City, but not a firm requirement. Advancements in the meter reading industry surrounding Smart Cities and Internet of Things applications are considered beyond the scope of this Water Metering Program.

6.3 RECOMMENDED READING APPROACH

Based on the evaluation, it is recommended that the City consider either:

- An AMR (walk-by or drive-by radio read) system that is migratable to AMI; or
- An AMI (fixed-base radio read or cellular) system.

Capital and annual operating costs for both of these options are provided in Section 8.0 below, as well as for the "base case" of touch read for comparison.

7. PROCUREMENT CONSIDERATIONS

7.1 WATER METER SUPPLY / INSTALLATION

There are multiple options available for meter supply, which somewhat depend on who will install the meters. Four (4) options are outlined below:

Option #1 - If the City intends to install the meters using in-house resources, a Request for Quotations (RFQ) process can be an effective means of seeking competitive meter supply prices.

Option #2 - For meter installation by an outsourced contractor, a tender (CCDC, MMCD, or Yukon Government Contract) could be used, but this may be considered overly detailed.

Option #3 – As essentially a combination of the above two options, the City could pre-purchase meters through an RFQ process and then issue a tender for contractor installation of City-supplied meters.

Option #4 – Finally, meter supply and installation could be included in the selection of the reading system with a comprehensive Request for Proposals (RFP) used to select a proponent followed by negotiation of the product supply and installation contract.

7.2 METER READING SOLUTION

Reading systems (beyond touch read) are best procured using a RFP process. This is because each vendor uses a different technology / approach. The City is really looking for a reading solution (vs a meter product) in this case. Further to the technology, vendor proposals can outline the Software as a Service (SaaS) and Network as a Service (NaaS) options available to the City. SaaS and NaaS are more applicable to AMI systems than AMR, but are expanded on below for context.

SaaS refers to a service provided by meter reading manufacturers whereby the vendor takes responsibility for the ownership, monitoring, security, and reliability of the read data and software system. The utility data is “hosted” on a secure cloud-based server (within Canada) and is accessible via a secure utility portal. This avoids the need for the utility to purchase and maintain software or provide local data storage. The SaaS agreement is typically structured as an annual cost based on the number of endpoints in the system.

Naas refers to a service provided by meter reading manufacturers whereby the vendor takes responsibility for the ownership, monitoring, maintenance, and upgrading of the fixed-base reading system infrastructure. This includes the gateways (where applicable) and firmware, but does not include the endpoints. This model avoids the need for utilities to purchase and maintain fixed-base hardware and firmware. The NaaS agreement usually covers a multi-year term with month-to-month delivery / payment conditions.

7.3 RECOMMENDED PROCUREMENT OPTION

Recognizing that the City intends to outsource the meter supply and installation, as well as the supply and installation of the reading system infrastructure, a comprehensive procurement approach is recommended. This represents meter supply and installation Option #4 outlined in Section 7.1 in conjunction with the meter reading procurement approach presented in Section 7.2.

The City could administer a single RFP to select the reading system and metering products, while also securing competitive pricing for supply and installation works. Options for vendor support (SaaS, NaaS, or similar) could also be explored. This allows vendors to present optional / value-added services or products for the City’s consideration. It also provides vendors with the ability to present a turnkey solution to the City.

The RFP evaluation criteria should include quantitative criteria, as cost is certainly a factor, but also qualitative criteria such as system / product reliability and availability and quality of vendor support. An RFP process also allows for vendor interviews, reference checks, presentations, or proof of concept.

The RFP could be openly / publicly procured, or alternatively it could be issued to an invited short-list of qualified proponents. For the latter option, the City could decide whether a pre-qualification process was warranted vs proceeding directly to invited proponents.

8. COST ESTIMATES

8.1 CAPITAL COSTS

Class “B” capital cost estimates are provided in the table below for the various reading system options, with a detailed cost breakdown included in **Appendix B**. These cost estimates are based on the following assumptions:

- Meter size is assumed to match the existing water service connection size, based on the inventory provided by the City. It may be possible to downsize some meters, pending further review;
- All meters are assumed to be located inside homes / buildings, as opposed to outside in pits / chambers; and
- Ancillary works, specifically carpentry and shut off valve replacement, have been assumed to be required for 25% of small diameter (19 mm and 25 mm) meter installations.

A 10% contingency and 10% project management allowance are also included.

Table 8.1 – Capital Costs

Cost Component	Option #1 Touch Read	Option #2 Drive-By / AMR	Option #3 Fixed Network / AMI
Water Meter Supply and Installation	$419,000	$419,000	$419,000
Ancillary Works	$40,000	$40,000	$40,000
Reading System Infrastructure	$58,000	$225,000	$285,000
Subtotal:	*$517,000*	*$684,000*	*$744,000*
Contingency (10%)	$52,000	$68,000	$74,000
Project Management (10%)	$52,000	$68,000	$74,000
Total:	**$621,000**	**$820,000**	**$892,000**

As can be seen above table, the costs for meter supply / installation and ancillary works are consistent between all three of the reading options. The variation is unique to the reading system infrastructure components.

For budgeting purposes, the City should set aside additional funds for:

- Public engagement / consultation;
- Procurement of project management and contractor services; and
- Coordination with Diamond (including potential software upgrades) to establish the interface between the meter reading software and City's customer information system.

8.2 ANNUAL OPERATING COSTS

The annual costs for the various meter reading system options largely depend on the extent that vendor support is required / desired. The table below outlines estimated annual vendor costs for each option, which are also included in the cost estimates in Appendix B.

Table 8.2 – Annual Vendor Costs

Cost Component	Option #1 Touch Read	Option #2 Drive-By / AMR	Option #3 Fixed Network / AMI
Vendor Software / Support / Service	$3,000	$6,000	$20,000
Customer Web Portal (optional)	-	-	$7,500
Subtotal:	*$3,000*	*$6,000*	*$27,500*
Contingency (10%)	$300	$600	$2,750
Total:	**$3,300**	**$6,600**	**$30,250**

The annual costs can vary between each specific vendor and are typically based on the number of endpoints / gateways. Most vendors also offer different level of service / support packages. The above table illustrates the relative annual cost for each reading system option, but an RFP with vendor quotations is recommended for budgeting purposes.

Note that in addition to the vendor annual costs, the City should budget for annual costs associated with:

- Meter reading and billing;
- Meter testing (if desired);
- Meter maintenance / repair; and
- Meter replacement.

8.3 ASSET REPLACEMENT

The expected service life for small diameter meters (≤ 50 mm) is 20 years. For large meters (≥75 mm), a 10 year service life is common. Each manufacturer has specific warranty coverage, which are predominantly based on battery life. For mechanical meters, accuracy decline over time is also a factor considered. For asset management planning purposes, the above service lives are recommended for forecasting asset replacement.

Data collection infrastructure including hand-held devices, drive-by radio read systems, and fixed base (AMI) gateways may require replacement or upgrade every five years or so. These costs are typically included in the vendor service contract.

9. WATER RATES

As a complementary study to this Water Metering Program, a review of water rate structure options was completed as the City seeks to update its water rates to be fair, equitable, and transparent. The standalone Water Rates Review Memo is included in **Appendix C** for convenient reference.

The memo provides a detailed review of historical water use, analysis of seasonal bleeder flows, estimation of post-metering water use, confirmation of annual cost recovery requirements, evaluation of alternative rate structure approaches, and identification of implementation considerations.

The ultimate design of the updated rates structure is recommended to follow deployment of universal metering. This provides an opportunity to assess actual post-metering water use reductions, advance public consultation, and implement roll out strategies including mock billing.

10. IMPLEMENTATION PLAN

10.1 KEY CONSIDERATIONS

The implementation of a universal water metering program requires a variety of skillsets, expertise, and resources. Some of the key considerations include:

- Undertake a public education and engagement process to increase community awareness and gain support for the metering program;
- Secure adequate funding for the capital costs required to deploy metering and reading system infrastructure;
- Identify how project management, contract administration, and inspection roles will be fulfilled, including securing funds for such;
- Identify an internal / City “champion” for the metering program and the extent of the role they will play;
- Confirm the approach for procurement of services;
- Identify steps the City may want to undertake in advance of engaging a contractor, such as locating existing water service connections and curb stops / shut off valve; and
- Advance the water rate structure update in conjunction with water use review and mock billing.

10.2 SCHEDULE

An approximate schedule / timeline for key components of the Water Metering Program is provided below.

- Finalize Water Metering Program Design - December 2020 / January 2021
- Develop and Initiate Public Education and Engagement - January / February 2021
- Develop RFP / Tender Documents - February 2021
- Procure Services – March - May 2021
- Initiate Discussions with Diamond for CIS Integration – April 2021
- Supply and Install Meters and Reading System – Summer 2021
- Update and Implement New Rate Structure - 2022

Appendix A

Meter Technology Evaluation Matrix

GREENWOOD ENGINEERING SOLUTIONS

URBAN systems

WATER METER EVALUATION MATRIX

URBAN systems

Small Diameter Meters (< 50mm)

Water Meter			Materials and Dimensions			Features				O&M	Support and Performance	
Manufacturer	**Model**	**Photo**	**Size Range (mm)**	**Meter Type**	**Maincase Material**	**Fire Version Available**	**Installation Position**	**Data Logging Capability**	**Enhanced Features**	**Replacement Components**	**Support**	**Performance**
Neptune	T-10		16 - 50	Positive Displacement (Nutating Disc)	Lead Free, High Copper Alloy	None	Manufacturer Specifies Horizontal Installation	96 days of hourly data with R900i or R900 MIU.	No noteworthy enhanced features with ProCoder register.	Field Replaceable: - Register - Measuring Element - Frost Plate	Local Neptune Representative (Mike Middlemass) Local Distributor (Fred Surridge Ltd)	> 20 years
	MACH 10		16 - 50	Ultrasonic	Lead Free, High Copper Alloy	Yes	Horizontal or Vertical		Easily passes water borne debris. Extended low-flow / high-flow range and accuracy.	No Field Replaceable Components (must change out entire meter)		< 5 years
Badger	Recordall PD		16 - 50	Positive Displacement (Nutating Disc)	Lead Free Bronze Alloy (or polymer up to 19mm)	None	Manufacturer Recommends Horizontal Installation (but vertical installation also possible)	42 days of 15 minute data with Cellular LTE or LTE-M endpoint.	With HR-E LCD Register: high ambient temperature, tamper, reverse flow, suspected leak, no flow, and end of life battery alarm indicators.	Field Replaceable: - Register - Measuring Element - Frost Plate	Local Representative and Distributor (ICONIX Waterworks)	> 20 years
	E-Series		16 - 50	Ultrasonic	Stainless Steel (or polymer up to 25mm) (Lead Free Bronze Alloy Under Devolopment)	Yes	Horizontal or Vertical		Empty pipe, high ambient temperature, continuous maximum flow rate exceedance, tamper, reverse flow, suspected leak, no flow, and end of life battery alarm indicators. (Water temperature and pressure sensors under development.)	No Field Replaceable Components (must change out entire meter)		< 5 years
	E-Series Plus		16 - 25	Ultrasonic	Lead Free Bronze Alloy	Yes	Horizontal or Vertical		All features of E-Series noted above, plus remote shut-Off valve.	No Field Replaceable Components (must change out entire meter)		Pending Release

WATER METER EVALUATION MATRIX

Small Diameter Meters (< 50mm) continued

Water Meter			Materials and Dimensions			Features				O&M	Support and Performance	
Manufacturer	**Model**	**Photo**	**Size Range (mm)**	**Meter Type**	**Maincase Material**	**Fire Version Available**	**Installation Position**	**Data Logging Capability**	**Enhanced Features**	**Replacement Components**	**Support**	**Performance**
Sensus	SR II		16 - 25	Positive Displacement (Oscillating Piston)	Low Lead Bronze Alloy	None	Manufacturer Specifies Horizontal Installation	120 days of hourly data with Electronic Register+. 35 days of hourly data with M radio.	No noteworthy enhanced features.	Field Replaceable: - Register - Measuring Element - Frost Plate	Local Representative and Distributor (KTI Limited)	> 20 years
	accuSTREAM		16 - 25	Positive Displacement (Oscillating Piston)	Polymer Composite	None	Manufacturer Specifies Horizontal Installation	120 days of hourly data with Electronic Register+. 35 days of hourly data with M radio.	No noteworthy enhanced features.	Field Replaceable: - Register		> 5 years
	iPERL		16 - 25	Electromagnetic	Polymer Composite	Yes	Horizontal or Vertical	45 days of hourly data from integrated register.	Leak detection, reverse flow, empty pipe, magenetic tampering, and multiple battery life alarm indicators.	No Field Replaceable Components (must change out entire meter)		> 10 years
	OMNI (R^2, T^2, C^2)		38 - 50	Floating Ball Impeller	Epoxy Coated Ductile Iron	Not for this size range.	Horizontal or Vertical	31 days of hourly data.	No noteworthy enhanced features.	Field Replaceable: - Register - Measuring Chamber		> 10 years
	ally		16 - 25	Electromagnetic	Polymer Composite	None	Manufacturer Specifies Horizontal Installation	120 days of hourly data from integrated register.	Leak detection, reverse flow, empty pipe, magenetic tampering, and multiple battery life alarm indicators. Water temperature, pressure, and remote shut-off valve also provided.	No Field Replaceable Components (must change out entire meter)		< 5 years

Appendix B

Cost Estimates

GREENWOOD ENGINEERING SOLUTIONS

URBAN systems

CITY OF DAWSON
WATER METERING PROGRAM
COST ESTIMATE
OPTION #1 - TOUCH READ

Item	Description	Unit	Quantity	Unit Price	Amount	Comments
Capital Costs						
1	Water Meter Supply and Installation					Based on inside meter installations.
a)	19 mm	ea.	355	$400	$142,000	Based on $200 per meter and $200 labour.
b)	25 mm	ea.	354	$450	$159,300	Based on $250 per meter and $200 labour.
c)	50 mm	ea.	24	$2,000	$48,000	Based on $1,000 for meter, 2 x $250 for valves, and $500 for labour.
d)	100 mm	ea.	5	$8,000	$40,000	Based on $3,000 for meter, 2 x $1,500 for valves, and $2,000 for labour.
e)	150 mm	ea.	2	$15,000	$30,000	Based on $5,000 for meter, 2 x $2,500 for valves, and $5,000 for labour.
2	Ancillary Works					
a)	Carpentry Adder	ea.	175	$150	$26,250	Assume approximately 25% of 19 mm / 25 mm meters will require carpentry restoration.
b)	Shut Off Valve Replacement Adder	ea.	175	$75	$13,125	Assume approximately 25% of 19 mm / 25 mm meters will require a new shut off valve.
3	Reading System Infrastructure					
a)	Touch Pad Supply and Installation	ea.	740	$75	$55,500	Based on $25 per touch pad plus $50 labour for wire run to exterior wall.
b)	Reading Equipment	L.S.	1	$2,500	$2,500	Based on purchase of touch reader, which is limited to storage of 100 reads.
				Subtotal Capital Cost:	$517,000	
				Contingency (10%)	$52,000	
				Project Management (10%)	$52,000	Includes project management, engineering, contract administration, and inspection.
				Total Capital Cost:	**$621,000**	
Annual Operating Costs						
1	Vendor Software / Support / Service	yr	1	$3,000	$3,000	Includes customer / technical support and basic transfer software for upload into Diamond.
				Subtotal Annual Fixed Operating Costs:	$3,000	
				Contingency (10%)	$300	
				Total Annual Operating Costs:	**$3,300**	

CITY OF DAWSON
WATER METERING PROGRAM
COST ESTIMATE
OPTION #2 - DRIVE-BY / AMR

GREENWOOD ENGINEERING SOLUTIONS

URBAN SYSTEMS

Item	Description	Unit	Quantity	Unit Price	Amount	Comments
Capital Costs						
1	Water Meter Supply and Installation					Based on inside meter installations.
a)	19 mm	ea.	355	$400	$142,000	Based on $200 per meter and $200 labour.
b)	25 mm	ea.	354	$450	$159,300	Based on $250 per meter and $200 labour.
c)	50 mm	ea.	24	$2,000	$48,000	Based on $1,000 for meter, 2 x $250 for valves, and $500 for labour.
d)	100 mm	ea.	5	$8,000	$40,000	Based on $3,000 for meter, 2 x $1,500 for valves, and $2,000 for labour.
e)	150 mm	ea.	2	$15,000	$30,000	Based on $5,000 for meter, 2 x $2,500 for valves, and $5,000 for labour.
2	Ancillary Works					
a)	Carpentry Adder	ea.	175	$150	$26,250	Assume approximately 25% of 19 mm / 25 mm meters will require carpentry restoration.
b)	Shut Off Valve Replacement Adder	ea.	175	$75	$13,125	Assume approximately 25% of 19 mm / 25 mm meters will require a new shut off valve.
3	Reading System Infrastructure					
a)	Radio Endpoint Supply and Installation	ea.	740	$250	$185,000	Based on $200 per endpoint plus $50 labour.
b)	Reading Equipment	L.S.	1	$40,000	$40,000	Based on average cost of high-power and low-power drive-by radio read systems.
				Subtotal Capital Cost:	$684,000	
				Contingency (10%)	$68,000	
				Project Management (10%)	$68,000	Includes project management, engineering, contract administration, and inspection.
				Total Capital Cost:	**$820,000**	
Annual Operating Costs						
1	Vendor Software / Support / Service	yr	1	$6,000	$6,000	Includes customer / technical support, mapping program, and transfer software for upload into Diamond.
				Subtotal Annual Fixed Operating Costs:	$6,000	
				Contingency (10%)	$600	
				Total Annual Operating Costs:	**$6,600**	

CITY OF DAWSON
WATER METERING PROGRAM
COST ESTIMATE
OPTION #3 - FIXED NETWORK / AMI

Item	Description	Unit	Quantity	Unit Price	Amount	Comments
Capital Costs						
1	Water Meter Supply and Installation					Based on inside meter installations.
a)	19 mm	ea.	355	$400	$142,000	Based on $200 per meter and $200 labour.
b)	25 mm	ea.	354	$450	$159,300	Based on $250 per meter and $200 labour.
c)	50 mm	ea.	24	$2,000	$48,000	Based on $1,000 for meter, 2 x $250 for valves, and $500 for labour.
d)	100 mm	ea.	5	$8,000	$40,000	Based on $3,000 for meter, 2 x $1,500 for valves, and $2,000 for labour.
e)	150 mm	ea.	2	$15,000	$30,000	Based on $5,000 for meter, 2 x $2,500 for valves, and $5,000 for labour.
2	Ancillary Works					
a)	Carpentry Adder	ea.	175	$150	$26,250	Assume approximately 25% of 19 mm / 25 mm meters will require carpentry restoration.
b)	Shut Off Valve Replacement Adder	ea.	175	$75	$13,125	Assume approximately 25% of 19 mm / 25 mm meters will require a new shut off valve.
3	Reading System Infrastructure					
a)	Radio Endpoint Supply and Installation	ea.	740	$250	$185,000	Based on $200 per endpoint plus $50 labour.
b)	Reading Equipment	L.S.	1	$100,000	$100,000	Based on deployment of one high-power data collector or three low-power data collectors.
				Subtotal Capital Cost:	$744,000	
				Contingency (10%)	$74,000	
				Project Management (10%)	$74,000	Includes project management, engineering, contract administration, and inspection.
				Total Capital Cost:	**$892,000**	
Annual Operating Costs						
1	Vendor Software / Support / Service	yr	1	$20,000	$20,000	Includes customer / technical support, meter data management software, and data hosting.
2	Customer Web Portal	yr	1	$7,500	$7,500	Optional added feature.
				Subtotal Annual Fixed Operating Costs:	$27,500	
				Contingency (10%)	$2,750	
				Total Annual Operating Costs:	**$30,250**	

Appendix C

Water Rates Review Memo

GREENWOOD ENGINEERING SOLUTIONS

URBAN systems

MEMORANDUM

TO	Cory Bellmore, Chief Administrative Officer, City of Dawson Kim McMynn, Acting Chief Financial Officer, City of Dawson Marc Richard, Acting Public Works Manager, City of Dawson Jacob Scissons, Urban Systems Ltd. John Weninger, Urban Systems Ltd.		
FROM	Adam Greenwood, P.Eng.	**DATE**	September 21, 2020
RE	Water Rates Review	**PROJECT No.**	11-01

The findings of our water rates review summarized in this memorandum are intended to assist the City of Dawson (the City) update their water rates to be fair, equitable and transparent. Following the City's review of this memorandum, we would like to set up a call to review the contents of this memorandum and confirm what information should be in included in the Water Meter Program Design reporting.

1 BACKGROUND

As part of the water metering program design, Greenwood Engineering Solutions (GES) in partnership with Urban Systems Ltd (Urban) was hired by the City to review the water rate structure in Dawson. The primary objectives of this analysis were to review current water rate best practices for metered services and present the options available to the City along with recommendations for next steps as part of the City's desire to update their water rates and rate structure.

