THE CITY OF DAWSON

AGENDA - COUNCIL MEETING #C24-04
TUESDAY, February 20, 2024, at 7:00 p.m.
Council Chambers, City of Dawson Office

Join Zoom Meeting
https://us02web.zoom.us/j/81343824315?pwd=SFo3M29qWFllNWQwSGhPMDRDYUN1UT09
Meeting ID: 813 4382 4315
Passcode: 488919

1. **Call To Order**

2. **Adoption of Agenda**
   1.1. Council Meeting Agenda #C24-04

3. **Proclamations**
   3.1. March 8th, 2024, International Women's Day
   3.2. March 15th to March 17th Thaw di Gar Spring Carnival

4. **Adoption of Minutes**
   4.1. Council Meeting Minutes C24-01 of Jan. 16, 2024
   4.2. Special Council Meeting Minutes C24-02 of Jan. 30, 2024
   4.3. Special Council Meeting Minutes C24-03 of Feb. 6, 2024

   4.4. Business Arising from Minutes

5. **Special Meeting, Committee, and Department Reports**
   5.1. Recreation Board Appointments
   5.2. Solid waste
      5.2.1. Discontinue commercial collection.
      5.2.2. Extend residential service and reduce bin rental.
      5.2.3. Move to biweekly recycling collection.
      5.2.4. Institute bag limits.
   5.3. Admin Boiler Change Order
   5.4. Community Grants and Recreation Fund
   5.5. North End Tender Close

6. **Bylaws and Policies**
   6.1. RFD - Development Agreement
   6.2. Bylaw 2024—04 First Reading

7. **Public Questions**

8. **Closed Meeting – meeting closed to the public for discussion of matter related to:**
   8.1. "The conduct of existing or anticipated legal proceedings".
   8.2. "Personal information, including personnel".

9. **Adjournment**

THE CITY OF DAWSON

Office of the Mayor

PROCLAMATION
"International Women's Day"
March 8, 2024

WHEREAS: In 1977, the United Nations General Assembly adopted a resolution calling on member states to proclaim a day for women's rights and international peace; and,

WHEREAS: Following the United Nations' lead, Canada chose March 8th as International Women's Day; and,

WHEREAS: In 1979 the United Nations adopted the "Convention of the Elimination of Discrimination Against Women" (CEDAW), providing a mechanism for governments to make commitments ensuring women's equal access to equal opportunities in political and public life, as well as education, health and employment; and,

WHEREAS: International Women's Day is observed around the world and provides an opportunity to recognize and reflect on the progress made to advance women's equality, to celebrate the gains made by women in our society, and to reflect on the challenges and barriers women continue to face; and,

THEREFORE: I, William Kendrick, Mayor of the City of Dawson, do hereby proclaim March 8, 2024

"International Women's Day
in the City of Dawson.
Yukon Territory

THE CITY OF DAWSON

Office of the Mayor

PROCLAMATION
"Thaw di Gras Spring Carnival."
March 15-March 17, 2024

WHEREAS: the citizens of Dawson, Yukon, have endured the long, cold, and dark winter with admirable resilience and fortitude and,

WHEREAS: the arrival of spring marks a time of renewal, warmth, and the rekindling of community spirit and joy and,

WHEREAS: the Thaw di Gras Spring Festival embodies the essence of spring, offering a beacon of hope and a vibrant platform for celebration and,

WHEREAS: the festival from March 15th to 17th shall be a time where Dawsonites are deservedly seeking fun, frolic, and the freedom to partake in outdoor activities, bask in the sunshine, engage in socializing, embrace silliness, and indulge in all manners of heartwarming endeavors and,

WHEREAS: it is essential to recognize the significance of such gatherings in strengthening community bonds, enhancing our collective well-being, and fostering a sense of belonging and happiness among all;

THEREFORE be it proclaimed, that March 15th to 17th is officially designated as the Thaw di Gras Spring Festival in Dawson, Yukon. Let these days be filled with laughter, joy, and the warm embrace of community and celebration, marking the transition from the quietude of winter to the lively spirit of spring.

I, William Kendrick,
Mayor of the City of Dawson,
do hereby proclaim

MINUTES OF COUNCIL MEETING C24-01 of the Council of the City of Dawson held on Tuesday, January 16, 2024 at 7:00 p.m. via City of Dawson Council Chambers.

PRESENT:
Mayor William Kendrick
Councillor Alexander Somerville
Councillor Brennan Lister
Councillor Patrik Pikálek

REGRETS:
Councillor Julia Spriggs

ALSO PRESENT:
CAO: David Henderson
MC: Elizabeth Grenon
CFO: Kim McMynn
PDM: Farzad Zarringhalam
A/PWM: Owen Kemp-Griffin
RECM: Paul Robitaille

1 Call To Order

The Chair, Councillor Somerville called Council meeting C24-01 to order at 7:00 p.m.

1.1 Appointment of Chairperson

C24-01-01
Moved By: Councillor Pikálek
Seconded By: Councillor Lister

That Council designate Councillor Somerville as the Chair in accordance with Section 9(6) of the amended Council Proceedings Bylaw.

CARRIED 3-1

2 Adoption of the Agenda

C24-01-02
Moved By: Councillor Somerville
Seconded By: Councillor Lister

That the agenda for Council meeting C24-01 of January 16, 2024 be adopted as presented.

CARRIED 4-0

3 Delegations & Guests

3.1 Helen Dewell RE: Grimshaw, Alberta Multiplex

Helen presented on the Grimshaw, A.B. multiplex and had suggestions on how Council can collaboratively move forward with the rec center project.

Mark Mather offered to fund travel of a Councillor, YG, or staff member to go to one of the communities mentioned by citizens (Grimshaw or Assiniboia), in the amount $4,000.00.

	4	**Public Hearings**
	4.1	**Consolidation Application #23-117-Lots 3, 4 & 5, Block 1, Day's Addition** The Chair called for submissions. The Chair called for submissions a second time. The Chair called for submissions a third and final time, and hearing none declared the Public Hearing closed.
	4.2	**Zoning Bylaw Amendment No. 28 (2023-18)-Klondike Highway Subdivision Parcel D/F** The Chair called for submissions. The Chair called for submissions a second time. The Chair called for submissions a third and final time, and hearing none declared the Public Hearing closed.
	5	**Adoption of the Minutes**
C24-01-03	**5.1**	**Council Meeting Minutes C23-19 and Special Council Meeting C23-20 of December 19, 2023** **Moved By:** Councillor Lister **Seconded By:** Councillor Pikálek That the minutes of Council Meeting C23-19 and Special Council Meeting C23-20 of December 19, 2023 be approved as presented. CARRIED 4-0
	6	**Financial and Budget Reports**
C24-01-04	**6.1**	**Canada Community Building Fund (CCBF) Update** **Moved By:** Councillor Somerville **Seconded By:** Councillor Lister That Council receive the Canada Community Building Fund report for informational purposes. CARRIED 4-0
C24-01-05	**6.2**	**Cash Flow** **Moved By:** Councillor Somerville **Seconded By:** Councillor Pikálek That Council receive the Cash Flow report for informational purposes. CARRIED 4-0
	7	**Special Meeting, Committee, and Departmental Reports**
C24-01-06	**7.1**	**Rec Centre – Work plan** **Moved By:** Councillor Lister **Seconded By:** Councillor Pikálek That Council directs administration to: 1. Develop a Service Agreement with Yukon Government to design and build a Recreation Center in Dawson City that includes a progressive design-build

procurement method and
2. utilize a local advisory group to assist in the decision-making process.

CARRIED 4-0

7.1.1 Amendment-Rec Centre Work Plan

C24-01-07

Moved By: Mayor Kendrick
Seconded By: Councillor Pikálek

That point number 2 of the main motion be amended to add "in principle" after the word group and to add "and to refer to the next Committee of the Whole meeting" to the end of the resolution.

CARRIED 4-0

7.2 Rec Centre Motion from Member of Council

Moved By: Mayor Kendrick

Be it resolved that Council direct Administration to comprehensively explore the feasibility of a downtown core location for a new recreation centre, with the working group team and YG project manager. Be it further resolved that Admin and the Rec Centre working group report back to Council whenever necessary for feedback and direction so as to not jeopardize any funding envelopes available for a new recreation centre.

MOTION NOT SECONDED

7.3 Consolidation Application #23-117-Lots 3, 4 & 5, Block 1, Day's Addition

C24-01-08

Moved By: Councillor Somerville
Seconded By: Councillor Lister

That Council grant subdivision authority to consolidate Lots 3, 4, and 5, Block 1, Day's Addition (Subdivision Application #23-117), subject to the following conditions:
1. The applicant submits a plan of subdivision completed by a certified lands surveyor drawn in conformity with the approval.
2. The applicant shall, on approval of the subdivision plan by the City of Dawson, take all necessary steps to enable the registrar under the Land Titles Act to register the plan of subdivision.

CARRIED 4-0

7.4 Dredge Pond II

C24-01-09

Moved By: Councillor Lister
Seconded By: Mayor Kendrick

That Council review and endorse the City of Dawson's draft written response to Tr'ondëk Hwëch'in Letter regarding the Dredge Pond II Master Plan and authorize CAO to release the response to Tr'ondëk Hwëch'in.

CARRIED 4-0

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8 Bylaws & Policies

8.1 2024 Annual Operating Budget & Capital Expenditure Program Bylaw (#2024-01)- 1st Reading

C24-01-10

Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Council give Bylaw 2024-01, being the 2024 Annual Operating Budget & Capital Expenditure Program Bylaw, first reading.

CARRIED 4-0

8.2 **2024Tax Levy Bylaw (#2024-02)- 1st Reading**

C24-01-11

Moved By: Councillor Somerville
Seconded By: Councillor Lister

That Council give Bylaw 2024-02, being the 2024 Tax Levy Bylaw, first reading.

CARRIED 4-0

8.3 **Fees & Charges 2024 Amendment Bylaw (#2024-03)- 1st Reading**

C24-01-12

Moved By: Councillor Somerville
Seconded By: Councillor Lister

That Council give Bylaw 2024-03, being the Fees & Charges 2024 Amendment Bylaw, first reading.

CARRIED 4-0

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9 **Public Questions**

Diana Andrew had a question on public consultations for the budget bylaws before second reading. She also had a question on the Mayors alternative rec center location recommendation.

Dan Davidson had a question regarding the Dredge Pond Heritage Park.

Kim Biernaskie had a question regarding the Mayors alternative rec center location recommendation and why other Council members did not seem interested in entertaining the idea. She also had questions regarding curbside pickup.

9.1 **Extend Meeting**

C24-01-13

Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Council meeting C24-01 be extended not to exceed one hour.

CARRIED 4-0

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10 **In Camera-Strategy and Confidential Matters**

10.1 **Recess**

C24-01-14

Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Council take a three-minute recess.

CARRIED 4-0

10.2 **Move to In Camera**

C24-01-15

Moved By: Councillor Somerville
Seconded By: Councillor Lister

That Council move into a closed session of Committee of the Whole, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a strategic and confidential related matter.

CARRIED 4-0

	10.3	**Revert to Open Session**
C24-01-16		**Moved By:** Councillor Somerville **Seconded By:** Councillor Pikálek
		That Committee of the Whole revert to an open session of Council to proceed with the agenda.
		CARRIED 4-0
	10.3.1	**Letter to Minister Mostyn**
C24-01-17		**Moved By:** Councillor Pikálek **Seconded By:** Councillor Somerville
		That Council direct staff to draft a letter addressed to Minister Mostyn, in collaboration with the mayor, to support the City's position on the CMG proposals and AYC's position thereon.
		CARRIED 4-0
	11	**Adjournment**
		No adjournment was made because the meeting automatically adjourned at 11:00PM.

THE MINUTES OF COUNCIL MEETING C24-01 WERE APPROVED BY COUNCIL RESOLUTION #C24-02-XX AT COUNCIL MEETING C24-02 OF FEBRUARY 20, 2024.

Alexander Somerville, Chair

David Henderson, CAO

MINUTES OF SPECIAL COUNCIL MEETING C24-02 of the Council of the City of Dawson held on Tuesday, January 30, 2024 at 6:30 p.m. via City of Dawson Council Chambers

PRESENT:
Mayor Kendrick – Arrived late 6:45pm
Councillor Somerville
Councillor Lister – Left early 9pm
Councillor Patrik Pikálek

REGRETS:
Councillor Spriggs

ALSO PRESENT:
CAO: David Henderson
AMC: Shelly Musyj
PDM: Farzad Zarringhalam
PJM: Owen Kemp-Griffin
FM: Kim McMynn
FC: Mike Masserey
RECM: Paul Robitaille

	1	**Call To Order** The Chair, Councillor Somerville called Special Council meeting C24-02 to order at 6:30 p.m.
C24-02-01	**2**	**Acceptance of Addendum & Adoption of Agenda** **Moved By:** Mayor Kendrick **Seconded By:** Councillor Pikálek That the agenda for Special Council meeting C24-02 of January 30, 2024 be adopted as amended. CARRIED 3-0 (Mayor Kendrick was not yet in attendance)
C24-02-02	**3**	**Move to In Camera** **Moved By:** Councillor Somerville **Seconded By:** Councillor Pikálek That Council move into a closed session of Council, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a commercially sensitive information matter. CARRIED 3-0 (Mayor Kendrick was not yet in attendance)
C24-02-03	**3.1**	**Move to Open Session** **Moved By:** Councillor Somerville **Seconded By:** Councillor Lister

That Council revert to an open session of council to resume Special Council Meeting Agenda C24-02.

CARRIED 4-0

C24-02-04 **3.2** **Recess**
Moved By: Councillor Pikálek
Seconded By: Councillor Somerville

That Council take a three-minute recess.

CARRIED 4-0

C24-02-? **4** **Bylaw 2024-01 C24-01**
Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Council give Bylaw 2024-01, being the 2024 Annual Operating Budget & Capital Expenditure Program Bylaw, second reading.

POSTPONED- (, see secondary motion to postpone)

C24-02-05 **4.1** **Bylaw 2024-01 C24-01**
Moved By: Mayor Kendrick
Seconded By: Councillor Somerville

That council postpone further discussion of bylaw 2024-01, being the 2024 annual operating budget & capital expenditure program bylaw to a special committee of the whole meeting.

CARRIED 3-0 (Councillor Lister left the meeting)

Note –

Bylaw 2024—02 Tax Levy Bylaw and

Bylaw 2024—03 Fees and Charges Amendment

Were not brought to the floor and will presumably come to the floor when the Operating & Capital Budget 2nd reading resumes.

C24-02-06 **4.3** **Cable Analysis Report**
Moved By: Councillor Pikálek
Seconded By: Mayor Kendrick

That council directs administration to include the public portion of the cable analysis report in the package for a special committee of the whole meeting.

Recorded Vote:

Name	Yes	No
William Kendrick	✓	
Patrik Pikálek	✓	
Alexander Somerville		✓

CARRIED 2-1

C24-02-07 **4.4** **Extend Meeting**
Moved By: Councillor Pikálek
Seconded By: Mayor Kendrick

That Special Council Meeting C24-02 be extended not to exceed one hour.

Recorded Vote:

Name	Yes	No
William Kendrick	✓	
Patrik Pikálek	✓	
Alexander Somerville		✓

CARRIED 2-1

5 **Public Questions**

Diana Andrew had questions hiring and specific budget lines.

Kim Biernaskie had questions regarding specific budget lines

Dan Davidson had a personal inquiry for public works department

C24-02-08 **6** **Adjournment**
Moved By: Mayor Kendrick
Seconded By: Councillor Pikálek

That Special Council Meeting C24-02 be adjourned at 10:20 p.m. with the next regular meeting of Council being February 20, 2024.

CARRIED 3-0

THE MINUTES OF SPECIAL COUNCIL MEETING C24-02 WERE APPROVED BY COUNCIL RESOLUTION #C24-02-XX AT COUNCIL MEETING C24-02 OF FEBRUARY 20, 2024.

Alexander Somerville, Chair

David Henderson, CAO

MINUTES OF SPECIAL COUNCIL MEETING C24-03 of the Council of the City of Dawson held on Tuesday, February 6, 2024 at 7:00 p.m. via City of Dawson Council Chambers

PRESENT:
Mayor Kendrick
Councillor Somerville
Councillor Pikálek

REGRETS:
Councillor Lister
Councillor Spriggs

ALSO PRESENT:
CAO: David Henderson
MC: Shelly Musyj
PDM: Farzad Zarringhalam
PJM: Owen Kemp-Griffin
PWM: Jonathan Howe
RECM: Paul Robitaille

1 Call To Order

The Chair, Councillor Somerville called Special Council meeting C24-03 to order at 7:00 p.m.

2 Acceptance & Adoption of Agenda

C24-03-01
Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That the agenda for Special Council meeting C24-03 of February 6, 2024 be accepted as presented.

CARRIED 3 -0

C24-03-02 **3 Appointment of Heritage Advisory Committee Member**
Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Council appoint Aaron Woroniuk to the Heritage Advisory Committee with terms ending September 30, 2025.

CARRIED 3 – 0

C24-03-03 **4 Appointment of Heritage Advisory Committee Member**
Moved By: Councillor Pikálek
Seconded By: Councillor Somerville

That Council, following consideration of S.5.02 of the Heritage Bylaw, appoint Kate Serre de St. Jean to the Heritage Advisory Committee with terms ending September 30, 2025.

Recorded Votes	For	Against
Councillor Somerville	✔	
Councillor Pikálek		✔
Mayor Kendrick		✔

DEFEATED 1 – 2

C24-03-04 **5** **Adjournment**
Moved By: Councillor Somerville
Seconded By: Councillor Pikálek

That Special Council Meeting C24-03 be adjourned at 7:11 p.m. with the next regular meeting of Council being February 20, 2024.

CARRIED 3 – 0

THE MINUTES OF SPECIAL COUNCIL MEETING C24-03 WERE APPROVED BY COUNCIL RESOLUTION #C24-03-XX AT COUNCIL MEETING C24-03 OF FEBRUARY 20, 2024.

Alexander Somerville, Chair

David Henderson, CAO

City of Dawson
Report to Council

Agenda Item	Recreation Board Appointments
Prepared By	Paul Robitaille, Parks and Recreation Manager
Meeting Date	February 20, 2024
References (Bylaws, Policy, Leg.)	Bylaw #01-02
Attachments	

x	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendation

THAT Council appoint Ashley Doiron and Amélie Morin to the Recreation Board with a term expiring October 31, 2025.

Executive Summary

There are currently two vacancies on the Recreation Board. As per S.2.01 of Bylaw 01-02 "the Recreation Board shall have six regular members appointed by resolution of Council". Council previously directed Admin to recruit to fill the vacant position(s) on the Recreation board in preparation for utilizing the board in an advisory capacity to the Recreation Centre project.

Background

City of Dawson Bylaw 01-02 states:

2.01 the Recreation Board shall have six regular members appointed by resolution of Council and may have such other members as provided for under this bylaw. Regular and other members may serve consecutive or succeeding terms.

2.02 Unless otherwise stipulated, appointments shall be for two-year terms with 3 members expiring Oct 31 of even numbered years and 3 members' terms expiring Oct 31 of odd numbered years.

3.01 Council may appoint one or more honorary members to the Recreation Board for terms ranging from one year to life at the discretion of council.

3.02 Honorary members appointed under this part shall have all the rights and privileges of a regular member.

4.02 Upon the request of the Recreation Board, the Tr'ondëk Hwëch'in may appoint a member to the Board.

4.03 A member appointed under this part shall be appointed for two years, with the appointment terminating on the October 31st nearest to the end of the two-year period.

Currently the Recreation Board includes:

- Regular Members (End of term): Peter Menzies (October 31, 2026), Dawn Kisoun (October 31, 2026), Megan Macdougall (October 31, 2024), Brent Macdonald (October 31, 2025), Vacancy (October 31, 2025), Vacancy (October 31, 2025)
- Honourary Member: Monna Sprokkreef (Lifetime Member)
- Tr'ondëk Hwëch'in Member: Vacant – Discussion ongoing to fill position.

Based on these vacancies, and the expression of interest, which was publicly issued from February 7 to February 14, we recommend that Council appoint Ashley Doiron and Amélie Morin to the Recreation Board with a term expiring Oct 31, 2025.

Discussion / Analysis

Candidates were discussed internally by administration, and the selected candidates were recommended based on their knowledge and experience. Discussions with Tr'ondëk Hwëch'in are ongoing to fill the vacancy for that board position.

Fiscal Impact

This is a volunteer board. Members are not currently compensated.

Alternatives Considered

Administration considered all applicants & is recommending these candidates based on their skills and experience in the field.

Next Steps

Parks and Recreation will inform the members of their appointment.

Approved by	Name	Position	Date
	David Henderson	CAO	Feb 16, 2024

City of Dawson
Report to Council

Agenda Item	Solid Waste Management
Prepared By	
Meeting Date	Feb 20, 2024
References (Bylaws, Policy, Leg.)	"Garbage Bylaw" Environment Act
Attachments	1. Interim Regional Waste Agreement 2. Morrison Hershfield Report 3. Chamber of Commerce Letter

x	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendations

1. That the City of Dawson discontinue Solid waste collection services for Commercial, Institutional, and Multi-Residential properties and discontinue associated non-residential waste charges on a pro rated basis.

2. That upon cessation of Commercial Solid Waste pickup services by the City, the City extend residential waste collection services to municipal residential neighborhoods where practicable with the elimination of neighbourhood Bin rentals in neighbourhoods affected.

3. That upon cessation of Commercial services by the City, the City transition residential waste pickup services to a bi-weekly schedule with residential solid waste pickup on week one and residential recycling collection on week two.

4. That upon full implementation of Tipping fees at the Dawson Landfill site the City of Dawson adopt a waste limit of 1 or 2 Bag(s) per household per week, with the option to purchase additional bag tags.

Executive Summary

Dawson agreed to an interim regional Waste Agreement with YG in 2023 whereby Dawson planned to adopt tipping fees at the Quigley landfill in the summer of 2023. The agreement provides funding to the City to compensate for regional users and implements tipping fees to encourages diversion of recyclables, extending the life of the landfill site, reduce GHGs, and enable cost recovery from all users.

Implementation of tipping fees has been delayed as the city recruits a solid waste supervisor who will manage the implementation process (along with managing the landfill, diversion centre, waste collection, and associated contracts). A Solid Waste Supervisor has been hired and will be onboarding into the position starting March 4th, 2024, a landfill attendant will then be hired to collect tipping fees (funded by waste agreement). YG is continuing the engineering review and costing of potential weigh scales to charge tipping fees by weight vs volume. YG has indicated they will fund up to $400k of the capital cost.

Interim Agreements are expected to be extended and adjusted annually to accommodate transition to final standing regional waste agreements.

With the opening of the new Dawson Diversion Centre in 2023 City Council asked staff to develop recommendations for the city to implement residential recycling collection to increase the benefits to the community of solid waste diversion and reduction. Staff utilized the principles of mitigating costs to the municipality, encouraging diversion of solid waste from the landfill via recycling or reduction, and best practices in solid waste management that has been tested in other municipalities. The following recommendations were developed and presented to council for consideration.

Discontinue Municipal Collection of Solid Waste from Commercial properties (Commercial, Institutional, & Multi Residential)

A review of best practices in municipal solid waste services identified that commercial services are primarily provided by the private sector which can better serve the high degree of variability in pickup schedules, volume, and seasonality associated with Commercial properties.

If Commercial Pickup services are discontinued then commercial, Institutional, and Multi Residential properties will contract private sector Waste collection that is tailored to their specific needs and associated costs will reflect the volume of waste produced – small commercial operations will save money, large commercial operations will pay more and will be encouraged to reduce the waste they produce. Municipal subsidization of commercial waste handling will be reduced.

Private Waste Collection service providers will incorporate landfill tipping fees into their service charges. Recyclable deliveries to the diversion centre will be free. Thus "recycling and reducing" presents a lower cost solution to the non-residential sector and an incentive to increase efforts to reduce waste produced and divert recyclables from the landfill.

The commercial, annual waste fee would be cancelled, costing the city approx. $118K. Tipping fees will recover a portion of these fees. Changes to residential service areas and cost savings from a reduction of Bin rentals will cover the balance.

Discontinuing commercial pickup will free up municipal waste collection staff time which then can be reassigned to residential service extension (a cost savings) and Curbside Residential Recycling Collection.

It is recommended that the annual Waste fee be kept for Vacant Commercial, Institutional, and Multi-Residential properties.

Providing Residential Service to Neighbourhoods not currently served

Currently several residential neighbourhoods are served by the City making available large commercial waste bins in their neighbourhood. The rental and servicing of these bins costs the municipality approx. **$90,000 annually**.

Extending Collection services to these areas and discontinuing the associated bin rental presents a cost saving that replaces revenues lost from stopping commercial services.

The Dome and dredge pond subdivisions will present operational challenges for curbside pickup. Residences will be required to purchase or make their own bins – these bins will either need to be wildlife proof and/or be placed at the curb the day of pickup. The Dome will also present operational challenges with access, the terrain is difficult to navigate and going up to each residence may be challenging. The refuse truck purchased in 2023 has 4X4 capabilities and is envisioned to be sufficient for these locations. The truck and trailer solution for residential recycling pickup services will require some adjustment time for operations in the Dome Road areas.

Curbside Residential Recycling Collection

Curbside residential Recycling services will increase the volume of solid waste diverted from the Landfill to the diversion centre. Diversion reduces future expenses associated with Landfill closure and opening a new landfill site.

Curbside residential recycling collection can be provided by current staff if residential waste pickup is changed to a biweekly service – Waste is picked up on week 1 and recyclable materials on week 2.

Curbside Recycling collection will increase the overall volume of collections. If the current system of collection from Commercial properties and residential properties were switched to bi weekly waste / Recycling collection the existing staff would not be able to provide the full service and no cost savings (from bin rental would be achieved)

1 or 2 Bag per household per week limit.

The goal is to encourage the reduction of waste production and the diversion of solid waste from the landfill. Doing so extends the life of the landfill site, reducing future costs on the municipality, and is more environmentally responsible.

No tipping fees at the diversion centre and bag limits for curbside waste collection encourages residents to reduce waste and divert recyclable waste to the diversion centre.

The ability to purchase additional bag tags allows for special circumstances where a household may have had a special event, a cumulation of waste, etc.

Background

Regional Waste Management Facility Agreement

The Yukon Government is moving to Regional Waste Management Facility Agreements across the Yukon and wishes to do so in Dawson. Regional Waste Management Facility Agreements standardize services and practices, identify shared liability for closure and promote diversion. The anticipated changes include upgrades to Dawson facilities (weight scale and attendant Hut), financial support for unincorporated residents within the "regional boundary" based on a population formula, introduction of universal residential tipping fees for access to the landfill facility, extending the life of the landfill facility and reducing greenhouse gas emissions through diversion.

Interim Agreements are transitional steps that move municipal landfills towards the requirements of regional agreements "once lease, liability and other operational standards are established".

Tipping fees encourages diversion of recyclables, extending the life of the landfill site, reduce GHGs, and enable cost recovery from all users. Currently the cost of operation and eventual closure of the Quigley Landfill site are primarily covered by the City of Dawson municipal budget. Municipal properties pay an annual Waste Management fee which partially covers the cost of collection, processing, Landfill management, Diversion centre operations.

As Municipal properties pay the bulk of waste management costs through Waste management fees and Property Taxes the Yukon Government developed formulas to identify how many non-municipal residents use the regional landfill and drafted agreements which compensate the host municipality for non-resident users to the point that common residential tipping fees can be applied.

Commercial tipping fees are at the discretion of the host municipality and rates for resident and non resident users do not have to be common as the Yukon Government is not compensating the host municipality for non resident commercial users.

Dawson agreed to an Interim Regional Waste Management Facility Agreement in 2023 with the implementation of tipping fees at the Quigley landfill planned for the summer of 2023. Implementation was conditional on a sequence of events:

1. The city hiring a Solid Waste Supervisor to manage the Landfill, Diversion Centre, Waste Collection and Recycling collection services. This position manages the implementation of tipping fees.
2. The hiring of a landfill attendant to collect the tipping fees. This position is funded by the Regional Waste Agreement.
3. Ideally the installation of a weigh scale at the landfill site to charge tipping fees by weight. YG is providing engineering and planning review and will fund up to $400,000 in capital costs. The configuration of the landfill property poses some challenges to this which are still under review. Cost escalation for purchase and installation of such scales across the territory has caused YG to cap their potential capital funding at $400,000 per installation.
4. If weigh scale costs are more than anticipated – volume-based fees can be implemented.

The Interim Regional Waste Management Facility Agreement paid Dawson $70k upon adoption and $70k upon implementation of Tipping fees.

The Waste Supervisor has now been selected and will be onboarded on March 4th, 2024 - next will be hiring the waste attendant (funded by the agreement) and implement Tipping fees either by weight (If a funding and install agreement for a scale can be reached with YG) or without a weigh scale (By volume).

A Solid Waste Supervisor is deemed necessary for the city as Solid Waste operations have grown from operating the Landfill and contracting out collections to Operating the Landfill, Operating the Diversion Centre, assuming collection services internally, managing solid waste contracts and negotiations

Current Waste Facility (landfill) Agreement

YG funds operating costs at the Dawson Landfill site up to a maximum of $75,000 per year based on a formula. This includes well monitoring, engineering inspections, a once-a-year residential household hazardous waste collection day, and the removal of certain classes of special waste.

Commercial Waste and Recycling Services

Currently the City of Dawson charges an annual Waste fee to Commercial, Institutional, and Multi residential properties of **$319.50/yr.** Gross revenue from this charge was $118,000 in 2022. The revenues generated by this charge, plus the revenue from the annual residential waste fee **($208/yr**) , assist the City in covering the cost of all solid waste services (solid waste collection, cardboard collection, landfill Site operations, Landfill site closure costs, Diversion Centre operations)

The City currently picks up Waste and Cardboard from Commercial, Institutional and Multi- residential properties as needed, delivering waste to the landfill site and cardboard to the Diversion Center and landfill.

Standard practice in municipal waste management in urban municipalities is for the Municipality to provide Residential waste pickup with Commercial waste pickup provided by private operators who contract directly with the owners of Commercial, institutional, and multi residential properties ("Commercial Properties"). If the City stops providing collection services to commercial properties it is recommended to also top collecting the annual commercial waste fee. (But not on vacant commercial, institutional, multi residential properties).

The reason for this is that the waste produced by commercial properties will vary widely from one property to another by volume and in scheduled pickups, causing problems for a municipal system to deliver services equitably and according to a standard schedule. When commercial properties contract a private supplier to pickup waste and cardboard they will pay based on the volume of waste and recyclables produced with large producers paying more and small producers paying less – thus more financially equitable –providing a clear incentive to producers to reduce their waste production and divert more waste to the diversion centre. Commercial pickup agreements provide greater flexibility to pickup waste as needed versus a regular schedule which residential customers require.

With the establishment of Tipping fees at the landfill site private contractors will offer a commercial customer a range of services such as the rental of a waste or cardboard bin at the commercial site, a pickup of waste on a schedule or as needed, and a charge through of tipping fees incurred for dropping waste at the landfill site.

Tipping fees are designed to assist in covering the cost of operating and maintaining a landfill site, to provide an incentive to producers of waste to reduce the volume of waste they produce thus extending the useful life of the landfill site and reducing long term costs for the municipality.

Residential Waste Services

Currently The City provides weekly curbside waste and cardboard pickup to residential customers in the downtown core with neighbourhood services provided in some areas outside of the downtown core through rented Waste Bins. Each residential property is charged **$208**/yr to assist in the costs related to pickup services, landfill operations and maintenance and Diversion Centre operations.

Recycling Services

Cardboard is picked up from commercial operations and residential properties and delivered to the new Diversion centre for shipping south. Recyclable products are dropped off at the diversion centre for processing and refunds where applicable.

The facility is awaiting final equipment prior to accepting 100% of the cardboard from the municipality. Additional pickups will be required from YG to accommodate the large amount of cardboard produced by the municipality. If all cardboard products can not be handled by the diversion center – they will be put in the landfill free of charge.

Extended Producer Responsibility

EPR is designed to move the cost of solid waste services onto the companies that produce the packaging and materials that make up the bulk of the waste products that end up in a landfill. The Yukon is moving to EPR by 2025 and it is not yet clear what this means to the Dawson Waste Management system and costs as details are not yet available.

Discussion / Analysis

Current System

Under the current system commercial properties that produce large volumes of solid waste are effectively subsidized by commercial properties that produce small volumes of Solid waste and have no incentive to reduce the production of waste or to divert solid waste through recycling.

Given that Commercial properties produce more solid waste in total than residential properties, the current system also subsidizes waste management of commercial properties from the property tax base.

Discontinuing municipal collection of commercial property solid waste creates a business opportunity in the local private sector and an opportunity for commercial properties to negotiate their waste collection costs or innovate their waste management process. In turn their waste management costs should more accurately reflect the volume of solid waste they produce.

The net result should be a greater incentive to commercial properties to reduce and recycle, reducing the volume of waste going to the landfill and lengthening the useful life of the landfill – saving the municipality and taxpayers money.

Commercial, Institutional, and Multi Residential Waste Services (Commercial Waste)

"Commercial" Solid Waste volumes and pickup frequency vary across businesses, institutions and multi residential properties. Currently each such property is charged the same annual fee regardless of the volume of waste produced. Eliminating annual fees and building the charge into tipping fees ensures that these properties pay according to the volume produced and have an incentive to reduce waste.

The high variability of commercial services is more compatible with private contracting where contracts can accommodate the unique needs of each property and billing can reflect actual service demands as opposed to a standing service.

If the municipality discontinues commercial pickup service, then resources can be applied to extending residential services to subdivisions that currently do not receive services. These areas currently utilize leased waste bins that would no longer be required. Resources can also be reallocated to curbside pickup efforts.

Where Residential Services are extended to currently underserviced areas Garbage box purchases will be the residential properties responsibility. The City of Dawson will be requiring residents bring their refuse to their bin the day of pickup to reduce wildlife encounters.

The proposed changes will be implemented gradually giving commercial businesses ample time to either hire or implement self-hauling operations.

Residential Biweekly Curbside Recycling

If residential waste pickup moves to biweekly pickup, municipal staff will then pickup recyclables on alternating weeks, using a trailer designed to allow for separation of material.

It is expected that the diversion centre will require an additional attendant to deal with the increase in material at the diversion Centre. The City will also purchase blue bins to be distributed to residential addresses.

There is some uncertainty around the pickup of recyclable product by Raven Recycling of Whitehorse from the Dawson Diversion Centre and the Extended Producer pay program, to be initiated by the Yukon Government and associated funding arrangements. This uncertainty exists currently, regardless of the status quo or implementation of changes identified.

Visualization of implementation steps

Extend Interim regional Waste Management Facility Agreement to 2024.