The City's current water rate structure is lengthy and, in some instances, somewhat arbitrary. The City would like to develop a water rate structure that is fair, reasonable and transparent. City administration and Council have approached the topic of updating their water rate structure in the past, however, they do not have sufficient information to allow them to make decisions about how best to structure their rates. As part of the water metering program design, this memorandum provides an overview of the analysis and recommendations for future water rates in Dawson.

Along with typical considerations for developing water rates, the following Dawson-specific water rate considerations were included as part of our review:

1) How bleeder flows (both residential and City bleeders) are integrated into water meter rates
2) How vacant lots with water services are charged (ex. what happens if a building is moved)
3) How users are billed for trucked and bulk water use.

In addition to these considerations, the City would also like to understand how the current subsidies from general revenue should be factored into water rates, however, these considerations are not explored in the current review.

2 Historical Water Use and Future Water Use

Figure 2.1 provides a summary of the historical water use in Dawson and shows a very strong seasonal trend in water use. In general, winter flows (Nov-April) are approximately 1.65 times greater than summer flows (June-Aug) due to the addition of bleeder flows in the winter months. Furthermore, with reference to Figure 2.2, the water use ("actual discharge" – term used by water operations to track water use) has been increasing by an average of 3.6% per year. Meanwhile, the amount of water that is recirculated ("return" – term for water that is recirculated back to water treatment plant) in the distribution system during the winter months has decreased by an average of 5.1% per year. These trends may be attributed to more people staying in Dawson in the winter months which increases the water use and decreases the water returned from recirculation pumping.

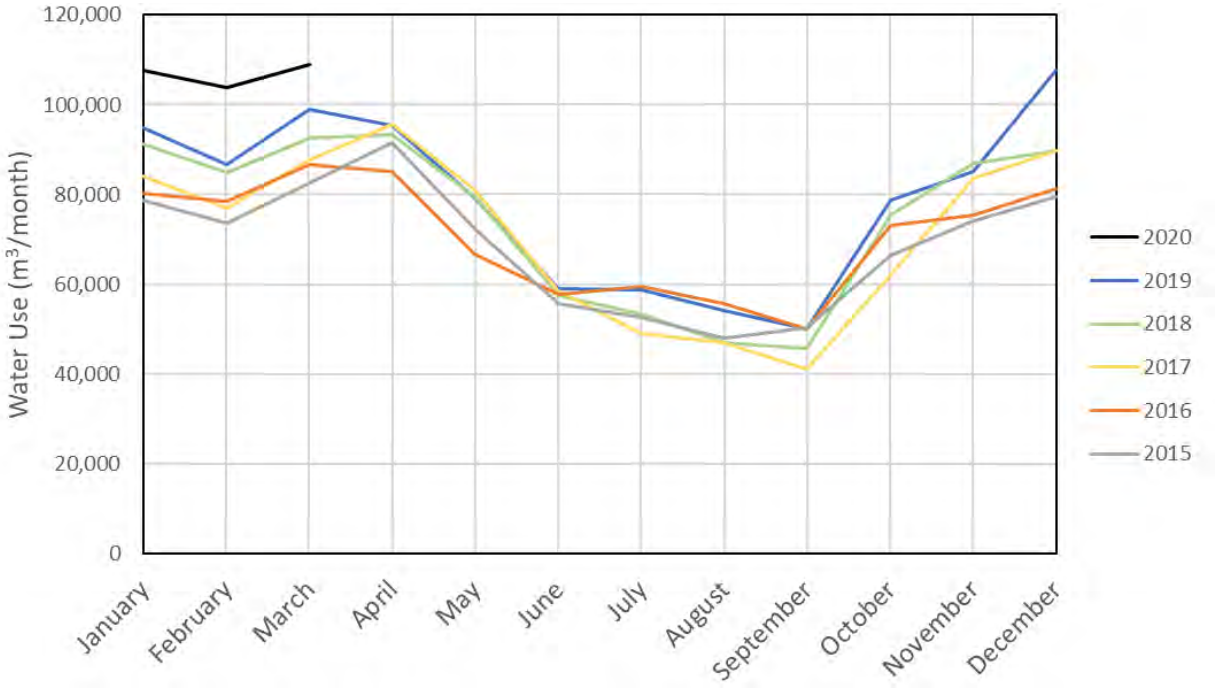


Figure 2.1 – Historical Monthly Water Use in Dawson

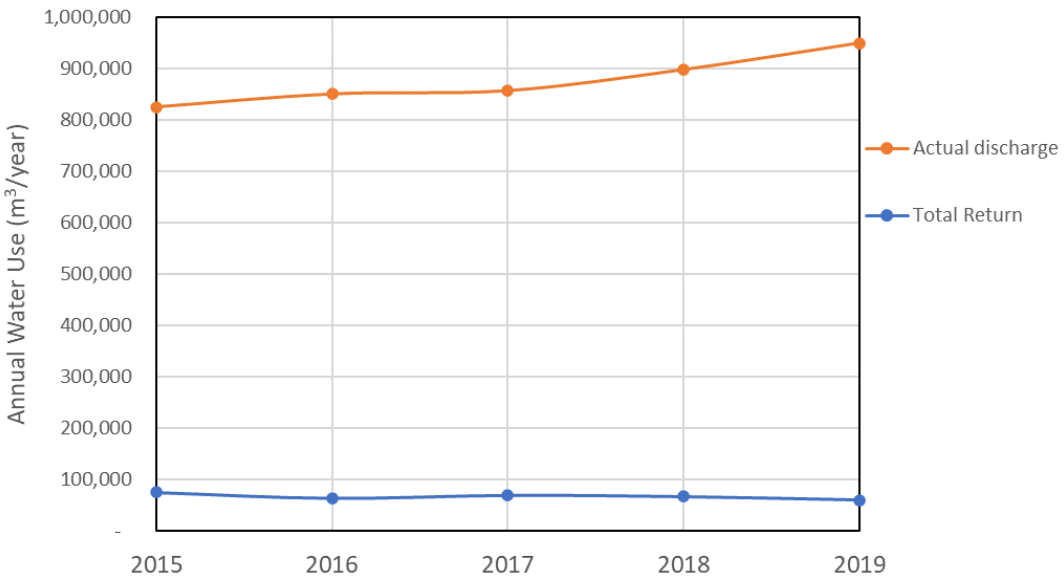


Figure 2.2 – Historical Annual Water Use in Dawson

To implement a water rate structure that charges users based on use, it is important to understand the volume of water that is going to be used by the consumer (revenue water). This ensures the water provider can generate the necessary revenues to cover the costs to produce and deliver the water. To calculate this volume, the bleeder flows and unaccounted for water (leaks, abandoned leaking services, etc.) need to be deducted from the water use. To estimate the amount of bleeder flows in the winter months, City staff indicated that the September water use is representative of the winter consumer water use before the bleeders are turned on. Table 2.1 provides a summary of the summer flows and the September flow.

Table 2.1 – Historical Summer and September Water Flows

Year	**Summer Flows** (June - Aug)	**September Flows** (Typical Winter Water Use excluding Bleeder Flows)	**September Flows as a Percent of Summer Flows** (Sept. Flows/Summer Flows)
2015	52,053.00	50,188	96%
2016	57,606.33	49,994	87%
2017	51,502.67	41,167	80%
2018	52,572.67	45,774	87%
2019	57,222.67	49,969	87%
Average	54,191.47	47,418	**88%**

As outlined in Table 2.1, over the past 5 years, the September flows were approximately **88%** of the summer flows. This reduction in overall water use can be attributed to a reduction in use at the hotels and businesses that slow down as a result of the reduced tourism traffic as well as the seasonal residents that leave Dawson and the pool closure in the winter months.

Assuming the September flows are representative of the winter water use, the bleeder water use was calculated by comparing the November to April water use (winter flows when the bleeders are **ON**) to the September flows (winter flows when the bleeders are **OFF**).

Furthermore, a typical water system experiences unaccounted water use due to leaks and other sources of water losses, such as unmetered services. On average, municipalities experience unaccounted for water that ranges between 10% to 40% of the total water produced. There is limited data available to estimate the unaccounted water in Dawson and therefore we have assumed that **20%** of the water flows in Dawson is unaccounted water.

A summary of the water use, bleeder flows and accounted water flows discussed above, Table 2.2 provides a summary of the historical water use.

Table 2.2 – Historical Summer and September Water Flows

Year	Summer Water Use (June-Aug.) (m^3/month)	Winter Water Use (Sept-April) (m^3/month)	Winter Bleeders Flows (m^3/month)	Estimated Annual Domestic Use (m^3/year)	Annual Bleeder and Unaccounted Water (m^3/year)	Bleeder and Leakage as percent of Water Use
2015	41,642	36,438	44,236	452,867	371,903	45%
2016	46,085	40,325	43,218	501,182	348,735	41%
2017	41,202	36,053	53,111	448,079	408,143	48%
2018	42,058	36,802	55,323	457,388	439,633	49%
2019	45,778	40,057	62,600	497,844	450,507	48%
Average	43,353	37,935	51,697	**471,472**	403,784	**46%**

As outlined in Table 2.2, the average water use in Dawson, not including bleeder flows or unaccounted for water flows, is estimated to be approximately 471,472 m^3/year.

The introduction of metered pricing often leads to increased conservation efforts among users and a reduction in overall demand. However, it is difficult to project what that water use will be in Dawson. The implementation of a water meter billing system can see anywhere from no reduction in water use to a substantial reduction in water use (ex. up to around a 30% reduction in water use). For the purposes of estimating the future water use for this water rates review, we will assume that the water use will decrease by approximately 15% which estimates an after-metering water use of 400,000 m^3/year.

- **A water use of 400,000 m^3/year will be used to calculate the water rates to cover the costs of providing water in Dawson.**

3 Bleeder Flow Considerations

As discussed in section 2, the 400,000 m^3/year of water sales does not include the bleeders flows or the accounted for water. Since bleeder flows are for the mutual benefit of providing freeze protection for both the City's buried water infrastructure as well as the individual water services, it is recommended that the cost of providing water for use as bleeder flows should be considered a fixed cost and not metered. Metering bleeder flows may encourage residents and business owners to limit bleeder use below the recommended levels and days.

There are opportunities to reduce un-metered flows. It should be ensured that all users have an appropriately-sized bleeder orifice to avoid excessive bleeder flows. Additionally, annual water flow balances completed once the water meters are installed can determine areas of the water distribution system that may have leaks or other sources of accounted for water (un-meters services, etc). Reducing water use will ultimately reduce the operating costs of the system and will lead to a more sustainable water system. The service configuration and considerations related to bleeder operations and oversight will be discussed further in the Water Metering Program Design report, however, at this time we recommend that bleeder flows are not metered to create a more simple rate structure and avoid issues related to monitoring and including bleeder flow rates as part of the rate structure.

4 Historical Water Expenditures

Figure 4.1 provides a summary of the historical costs of providing water in Dawson before any subsidies are applied to the costs. The costs have been grouped into categories to identify potential trends in the costs. Overall, the costs of providing water in Dawson are increasing annually. Staff wages and electricity and heat costs are the main sources of the increases in costs; most likely attributed to the additional treatment costs that were brought online in 2019. Over the same period, both the water delivery costs and the contribution to reserves remained constant year over year. The one anomaly is that the operating costs decreased year over year which are attributed to the reduction in the "Contract Services" and "Supplies – Operating" in the annual budgets. It may be that these costs are now being taken on by staff or may be covered under other line items. A separate exercise may be undertaken to look into ways to potentially reduce costs, however, in general it is fair so say that the costs of providing water in Dawson are increasing.

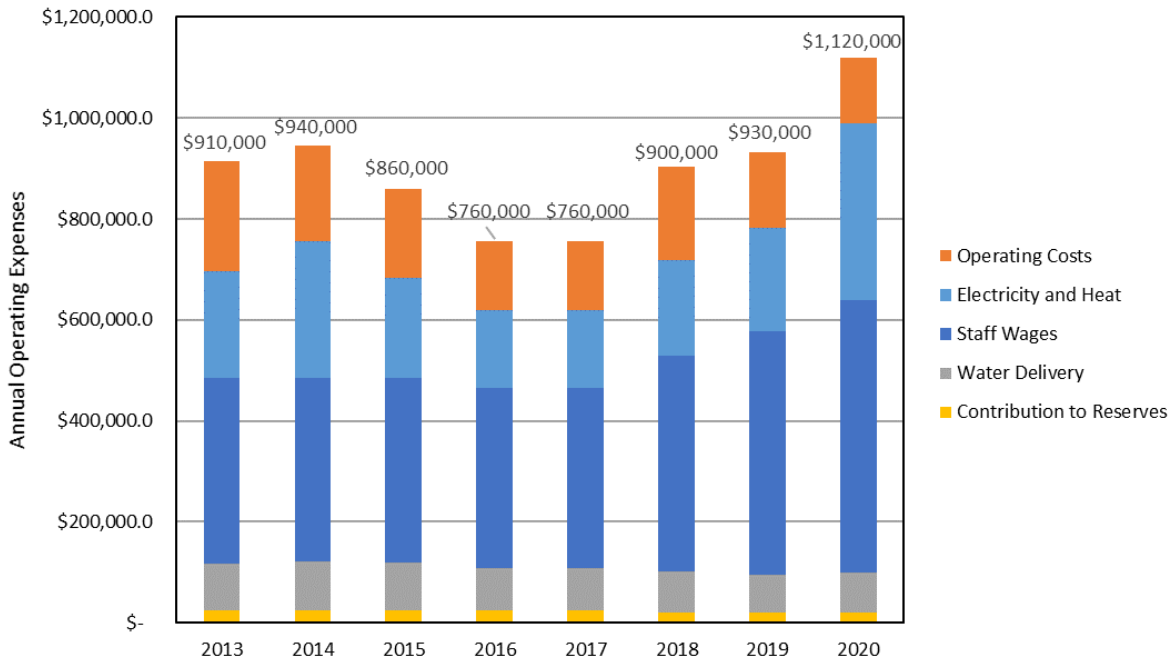


Figure 4.1 – Historical Annual Water Use in Dawson

In speaking with staff, Dawson would like to be able to generate $800,000 in water revenues with the balance of the operating expenses being subsidized by general revenues. In addition to the $800,000, approximately $20,000 per year will be required to cover the costs of collecting water meter data for billing purposes.

- **Water rates will be calculated based on generating $820,000 in water revenues per year.**

5 Water Rate Structures

The American Water Works Association (AWWA) has established best practices which are recommended to be followed to establish the new rate structure for Dawson. There are a number of rate structure options which are guided by the rate setting principles outlined in Table 5.1.

Table 5.1 – Water Rate Structure Principles

Principle	Description
Fairness and Equity	- Fair to all types of users. - Defendable approach.
Conservation	- Pricing (rate) to encourage water conservation.
Continuity	- With previous approach / philosophy, but not necessarily all aspects (i.e. Those not working)
Affordability	- Charges are reasonable and not punitive.
Simplicity	- Easy for customers to understand. - Efficient to administer.
Revenue Stability	- Ability to generate revenues to cover the cost to provide water.

- **Based on feedback during the August 8, 2020 council meeting, City Council expressed that they would like a water rate structure that is FAIR, EQUITABLE and DEFENDABLE as the primary driver of the rate structure revision.**

In addition to being fair, equitable and defendable, City Council would like the water rates to be affordable and also provide savings to the users that use less water (conservation). The main challenge with establishing rate structures is that there are trade-offs between the various principles in that the rate structure cannot meet all of the principles.

For example, charging everyone a flat rate to generate the revenues needed to cover the cost of operating the water system (current rate structure) meets the **Revenue Stability** principle, however, it does not encourage **Conservation** since users will be charged the same regardless of how much water they use. Alternatively, charging users solely based on the amount of water they use will encourage users to reduce their water use (promote **Conservation**), which may result in a decrease in water revenues (negatively affect **Revenue Stability**).

A list of some trade-offs between competing principles are listed below.

Water Meter Rate Structure Trade-Offs

Revenue Stability	⟷	Conservation
Conservation	⟷	Simplicity
Simplicity	⟷	Equity
Equity	⟷	Affordability

Three of the most common water rate structure models are discussed below.

5.1 *Fixed Charge Model*

The fixed charge model is the most common water structure. A fixed charge is applied for each connection and then the consumer pays for each unit of water they use. The price to the consumer increases uniformly with the volume used. This model is easy to understand, promotes conservation and provides good revenue stability. A visual of the costs to the user is presented below.

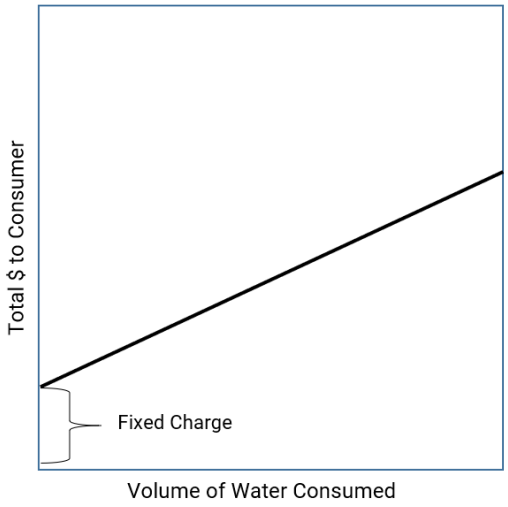


Figure 5.1 – Fixed Charge Model

5.2 *Inclining Block Model*

The inclining block model uses a set of usage "blocks" that increases as the consumption increases. This model supports water conservation; however, it has the highest revenue volatility. This model may lead to inequities if applied "across the board" to all customer classes (ex. Higher-density residential buildings will be charged a higher rate compared to lower-density residential buildings with the same water use per person). The inclining block is also not as easy for the consumer to understand.

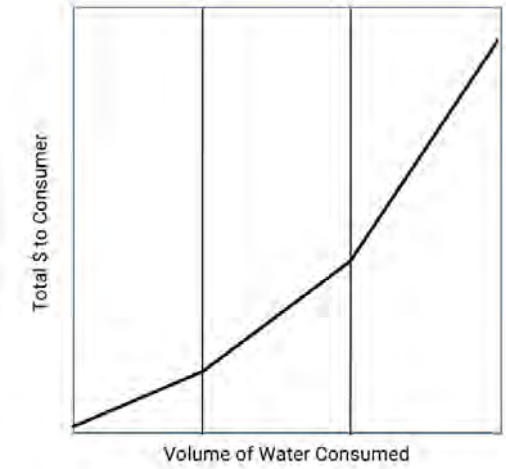


Figure 5.2 – Inclining Block Model

5.3 *Minimum Charge Model*

The minimum charge model is very similar to a fixed charge model but includes an allotment of water. The consumer pays for each unit of water they use after the allotment is exceeded.

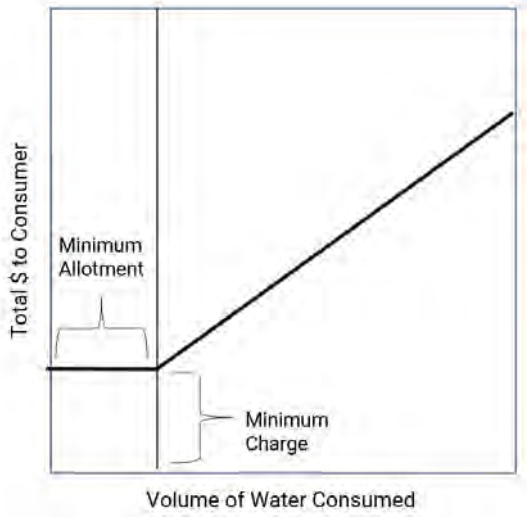


Figure 5.3 – Minimum Charge Model

- **The fixed charge model has been successfully used in other jurisdictions and appears to be the best model for the City.**

6 Water Rates

As discussed above, there are typically two components to a metered rate structure as follows:

Total Customer Bill = Fixed Charge + Customer Charge

The fixed charge does not vary with the amount of water used and the best practices published by the AWWA recommends the fixed charges are based on "equivalent connections." Equivalent connection takes into consideration the pressures that larger service connections have on the water system. The larger the service connection size, the greater the amount of water that the service can pull from the water system. Since the larger service connections require the water system infrastructure to be larger to maintain to appropriate water flows and pressures, water rate best practices recommend the larger services are charged based on the equivalent number of service connections.

Table 6.1 provides a summary of the equivalent connections for the various sizes of water services and the number of services of each size based on a preliminary review of the services in Dawson. The City should confirm the numbers presented in Table 6.1 and include the service size as part of each of the water billing report.

Table 6.1 – Equivalent Connection Summary

Connection Size (inches)	Equivalent Connections	Number of Service in Dawson	Equivalent Services
3/4 or 1	1	709	709
1.5	2.25	0	0
2	4	24	96
3	9	0	0
4	16	5	80
6	36	2	72
8	64	0	0
	Total	740	957

The customer charge (also known as volumetric rate) is what the user will be charged per unit of water consumed. The customer charge is based on the revenues that need to be generated (Section 4), the total amount of water that will be sold (Section 2) and what percent of the revenues the utility wants to recover through the fixed charge. As discussed in Section 5, there is a trade-off to consider in establishing what percent of the revenues will be generated through the fixed charge versus the customer charge. The trade-off is between revenue stability and conservation, as shown below.

Percentage of Fixed Charge vs Customer Charge: Primary Trade-Off

Revenue Stability ⟷ Conservation

The greater the percentage of the revenues that is recovered through fixed charge, the greater the revenue stability (stable since revenue is independent of water use), however, the fixed rate does not encourage water conservation since users do not save money if they use less water. Alternatively, the greater the percentage of the revenues that is recovered through the customer charge, the more conservation is encouraged, and the more volatile revenue will be since revenue will be highly dependent on water use.

Table 6.2 provides an overview of the potential fixed charge (monthly fee) and customer charge (volumetric rate) based on the percent of the revenues that will be recovered through the fixed charges.

Table 6.2 – Potential Water Rates based on Percent of Revenues Collected through Fixed Charges

Scenario	Description	Monthly Fee per Equivalent Service	Volumetric Rate ($/m^3)
Scenario 1	25% of Revenues from Fixed Charge	$18	$1.54
Scenario 2	50% of Revenues from Fixed Charge	$36	$1.03
Scenario 3	75% of Revenues from Fixed Charge	$54	$0.51
Scenario 4	100% of Revenues from Fixed Charge	$71	n/a

Note that commercial, institutional, industrial and residential services would be charged using the same fixed and volumetric rates under the scenarios outlined in Table 6.2.

Table 6.3 provides an overview of the charges that will be billed to the typical residential users based on the amount of water they consume.

Table 6.3 – Potential Annual Water Charges for Typical Residential Service

Scenario	Description	Low Water User (23 m^3/month)	Moderate Water User (35 m^3/month)	High Water User (46 m^3/month)
Scenario 1	25% of Revenues from Fixed Charge	$509.41	$638.56	$859.96
Scenario 2	50% of Revenues from Fixed Charge	$625.22	$711.32	$858.92
Scenario 3	75% of Revenues from Fixed Charge	$741.03	$784.08	$857.88
Scenario 4	100% of Revenues from Fixed Charge	$856.84	$856.84	$856.84

Currently the average residential service is charged $635.60 per year ($158.90 quarterly) which is in line with a moderate water user under scenario 1. This scenario provides an incentive for residents to decrease their water use. The higher the fixed charge, the less the incentive to reduce water consumption and the greater the cost to the residents. The fixed charge will also be used for those services that are connected to the water system but are not using water (such as the vacant lots).

It should be noted that, if all of the revenues are collected through the fixed charge (scenario 4), the charges to a residential service is greater than what the residents are currently being charged ($856.84 compared to $635.84 per year). This suggests that the current water rate structure may have commercial, institutional and industrial services subsidizing residential services and that residents are currently not paying the true cost of providing them their water.

The rates presented above are intended to illustrate how the rate structure would impact the fixed and consumption components of the water rate. They should not be considered to be at a state that could be implemented. More study and analysis will be required to get to that status.

7 Comparison to Other Municipalities

A summary of the water rates throughout the territory as well as the water rates for the Peace Region (Fort St. John, Dawson Creek and Chetwynd) and Yellowknife are summarized in the attached table (Appendix A). In general, the water rate structure being proposed is consistent with the communities in the Peace and in Yellowknife.

8 Water Rate Considerations

Ultimately rates should be set based on metered use at all of the services, the size of the services and the revenues that need to be generated to cover the operating costs of providing water to residents. It is very important that residents feel that the new billing system will be set up in a way that they feel it is fair and easy to understand. One way to do this is to have a well thought out public engagement program that provides a clear rationale as to why the City is updating their water rate structure, how residents will be charged for water and what the schedule will be for unfolding and implementing the new water billing system. As part of the implementation phase, it is recommended that the City complete water use analysis and mock billing for at least a one-year period to inform users how they will be charged for their water use along with information that will help them reduce their water bills. This mock billing period will also collect valuable information to help the City finalize their rate structure based on actual water use

data to ensure the revenues collected are sufficient to cover the operating costs of providing water to the public and avoid having to make further rate changes in the short term.
The City should also consider if and how they would like to subsidize the costs of providing water. It is understood that the City covers approximately 20% of the operating costs through general revenues and other sources of revenues. The City should consider how stable these sources of revenue are when they establish the new water rates. Furthermore, the City also provides a senior's discount in their current water rates bylaw and should consider how this discount is applied in the new water rates. The question of affordability is an important consideration for most communities and it is recommended that the City identify the vulnerable populations that the City would like to benefit from a discount.

Lastly, the City should consider whether or not users from outside the City that use the bulk water fill station should have an additional charge since they are not paying property taxes. Given users do not pay for water at the bulk water filling stations operated by Yukon Government, out of town users at the City's fill station may be limited. However, adopting this additional charge promotes the notion of fairness.

9 Closing

Please contact the undersigned if you would like to discuss the contents of this memorandum further. Following your input, we will prepare the rate structure table that can be considered by City Council as part of the City's plan to update their water rates bylaw before and after the water meters are operational.

We look forward to helping the City unfold this water metering program and water rates update.

Sincerely,

Adam Greenwood, P.Eng.
Water Engineer

Appendix A - Water Rates for Other Municipalities

Location	Supply	2020		2021	2022	Reference
		Rate	Per-Unit	Rate	Rate	
Whitehorse, YT	Bulk water station	$ 1.69	m^3			Bulk water webpage https://www.whitehorse.ca/departments/water-and-waste-services/bulk-water-station
	Water only - flat rate/month - Single family dwelling, commercial & bulk water - based on 17000 gallons	$ 67.99	month			Fees and Charges Manual - Schedule 10 (Water and Sewer)
	Water only - metered rate/bulk rate - each additional 1000 gallons over minimum	$ 2.22	m^3			
	Sewer only - flat rate/month - Single family dwelling	$ 17.86	month			
	Sewer & water - flat rate/month - Single family dwelling	$ 85.85	month			
	Sewer & water - flat rate/month - plus 1 suite	$ 170.86	month			
	Sewer & water - flat rate/month - plus 2 suites	$ 214.56	month			
	Sewer & water - metered rate/month - first 38.64 cubic meters	$ 85.85	month			
	Sewer & water - metered rate/month - each additional 1 m^3 over minimum	$ 2.27	m^3			
Watson Lake, YT	Residential - non-metered (water)	$ 35.00	month			By-Law 16-07 Rate Schedule "A" (2018-03-06)
	Residential - metered - monthly minimum	$ 20.00	month			
	Residential - metered consumption above min.	$ 1.00	m^3			
	Commercial - metered - monthly minimum	$ 45.00	month			
	Commercial - metered consumption above min.	$ 2.25	m^3			

Appendix A - Water Rates for Other Municipalities

Location	Supply	2020		2021	2022	Reference
		Rate	Per-Unit	Rate	Rate	
Faro, YT	Residential - dwelling unit	$ 40.00	month			By-Law 92-30 Water/Sewer - Appendix "A" Rate Schedule (2019-06)
	Commercial - minimum	$ 40.00	month			
	Bulk water sale - residential within town	$ 2.50	m^3			
	Bulk water sale - commercial within town	$ 5.00	m^3			
	Bulk water sale - premises outside of town	$ 15.00	m^3			
Mayo, YT	Residential - dwelling unit	$ 40.00	month			By-Law 308 - Appendix "A" Base Rate Schedule (2009-10)
	Metered rate - minimum charge	$ 40.00	month			
	Metered rate - over 30 cubic meters	$ 3.20	m^3			
	Bulk water sale - minimum charge	$ 40.00	month			
	Bulk water sale - over 30 cubic meters	$ 3.20	m^3			
Haines Junction, YT	Sewer & water - base rate - residential	$ 49.50	month	$ 54.46	$ 59.90	By-Law 351-20 - Appendix "A" (2020-06) [unhide columns E and F for planned 2021-22 rates]
	Sewer & water - base rate - commercial	$ 55.00	month	$ 60.50	$ 66.54	
	Sewer & water - metered consumption - res/comm	$ 1.86	m^3	$ 2.00	$ 2.14	
	Bulk water - residential - within boundary	$ 1.30	m^3	$ 1.40	$ 1.50	
	Bulk water - residential - outside boundary	$ 1.60	m^3	$ 1.80	$ 2.00	
	Bulk water - commercial	$ 1.60	m^3	$ 1.80	$ 2.00	

Appendix A - Water Rates for Other Municipalities

Location	Supply	2020		2021	2022	Reference
		Rate	Per-Unit	Rate	Rate	
Fort St John, BC	Unmetered residential premis including without limitation each suite, self-contained living unit or apartment	$ 250.00	month			Water Regulation Bylaw - Schedule A (Fees and Charges)
	Unmetered commercial or industrial or mixed use property	$ 1,000.00	month			
	Metered residential premise including without limitation each suite, self-contained living unit or apartment	$ 1.65	m^3			
	Metered commercial or industrial or mixed use property	$ 1.65	m^3			
	Users of City Water for residential domestic use, residing outside of City Boundaries	$ 3.00	m^3			
	Fixed base charge for each Water Utility account	$ 13.00	month			
Dawson Creek, BC	Variable charge for potable water	$ 2.02	m^3			By-Law No. 4087 (2020 fees)
	Variable charge for non-potable water	$ 1.51	m^3			
	Fixed infrastructure charge - 5/8" meter size	$ 26.62	month			
	Fixed infrastructure charge - 3/4" meter size	$ 38.14	month			
	Fixed infrastructure charge - 1" meter size	$ 68.36	month			
	Fixed infrastructure charge - 1-1/2" meter size	$ 153.27	month			
	Fixed infrastructure charge - 2" meter size	$ 272.72	month			
	Fixed infrastructure charge - 3" meter size	$ 613.07	month			
	Fixed infrastructure charge - 4" meter size	$ 1,098.87	month			
	Fixed infrastructure charge - 6" meter size	$ 2,454.53	month			

Appendix A - Water Rates for Other Municipalities

Location	Supply	2020		2021	2022	Reference
		Rate	Per-Unit	Rate	Rate	
Chetwynd, BC	Metered user	$ 1.56	m^3			By-Law No 916 - Schedule "B" (2020)
	Bulk water fill station (residential - 2" hose)	$ 2.93	m^3			
	Bulk water fill station (commercial - 3" hose)	$ 5.44	m^3			
	Wells (non-potable water)	$ 4.39	m^3			
	Non-metered user - residential	$ 27.66	month			
Yellowknife, NWT	Pipe Water Access Fee	$9.25	per equivalent Residential Unit	$ 9.50	$ 9.75	
	Monthly demand charge - 5/8" meter size	$ 11.50	month	$ 12.00	$ 12.25	
	Monthly demand charge - 3/4" meter size	$ 17.25	month	$ 17.75	$ 18.25	
	Monthly demand charge - 1" meter size	$ 28.75	month	$ 29.75	$ 30.75	
	Monthly demand charge - 1-1/2" meter size	$ 63.00	month	$ 65.25	$ 67.25	
	Monthly demand charge - 2" meter size	$ 109.00	month	$ 112.75	$ 116.25	
	Monthly demand charge - 3" meter size	$ 241.00	month	$ 249.50	$ 257.00	
	Monthly demand charge - 4" meter size	$ 424.75	month	$ 439.50	$ 452.75	
	Monthly demand charge - 6" meter size	$ 975.50	month	$ 1,009.75	$ 1,040.00	
	Monthly demand charge - 8" meter size	$ 1,721.50	month	$ 1,781.75	$ 1,835.25	

Report to Council

[ ] For Council Decision [ ] For Council Direction [X] For Council Information

[ ] In Camera

SUBJECT:	**Eliza Building Proposal: C19-012 Order to Comply**	
PREPARED BY:	Stephanie Pawluk, CDO	**ATTACHMENTS:** • Proposal and supporting renderings
DATE:	January 22, 2021	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Official Community Plan Zoning Bylaw Heritage Management Plan Guidelines for Historic Dawson		

RECOMMENDATION

It is respectfully recommended that Committee of the Whole accept this report as information and forward the proposal to Council for approval.

ISSUE

Chief Isaac Incorporated's 'Eliza Building' (156 Queen Street, or Lot 32, Block A, Ladue Estate) has been in continued contravention of s. 7.5 of the *Zoning Bylaw* ('Heritage') and Development Permit #15-058 since October 23rd, 2019.

In order to remedy this contravention, the proponent submitted the attached proposal to bring the building into compliance with the heritage design guidelines. The proposal has been approved by the Heritage Advisory Committee and Administration is now presenting the proposal to Council for decision, since this issue had previously been forwarded to Council.

BACKGROUND SUMMARY

Three Notice of Offence Order's have been issued to Chief Isaac Incorporated in response to this noncompliance issue.

Administration sent the first Notice of Offence Order dated October 23rd, 2019 to Chief Isaac Incorporated in response to the City of Dawson becoming aware that the proposed building and elevation plans for Development Permit #15-058 were not followed. The Offence, as per s. 16.2 of the Zoning Bylaw, is for neglecting or omitting anything required under the Zoning Bylaw or a development permit. The Order requested the proponent to submit the building and elevation plans used for construction for review by November 6th, 2019.

Following this Notice of Offence Order, the City of Dawson received building plans confirmed to be the plans used for construction from Jack Kobayashi, the Architect for the project. The Heritage Advisory Committee (HAC) assessed these building plans against the Zoning Bylaw, the Heritage Management Plan, and the Design Guidelines for Historic Dawson. In assessing these plans, it was discovered that some elements of this amended design are non-compliant with the Zoning Bylaw, Heritage Management Plan, and the Design Guidelines for Historic Dawson. It was also determined that there are non-compliant differences between what was constructed and what was proposed. The elements that are non-compliant are as follows:

1. In the original building plans assessed by the Heritage Advisory Committee in 2015, a wooden façade was proposed. In the subsequent amendments, the façade was switched to tin, and this material was not approved by the committee.
2. The skirting proposed in the building plans is defined as a 1x6 cement board. The built skirting is gapped and is not compliant with the Heritage Management Plan.
3. The horizontal white trim between storeys was not demonstrated on the submitted building plans. The trim is also a metal material, which is a non-compliant material in the Design Guidelines for Historic Dawson.
4. The bottom of the oriel windows on the front façade were built larger than what was proposed in the renderings and are missing decorative trim elements.
5. The front door that was proposed was supposed to be a double door with a transom window. The door that was built is a single door without a transom window and is therefore non-compliant with the Heritage Management Plan and Design Guidelines for Historic Dawson.
6. The door to the deck that was proposed on the front façade was not replaced with a window, and it therefore alters the symmetry of the front façade, making it non-compliant with the Heritage Management Plan and Design Guidelines for Historic Dawson.

Two follow-up Notice of Offence Orders, dated November 21st, 2019 and June 24th, 2020 resulted in the submission of proposals to retrofit the building into compliance. The first proposal was reviewed on May 20th, 2020 at HAC meeting #20-07. Following HAC feedback on the original proposal, an updated proposal was brought forward to the HAC on August 5th, 2020 at meeting #20-013. It was ultimately determined that the proposals insufficiently addressed the design issues as identified by the Notice of Offence Orders and HAC feedback and the proposals were denied by resolutions #20-09-10 and #20-13-19, respectively. As per resolution #20-13-19 and s. 16.5.1 of the ZBL, this matter was referred to Council.

Administration continued to work towards resolution of the outstanding offence orders. In doing so, a meeting between members of the City and Chief Isaac Inc. occurred on October 22, 2020. Following direction that emerged from this meeting, the CDO and HAC member Jim Williams met with members of the Chief Isaac Inc. team including Heidi Bliedung (Director of Operations), Monica Hawthorne (Eliza Building Manager), Daniel Fraser (Construction Supervisor) and Jack Kobayashi (KZA architect) on November 10th, 2020. At this meeting, the City presented a document containing proposed resolutions that could bring the proponent's previous proposal into compliance. The purpose of this meeting was to analyze the previous proposal in detail, provide examples of how the building could be brought into compliance, and forge a path forward.

Following this meeting, the proponent submitted this proposal to Administration on December 21, 2020. This is the third proposal that the City has received on the issue. This proposal was reviewed at HAC meeting #21-01 on January 7, 2021. The Committee provided feedback to the proponent, requested a series of amendments to the drawings, and as per resolution #21-01-10, the decision was tabled until the next HAC meeting. The proponent made all requested amendments to the proposal, as per meeting minutes #21-01 and submitted the amended renderings on January 14, 2021. The amended renderings were ultimately approved by the HAC at meeting #21-02 on January 21, 2021.

ANALYSIS / DISCUSSION

Offence

The *Zoning Bylaw* outlines the following as offences:

"s. 16.2: Offences

Any person who does the following commits an offence:

1. *Contravenes, causes, or permits a contravention of this bylaw or a development permit*
2. *Neglects or omits anything required under this bylaw or a development permit"*

The proponent has committed two offences, as per s. 16.2.1 and 16.2.2 of the *Zoning Bylaw*.

> 16.2.1: The proponent did not construct the building as per the approved plans; therefore, is in contravention of development permit #15-058. In addition to the contravention of the development permit, there is a contravention to the *Zoning Bylaw* as elements of what was built are non-compliant with the Zoning Bylaw, Heritage Management Plan, and the Design Guidelines for Historic Dawson (outlined in the Nov 2019 Notice of Offence Order).
>
> 16.2.2: The proponent neglected to submit plan amendments to the City for approval (outlined in Oct 2019 Notice of Offence Order), which contravenes development permit #15-058.

Enforcement

As described under 'background', Administration issued multiple Notice of Offence Orders, and reported the issue to Council as per s. 16.5.1 of the ZBL. The proposed resolution is now being presented to Council for final approval.

Design Compliance Analysis

Image 1: Eliza Building, as is

Image 2: Proposed resolutions, as amended Jan 14, 2021

This proposal addresses five of six of the noncompliant design issues as noted in the Notice of Offence Order dated November 21st, 2019.

1. In the original building plans assessed by the Heritage Advisory Committee in 2015 (attached), a wooden façade was proposed. In the subsequent amendments, the façade was switched to tin, and this material was not approved by the committee.

   Wooden façade not included in proposal. Replacing the front façade, extended around the sides on the front portion of the building with wood cove siding was discussed at the November 10th, 2020 meeting. Please see below re. the fact that the Design Guidelines and Heritage Management Plan do not indicate that tin is not an allowable material.

2. The skirting proposed in the building plans is defined as a 1x6 cement board. The built skirting is gapped and is not compliant with the Heritage Management Plan.

   Proposed resolution: vertical corrugated metal to match the tin siding along the front and ~16ft along the sides, and painting the remainder of the skirting brown to match the siding, as per HAC's Jan 7, 2021 request.

3. The horizontal white trim between storeys was not demonstrated on the submitted building plans. The trim is also a metal material, which is a non-compliant material in the Design Guidelines for Historic Dawson.

   Proposed resolution: the storey-defining trim band has been widened and terminates at the bays, as per HAC's Jan 7, 2021 request. The band sits on top of the door entrance and the thin trim that currently exists has been removed, as per HAC's Jan 7, 2021 request.

4. The bottom of the oriel windows on the front façade were built larger than what was proposed in the renderings and are missing decorative trim elements.

   Proposed resolution: Adding trim detailing -quarter round moulding and widening the bottom of the bay trim, as per HAC's Jan 7, 2021 request.

5. The front door that was proposed was supposed to be a double door with a transom window. The door that was built is a single door without a transom window and is therefore non-compliant with the Heritage Management Plan and Design Guidelines for Historic Dawson.
   Proposed resolution: built up trim on top of the door frame.

6. The door to the deck that was proposed on the front façade was not replaced with a window, and it therefore alters the symmetry of the front façade, making it non-compliant with the Heritage Management Plan and Design Guidelines for Historic Dawson.
   Proposed resolution: false balcony. This balcony resolves the symmetry issue and is compliant with the design guidelines (see image below)
   .  (Guidelines for Historic Dawson, p. 39)

It was respectfully requested that the HAC review this retrofit proposal on its own merits and unique circumstance, independent of past approvals, in accordance with the Design Guidelines and Heritage Management Plan. A concern that was brought up at HAC meeting #21-01 was that the proposal does not address the tin siding, which was not approved when the application was first presented at HAC in 2015. Given that the Design Guidelines and Heritage Management Plan do not indicate that tin is not an allowable material, this proposal was recommended for approval.