Install Gatehouse	YG	July 2024
Install Weigh Scales (YG$400,000)	YG	July 2024
Hire attendant at gatehouse	($ 80,000)/yr	July 2024
Initiate Tipping Fees (YG Agreement)	$ 75,000 / yr	july 2024
Tipping Fee Estimate	$ 50,000/yr	

Commercial Service Changes	**Summer 2024 (after tipping fees)**
Stop Commercial Pickup	
Stop Commercial Charge	($ 118,000) /yr
Extend Res Serv (Cancel bins)	$ 90,000 / yr
Est Tipping Fees Rev	$ 100,000 / yr

Initiate 1 or 2 bag limit per household per week

Residential Cubside Recycling	**Fall 2024 (After Commercial Serv Changes)**
Confirm Raven Pmts	?
Confirm Producer Pay	?
Buy Truck / Trailer	($ 100,000) one time capital expense
Buy initial Blue Bins for Res	($ 50,000) one time capital expense
Additional Diversion Centre Staff	($ 79,000) /yr

Initiate BiWeekly Res Waste/Recycle collection

Estimating tipping fee revenue is difficult, Watson Lake may be used to provide an estimate, Below is Watson Lake's 2024 projections of revenue for Solid Waste:

Solid Waste

Revenues

GL Code	Acct Name	2024 Projections
1143004200	Garbage Revenue	$ 100,000.00
1143004300	Solid Waste Tipping Fees	$ 285,000.00
1143004301	YTG - Landfill Funding	$ 80,000.00
1143004800	Solid Waste - Fines	$ 10,000.00
1143004910	Solid Waste - Misc	$ 500.00
TOTAL		$ 475,500.00

Figure 1: Watson Lake Revenue for Solid Waste (Draft 2024 O&M expenditure breakdown)

Fiscal Impact (estimates)

Interim Agreement	**Operating**	**Capital**
Increase in YG annual Operating support with Tipping Fees	$ 70,000	
CoD expense of hiring attendant	($ 80,000)	
Implementation of Tipping fees	$ 50,000	
Engineering review and design of Hut & Scales		Paid by YG
YG funding of Installation of Hut and scales (capped at $400K)		$ 400,000
Commercial, Institutional, multi residential waste changes		
Discontinuation of Commercial Waste Charge	($ 118,076)	
Full Implementation of Tipping Fees (annual est.)	$ 100,000	
Discontinuation of Residential Large Bin Rentals	$ 90,000	
Adoption of Residential Curbside Collection		
Additional Staff at Diversion Centre	($ 78,924)	
Curbside Collection Res Bins		($ 50,000)
Curbside Collection Truck & Trailer		($100,000)
Dawson Net Annual Operating & one time Capital costs	$ 33,000	($ 150,000)

Note –

1. If weigh scale cannot be configured for site it will be reconsidered.
2. If weigh scale estimates come in above $400k further review of options will be required
3. Tipping fees are conservatively estimated at approx. half of Watson Lakes with 50k upon implementation and an additional $100K if commercial collection discontinued

Alternatives Considered

Please refer to Waste Management report identifying alternative recycling options and capital considerations.

1. Commercial Solid Waste pickup once per week. – would force commercial properties to contract commercial collection and result in a hybrid system that would not be beneficial to contract negotiation and complicate the ability to extend residential services (and save money) and move to biweekly residential waste/recycling pickup.

2. Retaining Commercial waste collection service

   Commercial Solid Waste collection remains- changing the payment structure to adjust for volume of waste. Under the new bag limit structure, a residential bin would pay $4/bag ($2/bag if we allow 2 bags per week) - $208/52 = $4. A limit on the number of bags per pickup for commercial businesses would then be implemented.

   As an example, a business that produces three times the waste (3 bags) per pickup would now be charged $4 x 3 bags x 52 weeks = $624 per year (or $312 per year if its $2/bag)

   Here is an example from an existing business that produced 36 bags in one week extrapolated to a yearly fee – 36 bags x $4 per bag x 52 weeks = $7,488 per year (or $3,744 per year if its $2/bag). This does not include the pickup frequency of to the business, or any potential commercial incentives (reducing the cost per bag for businesses).

   A full fiscal analysis and cost options will be required if this system is to be considered.

   Cardboard pickup frequency would remain as is.

   Bi-weekly pickup of curbside recycling may not be feasible with this option or may be for residential properties only. Residential waste collection of subdivisions outside of Dawson Proper may not be feasible (the $90,000 per year bin rental would remain).

   Keeping commercial waste pickup services and implementing bi-weekly pickup of waste and recyclables would need to be tested prior to implementation to ensure existing staff can handle the workload.

Next Steps

1. If council discontinues commercial Solid Waste Collection
   i. Update of 2024 Budget to reflect changes.
   ii. Staff development of implementation plan and timing
   iii. Implementation
   b. If Council chooses to extend residential services
      i. Update Budgets
      ii. Staff develop implementation plan.
   c. If council chooses to move to a biweekly residential Solid waste / Recycling collection system
      i. Updates budgets
      ii. Staff develop implementation plan.
2. If Council adopts a one bag per household per week residential service
   a. Staff develop implementation plan – following implementation of tipping fees
3. Updating governing waste bylaw to encompass current services and regulations plus changes approved herein

4.

Approved by	Name	Position	Date
	Dave Henderson	CAO	February 15th , 2023

MORRISON HERSHFIELD

FINAL REPORT

Solid Waste Management Program Design Assessment

City of Dawson, Yukon Territory

Presented to:

CITY OF DAWSON
1336 Front Street / P.O. Box 308
Dawson City, YT Y0B 1G0

Report No. 108283500 September 17, 2018

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EXECUTIVE SUMMARY

Currently, municipal solid waste is collected weekly from residents at the curb and taken to the Quigley Landfill. The City of Dawson (CoD) engages a contractor to provide this collection service. Commercial waste is collected on an as-needed basis by the same contractor. A private contractor provides curbside collection of recyclables and organics to approximately 40 households.

CKS operates two recycling depots: one downtown and the other at the Quigley Landfill. These depots are at or beyond their operational capacity.

There are currently no incentives for any waste generators (i.e. residents, businesses) to reduce the waste that ends up in the landfill, and with existing depot infrastructure there are limited opportunities for waste diversion within the CoD. The City has set out on the path of first developing a citywide recycling program, which is to consist of curbside collection of recyclables and organics (in the long term), and the establishment of a new waste diversion centre. A site has already been established for a new waste diversion centre.

The key drivers for undertaking this study are the current high garbage collection costs, limited waste diversion programs, limited remaining landfill life span (only 10 years of landfill capacity remaining under the current design), and the desire to build on the partnership with CKS.

The City commissioned Morrison Hershfield (MH) to assess the current solid waste management system and provide an assessment of options and costs for implementing the citywide recycling program.

Curbside Collection

MH assessed the options for the CoD to expand the existing municipal curbside collection service to not only collect garbage, but also recyclables and potentially organic waste (food and yard waste).

The CoD currently services 537 residential units and 264 commercial units. It is suggested that the CoD is best to provide a weekly collection of garbage and recyclables. The collection could be performed using manual or semi-automated collection systems.

Manual collection would require home owners to supply their own garbage containers; size and weight limits would be placed on the containers to facilitate manual lifting. One of the issues with residents providing their own garbage container is the high risk of attracting wildlife compared to providing an approved wildlife resistant container to each resident, such as the containers assessed as part of the semi-automated option. With manual collection, only pick-up of one garbage container is recommended to offer as part of regular service; additional containers or bags would need pre-paid stickers.

If semi-automatic garbage collection is introduced, each unit would require a standardized container (such as a wildlife proof wheeled carts). These are best to be provided as part of the program cost. Residents could choose a small, regular or large container and pay less or more for the collection service depending on the size of container chosen.

The materials that are suggested for curbside recycling include two streams: fibres (paper and cardboard products) and containers (plastics and metal). Glass is assumed to only be collected at depots. The fibres and containers are best to be separated for placement at the curb in standardized recycling containers: fibres in a 'bluebox' container, and mixed containers in reusable plastic bags. Source separation at the curb saves on sorting and processing costs and increases marketability of the recyclables to end markets.

The enhanced curbside collection service will provide the convenience of garbage and recyclables pick-up at the curb. The recovery of more recyclable materials would improve the environmental performance of the area, and substantially reduce the waste that will have to be disposed at the Quigley Landfill.

Although the study assessed the potential quantities of organics to collect from residents and ICI customers, we recommend that organics (yard & garden and kitchen waste) should not be collected at this time, since the available processing facility is not suitable to handle larger quantities of organics at this point. Backyard composting can be actively encouraged until a processing facility that can handle larger quantities of organic waste has been evaluated and established. This facility is not equipped to handle the full range of food waste (e.g. cooked food and meat) that would be collected in a municipal curbside collection.

The table below presents the initial cost estimates for two of the main curbside collection options for garbage and recyclables: manual collection versus a semi-automated collection. Curbside collection for garbage and recyclables is estimated to cost between $815 and $900) per household per year (or a monthly cost of approximately $70 to $80 per household).

Cost Estimates of Two Options for Curbside Collection of Garbage and Recyclables

	OPTION 1 Weekly Collection of Garbage and Recyclables (manual)	OPTION 2 Weekly Collection of Garbage and Recyclables (semi-automated)
Collection Containers	$15,841	$123,241
Collection Vehicles (Annual costs of equipment, maintenance and insurance)	$251,280	$159,600
Operational Collection Costs ((labor and fuel)	$137,099	$77,195
Processing of Recyclables	$77,792	$77,792
Total Costs	**$482,012**	**$437,828**
Cost per HH	$898	$815

The cost to collect garbage on a weekly basis from ICI customers in 3 yd^3 bins using a front-end loading truck is estimated to cost $1,092 per customer (or $292,000 in total). However not all customers will need that much capacity, and many may want to opt into the residential curbside recycling program or share a collection bin with adjacent businesses. If ICI customers can be serviced by the provision of carts, which may be suitable for recyclables, the costs are likely to be half of those of front-end loaded bins. If garbage is collected via carts this would require semi or fully automated trucks.

Based on the study, MH suggests that the CoD consider the following:

- The final decision regarding selecting a manual or semi-automated collection could be made by the CoD, or left to the private sector firms proposing the services as part of a Request for Proposal submission.

- The entire curbside collection system should be user-pay. This is also emphasized in the City of Dawson Integrated Community Sustainability Plan, which was developed in partnership with the Tr'ondëk Hwëch'in in 2009, and more recently encouraged by the Yukon Ministerial Committee on Solid Waste in 2018. User-pay can be achieved by funding the program through utility fees and, in the case of a manual system, additional use of stickers for anyone wishing to dispose of garbage over and above the basic container limit. It should be noted that user fees do not necessarily cover the entire cost of the service, and a collection service can be funded by a combination of revenue sources.

- There seems to be a limited pool of private contractors/haulers that can provide collection services (i.e. limited competition), and there are concerns about the cost of the current service. To determine how many private service providers might be interested, the next step is best to include some consultation with the private sector and then a Request for Expressions of Interest (RfEOI) could be developed to confirm how many providers could compete at the Request for Proposal (RfP) stage. To increase competition, the CoD can consider also bidding on the contract.

- In addition to offering curbside collection of garbage and recycling, the CoD could consider a ban at the landfill on materials that are recyclable. The CoD is advised to develop a communications plan in which promotion and education methods for the period prior to program-roll out, around the launch and for long-term are clear and financed adequately.

New Solid Waste Diversion Centre

MH prepared a proposed design and cost estimate for the design of a new Solid Waste Diversion Centre (SWDC) on an industrial property within the municipality. Two main design concepts were initially developed in collaboration with the CKS, the expected final operator of the facility. MH developed a conceptual design and incorporated elements from the two previous conceptual designs.

The conceptual design was prepared with the following objectives:

- Provide additional space for sorting recyclables.
- Provide additional space for public drop-off of recycling.
- Provide infrastructure to allow for processing of recyclables collected curbside.
- Provide space allocation to allow for acceptance and processing of additional materials in the future.

A capital cost estimate was prepared based on various system components outlined in this report. The cost estimate is presented below and is considered a Class D preliminary cost estimate (±50 %).

Class D Capital Cost Estimate for Proposed SWDC

Item #		Item	Unit	Quantity	Unit Price	Total Price
1		**Project Summary**				
	1.01	Mob/Demob	LS	1	$ 50,000	$ 50,000
	1.02	Site Preparation	LS	1	$ 120,000	$ 120,000
	1.03	Surfacing, barriers and signs	LS	1	$ 197,500	$ 197,500
	1.04	Lock-block Wall	LS	1	$ 12,600	$ 12,600
	1.05	Surface water management	LS	1	$ 20,000	$ 20,000
	1.06	Site Buildings	LS	1	$ 550,000	$ 550,000
	1.07	Equipment and Containers	LS	1	$ 196,500	$ 196,500
					Subtotal	**$ 1,146,600**
					40% Construction Contingency	$ 459,000
					Subtotal - Construction Cost	$ 1,606,000
					Engineering - Detailed Design Services (8%)	$ 128,000
					Construction Oversight, Contract Administration (7%)	$ 112,000
					TOTAL - COST	**$ 1,846,000**

The capital cost estimate is suitable for preliminary discussion of the proposed SWDC. MH recommends discussing the proposed conceptual design of the new SWDC with various stakeholders, including YG. This report only considered one concept. The CoD has many options with the new SWDC and the final design can be developed to suit the solid waste management system needs, with consideration of potential budgetary restrictions.

Operating costs have not been estimated due to the limited information about staffing, waste processing at the facility, and waste hauling to and from the facility.

Next Steps

The CoD is proposing many improvements to the existing solid waste management system, and all of them cannot be implemented at once. MH has proposed a road map in this report to guide the sequence of events.

All significant changes to the existing system should be informed throughout the process by stakeholder input and consultation. At first, the CoD will need to develop a communications strategy aimed to consult on proposed changes to level of service and changes to costs. Council must be kept informed of proposed changes, associated costs, and stakeholder feedback, and be part of deciding whether adjustments are needed to the plan. The new solid waste management program will need to include a revised solid waste budget based on proposed changes, and the CoD will need to develop a revised revenue structure based on a combination of taxes, utility fees, tipping fees, etc.

The road map presented below was developed to illustrate the sequence of events. Firstly, the CoD needs to focus on immediate operational improvements that can extend the landfill life. After this, it will be important to prioritize the development of a new solid waste diversion centre (i.e., recycling depot). The new depot will provide a sorting facility that can receive recyclables collected via a curbside collection program. In terms of curbside collection, the CoD should

initially focus on only providing a collection service for garbage and recyclables, and leave the collection of organics until a processing facility that can handle larger quantities of organic waste has been evaluated and established.

Currently it is estimated that only 10% of waste materials are diverted from landfilling. In 2015, the CoD set a diversion target of 34% of the MSW stream by 2023. This appears to still be a realistic and achievable target. With the establishment of a new SWDC (recycling depot) and a curbside collection for recyclables, the CoD is likely to achieve roughly 30% waste diversion. With the implementation of an organics management program the CoD is likely to exceed its diversion target of 34%.

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APPENDICES

APPENDIX A: Sorting Requirements for Recyclables Collected at Recycling Depots

1. BACKGROUND

Currently, municipal solid waste is collected at the curb and taken to the Quigley Landfill. The landfill operates under a Solid Waste Management Plan that expires in 2023. Conservation Klondike Society (CKS) operates two recycling depots: one downtown and the other at the Quigley Landfill. These depots are at or beyond their operational capacity. Municipal solid waste (MSW or garbage) is collected from residents weekly by a private hauler contracted by the City of Dawson (CoD). Industrial, commercial and institutional (ICI) waste is also collected on an as-needed basis. CKS also provides curbside collection of recyclables to approximately 43 households.

There are currently no incentives for any waste generators (i.e. residents, businesses) to reduce the waste that ends up in the landfill. Based on the current design, the local landfill has less than 10 years of landfill capacity remaining. The CoD has set out on the path of first developing a citywide recycling program, which is to consist of curbside collection of recyclables and a new waste diversion centre. Diversion of organics will be considered in the future.

The CoD commissioned Morrison Hershfield (MH) to assess the current solid waste management system and provide guidance for implementing the citywide recycling program.

The key drivers for undertaking this study are the current high collection costs, limited waste diversion programs, remaining landfill life span (only 10 years of landfill capacity remaining), and the desire to build on the partnership with Conservation Klondike Society (CKS).

2. CITY OF DAWSON

This section provides an overview of the population (current and predicted) in the CoD, characterization of the solid waste generated in the CoD, including the composition of the waste stream, the amount disposed in landfill and the amount diverted. This information, along with the system description in Section 3 provides the baseline for the development of the Solid Waste Management Program Design.

2.1 Demographics

The wasteshed for the CoD's solid waste management program is defined as the geographical area contributing waste and recyclables to the Quigley solid waste management facility. It includes the City of Dawson and the Tr'ondëk Hwëch'in First Nations residential areas.

According to 2016 census data, the City's population is 1,375 with 756 dwellings, of which 678 are private dwellings occupied by permanent residents. There are 80 apartments in buildings that have fewer than five storeys, and no apartments with more than 5 storeys. The population density is 42.2 per km^2 and the town covers 32.45 km^2 [1].

The Tr'ondëk Hwëch'in – a Self-Governing Yukon First Nation – is based within the boundaries of the CoD. According to the Tr'ondëk Hwëch'in Citizenship Registrar, the total population of Tr'ondëk Hwëch'in citizens is 1174, with about 320 currently living in Dawson City. Others live in Whitehorse, elsewhere in the Yukon, and outside the Territory[2].

The permanent population of the entire wasteshed (i.e. the area beyond the municipal limits) was estimated at 1,999 in 2013.

Although the permanent population of the wasteshed is 1,999, seasonal influx of people over the summer months due to construction, mining and tourism is estimated to double the population. Assuming the seasonal influx lasts for four months of the year, the annual average population in 2016 was 2,665.

Based on 2016 data, the population is projected to increase, with a compound annual growth rate of approximately 1% in the Yukon, slightly lower than the Canada average of 1.2%[3].

2.2 Current Disposal and Diversion Quantities

2.2.1 Disposal

As there is no weigh scale at the landfill, waste disposal rates were estimated using scale data from the Son of War Eagle Landfill in Whitehorse and the Canadian average waste disposal rate.

[1] https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/index-eng.cfm
[2] As per correspondence with the Tr'ondëk Hwëch'in First Nation, August 2018.
[3] https://www150.statcan.gc.ca/n1/pub/91-215-x/2017000/sec1-eng.htm

Based on City of Whitehorse data from 2006 to 2013, the per capita MSW disposal rate, including industrial, commercial and institutional (ICI) waste and organics, is 1.9 kg/capita/day. The per capita disposal rate for C&D is 0.7 kg/capita/day, resulting in a total disposal rate of 2.6 kg/capita/day. Using the census 2016 population size of 1,375, the ICI and residential sectors of CoD are estimated to generate 1,305 tonnes of MSW and C&D wastes per year.

The Ministerial Committee on Solid Waste estimated an annual tonnage for the CoD based on Canada's average annual municipal waste generation rate of 0.9 tonnes per capita (Bryna Cable, personal communication, June 26, 2018). For the CoD population, this equates to at 1,238 tonnes of MSW per year.

When planning for a curbside collection program for garbage, recyclables and potentially organics, MH estimated the waste quantities coming from residential customers and ICI customers. All MSW is not assumed to be collected as part of curbside collection. Refer to Section 5.1.1 for these estimates.

2.2.2 Diversion

Insufficient data are available to accurately estimate quantities diverted through methods such as the segregation of clean wood and brush, composting, freestore operations, tire recycling, electrical and electronics ("e-waste") collection, and salvaging of metals from major appliances, scrap metals and autobodies.

The CoD currently estimates that 10% of the MSW and the C&D waste stream is currently being diverted from the landfill. The CoD currently lacks the infrastructure or system in place to record or estimate diverted quantities.

2.3 Waste Stream Characterization

Waste audits were conducted by CKS in 2008 and 2009 at the Quigley Landfill. The waste composition of domestic waste is shown in Figure 1.

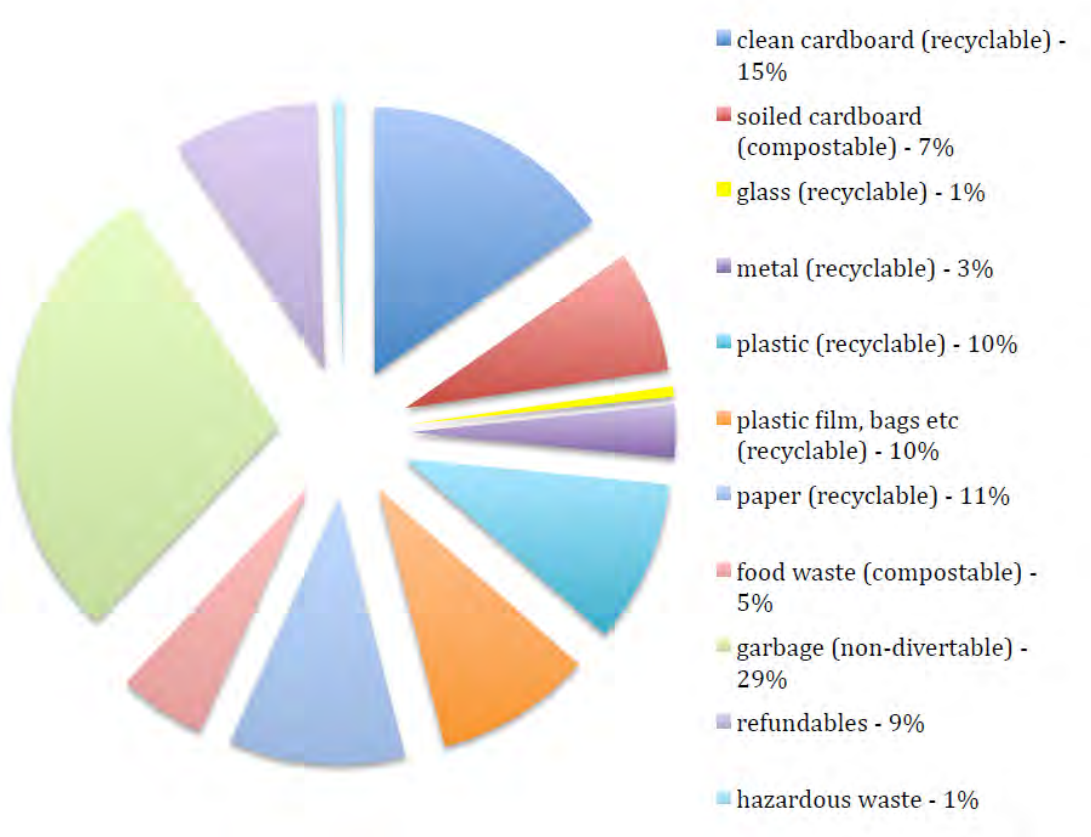


Figure 1 Waste Composition of Domestic Waste at the Quigley Landfill in 2009[4]

Of the domestic waste, 71% of the waste is considered divertible (29% is non-divertible garbage). The large components of the divertible material categories include clean cardboard (15%), paper (11%), plastic packaging (10%) and refundables (9%). Compostable materials made up only 12%. However, typically compostable materials/organics make up to 40% of MSW if organics are not collected at the curb. A waste composition study only represents conditions and characteristics of sampled waste during the time of the audit (i.e. it represents a "snapshot" in time). The composition of waste can change over time (e.g. seasonality), and the waste audit may simply have captured a portion of the waste stream when the organics fraction was low. Another contributing factor to the low organics fraction of the MSW may be due to many households undertaking backyard composting in the CoD.

When CKS audited the C&D waste, the bulk of the waste was found to be lumber and wood products (38%), with cardboard/paper (19%) and plastic and linoleum (18%) being significant contributors as well. It is clear that much of the C&D waste material could be reused.

The City of Whitehorse recently audited its waste stream. Figure 2 shows the waste composition from November 2017, during the winter/low tourism season. This was the first

[4] Quigley Sustainable Landfill Study – Phase II, Aug 2009

sampling event, which is part of a two-season waste composition study during 2017-18. Another sampling event will take place in July 2018 (high tourism season), with results available during fall of 2018.

Residential curbside waste represented 12% of the waste disposed. Figure 2 illustrates the estimated composition of the residential waste stream. As shown, the primary components of the waste stream are: organic waste (39%), plastic and composite materials (11% each), pet waste (9%), personal hygiene (8%), and paper (7%)[5]. The City of Whitehorse offers curbside collection of organics and garbage. Residents self-haul recyclables to a depot or hire private collectors.

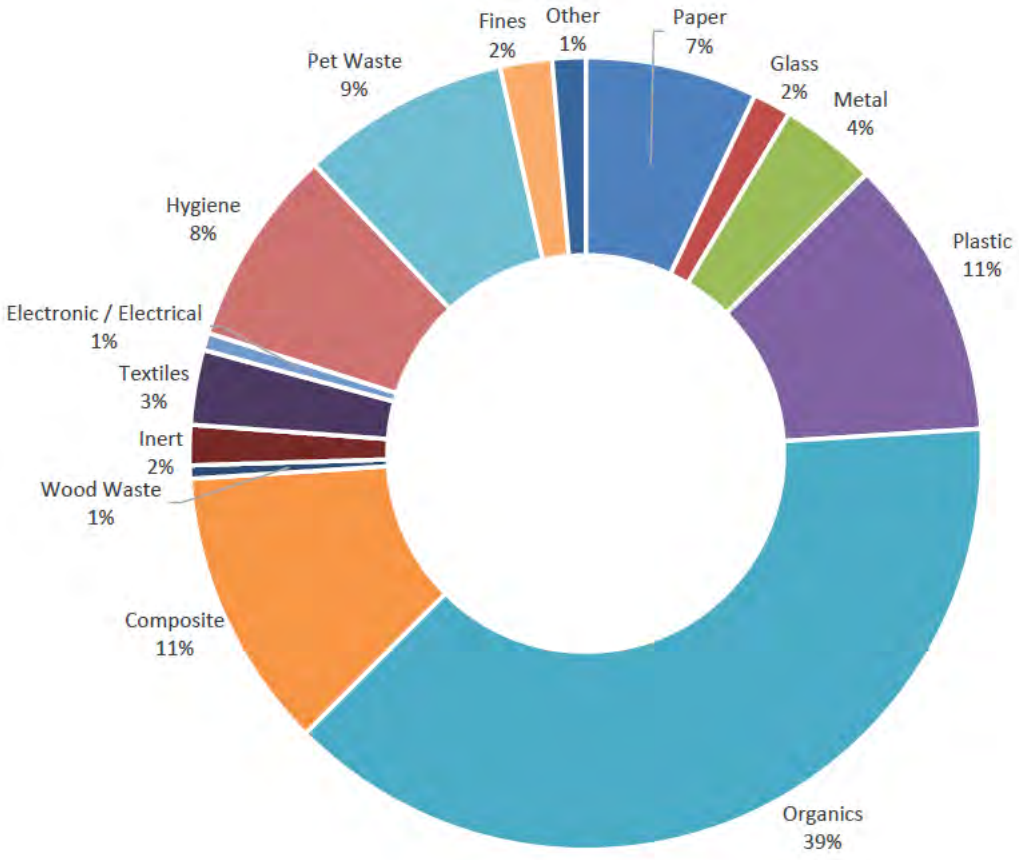


Figure 2: Percent Composition of Residential Waste Landfilled by the City of Whitehorse, Based on Weight (November 2017)

[5] City of Whitehorse 2017-18 Waste Composition Study November 2017, Interim Report by Maura Walker and Associates, January 10, 2017.

3. Existing Solid Waste Management System

3.1 Waste Diversion

3.1.1 Reduction & Reuse Activities

The CoD is currently not actively promoting reduction and reuse activities, however the CKS has some initiatives that target the first 2 Rs (reduce and reuse) of the sequential 5 R pollution prevention hierarchy (reduce, reuse, recycle, recover and residuals management).

At the Quigley Landfill, reusable goods are accepted and stored in the freestore shelter (adjacent to recycling depot). The freestore accepts donated items/clothing in good working order and reuseable construction material that has already been de-nailed and sorted. Bicycles and plastic buckets are stockpiled outside for reuse by the local community.

In 2008, turquoise Dawson City reusable bags were distributed by CKS to reduce the amount of single-use plastic bags used by store customers.

3.1.2 Curbside Collection of Recyclables and Organics

A private curbside collection service for recyclables and organics is available in Dawson. The service is offered by a private contractor. There are currently approximately 40 households signed up for this service at a cost of $20 per month. There is also private collection of cardboard from ICI customers. However, at this time, the majority of cardboard is burned at the Quigley Landfill and not recycled.

CKS offers a commercial paper collection service.

For residents of the Dome subdivision, Dredge Pond Subdivision, the Tr'ondëk Hwëch'in First Nation subdivision and the rec centre, compost bins (individual garbage cans) are provided in each of these areas. The CoD is responsible for the collection of organics twice per week throughout the year. Due to the high level of contamination, the compost product is used for final cover at the landfill.

Organic materials are collected from commercial areas by CKS as needed for a fee.

CKS has a contract through the CoD’s recreational department to rent out recycling bins and place them around town. CKS empties bins weekly and retains the value of the refundables. All recyclable materials are being collected in one stream in those bins. There are 14 bins around town (e.g. at the parks, the community garden, baseball diamonds, skate park, and Victory gardens). Other bins are rented out by CKS for events.

3.1.3 Recycling Activities at the Recycling Depot and Landfill

CKS operates a recycling depot in downtown Dawson at 1067 2nd Avenue, as well as another at the Quigley Landfill. At the CKS depots, residents can drop off their recyclables

and refundables[6]. Table 1 outlines the recycling opportunities offered at each of the CKS depots. CKS has indicated that they are currently operating at or beyond capacity.

Table 1: Recycling Activities at the Depots Downtown and at the Quigley Landfill

Recycling	Downtown	Quigley Landfill
BCR materials (refundables)	x	x
Glass (non-refundables)	x	x
Plastics (e.g. #1, #2, #4 - #7, plastic film	x	x
White paper (e.g. hard mixed paper & office pack)	x	x
Brown paper (Cardboard & Boxboard)	x	x
Metal	x	x
Polystyrene Foam	x	x
Tin	x	x
Tetra Pak®/Wax Cartons	x	x
Household Hazardous Waste (HHW)		x[7]
Tires		x
Used oil		x
Major appliances		x
Compostable organic waste		x
Electronic waste (including cell phones)		x
Batteries[8]		x
Reusable Goods[9]		x

Although cardboard and glass are currently accepted, they are not being recycled. Cardboard is burned at the landfill throughout the year as conditions permit. If there are prolonged dry periods, the cardboard is buried with the C&D waste to prevent a fire hazard. Glass is crushed and disposed of in the landfill. There are currently no reuse options for glass.

HHW collection is currently done once per year. The depot at the Quigley Landfill stockpiles any HHW that is dropped off, but HHW is not commonly accepted as regular practice.

During the summer, the Quigley Landfill is open from Tuesday to Saturday, 12:00 pm to 7:00 pm, and is closed on Sundays, Mondays and Public Holidays. Winter hours are 11:00 am to 6:00 pm.

[6] Material covered under the Beverage Container Regulation (BCR).
[7] Quigley landfill accepts HHW such as asbestos, antifreeze, mercury-containing equipment, paint, used oil, etc. (SWMP 2013-2023).
[8] Alkaline batteries & lead acid.
[9] Reusable goods are salvaged and sold via the reuse store.

3.1.4 Processing of Recyclables

The recyclables collected at the CKS depots are sent to Raven Recycling, where they are consolidated for transport to other material recovery facilities for sorting and processing.

One baler is currently used at the Downtown location. The following materials are received from the CKS depots to Raven Recycling in Whitehorse:

- Materials in mega bags: mixed plastics, polyethylene film, polystyrene foam, tetra (refundable), cans, plastic bottles.
- Materials transported on pallets: glass (refundable), cans, plastic bottles/fibre/aluminum/tin, all in bags on top of pallets.
- Baled materials: cardboard (sometimes). It is unclear which other materials are currently baled.

YG manages the contract for transfer of recyclables from both depots to a local recycling processor in Whitehorse. On a weekly basis, the contractor, Kluane Freightlines, hauls recyclables from the two depots in CoD to Raven Recycling for processing. The hauling of materials is only performed when backhauls are available.

3.1.5 Organics Management

Compostable materials from organics collection bins around the City (Section 3.1.2) and organics accepted from customers at the landfill depot are managed on a concrete slab by the Quigley Landfill.

The organic material is being composted at the landfill. This facility is able to handle compostable food waste (fruit and vegetable trimmings), but is not equipped to handle the full range of food waste (e.g. cooked food and meat). Composting is currently undertaken without a rigid composting process and without any regular testing of product quality.

More work is required to determine the requirements for proper composting and for producing a high quality compost.

3.2 Residual Waste Management

3.2.1 Curbside Collection of Garbage

Curbside collection of garbage is currently undertaken by a private hauler, Ed's Repair. Within municipal boundaries, curbside garbage collection is provided weekly on Wednesdays, Mondays or Fridays. The contractor is servicing residents and small ICI customers at the same time.

Commercial waste is collected by the same private hauler, Ed's Repair, as often as is necessary to keep up with the amount of waste being generated by the businesses. Often, commercial waste is collected six days per week in the summer and three days per week in the winter. Garbage from ICI customers is currently collected in either 6 yd^3 containers or in garbage bags placed in self-made boxes.

For residents of the Dome subdivision, Dredge Pond Subdivision, and Tr'ondëk Hwëch'in First Nation subdivision, 6 yd^3 MSW bins are provided. These bins are sometimes used by residents from elsewhere. The CoD suspects that many of these users are not tax-paying residents.

3.2.2 Operational Waste Disposal Facilities

MSW is not accepted at the downtown depot, and is only accepted at the depot at the Quigley Landfill.

The CoD is operating one waste disposal facility. All MSW from within the CoD is hauled to the Quigley Landfill, which is currently operating under a Solid Waste Management Plan (SWMP) that expires in 2023. Landfilling operations began in 1987.

The landfill currently accepts waste from areas outside their municipal boundaries through separate agreements. The CoD is unable to provide volume estimates of MSW from these areas.

The operating hours of the depot at the landfill are outlined in Section 3.1.3. Specific waste haulers and contractors are granted access to the landfill after operational hours; however, in general, the landfill is only operated during the same hours as the depot. The hours of operation for the facility differ by season and correspond with when the depot is open.

There is no weigh scale on site. No tipping fees are collected for accepting waste or recyclables at the facility. Based on the type of collection and landfilling equipment used, compaction of MSW and C&D waste at the landfill is minimal. Separate landfill cells are maintained for MSW and C&D wastes. With the current design, there is landfill capacity remaining for MSW until the year 2021. For C&D wastes, there is capacity until 2032; however, the Sustainable Landfill Study (Aug 2009), estimated that as of 2008, the C&D waste area may only have 5-6 years remaining in its lifespan. There is a need for an accurate assessment of the remaining landfill capacity. Based on a review of the landfill design and an inspection of the site, there is likely additional capacity that can be gained by revising the final topography plan.

A landfill study conducted in 2008 and 2009, estimated that approximately 66% of the landfill users were residential customers with household waste materials and the second largest user category was ICI at 16% (Quigley Sustainable Landfill Study – Phase II, Jeremy Taylor, Aug 2009).

3.3 Solid Waste Bylaws

The Waste Management Bylaw (#99-06) governs solid waste management activities within the CoD. This bylaw states that all commercial and institutional users must separate cardboard and other recyclables as identified by Council resolution prior to placing them out for pick-up or delivering them to the waste management site.

3.4 Solid Waste Management Budget

Based on the 2017 calendar year, the CoD received revenues from utility fees and YG funding for waste management and groundwater monitoring as follows:

Table 2: 2017 City of Dawson's Solid Waste Management Revenues

Funding Source	Actual	Description
Waste Management Facility Fees	$ 168,833	Further information about the fee structure is included in section 3.2.1.
YG Funding for Waste Management	$ 47,871	Operational funding for the Quigley WMF (for operations and maintenance) of up to $75,000 per year from YG as per the transfer payment agreement (valid until March 31, 2019). The agreement with YG may be revised ahead of March 31, 2019.
YG Funding for Ground Water Monitoring	$ 20,000	
Total	**$ 236,703**	

The YG Funding for waste management is specifically for YGs contribution to cover the additional costs associated with the landfill users that are outside of the municipal boundary but within the wasteshed. It does not fund any portion of the cost of the landfilled waste generated within municipal boundaries.