OPTIONS

1. Committee of the Whole accept this report as information and forward the proposal to Council for decision.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** C Bellmore
DATE:	Jan 28, 2021	

HAC PROPOSAL

Re: Eliza Retro-fits
Date: December 11, 2020
Prepared by: Heidi A.E. Bliedung

Summary:
In a meeting with Stephanie Pawluck (City of Dawson), Jim Williams (HAC), Monica Hawthorne (CII Eliza Manager), Daniel Fraser (CII Construction Supervisor) and Jack Kobayashi (KZA architect), we heard the changes the City & HAC wished to see. Later I sat down with Daniel to go over the non-compliant issues.

We agreed to some changes that were reasonable and not too expensive while others took some considerations due to cost and other environmental factors such as wasted material. Once we received the quotes for each issue, it was decided to propose changes to all of the non-compliant issues with the exception to the cove siding.

Proposed changes:
1) Sign
2) Parapet Trim and thicker vertical trim along corners and front entrance
3) Windows & Front Door
4) Bay/oriel window details
5) False balcony:
6) 1st & 2nd Floor Breaker Board & Skirting

We will need to see if a lift is available in town in the Spring/Summer of 2021, otherwise we may need to lease one from Whitehorse.

Next Steps:
Planning for changes 1-6 beginning in the Spring (weather permitting). We wish to negotiate the siding, or leave it as is based off the email dated April 30th, 2019, from Clarissa Huffman describing the use of the corrugated metal siding as *"…still accurately reflective of what you intend to install, there are no issues."*. We also feel that not only would the cove siding be expensive (especially with the dramatic increase in construction materials due to Covid-19), but it would be a terrible waste, removing perfectly good material already in place to add the wood.

Report to Council

☐ For Council Decision ☐ For Council Direction ☒ For Council Information

☐ In Camera

AGENDA ITEM:	Draft Engagement Materials: Dome Road Master Planning	
PREPARED BY:	Stephanie Pawluk, CDO	**ATTACHMENTS:** Draft engagement materials, including: • Event poster • Letter from Council • Online survey • Engagement session agenda and presentation • Background Document
DATE:	January 28, 2021	
RELEVANT BYLAWS / POLICY / LEGISLATION: N/A		

RECOMMENDATION

That Committee of the Whole review the draft engagement materials and provide comments to the planning committee.

ISSUE / PURPOSE

As part of the Dome Road Master Planning process, Stantec is conducting community engagement as per the Council approved Engagement Plan.

Administration is soliciting feedback from Council on the engagement materials.

BACKGOUND SUMMARY

Council approved the Dome Road Master Planning Engagement Plan as per resolution #20-21-13. This plan outlines how engagement for this project is to be conducted and includes community engagement on the development of the Planning Brief.

Both in-person and online engagement events are scheduled for Tuesday February 23rd at 12-1:30 pm and 6:30-8 pm. Given seating limitations on account of Covid-19 event protocol, registration for the in-person sessions is required via City Administration. If the registration yields interest that exceeds seating availability for the February 23rd events, a third in-person session will be added for Wednesday February 24th at 6:30.

ANALYSIS / DISCUSSION

The goals of the survey and engagement sessions are to:

- Introduce the team (Dome Road Technical Advisory Working Group -City, YG & Stantec), process and schedule
- Review the draft Vision and Goals
- Review the four development areas
- Obtain feedback on the subdivision names

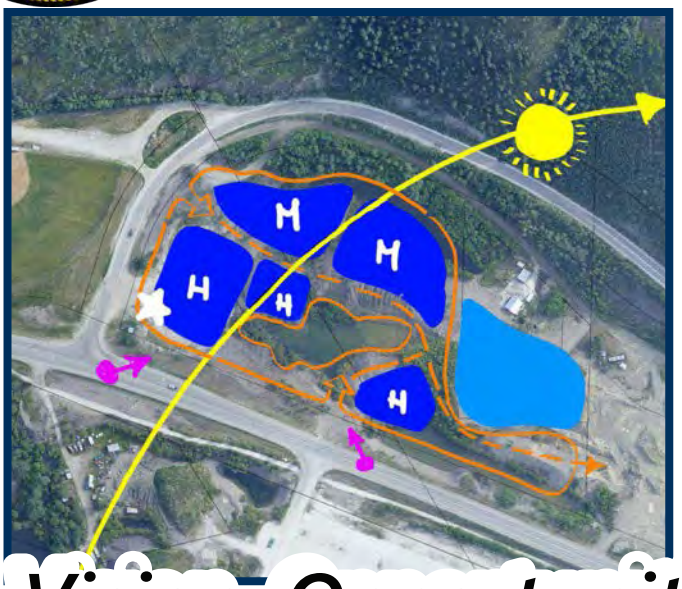
The proposed survey and engagement sessions are in line with the approved Engagement Plan, and follow current Covid-19 event protocol. The projected date for these sessions in the Engagement Plan was mid-

January. Given holiday delays and scheduling difficulties, this project is approximately one month behind schedule.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** 
DATE:	Jan 28, 2021	

DOME RD SUBDIVISION MASTERPLAN

Public Engagement



Vision, Opportunities, and Constraints

ONLINE ENGAGEMENT

February 19 - March 5

Visit the **www.cityofdawson.ca** for more information.

IN-PERSON INFORMATION SESSIONS

Tues Feb 23 in Council Chambers

12-1:30pm and 6:30-8pm [with online broadcast]

Due to COVID-19 regulations, capacity for each information session will be limited. Please register your attendance for one of the sessions in advance by visiting the City Hall or contacting:

Charlotte Luscombe
planningassist@cityofdawson.ca
(867) 933-7400 ext 438

THE CITY OF DAWSON

Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

February 8, 2021

Attention: City of Dawson landowner

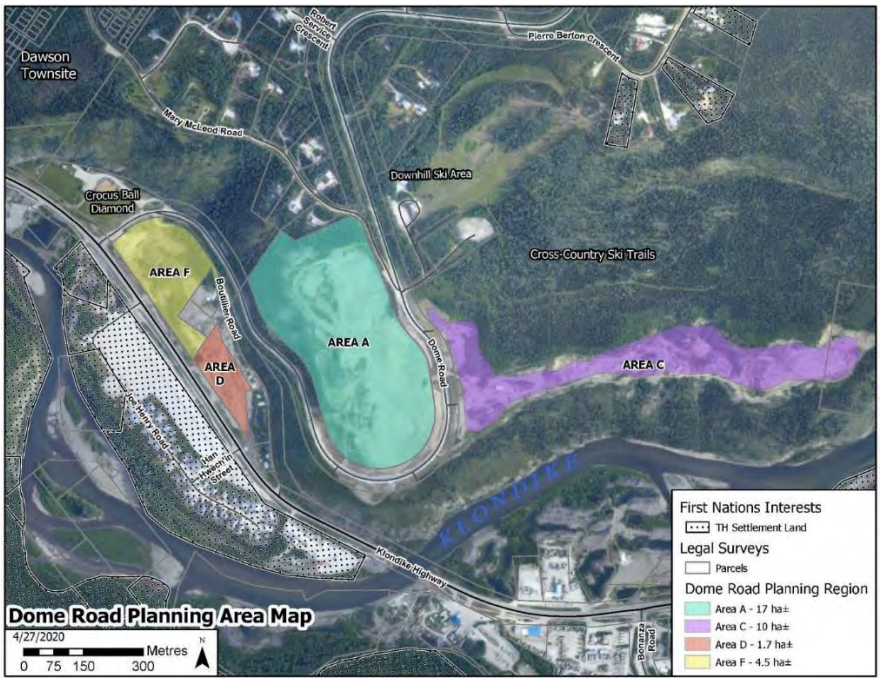
To whom it may concern,

Reference: Dome Road Subdivision Master Plan – Engagement Opportunity

The Government of Yukon and City of Dawson have hired Stantec Consulting to complete a Master Plan for the Dome Road Subdivision. The purpose of the study is to provide a detailed plan for subdivision and development of four sites along Dome Road. As directed by Council, the Dome Road Subdivision is envisioned as a serviced residential development, which will provide a range of housing types for our community, and build on past work such as the Slinky Mine Visioning Charette which took place in December 2019.

To share information gathered to date, and review the opportunities and constraints for each site, we will be launching both in-person and online community engagement. During this process, we are hoping to gather feedback from a wide cross-section of the community. I hope you will participate in the various engagement activities available to you and encourage others to do so as well.

Location of Dome Road Subdivision Areas



ENGAGEMENT ACTIVITIES

Engagement activities available during this process have been designed to support both in-person and distance interactions, in accordance with COVID-19 regulations.

Reference: Dome Road Subdivision Master Plan – Engagement Opportunity

- **Online survey**

  The online survey will be used to gather feedback about the project and will be launched from the City's website on February 19th. Paper copies of the survey will also be available at City Hall.

- **Online and in-person public information sessions**

  There will be two public information sessions held on Tuesday February 23rd; one from 12-1:30pm and one from 6:30-8pm. You can sign-up to attend in-person or you can join on-line. Both sessions will be broadcast live using Microsoft Teams and people at home can view the presentation and ask questions in real-time. Please visit the City's website for sign-up and log-in information. Additional in person sessions will be added if they are needed.

  Due to COVID-19 regulations:

  - Capacity at each public information session will be limited to 11 in-person attendees total
  - All attendees will be required to sit with those in their same social bubble, and stay seated during the event
  - All sessions will require a specific room set-up based on the number of persons in attendance; as such, advanced registration is mandatory:

    Please sign up for one of the sessions by visiting the Town office or contacting:

    Charlotte Luscombe
    planningassist@cityofdawson.ca
    (867) 993-7400 ext 438

    At the time of sign-up, you will be asked how many persons within your same social bubble will be attending with you.

NEXT STEPS

Following this engagement process, we will be preparing draft concept plans for each development area which will then be shared back to the community for review and comment. The selected concept plan will be the basis of the Master Plan, which will ultimately be reviewed and adopted by Council.

As noted above, Stantec Consulting Ltd. has been hired to complete this Master Plan and lead the engagement activities. Please contact Zoë Morrison at zoe.morrison@stantec.com (867) 332-3286, if you have any questions about the project or the engagement opportunities available to you.

Sincerely,

City of Dawson Mayor and Council

Link: Dome Road Master Planning Engagement Survey

[SURVEY PREVIEW MODE] Dome Road Subdivision Master Plan Survey (surveymonkey.com)

Agenda

Dome Road Public Sessions – Online and In-Person

City of Dawson Council Chambers

Tuesday February 23, 2021, 12-1:30pm and 6:30-8pm

Time:	Item:
12 or 6:30	• Welcome and Introductions • Dome Road Planning Process • Overview of Master Plan and Planning Brief
12:15 or 6:45	• Development Areas • Draft Vision and Goals • Names and Next Steps
12:45 or 7:15	• Questions and open discussion

Questions for discussion:

- Does the Draft Vision align with your vision for the development of this area?
- Do the Draft Goals support the vision? Are we missing anything? Which goals do you think are most important?
- Do you have any specific information about the development sites that you think we should be considering now?
- How would you describe “Authentically Dawson”?
- What do you think of the top voted names?

Dome Road Future Subdivision Master Plan

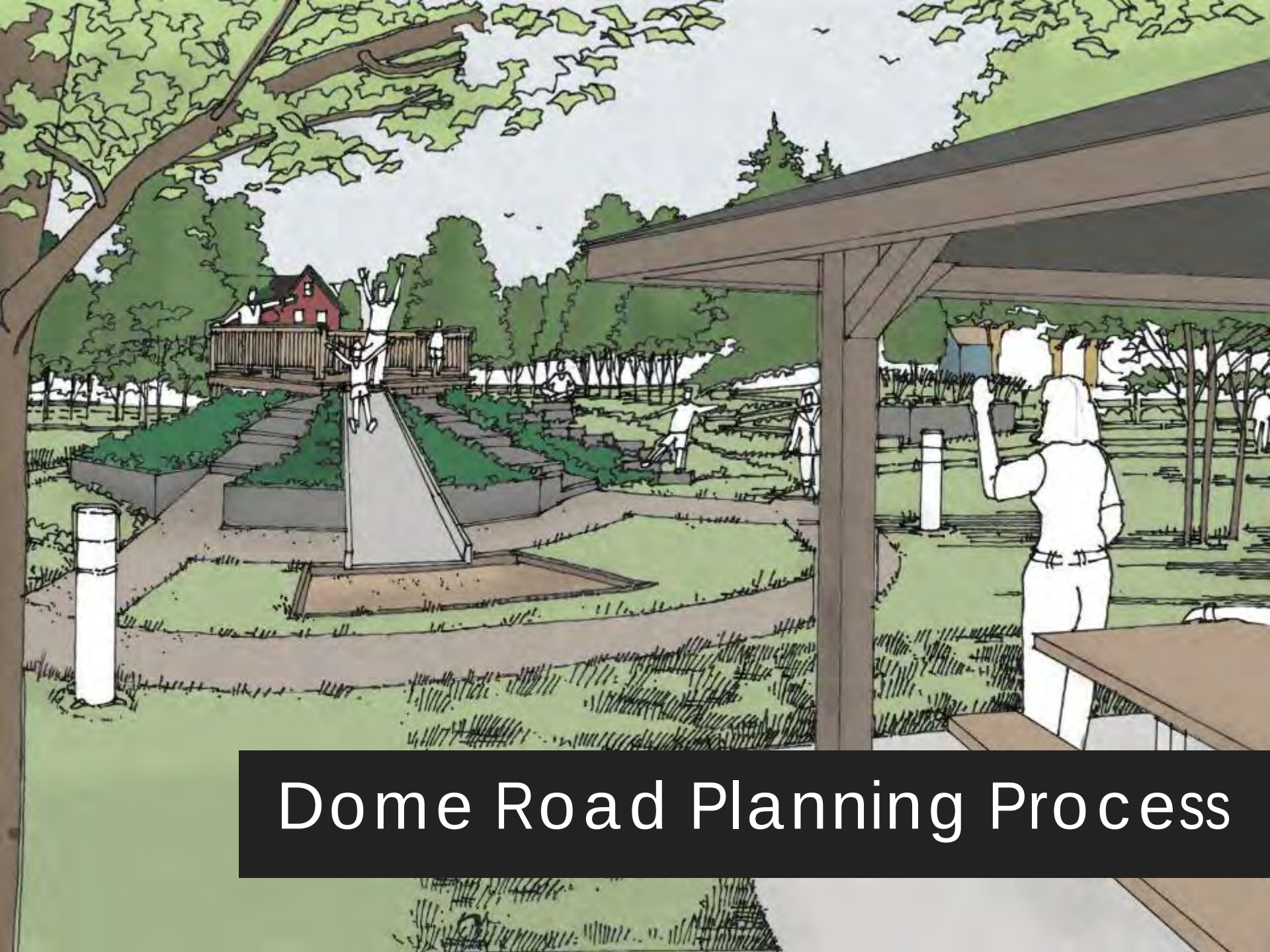
Community Engagement Session

February 23, 2021

Stantec

Agenda

- Dome Road Planning Process
- Site Review
- Vision and Goals
- Discussion and Next Steps



Dome Road Planning Process


Dawson Townsite
Robert Service Crescent
Pierre Berton Crescent
Mary McLeod Road
Downhill Ski Area
Crocus Ball Diamond
Cross-Country Ski Trails
AREA F
Boutillier Road
AREA A
Dome Road
AREA C
AREA D
Joe Henry Road
Han Hwech'in Street
KLONDIKE
Klondike Highway
Bonanza Road
Dome Road Planning Area Map
4/27/2020
Metres
0 75 150 300
N
First Nations Interests
TH Settlement Land
Legal Surveys
Parcels
Dome Road Planning Region
Area A - 17 ha±
Area C - 10 ha±
Area D - 1.7 ha±
Area F - 4.5 ha±

Dome Road Planning Steps

Predesign

- First Residential Plan - **2009**
- Slinky Mine Charrette **2019**
- Background Studies - **2019/2020**
- Planning Brief - **Jan 2021**

Plan Development

- Draft Concept Plan - **March 2021**
- Draft Master Plan - **May 2021**
- Final Master Plan-**June 2021**

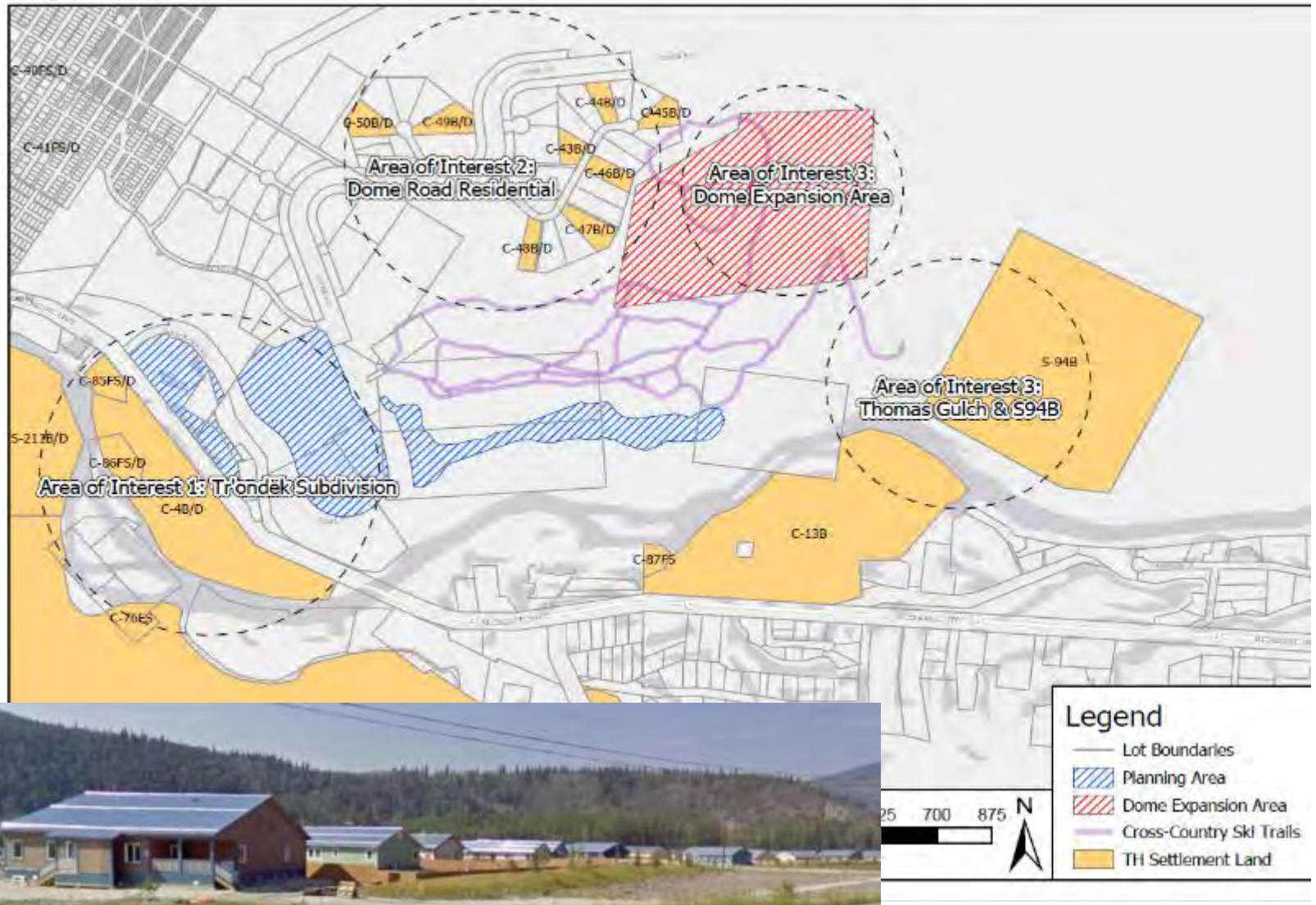
Approval

- YESAB Review - **July 2021**
- Council approval

Planning Process

- Planning Brief
- Engagement #1
- Draft Concept Plan
- Engagement #2
- Draft Master Plan
- Engagement #3
- YESSA
- Detailed Design

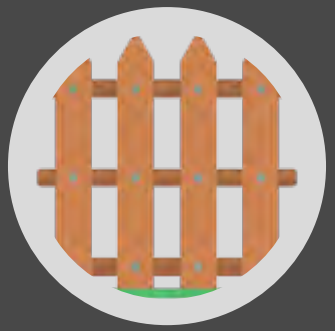
Tr'ondëk Hwëch'in Interests

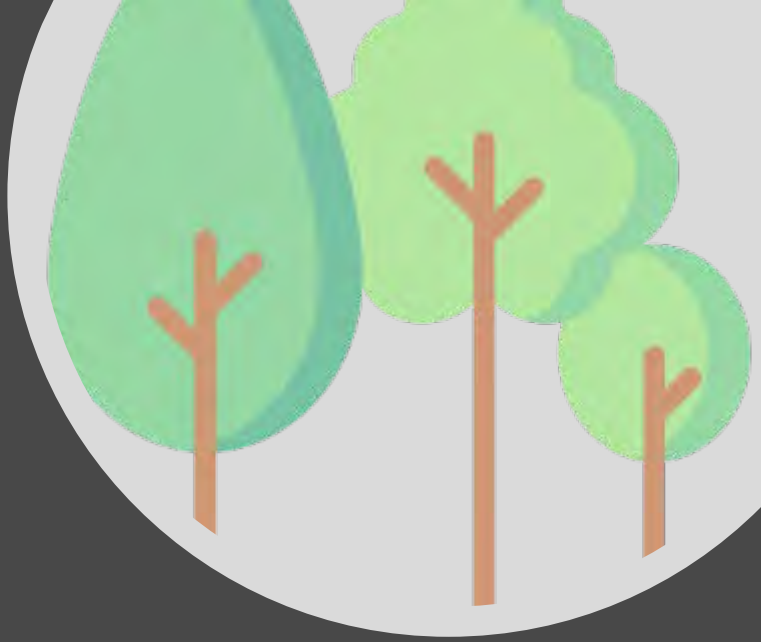


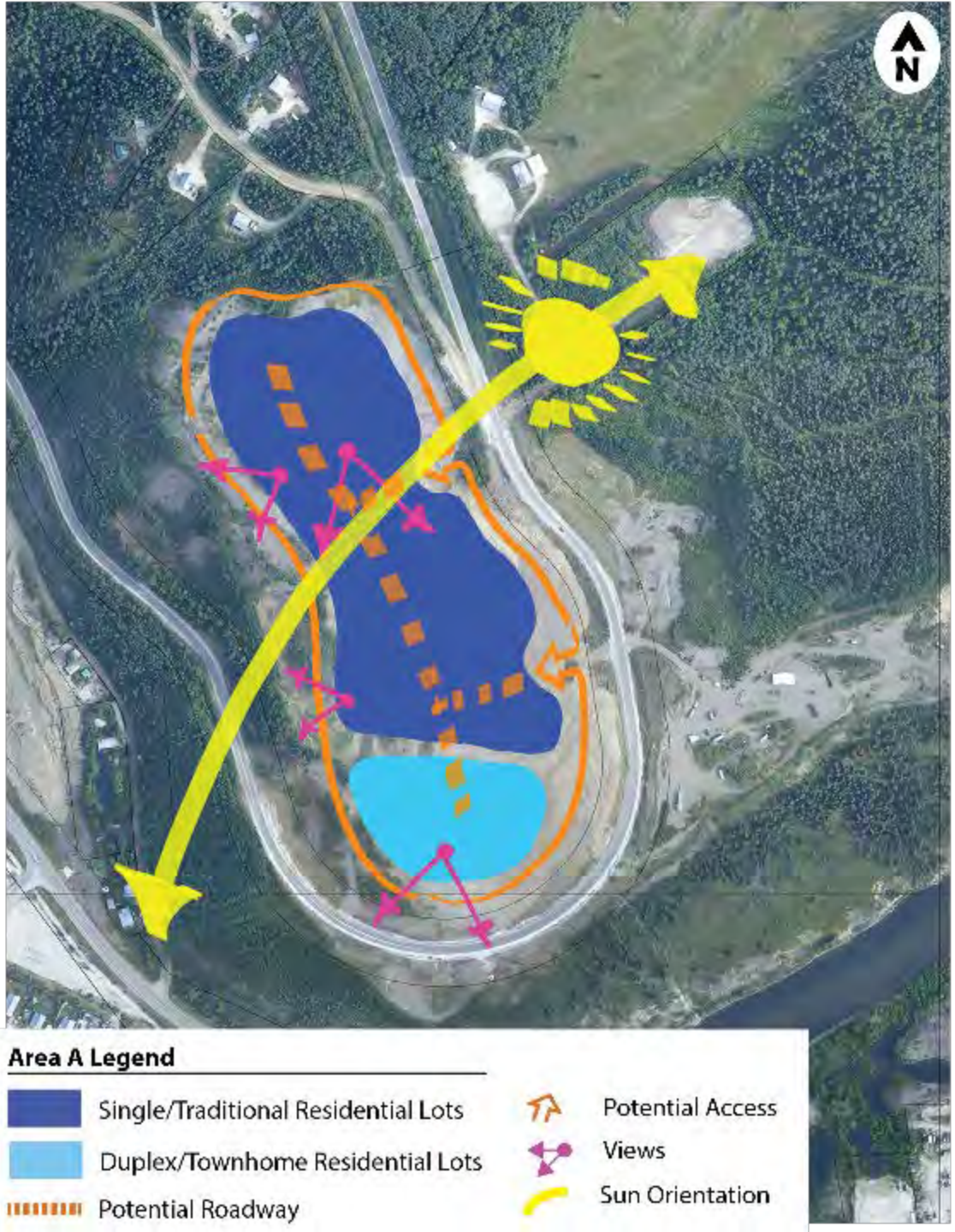

Development Area

Site Review

- Development Boundary
- Transportation and Access
- Existing Conditions
- Connectivity
- Development Potential

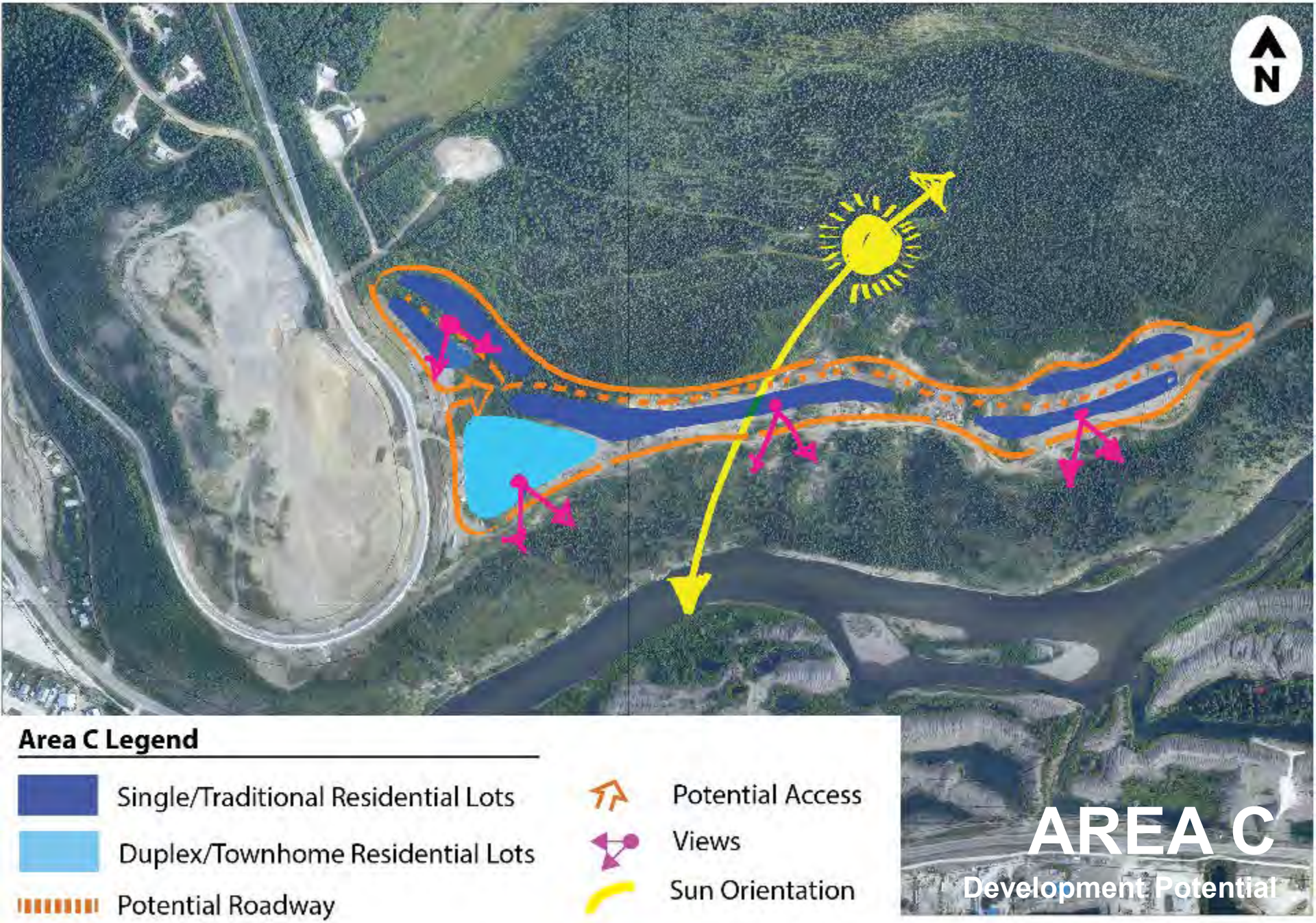




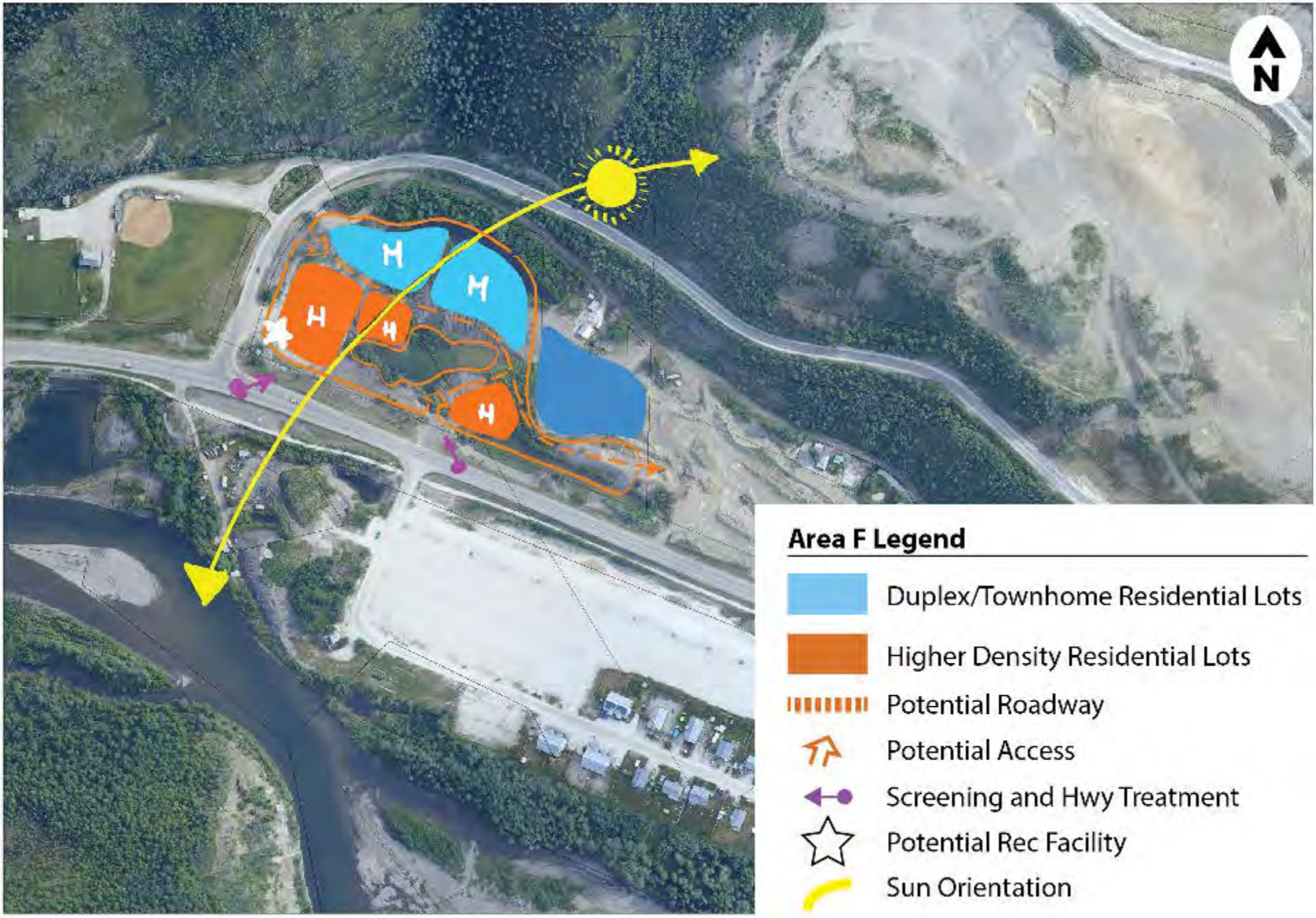


AREA A

Development Potential


N
Area C Legend
Single/Traditional Residential Lots
Duplex/Townhome Residential Lots
Potential Roadway
Potential Access
Views
Sun Orientation
AREA C
Development Potential


Area D Legend
Duplex/Townhome Residential Lots
Potential Roadway
Potential Access
Screening and Hwy Treatment
Sun Orientation
N
AREA D
Development Potential


N
H
H
H
H
H
Area F Legend
Duplex/Townhome Residential Lots
Higher Density Residential Lots
Potential Roadway
Potential Access
Screening and Hwy Treatment
Potential Rec Facility
Sun Orientation

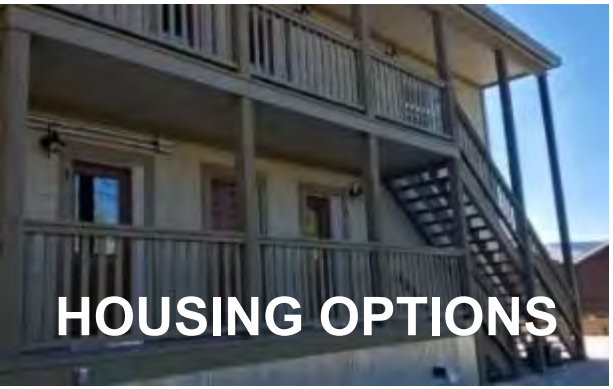
Vision and Goals

DRAFT VISION

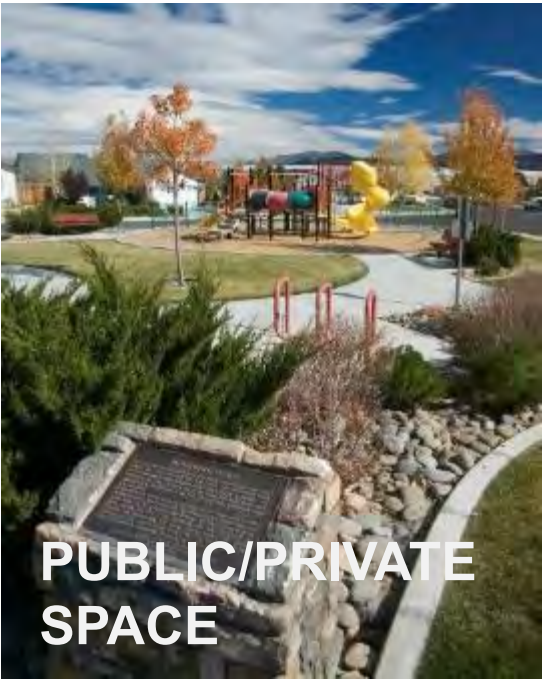
The Dome Road subdivision will be a comprehensively planned neighbourhood that represents a long-term housing solution for Dawson. This area will provide a range of housing types at different price points to meet the needs of Dawsonites at different stages of life. Access to Settlement Parcel 94-B, Thomas Gulch and other special areas to the east will be protected and formalized so that Tr'ondëk Hwëch'in citizens can continue to participate in cultural, social and traditional pursuits on their lands.

Homes will be built around a system of connected greenspaces and serviced by municipal water and sewer. Roads and trails will provide safe and direct access for pedestrians, cyclists, and vehicles including cars, ATVs and snowmachines, within the neighbourhood, to Historic Townsite, the river and other destinations. The housing types, density and focus of the four development areas will reflect the unique opportunities, constraints, and features of each site.

GOAL 1: PROVIDE A VARIETY OF HOUSING TYPES

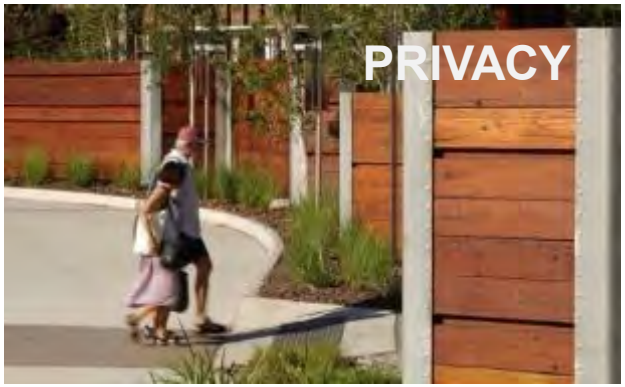


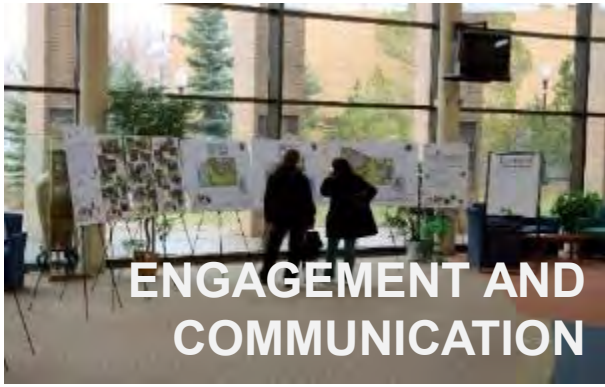
GOAL 2: CREATE A SENSE OF CHARACTER



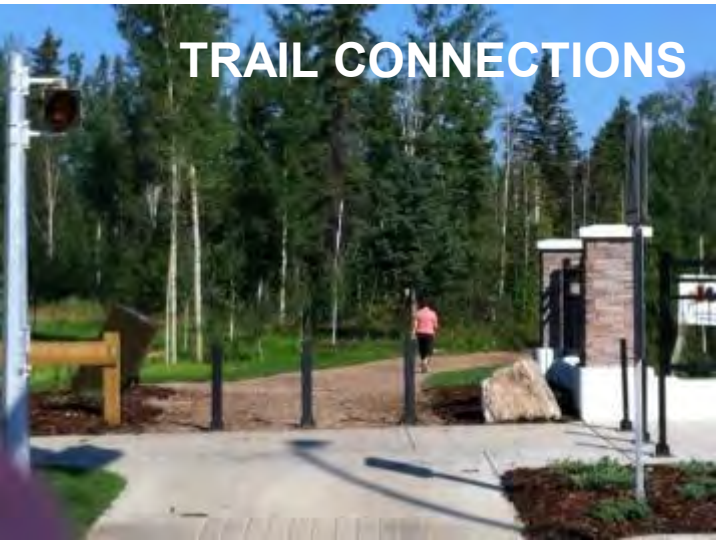
GOAL 3: PLAN FOR A COMPLETE NEIGHBOURHOOD

GOAL 4: RESPECT THE TR'ONDËK HWËCH'IN INTEREST



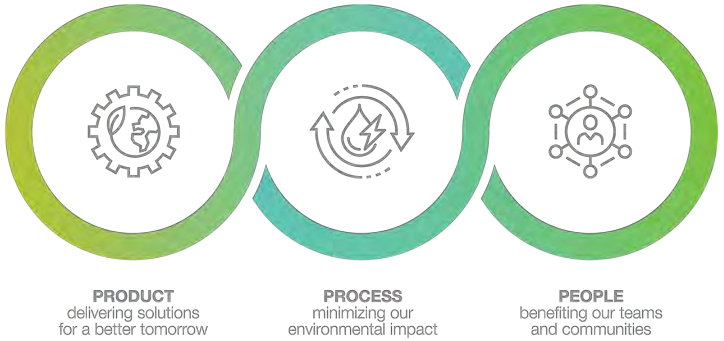


GOAL 5: PROVIDE CONNECTIVITY AND ACCESS FOR DRIVERS, WALKERS, AND CYCLISTS



Goal 6: Efficient Infrastructure

Goal 7: Sustainable Design



Next Steps and Discussion

Naming

- Gold Ridge (35 votes)
- Aurora Heights (34 votes)
- Crocus Bench/ Ridge (16 votes)
- ‘Our Home’, in Hän [Ninzho] (9 votes)
- Acklen Cliffs/ Bench/ Ridge (9 votes)
- ‘Dome’, in Hän [Unknown] (7 votes)
- Placer Ridge (6 votes)
- Prospector Ridge (5 votes)
- Miner’s Folly (5 votes)
- Perseverance Point (4 votes)

Next Steps

- Survey available until March 5, 2021
- Use information gathered to develop Concept Plan options
- Engagement #2 – April 2021