In the 2017 calendar year, the CoD had total expenses related to waste management of $640,000, of which approximately $330,000 is related to waste collection from residential and commercial customers. There is an obvious shortfall between the revenue and the expenses for solid waste management services.

There is no formal contract set up for the curbside collection of residential or ICI waste by the contractor. It is not possible to break down the cost to collect residential garbage separate from that of ICI. The contractor is currently paid an hourly rate, without any incentives to deliver the service as efficiently as possible.

Structure of Waste Management Facility Fees

The CoD charged the following annual waste collection program fees in 2017:

- Commercial Space $215.00
- Commercial Mobile Refreshment Stands[10] $150.00
- Residential Unit $145.00
- Vacant Institutional Commercial Lot $57.50
- Vacant Non-Institutional Residential Lot $45 00

The vacant lots do not generate any garbage that require collection.

[10] Food trucks receiving the service during the tourist season.

4. LINKAGES WITH OTHER PLANS AND GOALS

4.1 Official Community Plans

The Official Community Plan (OCP) Bylaw is the main policy document for the CoD. It outlines the goals and policies that are used to guide decision making on planning and land use management.

The OCP mentions environmental stewardship and the need to address important local environmental impacts with a long-term goal of minimizing the environmental impacts of municipal regulations, programs, services and projects. The OCP states that the CoD should consider examining methods and approaches to delay the need for a new landfill, such as supporting further recycling and waste diversion programs.

4.2 Integrated Community Sustainability Plan

After the Gold Rush, the Tr'ondëk Hwëch'in and City of Dawson Integrated Community Sustainability Plan (ICSP) was developed in partnership with the Tr'ondëk Hwëch'in and the CoD in 2009. It outlines waste management as one of the sustainability dimensions. The ICSP highlights some aspects of waste management that need improvement. It states, "Initiatives should be introduced to reduce material consumption and associated waste, and raise awareness of solid waste issues. Improved recycling programs and infrastructure would increase the volumes of waste diverted. Better facilities and supervision at the landfill would similarly help reduce the waste deposited at the facility". It identifies the following actions for how these objectives can be achieved:

- Improve facilities at the landfill, including better signage and separation.
- Improve opening hours at the landfill and remove public key access.
- Community promotion of education and initiatives to encourage reduced consumption.
- More local government support and partnerships for local environmental organizations.
- Increase the types of materials that can be recycled.
- Household "blue box" program.
- Public recycling bins, particularly during the tourist season.
- Community composting program.
- Improved downtown recycling depot and drop-off facilities.
- Plastic bag eradication initiative.
- Identify environmentally sustainable alternatives for materials.
- Investigate alternatives to burning waste.
- Research alternatives for recycling waste oil.
- "Polluter/user pays" policy and users paying the full cost for consumption and disposal.
- Lobby governments for greater recycling and waste reduction funding and resources.

4.3 Other Relevant Strategies and Plans

The Minister of Community Services, John Streicker, spoke during the Association of Yukon Communities' annual general meeting on May 11, 2018, about actions towards a sustainable solid waste management system for Yukon. He presented the findings from a report by the Ministerial Committee on Solid Waste on recommendations for actions. Some of these are presented as part of three themes in the Table 3 below, together with potential actions for the CoD.

Table 3: Key Recommendations by Ministerial Committee on Solid Waste Relevant to CoD

Theme	Recommended Initiatives Relevant to CoD	Potential Action for CoD
Regionalization	▪ Develop and implement a solid waste regionalization strategy and framework	▪ Work with YG and other nearby communities to assess synergies to reduce costs
User Pay	▪ Implement Designated Material regulation (DMR) as expediently as possible and explore Extended Producer Responsibility with industry	▪ Plan for the management of increased number of DMR material categories in the development of a new SWDC
	▪ Implement a coordinated communications strategy promoting stewardship programs and practices in Yukon	▪ Collaborate with YG and other municipalities to develop a shared communication strategy
Clear Standards	▪ Establish a Solid Waste Implementation Working Group	▪ Participate in the working group to represent CoD interests
	▪ Implement best practices for waste management facility operations	▪ Ensure that agreed-upon best practices are implemented
	▪ Explore the role of social enterprise, entrepreneurship and local innovation in solid waste management across Yukon	▪ Continue to work closely with CKS and other non-profit organizations to improve current waste management

5. PROGRAM DESIGN DEVELOPMENT OPTIONS

5.1 Curbside Collection Service

There are many considerations for developing a curbside collection program. Key aspects are which waste materials to collect: garbage, recyclables, and organics. The types collected will determine the collection frequency.

For recyclables, decisions need to be made as to which recyclable materials should be included and how these are best collected, either through a commingled collection in larger receptacles or via dual/multi streams that require the residents to sort the materials more.

The service can be provided to single-family dwellings only, or it can also include multifamily (MF) buildings and ICI buildings. For example municipalities often choose to provide services to MF buildings with less than 4 units and to ICI if these can be serviced at curb.

Decisions related to these considerations will inform the collection truck requirements and service costs.

5.1.1 Quantity of Garbage, Organics and Recyclables to Collect

Potential Customers to Service

The primary objective for the CoD is to provide curbside collection service to all of the residential units within City boundaries that are currently being serviced by garbage collection only. An extended curbside collection service for garbage, recyclables and potentially organics must service at least 537 units (currently serviced). For residents of the Dome subdivision, Dredge Pond Subdivision, and Tr'ondëk Hwëch'in First Nation subdivision, where 6 yd^3 MSW bins are provided, we assumed that each of these residential units will be serviced individually. This approach will eliminate the opportunity for outside residents to misuse the central 6 yd^3 containers. A service needs to also account for population growth.

The current garbage collection service also services 260 commercial units and four seasonal food trucks. This section will assess the suitable options and costs for curbside collection for residential and ICI customers.

Table 4: Potential Customers to Service

Customer Type	Number to Service
Residential Unit	537[11]
Commercial Space	260
Commercial Mobile Refreshment Stands (food trucks receiving the service during the tourist season)	4 (seasonal)

[11] Includes 80 units located in MF buildings.

Quantities to Collect from Residential Units

There is no information on the amount of recyclables currently diverted by the collection bins for recyclables provided within the City. In order to estimate the quantity of recyclables that could be collected, the CoD's waste composition results from 2009 and a typical garbage set-out rate with no collection of recyclables were used. MH worked with the City of Terrace and the Regional District of Kitimat-Stikine for the planning of a curbside collection service for garbage and recycling in 2013. Based on numbers from other places, the CoD is likely to have a garbage set-out rate of approximately 15.0 kg/household. This waste generation rate will provide a suitably conservative estimate on which to base the preliminary design of the new curbside collection system.

Garbage set-out rates from City of Whitehorse and their recent waste composition results cannot be directly applied to City of Dawson, since Whitehorse has offered an organics curbside collection for residents for many years and there is wide uptake of recycling through private collection and drop-off at depots.

Experience in other jurisdictions indicates that not all recyclables will be successfully captured. It is reasonable to assume that at the beginning of the program, 70% of households will participate, and those households will successfully divert 70% of their recyclables and organics, yielding an overall recovery rate of 49% of the recyclables and organics respectively. The participation and capture rates may increase over time. Well-established recycling programs can have participation rates of over 95% and capture rates of over 90%.

Table 5 summarizes the potential quantities of the three waste streams: garbage, recyclables and organics.

Table 5: Potential Quantities of Garbage, Recyclables and Organics to Collect from Residents

Waste Stream	Tonnes to Collect per Year	Tonnes to Collect per Week
Garbage	284	5.1
Total recyclables	110	2.1
Recyclable fibres	53	1.0
Recyclable plastic and metal containers[12]	56	1.1
Organics	25	0.5

In BC, Recycle BC is the stewardship organization responsible for the Extended Producer Responsibility (EPR) program, which was launched in BC in 2014. Prior to the launch, they collected data on collection quantities and costs from over twenty local governments.

[12] Assuming half of refundable containers currently found in the garbage would be collected at the curb.

The estimate of recyclables to collect per serviced household of 0.20 tonnes per household per year is within the range of collection rates reported by Recycle BC. In BC, the rates ranged from 0.05 to 0.27 tonnes per household with a mean of 0.18 tonnes and a median of 0.19 tonnes per household.

When estimating the set-out rates for organics, based on waste composition and garbage set-out rates, each household is only assumed to generate approximately 1 kg of organic waste for collection per week (in total 0.5 tonnes to collect per week).

The City of Whitehorse provides a curbside collection for organic waste. The collection covers all food and yard waste free of packaging, food soiled cardboard (i.e., pizza boxes), paper towel, and newspaper used as compost bin liners. When applying the organics set-out rate per household recorded by the City of Whitehorse (5.3 kg per week per household), it yields an annual generation estimate of 148 tonnes organic waste or 2.8 tonnes per week. This rate is only likely to be achieved after several years of successful operation, and it would be reasonable to expect the initial capture rate to be modest (1 kg/week). The curbside collection must be able to handle increasing tonnages of organic waste as the program develops.

Quantities to Collect from Commercial Customers (ICI)

The quantities to collect from commercial customers depend on the types of businesses and institutions operating in the City. It is difficult to simply apply waste generation rates from other regions of Canada, as the make-up of the ICI sector greatly varies. The CoD is currently collecting ICI waste, but does not have any data as to quantities collected. Table 6 provides a summary of the estimated maximum tonnages of materials (garbage, recyclables and organics) available to collect from the ICI sector at the curb.

In 2014, MH was involved in estimating waste disposal rates for southeast Yukon communities as part of a Southeast Yukon Recycling Circuit Study for the Yukon Government (YG). The study resulted in an estimated combined disposal rate for the communities outside Whitehorse of 781 kg/cap/yr. This disposal rate includes residential and ICI quantities, but excludes construction and demolition waste quantities.

For the City of Dawson and its permanent population of 1,375, this equates to 1,074 tonnes, of which an estimated 284 tonnes is likely to be collected from residents. The remaining 789 tonnes (or 15 tonnes per week) can either be available for collection from ICI or from residents self-hauling MSW to the landfill. CoD's population almost doubles during the summer months and will increase ICI waste quantities, rather than the residential curbside collection quantities. Table 6 includes the estimated peak quantities to collect from ICI customers during the summer months. It is unlikely that all of this MSW will be available for curbside collection from the ICI sector; however, this waste disposal rate will be used as a conservative estimate.

In 2012, the Regional District of Nanaimo (RDN) reported 38,717 tonnes of recyclable materials from all sectors (ICI and residential), based on data acquired through waste facility licencing requirements. This represents approximately 0.26 tonnes per capita per year. If this is applied to the City of Dawson's population (1,375 according to 2016 census data), this would equate to 358 tonnes of recyclables per year. If the estimated

tonnages of residential recyclables are deducted (110 tonnes as shown in the table above), the ICI sector is likely to generate a total of 248 tonnes of recyclables (or typically 4.8 tonnes per week). This estimate is likely to be applicable after a few years of program implementation. The RDN already had a well-established waste diversion program with a disposal ban on recyclables when the quantities of recyclables were reported.

The annual capture rates for organic waste from the ICI sector can be expressed per capita. The Comox Valley Regional District (CVRD) in BC has estimated a capture rate from the ICI sector equivalent to 18 kg/capita/year and the Abbotsford transfer station has recorded a capture rate of 31 kg/capita/ year. For the Dawson population, the capture rate in the CVRD is applicable where organics disposal bans have not been enforced yet. The ICI sector is likely to generate approximately 25 tonnes organic waste per year available for collection (the same estimated quantity as from the residential customers).

Table 6: Potential Quantities of Garbage, Recyclables and Organics to Collect from ICI Customers

Waste Stream	Tonnes to Collect per Year	Tonnes to Collect per Week	Peak tonnes to collect per week (summer months)
Garbage	789	15	30
Total recycling	248	4.8	10
Organics	25	0.5	1

Combined Quantities to Collect from Residential and Commercial Customers

The combined annual quantities of garbage, recyclables and organics to collect from both residential and ICI customers are summarized in Table 7 below.

Table 7: Combined Quantities of Garbage, Recyclables and Organics to Collect from ICI and Residential Customers Annually

Waste Stream	Tonnes to collect from residents	Tonnes to collect from ICI	Combined Quantities
Garbage	284	789	1,074
Total recycling	110	248	358
Organics	25	25	49
TOTAL	**419**	**1,062**	**1,481**

5.1.2 Collection Frequency

Most jurisdictions, particularly those that do not offer separate collection of organics waste (food scraps), collect garbage every week. This is the case in the CoD.

If organics are not separated at source (i.e. the household or business), weekly collection is considered appropriate, as the waste contains kitchen scraps and the mixed waste can become odourous when stored for longer than a week. If the CoD is wanting to offer a comprehensive organic waste collection that includes all food scraps, the frequency of

garbage collection can be reduced to biweekly. If only yard waste is collected, the CoD may want to consider only seasonal collection of yard waste.

As recyclables are not putrescible and do not generate odours, they do not require weekly collection. A biweekly collection may be sufficient for residents. If organic waste is collected on a weekly basis, the CoD may want to offer an alternate week curbside collection for recyclables and garbage.

5.1.3 Collection Truck Types for the Residential Quantities

The collection of garbage from residents is likely to require a different truck than what is needed to collect garbage from ICI customers.

For the residential collection of waste materials, the CoD must decide whether it prefers to implement manual, semi-automated or automated collection. Each option has strengths and weaknesses that must be considered.

Figure 3: Manual Garbage Collection (London ON)

Manual collection has been the industry standard for many years. Vehicles are typically operated by a 1 to 3-person crew, with one that drives while the other(s) collect the waste and lift it into the truck. Access can be via a rear-loading or side- loading compartment. Side-loading compartments are now more common in residential applications, as the lift height can be lower. With a manual system, residents provide their own garbage can, which is usually required to meet certain specifications with respect to volume and weight limits. Manual collection trucks cost in the order of $250,000 to $350,000.

Figure 4: Manual Garbage Collection (Edmonton, AB)

Work Safe BC is not in favour of using single-operator manual trucks. For the CoD, it is reasonable to assume that two operators are needed for one manual truck: one for driving and one for collecting waste.

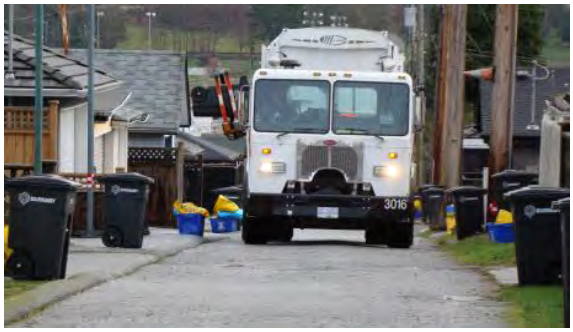


Figure 5: Typical Automated Collection (Burnaby, BC)

Automated collection uses an articulated arm to reach out and grab a standardized garbage cart (Figure 5 and Figure 6).

Automated collection vehicles can be operated by a single person who remains in the cab at all times, operating the arm via a joystick. Fully automated systems work well in areas with good access to the garbage carts. Areas with narrow streets, on-street parking, street trees, or those that experience significant quantities of snow are less well served by automated collection. Fully automated systems are more commonly used in cities with laneways (such as Vancouver), or in cities where most households have driveways (such as Prince George). The cost of an automated vehicle is higher than a manual collection vehicle, due to the incremental cost of the arm. However, the increased speed means more households can be serviced in a single day. The capital cost of the standardized carts required can be a barrier to introducing automated collection. The standardized containers are usually purchased and provided by the local government and remain with the property when an owner/occupant leaves.

Figure 6: Typical Automated Collection (Prince George, BC)

Figure 7: Semi-automated Collection (View Royal, BC)

Semi-automated collection (Figure 7) provides the flexibility of manual collection of recyclables, but reduces the health and safety risks associated with lifting garbage containers from the ground. The truck performs this by a hydraulic lift. This method is similar to manual collection and usually involves the use of standardized collection containers that are compatible with the lift.

Figure 9 shows a collection truck with the option to split the body to manually collect separate streams (e.g. recyclables) or to collect waste streams via carts through a semi-automated system. The M-Class truck is a side-load collection truck available in capacities of 14 to 22 yd^3. The unit can pick up any combination of garbage, recyclables and organics. The truck body can be mounted on a hook-lift frame so the chassis can collect roll-off bins. When a single axle chassis is selected (for sizes of 14 to 16 yd^3) the operator does not require a commercial driver's license. Dual steering can be provided to eliminate the need for two operators.

Figure 8: Semi-automated Collection M-Class Truck

We recommend the use of manual or semi-automated collection for collecting garbage in the CoD. While other jurisdictions have shown that fully automated collection can work in rural areas with snowy winters (e.g. Regional District of Central Okanagan), we believe that fully automated collection is not necessary in the CoD. The additional capital costs associated with the mechanized arm and the higher maintenance requirements make this option less attractive for a service area of only 537 homes. It would be necessary to have a back-up vehicle that would also be capable of doing automated collection, and this represents a significant amount of capital resources that would not be fully utilized.

While semi-automated collection also has some additional costs (i.e. the purchase of standardized carts), the incremental cost for the trucks is substantially lower than a fully automated truck. Existing trucks can be retrofitted with lifts, providing more flexibility in terms of securing primary and back-up collection vehicles. Semi-automated collection offers the potential for increased efficiency and definite improvements to worker health and safety, which should not be overlooked when comparing it to manual collection.

The collection of recycling can be performed differently than the collection of garbage. Manual collection of recyclables is sometimes undertaken when automated or semi-automated collection of garbage is introduced. This is partly because recycling tends to be lighter than garbage, and there are fewer health and safety issues associated with lifting recycling into the truck. Another reason to undertake manual collection is to maintain the ability to collect multiple streams of recyclables (e.g. newsprint, other paper products and containers).

Figure 9. Semi-automated Collection Truck with a Split Compartment (Toronto, ON)

The main advantages of switching to automated or semi-automated recycling collection are potential consistency with the garbage collection system, the potential to use split compartment collection trucks (Figure 8) to collect garbage and recyclables (as commingled) at the same time, and the increased volume of the containers used by residents compared to standard blue boxes (which may increase the capture rate). Refer to Section 5.1.5 for more information about collection containers. However, choosing the appropriate split between compartments may be challenging. If residents of a particular route divert more of one waste stream than other routes, that side of the split truck will fill up faster and may need to be emptied before the other part of the truck is full. Changes in diversion rates over time or the addition of recyclable items to the collection program can have an impact on split requirement of the container.

Trucks used for collection of residential organics and recyclables can be the same as those used for garbage pick-up, as long as the trucks are cleaned between uses. It is important to not contaminate the organics and recyclables.

5.1.3.1 Truck Size Requirements

Garbage Collection

Based on an 8-hour work day (480 minutes available time), approximately 350 minutes was assumed to be available for manual collection (excluding time for breaks, clean-up and to get to landfill/depot). Typical collection times in suburban neighbourhoods with manual collection are in the order of 0.7 min (42 seconds) per household. On this basis, a single manual truck can be expected to service approximately 560 households per day. The City of Whitehorse has reported performing approximately 700 lifts per day per truck.

The number of households in the CoD (currently 537 residential units being serviced) is within the number that can be serviced by a single truck in a single day. However, it is best to plan for collection that also allows for population growth or the addition of ICI buildings, if these can be serviced at curb.

The estimated garbage disposal rate from each household is approximately 10 kg per household per week if recyclables are also collected at the curb and approximately 11 kg per household per week if recyclables and organic waste are also collected at the curb. With these disposal rates and the typical compaction ratios for collection vehicles, a truck servicing 560 dwellings would require a minimum capacity of 16.5 yd^3. To provide sufficient flexibility, we recommend a truck size of at least 18 yd^3 be used for garbage collection using a manual collection truck.

If a multi-purpose semi-automated truck with a 16 yd^3 capacity is used for the collection of garbage (e.g., M-class truck, which does not require a commercial driver's license), it can service approximately 200 households before it needs to dump its load at the landfill. It should still be possible to cover all of the residential units currently serviced within one working day. The main benefit of the semi-automated truck is that it only needs one operator, compared to two operators needed to safely operate a manual collection truck.

We recommend the use of two trucks, with one as a contingency vehicle for those times when the primary truck is out of service, waste volumes are higher than predicted, or when weather and road conditions slow collection activity.

Recyclables

For recyclables, a weekly collection service would require a truck capacity of at least 16.5 yd^3 to service 560 households in a day, if all materials were commingled.

For this study, we assumed that recyclables are collected as two separate streams: fibres (paper, cardboard and boxboard), and mixed containers (plastics and metal). Glass is assumed to only be collected at depots.

Weekly collection of recyclable fibres and mixed containers separately will require truck capacities of 5 yd^3 and 11 yd^3, respectively. Biweekly collection would require a truck capacity of over 22 yd^3 for mixed containers, which may be a larger size of collection vehicle than the City wants to use for other waste streams (garbage and organics).

As mentioned above, two trucks are recommended at a capacity of at least 18 yd^3 each, since this capacity is needed for the garbage collection. The additional truck can be used for weekly collection of the second stream of recyclables.

A smaller collection truck (at a capacity of 16 yd^3), such as an M-class truck with a split compartment for fibres and mixed containers, can also be used. However, two collection days would be required to cover all households with one truck. If two trucks are used, each one can cover the two streams of recyclables (fibres and mixed containers) in one working day.

Organics

Organic waste can be collected with any of the truck sizes that work for garbage and recyclable collection. There is no concern about capacity issues, since the capture rates per households are likely to be modest.

5.1.4 Collection Truck Types for the Commercial Quantities

Garbage from ICI customers is currently collected either via 6 yd^3 bins or garbage bags. Often commercial waste is collected six days per week in the summer and three days per week in the winter.

Front-end loading trucks (Figure 10) currently used by the waste hauler in Dawson can typically collect bins at capacities of 3, 4, and 6 yd^3. These collection trucks are different than the ones used for collecting residential waste quantities at the curb.

Figure 10: Front-end Loading Truck

Truck Size Requirements

As a conservative estimate, 15 tonnes of garbage will be available to collect from ICI customers each week (assuming no collection of organics is provided at the curb). Currently, 264 commercial customers are serviced, which equates to 0.5 tonnes per customer per week. The average volume per customer equates to only 0.5 yd^3, which means a total of 133 yd^3 of uncompacted garbage will be available to collect.

Depending on the business size and type of organization, the quantities will vary greatly. When the population base doubles during the summer months, the waste quantities will also peak and a service will need to cater for this increase. The garbage quantities can reach an estimated 1 tonne per week.

ICI customers can be offered several options, and the preferred option can be made the default. Carts can be serviced by a semi-automated truck used for residential collection, but these will be too heavy for manual collection. Bins at capacities of 3, 4, and 6 yd^3 will require a front-end loading truck.

It is difficult to determine the type of truck needed and the number of lifts required until there is more information on the current waste collected and the types of ICI customers

to service. The collection of waste and recyclables for these customers can be fully left to the private sector to manage. If the CoD wants to continue to service the ICI customers, they can either choose to service them with the residential collection truck or have a separate front-end loading truck dedicated to ICI customers. A dedicated truck for larger volumes may need less frequent collection. The benefits and disadvantages with a City-managed curbside collection program collection is included in 5.1.7.

With the use of an M-class truck, ICI waste can be collected via a semi-automated system for carts. For larger volumes using larger containers, a front-loading system would be required.

5.1.5 Collection Containers for Residents

If a manual garbage collection system is chosen, the CoD will not supply collection containers to residents. The CoD can set requirements for the containers purchased and maintained by residents. Any containers that do not meet the requirements may not be collected. The CoD should work with local retailers to ensure that suitable containers are available for purchase.

The requirements for resident-owned garbage containers should address the number, size and weight of the collection containers. Based on WorkSafe BC standards, it is recommended that the maximum weight of a container be less than 20 kg (44 lbs). It is also advantageous to workers to limit the size of container; a typical restriction is 80 litres. It is also standard to limit the number of containers allowed to be placed at the curb.

In addition to size and weight restrictions, the CoD may also wish to implement additional requirements to limit wildlife attraction, such as requiring garbage to be enclosed in containers with animal-resistant lids (requirements may also specify that lids be able to be removed completely and that residents unlatch lids in the morning of garbage collection). Many jurisdictions have a bylaw that requires residents not to set out their garbage before 7:00 am the day of collection.

For manual recycling collection, the CoD could supply standardized containers or could set requirements for the containers to be purchased and maintained by residents. It is recommended the CoD purchase and supply a recycling container to each household. This will distinguish recycling from the garbage, create more awareness and excitement about the program, and increase participation. Specifying container requirements is not likely to be as effective in addressing wildlife attraction issues compared to providing an approved wildlife resistant container to each resident.

Many municipalities across Canada provide Bluebox Containers (typically approximately 50 litre volume), in which households can place commingled or source-separated recyclables. If source separation is required, each household usually has extra bags for fibres (sometimes broken into newspaper vs cardboard), or they are provided with an additional container (e.g. grey box for other materials such as glass or fibres). Processors that receive source-separated recyclables are likely to achieve a higher operational efficiency and lower processing costs compared to when commingled recyclables are collected.

Figure 11: Common Curbside Collection Containers for Recyclables

If a semi-automated garbage collection system is chosen, the CoD would need to provide standardized collection containers for garbage to residents. Containers are best to remain the property of the CoD, and would be registered to each property receiving the service rather than to the property owner. If the owner moves, the container remains with the residential unit. No weight restriction is required in a semi-automated system, as no manual lifting takes place during collection. Containers typically cost $65-$100, depending on size and number ordered. Bear-proof containers cost approximately $200-$350, depending on the sophistication of the system. The most expensive containers have automated latch systems.

The CoD can offer a range of container sizes for garbage to meet the needs of different households. The estimated weekly volume of garbage and recyclables is approximately 74 litres and 22 litres, respectively. The provision of varying sizes can allow the CoD to implement a user-pay system, whereby a household needing a larger container pays a higher annual fee, reflecting their increased use of the system. While some jurisdictions offer as many as five sizes of cart, we have observed that the majority of local governments offer three sizes (see example shown in Figure 12). Three typical sizes that may suit the CoD are:

- Small: 80 litres (reduced fee)
- Standard: 120 litres (default fee)
- Large: 240 or 360 litres (additional fee)

Figure 12: Three Typical Cart Sizes Used for Semi-Automated Curbside Collection (Vancouver, BC)

For semi-automated collection of garbage, 120, 240 or 360 litre carts are typically provided to all residents. It is not typical to offer multiple sizes of recycling carts. The provision of a single large cart would only allow for commingled collection of recyclables.

Alternatively, recyclables from residents can be collected manually using bluebox containers for mixed containers and separate bags for fibres. This can be done on either a weekly or a biweekly basis. If a biweekly service is selected, the selected container must provide sufficient volume (the average volume of mixed containers will be approximately 40 litres per household every two weeks). If recyclables are comingled, the anticipated volume is approximately 50 litres every two weeks.

5.1.6 Collection Containers for ICI Customers

Waste materials (garbage, recyclables and organics) can be collected from the ICI customers at the curb if there are small quantities that can be collected as part of the residential collection.

Examples of container options for garbage include:

- One cart at a volume of 240 litres (by default), or
- One 3 yd^3 front-end load container.

For larger quantities, ICI customers can be allowed to place several carts at the curb or use larger collection bins (3, 4, and 6 yd^3) at a higher fee. Customers that share a bin can be provided a discount as incentive to save space and reduce waste.

For small quantities of recyclables, ICI customers may want to use carts that can be serviced by a semi-automated curbside collection. Recyclables in some areas are collected from ICI in split bins, in which three types of recyclables can be collected (Figure 13). These collection bins come in capacities ranging from 4 to 14 yd^3.

For ICI customers with large quantities of recyclables, ICI can be serviced by a 20 or 30 yd^3 roll-off for wood waste, metal, or plastics. These large roll-off bins dedicated to source-separated materials are probably not suitable options in the Dawson context. ICI customers are best to contract privately for this type of large-scale pickup.

Figure 13: Split Bin Options for Recyclables

The City of Whitehorse has been offering a voluntary organics collection program for ICI customers since 2014 using small volume carts. Since this program is now at capacity, they are also offering large volume dumpster-based collection of organic waste (2 or 3 yd^3)[13]. The CoD may want to look at similar options and correspond with the City of Whitehorse on key learnings.

5.1.7 Procurement Considerations

The CoD can either provide curbside collection as an in-house delivered service or contract it out to private contractors. There are numerous pros and cons of a City-managed curbside collection program (i.e. a program delivered in-house), as outlined in the Table below.

Table 8: Advantages and Disadvantages of providing a City-managed curbside collection program

Advantages	Disadvantages
▪ More robust monitoring and enforcement of bylaws ▪ Greater flexibility to increase the number of customers receiving service in the future ▪ Better coordination of waste collection with public education and outreach initiatives, which may result in greater potential for customer participation in diversion programs as well as customer satisfaction ▪ Greater flexibility to modify services in the future ▪ Improved coordination between the collection from residential, multi-family, and ICI customers	▪ High initial capital investment to cover equipment costs ▪ Additional staff required – greater risk due to labour market conditions and availability ▪ Greater risk to changing waste stream tonnages and composition ▪ Exposure to greater liability through additional high risk operations ▪ Safety considerations and risks associated with collection ▪ Greater competition with private sector and potential complaints or conflicts

[13] http://www.whitehorse.ca/departments/environmental-sustainability/waste-diversion/additional-information/ici-organic-collection

Advantages	Disadvantages
▪ Potentially better opportunities to track safety data and more confidence in reporting of safety data ▪ Better coordination of waste transfer between transfer stations and processing facilities ▪ Greater control over quality of waste material entering facilities achieved through enforcement at the curb, including recyclables and organics	▪ Potential for higher operating/annual costs (staffing, maintenance, etc.) ▪ Potential for higher administrative, management, coordination costs compared to current contracted delivery model due to additional staff and resources managed

If contracted out, the CoD needs to consider the ability for the contractor to collect the materials. If a contractor has to invest in new trucks, the contract length needs to allow the contractor to amortize the cost of new trucks. It is difficult to determine the cost of contracting out garbage and recyclables collection without determining a market response to a request for proposals (RFP).

The following considerations should be taken into account when developing the RFP for curbside collection services:

- The length of a curbside garbage collection contract should be dependent on the level of service prescribed. Since manual collection has lower up-front costs, a shorter contract term (5 years) should result in an acceptable price. Semi-automated collection requires more expensive equipment; therefore, a longer contract term (8-10 years) will result in a more competitive price. A successful contractor may require six months' lead time from contract award date to purchase specialized equipment. However, if the CoD will accept the use of used equipment that meets performance standards, then the lead time can be reduced.
- All CoD households should be included in the same contract. The population base is not large enough to require multiple contracts. The service for ICI buildings should be separated into its own contract, since different trucks may be required.
- A more prescriptive RFP will yield submissions that are more directly comparable, but may also stifle creativity and the development of local solutions.
- The criteria against which the submissions are evaluated should be clearly defined (e.g. minimum performance standards for collection trucks).
- When manual collection is proposed, enforcement of weight restrictions should be the responsibility of the contractor.
- Receiving and managing complaints arising from the curbside collection should be the responsibility of the contractor.
- Paying of all applicable tipping fees should be the responsibility of the contractor.
- The CoD should have the right to final approval of the proposed route and timing.

We recommend that if the service is contracted out, the promotion and education related to the curbside collection of both garbage and recycling should be the responsibility of the CoD.

There seems to be a limited pool of private contractors/haulers that can provide collection services (i.e. limited competition), and there are concerns about the cost of the current service. One option for increasing competition and making sure costs are reasonable would be to put out a competitive tender and allow the CoD to also bid. To determine how many private service providers might be interested, some consultation with the private sector could be undertaken and then a Request for Expressions of Interest (RFEOI) could be developed to confirm how many providers could compete at the RFP stage.

5.1.8 Estimated Curbside Collection Costs to Households

There are two cost elements for the collection of recyclables: the costs for collection and the costs for processing materials. Processing costs add to the overall cost for recycling in the Yukon, due to the distance from markets as compared to other jurisdictions. The cost to collect recyclables will depend on the collection frequency and the number of streams the CoD chooses to collect.

There are many different ways that the CoD can provide curbside collection of garbage and recyclables to its residents. Two feasible collection options are described below and the estimated costs are described in Table 9.

Option 1: Manual Collection

- Collect garbage in containers purchased and maintained by residents (self-provided and not standardized), with one bluebox provided for mixed containers and reusable plastic bags provided for fibres.
- Collect via manual trucks (two trucks needed) at a capacity of 18 yd^3. Two operators would be needed per truck to operate safely.
- Garbage from all residential units can be covered in one day and two trucks can cover all the units in one day to collect the source-separated recyclables.
- Weekly collection of garbage and recyclables.

Option 2: Semi-Automated Collection

- Collect garbage in a wildlife-proof wheeled cart with one bluebox provided for mixed containers and reusable plastic bags provided for fibres.
- Collect via semi-automated trucks (two trucks needed) at a capacity of 16yd^3. One operator is only needed per truck.
- Garbage is collected in wheeled carts using the semi-automated truck arm, while with two streams of recyclables are collected manually using two trucks.
- All residential units can be covered in one day and two trucks can cover all the units in one day to collect the source-separated recyclables.
- Weekly collection of garbage and recyclables.

Table 9 presents the initial cost estimates for two of the main curbside collection options for garbage and recyclables: manual collection versus and semi-automated collection. Curbside

collection for garbage and recyclables is estimated to cost between $815 and $900 per household per year (or a monthly cost of approximately $70 - $80 per household).

Table 9: Cost Estimates for Two Options for Curbside Collection of Garbage and Recyclables

	OPTION 1 Weekly Collection of Garbage and Recyclables (manual)	OPTION 2 Weekly Collection of Garbage and Recyclables (semi-automated)
Collection Containers	$15,841	$123,241
Collection Vehicles (Annual costs of equipment, maintenance and insurance)	$251,280	$159,600
Operational Collection Costs (labour and fuel)	$137,099	$77,195
Processing of Recyclables (excluding amalgamation costs)	$77,792	$77,792
Total Costs	$482,012	$437,828
Cost per HH	$898	$815

Labour costs for the amalgamation of recyclables (sorting and baling) prior to haulage to the processor in Whitehorse were not included as the costs are largely dependent on the sorting equipment selected at the SWDC, and staffing levels. These costs are unlikely to increase overall costs significantly.

The cost estimates in Table 9 do not include the transportation costs of recyclables to a processor in Whitehorse, as these are costs are covered by YG. The transportation cost for the recyclable materials captured by the residential curbside collection are estimated at approximately $85,000. However, the increased use of balers in the new SWDC is expected to significantly decrease the cost for transportation of recyclables from CoD to Whitehorse.

5.1.9 Estimated Curbside Collection Costs to ICI customers

The following costs were gathered through hauler surveys and interviews conducted by MH (both locally and in BC's lower mainland) in 2016. The costs are assumed to include processing costs of recyclables. The costs from 2016 have been adjusted to account for historic inflation in Canada. The potential collection costs for haulers in Dawson depends on the available trucks and local processing costs. The information below simply provides cost estimates for possible service options. Sometimes customers also pay rental costs for the use of the containers.