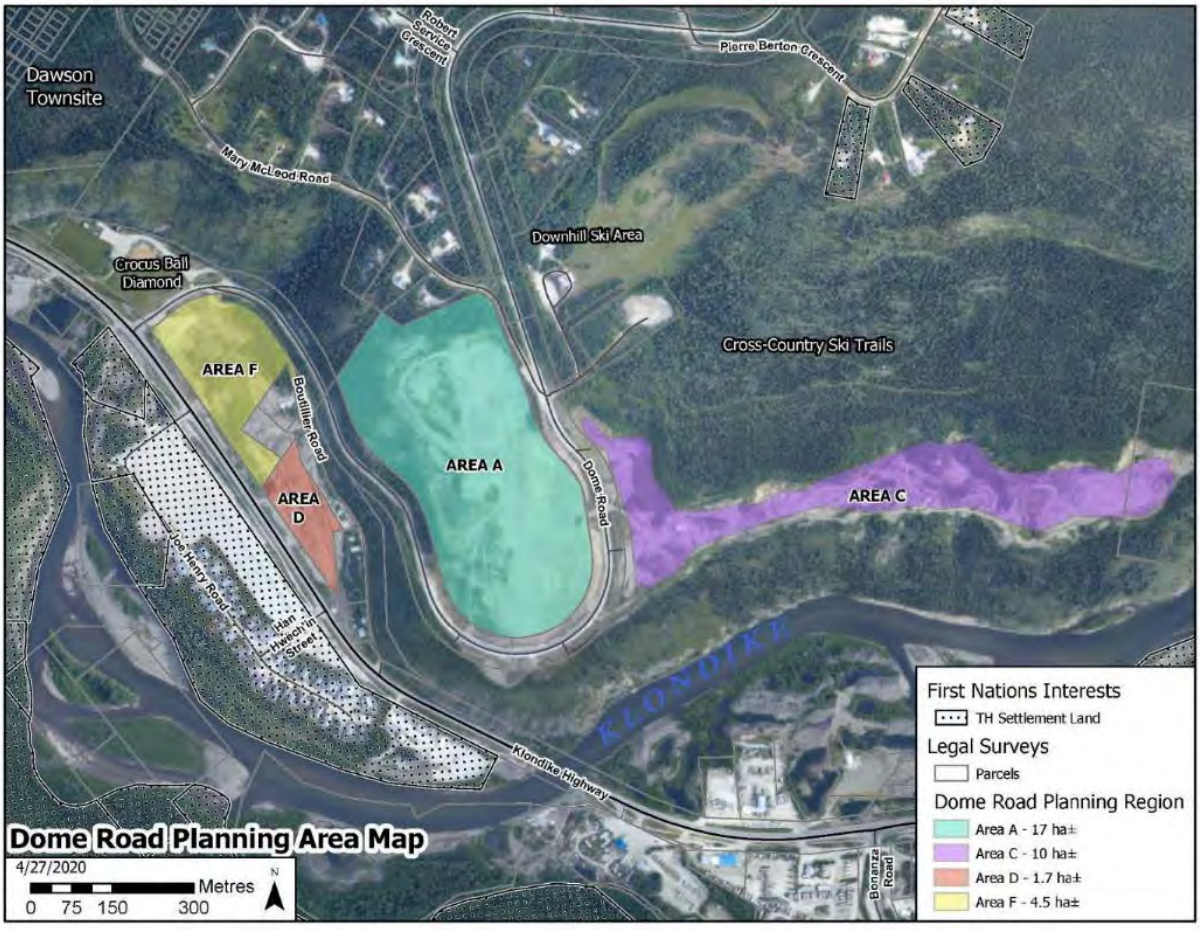

Dawson Townsite
Robert Service Crescent
Pierre Berton Crescent
Mary McLeod Road
Downhill Ski Area
Crocus Ball Diamond
Cross-Country Ski Trails
AREA F
Boutillier Road
AREA A
Dome Road
AREA C
AREA D
Joe Henry Road
Han Hwech'in Street
KLONDIKE
Klondike Highway
Bonanza Road
Dome Road Planning Area Map
4/27/2020
Metres
0 75 150 300
N
First Nations Interests
TH Settlement Land
Legal Surveys
Parcels
Dome Road Planning Region
Area A - 17 ha±
Area C - 10 ha±
Area D - 1.7 ha±
Area F - 4.5 ha±

Dome Road Subdivision Master Plan

INTRODUCTION

The Dome Road Subdivision will be a mainly residential neighbourhood, located south of the historic townsite in the City of Dawson. This area is critical to the future growth of Dawson and the Government of Yukon (YG) and City of Dawson are working together to complete a Master Plan that will guide this development. The Dome Road Subdivision represents an important opportunity to meet the housing needs of the City of Dawson and develop a new neighbourhood that Dawsonites want to call home.

As shown in the figure below, there are four separate development areas which will be planned and designed comprehensively, recognizing the unique and different opportunities of each site. Stantec Consulting Ltd. has been hired by YG Land Development Branch to provide the planning and engineering services to develop the Dome Road Master Plan.



PLANNING PROCESS

This is not a new project for Dawson; a residential subdivision has been envisioned along the Dome Road for many years. The project was restarted in December 2019 when the City of Dawson led the Slinky Mine Charrette to begin work on a new vision, guiding principles, and design ideas for the future neighbourhood. As of February 2021, a Draft Planning Brief has been completed and will be available for review on the City website.

Predesign		Plan Development		Approval	
2009	First Residential Plan	March 2021	Draft Concept Plan	July 2021	YESAB
2019-2020	Background Studies	May 2021	Draft Master Plan		Council approval
Dec 2019	Slinky Mine Charrette	June 2021	Final Master Plan		

DRAFT VISION AND GOALS

The overall neighbourhood vision is an important part of planning a new neighbourhood as it guides the process and provides a way to measure the success of the project. The draft vision and goals that are presented below have been developed based on the input gathered during the Slinky Mine Charrette, and discussions with representatives from YG and the City.

What's the Difference?

Planning Brief

The Planning Brief provides a review of existing legislation and planning documents, evaluates past studies and visioning completed to date, and identifies the constraints and opportunities of each of the four development areas. The Planning Brief brings together all the information that needs to be considered as the draft Concept Plans are developed.

Subdivision Master Plan

The result of the current planning process will be a Dome Road Master Plan. Once complete, the final plan will be adopted by the City of Dawson. The Master Plan will include:

- *Vision and goals for the development*
- *Development concept that includes lots, roads, trails, playgrounds, public spaces and zoning*
- *Servicing review, phasing and cost estimates*

Draft Vision

The Dome Road subdivision will be a comprehensively planned neighbourhood that represents a long-term housing solution for Dawson. This area will provide a range of housing types at different price points to meet the needs of Dawsonites at different stages of life. Access to Settlement Parcel 94-B, Thomas Gulch and other special areas to the east will be protected and formalized so that Tr'ondëk Hwëch'in citizens can continue to participate in cultural, social and traditional pursuits on their lands.

Homes will be built around a system of connected greenspaces and serviced by municipal water and sewer. Roads and trails will provide safe and direct access for pedestrians, cyclists, and vehicles including cars, ATVs and snowmachines, within the neighbourhood, to the Historic Townsite, the river and other destinations. The housing types, density and focus of the four development areas will reflect the unique opportunities, constraints, and features of each site.

Draft Goals

The goals listed below will provide specifics for how the vision will be carried through the Master Plan and into the development. These goals will guide the planning elements such as the lot layout, design of greenspaces, trail and road networks, and supporting infrastructure.

Goal 1: Provide a Variety of Housing Types

In Dawson, housing costs have been rising and options are increasingly limited. The City wants to see residential development that focusses on providing more affordable options. The Dome Road subdivision will include a range of lot sizes and housing styles that will support the community's diverse residents and lifestyles, fill gaps in the market and reflect varying budgets. It is expected that when this area is built out, there will be a range of medium to higher densities options including single detached homes, duplexes, town homes, secondary and garden suites, and low-rise apartments. As an innovation, tiny homes or wall-tents arranged together on one lot, specifically as rental units for season workers, will also be considered.

Achieving affordability will require balancing lot size, zoning, housing types, innovative infrastructure options and municipal design standards.

Goal 2: Create a Sense of Character

It is important to the community that this new neighbourhood is "Authentically Dawson". This does not mean that new houses will need to comply with the heritage standards that apply to the historic townsite, but rather that the neighbourhood is diverse, flexible, and colorful, and recognize human scale and northern elements. Residents do not want to see cookie cutter homes with similar designs, repetitive materials and a suburban feel.

Goal 3: Plan for a Complete Neighbourhood

The Dome Road development will be a complete neighbourhood that aims to meet the needs of all residents by addressing affordability, healthy lifestyles, inclusion, connectivity, and culture. This means focusing on compact design and density; creating ways to encourage neighbourhood interaction; and encouraging multi model transportation.

Goal 4: Respect the Tr'ondëk Hwëch'in Interest

Tr'ondëk Hwëch'in has several interests in this development. First, any development on Sites D and F should to be compatible with the current and planned residential development on Lot C-4B/D, C-85FS/D and C-86FS/D, which is directly across the Highway. Second, development should not negatively impact the Tr'ondëk Hwëch'in parcels on Jack London Lane and Pierre Burton Crescent. Lastly, development should not cut off access to the Dome Expansion Area, or to Thomas Gulch. YG and the City will work with Tr'ondëk Hwëch'in leadership, staff, and citizens to ensure their interests are respected.

Goal 5: Provide Connectivity and Access for all Modes of Transportation

The Dome Road development will have good access for people traveling by car, bike, ATV, snowmachine and on foot. This will include connections within new neighbourhoods, to downtown, the river and other community destinations. Some trails will be designed to be part of the transportation network and others will provide connections to existing trails that are used for recreation. Safety for all is a priority.

Goal 6: Efficient Infrastructure

It is important for both YG and the City that the infrastructure for this development is both financially and technically feasible. The current plan is to connect all the new lots to piped water and sewer systems. As the City will own the infrastructure, it is important that these systems be designed and built so that ongoing operation and maintenance is low-cost and efficient. It is understood that smaller lots are a more efficient use of land and generally cost less to service.

Goal 7: Sustainable Design

This development will include elements of sustainable design. Developing a new neighbourhood is an opportunity to move away from the status quo and towards a new model for residential development.

HOW TO GET INVOLVED

The planning process for the Dome Road will have several opportunities for the public to get involved.

- Online survey and online/in-person sessions to meet the project team, **comment on the draft vision and goals** and **get more information** about the four development areas
- Tuesday Feb 23 at 12 to 1:30 pm and 6:30 to 8 pm
- Wednesday Feb 24 at 6:30 (if needed)
- Details on the City Website

There will also be opportunity for the public to review and provide comments on the draft Concept Plan options (tentatively set for April 2021) and the draft Subdivision Master Plan (tentatively set for May 2021).

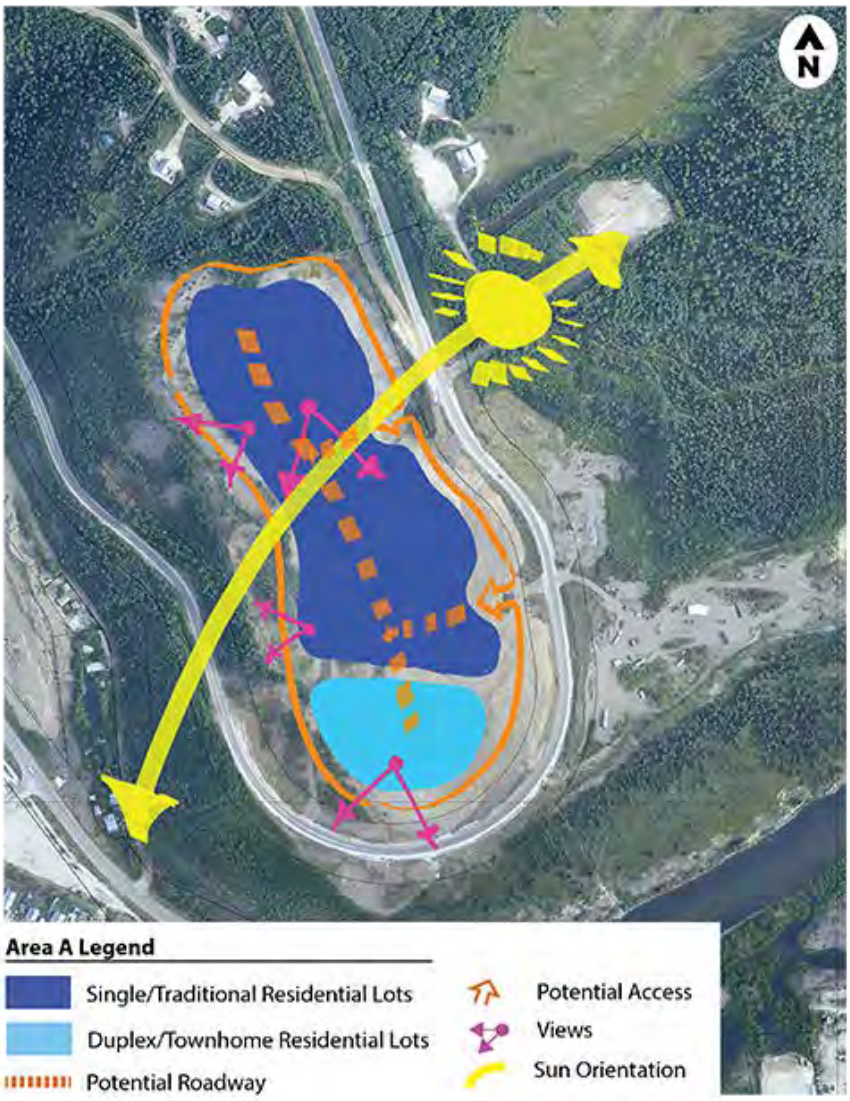
OPPORTUNITIES AND CONSTRAINTS

Each of the four development sites is different and it is expected that because of site conditions, access, views, topography, and development will look different in each area.

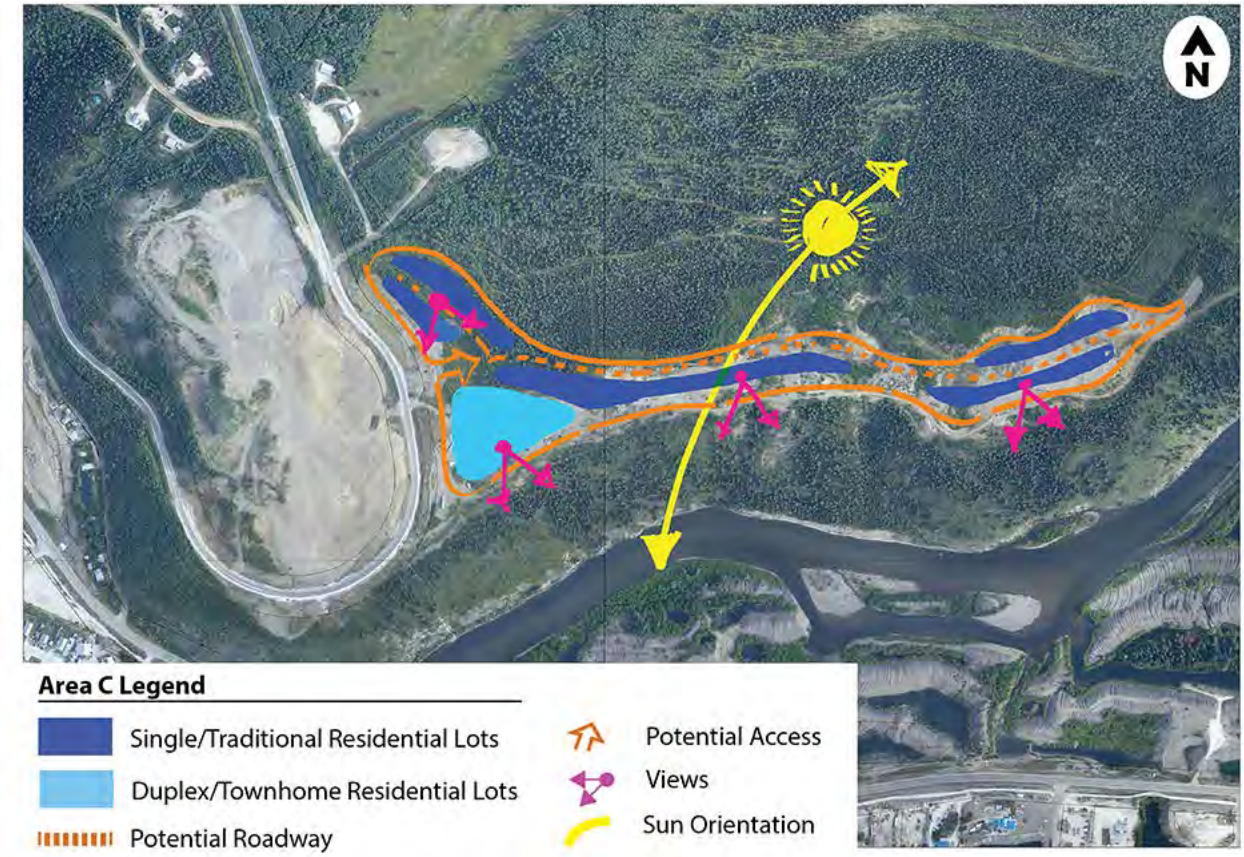
Development Area A

Development Area A is an undeveloped area, historically used for placer mining, as a gravel pit, and was subsequently regraded. The site is primarily cleared, with some vegetation to the north and along the slopes. The area is generally flat with a rising slope towards the northeast and a steep cliff along the west side.

- Area is largely developable with few challenges.
- Size and shape of area is appropriate for a variety of housing and development options.
- Roadway layout and house orientation should take advantage of the grades, views and sun orientation.
- Support smaller single family, duplex and townhome residential.



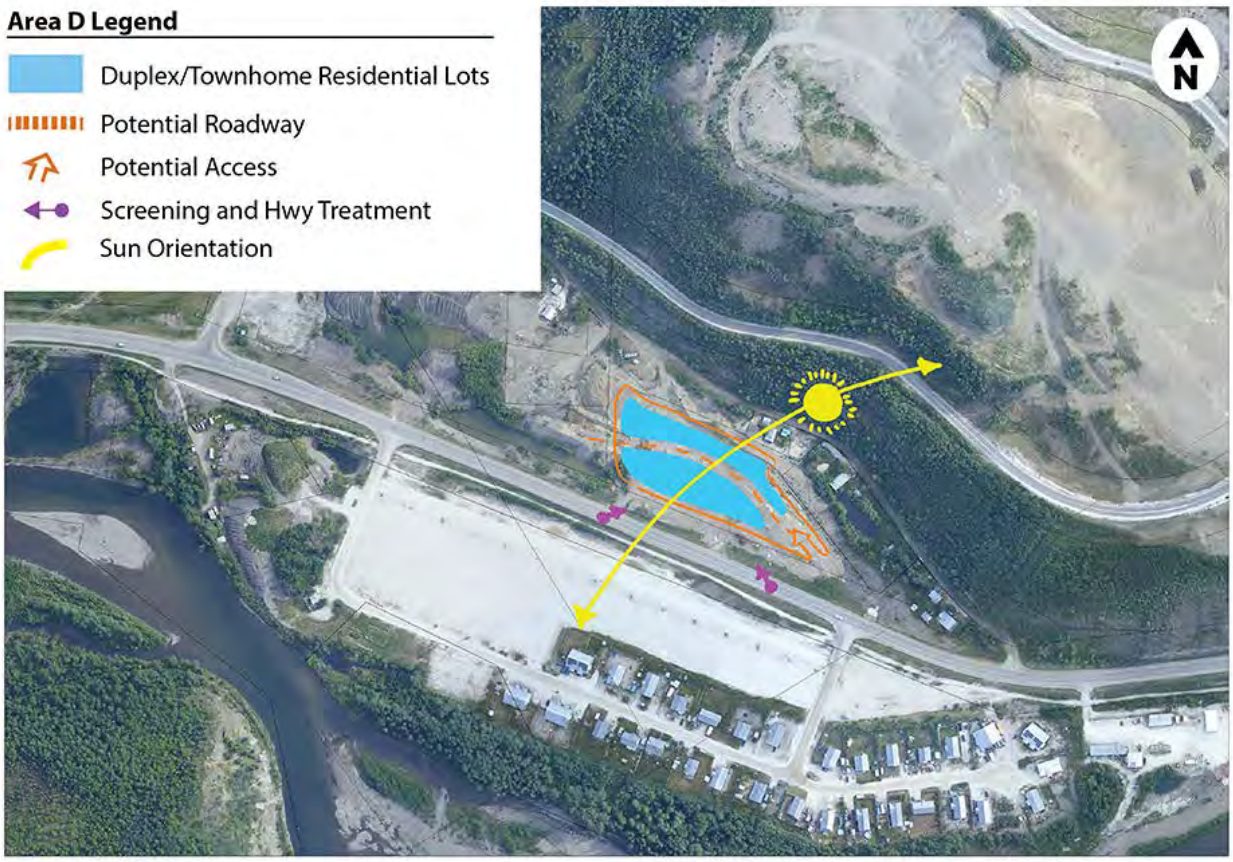
Development Area C



Development Area C is an undeveloped area that has been used for placer mining activities and regraded afterward. The site is primarily cleared of vegetation with some smaller trees. The site is mostly flat with an increasingly steep slope towards the northeast and a steep cliff located along the west side.