Table 10: Typical Cost of ICI Collection Services per Haul for Lower Mainland BC and Whitehorse

Min. Size of Collection Containers	Frequency	Typical Cost of Service per haul Lower Mainland BC	Whitehorse Hauler Cost per haul
1 – cart	Weekly	$6	n/a
2 – carts	Weekly	$11	n/a
1 - 3 yd^3	Weekly	$18	$21
1 - 4 yd^3	Weekly	$18	$26
1 - 6 yd^3	Weekly	$18	$36

Min. Size of Collection Containers	Frequency	Typical Cost of Service per haul Lower Mainland BC	Whitehorse Hauler Cost per haul
1 – 3 yd^3 & 1 cart	Weekly	$24	n/a
1 – 6 yd^3 & 1 cart	Weekly	$24	n/a
1 - 6 yd^3 & 2 carts	Weekly	$29	n/a
14 yd^3 split bin (3 types of recycling)	Weekly	$0	$142
20 or 30 yd^3 roll-off (for e.g. wood waste, metal, or plastics)	On call	$155	$155

Assuming that each ICI customer (267 customers) will be provided a 3 yd^3 bin for weekly garbage collection using a front-end loading truck, the annual waste collection program fees will equate to $1,092 per customer (or $292,000 in total). In reality, not all customers will need that much capacity; many may want to opt into the residential curbside recycling or share a collection bin with adjacent businesses.

If ICI customers can be serviced by the provision of carts, which may be suitable for recyclables, the costs are likely to be half of those of front-end loaded bins. Garbage collected via carts would require semi or fully automated trucks.

5.1.10 Considerations of Processing Costs of Recyclables

It is assumed that all collected recyclables will be delivered to the new SWDC. At this point, it is very difficult to estimate costs per tonne of material processed. These will be dependent on the number of recyclables streams the CoD wants to collect, the market conditions for the collected materials and how much the processor will be paid as diversion credits per tonne of non-refundable recycling shipped to end market. Currently markets are down for many recyclable materials since the largest recycling market, China, is only accepting clean and source-separated recyclables.

There are two recycling processors in Whitehorse that are subsidized by the diversion credits: Raven Recycling and P&M. The processors are paid $150/tonne to offset the high cost of processing recyclables and shipping to markets. However, both processors have indicated there is insufficient revenue to continue recycling the products currently being recycled. YG has been considering other funding options, but there is no indication how the processing costs will be covered in future.

The cost estimates developed for the City of Whitehorse for the residential curbside collection of recyclables included processing costs (refer to Section 5.1.8).

5.1.11 Potential Funding

Table 11 below provides a comparison of the waste management fees for curbside collection based on a jurisdictional review of other municipalities in the Yukon. It shows that only Whitehorse and Faro offer residential curbside collection at lower user fees than CoD, and that CoD's commercial collection fee is the lowest of all jurisdictions. In fact, the City of Whitehorse's fee includes the collection of garbage and organic waste.

We suggest the CoD consider increasing collection fees for both residents and commercial customers. However, it is important to note that many jurisdictions use a combination of user fees and taxes. The CoD only charges residential and ICI customers waste management facility fees and no other taxes. User fees do not necessarily cover the entire cost of the service, and a collection service can be funded by a combination of revenue sources.

Table 11: Curbside Collection Fees in Other Jurisdictions of Yukon[14]

Municipality	Customer Type	Annual Fee or other Fee Structures	Service Level Provided
Faro	Residential Dwelling	$145.72	Curbside collection for garbage
	Commercial	$312.44/year $28.20/pick-up of 6 cubic yards $18.80/pick-up of 4 cubic yards	Curbside collection for garbage
Watson Lake	Residential Dwelling	$300	Curbside collection includes organics, garbage, and may include recycling
	Commercial	$600 (for twice/week pick up)	Curbside collection includes garbage, organics and recycling may be the responsibility of the owner[15]
Whitehorse	Residential Dwelling	$133 $240 (for recycling service)	Curbside collection for organics and garbage. Optional curbside collection for recycling
	Commercial	$133 Fee for recycling service is dependent upon frequency and amount collected	Curbside collection for organics and garbage. Optional curbside collection for recycling[16]
Teslin	Residential Dwelling	$ 300	Curbside collection for garbage. It is unclear whether Teslin also provides curbside collection of recyclables
	Commercial	$600 (for twice/week pick up)	Curbside collection for garbage
City of Dawson	Residential Dwelling	$147.05	Garbage collection only
	Commercial	$218	Garbage collection only

It is important to note that the user pay philosophy is strongly encouraged by the Ministerial Committee on Solid Waste (April 2018). In practice, this means that curbside collection of

[14] 2018 Yukon Municipal Waste Fee Summary, Compiled from Municipal data by Community Affairs branch, Government of Yukon, June 5, 2018.
[15] http://www.watsonlake.ca/wp/wp-content/uploads/2014/10/014-04-Garbage-Collection-Recycling-By-Law.pdf
[16] http://whitehorse.ca/departments/environmental-sustainability/waste-diversion/additional-information/residential-curbside-collection

garbage, recyclables and organic waste should largely be funded by the customers that receive the service (via user fees).

Many municipalities in BC mainly fund their collection services via utility charges to the property owner. The use of a utility fee is recommended for the CoD as well, as it is in line with “user pay” or “pay-as-you-throw” philosophies, which are equitable and generally received better by the public than an increase in taxes. With a transition to user fee-based funding, residents could also receive reduced taxes.

The collection services should be made mandatory for each household in the serviced areas, even if residents choose not to use the service. Any properties that will not receive the service (e.g. vacant properties, or households with insufficient road access) will be exempt from paying the fee.

If the CoD adopts a semi-automated collection system, the delivery of collection carts can trigger the need for payment. The carts would be linked to the property rather than the property owner. As noted earlier, households can be given an opportunity to increase or decrease the size of their container, which would result in the utility fee being adjusted accordingly.

In case of manual collection, all customers within the service area can be automatically assessed the utility fee for the basic level of service (e.g. 1 can of garbage + recyclables pick up per week). If customers (e.g. ICI and MF buildings) require additional garbage disposal capacity, the following mechanisms are proposed:

- Tag-a-bag stickers that would be made available for purchase from local sources (e.g. municipal facilities, local super markets) at a fee that reflects the additional cost of collection and disposal, and/or
- Self-haul the additional waste to the landfill or transfer station and pay the tipping fee (assuming a scale will be installed at the landfill).

The volumes of recyclables and organic waste will be limited by the types of containers used. Any additional recyclable materials will need to be taken to a depot. Some municipalities in BC offer pick-up of unlimited quantities of yard waste when they are stored in paper bags. Alternatively, additional bags can require a tag-a-bag sticker for organics, as described for additional garbage.

5.2 New Solid Waste Diversion Centre

The CoD wishes to explore the option to design and construct a new Solid Waste Diversion Centre (SWDC) on an industrial property within the municipality in collaboration with the Conservation Klondike Society (CKS), the expected final operator of the facility.

The objectives of the new solid waste diversion centre are:

- Increase capacity for sorting by providing a larger sorting table and receiving area.
- Improve materials sorting and processing efficiency of materials dropped off by the public and material collected curbside.

- Provide a processing area (tipping floor and lock-block bays) for receiving recyclables collected from a residential curbside collection program.
- Improve safety controls.
- Provide space to accept and process additional material in future that may be included under the YG DMR.

5.2.1 Site Description

The site for the SWDC is vacant Lot 11, Guggieville Subdivision, in Callison.

The lot was owned by YG and has now been transferred to the CoD.

The CoD has prepared the lot for construction of road and buildings by adding 12 inches of fill, 8 inches of pit run and 4 inches of screened material, compacted and graded.

The lot has an area of 0.608 ha (1.5 acres). However, due to the north area having a pond at a much lower elevation, the useable area for construction and roadways/parking is at most two thirds of the existing lot (i.e. approximately 1 acre).

There is power available on two sides of the lot: the south and the east. The site does not currently have water or sanitary sewer connections. There is a lower undeveloped area to the northwest, west of the existing pond, which may be suitable for a septic field to maximize useable space for parking, roads and construction on the lot.

The CoD has erected fencing around the lot, including two sliding vehicle gates and one man gate. The vehicle gate on the south access will be located approximately 24 m from the southeast property corner, and the vehicle gate on the east access will be located approximately 25 m from the northeast property corner. The main gate is to be located on the northwest side of the fence, essentially opening to the potential location of the septic field to the west of the pond.

5.2.2 Yukon Acts and Regulations Governing Solid Waste Management Facilities in Yukon

Yukon acts and regulations provide the regulatory framework governing development, operations, closure, and post-closure of Yukon solid waste management facilities, and must be considered for the new SWDC. Environment Act RSY 2002, c.76 defines the requirement for SWMPs and provides legislation for the following SWMF related regulations:

- Recycling Fund Regulation O.I.C. 1992/135;
- Beverage Container Regulation O.I.C. 1992/136;
- Special Waste Regulation O.I.C. 1995/47;
- Spills Regulation O.I.C. 1996/193;
- Air Emission Regulations O.I.C. 1998/2007;
- Solid Waste Regulations O.I.C. 2000/11;
- Ozone Depleting Substances and Other Halocarbon Regulations O.I.C. 2000/127;

- Contaminated Sites Regulation O.I.C. 2002/171; and
- Designated Materials O.I.C. 2003/184.

The preliminary conceptual design presented in this report has been prepared with consideration given to the YG's Designated Materials Regulation (DMR) initiatives, which may impact the materials accepted at the SWDC and how the materials are managed in the future.

Materials that may fall under the DMR in future are listed below. These materials are proposed to be added to the DMR, with a proposed fee structure to cover the costs of managing these materials.

Materials expected to be managed under the DMR by the end of 2018

- Vehicle tires (19.5" or less, between 19.5" and 24.5", larger than 24.5").
- Electronic and electrical products (E-waste), such as computers, printers, display monitors, home audio/video systems, phones, and small appliances, including kitchen countertop appliances, microwaves, clocks, bathroom scales).

Tires are already included under the DMR, however the YG is planning for upcoming regulatory changes to tire categories, and the inclusion of additional products such as e-waste with program implementation October 1, 2018. It is unknown at this time exactly what role the YG will play in managing these materials.

Additional features incorporated into the conceptual design to provide flexibility for future modifications include the following:

- A spare bay in the lock-block wall recycling tipping floor area.
- An open recycling shelter structure that can be rearranged to allow for additional materials to be accepted.
- Space allocation to accept additional materials in recycling bins and an additional recycling structure in the southeast corner of the site.

We recommend the CoD discuss this conceptual plan with YG to ensure that as materials are added to the DMR, the CoD is able to transfer the handling and storage to YG or be in a position to negotiate for compensation to accept, handle and store future DMR materials.

5.2.3 Previous Conceptual Designs

CKS developed a preliminary concept design in 2015. Two conceptual designs have since been prepared by YG in 2017 as shown in Figure 14 and Figure 15, next page.

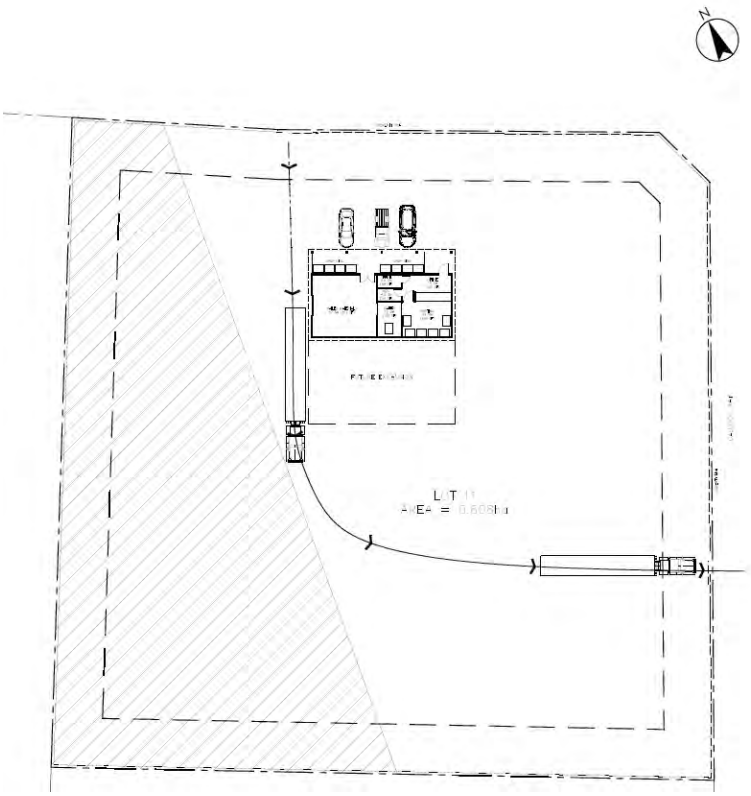


Figure 14: Option 1 for New SWDC

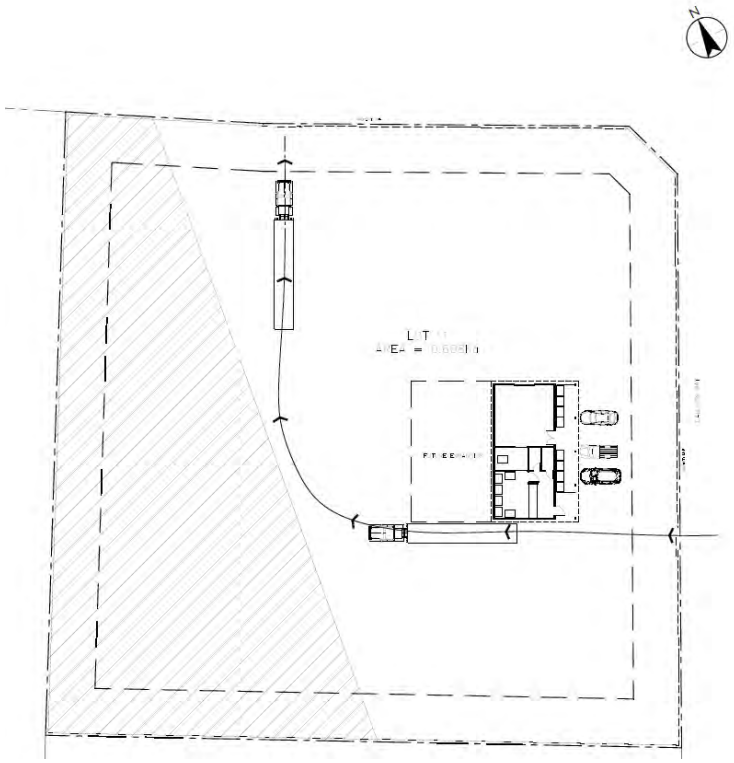


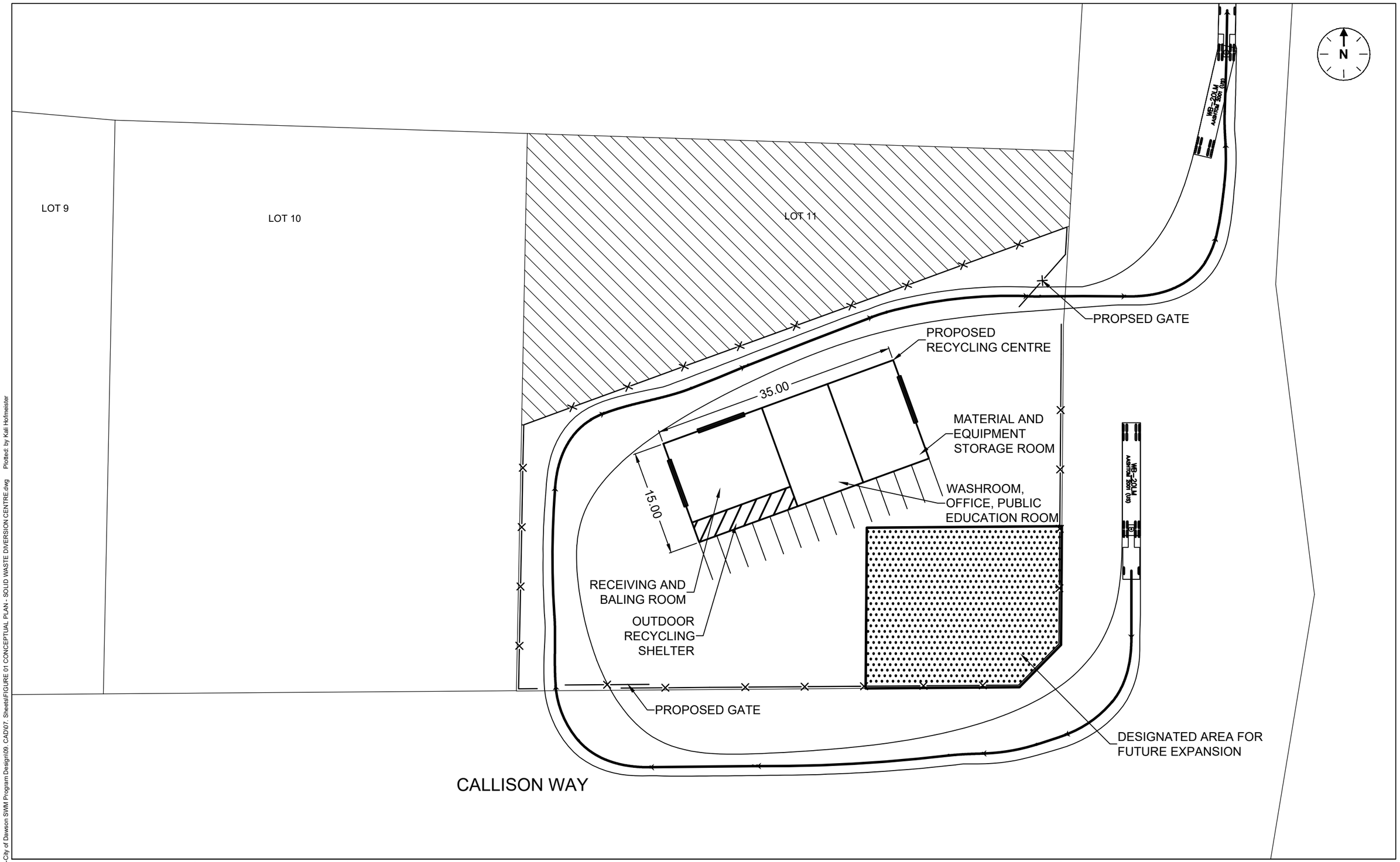
Figure 15: Option 2 for New SWDC

5.2.4 Updated Conceptual Design

MH reviewed the previous two conceptual designs prepared by CKS in 2015 and YG in 2017. Based on updated information and the assessment provided in this report, an updated conceptual design for the new SWDC was prepared. The updated conceptual design incorporates elements from the two previous conceptual designs.

The conceptual design described in this section is considered a preliminary design suitable for discussion and preliminary costing purposes only.

The conceptual plan is presented in Figure 16, next page.



P:\2018\180283500-City of Dawson SWM Program Design\09. CAD\07. Sheets\FIGURE 01 CONCEPTUAL PLAN - SOLID WASTE DIVERSION CENTRE.dwg Plotted: by Kali Hofmeister

MORRISON HERSHFIELD

DAWSON CITY, YUKON

CITY OF DAWSON
SOLID WASTE MANAGMENT
PROGRAM DESIGN

LEGEND:
UNUSABLE WET LANDS
FENCE

FIGURE 16
CONCEPTUAL PLAN - SOLID WASTE
DIVERSION CENTRE

SCALE 1:500 0 2.5m 12.5m 25m

180283500
Aug 01, 2018
VERSION 01

5.2.4.1 Objectives

The conceptual design was prepared with the following objectives:

- Provide additional space for sorting recyclables.
- Provide additional space for public drop-off of recycling.
- Provide infrastructure to allow for processing of recyclables collected curbside.
- Provide space allocation to allow for acceptance and processing of additional materials in the future.

5.2.4.2 Materials to Manage at SWDC

Materials that may be accepted at the SWDC include the following:

- BCR materials (refundables)
- Glass (non-refundables)
- #1 Plastic (Clear and Coloured)
- #2 Plastic (Natural/Cloudy)
- Newspaper
- Hard Mixed Paper & Office Pack
- Cardboard & Boxboard
- Metal
- Mixed Plastics (#4 - #7)
- Plastic Film
- Polystyrene Foam
- Tin
- Tetra Pak®/Wax Cartons
- Propane tanks
- Household Hazardous Waste (HHW)
- Tires
- Used oil
- Lead-acid batteries
- Major appliances
- Compostable organic waste
- E- waste
- Household batteries

The CoD has the option to accept and store larger DMR materials, such as tires, fridges, and appliances at the new SWDC. Another option is to continue accepting these larger items at the landfill and not manage them at the new SWDC.

The proposed conceptual design includes a space allocation to manage larger items; however, this may be less practical from an operational point of view, and it may be more cost effective to manage larger items at the landfill only.

YG is committed to providing an annual HHW collection event at the Quigley Landfill. This is also assumed to be the case for a new SWDC.

5.2.4.3 Key Features

SWDC Main Building

The main building of the proposed SWDC includes the following rooms as shown on Figure 16:

- Receiving and baling room
- Material and equipment storage room
- Washroom
- Office

- Public education room
- Recycling shelter (attached, accessed from the outside)

The structure proposed is a pre-fabricated insulated metal building. The building will require electrical, sanitary, and water connections.

The footprint of the proposed building is estimated to be 525 m^2 and includes the rooms listed above. The recycling shelter will be attached to the main building and is included in the 525 m^2 building footprint.

Lock-Block Wall Receiving Area for Curbside Recyclables

The conceptual design includes an area for receiving recyclables collected from a future curbside collection program. The receiving area consists of a concrete tipping floor and a three-bay lock-block wall for temporary storage of the materials.

It is assumed that two streams of recyclables will be collected from the future curbside collection program: mixed paper (includes newspaper and cardboard) and mixed containers (includes all beverage containers and aluminum cans). A third lock-block receiving bay has been included for future materials that may be collected. It could also be used as a general storage area for materials such as e-waste or bulky waste.

When the collection truck arrives at the facility, the materials are emptied onto the tipping floor. A skid steer would then be used to move the materials into one of the two receiving bays. The material would then be baled at regular intervals (baler located in the receiving room) and the bales would be moved to the storage room.

The conceptual design and cost estimate includes the cost for a three-bay lock-block bunker and a skid steer to manage the incoming recyclables.

An example of a recycling depot with a concrete tipping floor and lock-block bays for receiving recyclables is shown in Figure 17.

Figure 17: Recycling Depot with Tipping Floor and Lock-Block Sorting Bays for Recyclables

Upgraded Balers

One baler is currently used at the depot in downtown Dawson. However, the majority of the recyclables collected at the CKS depots are sent unbaled to Raven Recycling.

YG currently pays for the transportation of materials accepted at the current depots. However, it is in the COD's best interest to manage and store materials as efficiently as possible prior to transport.

The processor, Raven Recycling, currently accepts (and often prefers) that many of the recyclable materials are baled at the depot prior to transportation (refer to Appendix A for preferred sorting requirements). A baler can compress materials prior to shipment to the Whitehorse processing facilities. Baling allows greater quantities of recyclables to be shipped on a single transport vehicle to Whitehorse and improves materials management at the depot facility (space savings if storage capacity is limited).

All BCR materials need to be managed separately from non-refundables at the depot for auditing purposes. YG periodically audits BCR bales to ensure the number of containers per bale remains consistent.

Based on previous work for the YG, it is understood that YG has budgeted to purchase balers. YG will first focus on purchasing balers for depots with access to power and available space. We recommend the CoD contact YG about specific needs for its depots.

The conceptual design and cost estimate include two new horizontal recycling balers and supporting equipment, including a pallet jack. The pallet jack is used for maneuvering and stacking of bales indoors/outdoors.

An example of a horizontal baler is shown in Figure 18

Figure 18: Horizontal Baler

Storage for Bailed Materials and Other Materials

The conceptual design includes a baling and sorting room that will provide sufficient storage for baled materials, including paper and mixed containers. Additional materials, such as HHW and e-waste, can also be stored in this room.

Material storage is an important consideration, because BCR and non-refundables are to be baled separately for auditing purposes.

Improved Sorting Efficiency

The recycling depot located downtown currently has one sorting table, which staff use to sort through mixed recyclables and place sorted items into pails located beside the table.

The conceptual design proposes three potential options to improve the sorting efficiency of mixed recyclables.

Option 1: Larger Rectangular Sorting Table

It appears the current sorting table is undersized for the quantity of recyclables received at the facility. A larger sorting table would provide additional space for more recyclables, and would allow staff to sort through material from either side of the table.

The sorting table would have perimeter guards/rails to prevent material from falling off. The table top would be finished with sheet metal for durability. It is recommended that the table be sloped for drainage purposes. If staff are expected to sort from both sides of the table, the table can be designed so the crest/peak runs along the table's centre and slopes towards both edges. Drainage holes, side channels, and buckets would be required to convey and capture any liquids.

Option 2: Rotating Circular (Rotary) Table

There are several styles of rotating circular tables available. The intent of the rotating table is to improve sorting efficiency by moving the recyclables to the staff completing the sorting, which reduces the amount of bending and reaching staff are required to do during sorting.

Rotary tables are typically produced in stainless steel and are available in a range of diameters up to 1.5 m. The tables have standard guardrails fitted on the outside edge to prevent materials from falling off. The motors can also be variable speed, so users can adjust the RPM to accommodate the speed at which staff can sort.

Mixed recyclables must be manually loaded onto the rotary table, and any materials remaining on the table after sorting is complete must be manually unloaded off the table.

An example of a rotary table is shown in Figure 19 below.

Figure 19: Example of a 2.5 m Diameter Stainless Steel Rotary Table[17]

Option 3: Straight Belt Conveyor

The purpose of a straight belt conveyor is to allow staff to sort through mixed recyclables more efficiently by reducing the amount of bending and reaching required while sorting. The conveyor transports materials to the staff completing the sorting. The conveyors are typically produced with PVC or rubber belts; however, other belt materials are available for specific applications. The conveyors are available in a range of widths, and are produced with variable speed motors that can be adjusted to match the operators' sorting speed. It should be noted that the belts do need to be replaced, and replacement belts are available and relatively easy to replace. The replacement frequency depends on several factors, including belt material, duration of use, nature of materials on the belt, and speed of the motor.

The conveyor is manually loaded with mixed recyclables at one end, and a bucket or bin is placed at the other end of the conveyor to collect any unsorted recyclables. Unsorted materials can be manually loaded back to the front of the conveyor to complete sorting a load of recyclables.

An example of a straight belt conveyor is shown in Figure 20, next page.

[17] https://www.eqm.co.nz/product/rotary-tables/

Figure 20: Straight Belt Conveyor with Guardrails[18]

Outdoor Recycling Shelter

The conceptual design includes a semi-enclosed recycling shelter attached to the main SWDC building. The recycling shelter would be primarily for residential drop-off of sorted recyclables, and would have separate bays for accepting the materials listed in Section 5.2.4.2.

Recyclables would be stored in mega bags (1 m by 1 m freestanding bags). Approximately 2-3 mega bags would fit in each compartment of the recycling shelter. The total number of recycling compartments and shelter size would be determined during detailed design, once a detailed review of anticipated tonnages and accepted materials has been completed.

The purpose of having the recycling shelter attached to the main SWDC building is to minimize the handling distance between placement of recyclables in the bags, transportation to the baler for baling of the materials, and transportation of the baled materials to the storage room.

One advantage of having the recycling shelter attached to the primary building is that transportation distance is minimized. Doors could be installed on the SWDC between the back of the recycling shelter and the building to allow the mega bags to be transferred directly into the building without needing to collect the bags from outside. The style of doors could be either sliding or garage-style roll-up doors, as determined during the preliminary or detailed design stage of the SWDC.

An example of a detached recycling shelter used by a similar sized community in the Yukon is shown in Figure 21.

[18] http://www.cisco-eagle.com

Figure 21: Detached Recycling Shelter Used to Collect Sorted Recyclables Dropped Off by Residents

Two potential door configurations that could be used to transfer the mega bags from the back of the recycling shelter into the main SWDC building are shown in Figure 22 below; a garage style roll up door (shown left) and a sliding door (shown right).

Figure 22: Garage Style Roll Up Door and Sliding Door

Designated Area for Future Expansion and Acceptance of Additional Materials

As noted in Section 5.2.2, changes to the YG's DMR initiatives may impact what materials are accepted at the SWDC and how the materials are managed in the future.

A primary objective of the conceptual design is to provide sufficient flexibility for accepting and managing future materials. As shown in Figure 16, an area has been

designated in the southeast corner of the site for future infrastructure. This space is large enough for an additional detached recycling shelter or multiple 40 yd^3 roll-off bins. This space could also be used as a general storage area for equipment or baled materials.

At this time, given the quantity of recyclables expected to be managed at the facility, it is anticipated that this space will not be used and the proposed SWDC will be sufficient for receiving, processing, and storing all materials in the short term.

5.2.4.4 Future Considerations

Future considerations that should be evaluated as the proposed SWDC progresses into the preliminary and detailed design phases are listed below:

- **Management of materials between the new SWDC and current downtown facility.** If the new SWDC were operated out of Lot 11, the CKS may still wish to receive refundables at the downtown depot location, as opposed to closing down operations at their downtown location. CKS would keep the downtown location open as a bottle depot to distribute refunds to customers.
- **Future DMR material management.** The CoD should meet with YG to assess which materials may be managed by YG in the future and what role YG expects to play in managing the materials. This may impact the space and infrastructure required at the new SWDC. Materials that may be managed by YG in the future include C&D waste, and waste oil.
- **Review of recycling curbside collection program.** The new SWDC is expected to act as the drop-off location for recyclables if a recycling curbside collection program is implemented in the future. It is important to review the requirement of any curbside collection program being considered to ensure drop-off requirements are compatible with the layout of the proposed SWDC. Factors to consider include: type of collection vehicle being used, vehicle capacity, how materials are emptied from the truck, and recyclable streams that will be collected.
- **Staffing.** A new SWDC will require additional staff to operate the facility. If the downtown facility continues to operate as planned, then CKS will require double the staff to operate their depots. CKS currently has five employees and six during the summer. One is the coordinator and the rest are depot attendants. Employees receive a wage of $17.00 an hour at the downtown depot, $18.00 at the landfill and $21 for the coordinator. All positions are part time.

5.2.5 Capital Cost Estimate

A capital cost estimate has been prepared based on the system components presented in this section. The cost estimate is considered a Class D preliminary cost estimate (±50 %) based on the information available on the site at this time. The cost estimate is suitable for preliminary discussion of the proposed SWDC.

Operating costs have not been estimated due to the limited information about staffing, waste processing at the facility, and waste hauling to and from the facility.

The capital cost estimate is presented in Table 12 below.

Table 12: Class D Capital Cost Estimate for Proposed SWDC

Item #		Item	Unit	Quantity	Unit Price	Total Price
1		**Project Summary**				
	1.01	Mob/Demob	LS	1	$ 50,000	$ 50,000
	1.02	Site Preparation	LS	1	$ 120,000	$ 120,000
	1.03	Surfacing, barriers and signs	LS	1	$ 197,500	$ 197,500
	1.04	Lock-block Wall	LS	1	$ 12,600	$ 12,600
	1.05	Surface water management	LS	1	$ 20,000	$ 20,000
	1.06	Site Buildings	LS	1	$ 550,000	$ 550,000
	1.07	Equipment and Containers	LS	1	$ 196,500	$ 196,500
					Subtotal	**$ 1,146,600**
					40% Construction Contingency	$ 459,000
					Subtotal - Construction Cost	$ 1,606,000
					Engineering - Detailed Design Services (8%)	$ 128,000
					Construction Oversight, Contract Administration (7%)	$ 112,000
					TOTAL - COST	**$ 1,846,000**

Further details on the proposed SWDC is provided below.

Site preparation (item 1.02) includes the following items:

- Site grading, clearing, and grubbing. It is understood that the majority of the site is cleared and has been partially graded.
- Landscaping and topsoil.
- Power supply and lighting.

Surfacing, barriers and signs (item 1.03) includes the following items:

- Compacted gravel over the entire site, consisting of a 300 mm thick sub-base and 150 mm thick gravel road base.
- An area approximately 225 m^2 for a concrete tipping floor for managing recyclables collected from the curbside collection program (100 mm thick concrete slab).
- An allowance for traffic barriers and concrete curbing.
- An allowance for up to 10 traffic signs.

Surface water management (item 1.05) includes drainage ditches, pipe culverts, and culvert headwalls.

The site building (item 1.06) is assumed to be a pre-fabricated metal structure with an attached wooden recycling structure. The cost for this line item includes the foundation preparation works associated with the building.

The cost for equipment and containers (item 1.07) includes the following:

- Two horizontal recycling balers.
- One wheeled 3 tonne skid steer.
- One manual rough terrain pallet jack.
- One circular conveyor belt sorting table.
- Twenty large canvas bags and containers for recyclables.
- Miscellaneous safety equipment (fire extinguisher, first aid, spill kit, etc.).

The capital estimate is for budgeting and discussion purposes. As the design progresses, the contingency amount will also become lower and it will be possible to consider ways of lowering the capital costs.

5.2.6 Funding

Recycling depots are financially incentivized via the Recycling Fund to manage BCR materials. The funding does not cover the management of non-refundables, although the non-refundables often make up the majority of the quantities of materials managed at many depots in YT.

CKS receives an operating grant from YG of $40,800 a year, an average of $30,000 in handling fees a year.

YG has the full financial responsibility for removing all DMR materials from the Quigley Landfill. This is assumed to also be the case for a new SWDC. YG may be able to provide funding for capital projects from federal sources, such as rural and northern communities infrastructure funds.

5.3 Public Education Programs

5.3.1 Curbside Collection Program

A well-designed collection system can live up to its potential if it is well promoted and households receive sufficient education about the system before and during program roll-out. Adequate communication is crucial to achieve a smooth transition to a new system, to maximize participation rates and to ensure the ongoing success of the program.

At first the CoD may want to seek additional stakeholder feedback (e.g. haulers, processors and the public) in order to refine the program design and costs.

The following considerations should be taken into account prior to program launch to create awareness and build interest about the new collection program:

Methods of Communication

- Advise households about the upcoming program using a range of media, including the municipal website, direct mailings, utility bill notices, newspaper articles, print and

broadcast public service announcements, community meetings, and paid advertising (newspaper and radio). Representatives from CoD may also attend local events/shows with information about the upcoming program.

- Social media offers additional routes for authorities to engage with residents. For example, Twitter can be used to hold question and answer sessions on waste services. Another example is the use of smart phone apps, which can offer residents information about service details (e.g. which materials can and cannot be recycled, how and when to put out collection containers) and can also send automated reminders about collection days.
- Calendars containing curbside collection schedules and tips are an essential communication tool for many authorities.
- Some information can also be embossed on collection containers (if containers are provided by CoD).

Information to Communicate

- Details about what services will be provided, how this system was selected, who is impacted (and who is excluded), how the system will work (e.g. service rules), program start-date, what happens to their garbage and recyclables after collection and the promotion of a hotline to call with questions.
- Where suitable, address people's barriers to using the system by including positive quotes from residents who are looking forward to the curbside collection program or who have had curbside collection in other jurisdictions
- Information about the benefits (environmental and financial) from waste diversion.
- CoD may want to clarify the long-term plan for waste management, e.g. progress on the Waste Diversion Centre and the potential for organics waste collection.

How to Communicate

- If available, use outreach specialists and other communications-related staff at CoD to build on existing communication programs and branding.
- Inform all relevant CoD staff of a planned change ahead and train staff to respond to hotline calls.

Timing

Approximately 2 months prior to program launch, CoD should start to provide practical information, such as the curbside collection schedule, set-out practices, and details on what can be recycled and disposed of as garbage. Information channels can be expanded to include an increase in earned media, paid advertising, and may also include direct mail, such as a collection calendar.