- Grades and long, thin shape of the site will limit development potential and design efficiencies.
- Required setbacks from steep slope will greatly reduce the developable area.
- Size and dimensions limit housing and development options.
- Roadway layout and house orientation should take advantage of the grades, views and sun orientation.
- Housing options and densities may be impacted by inefficiencies of required infrastructure.
- Limited access and inefficiencies of required infrastructure may be more ideal for larger single family.
- Access to TH Settlement Parcel S-94B must be protected.
- Areas near the Dome Road could support duplexes or condominiums.

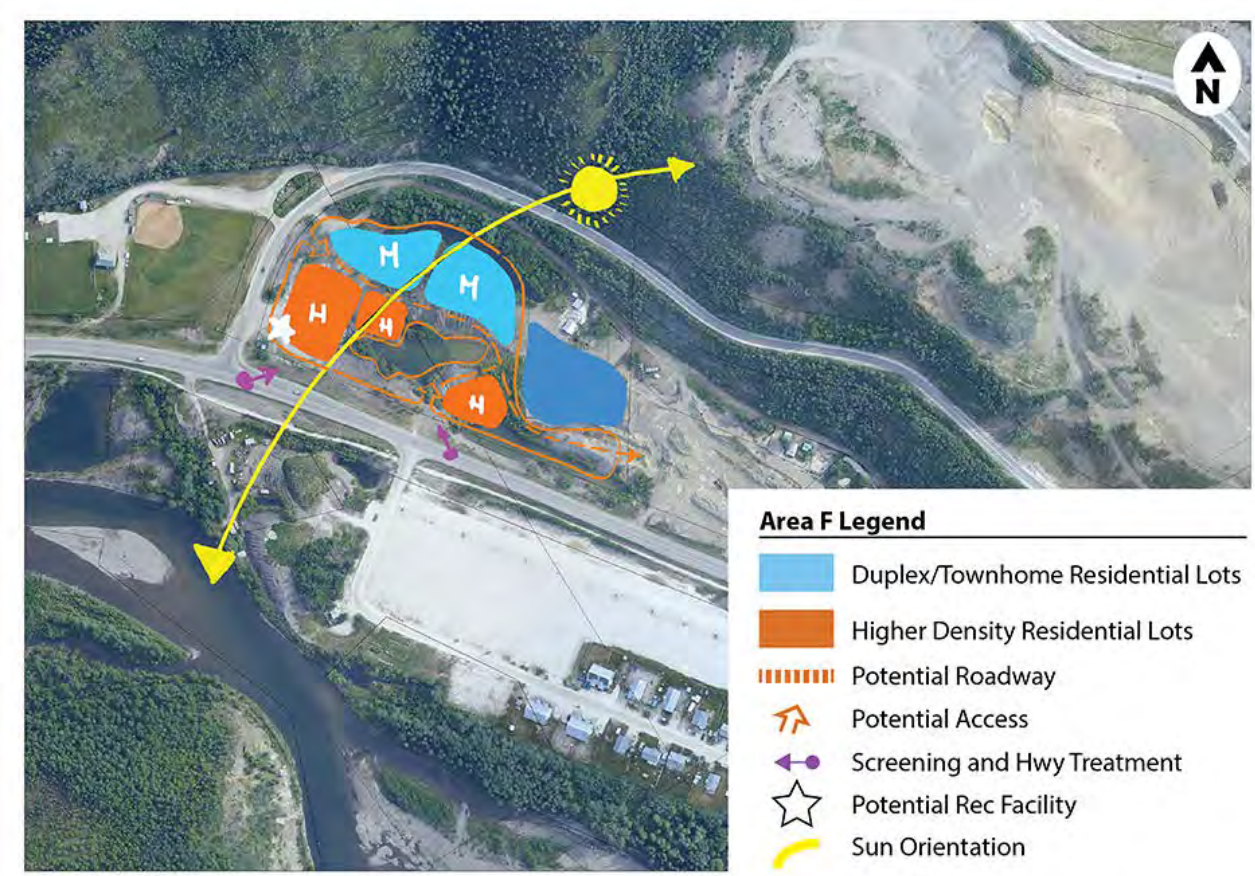
Development Area D



Development Area D is an undeveloped area, historically used for placer mining and as a gravel pit, that is primarily clear of vegetation with some willows and shrubs around the ponds. The site is adjacent to the Klondike Highway and is generally flat.

- Site is developable, with few constraints.
- Size and dimensions of area is appropriate for a variety of housing and development options.
- Support higher density and condominium development.
- Transition and impacts to/from the Tr'ondëk Subdivision and existing industrial uses must be considered.
- Screening, landscape treatment and sound mitigation along Klondike Highway should be considered.
- Development should consider the potential inclusion of adjacent lots.

Development Area F



Development Area F is near the intersection of the Dome Road and the North Klondike Highway. It is an undeveloped area, historically used for placer mining, that contains a single building on the western corner of the lot. The site is primarily clear of vegetation with some trees and a small tailings pond.

- Backfilling of the tailings ponds may impact the developable areas and type of structures.
- Size and dimensions of area is appropriate for a variety of housing and development options.
- This area can support higher density and condominium development.
- Transition and impacts to/from Tr'ondëk and existing industrial must be considered.
- Screening, landscape treatment and sound mitigation along Klondike Highway should be considered.
- Development should consider the potential inclusion of adjacent lots.
- This location is being considered for the community's new recreation centre, meaning that additional recreational or commercial uses should be considered.

Report to Council

[ ] For Council Decision [X] For Council Direction [ ] For Council Information

AGENDA ITEM:	**ZBL Text Amendment: Renewable Energy System**	
PREPARED BY:	Stephanie Pawluk, CDO	**ATTACHMENTS:** Bylaw No. 11, #2021-01
DATE:	January 25, 2021	
RELEVANT BYLAWS / POLICY / LEGISLATION: Zoning Bylaw/OCP/Municipal Act		

RECOMMENDATION

THAT Committee of the Whole forward Zoning Bylaw Amendment No. 11, #2021-01 to Council for Second Reading and direct Administration to include the research request in the 2021 Zoning Bylaw housekeeping review.

ISSUE / PURPOSE

Through the Klondike Development Organization (KDO)'s proposed solar farm project, it was found that renewable energy systems do not fall under any of the current permitted uses listed in the M1: Industrial zone.

A renewable energy system is an appropriate use in the M1: Industrial zone and is fitting with Council strategic goals; therefore, Council has initiated a text amendment to Zoning Bylaw #2018-19 to add 'renewable energy system' to the list of permitted uses in the M1: Industrial zone (S. 13.1.1: Permitted Uses).

At the January 13 COW meeting, Council indicated a desire to consider adding the 'renewable energy system' use to other zones, in addition to the M1 zone. To facilitate the passing of the current text amendment, it is proposed that Administration include this request in the 2021 ZBL housekeeping review.

BACKGOUND SUMMARY

The KDO has sought support from Council to install a solar farm for renewable energy in Dawson City. They have expressed the desire to lease a portion of the old landfill (Lot 1029 Quad 116B/03) owned by the City of Dawson for this installation. Following initial Council support for the project, the KDO submitted a development permit application for the project (#20-091); however, the application cannot proceed until this amendment is passed due to current zoning constraints.

This bylaw passed First Reading on January 20th, 2021. Administration was directed to conduct additional research on adding the 'renewable energy system' use to other zones, in addition to the M1 zone at the January 13 COW meeting.

ANALYSIS / DISCUSSION

Zoning Bylaw

As per S. 17.1.1 of Zoning Bylaw #2018-19, "Council may initiate any text amendment to this bylaw. Any such amendment shall be reviewed in accordance with section 3.0 (Duties and Responsibilities)." In order to support this community project, it is proposed that Council initiate this text amendment.

S. 4.04 of the 2019 Housekeeping Zoning Amendment Bylaw No. 2019-15 (passed Second Reading) adds 'renewable energy system' to the list of definitions in the zoning bylaw, as follows:

> *"Insert the following definition to s. 2.2: "RENEWABLE ENERGY SYSTEM means a system or device where energy is derived from sources that are not depleted by using them and transformed for use. Renewable energy systems include but are not limited to solar-electric or solar-thermal panel systems."*

As such, this proposed addition to the permitted uses in the M1: Industrial zone does not require any additional changes to the Zoning Bylaw.

Official Community Plan

The proposed use (renewable energy systems in the M1: Industrial zone) conforms with the Official Community Plan's Economic Development (S. 8) and Environmental Stewardship (S. 10) goals. Specifically, the Economic Development goals that support this proposed use include:

- "New economic sectors have an opportunity to succeed."
- "A range of industrial development types are accommodated"

Under S. 10: Environmental Stewardship, it is stated that "addressing local environmental impacts is essential to Dawson's overall sustainability". Renewable energy systems, such as solar infrastructure, address local environmental impacts, contributing to Dawson's overall sustainability.

Lands zoned M1 are designated in the OCP as MU: Mixed Use. The MU definition is intentionally broad, allowing a diversity of uses, which this proposed use adheres to. The MU designation is described as:

> *"an integrated mix of commercial and industrial uses complemented by residences and small-scale open spaces. These areas may include single uses per parcel or multiple land uses per parcel—a true reflection of Dawson's unique nature wherein residents' living and working spaces are often intertwined."*

No changes to the OCP are required as the proposed text amendment adheres to the OCP.

Municipal Act

The Municipal Act outlines the requirements and notification procedures of passing a ZBL amendment. Should Council pass First Reading of the proposed bylaw, as per S. 294, public notification of the intention to pass this ZBL amendment will be advertised for two successive weeks prior to holding a public hearing.

S. 288(2) of the *Municipal Act* states that *"a council must not adopt a zoning bylaw, or an amendment to a zoning bylaw, that is not consistent with an official community plan".* The proposed change to the Zoning Bylaw Amendment will be consistent with the OCP, as demonstrated above.

Options

1. THAT Committee of the Whole forward Zoning Bylaw Amendment No. 11, #2021-01 to Council for Second Reading and direct Administration to include the research request in the 2021 Zoning Bylaw housekeeping review.
2. THAT Committee of the Whole not forward Zoning Bylaw Amendment No. 11, #2021-01 to Council for Second Reading
3.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** 
DATE:		

THE CITY OF DAWSON

Zoning Bylaw Amendment No. 11 Bylaw

Bylaw No. 2021-01

WHEREAS section 265 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that a council may pass bylaws for municipal purposes, and

WHEREAS section 289 of the Municipal Act provides that a zoning bylaw may prohibit, regulate and control the use and development of land and buildings in a municipality; and

WHEREAS section 294 of the Municipal Act provides for amendment of the Zoning Bylaw;

THEREFORE, pursuant to the provisions of the *Municipal Act* of the Yukon, the council of the City of Dawson, in open meeting assembled, **ENACT AS FOLLOWS**:

PART I - INTERPRETATION

1.00 Short Title

This bylaw may be cited as the ***Zoning Bylaw Amendment No. 11 Bylaw***

2.00 Purpose

2.01 The purpose of this bylaw is to provide for:

(a) A text amendment.

CAO _____ Presiding Officer _____

Table of Contents

3.00 Definitions

3.01 In this Bylaw:

(a) Unless expressly provided for elsewhere within this bylaw the provisions of the *Interpretations Act,* RSY 2002, c. 125, shall apply;

(b) "city" means the City of Dawson;

(c) "council" means the Council of the City of Dawson;

PART II – APPLICATION

4.00 Amendment

4.01 Insert "renewable energy system" in S. 13.1.1 as a permitted use.

PART III – FORCE AND EFFECT

5.00 Severability

5.01 If any section, subsection, sentence, clause or phrase of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, the invalid portion shall be severed and the part that is invalid shall not affect the validity of the remainder unless the court makes an order to the contrary.

6.00 Enactment

6.01 This bylaw shall come into force on the day of the passing by Council of the third and final reading.

7.00 Bylaw Readings

Readings	Date of Reading
FIRST	**January 20, 2021**
PUBLIC HEARING	
SECOND	
THIRD and FINAL	

Wayne Potoroka, Mayor
Presiding Officer

Cory Bellmore, CAO
Chief Administrative Officer

Report to Council

[ ] For Council Decision [X] For Council Direction [ ] For Council Information

[ ] In Camera

SUBJECT:	2019 Zoning Bylaw Housekeeping Amendment (No. 5)	
PREPARED BY:	Stephanie Pawluk, CDO	**ATTACHMENTS:** Draft ZBL Amendment Bylaw (#2019-15)
DATE:	January 29, 2021	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Official Community Plan Zoning Bylaw		

RECOMMENDATION

That Committee of the Whole forward to council Zoning Bylaw Amendment No. 5, Bylaw #2019-15 for Third and final Reading.

BACKGROUND SUMMARY

The OCP underwent a yearly review in 2019, as per S. 16.2 of the OCP. The Zoning Bylaw must be consistent with the OCP, therefore; the Zoning Bylaw was also reviewed.

OCP Bylaw Amendment No. 2 was given Third Reading on December 9th, 2020.

Administration received direction to provide a response to Council's information requests prior to Third and final Reading. The requested information is provided as information in this report.

ANALYSIS / DISCUSSION / ALIGNMENT TO OCP & STRATEGIC PRIORITIES

Municipal Act

S. 288(2) of the *Municipal Act* states that *"a council must not adopt a zoning bylaw, or an amendment to a zoning bylaw, that is not consistent with an official community plan".* The proposed changes in the Zoning Bylaw Amendment will be consistent with the OCP.

Zoning Bylaw

S. 17.1.1 of the *Zoning Bylaw* states that *"Council may initiate any text amendment to this bylaw."*

Council Information Requests

S. 4.05: Provide the context of 'structural alteration' within the ZBL and consider removing "foundations"

'structural alteration' is referenced twice in the ZBL:

- S. 4.2: Development Permit Not Required

  "No development permit is required for the following, provided that such development conforms to all other provisions of this bylaw:

  .1 regular maintenance and repair of any building or structure, provided it does not include **structural alterations** or does not change the use or intensity of use of the land, building, or structure"

- S. 2.2: General Definitions

  "CONVERSION means a change in use of land or buildings, or an act done in relation to land or a building, that results, or is likely to result, in a change in the use of such land or building without involving major **structural alterations**."

This definition of structural alteration aligns with s. 4.2. It clearly indicates what kind of development extends beyond "regular maintenance and repair" and constitutes "structural alteration".

This clause has undergone numerous iterations. Most recently, this clause was edited upon Council direction of including language about repairs and maintenance in the definition of 'structural alteration' in order to provide clarity on this topic. It is important for Administration to have this descriptive language in the definition as it will increase clarity for all, including decision makers and members of the public, in understanding exactly what constitutes a structural alteration and therefore what kinds of development requires or does not require a development permit. Additionally, this definition aligns with the Municipal Act (S. 302(2)).

S. 302(2) of the Municipal Act states:

> *"For the purpose of this section, repairs, maintenance, or installations that do not alter the size of the building or other structure or involve the rearrangement or replacement of structural supporting elements shall not be structural alterations."*

In consideration of the removal of "foundations", it is not advised to do so because a foundation is, fundamentally, a "structural supporting element".

S. 4.09: Is the numbering (S. 4.4.1.5(V)) correct?

Administration confirmed that the numbering is correct.

S. 4.20.3: Why is the following included in this clause: "any person owning or occupying real property"?

This same clause is copied from the Zoning Bylaw #2018-19 (S. 16.6.3). An example of where the "occupying real property" language might apply is in the case of an offence occurring on a lot that is leased by YG to an individual or in the case of a mining claim, or if a temporary structure (eg. tiny home) is placed on a rented lot by the renter. For administrative enforcement reasons, it is critical that this language remain in this clause.

It is respectfully recommended that Committee of the Whole review Zoning Bylaw Amendment No. 5, Bylaw #2019-15 and forward to council for Third and final Reading.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** C Bellmore
DATE:	Jan 29, 2021	

THE CITY OF DAWSON

Zoning Bylaw Amendment No. 5 Bylaw

Bylaw No. 2019-15

WHEREAS section 265 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that a council may pass bylaws for municipal purposes.

WHEREAS section 288 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that a council, within two years after the adoption of an official community plan, or as soon as is practicable after the adoption of an amendment to an official community plan, a council must adopt a zoning bylaw.

WHEREAS section 288 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that no person shall carry out any development that is contrary to or at variance with a zoning bylaw.

THEREFORE, pursuant to the provisions of the *Municipal Act* of the Yukon, the council of the City of Dawson, in open meeting assembled, **ENACT AS FOLLOWS**:

PART I - INTERPRETATION

1.00 Short Title

This bylaw may be cited as the ***Zoning Bylaw Amendment No. 5 Bylaw***

2.00 Purpose

2.01 The purpose of this bylaw is to provide for:

(a) A re-zoning of Lot 7, Block J, Ladue Estate from C1: Core Commercial to P1: Parks and Natural Space.
(b) A series of text amendments.

CAO _____ Presiding Officer _____

Table of Contents

3.00 Definitions

3.01 In this Bylaw:

(a) Unless expressly provided for elsewhere within this bylaw the provisions of the *Interpretations Act,* RSY 2002, c. 125, shall apply;

(b) "Bylaw Enforcement Officer" means a person employed by the City of Dawson to enforce bylaws;

(c) “CAO” means the Chief Administrative Officer for the City of Dawson;

(d) “city” means the City of Dawson;

(e) “council” means the Council of the City of Dawson;

PART II – APPLICATION

4.00 Amendment

4.01 This bylaw amends Schedule C to re-zone Lot 7, Block J, Ladue Estate from C1: Core Commercial to P1: Parks and Natural Space, as shown in Appendix 1.

4.02 Repeal and replace S. 1.9.1 “Lots created before the approval of this bylaw that are less than the minimum dimensions or more than the maximum dimensions required of the zone they are in shall be considered to be conforming lots for the purposes of this bylaw”.

4.03 Insert the following definition to S. 2.2: “PERSONAL SERVICE ESTABLISHMENT means a business which is associated with the grooming or health of persons or the maintenance or repair of personal wardrobe articles and accessories, and may include a barber shop, beauty parlor, shoe repair shop, self-service laundry or dry cleaning establishment.”

4.04 Insert the following definition to S. 2.2: “RENEWABLE ENERGY SYSTEM means a system or device where energy is derived from sources that are not depleted by using them and transformed for use. Renewable energy systems include but are not limited to solar-electric or solar-thermal panel systems.”

4.05 Insert the following definition to s. 2.2: “STRUCTURAL ALTERATION means any change to structural supporting elements of a structure including but not limited to foundations, exterior load-bearing walls, door and window openings, roof, and

access/egress components (such as decks or porches), which does not increase the exterior dimensions of height or footprint. For the purposes of this bylaw, full removal of a structure or structural component and replacing it in its entirety constitutes structural alteration. Repairs, maintenance, or installations that do not alter the size of the building or other structure or involve the rearrangement or replacement of structural supporting elements does not constitute structural alteration."

4.06 Insert the following clause: S. 4.2.10 "wall tents or similar temporary structures provided the wall tent consists only of a frame and canvas walls. For the purposes of this bylaw, construction of a structure with a floor, walls, or roof requires an approved development permit."

4.07 Insert the following clause: S. 4.2.11 "roof-mounted renewable energy systems outside of the Historic Townsite."

4.08 Repeal S. 4.3.6 and replace with the following: S. 4.3.6 "an application shall not be deemed complete until all requirements above have been submitted to the satisfaction of a development officer. Partially complete applications that are inactive for a period of six months or more may be cancelled at the discretion of the development officer."

4.09 Insert the following clause: S. 4.4.1.5 (V) "the applicant is unable to prove the extent of a development using a survey conducted by a registered Canada Lands Surveyor."

4.10 Repeal S. 5.3 and re-insert the clause as S. 4.8.

4.11 Repeal S. 8.11(c) and replace with the following: S. 8.11(c) "a Cannabis Retail Service shall be allowed to sell non-regulated goods. A Cannabis Retail Service must comply with section. 17(1) of the Federal *Cannabis Act* when selling goods that promote cannabis."

4.12 Insert "personal service establishment" in S. 12.1.1 as a permitted use.

4.13 Repeal S. 12.2 and replace with the following: S. 12.2 "The purpose of the C2 zone is to permit a wide range of commercial uses that provide service to local industry and/or highway tourism and service needs. Small-scale residential uses in this zone are permitted, though the area remains predominately a service commercial zone."

4.14 Update Table 12-1 as follows: Repeal the line "minimum building height: 13.72m/45ft" and replace with "maximum building height: 13.72m/45ft".