Approximately 1 month before program launch, the CoD should send information to residents by mail that focuses on the start date and set-out practices.

Approximately 1 month to 2 weeks before program launch, any collection containers that will be supplied by the CoD should be delivered to households. This is another opportunity to provide printed material.

At this time, the CoD also needs to make sure that sufficient staff are in place and are trained to respond to calls. The number of calls typically diminishes within a month or two after program roll-out.

Once the call volume has tapered, the CoD may wish to consider transferring the responsibility for responding to customer enquiries about the collection service from the CoD to the collection contractor (if undertaken by a private contractor). If possible, ensure that the hotline number used during the program launch is transferred to ensure that printed promotional material is still relevant.

The success of the program should be evaluated and communicated on an ongoing basis to encourage participation. The CoD can provide households with information on recycling rates achieved, results from waste composition data and what environmental outcomes are being achieved from the collection so far. Positive messaging is important to keep people engaged and participating in the collection program.

Public Education Costs

Once the CoD invests in a curbside collection program for recyclables, it is important to maximize the waste diversion from this program. There needs to be adequate funding for the launch costs and promotion associated with the program roll-out. The CoD should expect to spend a minimum of $10,000.

On an ongoing basis, the CoD will need to plan for education costs. Recycle BC has reported that among over 20 municipalities in BC, these ongoing costs have varied widely. Before the implementation of the Extended Producer Responsibility (EPR) Program for packaging and printed paper in BC, the cost per household ranged from $0.24 to $11.18 with a mean of $1.71 and a median of $1.05.

5.3.2 New Solid Waste Diversion Centre

The CoD should take the unique opportunity to raise awareness of its solid waste management program and how a new SWDC fits into this program.

The public can be invited to an open house for the facility opening. Ideally, it can coincide with a local celebration or festival. The open house should be staffed with local experts (e.g. CKS and municipal representatives).

On an ongoing basis, the facility is envisioned as being an environmental educational centre for Dawson, providing educational opportunities for schools and other interested groups. CKS may want to provide this education as part of the operation of the SWDC.

5.4 Diversion Opportunities

This section covers potential opportunities for improvements, either in terms of diversion from landfill or from material management.

5.4.1 Waste Reduction

The CoD is able to target waste diversion by implementing some of the initiatives that promote waste reduction and reuse of resources. Some examples include:

- **Hold repair cafés.** These are often popular meetings free of charge aimed at bringing people together to repair broken goods and reduce wastage. Typically, municipalities are making sure that participants can find all the tools and materials required to help make repairs. Volunteer specialists in the community can be invited to guide the repairs.
- **Promote "Make Holiday Memories, Not Garbage" initiative.** Provide ideas of wonderful gift ideas that make memories and create little to no waste.
- **Encourage residential backyard composting.** Until a curbside collection program for organic waste is rolled out, the CoD may want to more actively encourage backyard composting. The City can, for example, subsidize the cost and distribute suitable types of composters and provide education on their use. Backyard composting reduces the amount of organic waste going to landfill and reduces the need for collecting the waste materials (either as part of the garbage or an organic waste collection).
- **Encourage residents to reuse bags.** Develop waste reduction campaign to encourage the use of reusable bags, rather than single-use plastic bags.
- **Promote Food Waste Reduction.** Uneaten leftovers and spoiled food make up over 25% of the waste discarded from a household. The CoD may want to use some of the strategies found in the BC Residential Food Waste Prevention toolkit developed by BC Ministry of Environment. It includes the promotion of a Love Food, Hate Waste style campaign.
- **Support the development of a sharing library.** Several permanent libraries have been set up in Vancouver that offer tools, sports equipment and more. The so called "Thingery" has been a huge success[19]. That pooling of resources means less demand for goods production.

5.4.2 Regulatory Options to Encourage Waste Diversion

Many towns and cities in North America have established bylaws requiring residents and ICI sector waste generators to source separate recyclable and/or compostable materials in order to ensure diversion from landfill.

[19] http://thethingery.com/

There are legislative options for requiring ICI sector waste generators to source separate recyclable and/or compostable materials in order to ensure diversion from landfill (landfill bans, aggressive differential tipping fees, bylaw amendments).

Suitable options that are available to the CoD include:

- Landfill disposal bans on readily recyclable and compostable materials (implemented in conjunction with or after the provision of collection services).
- Landfill disposal bans on all materials covered under BCR and DMR.
- Aggressive differential tipping fees for source-separated materials that can be processed for diversion at the landfill (only feasible for facilities where tipping fees are collected).
- Bylaw requirement requiring ICI sector waste generators to source separate recyclable and/or compostable materials.

5.5 Improvement to Material Management at Depot

5.5.1 HHW Management

The CoD is currently collecting HHW once a year, which makes it difficult for residents and the ICI sector that often want the ability to drop off these materials when the depots are open. YG is responsible for the management of HHW. The CoD may want to influence YG to collect HHW from residents via a mobile HHW depot, which visits each of the territory's depots several times a year. A mobile HHW depot can stay at each location for a period of one week before moving on to another. In 2016, The County of Wellington, ON, established a mobile depot at a capital expense of $15,000, which includes safety features, lockers and shelving. The mobile unit (55 yd^3 roll off bin) can accommodate 25 55-gallon drums that are single stacked[20]. Operating costs are estimated between $130,000 and $215,000. However, there may be opportunities to obtain funding for capital and operational costs from YG.

By targeting HHW, only small quantities of waste are diverted (not noticeable in terms of waste diversion performance tracking), but with significant environmental benefits from avoided costs of pollution and environmental mitigation if these HHW materials ended in the landfill or in the environment.

5.5.2 Glass

Dawson has equipment to crush BCR and non-refundable glass. Instead of simply crushing and disposing of glass into the landfill, the CoD may want to look at finding local uses for it. Glass is costly to transport because there is a very low to no market value for recycled glass.

[20] Information provided by Das Soligo, County of Wellington, January 2018, personal communication.

The Government of the Northwest Territories sends crushed glass to Airdrie, Alberta, where it is processed into fibreglass insulation[21].

In Alaska, they have created a market for crushed glass as a pipe bedding medium for the Water and Wastewater Utility. The Solid Waste and Water and Wastewater Utilities of the Municipality of Anchorage worked together to write a new pipe bedding specification.

C&D glass waste can be diverted from the landfill using deconstruction processes, which involve sorting materials from a building tear-down for reuse and recycling. The City of Portland has a non-profit organization called Rebuilding Center that sorts and sells used building materials for 50-90% of their retail value. The largest issue with deconstruction is time, where demolition typically takes 1 day, deconstruction can take 1-2 weeks. However, the cost of deconstruction can be reduced by reusing glass windows in greenhouses or for interior household windows. Recycled glass can be used as aggregate in concrete, as a sand supplement, or it can be donated to local artists and up-cycled for glass blowing, glass tiles, jewelry, or landscaping decorations[22]. The revenue generated from more profitable recycling materials, such as metals, may be able to subsidize some transportation costs for the recycling of less profitable materials, such as glass[23].

The CoD may want to investigate whether any of these are suitable reuse options for the crushed glass.

5.5.3 Cardboard

Cardboard is currently landfilled in the summer and burned in the winter. The CoD is interested in finding a better use for the collected cardboard than currently burning it at the landfill without energy recovery.

We recommend the CoD consider the feasibility of having balers at each of the depots to allow for baling and stockpiling of cardboard. Recycling of baled cardboard is preferred instead of lower uses of cardboard (recovery or residual waste disposal).

Cardboard can also be made into pellets; however, it presents unique challenges with conventional manufacturing processes. When cardboard goes through size reduction in a hammer mill, it produces a fluffy material that has a static charge. This material does not flow well through the augers of a pellet plant. The production of cardboard pellets would require unconventional equipment that may increase cost. Furthermore, there is a limited market for cardboard pellets, since only some pellet burners can handle their higher ash content[24].

[21] https://www.enr.gov.nt.ca/en/about-environment-and-natural-resources
[22] 2013 Possible options for reuse and recycling of end-of-life waste glass from deconstruction projects, Veronica Vaughan, April 3, 2013.
[23] 2017 Solid Waste Management for Northern and Remote Communities, Planning and technical guidance document, Environment and Climate Change Canada, March 2017.
[24] http://www.pelheat.com/cardboard_pellets.html

5.5.4 Waste Oil

St. Theresa Point, in northeastern Manitoba, has installed a used oil burner and storage unit for the community. They collect recycled oil and use it as heating fuel for the Municipal Fire Station during the winter[25]. This may be a suitable option in Dawson if there sufficient quantities of oil collected and users of the oil for heating.

5.5.5 Waste Textiles

Textiles can often make up a significant part of the waste streams. For example, it made up 3% of City of Whitehorse' residential waste stream in 2017. Many waste textiles can be diverted and reused. The CoD may want to place a textile collection container at the depots and/or the landfill. There are several non-profit organizations across Canada (such as Goodwill, Big Brother and Canadian Diabetes Association) that are willing to collaborate with municipalities across Canada to find unwanted clothing to donate to people in need, either in Canada or in developing countries.

5.5.6 End-of-Life Mattresses

The disposal of mattresses at the landfill is operationally challenging due to the bulkiness of mattresses. One mattress takes up approximately 0.9 m^3. The mattress springs have a tendency to impact landfill and transfer station equipment (e.g. puncture hydraulic systems). The removal of mattresses from the waste stream can help to reduce maintenance costs of transfer station and landfill equipment.

The CoD may want to look at the possibility for manually deconstructing mattresses with high metal content, as there are secondary markets for the steel of the innerspring unit. This recycling has several benefits, such as diverting waste from landfill and creating local jobs.

[25] http://usedoilrecycling.com/recycling-in-canadas-remote-northern-communities/

6. STAKEHOLDER CONSULTATION

The CoD is looking at making significant changes to the existing solid waste management system and the level of service its residents and businesses are currently provided. As part of this project, MH staff engaged with private waste haulers operating in the CoD to understand the current services provided and what issues they experience.

The CoD may want to plan for consultation with the public and other impacted stakeholders on the new direction by:

1. *Informing* the general public and potentially affected stakeholders about the content of the draft design of the SWM program;
2. Obtaining *input* from affected stakeholders (including general public) on the proposed plan components; and
3. *Collaborating* with member municipalities to undertake consultation events that broadly engage with the community on matters related to solid waste management.

The CoD may want to use some of the following strategies to undertake consultation:

- Open Houses at depots or landfill staffed with local experts
- Presentations to stakeholder groups/organizations
- Presentations to First Nation Councils
- Online information on municipal website
- Determine opportunities to piggyback on municipal communications (newsletters, mailers, utility bills, billboards, etc.)
- Use of social media (Facebook)
- TV/radio commercials
- Radio advertisements
- Feedback surveys (online, exit surveys at open houses, at landfills and depots, phone interviews)
- Promotional activities

Feedback from various stakeholders during this consultation can inform how to best design/revise a service. It is important to report out on feedback received and how it will be incorporated into the Final SWM program design.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Curbside Collection Service

This study assessed options for solid waste management program designs to improve the management of waste materials (such as MSW/garbage, recyclables and organics) from within the City boundaries. The CoD currently only collects garbage through the use of a contractor, and there is limited curbside collection of recyclables and organics. The introduction of curbside recycling and (eventually) source separation of organics, will improve the CoD's environmental performance and reduce the amount of waste that goes to landfill.

The materials that are suggested for recycling include the collection of two streams: fibres (paper and cardboard products) and containers (plastics and metal). Glass can be added when there are local markets for crushed glass, but is not included at this stage. The fibres and containers are best to be source separated at the curb. Residents can be made to source separate recyclables if the education and promotion of the program is planned adequately. Source separation at the curb saves on sorting and processing costs and increases marketability of the recyclables to end markets. This is especially important now when large recycling markets, such as China, are only willing to receive clean and source-separated recyclables.

Although the study has assessed the potential quantities of organics to collect from residents and ICI customers, we recommend that organics (yard & garden and kitchen waste) should not be collected at this time, since the available processing facility is not suitable to handle larger quantities of organics at this point. All residual waste (i.e. the garbage collected) will be disposed of at the Quigley Landfill.

Residential Curbside Collection

There are 80 apartment units in MF buildings in CoD, which are currently serviced by a curbside garbage collection. Accessibility for collection trucks and space requirements for collection containers may require further investigation prior to the inclusion of this sector in the residential collection program. As these MF buildings are currently serviced by the existing curbside collection service, it was assumed that a residential service will continue to service them.

There are many different ways that the CoD can provide residential curbside collection of garbage and recyclables to its residents. Some of the main options include:

Option 1: Manual Collection

- Collect garbage in containers purchased and maintained by residents (self-provided and not standardized), with one bluebox provided for mixed containers and reusable plastic bags provided for fibres.
- Collect via manual trucks (two trucks needed) at a capacity of 18 yd^3. Two operators would be needed per truck to operate safely.

- Garbage from all residential units can be covered in one day and two trucks can cover all the units in one day to collect the source-separated recyclables.
- Weekly collection of garbage and recyclables.

Option 2: Semi-Automated Collection

- Collect garbage in a wildlife-proof wheeled cart with one bluebox provided for mixed containers and reusable plastic bags provided for fibres.
- Collect via semi-automated trucks (two trucks needed) at a capacity of 16 yd^3. One operator is only needed per truck.
- Garbage is collected in wheeled carts using the semi-automated truck arm, while with two streams of recyclables are collected manually using two trucks.
- All residential units can be covered in one day and two trucks can cover all the units in one day to collect the source-separated recyclables.
- Weekly collection of garbage and recyclables.

Curbside collection for garbage and recyclables is estimated to cost between $815 and $900) per household per year (or a monthly cost of approximately $70 to $80 per household).

Curbside Collection from ICI

Based on cost estimates from private haulers in Whitehorse, the cost to collect garbage in 3 yd^3 bins on a weekly basis using a front-end loading truck equates to $1,008 per customer (or $287,000 in total). In reality, not all customers will need that much capacity, and many may want to opt into the residential curbside recycling or share a collection bin with adjacent businesses.

If ICI customers can be serviced by the provision of carts, the costs are likely to be half of those of front-end loaded bins, provided that the semi or fully automated trucks are available for cart collection.

With the use of an M-class truck, ICI waste can be collected via a semi-automated system for carts, or for larger volumes (in roll-off bins with capacities of 8 – 12 yd^3). In the CoD there are not likely to be many ICI customers who require these roll-off bin capacities. Most jurisdictions in BC do not collect garbage or recyclables from the ICI sector and instead leave it to the private sector. This is an option for the CoD to consider.

Procurement Considerations

Regardless of servicing residential or ICI customers, it is recommended that the CoD move toward a full cost recovery user-pay system for providing the services. The first step on this path to a more financially sustainable system is to implement a user-pay residential curbside collection system for garbage and recyclables, and eventually organics when the processing capacity has been established.

In order to achieve the most economical system, the collection service should be obtained through a competitive bidding process.

The proposed next steps for implementation include more detailed assessment of garbage and recyclable materials to be included in the collection program and procurement options. Stakeholder consultation (e.g. haulers, processors and the public) will be required to refine estimated program costs and initiate the undertaking of the procurement process.

There seems to be a limited pool of private contractors/haulers that can provide collection services (i.e. limited competition) and there are concerns about the cost of the current service. The CoD may want undertake some stakeholder consultation with the private sector and develop an RFEOI to confirm how many private service providers can potentially compete at the RFP stage.

The RFP can specify the conditions and level of service desired, but leave sufficient leeway for service providers to be able to provide innovative solutions. The use of an RFP gives the CoD more flexibility in terms of evaluating submissions, compared to a traditional tender process. To increase competition, the CoD should consider also bidding on the contract. The City of Whitehorse used this method when it procured a service provider for its curbside garbage collection. The procurement method had some resistance from the private sector as it perceived the municipality to have an advantage as a single axle truck was specified in the RFP requirement. At that time, many potential private sector proponents only owned double axle trucks and were unable to bid. The municipality had a single axle truck at the time of the procurement. MH recommends the CoD consider these kinds of challenges prior to issuing an RFP so that there is a level playing field for all proponents.

If the CoD elects to use specialized carts for the curbside collection (e.g. bear proof), the RFP can specify that the purchase of the specialized carts would be the responsibility of the CoD. This will enable a more accurate comparison between manual and semi-automated collection costs.

7.2 New Solid Waste Diversion Centre

MH recommends discussing the proposed conceptual design of the new SWDC with various stakeholders, including YG.

The design presented in this report is considered only one concept. The CoD has many options with the new SWDC and the final design can be developed to suit the solid waste management system needs, with consideration to budgetary restrictions.

Additional recommendations and considerations are provided in Section 5.2.

7.3 Road Map for Dawson's Solid Waste Management Program

The CoD is proposing many improvements to the existing solid waste management system, and all of them cannot be implemented at once. Currently it is estimated that only 10% of waste materials are diverted from landfilling. In 2015, the CoD set a diversion target of 34% of the MSW stream by 2023. This appears to still be a realistic and achievable target. With the establishment of a new SWDC (recycling depot) and a curbside collection for recyclables, the CoD is likely to achieve a waste diversion of roughly 30%. With the additional implementation of an organics management program the CoD is likely to exceed its diversion target of 34%.

MH has developed a road map to guide the sequence of events. Figure 23 below summarizes the proposed road map for the CoD's new solid waste management program.

Figure 23: Proposed Road Map for the CoD's Solid Waste Management Program

Firstly, the CoD needs to focus on immediate operational improvements that can extend the landfill life. This was not the focus of this report; however, MH recommends a thorough review to increase operational efficiencies at the landfill.

CKS has been eager to advance plans for a new waste diversion centre for several years, and it will be important for the CoD to build on this enthusiasm and prioritize the development of a detailed facility design. With a detailed plan and cost estimate, the CoD should be able to secure any additional external funding (e.g., from YG and/or federal sources) for the facility or for the equipment needed, such as bailers, scales, etc. The new facility will provide a sorting facility that can receive recyclables collected via a curbside collection program. In terms of curbside collection, the CoD should initially focus on only providing a collection service for garbage and recyclables, and leave the collection of organics until a processing facility that can handle larger quantities of organic waste has been evaluated and established. It will require significant investment in related infrastructure, such as a composting facility suitable to process larger quantities of organic waste and varying types of wastes (including food waste). It is likely to require a fully contained processing facility, which often costs several millions of dollars in investment.

All significant changes to the existing system should be informed throughout the process by stakeholder input and consultation. At first, the CoD will need to develop a communications strategy aimed to consult on proposed changes to level of service and changes to costs. Council must be kept informed of proposed changes, associated costs, and stakeholder feedback, and be part of deciding whether adjustments are needed to the plan. The new solid waste management program will need to include a revised solid waste budget based on proposed changes, and the CoD will need to develop a revised revenue structure based on a combination of taxes, utility fees, tipping fees, etc. With a transition to user fee-based funding model, residents could also receive reduced taxes.

APPENDIX A:

Sorting Requirements for Recyclables Collected at Recycling Depots

DEPOT SORTING REQUIREMENTS FOR BEVERAGE CONTAINERS (as of July 18, 2018 based on interview with Raven Recycling)

Beverage Container Material	Typical Containers	Sorting Instructions	Preferred Collection Procedure	Alternate Collection Option
Aluminum Cans	Pop and Beer Cans	• No sorting by type of beverage required • Separated from non-refundables	Baled	Mega fibre bags
Refillable Beer Bottles*	Domestic Brown Beer Bottles Clear/Green Cider Bottles (Growers, Okanagan)	• Fill original beer/cider cases. • 6 packs fill cardboard flat. Not recommended to use 4 packs. • Stack similar sized bottles together in same row on pallet (long-necked or short-necked). • Only one row of cardboard flats per layer – with 2 rows of 24 cases for stability. • Alternate orientation of cases with each layer to increase strength of a full pallet. • NEVER STACK LOOSE BOTTLES - Even in the middle of a layer. They will fall through or get pushed around and compromise entire pallet!	Shrink-Wrapped Pallets • The entire pallet should be wrapped twice with shrink wrap. • Maximum height of a pallet is 7 layers.	Beer cases in a larger box/tote (**ONLY** if very small volumes – less than one layer of cases on a pallet)
Glass	Liquor and Wine Bottles, Non-refillable Beer Bottles, Pop Bottles, Juice Bottles	• No sorting by size required • Bottles (unbroken) placed in boxes or plastic totes • **NO NON-REFUNDABLES**	Boxes or plastic totes • Containers holding bottles within should be small and/or light enough to lift out without breakage • **NO GLASS IN MEGA FIBRE BAGS**	
#1 Plastic (Clear and Coloured)	Pop/Water/Juice Bottles	• No sorting by size required • Separated from non-refundables	Baled	Mega fibre bags
#2 Plastic (Natural/Cloudy)	Milk Jugs, Water Jugs, Juice Containers	• Milk Jugs and ‘cloudy’ #2 (HDPE) containers ONLY	Mega fibre bags	

DEPOT SORTING REQUIREMENTS FOR BEVERAGE CONTAINERS (as of July 18, 2018 based on interview with Raven Recycling)

Beverage Container Material	Typical Containers	Sorting Instructions	Preferred Collection Procedure	Alternate Collection Option
#2 Plastic (coloured)	Milk 2 Go White Bottles, Juice Bottles	• No sorting by size required • Separated from non-refundables • Can be commingled with Tetra Paks/Waxed Cartons/Foil Packs	Mega fibre bags	Baled (if large baler capable of compaction)
Tetra Paks®/Waxed Cartons/Foil Packs	Juice Boxes, Milk and Juice Cartons, Drink Pouches	• No sorting by size required • Separated from non-refundables	Baled	Mega fibre bags
Tin	Tomato Juice and Coconut Water Cans	• Commingle with non-refundable tin	Mega fibre bags	

*Please refer to Yukon Liquor Corporation 2011 list of what is refillable. No imports/small liquor/coolers/Alaskan products.

Notes:

1. **There is a higher handling fee of 4 cents per container for non-refillable beer/cider vs. 2.5 cents per container for refillable. To ensure maximum handling fees are received by the depot, only include refillable beer/cider on pallets.**
2. Even though categories on Depot Claim Form are counted together by size (<750 ml, >750 ml) – product must be shipped separately by material type.
3. Refundable beverage containers should not be commingled with non-refundable product (provided space constraints allow).
4. Labels are not required on containers to ensure refund, nor must they be removed prior to shipping.
5. Lids do not have to be removed from beverage containers, provided containers are empty of all residual liquids.

DEPOT SORTING REQUIREMENTS FOR NON-REFUNDABLES (as of July 18, 2018 based on interview with Raven Recycling)

Material	Typical Products	Sorting Instructions	Preferred Collection Procedure	Alternate Collection Option
Glass	Jam Jars, Pickle Jars	• **No longer accepted AT ALL by Raven** • P&M - Jars (unbroken) placed in boxes or plastic totes	• Collect, crush and dispose of on-site	Boxes or plastic totes • Containers holding bottles within should be small and/or light enough to lift out without breakage • NO GLASS in mega fibre bags
White Paper	Newspaper, Flyers, Magazines, Office Paper (white),	• Separate from brown paper	Baled or in boxes On pallet if high volume (Shredded paper in mega fibre bags)	Mega fibre bags
Brown Paper	Corrugated Brown, Cardboard Boxes, Cereal Boxes	• Separate from white paper if space allows • Flattened and clean of food residue • No wax-coated cardboard	Baled •	Mega fibre bags
#1 Plastic (clear)	Produce Clamshells, Dish Detergent Bottles	• Can be commingled with other plastics if not refundable (NO FILM / STYROFOAM!) • Separate from other mixed plastics if space allows	Baled	Mega fibre bags
#2 Plastic (coloured)	Laundry Detergent Bottles	• Can be commingled with other plastics if not refundable (NO FILM / STYROFOAM!) • Separate from other mixed plastics if space allows	Baled	Mega fibre bags
Mixed Plastics (#4 - #7)	Yogurt Containers, Margarine Containers, styrofoam meat trays and all coloured styrofoam	• Can be commingled (NO FILM / STYROFOAM!)	Mega fibre bags	
Plastic Film	Grocery Bags, Bread Bags, Garbage bags, Shrink Wrap	• NOT TO BE MIXED WITH OTHER PLASTICS • No loose bags, smaller bags placed within larger bags • No tarps allowed and lumber plastic wrapping. If sufficient volumes, these can be collected in separate mega fibre bags.	Mega fibre bags	Bale if sufficient volume

DEPOT SORTING REQUIREMENTS FOR NON-REFUNDABLES (as of July 18, 2018 based on interview with Raven Recycling)

Material	Typical Products	Sorting Instructions	Preferred Collection Procedure	Alternate Collection Option
Polystyrene Foam	Styrofoam® Protective Packaging for Electronics, TVs (only white Styrofoam)	• WHITE PACKAGING STYROFOAM ONLY • NOT TO BE MIXED WITH OTHER PLASTICS • Break large protective packaging into smaller pieces • Coloured foam and meat trays to be placed in with mixed plastics	Mega fibre bags	
Tin	Soup Cans, Dog and Cat Food Cans (if not Aluminum)	• Can be commingled with BCR tin • Separate from aluminum cans	Mega fibre bags	
Tetra Pak®/Wax Cartons	Soup broth, meal supplement drinks	• Can be commingled with BCR materials	Baled if sufficient volume	Mega fibre Bags

Interim Regional Waste Management Facility Agreement

This Interim Agreement made in the Yukon Territory

Between

THE TOWN OF THE CITY OF DAWSON,
as represented by its Chief Administrative Officer
("Dawson")

and

GOVERNMENT OF YUKON,
as represented by the Director of Operations and Programs, Community Services
("Yukon")

together with the above referred to as the "Parties"

PREAMBLE

The Yukon Government (YG) and the Association of Yukon Communities (AYC) are working to modernize Yukon's management of solid waste in order to reduce risks, liabilities and cost to taxpayers as outlined in the 2016 AYC report Solid Waste Management: Vision for a Sustainable Model, and the 2018 Ministerial Committee on Solid Waste recommendations report.

Interim Regional Agreements are being struck to provide funding for municipalities to work on waste management and to ensure all residents within each regional boundary have access to a Regional Waste Management Facility. These interim agreements will be replaced by Regional Agreements once lease, liability and other operational standards are established at municipal facilities.

BACKGROUND

A. Dawson possesses a Waste Management Permit (#80-003) to operate a waste disposal facility (the "Facility") and a special waste management facility granted under the Environment Act R.S.Y. 2002, c.76, the Solid Waste Regulations OIC 2000/011, and the Special Waste Regulations, O.I.C. 1995/047 (the "Permit").

B. The Permit expires December 31, 2023.

C. Dawson operates a municipal landfill in accordance with the Permit on Yukon government land set aside for this purpose by Yukon at and as further described on the map attached as Schedule A (the "Regional Waste Management Facility").

D. Yukon wishes to ensure use of the Regional Waste Management Facility by nearby unincorporated users within each Regional Boundary (see Schedule B).

E. The Parties are working together to regularize the use and occupation of the Regional Waste Management Facility by raising title to the land then leasing it (if not already titled) to Dawson and by making a final regional agreement with Dawson about their operating of the Regional Waste Management Facility and the provision of these municipal services to the region.

F. The Parties recognize that the process to subdivide the landfill site from the YG reserve area is a slow process. This interim agreement is intended as a bridge agreement to facilitate the flow of compensation funds from YG Community Services to Dawson.

G. The interim agreement will provide supportive funding for the municipality to facilitate the transition to a Regional Waste Management Facility.

H. For greater clarity the Parties are committed to and in the process of developing overarching regional solid waste management agreements which will include:

a. Gates, staff, and tipping fees at all facilities.

b. Lease agreement.

c. Liability agreement reflecting an equal cost sharing of closure and post closure costs. (50% each)

d. Financial compensation by YG to the municipalities for the acceptance of residential waste from regional residential users.

e. YG assistance with environmental issues that may arise from the operation of a Solid Waste Management Facility.

AGREEMENT

Now therefore, the Parties agree as follows:

1. DEFINITIONS

1.1. In this Interim Agreement;

"**Designated Materials**" means those materials for which Yukon collects a point-of-sale or manufacturing fee in relation to waste disposal or recycling and as further defined under the Environmental Act, specifically the Designated Materials Regulation and the Beverage Container Regulation. These designated materials include tires, electronic waste, and beverage containers.

"**Special Waste**" has the same meaning as found in the Environmental Act and the Special Waste Regulations, and includes residential products such as waste oil accepted under Community Services' Household Hazardous Waste Program.

"**Tipping fees**" means fees charged by the Regional Waste Management Facility to all facility users per unit, or per unit of volume or mass, for waste disposed of at the facility.

2. Regional Waste Management Facility Operations & Permitting

2.1. Tipping Fees

2.1.1. Dawson will work to develop a waste management bylaw that establishes sorting requirements and tipping fees at the Regional Waste Management Facility.

2.1.2. Dawson agrees that all residential users of the Regional Waste Management Facility will be charged the same tipping fees. Some variation from one municipality to the other is expected due to individual operation practices.

2.2. Safe operations

2.2.1. Dawson will carry out the operation and maintenance of the Regional Waste Management Facility safely, in compliance with all relevant legislative and regulatory requirements and with due care to ensure that it does not cause any injury.

2.3. Permits

2.3.1. Dawson is responsible for all permitting and license application requirements associated with the operation and maintenance of the Regional Waste Management Facility and will ensure compliance with relevant legislative requirements;

2.3.1.1. its obligations as a proponent for any environmental assessments;

2.3.1.2. renewal of the Permit; and

2.3.1.3. its obligations under the Workers' Safety and Compensation Act S.Y. 2021, c.11.

2.4. Not a YG operation

2.4.1. Dawson acknowledges that it has sole responsibility for the

operation and maintenance of the Regional Waste Management Facility including controlling access to the site.

3. FUNDING

3.1. Yukon will provide a contribution of $70,000 (based on 50% of the 583 unincorporated users plus 20% x $200pp) to offset the costs associated with providing waste disposal services to residents outside of the municipality of Dawson as per the regional boundary identified in Schedule B and to assist with operation and maintenance costs of the Regional Waste Management Facility. (Note: Municipalities that have already implemented the requirements of fencing, gating, facility attendants, tipping fees, and with the Solid Waste Facility Permit in place will receive 100% of the eligible compensation amount.)

3.2. In the event that this Agreement is extended past December 31, 2023, a review of the eligible regional population will be carried out by AYC and the revised population numbers must be reviewed and agreed to by Community Services and upon consensus, used to calculate the future compensation amount. As there is no reliable source of information on the regional population, AYC will use at least two sources and present an average regional population for each municipality.

3.3. The payment will cover the period from January 1, 2023, to December 31, 2023 (12 months).

3.3.1. This contribution will be paid in one payment within 60 days of signing the agreement.

3.3.2. YG currently reimburses Municipalities for costs associated with the testing of monitoring wells installed in and around the landfill site. The practice will continue until a Regional Waste Management Facility Agreement has been reached. The parties will negotiate the final well monitoring arrangement and include as part of the Regional Waste Management Agreement.

3.4. Yukon will arrange and pay for the pick-up, transport from the Regional Waste Management Facility and processing or disposal of:

3.4.1. any Designated Materials; and

3.4.2. Non-commercial Special Waste including waste oil.

3.5. The obligation of YG to make any payments to under this Interim Agreement is subject to the following:

3.5.1. the Financial Administration Act (Yukon);

3.5.2. money being appropriated by the Legislature for the purpose of this Interim Agreement; and

3.5.3. abiding by the terms and conditions of this Interim Agreement.

4. TERM

4.1. This Interim Agreement is in force from January 1, 2023 to December 31, 2023, and may be extended annually upon agreement by both parties until such time as it is replaced by a Regional Waste Management Agreement.

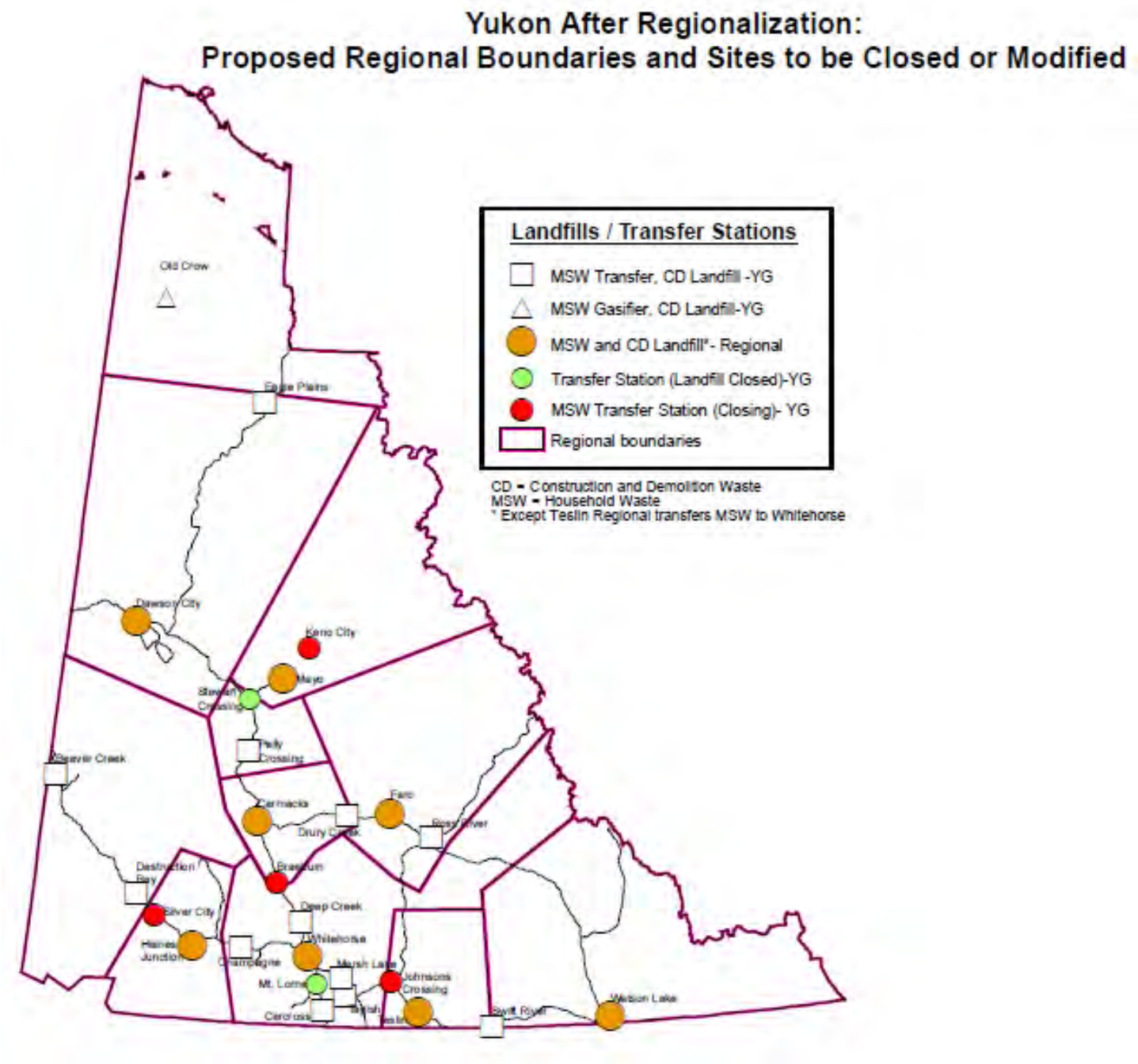
The Parties have executed this Interim Agreement by their Duly Authorized Officials:

GOVERNMENT OF YUKON by the Director of Community Operations:	)	
David Albisser	)	Date Signed
TOWN OF THE CITY OF DAWSON by the Chief Administrative Officer:	)	
~~CAO David Henderson~~ A/CAO, Paul Robitaille	)	Dec 20, 2023 Date Signed

Schedule A

Map of the Location of the Solid Waste Management Facility

Schedule B


Yukon After Regionalization:
Proposed Regional Boundaries and Sites to be Closed or Modified
Landfills / Transfer Stations
MSW Transfer, CD Landfill -YG
MSW Gasifier, CD Landfill-YG
MSW and CD Landfill* - Regional
Transfer Station (Landfill Closed)-YG
MSW Transfer Station (Closing)- YG
Regional boundaries
CD = Construction and Demolition Waste
MSW = Household Waste
* Except Teslin Regional transfers MSW to Whitehorse
Old Crow
Eagle Plains
Dawson City
Keno City
Mayo
Stewart Crossing
Beaver Creek
Carmacks
Faro
Ross River
Destruction Bay
Braeburn
Silver City
Deep Creek
Whitehorse
Haines Junction
Marsh Lake
Mt. Lorne
Johnsons Crossing
Carcross
Watson Lake

Dawson City Chamber of Commerce
1102 Front Street
Dawson City, YT
Y0B 1G0

The Town of the City of Dawson
1336 Front Street
Dawson City, YT
Canada
15 January 2024

Dear Mayor and Council,
On behalf of the Dawson City Chamber of Commerce (DCCC), we are writing to express our concerns regarding the recent Waste Management proposal put forth by the town. We have been approached by a large number of business owners and community members who feel that our Mayor and Council are not taking their objections seriously without the weight of a united voice to represent the business sector. Therefore, we have taken the time to connect with local business operators and have outlined their concerns below:

1. The business community is already struggling with capacity, and we foresee this initiative being problematic for businesses that lack significant human or other resources.