4.15 Update Table 12-3 as follows: Repeal the line "minimum building height: 13.72m/45ft" and replace with "maximum building height: 13.72m/45ft".

4.16 Update Table 12-3 as follows: Repeal the line "minimum setback of buildings from front parcel line: 15.24m/50ft" and replace with "minimum setback of buildings from front parcel line: 6.10m/20ft".

4.17 Repeal S. 16.4.1 and replace with the following: S. 16.4.1 "If the corrective measures described in a notice of offence order issued pursuant to section. 16.3 are not completed

within the specified time, the person to whom the order was issued may be issued an offence ticket by a development officer".

4.18 Repeal S. 16.4.3.

4.19 Insert the following clause: S. 16.4.5 "for greater certainty, a person found to be in contravention of this bylaw on an ongoing basis may be fined for each day the contravention continues, as per section 340 of the Yukon *Municipal Act*."

4.20 Repeal S. 16.5 and 16.6 and replace with the following:

S. 16.5 "Summary Conviction Penalties

.1 A person who fails or refuses to comply with an offence ticket is liable to sanctions as described in section 343 of the Yukon Municipal Act.

.2 In addition to the penalties provided for under section 16.4 of this bylaw, a person convicted of an offence pursuant to section 16.2, may be ordered to remove such development and reclaim the site at that person's own expense.

.3 Should any person owning or occupying real property within the City refuse or neglect to pay any penalties that have been levied pursuant to this bylaw, the development officer may inform such person in default that the charges shall be added to, and shall form part of, the taxes payable in respect of that real property as taxes in arrears if unpaid on December 31 of the same year.

.4 When a development officer has issued a ticket under section 16.4 that results in a summary conviction, the development officer shall report this information to Council."

4.21 Insert the following clause: S. 17.2.3 (VII) "development assessment documentation as detailed in section. 4.3 Development Permit Applications."

PART III – FORCE AND EFFECT

5.00 Severability

5.01 If any section, subsection, sentence, clause or phrase of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, the invalid portion shall be severed and the part that is invalid shall not affect the validity of the remainder unless the court makes an order to the contrary.

6.00 Enactment

6.01 This bylaw shall come into force on the day of the passing by Council of the third and final reading.

CAO _____ Presiding Officer _____

7.00 Bylaw Readings

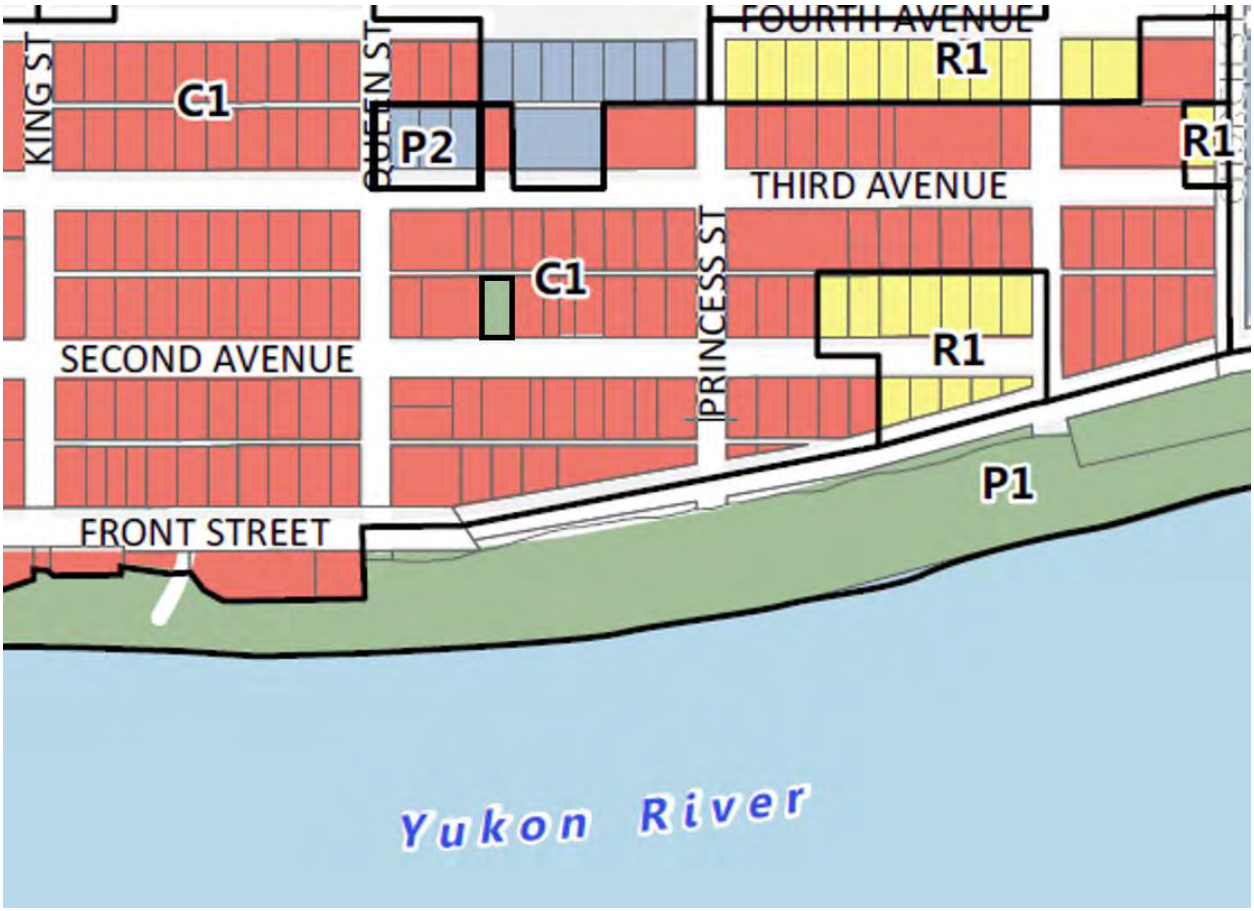
Readings	Date of Reading
FIRST	**November 20, 2019**
PUBLIC HEARING	**February 12, 2020**
SECOND	**February 12, 2020**
THIRD and FINAL	

Wayne Potoroka, Mayor
Presiding Officer

Cory Bellmore, CAO
Chief Administrative Officer

8.00 Appendices

Appendix 1. Amendments to Schedule C



CAO

Presiding Officer

RCMP·GRC

ROYAL CANADIAN MOUNTED POLICE • GENDARMERIE ROYALE DU CANADA

MONTHLY POLICING REPORT December 2020

Dawson City RCMP Detachment "M" Division Yukon

The Dawson City RCMP Detachment responded to a total of 68 calls for service during the month of December, 2020.

OCCURRENCES	December 2020	Year to Date 2020	December 2019	Year to Date 2019	Year Total 2019
Assaults (including common assault, assault with a weapon, assault causing bodily harm etc.)	2	52	4	81	81
Sexualized Assaults	0	6	0	4	4
Break and Enters	1	13	0	36	36
Thefts (all categories)	1	56	1	89	89
Drugs (all categories)	1	28	0	6	6
Cause Disturbance	4	67	5	138	138
Mischief	9	145	8	158	158
Impaired Driving	0	32	1	41	41
Vehicle Collisions	0	44	3	80	80
Mental Health Act	5	42	2	43	43
Assistance to General Public	3	79	4	36	36
Missing Persons (including SAR)/Requests to Locate/Well Being Checks	6	102	6	94	94
Check Stops Check stop numbers have been adjusted as per policy. Each number represents the number of vehicles as a contact. ie 439 means 439 vehicles were checked	0	502	105	370	370

Other Calls for Service	36	949	68	892	892
Total Calls for Service (Numbers are adjusted (higher) because of the way checkstop contacts are now reported)	68	2089	207	2068	2068
Total Criminal Code Charges Laid	12 Criminal Code	59 Criminal Code	0 Criminal Code	57 Criminal Code	57 Criminal Code
Total Territorial Act Charges (ie : Liquor Act/Motor Vehicle Act)	0	11 Motor Vehicle Act	1 Motor Vehicle Act 0 Liquor Act	15 Motor Vehicle Act 5 Liquor Act	5 Liquor Act 15 Motor Vehicle Act

PLEASE NOTE: The statistic numbers in the report may change monthly as file scoring is added, deleted or changed. These are estimates only.

	December, 2020	**Year to Date 2020 Total**	**December, 2019**	**Year Total 2019**
Prisoners held locally	2	54	1	65
Prisoners remanded	0	3	0	0
Total Prisoners	2	54	6	65

Justice Reports	**December, 2020**	**Year to Date 2020**	**December 2019**	**Year Total 2019**
Victim Services Referrals Offered	2	54	3	55
Youth Diversions	0	1	0	2
Adult Diversions	0	2	0	1
Restorative Justice Total	0	3	0	0

125 Celebration Photograph of the NWMP arrival in the Yukon
L-R Sgt. David WALLACE, Peter NAGANO (THFN Community Mentor), Cst. Josh TOWER, Cpl. Dustin GRANT, Richard NAGANO (THFN Community Mentor), Sgt. Rob MORIN

Annual Performance Plan (A.P.P.'S) Community Priorities

Community approved priorities are:

(1) Substance Abuse
(2) Road Safety
(3) Youth Initiatives
(4) Attendance at THFN and Community Events
(5) Restorative Justice

(1) Substance Abuse

A small increase in alcohol- and drug-related files was noted over the holiday season. Detachment members remained committed to proactively mitigating the dangers of substance abuse. Patrols were conducted multiple times per shift, most notably on cold nights or when members received information that known clients were engaging in high-risk behaviour. Our members` primary goal is to ensure the safety of each citizen, and in most cases this was

accomplished by simply providing transportation to a safer environment.

(2) Road Safety

Although no check-stops were conducted this month (as is typically done in years past), members continued to show a notable presence on the streets of Dawson City with increased patrols. School zone patrols were made at peak times as per months past, and the pattern appears to bare fruit as members note no violations this month.

No collision were reported last month, likely in part due to the Pandemic reducing the number of travellers on the road.

(3) Youth Initiatives

This month, Lee POPESCUL continued his hockey skills clinic for youth skaters, with Cst. TREMBLAY assisting on occasion. Feedback from participants and parents was positive, and a future repeat venture is be considered for next season.

Cst. TOWER gave several presentations at Robert Service School regarding various topics as requested by school administration.

(4) Attendance at THFN and Community Events

The Detachment took part in the annual Dawson City Boat Parade. Members and their young families enjoyed putting together the float and waving to the crowd in what was a very successful event.

Rob Morin, Dave Wallace, Dustin Grant and Josh Tower also joined Canadian Rangers Peter Nagano and Richard Nagano in a (very cold) joint skidoo patrol to the 40 Mile Town site, visiting the area as part of the NWMP/RCMP 125 year celebration.

(5) Restorative Justice

December marked the first steps of the new Restorative Justice Unit, based in Whitehorse. This unit will be able to assist the Dawson City Detachment with community-led restorative justice initiatives, as needed. This will be a valuable tool in the Detachment's toolbox as it continues its push for considering and/or implementing further Restorative Justice measures on a more frequent basis.

There were no new Restorative Justice referrals or diversions this month, however some from past months are still in progress.

Fun Fact

On December 29th, 1900, L.B. Mack was ordered to appear in court for selling food unfit for human consumption.

The case was ultimately dismissed by Inspector McDonnell two days later.

Kindest regards,

Cst. Marc TREMBLAY

For

Sgt. Rob MORIN
N. C. O. In Charge
Dawson City RCMP-GRC
Box 159
Dawson City, Yukon Y0B 1G0

METRIX GROUP LLP
CHARTERED PROFESSIONAL ACCOUNTANTS

January 26, 2021

City of Dawson
P.O. Box 308
Dawson City, YK Y0B 1G0

Sent via e-mail: cfo@cityofdawson.ca

Attention: Council Members

Dear Council Members:

Re: 2020 AUDIT PLAN

A. INTRODUCTION

The objectives of this document are as follows:

a) To communicate clearly with Council our responsibilities in relation to the financial statement audit, and provide an overview of the planned scope and timing of the audit;

b) To obtain from Council information relevant to the audit;

c) To provide Council with timely observations arising from the audit that are significant and relevant to Council's responsibility to oversee the financial reporting process; and

d) To promote effective two-way communication between the auditor and Council.

Clear two-way communication between the auditor and those charged with governance is an integral part of every audit. After reviewing this audit plan, please advise us whether there are additional areas of concern to Council which we should consider.

This letter should not be distributed without the prior consent of Metrix Group LLP and Metrix Group LLP accepts no responsibility to a third party who uses this communication.

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B. SERVICES TO BE PROVIDE

We have been engaged by Council to perform the following services:

a) Audit services

- Audit of the City of Dawson (the "City") financial statements.

b) Non-audit services

- We have not been engaged to provide any non-audit services.

C. AUDITOR INDEPENDENCE

At the core of the provision of external audit services is the concept of independence. Canadian Auditing Standards recommends that we communicate to Council, at least annually, all relationships between our firm and the City of Dawson that, in our professional judgment, may reasonably be thought to bear on our independence.

We are currently not aware of any relationships between the City and ourselves that, in our professional judgment, may reasonably be thought to bear on our independence. We will provide our annual letter confirming our independence up to the date of our report at the conclusion of the audit.

D. AUDITOR RESPONSIBITIES

It is important for Council to understand the responsibilities that rest with the City and its management and those that belong to the auditor in relation to the financial statement audit.

Our audit of the City's financial statements will be performed in accordance with Canadian Auditing Standards. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements present fairly, in all material respects, the financial position, results of operations and cash flows of the City in accordance with Canadian public sector accounting standards. Accordingly, we will plan and perform our audit to provide reasonable, but not absolute, assurance of detecting fraud and errors that have a material effect on the financial statements taken as a whole, including illegal acts whose consequences have a material effect on the financial statements.

Canadian Auditing Standards does not require the auditor to design procedures for the purpose of identifying supplementary matters to communicate to Council.

E. MANAGEMENT RESPONSIBILTIES

Management is responsible for the preparation of the financial statements in accordance with Canadian public sector accounting standards and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

F. PLANNED SCOPE AND TIMING OF THE AUDIT

In gathering our audit evidence, we will utilize an approach to the audit of the City that allows us to issue an audit opinion on the financial statements in the most cost-effective manner, while still obtaining the assurance necessary to support our audit opinion. In performing our audit, our work will be focused on, but not limited to, areas that we believe have a higher risk of being materially misstated.

To assess risk correctly, we will require a clear understanding of the City's business and the environment it operates in. We will gain this understanding primarily through discussions with management and staff.

Audit Strategy

Based on our knowledge of the City's operations, we anticipate utilizing a combination of tests of relevant internal controls and substantive procedures (analysis of data and obtaining direct evidence as to the validity of the items such as third-party confirmation). This type of approach is more appropriate when an entity processes a high volume of transactions and has strong internal controls. By obtaining some of our assurance through tests of controls, we can reduce the substantive procedures that are required.

Significant Risks

Significant risks are identified and assessed risks of material misstatement that, in the auditors' judgment, require special audit consideration. We have identified the following significant risks.

Revenue Recognition

Revenue recognition is presumed to be a significant risk in every financial statement audit. Our audit approach will include examining revenue recognition policies as well as reviewing various grant agreements to ensure revenue is being recognized appropriately.

Management Override of Controls

Canadian Auditing Standards stipulates that management override of controls is considered a significant risk in every financial statement audit. To reduce this risk to an acceptable level, our audit approach will include substantive procedures including testing of manual journal entries, reviews of irregular transactions, and assessing key estimates for potential bias.

Materiality

Materiality in an audit is used as a guide for planning the nature and extent of audit procedures and for assessing the sufficiency of audit evidence gathered. It is also used in evaluating the misstatements found and determining the appropriate audit opinion to express.

A misstatement, or the aggregate of all misstatements in financial statements, is considered to be material if, in the light of surrounding circumstances, it is probable that the decision of a person who is relying on the financial statements, and who has a reasonable knowledge of business and economic activities (the user), would be changed or influenced by such misstatement or the aggregate of all misstatements. The materiality decision ultimately is based on the auditors' professional judgment.

Canadian Auditing Standards require the use of both quantitative and qualitative factors in determining materiality. In planning our audit, we have concluded that a materiality level of 2% of revenue is appropriate. However, we anticipate that management will record any adjustments that we propose that are of a non-trivial nature.

We may update our materiality if actual amounts differ significantly from the estimates or circumstances suggest particular balances, results or disclosures may impact users' decisions.

Audit Team

We will provide skilled professionals who have experience working on local government audits as follows:

Phil Dirks, CPA, CA	Engagement Partner
Curtis Friesen, CPA, CA	Concurring Partner
Stephen Webber, CPA	Manager
Mitchel Opryshko, CPA	Junior

Timing of the Audit

Audit planning was completed during January 2021.

The year-end audit fieldwork is scheduled to take place during April or May 2021.

We anticipate presenting the audited financial statements to Council at the June 15, 2021 Council meeting.

Management Representations

Management's representations are integral to the audit evidence we will gather. Prior to the release of our report, we will require management's representations in writing to support the content of our report.

G. NEW PUBLIC SECTOR ACCOUNTING BOARD STANDARDS

The following is a summary of recently issued *Public Sector Accounting Board* pronouncements. We encourage the City's accounting staff to review these to determine the potential impact to the City.

Effective Fiscal Years Beginning on or After April 1, 2022

PS 3280 – Asset Retirement Obligations

- Establishes standard that addresses the accounting and reporting of legal obligations associated with the retirement of tangible capital assets.
- Includes obligations associated with solid waste landfill sites covered under *PS 3270 – Solid Waste Landfill Closure & Post-Closure Liability*.
- Earlier adoption is permitted.

Effective Fiscal Years Beginning on or After April 1, 2023

PS 3400 – Revenue

- Establishes a standard that addresses the accounting and reporting of revenue not previously addressed in the CPA Canada Public Sector Accounting Handbook.
- Provides a framework for recognizing revenue by distinguishing between revenue that arises from transactions that include performance obligations from transactions that do not have performance obligations.
- Earlier adoption is permitted.

H. AUDIT FEES

We understand that the City demands value and we strive to provide the highest quality services while working with the City to control costs.

We estimate of our audit fees for the 2019 fiscal year in the amount of $24,500 (no increase from our 2019 quote provided in our letter dated June 8, 2015).

The above fee estimate, which does not include Goods and Services tax or out-of-pocket expenses, is based on the assumption our responsibilities will be limited to the expression of an opinion on the City's financial statements. We will not be required to perform accounting work, prepare working papers, or provide any other non-audit responsibilities.

I. REQUESTS OF COUNCIL

During the course of your duties as Council, you may become aware of additional areas of concern from an audit perspective that you would like us to address. We welcome discussion on any areas of audit concern that you may have.

Additionally, we request that you inform us (prior to the commencement of our year-end work) whether Council has knowledge of any actual, suspected, or alleged fraud affecting the City.

J. COMMUNICATION OF THE RESULTS

At the completion of our audit, we will communicate to Council matters arising from the financial statement audit. Our communication will include the following:

- Matters required to be communicated to the Council under Canadian Auditing Standards including possible fraudulent activities, possible illegal acts, significant weaknesses in internal control and certain related party transactions;
- Our views about significant qualitative aspects of the City's accounting practices, including accounting policies, accounting estimates, and financial statement disclosures;
- Other matters, if any, arising from the audit that, in our professional judgment, are significant to the oversight of the financial reporting process; and
- Any other matters previously agreed to with Council.

We trust this communication will provide you with an update on the current developments within the accounting profession, as well as clarify our responsibility and audit approach.

Please do not hesitate to contact us about any of the above items or other matters of concern to the City Council.

Yours truly,

METRIX GROUP LLP

Philip J. Dirks, CPA, CA
Partner

cc: Cory Bellmore, Chief Administrative Officer

Department of Highways and Public Works
Transportation Aviation (W-16)
PO Box 2703, Whitehorse, Yukon Y1A 2C6

January 25, 2021

Public Airports Act Regulation review

Dear Mayor Wayne Potoroka::

The Yukon government is working to advance regulations that will guide the operation and management of Yukon's public airports.

I am pleased to report that we now have a completed draft of the regulations. As part of this process, we have been working closely with the Yukon Aviation Advisory Committee, who have provided valuable input and helped perform a thorough review of the draft regulations.

These regulations, once approved, will allow the *Public Airports Act* to come into force and cover the following topics:

- designation of airports;
- airport plans;
- requirements for subdivision;
- regulation of activities;
- agreements and permissions;
- transition for existing leases; and
- fees.

If your organization is interested in reviewing the draft regulations, please contact me by email at leah.stone@yukon.ca or by calling 867-332-2590. The Government of Yukon will require any comments and feedback prior to February 19, 2021.

Sincerely,

Leah Stone
Director of Transportation Aviation
Highways and Public Work