Implementing this proposal would require businesses to allocate additional resources to manage their waste, including hiring someone to handle waste disposal and maintaining a vehicle for transportation. This would place an unnecessary burden on businesses that are already facing numerous challenges.

2. Further to the above point, we urge the City to assess the impact this will have on our small businesses. Many small businesses do not produce a significant amount of waste, and it would be more appropriate to develop a program based on quantity, rather than affecting all commercial properties. Like other jurisdictions, the City should consider a 'Producer Pay Policy' or, better yet, create exemptions for businesses with net profits under a certain amount (i.e., $100,000).

3. Unlike larger cities such as Whitehorse, our commercial district in Dawson City is centralized. Therefore, the pick-up process for waste disposal is not significantly more taxing on the City in terms of time and distance. We acknowledge that the frequency of pickups is taxing on your staff and equipment, but we urge you to evaluate removing waste pick-up entirely. Our commercial sector is not only important for our residents but also serves as a major driver for our tourism sector, contributing significantly to the economic impact and growth of our town. It is crucial to consider the effect that this proposal will have on our local businesses' ability to operate regularly and consistently.

4. Eliminating waste pick-up for commercial businesses will likely impact their ability to maintain high standards of health and safety due to capacity limitations. Forcing businesses to manage waste disposal entirely on their own could lead to potential health hazards and sanitation issues. Additionally, this initiative may discourage businesses from operating regularly, consistently, or even at all, which would have a negative impact on our local economy.

5. Small business operators who work from home, as well as residents in the Dome Subdivision, have expressed concerns about bi-weekly garbage pick-up. They are worried that the presence of garbage for

an extended period may attract wildlife to their homes and businesses. Alternatively, they may face difficulties in storing garbage bags in their homes until the day before garbage collection.

6. While other jurisdictions may have successfully implemented similar waste management plans, it is important to note that Dawson City's business sector differs significantly from that of Whitehorse and Watson Lake. Currently, there are no independent contractors available to provide waste pick-up services in Dawson City. This means that businesses will have no other option but to transport their own waste. Moreover, businesses that choose to haul their waste will be subject to tipping fees, adding an additional financial burden to the non-residential community that is already taxed at a higher rate

The DCCC acknowledges the City's objective of creating long-term, fiscally responsible decisions. However, we strongly believe that there is a better solution that will address the concerns raised by the business community. We respectfully urge the City to enhance its transparency regarding this plan. We kindly request that the community be provided with a specific number of properties and a comprehensive list of businesses that will be impacted by this proposed change of public service. This information will foster a clearer understanding. among residents and promote an informed and before proceeding with the proposed Waste Management plan.

As you are aware, the DCCC was heavily affected by the Covid-19 pandemic and is currently. undergoing some operational restructuring. Our apparent silence on this matter up until this point speaks to the current capacity of our business sector as it tries to rebuild after the challenges of the last several years.
Thank you for your attention to this matter. We look forward to engaging in further discussions. and finding a mutually beneficial solution.

Sincerely,
April Gaudet
President, Dawson City Chamber of Commerce

City of Dawson
Report to Council

Agenda Item	Change Order - Administration Building HVAC Upgrade
Prepared By	Asset & Project Manager – Public Works
Meeting Date	February 20th, 2024
References (Bylaws, Policy, Leg.)	- Procurement Policy - Yukon Boiler and Pressure Vessels Act
Attachments	TPA: T00022686

X	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council award the change order #01 for the Administration Building HVAC Upgrade contract between the City of Dawson and Borealis Fuels & Logistics for $142,283.68 plus GST with funding to be sourced from the Facilities Reserve fund

Executive Summary

The existing contract between the City of Dawson and Borealis Fuels & Logistics is for $480,585.00 plus GST for the supply and installation of four new propane boilers at the Firehall/Administration building to replace the aging existing fuel oil boilers.

Including the change order, the new contract value would be $622,868.68. The change order is critical in order to complete the project prior to the funding deadline.

The change order request was issued from an increased scope of work for electrical engineering, equipment, labour and commissioning from revised issue for construction mechanical drawings and unforeseen existing building conditions.

Background

A payment agreement (TPA: T00022686) with the Yukon Government Energy Branch has been secured for a total of $621,625.00 and expires on March 31st, 2024. There is $479,215.59 left in the TPA agreement for this boiler replacement upgrade. The TPA specified replacing the boilers with propane boilers/fuel switching upgrade (ECM 15 of the Administration building energy audit).

The TPA included energy upgrades to the PW and Admin Buildings.

An RFP released in June 2023 for the boiler replacement, a single bid was submitted by Fireweed Plumbing & Heating LTD for $1,467,889.00 plus GST to complete the work. A second RFP was released in August 2023 with a reduced scope of work resulting in three bids: Fireweed Plumbing & Heating submitted a bid totalling $931,593.00 plus GST for the work, Budget Plumbing & Heating inc. submitted a bid totalling $842,136.62 plus GST for the work, and Borealis Fuels & Logistics submitted a bid totalling $480,585.00 plus GST for the work.

Council awarded the contract to Borealis Fuels & Logistics on October 4th, 2023.

Discussion / Analysis

The change order request was submitted to the City of Dawson on January 26th, 2024 totalling $148,063.68. The change order was reduced to $142,283.68.

The change order was submitted due to the following changes to the contract agreement:

- Supply and installation of (1) Axiom SF100 hydronic feeder including additional piping
- Revised Electrical Engineering Issue for Construction drawings
- Increased scope of work, equipment, labour, commissioning and expediting procurement of required materials for electrical components including: upgrading boiler room breaker amperage, additional propane vaporizer,
- Increased scope of work, equipment, labour for revised controls schematics.

The Good Energy Program is primarily supplying the capital funding for the boiler replacement at the Administration building.

The successful bid for the boiler work plus the identified change order, remains significantly lower than the other bids

Fiscal Impact

It is recommended that funding for this change order be sourced from the Facilities reserve and that this be reflected in the 2024 Capital Budget. The facilities reserve stands at approx. $2,233,478.

Next Steps

Project completion by March 31st, 2024.

Approved by	Name	Position	Date
	David Henderson	CAO	February 15th, 2023

Transfer Payment Agreement – T00022686

Project Funding for
Community (IEEP) & Good Energy program
Community Building Energy Upgrades

THIS AGREEMENT made at Whitehorse, Yukon on **31st day of August, 2021**.

BETWEEN:

> **The Government of Yukon**, as represented by the Minister of Energy, Mines & Resources ('YG')

AND:

> **City of Dawson**, a Municipal Government under the laws of Yukon with an address of **P.O. Box 308 , Dawson, Yukon Territory, Y0B 1G0**, as represented by the **Chief Administrative Officer** (the 'Recipient')

being collectively the parties (the 'Parties') to this Transfer Payment Agreement (the 'Agreement').

WHEREAS

A. The Recipient has submitted a proposal for one-time financial assistance of an endeavour called **City of Dawson – Energy Upgrades (City of Dawson Administration Building & Recreation Centre)** which qualifies for support under the ***Community – Institutional Energy Efficiency Program (Community IEEP)* & *Good Energy* program**.

B. YG wishes to provide the Recipient with financial assistance to support this endeavour.

NOW THEREFORE in consideration of the mutual promises contained in this Agreement, the Parties agree as follows:

1.0 This Agreement

This Agreement, together with all the Schedules and appendices, shall be read collectively and constitutes the whole Agreement between the Parties, and no oral or written representations on its subject matter are valid unless incorporated in this Agreement.

2.0 Definitions and Interpretation

2.1 In this Agreement:

'Budget' means the total amount of revenues and expenses, including any 'in-kind' and 'own-resources' assistance, budgeted for the Project and detailing the use of Funds as set out in Schedule B;

'Eligible Expenditures' means:

a) purchase cost of the eligible equipment;
b) the costs of labour for the installation of the eligible equipment;
c) costs to dispose of or decommission the replaced equipment;
d) costs of required inspections of the project;
e) shipping, delivery, duties and other costs applicable to the delivery of equipment to the facility;
f) GST (except when applicant is GST exempt); or
g) the cost of a commercial-grade energy audits provided the recommended eligible measures are implemented.

'Financial Report' means a report of all actual and budgeted Project revenues and expenses;

'Fiscal Year' means the year commencing on April 1st in one calendar year and ending on March 31st in the following calendar year;

'Funds' means the financial assistance provided by YG to the Recipient pursuant to this Agreement;

'Ineligible Expenditures' means:

a) any internal costs of the applicant, including costs of the applicant's labour, service, administration or overhead;
b) financing costs of the applicant;
c) related insurance costs of the applicant;
d) costs associated with post-installation maintenance or service contracts;
e) costs of spare parts, spare equipment or other inventories;
f) purchase or lease of tools for installation of equipment; or
g) other costs at the discretion of Energy Branch.

'Project' means the activities and work plan as more fully described in Schedule A;

'Project Report' means a report of Project activities and deliverables;

'Records' means invoices, receipts, vouchers, bank statements and all transactional information pertaining to incurred expenses and commitments made by the Recipient or its agents in carrying out the Project and the obligations of this Agreement; and

'Terms of Payment' means the terms of payment as set out in Schedule C.

2.2 In this Agreement, words importing a singular number shall include the plural and vice versa, as required by the context.

2.3 In this Agreement, headings are inserted only for convenience of reference and shall not affect its construction or interpretation.

3.0 The Project

3.1 The Recipient shall use the Funds to carry out the Project in accordance with Schedules A and B.

4.0 Term

4.1 The term of this Agreement shall be from **the date of execution** to **November 30, 2022**. Despite the Term, YG also agrees that it shall pay expenses identified in the Budget that were incurred by Recipient from August 21, 2020 to the date of the execution of this agreement.

5.0 Provision of Financial Assistance

5.1 YG shall provide the Recipient with Funds for the purpose of the Project in an amount not to exceed **$621,625.00**.

5.2 YG shall pay the Funds to the Recipient in accordance with the Terms of Payment.

5.3 The obligation of YG to provide the Funds is subject to the following:

5.3.1 the *Financial Administration Act* (Yukon);

5.3.2 money being appropriated by the Legislature for the purpose of this Agreement;

5.3.3 the Recipient abiding by the terms and conditions of this Agreement.

5.4 The Recipient warrants that it has declared all amounts owing to YG and that the Recipient is not in default of any payment schedule in respect of the amounts owing to YG.

6.0 Financial Accountability

6.1 In respect of the Funds, the Recipient shall:

6.1.1 incur expenses only for the purposes of this Agreement;

6.1.2 allocate the Funds received in accordance with this Agreement;

6.1.3 submit to YG three Interim and one Final Financial Reports which will include the following;

6.1.3.1 A written report, which shall contain a description of all expenditures, activities, and required documentation including contractor progress claims, invoices, receipts, technical specifications, and inspection reports related to the Project.

6.1.4 in the case of an interim Financial Report for the period **August 21, 2020** to **September 30, 2021**, submit it to YG on or before **October 31, 2021**; and

6.1.5 in the case of an interim Financial Report for the period **October 1, 2021** to **February 28, 2022**, submit it to YG on or before **March 31, 2022**; and

6.1.6 in the case of an interim Financial Report for the period **March 1, 2022** to **May 31, 2022**, submit it to YG on or before **June 30, 2022**; and

6.1.7 in the case of a final Financial Report for the term of this Agreement, for the period **July 1, 2022** to **October 31, 2022**, submit it to YG on or before **November 30, 2022**, such final Financial Report, to be accompanied as outlined in 6.1.3.1 above.

6.1.8 The Recipient shall at anytime, upon request by YG, submit an interim, up-to-date report as described in 6.1.3.1, which shall apply to a time period determined by YG. The interim report, shall be in a form acceptable to YG, and delivered within 30 days of YG's request. For greater certainty, submitting an interim report under this section does not relieve the Recipient from its obligation to submit any reports under sections 6.1.3 to 6.1.7.

6.2 YG shall not be obliged to pay any bills or other costs incurred during the term of this Agreement that are submitted more than 60 days after the expiry or termination of this Agreement.

6.3 Any Funds provided through this Agreement that are:

6.3.1 not expended at the expiry or termination of this Agreement;

6.3.2 not properly expended for the purposes of this Agreement; or

6.3.3 in excess of the reduced amount of Funds under 7.2

shall constitute a debt due to YG and shall, upon request by YG, be repaid immediately by the Recipient to YG. Any interest owing on this debt is calculated from the date the amount became repayable.

7.0 Reduction of the Funds

7.1 The Recipient shall immediately advise YG in writing if:

7.1.1 the Recipient receives additional payments or, excepting volunteer time, any other form of contribution, gift, or grant in respect of the Project other than those described in the Budget; or

7.1.2 the Recipient or any other contributor reduce their contribution to the Project.

7.2 If it comes to the attention of YG that the Recipient received additional assistance referred to in 7.1, then YG may reduce the Funds by such amount as it may decide.

7.3 YG shall give the Recipient 30 days written notice before reducing the Funds.

7.4 The reduced amount of Funds under 7.2 shall be the amount of financial assistance for the purposes of this Agreement.

8.0 Project Reporting Requirements

8.1 The Recipient shall:

8.1.1 submit to YG

8.1.1 in the case of an interim Project Report for the period **August 21, 2020** to **September 30, 2021**, submit it to YG on or before **October 31, 2021**; and

8.1.2 in the case of an interim Project Report for the period **October 1, 2021** to **February 28, 2022**, submit it to YG on or before **March 31, 2022**; and

8.1.3 in the case of an interim Project Report for the period **March 1, 2022** to **May 30, 2022**, submit it to YG on or before **June 30, 2022**; and

8.1.4 in the case of an interim Project Report for the period **July 1, 2022** to **October 31, 2022**, submit it to YG on or before **November 30, 2022**; and

8.1.5 in the case of a final Project Report for the term of this Agreement, submit it to YG on or before **November 30, 2022**.

9.0 Audit

9.1 The Recipient shall:

9.1.1 acknowledge that YG or its agents may audit any or all of the Records, including financial records of the Recipient or its agents, whether directly or indirectly related to this Agreement, as is necessary to satisfy YG that the objectives and activities of the Project have been carried out and that the Funds have been spent in accordance with the terms of this Agreement;

9.1.2 keep all Records for 2 years after the expiry or termination of this Agreement, unless otherwise notified in writing by YG that such information and documents are no longer needed;

9.1.3 make such Records available for audit by YG upon reasonable notice, and permit YG to audit and inspect the Records, and to take extracts from and make copies of the Records;

9.1.4 provide reasonable facilities to YG for such audits and inspections, and provide YG with all information necessary to understand the Records;

9.1.5 immediately reimburse YG any overpayments or non-allowed expenses, as determined by the audit; and

9.1.6 maintain any personal records in respect of this Agreement in an appropriate and confidential manner.

10.0 Access to Staff, Records and Premises

10.1 Upon reasonable notice, the Recipient shall provide YG with access to the Recipient's staff, Records and premises for purposes related to monitoring, reviewing or auditing the activities undertaken in relation to this Agreement, and related to the evaluation of the effectiveness or efficiency of the Project.

11.0 Evaluation

11.1 The Recipient shall maintain, in a manner acceptable to YG, case files and other data that may be required for on-going monitoring, review and evaluation of the Project.

11.2 The Recipient shall cooperate with YG in the event that YG undertakes, at its own expense, any evaluation studies in respect of this Project, and shall provide copies of existing information, data, and statistics that YG reasonably requires to carry out such evaluation studies.

12.0 Communication and Public Acknowledgement

12.1 Any information released or announced to the public in any form by the Recipient in respect of the Project shall adequately acknowledge the contribution made by YG.

12.1.1 Acknowledgements of funding by Recipient can be made with the following statement:

"The energy efficiency upgrades completed to [insert name of building] were funded by the Government of Yukon's Good Energy program and the Government of Canada's Low Carbon Economy Fund."

12.2 Any information released or announced to the public in any form by YG in respect of the Project shall adequately acknowledge the contribution made by the Recipient.

12.3 Recipients shall make available one or more photographs and a description of the work in progress or of the completed project, for use by the Parties in social media and other digital individual Communications Activities. By sending the photograph, the Recipient grants the Parties permission to use its photographs. Photo credits will acknowledge recipient.

12.4 Recipients will provide representatives access to project to take pictures and or video and grants YG permission to use in social media and other digital individual Communications Activities and other promotional activities.

12.5 Unless otherwise agreed by Canada, Yukon and the Recipient shall produce and install a physical sign, as appropriate, to recognize the funding of each Party, and the Recipient as applicable, at each project site.

12.5.1 Signage should be installed at the Project site(s) no less than one (1) month prior to the start of work, be visible for the duration of the Portfolio component, and remain in place until one (1) month after work is completed and the infrastructure is fully operational or opened for public use.

12.5.2 Signage should be installed in a prominent and visible location that takes into consideration pedestrian and traffic safety and visibility.

13.0 Legal Relationship

13.1 Nothing in this Agreement shall create the relationship of principal and agent, employer and employee, partnership or joint venture between the Parties.

13.2 The Recipient shall not make any representation that the Recipient is an agent of YG and shall ensure that any officers, employees, contractors, members, agents or successors of the Recipient do not make any representation that could reasonably lead any member of the public to believe that the Recipient, its officers, employees, contractors, members, agents or successors are agents of YG.

14.0 Liability

14.1 The Recipient shall use due care in carrying out the Project and in performing its obligations under this Agreement to ensure that it does not cause any injury (including death) to persons, damage or loss to property or infringement of rights.

14.2 YG shall not be liable for any action or inaction of the Recipient or any of the Recipient's officers, employees, contractors, members or agents during the performance of the Project.

14.3 YG shall not be liable for any injury to the Recipient, its officers, employees, contractors, members or agents or for any damage to or loss of property of the Recipient, its' officers, employees, contractors, members or agents caused by, arising from, or in any way related to the performance of this Agreement.

15.0 Conflict of Interest

15.1 No Member of the Yukon Legislative Assembly shall be admitted to any share or part of this Agreement or to any benefit arising from it, unless such benefits are available to the population at large.

15.2 No official or employee of the Government of Yukon shall be admitted to any share or part of this Agreement or to any benefit arising from it without the written consent of the official's or employee's Minister, unless such benefits are available to the population at large.

15.3 No current or former public servant or public officer holder to whom the *Conflict of Interest (Members and Ministers) Act*, Part 13 of the *Public Service Act*, the *Cabinet and Caucus Employees Act*, or Policy 3.39 of the Yukon Government General Administration Manual applies, shall derive any direct benefit from this Agreement, including any employment, payment or gifts, unless the provision and receipt of such benefits is in compliance with such legislation and policy.

16.0 Intellectual Property Rights

16.1 Any material produced by the Recipient in carrying out its obligations under this Agreement shall vest in and remain the property of the Recipient, unless otherwise agreed. The Recipient shall inform YG as to what material, if any, has been produced under this Agreement.

17.0 Confidentiality

17.1 YG and the Recipient shall both protect any confidential information according to applicable federal, provincial or territorial legislation.

17.2 YG and the Recipient shall use all reasonable efforts to protect confidential information from disclosure to third parties. Such efforts shall be in accordance with the *Access to Information and Protection of Privacy Act* (Yukon).

17.3 The Recipient shall ensure that all personal information to which the Recipient or its officers, employees, contractors, members, agents or successors become privy, shall be treated as confidential and shall not be disclosed without the written consent of the individual to whom the information relates.

17.4 YG shall ensure that all personal information to which YG, its officers, employees, contractors and agents become privy shall be treated as confidential in accordance with the *Access to Information and Protection of Privacy Act* (Yukon).

18.0 Indemnification

18.1 The Recipient shall save harmless and fully indemnify YG, its officers, employees, contractors and agents from and against all claims, liabilities, and demands arising directly or indirectly from:

18.1.1 any act, omission, or negligence of the Recipient, its officers, employees, contractors, members, agents or successors arising in connection with this Agreement;

18.1.2 any environmental impact or environmental liability arising from the Recipient's performance of this Agreement;

18.1.3 any breach of this Agreement by the Recipient, its officers, employees, contractors, members, agents or successors unless such breach is a direct result of a breach by YG of its obligations under this Agreement; and

18.1.4 any injury (including death) to persons, damage or loss to property, infringement of rights, or any claims, demands, or liabilities whatsoever that may arise directly or indirectly out of the performance or non-performance (in whole or in part) of the Recipient's obligations under this Agreement;

18.2 The above indemnity shall include all reasonable legal costs.

18.3 For greater certainty, sections 18.1 and 18.2 shall survive after the expiry or termination of this Agreement.

19.0 Assignment

19.1 This Agreement shall not be assigned, transferred, subcontracted or otherwise delegated by the Recipient without the prior written consent of YG. Any attempt to assign, transfer, subcontract or otherwise delegate any of the rights, duties, or obligations of this Agreement without written consent is void and of no effect

20.0 Amendment

20.1 Any amendments to this Agreement shall be made in writing and executed by both Parties.

21.0 Successors

21.1 This Agreement is binding upon the Parties and their respective administrators and successors.

22.0 Severability

22.1 If any of the terms or provisions of this Agreement are found invalid or unenforceable in whole or in part, then the remaining terms and provisions shall continue in full force and effect.

23.0 Breach or Non-fulfillment

23.1 The Recipient shall give YG notice of the breach or non-fulfillment of any provision of this Agreement.

23.2 The failure of the Recipient to give notice to YG of the breach or non-fulfillment of any provision of this Agreement shall not constitute acceptance by YG of:

23.2.1 the breach or non-fulfillment;

23.2.2 a further breach or non-fulfillment of the same provision; or

23.2.3 the breach or non-fulfillment of any other provision of this Agreement.

24.0 Termination

24.1 Either Party may terminate this Agreement without cause by giving the other Party 30 days written notice of its intention to terminate.

24.2 The Recipient shall, within 30 days of giving or receiving notice of intention to terminate, discharge any outstanding obligations under this Agreement.

24.3 In addition to any default that would at law entitle YG to terminate the Agreement, any of the following shall also constitute a default by the Recipient:

24.3.1 the Recipient fails to perform or comply with any term, condition or obligation under this Agreement;

24.3.2 the Recipient, in support of its application for funding, or proposal, or in connection with this Agreement, has made materially false or misleading representations or statements, or provided materially false or misleading information to YG;

24.3.3 the Recipient fails to make progress so as to jeopardise the success or outcome of the Project in accordance with this Agreement;

24.3.4 in the opinion of YG, there is a detrimental change in the Recipient's ability to carry out its responsibilities under this Agreement;

24.3.5 the Recipient is no longer in good standing or ceases to operate;

24.3.6 the Recipient becomes bankrupt or insolvent, goes into receivership or takes the benefit of any statute being in force from time to time relating to bankrupt or insolvency debtors; or

24.3.7 the Recipient is dissolved, or an order is made or resolution passed for the winding up of the Recipient.

24.4 If, in the opinion of YG, an event of default occurs, then YG may, with prior notice to the Recipient and without restricting any remedies otherwise available:

24.4.1 arrange, under specific terms and conditions, for the Project to be completed or continued by another recipient;

24.4.2 require that the Recipient takes such reasonable actions as may be necessary to remedy the event of default;

24.4.3 audit or cause to have audited the accounts and Records of the Recipient;

24.4.4 direct the Recipient to repay forthwith to YG all or part of the Funds paid under this Agreement;

24.4.5 withhold all or part of the Funds payable under this Agreement; or

24.4.6 terminate the Agreement and YG's obligation to provide any further Funds to the Recipient.

24.5 YG may exercise any one or more of the remedies set out in 24.4.

25.0 Obligations Surviving Termination

25.1 All obligations of the Recipient shall expressly, or by their nature, survive expiry or termination of this Agreement until, and unless, they are fulfilled, or by their nature, expire.

26.0 Disposal of Assets

26.1 The Recipient may be required to reimburse YG, any funds received from YG for the Eligible Expenditures of the Project if at any time within five years from the end date of this Agreement the Recipient sells, leases, or otherwise disposes of, directly or indirectly, any Asset purchased, acquired, constructed, rehabilitated or renovated, in whole or in part, as a result of or in connection with this Agreement, other than to Canada, Yukon, a local government, or with YG's consent.

27.0 Notice

27.1 Any written communication, report, or notice required pursuant to this Agreement may be given by personal delivery to the undersigned, or by fax or by prepaid mail to the addresses set out below. A notice shall be considered to be received if delivered personally on the date of delivery; if delivered by fax, two business days after transmission; or if delivered by mail, three business days after mailing.

If to YG:

Matthew Ooms, Manager, Energy Programs
Energy, Mines & Resources
Government of Yukon
PO Box 2703 (EMR-206)
Whitehorse, Yukon Y1A 2C6

matthew.ooms@gov.yk.ca
Tel: (867) 393-7062 (office)

If to the Recipient:

Brodie Klemm, Asset & Project Manager
City of Dawson
1336 Front Street (2nd Floor above the Fire Hall)
Box 308
Dawson, Yukon Territory
Y0B 1G0

projectmanager@cityofdawson.ca
Tel: (867) 993-7400 ext. 304

28.0 Signing of this Agreement

28.1 Each Party represents and warrants that it has full power and authority to enter into, perform, and execute this Agreement, and that each person signing this Agreement on behalf of a Party has been properly authorized and empowered to enter into and execute this Agreement.

29.0 Counterparts

29.1 This Agreement may be executed in counterparts, each of which will be considered an original, and all of which will constitute one and the same document.

IN WITNESS WHEREOF the Parties have executed this Agreement by their duly authorized representatives on the date first written.

GOVERNMENT OF YUKON
as represented by the
Minister,
Energy, Mines and Resources

In the presence of

Brenda Pilatzke-Vanier
(name and signature of witness 19 years of age or older)

Minister John Streicker

20-October-2021
Date

City of Dawson
as represented by the
Chief Administrative Officer

In the presence of

Elizabeth Grenon
(name and signature of witness 19 years of age or older)

Cory Bellmore

24.09.2021
Date

Schedule A

Project

A1.0 Deliverables

The purpose of this *Community Institutional Energy Efficiency Program (IEEP)* & *Good Energy* project is the implementation of energy upgrade measures (EUM's) recommended in the recently completed ASHRAE Level 2 Energy Audit Reports conducted by 3D Energy Ltd. (APPENDIX A) and Recommissioning Reports (Section 5 Recommendations) by FPMBC Ltd. (APPENDIX B) of the following City of Dawson buildings:

1. **City of Dawson – Administration Building**
2. **City of Dawson – Public Works Building**

The objective of these Energy Upgrades is to reduce the greenhouse gases emitted through the operations of the building owned by the City of Dawson (listed above). Implementation of these Energy Upgrades will also result in reduced operational costs for the City as the owner/operator of these buildings.

The complete list of Energy Conservation Measures (ECM's) to be implemented is outlined in the list below and in the Budget (Schedule B).

NOTE: Energy Conservation Measures (ECM) numbers in brackets are for reference back to the Energy Audit completed for this building – ECM's with * are NEW items that were not covered in the Energy Audit but are being reviewed by Energy Branch to confirm eligibility.

1. **Dawson Administration Building** – Energy Upgrade Description to be completed:

    - **Door Seals and Sweeps** (ECM 1)
    - **Int. Lighting Upgrade (incl. Exit signs)** – ECM 3)
    - **Propane Boiler** (Fuel-Switching fr. Oil) **Upgrade** (ECM 15)
    - **Sensors & Controls** (ECM 4, 9, 10, 14)
    - **Self-Sensing Pumps** (ECM 6)
    - **Control Optimization/Recommissioning** (ECM 8)

2. **Dawson Public Works Building** – Energy Upgrade Description to be completed:

    - **Door Seals and Sweeps** (ECM 1)
    -
    - **Air Curtain** (1 instead of 3 units) - (ECM 8*)
    - **Int. Lighting Upgrade (incl. Exit signs)** – ECM 4)
    - **Furnace Upgrades** (ECM 3)
    - **Unit Heater Upgrade** (ECM 5)
    - **Control Optimization/Recommissioning** (ECM 9*)

Project & Financial Reports

- **Interim Project & Financial Reports #1** along with updated Work Plan for proceeding on remaining Energy Upgrade Measures *(Furnace & other Mechanical upgrades)* upon completion of Part 1 of Energy Upgrade Measures *(Recommissioning/ Controls Optimization Site Visit & Report & LED Lighting Upgrades).*

  Report #1 due by: **October 31, 2021**

- **Interim Project & Financial Reports #2** along with updated Work Plan for proceeding on remaining Energy Upgrade Measures *(Insulation, other inside ECM's & Controls),* upon completion of ECM's completed for Part 2 of Energy Upgrade Measures.

  Report #2 due by: **March 31, 2022**

- **Interim Project & Financial Reports #2** along with updated Work Plan for proceeding on remaining Energy Upgrade Measures *(Insulation, other inside ECM's & Controls),* upon completion of ECM's completed for Part 2 of Energy Upgrade Measures.

  Report #3 due by: **June 30, 2022**

- **Final Project & Financial Reports** upon completion of outstanding Energy Upgrade Measures and Energy Branch Site Visit.

  Final Project & Financial Reports are due by: **November 30, 2022**

A2.0 Work Plan

A2.1 The Recipient shall carry out the Project in accordance with the work plan as initially approved in writing by YG and attached to Schedule A in the table below:

City of Dawson – Work Plan Timeline	**Targeted Completion Date**
Audit Review to confirm City of Dawson support & Gov. Yukon-Energy Branch support (Community IEEP & Good Energy)	*August 21, 2020*
1. **Transfer Payment Agreement (TPA) signed**	September 21, 2021
2. C. of Dawson proceeds on Energy Upgrades (pt. 1) *(Door Seals/Sweeps, LED Lighting, RCx/Control Optim. Site Visit/Report)* ADMIN – ECM's 1,3, & 8 *PW – ECM's 1,4, 9**	August 2020 – August 2021
3. **Check-in meeting #1** with C. of Dawson *(to discuss remainder of Energy Upgrades & any changes in work plan)*	*Aug./Sept. 2021*
4. **Interim Project & Financial reports #1** completed by C. of Dawson & sent to Energy Branch	**October 31, 2021**
5. **Completion of Energy Upgrade Measures (pt. 2)** *ADMIN – Controls & RCx ECM's (4,9,10,14, & 8), HVAC (Pumps & Boiler) ECM's 6 & 15 & Envelope ECM's Roof Insulation (17)* *PW – HVAC (Furnace, Unit Heater, Controls) ECM's 3,5,9* (RCx/ Controls Optim.) & ECM's 8* (Air Curtain), 6 (Roof Insulation).*	September – December 2021
6. ***Energy Branch site visit #1*** *to see completed energy upgrades (overlap with final Contractor work day if possible)*	*Sept./Oct. 2021*
7. **Interim Project & Financial reports #2** completed by C. of Dawson & sent to Energy Branch	**March 31, 2022**
8**. Implementation of remaining ECM's (pt. 3)** *any remaining ECM's to be completed in cold weather months, or pushed to 2022 if warm weather components.*	January – May 2022
9. **Check-in meeting #2** with C. of Dawson *(to discuss remainder of Energy Upgrades & any changes in work plan)*	*January 2022*
10. ***Energy Branch site visit #2*** *to see completed energy upgrades (overlap with final Contractor work day if possible)*	*March or April 2022*
11. **Interim Project & Financial reports #3** completed by C. of Dawson & sent to Energy Branch	**June 30, 2022**
12**. Implementation of remaining ECM's (pt. 4)** *… any remaining ECM's to be completed in 2022.*	June – Nov. 2022
13. **Check-in meetings *(or site visits)* #3 & 4** with C. of Dawson *(to discuss remainder of Energy Upgrades & any changes in work plan)*	*June & September 2022*
14. **Final Project & Financial reports** completed by C. of Dawson & sent to Energy Branch	**November 30, 2022**

A2.2 The Recipient may, with the prior written approval of YG, revise the work plan from time to time to meet the Project deliverables set out in A1.0. For greater certainty, such revision does not constitute an amendment for the purposes of this Agreement.

Schedule B – Budget

B2.0 Budget and Expenses

B2.1.1 The Recipient shall carry out the Project in accordance with the Budget as approved in writing by YG and in the table below.

City of Dawson (2 buildings, up to $200,000/building) *(Administration &Public Works buildings)*	
Energy Upgrade Description	**Estimated Cost**
#1. City of Dawson Administration Building	*14th July 2021*
Door Seals & Sweeps (ECM 1)	$2,250
Roof Insulation (ECM 17)	$10,000
Interior Lighting Upgrades (incl. EXIT signs to LED) (ECM 3)	$3,000
Propane Boilers/ Fuel Switching Upgrade (ECM 15)	$175,000
Sensors & Controls 4, 9, 10, 14)	$125,000
Self-Sensing Pumps (ECM 6)	$20,000
Recommissioning (ECM 8)	$19,950
Supplementary Engineering & Bldg. Constr. Admin.	$35,000
Admin. Bldg. sub-total #1	**$390,200**
Contingencies (up to 30% max.)	$117,060
#1 Project Total (Admin. bldg.)	**$507,260**
#2. Dawson Public Works	
Door Seals & Sweeps (ECM 1)	$1,700
Interior Lighting Upgrades (incl. EXIT signs to LED) (ECM 4)	$1,150
Roof Insulation Upgrade *estimate fr. Energy Audit* (ECM 6)	$50,000
Furnace Upgrade (ECM 3)	$16,000
Unit Heater Upgrade (ECM 5)	$30,000
Air Curtains (x1) (ECM 8*)	$20,000
Control Optimization / Recommissioning (new ECM 9*)	$10,950
Supplementary Engineering & Bldg. Constr. Admin.	$15,000
Public Works bldg. sub-total #2	**$144,800**
Contingencies (up to 30% max.)	$43,440
#2 Project Total (Public Works bldg.)	**$188,240**
TOTAL Energy Upgrade Project Costs	**$695,500**

B2.1.2 **Project Funding Allocation – Summary** (of funds from respective partners):

TOTAL Energy Upgrade Project Costs	**$695,500**
Community IEEP contribution ($400,000 maximum)	**$400,000**
Balance	$295,500
Good Energy Fund contribution *(75% of eligible balance over IEEP max.)*	**$221,625**
City of Dawson contribution *(25% of eligible balance over IEEP max.)*	$73,875
TOTAL YG *(Community IEEP + Good Energy)*	**$621,625**

B2.2 Eligible expenses for the purposes of this Agreement shall be those expenses directly related to the Project and set out in the attached Budget.

B2.3 The Recipient may, on prior written approval from YG, reallocate dollar amounts between Energy Upgrades within the approved Budget. For greater certainty, such reallocation does not constitute an amendment for the purposes of this Agreement.

B2.4 The following activities are <u>not</u> eligible for Funds:

- building materials and labour not directly related to the implementation of the Energy Upgrade Measures noted in this schedule;
- replacement of equipment for the purpose of maintenance, which does not reduce energy use.

Schedule C

Terms of Payment

C1.0 Funds

C1.1 YG shall pay to the Recipient the Funds as follows:

Deliverable(s) (includes: Milestones and/or other Triggering Events)	**% of Total**	**Date of Event**	**Payment**
1. **Initial payment** on signing of Transfer Payment Agreement. (20% of $307,750)	20%	**September 21, 2021**	$61,550
2. **Receipt of interim project & financial reports** *upon completion of first group of ECM's (as outlined in Milestone #2 in Project Work Plan) to show work completed.*	40%	**October 31, 2021**	$123,100
3. **Receipt of interim project & financial reports** *upon completion of second group of ECM's (as outlined in Milestone #5 & 6 in Project Work Plan) to show work completed.*	20%	**March 31, 2022**	$61,550
4. **Receipt of interim project & financial reports** *upon completion of third group of ECM's (as outlined in Milestones #8-10 in Project Work Plan) to show work completed.*	10%	**June 30, 2022**	$30,775
5. **Receipt of interim project & financial reports** *upon completion of remaining 2021-22 Energy Conservation/ Upgrade Measures (as outlined in Milestones #12 & 13 in Project Work Plan) to show work completed.*	10%	**November 30, 2022**	$30,775
		Subtotal =	**$307,750**
Contingencies (up to ~30%)			$92,250
		TOTAL:	**$400,000**
		***Community IEEP* maximum of:**	**$400,000**

Deliverable(s) – *Good Energy program* *75% of $234,455- for eligible expense above $400,000* *(as per Project Funding Allocation Summary from section B2.1.2, p.20)*	**% of Total**	**Target Completion Date**	**Maximum Payment**
6. **Receipt of FINAL project & financial reports** upon completion of remaining upgrade measures & Energy Branch Site Visit, if needed. (Milestones **#12 &13** in Project Work Plan)	75%	**November 30, 2022**	$221,625
		***Good Energy program* up to maximum of:**	**$221,625***

Maximum Payable through ***Community IEEP***	**$400,000**
Maximum Payable through ***Good Energy***	**$221,625**
Maximum TOTAL Payable through this Agreement *If amount stated is, or, totals to an amount greater than page 3 of the Agreement, then the total on page 3 prevails.*	**$621,625**

** final payment amounts to be based on actual eligible expenses paid, according to invoices provided by the Recipient to the Energy Branch.*

C1.2 The first **$200,000** of eligible expenses per building claimed through the Financial reports will be paid at a rate of 100% from YG's *Community Institutional Energy Efficiency Program (IEEP)* to a maximum of **$400,000**. Subsequent eligible expenses claimed through the Financial reports submitted will be paid at a rate of 75% from YG's *Good Energy* program, up to a combined total payment not to exceed the amount shown in C1.1.

See Budget section B2.1.2 for breakdown of Government of Yukon funds (Community IEEP & Good Energy) to be allocated to these City of Dawson Energy Upgrade projects plus funds to be allocated from the City of Dawson.

C 1.3 Under no circumstances will YG's contribution exceed 100% of the total project eligible expenses.

C1.4 A contingency of +30% can be applied to payments made at the completion of upgrade measures reporting periods, based on actual project costs as demonstrated through invoices provided at each reporting period.

C1.5 With the exception of the initial payment, all other payments will be based upon ACTUAL costs reported by the Recipient in the interim and final Financial reports.

C1.6 Between the milestones outlined in C 1.1, based on actual costs reported, the Recipient may, on prior written approval from YG:

- request additional payments or
- reallocate dollar amounts.

For greater certainty, such reallocation does not constitute an amendment for the purposes of this Agreement.

APPENDICES

Appendix A – City of Dawson – Administration Building
Detailed Energy Assessment – Executive & Energy Conservation Measure (ECM) Summaries, 3D Energy (2019)

Appendix B – City of Dawson – Administration Building
Recommissioning & Engineering Assessment Reports – Recommendations (Section 5, pp. 33 - 43) – FPMBC Consulting Ltd, 2020)

Appendix C – City of Dawson – Public Works Building
Detailed Energy Assessment – Executive & Energy Conservation Measure (ECM) Summaries, 3D Energy (2019)

Appendix D – City of Dawson – Public Works Building
Recommissioning & Engineering Assessment Reports – Recommendations (Section 5, pp. 31 - 43) – FPMBC Consulting Ltd, 2021)

City of Dawson
Report to Council

Agenda Item	Community and Recreation Grants
Prepared By	Paul Robitaille, Parks and Recreation Manager
Meeting Date	November 16, 2023
References (Bylaws, Policy, Leg.)	Community Grant Policy #16-01, Recreation Grants Policy 2017-06
Attachments	

x	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council approve the Community Grants, as recommended by the Community Grant Committee in the amount of $13,000 and

That Council approve the Level 2 Recreation Grants, as recommended by the Recreation Board in the amount of $14,575.

That Council approve $10,744 of in-kind support, as recommended by both the Recreation Board and Community Grant Committee.

Executive Summary

Community Grants

Budgeted 2023	30,000	to be dispersed over three intakes.
Recommended1st intake	13,000	
Balance remaining	17,000	

Recreation Grants

Budgeted 2023	45,978	to be dispersed over three intakes.
Recommended1st intake	14,575	
Balance remaining	31,403	

In-Kind Support

Three groups requested in-kind support of facility rentals, at a value of $10,744.00, which the Community Grant Board and Recreation Board recommend be approved by Council.

Background

The City of Dawson Manages and Distributes Community Grants and Recreation Grants

Community Grants are funded by the City of Dawson through the annual operating budget and governed by the Dawson Community Grant Policy.

- Applications are reviewed by the Community Grant committee and the Recreation board, with recommendations forwarded to City Council for final approval.
- Approved funding for 2023 is $30,000
- There are 3 intakes per year.
- The evaluation criteria for Community Grants applications are as follows:
    - Provide a lasting infrastructure legacy to the community.
    - Demonstrate significant volunteer involvement.
    - Generate significant local spending and economic impact.
    - Maintain open public access to the event or project.
    - Demonstrate partnership with other levels of government and community groups.
    - Show large event attendance and local involvement.

- Have limited access to alternative funding sources.
- Generate awareness of City of Dawson.
- Create a sustainable public and social benefit.
- Involve youth and seniors.
- and the *Recreation Grants Policy* establish the criteria.

Recreation Grants are funded by the Yukon Governments Yukon's Community Lottery Program and Governed by the Dawson Recreation Grant Policy.

- Level 1 Applications (individuals) and Municipal applications are approved by the Recreation Board.
- Level 2 applications (Groups) are reviewed and approved by the Recreation Board in Conjunction with the Community grant committee to maximize the effective distribution of funds.
- Funding is based on population and is $43,051 for 2023.
- Funds are used for municipal and community purposes.
- The evaluation criteria for Recreation Grants are as follows:
  - Public benefit (number of participants, large target audience)
  - Reduction of barriers (such as low fees, accessibility, reduce social & cultural barriers, location)
  - Building capacity (leadership development, instructor training, activity promotion or infrastructure improvement)
  - Application (complete, alternative funding sources, partnerships

Discussion / Analysis

Grant Requests and Recommendations

Organization	Project	Community Grants	Recreation Fund	Total
Available funds		30,000	45,978	73,051
Humane Society Dawson	Canine Training Classes	$1,000	$1,000	$2,000
Minor Hockey	U-11 Tournament	$1,000	$2,000	$3,000
DC Curling Club	2024 Bonspiel	$1,000	$1,000	$2,000
KIAC	Youth Art Enrichment Camp	$1,000	$1,000	$2,000
DCMF	Free Gazebo/Lodge performances	$3,000	$0.00	$3,000
KATTS	Ski trail grooming	$1,000	$3,250	$4,250
KHL	Sr Mens Hockey Tournament	$0.00	$1,325	$1,325
KVA	Thaw Di Gras	$1,500	$1,500	$3,000
DC Minor Soccer	Youth Soccer	$1,500	$1,500	$3,000
KIAC	Riverside Arts Fest	$2,000	$2,000	$4,000
Total		**$13,000**	**$14,575**	**$27,575**
Remaining		**17,000**	**31,403**	**48,403**

- All activities were deemed to fit the criteria and policies for both funds during review.
- The requested amounts are consistent with applications in previous January intakes for both funds.

In-Kind Requests and Recommendations

Organization	Project	Request	Recommendation
Humane Society Dawson	AMFRC Rental for Canine Training Clinic	$3,000	$3,000
KIAC	2024 Short film fest (Street Closure)	$500	$500
Dawson City Music Festival	Various Rentals (AMFRC, Minto, Crocus)	$7,744	$7,744
Total		$10,744	$10,744

- All activities fit the criteria and policies for both funds.
- Use of all these spaces is contingent on operational capabilities.
- From a review of the three requests, administration would share the following:
    - KIAC – Short Film Fest – No issues. City of Dawson will be recognized as a sponsor for this event.
    - Humane Society Dawson – This is in addition to $2000 noted in the Grant Requests and Recommendations section. Would not negatively affect revenues for AMFRC and should not be a hindrance on staff if building has been previously used for earlier events (i.e. Gold Show).
    - Dawson City Music Festival (DCMF)- This is in addition to $3000 noted in the Grant Requests section. In previous years, DCMF has paid for many of these spaces. This support would garner a top-tier (Platinum) sponsorship from DCMF. Would result in rental of number of our greenspaces over a few weeks, which is a challenge for public. Event does require additional staffing hours from City of Dawson departments, which is difficult to quantify. However, as Music Fest is trying to re-build following the pandemic, both granting bodies felt that support would be beneficial to assist them in their efforts to re-build the event.
- Staff plans to recommend changes to both programs, at a future Committee of the Whole meeting, to discuss challenges and opportunities to improve these programs. A review of in-kind support and process should be included in these recommendations.

Fiscal Impact

All grant items were budgeted for, and expenses are within budgeted amounts. In-kind amounts were not budgeted for, but over the last four years have not been consistent revenues for the municipality.

Alternatives Considered

N/A

Next Steps

- Approved applications will be directed to proceed with their initiatives.
- Following the end of their approved initiative, applicants are required to provide Parks and Recreation Department with a *Summary Report*. Once this document is received and approved, a cheque is issued to the applicant.

Approved by	Name	Position	Date
	David Henderson	CAO	16-Feb-2024

City of Dawson
Report to Council

Agenda Item	North End Development Tender Close
Prepared By	Asset & Project Manager – Public Works
Meeting Date	February 20th, 2024
References (Bylaws, Policy, Leg.)	- Procurement Policy - Yukon Boiler and Pressure Vessels Act
Attachments	• North End Development Bid Opening Sheet • North End Project Plan

X	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council reject the bids submitted for the North End Development Surface Works and Underground Utilities as per the submitted bids.

Executive Summary

The North End Development Surface Works and Underground Utilities Request for Proposals received two bids, both being significantly over the allocated budget as set by the Transfer Payment Agreement signed with the Yukon Government through ICIP. Administration recommends rejecting both bids.

Background

C22-19-11 "That Council acknowledge the change in scope of the project and direct administration to move forward with Option B – Lots 1-5 and civil infrastructure to existing homes to Judge Street."

The Government of Yukon's (YG) Community Services and Economic Development branches transferred the responsibilities of Lead Project Management to the City of Dawson since reducing the number of proposed lots to be developed and the removal of lot preparation in the project scope.

YG has provided extensive work and progress for this infrastructure development including reports, project management, contacts, resources, communications, funds, and many other contributions that are essential for the continuation of this project.

The objective of this project is to extend the water and sanitary services, drainage, roads, power, telecommunication, and traffic control infrastructure beyond the current servicing boundary.

The water and sewer infrastructure is to extend approximately 230 meters including underground potable water distribution pipes, gravity sewer mains, service connections, manholes, and fire hydrants.

The drainage infrastructure is to extend approximately 200 meters including ditches, culverts, catch basins, and outfall upgrades.

The roads infrastructure is to increase in size and quality by approximately 300 meters including width, compaction, materials, and traffic signage.

The electrical services infrastructure is to be replaced and extend approximately 150 meters including power poles and fiber optic lines.

Discussion / Analysis

The RFP: North End Development Surface Works and Underground Utilities was released on January 5th, 2024 and closed on February 14th, 2024. Two bids were submitted and deemed compliant with criteria set out in the tender documents.

Norcope Enterprises LTD. submitted a bid totalling $5,470,182.50 plus GST. Norcope provided all the required documentation for the bid submission scoring 80% based on the evaluation criteria. The project team and experience section was given a -10 for Norcope due to unresolved deficiencies from previous Dawson City projects.

PS Sidhu Trucking LTD. submitted a bid totalling $8,566.227.96 plus GST. Sidhu provided all the required documentation for the bid submission scoring 71% based on the evaluation criteria.

Throughout the design process, the consultant team made every effort to reduce the anticipated construction costs for this project. The following scopes were removed from the design from the Yukon Government:

- Lot development was removed
- Outfall replacement and upgrades was removed
- Water and sewer lines going up George Street and Edward Street were removed
- Hydrants were designed to be installed inline with the new Water Main
- Ditching was utilized wherever feasible
- Underground Utilities were designed to be shallow
- Flexibility with material selection

Fiscal Impact

The signed TPA with the Yukon Government set out a budget of $3,108,426.00 to complete the North End Development project.

Existing contracts with the consultant team currently total $242,928.00. YEC cost estimates from July 2021 is $176,223.23.

The remaining funds for the construction contract is $2,689,274.77 leaving a cost deficit of $6,305264.48 for the bid from Sidhu and a cost deficit of $3,054,416.86 for the bid from Norcope.

Alternatives Considered

Alternatives to this project will be considered including:

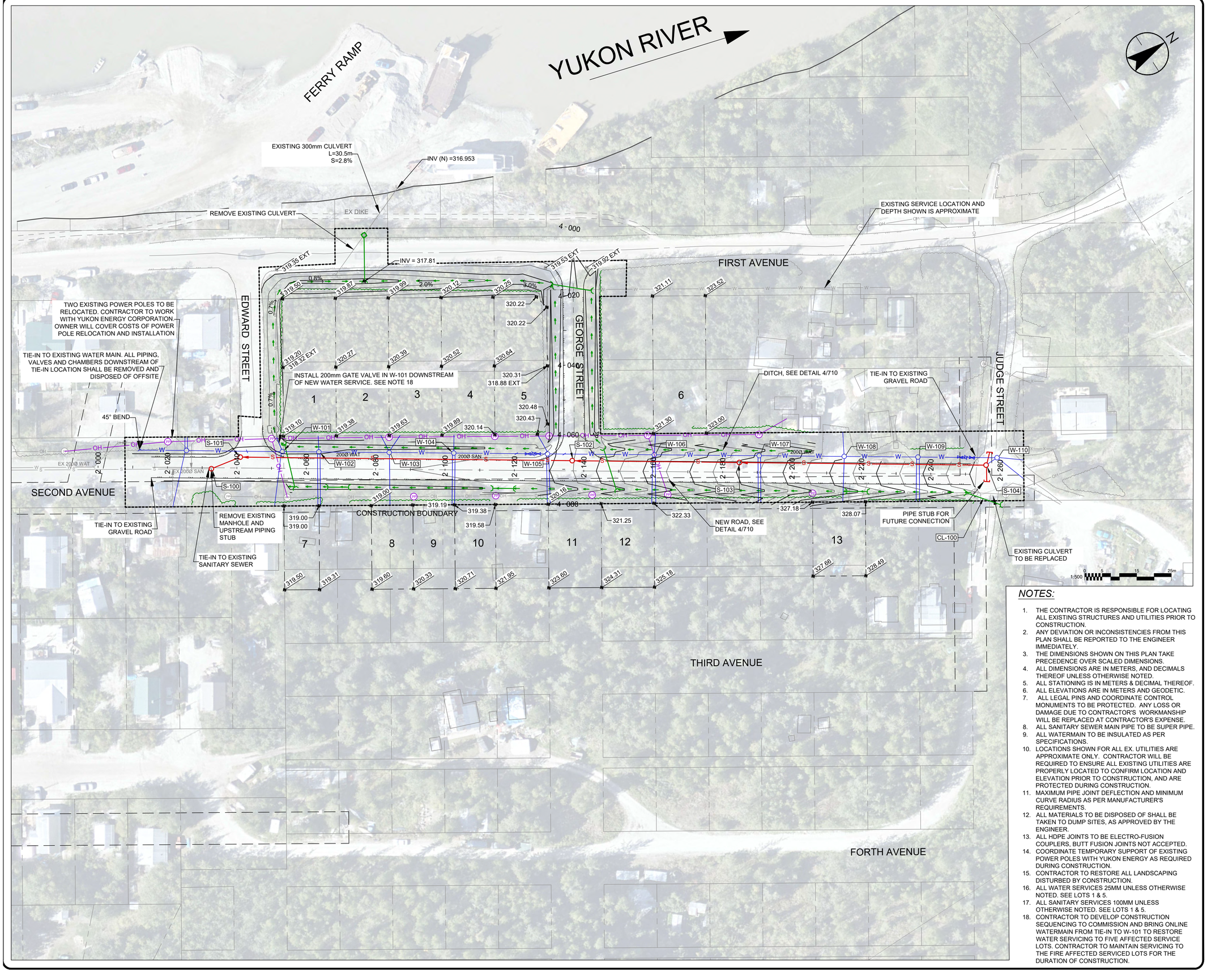
- Negotiate with low bidder to reduce project costs and/or scope to a bring the project within budge. A reduction is scope could include installing underground utilities from George Street to Edward Street only.
- City of Dawson could take on the responsibility as construction managers and sub-contract all required works separately.
- A combination of the two options above.

Next Steps

Discussions with bidders as a post tender meeting to better understand their submissions.

Discussions with the Yukon Government fund administrator for potential options

Approved by	Name	Position	Date
	David Henderson	CAO	February 15th, 2024



Data Sources:

Site Contour Survey - Greenwood Engineering Solutions. Survey Date: July 26, 2023. Project Area: North End, Dawson City, YT

Site Contour Survey - Challenger Geomatics Ltd. Survey Date: Jan 30, 2019. Project Area: North End, Dawson City, YT

Legend:

- Water Pipe - Proposed
- Water Pipe - Existing
- Proposed Sanitary Sewer
- Existing Sanitary Sewer
- Existing Overhead Powerline
- Proposed Overhead Powerline : BY OTHERS
- Proposed Gravel Road
- Existing Gravel Road
- Proposed Property Line
- Existing Property Line
- Easement
- Existing Storm Culvert
- Proposed Storm Culvert
- Proposed Storm Ditching
- Existing Tree Line
- Proposed Tree Line
- Proposed Water Manhole
- Proposed Sanitary Manhole
- Existing Sanitary Manhole
- Existing Water Valve
- Proposed Water Valve
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Existing Powerpole
- Proposed Powerpole : BY OTHERS

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING STRUCTURES AND UTILITIES PRIOR TO CONSTRUCTION.
2. ANY DEVIATION OR INCONSISTENCIES FROM THIS PLAN SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. THE DIMENSIONS SHOWN ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS.
4. ALL DIMENSIONS ARE IN METERS, AND DECIMALS THEREOF UNLESS OTHERWISE NOTED.
5. ALL STATIONING IS IN METERS & DECIMAL THEREOF.
6. ALL ELEVATIONS ARE IN METERS AND GEODETIC.
7. ALL LEGAL PINS AND COORDINATE CONTROL MONUMENTS TO BE PROTECTED. ANY LOSS OR DAMAGE DUE TO CONTRACTOR'S WORKMANSHIP WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
8. ALL SANITARY SEWER MAIN PIPE TO BE SUPER PIPE.
9. ALL WATERMAIN TO BE INSULATED AS PER SPECIFICATIONS.
10. LOCATIONS SHOWN FOR ALL EX. UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR WILL BE REQUIRED TO ENSURE ALL EXISTING UTILITIES ARE PROPERLY LOCATED TO CONFIRM LOCATION AND ELEVATION PRIOR TO CONSTRUCTION, AND ARE PROTECTED DURING CONSTRUCTION.
11. MAXIMUM PIPE JOINT DEFLECTION AND MINIMUM CURVE RADIUS AS PER MANUFACTURER'S REQUIREMENTS.
12. ALL MATERIALS TO BE DISPOSED OF SHALL BE TAKEN TO DUMP SITES, AS APPROVED BY THE ENGINEER.
13. ALL HDPE JOINTS TO BE ELECTRO-FUSION COUPLERS, BUTT FUSION JOINTS NOT ACCEPTED.
14. COORDINATE TEMPORARY SUPPORT OF EXISTING POWER POLES WITH YUKON ENERGY AS REQUIRED DURING CONSTRUCTION.
15. CONTRACTOR TO RESTORE ALL LANDSCAPING DISTURBED BY CONSTRUCTION.
16. ALL WATER SERVICES 25MM UNLESS OTHERWISE NOTED. SEE LOTS 1 & 5.
17. ALL SANITARY SERVICES 100MM UNLESS OTHERWISE NOTED. SEE LOTS 1 & 5.
18. CONTRACTOR TO DEVELOP CONSTRUCTION SEQUENCING TO COMMISSION AND BRING ONLINE WATERMAIN FROM TIE-IN TO W-101 TO RESTORE WATER SERVICING TO FIVE AFFECTED SERVICE LOTS. CONTRACTOR TO MAINTAIN SERVICING TO THE FIRE AFFECTED SERVICED LOTS FOR THE DURATION OF CONSTRUCTION.

1	2024-01-05	ISSUED FOR TENDER
	YYYY-MM-DD	SUBMISSION INFORMATION

PROFESSIONAL ENGINEER YUKON TERRITORY ADAM THOMAS GREENWOOD January 5, 2024

PERMIT TO PRACTICE GREENWOOD ENGINEERING SOLUTIONS SIGNATURE Date January 5, 2024 PERMIT NUMBER PP445 Association of Professional Engineers of Yukon

THE CITY OF DAWSON YT INCORPORATED JAN. 9, 1902

GREENWOOD ENGINEERING SOLUTIONS

PROJECT
NORTH END DEVELOPMENT SURFACE WORKS AND UNDERGROUND UTILITIES

DRAWING
PROPOSED SITE PLAN

DESIGN	DATE	SCALE
MV/CM	January 4, 2024	AS NOTED
DRAWN: MV	PROJECT NO.: 11-02	
CHECKED: CM	DRAWING NO: C200	VERSION: 1
APPROVED: AG		

Tender: North End Development Surface Works and Underground Utilities
Date: 2024-02-14

Tender Evalvation

City of Dawson completed a compliance check of the two bids received and both were determined to be compliant. Below is the evaluation of the two bids based on the criteria outlined in the RFT by the evaluation committee.

Item	Evaluation Criteria		Contractor 1 (low price)	Contractor 2
Price (80 Points)	The Price will be evaluated as follows: 1. Lowest Tender Price Proponent = 80 points 2. Lowest Tender Price ÷ Other Tender Price = Tender % Tender % x 100 points = # of points awarded to other proponent.	Bid Price	$ 5,743,691.63	$ 8,994,539.25
		Score	**80**	**51**
Project Approach (10 Points)	The Contractor shall include a schedule by completing Form of Tender – Form D demonstrating how the Work will be completed by the completion date. The schedule shall include relevant tasks and milestones that demonstrate the Contractor's understanding of the project planning and execution to complete the work. Full marks will be given to a schedule that includes tasks that consider material and equipment lead times and pre-construction activities that reduce the risk of delays and achieves the project completion date. Marks will be deducted for an incomplete schedule	Provided Comprehensive Schedule	yes	yes
		Lead Times and Pre-Construction Activities Included	yes	yes
		Marks deducted for incomplete schedule	none	none
		Score	**10**	**10**
Project Team and Experience (10 points)	The Contractor shall provide a list of qualified, competent team members and relevant experience in Form of Tender – Form B, Form C and Form F. Full marks will be given to a project team that has experience working on similar projects and demonstrates an understanding of the conditions specific to Dawson City. A score of zero will be given to proponents that have completed recent projects in Dawson with substantial deficiencies remaining incomplete with no intention of completing those deficiencies. If a Contractor has completed a project with deficiencies remaining incomplete, and they do not feel they should receive a score of zero, they may provide a rational why they should not receive a score of zero for consideration in the evaluation.	Provided list of Qualified Competent Team members	yes	yes
		Experience working on similar projects	yes	ues
		Demonstrates understanding of Conditions specific to Dawson	yes	yes
		Deficiencies remaining incomplete -10 Points	-10	none
		Score	**0**	**10**
TOTAL		**Total**	**90**	**71**

Bid evaluation Committee:

Owen Kemp-Griffin, Project Manager, City of Dawson

Chris Mackie, Contract Administrator, Greenwood Engineering Solutions

Jonathan Howe, Public Works Manager, City of Dawson

Adam Greenwood, Engineer, Greenwood Engineering Solutions

City of Dawson
Report to Council

Agenda Item	Development Agreement No.1 Bylaw
Prepared By	Planning and Development
Meeting Date	February 20, 2024
References (Bylaws, Policy, Leg.)	Municipal Act
Attachments	Development Agreement, Bylaw 2024-04, Subdivision Application #24-007

x	Council Decision
	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council give First Reading to Development Agreement No.1 Bylaw.

Executive Summary

The Government of Yukon has recently submitted a subdivision application for the Infill #3 parcel in Callison Subdivision. Direct access to the highway is a requirement under the *Municipal Act* for any proposed plan of subdivision. The applicant is currently unable to provide access for the proposed lot due to the need for engineering work. Municipalities have the authority to establish a Development Agreement through the passage of a bylaw, which addresses the conditions of conditional approval. Development Agreement No.1 Bylaw has been drafted for this reason.

Background

In accordance with Council's directive to pursue industrial lot development by releasing the parcel to the private sector, the applicant submitted a rezoning application in 2021 to designate the area as M1: Industrial. This application has successfully completed its Third Reading in 2021. The Subdivision Application #24-007 (attached) for creating the parcel represents an additional significant move in the direction of Council. This Subdivision Application necessitates the City and YG to engage in a Development Agreement, which requires the passage of a bylaw.

Discussion / Analysis

Staff will present Subdivision Application #24-007 for approval at the upcoming Council meeting. The newly created lot requires access to the highways. Access to that area is currently obstructed by a pond. In order to establish access, certain geotechnical and engineering work must be completed. The applicant is currently unable to complete these tasks due to scheduling and financial constraints. The *Municipal Act* provides the subdivision approving authority with the power to impose conditions on subdivision applications and establish a development agreement to meet those conditions.

Municipal Act S.309:

> *"development agreement" means a binding agreement between the owner of the land that is the subject of an application for subdivision and the approving authority with respect to the requirements or limitations of the conditional approval;*

The administration suggests that in the upcoming meeting, Council consider approving the application subject to the condition that YG signs a Development Agreement for the construction of the road. In order to accomplish this, council is required to pass bylaw(s) as stated in S.326 of the *Municipal Act*:

> *(1) The council may pass bylaws providing for the entering into development agreements, or council may, in its discretion, pass a bylaw for each development agreement the council enters into.*
>
> *(2) Any development agreement referred to in subsection (1) may include any terms and conditions considered necessary by council to carry out the intent of the development agreement.*

Therefore, in order to expedite the process, Development Agreement No.1 Bylaw is being presented to Council for first reading. This will allow for the Third Reading to be given immediately after the approval of the application in the upcoming meeting.

Attached are copies of the Development Agreement and Subdivision Application #24-007.

Fiscal Impact

The newly created lot will generate industrial property taxes.

Alternatives Considered

Do not pass First Reading pass First Reading until after Subdivision Application #24-007 has been approved.

Next Steps

Subdivision Application approval.

Passing Second and Third readings of Development Agreement No. 1 Bylaw.

Approved by	Name	Position	Date
	David Henderson	CAO	16-Feb-2024

THE CITY OF DAWSON

Development Agreement No. 1 Bylaw

Bylaw No. 2024-04

WHEREAS section 309 of the *Municipal Act* provides that a development agreement means a binding agreement between the owner of the land that is the subject of an application for subdivision, and the approving authority with respect to the requirements or limitations of the conditional approval; and,

WHEREAS Bylaw 95-08 provides that Council is the subdivision approving authority for the City of Dawson; and,

WHEREAS section 319(1) of the *Municipal Act* provides that, on receipt of a completed application for subdivision, the approving authority may approve it, refuse it, or approve it with conditions; and,

WHEREAS section 326 (1) of the *Municipal Act* provides that Council may pass bylaws providing for entering into development agreements, or council may, in its discretion, pass a bylaw for each development agreement the council enters into; and,

WHEREAS section 326 (2) of the *Municipal Act* provides that development agreements may include any terms and conditions considered necessary by Council to carry out the intent of the development agreement; and,

WHEREAS section 326 (3) of the *Municipal Act* provides that Council may require any development agreement entered into to be registered in the Land Titles Office, and any agreement so registered shall have the force and effect of a restrictive covenant running with the land; and,

NOW 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 ***Development Agreement No.1 Bylaw***

CAO

Presiding Officer

2.00 Purpose

2.01 The purpose of this bylaw is to provide for:

(a) entering into a development agreement with the Government of Yukon for road construction within the Narozny Right-of-way

CAO

Presiding Officer

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3.00 Definitions

3.01 In this Bylaw:

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

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

(c) "Council" means the Council of the City of Dawson.

PART II – APPLICATION

4.00 Development Agreement

4.01 The City and Government of Yukon shall enter into a Development Agreement for road construction within the Narozny Right-of-way in order to meet the conditions of the approval of the Subdivision Application #24-007.

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	
SECOND	
THIRD and FINAL	

William Kendrick, Mayor
Presiding Officer

David Henderson, CAO
Chief Administrative Officer

DEVELOPMENT AGREEMENT

THIS Development Agreement made in triplicate this ____ day of _____, 2024.

BETWEEN:

THE CITY OF DAWSON
a municipal corporation
(Hereinafter referred to as "the City")

AND:

THE GOVERNMENT OF YUKON
(Hereinafter referred to as "the Developer")

SECTION 1 PREAMBLE

WHEREAS the Developer owns or is entitled to become the owner of certain lands as outlined in red on the sketch plan attached hereto as Schedule "A", and being referred herein as the "Subdivision"; and

WHEREAS the Developer has applied for subdivision approval to construct one (1) service industrial lot in the Subdivision Area, and the City of Dawson has approved the said Plan of Subdivision in accordance with the aforementioned sketch plan, and subject to certain conditions, including the entering into of the Development Agreement for road construction within the Narozny Right-of-way; and

WHEREAS upon the completion, to the satisfaction of the City, of the construction of the said Municipal Improvements which are required to be constructed by the Developer hereunder, on any Public Property or any rights-of-way provided in accordance with the terms of this Development Agreement, the same shall thereafter be deemed to be the property of the City, without any cost or expense to the City thereof, or any further written agreement; and

WHEREAS the parties have agreed that the said construction and installation of the Municipal Improvements and all matters and things incidental thereto shall be subject to the terms, covenants and conditions as are hereinafter set forth; and

WHEREAS the City and the Developer jointly wish to see the development of the Subdivision; and

WHEREAS the City and the Developer recognize that development in the Subdivision may occur; and

WHEREAS the Developer is willing to undertake development of its lands in co-operation with the City.

NOW THEREFORE in consideration of the premises and mutual terms, covenants and conditions to be observed and performed by each of the parties hereto, the City agrees with the Developer and the Developer agrees with the City as follows:

SECTION 2: INTERPRETATION

2.1 "Agreed Standards" shall mean the standards and specifications as referred to in Schedule "C" attached hereto.

2.2 "BST" shall mean one or more applications of spayed-on liquid asphalt followed by a layer of suitable aggregate to protect and preserve the surface and maintain the structural integrity and skid resistance of roadway.

2.3 "Consulting Engineer" shall mean the Consulting Professional Engineer or Engineers employed or retained by the Developer at the Developer's expense.

2.4 "Construction Completion Certificate" is the written document in the form set forth per Schedule "D" by which the City confirms that the Developer has installed and completed the Municipal Improvements, contemplated by this Development Agreement, in accordance with the Plans, Agreed Standards and the terms and conditions of this Development Agreement.

2.5 "Council" shall mean the Council of the City of Dawson.

2.6 "Deemed Acceptance" shall mean where the City fails to provide the Developer with notice of its non-acceptance and reasons therefore within thirty (30) days of receiving the request for a Final Acceptance inspection of the Municipal Improvements, the Municipal Improvements shall be deemed to have met the warranty obligations at the end of the thirty (30) day period.

2.7 "Detailed Engineering Design" shall mean all plans, specifications, drawings and reports, including a master drainage plan, covering the detailed engineering design for construction and installation of the Municipal Improvements completed by the Consulting Engineer.

2.8 "Developer" means Yukon Government, Community Services, Land Development Branch, or its authorized assignee(s).

2.9 "Development Area" means the land shown as outlined in bold on the sketch plan attached hereto as Schedule "B".

2.10 "Development Officer" means the official or officials of the City appointed by the City Council to interpret and administer the provisions of the City's Zoning Bylaw.

2.11 "Final Acceptance Certificate" means the written document in the form set forth in Schedule "E" by which the City confirms that the Developer has satisfactorily completed the Municipal Improvements and the City assumes the complete responsibility for the Municipal Improvements.

2.12 "Inspection Date" is defined in Section 8.3 of this Development Agreement.

2.13 "Minor Deficiency" is a deficiency in materials and/or workmanship that does not affect the normal operation of the subdivision. Failure to erect street signs, lack of test results or similar deficiencies which affect the operation of the subdivision shall not be considered as minor deficiency.

2.14 "Municipal Improvements" shall mean the following services, utilities and other such items as are necessary for the proper development and functioning of the Development Area constructed in accordance with the Agreed Standards, approved

Plans and terms of this Development Agreement:

(a) such construction, development or upgrading of the Roads, in accordance with the Agreed Standards;

(e) grading as indicated in Lot Grading Plan to the extent required to ensure proper road surface drainage;

(f) ditches and back slopes as required to restore disturbed areas, or as may be required by the Development Officer and set forth in the Agreed Standards; and

(h) Driveway and culvert accessing the lot shown on Schedule 'A' in accordance with standards specified by the City.

2.15 "Plans" shall mean plans and specifications prepared by the Consulting Engineer or the Developer, at the Developer's expense, covering the design, construction and installation of the Municipal Improvements as approved by the City of Dawson.

2.16 "Plan of Subdivision" shall mean the registered plan of the subdivision referred to in this Development Agreement, as set out in Schedule "A".

2.17 "Preliminary Design Report" shall mean the preliminary engineering design drawings identified in the Agreed Standards and any additional engineering design drawings as may be determined to be required by the City.

2.18 "Public Property" shall mean any property owned or administered by the City, the Yukon Government, or the Government of Canada, but not including the Subdivision Area.

2.19 "Stop Work Order" means an order issued by the City to cease work within the Development Area.

2.20 "Subdivision Approval" means the signing of a sketch plan of subdivision by Council in accordance with the City of Dawson Subdivision Control Bylaw 95-08.

2.21 "Subdivision Area" is the area identified as the Plan of Subdivision and as outlined in bold line in Schedule "A" of this Development Agreement.

2.22 "Warranty Period" with respect to the Municipal Improvements shall mean a period of one year from the Inspection Date as determined pursuant to either Section 8.3 (a), (b) or (c).

SECTION 3 DEVELOPMENT OF THE SITE

3.1 The Developer may commence development in the Subdivision and Development Area, upon receipt of Subdivision Approval from the City.

3.2 The Developer shall develop at its sole cost the Development Area in accordance with the provisions of this Development Agreement.

3.3 A Preliminary Design Report is to be submitted to the City for review and approval before the detail design for this development is started. Plan approvals, construction completion certificates, maintenance periods and final acceptance certificates will be issued as outlined in Section 8, Acceptance of Municipal Improvements.

SECTION 4 ADHERENCE TO CITY BYLAWS

4.1 The Developer agrees that it shall comply with all of the City's statutes, bylaws, regulations and City policies adopted by Council, in place as of the date of signing of this Development Agreement, relating to the Subdivision Area and the Development Area, as may be required. Interpretation of City policies in effect at date of signing is subject to the intent and provisions of this Development Agreement.

4.2 It is further agreed by the Developer that, notwithstanding anything in this Development Agreement to the contrary, the Developer shall make application for all permits contemplated by the bylaws of the City and, shall submit such plans, specifications and designs as shall be required by those bylaws prior to issue of such permits.

SECTION 5 PLAN OF SUBDIVISION AND UTILITY EASEMENTS

5.1 The Developer shall, at its own expense cause the Plan of Subdivision to be prepared and approved by all necessary approving authorities in accordance with the law in that respect at the time of signing, and in accordance with the requirements imposed upon the Developer by the City.

5.2 For the purposes hereof, approval shall be deemed to have been obtained by Council approval. Preliminary approval of the Plan of Subdivision shall not be construed as inferring Subdivision Approval has been granted for land registration or for other purposes.

5.3 The City of Dawson shall review the Plan of Subdivision to ensure all conditions as agreed between the Developer and the City have been met. Once the City of Dawson has deemed the Plan of Subdivision complete, the City of Dawson will endorse the Plan of Subdivision, pursuant to the Subdivision Control Bylaw, provided all City conditions and concerns have been met.

SECTION 6 ENGINEERING APPROVALS

6.1 The Developer shall, at its own expense, design, construct and install the necessary Municipal Improvements related to the Development Area in accordance with the Agreed Standards.

6.2 Prior to commencing construction of the Municipal Improvements, the Developer shall comply with the following, regarding approval of the detailed design drawings:

(a) the Developer shall submit to the City a Preliminary Design Report for the Development Area, which is to be reviewed and returned to the Developer within 21 working days from the date of receipt;

(b) prepare and submit a master drainage plan of the Development Area for approval by the City in accordance with the Agreed Standards;

(c) When the Preliminary Design Report has received approval, an electronic PDF copy of the Municipal Improvement detailed design drawings, and an electronic PDF copy for of any supporting documents, including geotechnical design recommendations shall be submitted for review by the City. The City's comments with the "redlined" detailed design drawings will be returned to the

Developer within 21 working days from the date of receipt;

(d) Any changes as agreed by the City and the Developer in accordance with the Agreed Standards and good engineering practice or operational requirements shall be made by the Developer. Revised Plans shall be returned to the City with the original redline drawing for final review by the City within 14 days. When the City is satisfied with the submission, revised drawings shall be submitted for formal City approval and sign-off; and

(e) the City shall return the approved drawings to the Developer, at which time the Developer shall submit an electronic PDF copy of the approved engineering drawings to the City. These drawings are to be submitted to the City prior to the mobilization of any construction equipment on site unless approval has been granted by the City.

6.3 At all times during the performance of the work, the City:

(a) shall have free access to all design, inspection, material testing and "as constructed" records;

(b) may inspect and review the performance of the work and the testing of materials as may be reasonably deemed necessary and advisable to ensure the full and proper compliance by the Developer of the Developer's obligations under this Development Agreement and including without limiting the generality of the foregoing the proper performance of the work and the construction of the Municipal Improvements;

(c) may notify the Developer or the Consulting Engineer whenever they are of the opinion that the performance of the work or material testing to be incorporated in the work is not being carried out in full and proper compliance with the Developer's obligations herein. The Developer shall then take what steps are required to rectify the problem; and

(d) may notify the Developer or the Consulting Engineer whenever they are of the opinion that the testing of any materials to be incorporated in the work is not properly carried out. The Developer shall then take what steps are required to rectify the problem.

6.4 The Developer is responsible for determining the exact location of existing utilities or relocation of any utilities required for the construction of the Municipal Improvements. Approval must be received from the appropriate City departments and any other utility companies for any relocation.

SECTION 7 COMPLIANCE WITH ALL PLANS, SPECIFICATIONS, RESOLUTIONS AND REGULATIONS

7.1 The Developer shall, during all phases of the construction and installation of the Municipal Improvements contemplated by this Development Agreement, comply fully with all the terms, covenants, conditions, provisions and details as may be set out in the Plans, the Agreed Standards and all other lawful and legal requirements of the City.

7.2 Any major design change proposed by the Developer during construction shall be

approved as follows:

(a) the Developer shall submit a full sized redline print of all design changes to the City for review and approval;

(b) the redline print of the design changes shall be reviewed and comments returned to the Developer within 72 hours of submission;

(c) any changes as agreed between the City and the Developer in accordance with the Agreed Standards and good engineering practice or operational requirements shall be made by the Developer. The revised redline print shall be returned to the City with the original redline print for review. When the City is satisfied with the submission the Developer shall submit an electronic PDF copy for approval; and

(d) all design changes are to be incorporated into the as-built drawings.

7.3 The provisions of this section shall be additional to, and not in substitution for, any law, whether Federal, Territorial or City, which prescribe requirements relating to the construction standards and the granting of Development Permits, Building Permits, Occupancy Permits, Construction Completion Certificates, or Final Acceptance Certificates in place at the time of signing the Development Agreement.

SECTION 8 ACCEPTANCE OF MUNICIPAL IMPROVEMENTS

8.1 The Developer agrees that it will complete the Municipal Improvements, and apply to the City for acceptance of the Municipal Improvements.

8.2 When the Developer claims that a Municipal Improvement has been constructed and installed in accordance with the requirements of this Development Agreement, the Developer shall give notice in writing of such claimed completion to the City. The said notice is to be received by the City from the Developer only and not from any contractors or sub-contractors which the Developer may employ.

8.3 Upon the City receiving such notice from the Developer, it shall within thirty (30) days, weather permitting, either:

(a) upon being satisfied with the claimed completion, issue the Developer a Construction Completion Certificate, dated as of the date of inspection (the “Inspection Date”); or

(b) upon being satisfied with the claimed completion subject to the correction of Minor Deficiencies, issue a Construction Completion Certificate upon receipt of a letter of intent from the Developer to correct said Minor Deficiencies by July 31 of the following calendar year, dated as of the date of inspection (the “Inspection Date”); or

(c) issue the Developer notice of its non-acceptance and the reasons therefore.

8.4 In the event that the City fails to provide the Developer with notice of its non-acceptance and its reasons therefore within thirty (30) days of receiving such claim of completion from the Developer, the Municipal Improvements claimed to have been completed shall be deemed to have been accepted by the City at the expiration of the thirty (30) days.

8.5 Upon the City so accepting, or having been deemed to have accepted the Municipal Improvements, or any of them, all right, title and interest in and to all the Municipal

Improvements which are not on private property, shall vest in the City without any cost or expense to the City therefore, and such Municipal Improvements shall thereafter become the property of the City once the Construction Completion Certificate has been issued and the warranty period has been completed.

8.6 Within 60 calendar days of the Inspection Date, the Developer shall submit a copy of the as-built drawings to the City for review or as soon thereafter as practical. The engineering comments with the redlined detailed design drawings will be returned to the Developer. Revised as-built drawings shall be returned to the City with the original redline drawing for final review. When the City is satisfied with the revised submission, one copy of the as-built drawings shall be submitted by the Developer to the City for the City files within 30 calendar days of receiving City approval.

SECTION 9 WARRANTY OF MUNICIPAL IMPROVEMENTS BY THE DEVELOPER

9.1 The Developer shall warrant the Municipal Improvements against deficiencies in materials or workmanship, whether latent or otherwise, from the date of each Construction Completion Certificate for one year or until a Final Acceptance Certificate is issued whichever comes first and shall keep the Municipal Improvements in good repair (vandalism and reasonable wear and tear excepted) for that warranty period.

9.2 The Developer shall correct any defect in materials and workmanship forthwith upon the Developer being notified of that defect.

9.3 On the expiry of the 47 weeks from the date of each Construction Completion Certificate or deemed acceptance, the Developer shall give notice in writing to the City requesting an inspection for the purposes of obtaining a Final Acceptance Certificate.

9.4 Upon receipt of such notice from the Developer, the City shall within 30 days, weather permitting, either:

(a) upon being satisfied that the Municipal Improvements are free of defects in materials or workmanship, issue the Developer a Final Acceptance Certificate as per Section 8.1 of this Development Agreement; or

(b) issue the Developer notice of its non-acceptance and the reasons therefore.

9.5 In the event that the City fails to provide the Developer with notice of its non-acceptance and the reasons therefore within 30 days of receiving the request for an inspection of the Municipal Improvements for the purposes of obtaining a Final Acceptance Certificate, the Municipal Improvements shall be deemed to have met the warranty obligations at the end of the 30-day period.

SECTION 10 DEFAULT BY THE DEVELOPER

10.1 In the event that the City claims that the Developer is in default of its covenants under this Development Agreement, save for the warranty at Section 9.1, or City approvals in Section 6.2, the City may:

(a) give the Developer notice in writing of such claimed default and require the Developer to correct the default within a period of 30 days from the receipt of

this notice or such other time period or date as the City may identify, and the Developer shall forthwith correct such default; and/or

(b) issue a Stop Work Order to the Developer where the said default will affect the outcome of the development, as would be the case where construction was progressing without approved drawings. Upon receipt of the Stop Work Order, all work within the development shall cease. Construction shall not commence until the said default has been rectified and written notice to recommence work received from the City.

10.2 In the event that the City claims that the Developer is in default of the warranty provisions of this Development Agreement, the City may give the Developer notice in writing of such claimed default, and by such notice either require the Developer to rectify such default within 15 days of the receipt of such notice or such other time period or date as the City may identify, or notify the Developer that the City intends to rectify such default at the Developer's expense.

10.3 In the event that the City shall have given notice of default under either Section 10.1 or 10.2 hereof, and the Developer shall have failed to rectify the default within the time set out, then the City may rectify such default at the Developer's expense, and the Developer shall, within a reasonable period of time, pay the cost of rectifying the default.

10.4 In the event that the City shall carry out any rectification of default, it shall be entitled, where permitted by law, and in lieu of or in addition to seeking payment from the Developer, provide for recovery of the cost of rectifying any default by the levy of a frontage tax or drawdown of the Security; providing, however, that the making of any such levy or drawdown shall not relieve the Developer from payment, until the cost of rectifying the default has been recovered in full.

10.5 In the event the City, in its discretion, considers it necessary to undertake any immediate work for the repair of any of the Municipal Improvements, in any situation which the City considers to be an emergency, the City shall be entitled to cause such work to be done at the Developer's cost and expense without notification to the Developer; provided that the City shall forthwith give notice in both verbal and written form to the Developer if the City claims that such repair work was made necessary by reason of a default on the part of the Developer.

10.6 The City shall if practicable attempt to preserve the condition of the Municipal Improvements in such a manner so as to assist any claim that the Developer may wish to advance against any contractor which may be responsible to the Developer for such defect in the Municipal Improvements repaired by the City in such emergency situations.

SECTION 11 INDEMNITY

11.1 The Developer shall during the period from the date of this Development Agreement until issuance of a Final Acceptance Certificate, indemnify the City from any and all claims, demands, actions, causes of actions, suits and costs which may be brought against or incurred by the City by any person, firm or corporation for injury, loss or damage, whether personal or to property which may occur as a result of, or by reason of, the performance of the Municipal Improvements provided for in this Development

Agreement, and based upon or attributable to the activities of the Developer, its servants, agents, employees, consultants and contractors or any person, firm or to which the Developer has delegated or authorized the delegation of any work hereunder; provided that the Developer shall not be liable for any acts of negligence of the City or its servants, agents or employees.

SECTION 12 COMPLIANCE WITH LAW

12.1 The Developer shall at all times comply with all legislation, resolutions, City Bylaws and Territorial laws and regulations pertaining to the development of the Development Area.

12.2 This Development Agreement does not constitute approval of the Subdivision Area and is not a Development Permit, or other Permit granted by the City.

12.3 Where anything provided for herein cannot lawfully be done without the approval or permission of any authority, person or board, the obligation or right to do it does not come into force until such approval or permission is obtained provided that the parties will do all things necessary by way of application or otherwise in an effort to obtain such approval or permission.

12.4 If any provision hereof is contrary to law, the same shall be severed and the remainder of this Development Agreement shall be of full force and effect.

SECTION 13 LAW OF THE YUKON APPLICABLE

13.1 The validity and interpretation of this Development Agreement and of each clause and part thereof shall be governed by the law of the Yukon Territory in place at the time of signing the Development Agreement.

SECTION 14 FURTHER ASSURANCES

14.1 Both parties shall execute and deliver all further documents and assurances necessary to give effect to this Development Agreement and to discharge the respective obligations of the parties.

SECTION 15 WAIVER

15.1 A waiver by either party hereto of the strict performance by the other of any covenant, condition or provision of this Development Agreement shall not of itself constitute a waiver of any subsequent breach of such covenant, condition or provision or of any other covenant, condition or provision of this Development Agreement.

SECTION 16 NOTICES

16.1 Whenever, under the provision of this Development Agreement, any notices, demands or requests are required to be given by either party to the other, such notice, demand or request may (except where expressly otherwise herein provided) be given by delivery by hand to, by sending the same by telecopier, or by registered mail sent to, the respective addresses or telecopier number hereinafter provided for, and if given

by mail shall be deemed to have been served and given on the second business day following the date of mailing by registered mail. The respective addresses or facsimile numbers of the parties being, in the case of the City and provided such addresses or facsimile numbers may change upon five (5) days notice. In the event that notice is served by mail at the time when there is an interruption of mail service affecting the delivery of mail, the notice shall not be deemed to have been served until one (1) week after the date that the normal service is restored. The respective addresses and facsimile numbers of the parties being, in the case of the City:

CITY OF DAWSON
Attention: Planning and Development Manager

PO Box 308
Dawson City, Yukon, Y0B 1G0 ;
Email: planingmanager@cityofdawson.ca

and in the case of the Developer:

THE GOVERNMENT OF YUKON
Attention: _____

Whitehorse, Yukon, Y1A
Email:

SECTION 17 COVENANTS RUN WITH TITLE

17.1 The Developer agrees that pursuant to the Municipal Act, the conditions, terms and provisions of this Development Agreement shall be deemed to be covenants running with the title to the Subdivision Area, and shall be binding upon the Developer and its successors.

17.2 The City may register this Development Agreement or such other document as it shall deem advisable against the title to the Subdivision Area, to protect its interests therein, which registered interest shall be first in priority to any other charge, encumbrance or caveat registered.

17.3 The City shall remove the registered Development Agreement from the title of the Subdivision Area after the warranty period relating to the Municipal Improvements has expired, no defects remain uncured and the Final Acceptance Certificate for the Municipal Improvements has been issued.

SECTION 18 ASSIGNABILITY OF DEVELOPMENT AGREEMENT

18.1 This Development Agreement shall not be assignable, nor shall any of the rights or

obligations hereunder be assignable by the Developer, without the written approval of the City, which approval shall not be unreasonably withheld.

18.2 It is understood between the parties that in the event that the Developer wishes to assign any of its duties or obligations herein granted to it by the City, that the City has the full right to request that a Development Agreement be entered into by the assignee or transferee; and that no assignment of this Development Agreement shall be permitted unless the proposed assignee or transferee enters into such new Agreement, which may impose further or other conditions, levies or terms and covenants and standards and the assignee or transferee provides such security as the City may then require.

SECTION 19 ENUREMENT

19.1 This Development Agreement shall enure to the benefit of and be binding upon the parties, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF the parties hereto have affixed their corporate seals by the hands of their proper officers in that behalf and have duly executed this Agreement.

CITY OF DAWSON
per:

_____
Mayor of City of Dawson

_____
City Clerk of City of Dawson *(Seal)*

THE GOVERNMENT OF YUKON

per:

_____
Name / Title

_____
Date signed

_____
Witness

_____
Date signed

AFFIDAVIT OF WITNESS
(s. 47(1))

Name of Witness: _____
(print full name)

I SWEAR / AFFIRM THAT

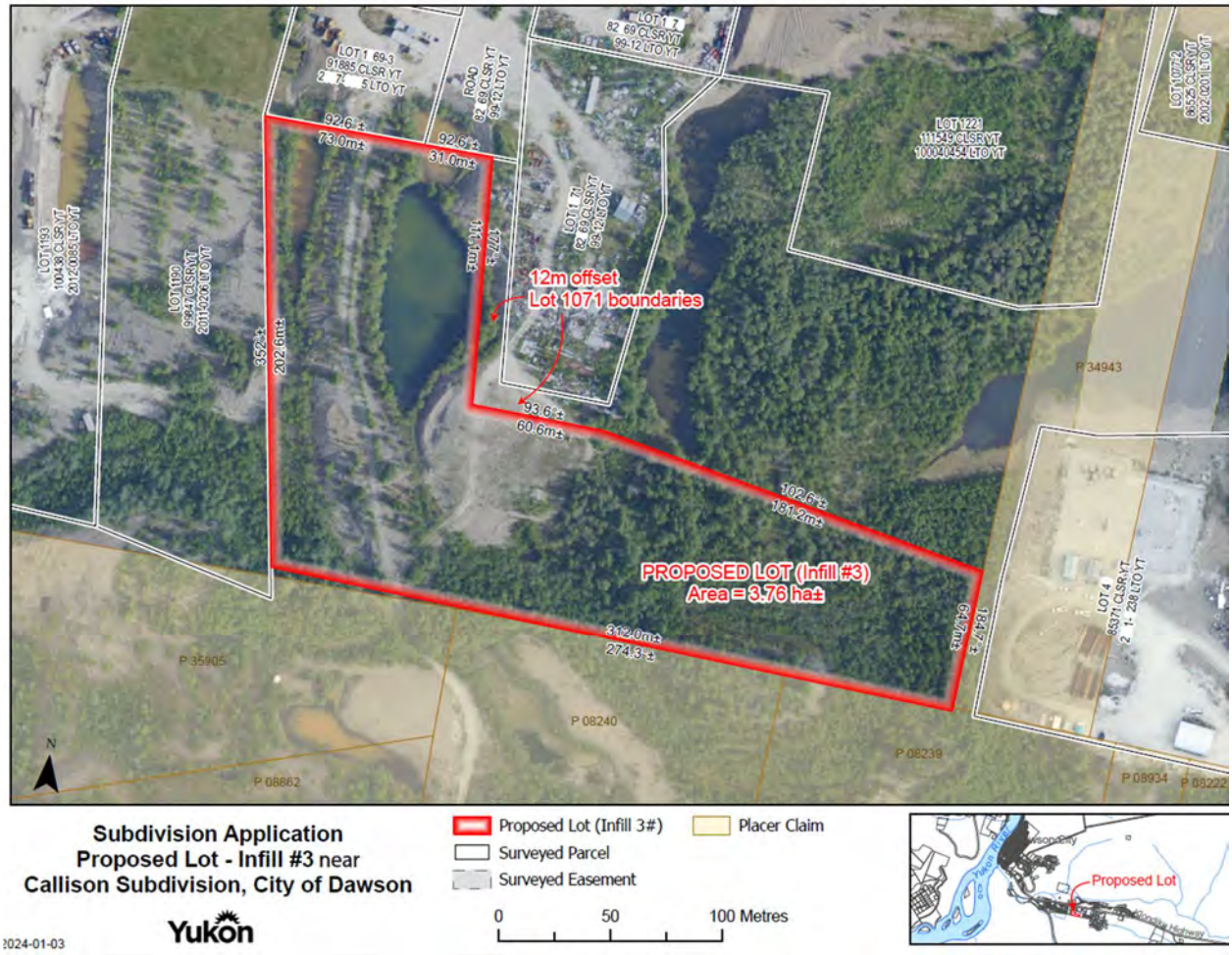
1. I was personally present and did see the attached instrument duly signed and executed by _____, the party thereto for
(print full name of Person(s) Signing Document)
the purposes named therein.

2. The said party identified themselves to me to be the party named in the within instrument, and the party is, in my belief, of the full age of nineteen (19) years.

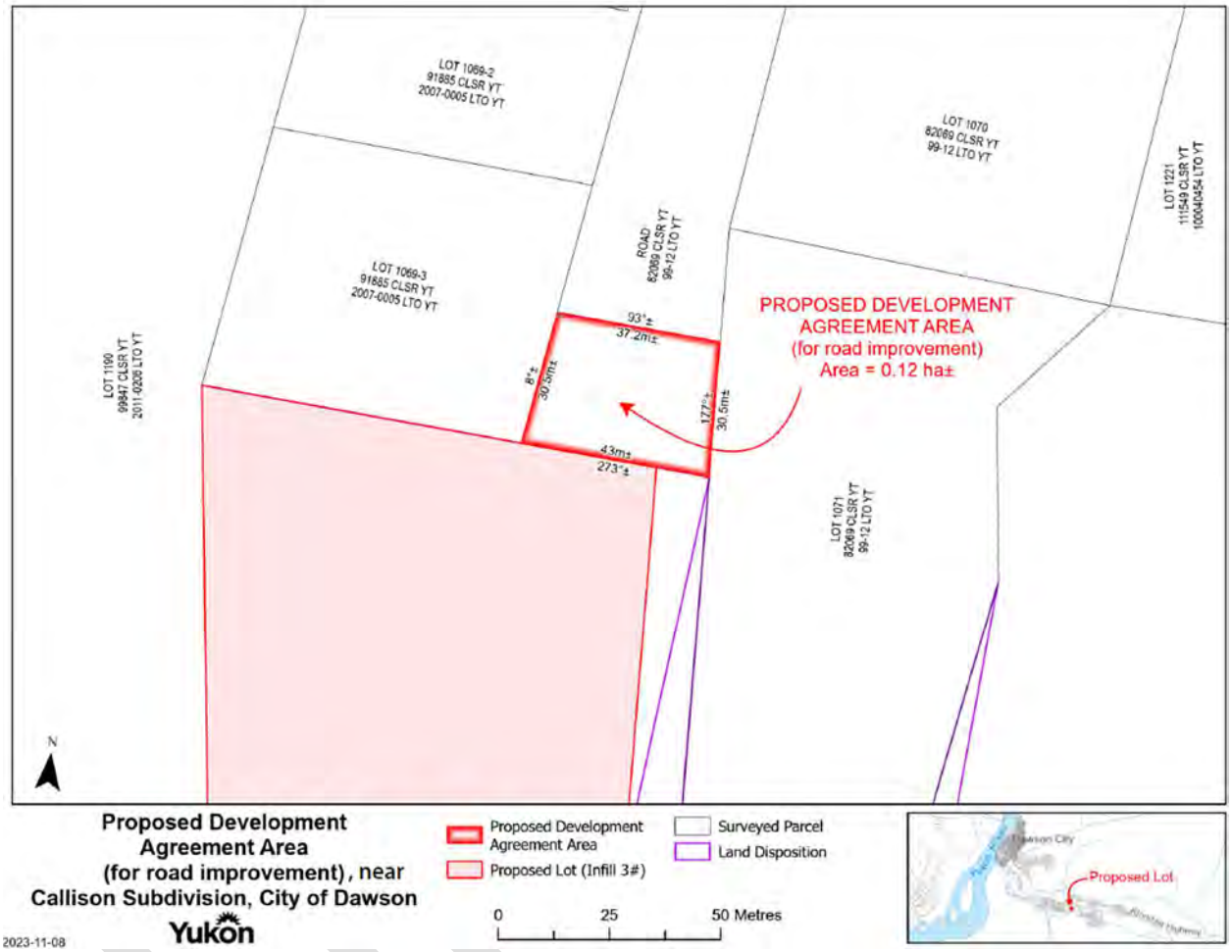
3. I am not
(a) a party to this instrument; or
(b) a spouse, within the meaning of the *Family Property and Support Act*, of a party to this instrument.

SWORN / AFFIRMED BEFORE ME)
At Dawson in Yukon Territory) _____
on the _____ day of _____, 202_) *(Signature of Witness)*
)
_____) _____
(Signature of Notary or Commissioner)) *(print full name)*
)
_____)
(print full name))
)
Notary Public in and for Yukon;)
)
My commission expires:)
)
)

SCHEDULE "A"
PLAN OF SUBDIVISION



SCHEDULE "B"
DEVELOPMENT AREA (PORTION OF NAROZNY ROAD)



SCHEDULE "C"
SUBDIVISION AREA
AGREED STANDARDS

1. GENERAL

1.1. The following sub-sections deal with the standards for any road infrastructure that will be located within or adjacent to the Subdivision Area that will be transferred to the City and fall under maintenance of the City, or is located on land that is currently maintained by the City but will be impacted by the construction of this new development. This includes the construction of: a public road; storm drainage systems; and all required connections to existing road and utility infrastructure located within the proposed or existing public road rights-of-ways. Utilities such as power are included but will be maintained by the respective Utility companies, not the City.

1.2. The Developer will be responsible for the provision of survey information necessary for the design of subdivision infrastructure, and along all proposed and existing roadways and other properties impacted by the development. Drawings and reports are available from the City for use, but information provided by the City is to be confirmed by the Developer for use on this project.

2. PRELIMINARY ENGINEERING DESIGN REPORT (PRE-DESIGN REPORT)

2.1. Preliminary engineering design drawings for the Development are to be submitted to the City for review and approval. Design considerations must address roadwork, highway improvements, surface drainage, landscaping, trails and other utilities.

2.2. Design is to consider future improvements within the appropriate zoning identified for the development.

3. DRAINAGE

3.1. As part of the preliminary engineering design, a drainage plan shall be submitted. The drainage plan is to show the impact on existing properties and must address all drainage issues along existing roadways, proposed roadways and identify Public Utility Lots for drainage to the ultimate point of discharge.

3.2. All drainage works are to be designed and constructed in accordance with sound engineering practice. Drainage works are to be designed and constructed with sufficient capacity to carry storm and spring runoff water and have adequate erosion protection provided at outfall structures, along drainage channels, ditch locations and along overland drainage Public Utility Lots where required.

4. ROADWAYS

4.1. Roadways, unless otherwise approved by the City, shall be designed as follows:

4.2. The Local roadway is to be Rural Roadway (TAC RLU-50), to the City Rural Local Standard of 9.0 metres wide, placed within a 30-metre right of way.

4.3. Cul-de-sacs are to be constructed to the standard for Urban Local Roads with a minimum inside turning radius of 14 metres. Right of Way widths are to be sufficient to provide the same separation from edge of shoulder to property line as on straight roads.

4.4. All roadway improvements i.e. ditches, sideslopes, backslopes, pole locations etc. are to be located within the Right of Way and constructed as per the relevant Rural Local\Collector Roadway Detail, and with the operational constraints of snow removal and ditch clearing in mind.

4.5. A qualified geo-technical engineer shall design the roadway and rural access structure. All approved materials are to be compacted under the responsibility of the geo-technical engineer. All compacted materials shall meet the City standards, and tests results are to be submitted to the City.

5. UTILITIES

5.1. Overhead power and telephone lines are to be designed, coordinated and installed by the appropriate utility company.

6. OTHER REQUIREMENTS

6.1. Finished surface shall be free of all rocks 150mm or larger and materials consisting of trees, branches, stumps, tree roots and deleterious materials (muskeg soils). All disturbed areas are to be graded; all organics suitable for re-use shall be incorporated within disturbed areas or road side ditches prior to seeding; ditches are to be deepened to ensure final grade meets drainage requirements. Seed mix is to be approved by the City and should contain a mixture of site-specific grasses that are low maintenance and drought and disease resistant. Once the areas have been seeded and fertilized, a Construction Completion Certificate for landscaping will be issued.

6.2. Disturbed areas shall include road right of ways, drainage channel right of ways, and borrow areas.

6.3. Any information on wells drilled within the subdivision area shall be copied to the City including well logs, depth of well, water level and flow conditions.

6.4. If a Construction Completion Certificate is not issued prior to snowfall, the Developer will be required to notify the City and sign a work order authorizing the City to provide snow removal.

SCHEDULE "D"
Construction Completion Certificate

Development Area: _____

Developer: _____

Development Agreement Date: _____

Contractor: _____

Municipal Improvement: _____

Date of Application: _____

I, _____ of the Firm_____
"Consulting engineers" hereby certify that the Municipal Improvement noted herein meets all the requirements for a Construction Completion Certificate as specified by the said mentioned Development Agreement above, and constructed, as far as can be practically ascertained, according to the Agreed Standards of the said development agreement, I, hereby recommend this Municipal Improvement for approval of the Construction Completion Certificate

_____

Project Engineer (Consulting Engineer) Date

_____

Signing Officer (Consulting Engineer Firm) Date

_____

Developer Date

_____

Authorized City Inspector Date

Approved / Rejected

_____

Development Officer, City of Dawson Date

SCHEDULE "E"
FINAL ACCEPTANCE CERTIFICATE

Development Area: _____

Developer: _____

Development Agreement Date: _____

Contractor: _____

Municipal Improvement: _____

Date of Application: _____

I, _____ of the Firm_____
"Consulting Engineers", hereby certify that as of the above date, the Municipal Improvements noted herein meet all of the requirements for final acceptance as specified by City of Dawson's Development Agreement, and I hereby recommend these Municipal Improvements for final acceptance by City of Dawson.

_____

Project Engineer (Consulting Engineer) Date

_____

Signing Officer (Consulting Engineer Firm) Date

_____

Developer Date

_____

Authorized City Inspector Date

Approved / Rejected

_____

Development Officer, City of Dawson Date

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

OFFICE USE ONLY	
APPLICATION FEE:	
DATE PAID:	
RECEIPT #:	
PERMIT #:	

SUBDIVISION APPLICATION

PLEASE READ THE ATTACHED INSTRUCTIONS, GUIDELINES AND SUBMISSION REQUIREMENTS PRIOR TO COMPLETING FORM.

PROPOSED DEVELOPMENT

☑ Subdivision ☐ Consolidation ☐ Boundary Adjustment

CIVIC ADDRESS: Infill #3, near Callison Subd. (YG File: 2021-8300) **VALUE OF DEVELOPMENT:** Approx. $300,000

LEGAL DESCRIPTION: LOT(S) Vacant Land **BLOCK** N/A **ESTATE** N/A **PLAN#** N/A

PROPOSED DEVELOPMENT: Please provide a brief description of the proposed development, including the number of proposed lots and their sizes.

This application is for Infill # 3 parcel in the Callison Subdivision of the City of Dawson. The proposed lot size is 9.29 acres or, 3.76 hectares. This proposed lot is zoned M1-Industrial. Once surveyed, it will be released by Yukon Government through a tender process, for a private development opportunity. The proposed lot has the potential to be subdivided based on its size, subject to all necessary approvals and authorizations from the City of Dawson. An existing road right-of-way (Narozny Road) provides access to the proposed lot from the Klondike Highway. A 12m buffer strip exists between the proposed lot and Lot 1071 to maintain access to the vacant Yukon land located northeast of the proposed lot. The proposed lot does not overlap any existing placer claims.

APPLICANT INFORMATION

APPLICANT NAME(S): Pierre Marchand (Yukon Government - Land Development Branch)

MAILING ADDRESS: P.O. Box 2703 **POSTAL CODE:** Y1A 2C6

EMAIL: pierre.marchand@yukon.ca **PHONE #:** 867-332-1578

OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)

OWNER NAME(S): Commissioner of Yukon (Authorized Agent: Susan Antpoehler, Land Management Branch)

MAILING ADDRESS: P.O. Box 2703 K 320 **POSTAL CODE:** Y1A 2C6

EMAIL: susan.antpoehler@yukon.ca **PHONE #:** 867-667-5882

It is the responsibility of the applicant to ensure that all plans conform to the provisions of the City of Dawson Zoning Bylaw and applicable territorial and federal legislation.

FURTHER INFORMATION

ACCESS: Does the proposed development require additional access to any public road or highway? If yes, please name the road and describe the location of the proposed access.

No additional legal access is required. Some road surface improvements are required in order to facilitate vehicle access to the parcel. The road improvement requirements will be identified in a proposed development agreement that will be registered on the title of the proposed lot after the legal survey plan is registered in the Land Titles Office. The development agreement will commit future owners of the proposed lot to completing the road improvements in conjunction with the development of the parcel.

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WATER: Is the land situated within 0.5 miles of a river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch? If yes, please name the body of water and describe the feature.

Yes, the Klondike River.

The proposed lot also contains a dredge pond which will need to be infilled to enable full development potential of the proposed lot. The pond was tested prior to the subdivision application being submitted and does not contain any fish.

TOPOGRAPHY: Describe the nature of the topography of the land (flat, rolling, steep, mixed), the nature of the vegetation and water on the land (brush, shrubs, tree stands, woodlots, etc, & sloughs, creeks, etc.), and the kind of soil on the land (sandy, loam, clay, etc.).

The proposed lot is mostly cleared with a few small trees (poplars and willows). The elevation of the proposed lot is approximately 328m. The existing topography of the proposed lot is generally low lying compared to the adjacent properties and contains tailings piles and a historic placer mining dredge pond. Fill should be imported to the site to address low-lying areas of the proposed lot and to help mitigate flood damage to any future building improvements through effective site grading.

EXISTING BUILDINGS: Describe any buildings, historical or otherwise, and any structures on the land and whether they are to be demolished or moved:

There are no buildings on the proposed lot. The proposed lot area previously contained some debris which was removed from the site. Recommended site remediation based on a environmental assessment of the proposed lot area was undertaken over the last two years. The site is now considered free of contaminants/debris and is ready for development.

DECLARATION

- I/WE hereby make application for a Development Permit under the provisions of the City of Dawson Zoning Bylaw No. 2018-19 and in accordance with the plans and supporting information submitted and attached which form part of this application.
- I/ WE have reviewed all of the information supplied to the City of Dawson with respect to an application for a Development Permit and it is true and accurate to the best of my/our knowledge and belief.
- I/WE understand that the City of Dawson will rely on this information in its evaluation of my/our application for a Development Permit and that any decision made by the City of Dawson on inaccurate information may be rescinded at any time.
- I/WE hereby give my/our consent to allow Council or a person appointed by its right to enter the above land and/or building(s) with respect to this application only.

I/WE HAVE CAREFULLY READ THIS DECLARATION BEFORE SIGNING IT.

February 7/24 — DATE SIGNED

SIGNATURE OF APPLICANT(S)

February 2/24 — DATE SIGNED

SIGNATURE OF OWNER(S)