COMMITTEE OF THE WHOLE
Town Hall – Council Chambers, ZOOM & Facebook Live
Monday, February 3, 2025 – 7:00pm

AGENDA

1. CALL TO ORDER

2. APPROVAL OF THE AGENDA

3. APPROVAL OF THE MINUTES
   3.1. Committee of the Whole Meeting – December 2, 2024

4. PRESENTATIONS
   4.1. Annapolis County Joint Economic Development Initiative – Daniela Siggia Beasant

5. ANYTHING BY CITIZENS

   Procedure: A thirty-minute period will be provided for members of the public to address Council regarding questions, concerns and/or ideas. Each person will have a maximum of two minutes to address Council with a second two-minute period provided there is time remaining within the thirty-minute "Anything by Citizens" period.

6. NEW BUSINESS
   6.1. RFD 007-2025 Reservoir Project Management - Change Order #1 – CAO
   6.2. RFD 008-2025 Reservoir Construction - Change Order #1 – CAO
   6.3. RFD 009-2025 Appointment List Update – CAO

7. INFORMATION/DISCUSSION ITEMS
   7.1. Dangerous and Unsightly Status Report as of January 2025 – CAO
   7.2. Community Concerns/Complaints as of January 2025 – CAO
   7.3. Joint Council Letter re: Annapolis Valley Regional Library – CAO
   7.4. Accounting Activities Report as of end December 2024 – Director of Finance

8. ANTHING BY MEMBERS

9. ADJOURNMENT

COMMITTEE OF THE WHOLE
Monday, December 2, 2024, at 7:00 pm

A regular monthly meeting of the Committee of the Whole of Middleton Town Council was held in person, via ZOOM and on Facebook Live on Monday, December 2, 2024

PRESENT

Chairing the meeting, Mayor Gail Smith; Deputy Mayor Gary Marshall, Councilors John Bartlett, Dan Smith, Bernadette Knapp (via ZOOM), Jonathan Archibald and Sandra Fournier; Chief Administrative Officer, Ashley Crocker, and Recording Secretary, Sara Marceau

Regrets:

Also in attendance: Gordon Rodgers and Dianne McDonald

1. CALL TO ORDER

Mayor Smith called the meeting to order at 6:59 p.m.

2. APPROVAL OF THE AGENDA

241202.01: It was moved and seconded to approve the agenda, as circulated. **Motion carried.**

3. APPROVAL OF THE MINUTES

Approval of the Previous Meeting Minutes

October 7, 2024

4. PROCLAMATIONS

None currently.

5. ANYTHING BY CITIZENS

Nothing currently.

6. NEW BUSINESS

6.1 RFD 055-2024 Planning Notices and Public Advertisements

Planning Services Coordinator Marceau gave a brief overview of the Planning Notices and Public Advertisements.

241202.02 It was moved and seconded that Town Council, on positive recommendation of the Planning Advisory Committee, authorize the use of the Town's website for planning notices, as per the *Municipal Government Act*, Part 205 (4) and (4A), as amended.

241202.03 That Council amend the Participation Program Policy (Code G – Planning #1.2), Policy Statement 1.c., by replacing the requirement for a public advertisement (1) "in the local newspaper" with "on the Town's website." **Motion carried.**

6.2 RFD 047-2024 Code of Conduct Policy A3.14

CAO Crocker gave a brief overview of the Code of Conduct Policy A 3.14.

Councillor Archibald inquired whether we could amend some of the wording. CAO Crocker responded that amendments can be made at any time and the revised version can be brought back to council for approval once everyone is satisfied with **it.**

Councillor Smith inquired whether there should be an appeal process.
ACTION: CAO Crocker will reach out to the province to inquire.

241202.04 It was moved and seconded that Council approve Policy A 3.14 Council Code of Conduct as circulated. **Motion carried. Nays:** Councillor Smith

7. INFORMATION/DISCUSSION ITEMS

7.1 Dangerous and Unsightly Status Report for October 2024

CAO Crocker stated the Dangerous and Unsightly Status Report was circulated.

7.2 January 6, 2025 COTW Meeting

CAO Crocker suggested canceling the January 6th COTW meeting, as there won't be much to report between the Christmas break and the meeting date.
There were no objections.

8. ANYTHING BY MEMBERS

- Deputy Mayor Marshall reminded residents about the holiday parade and tree lighting, taking place on Saturday, December 7th, starting at 6:00pm. The parade route is available on the Town's Facebook page.

- Councillor Archibald indicated that a resident was removed from the lower-income housing list.
    - CAO Crocker stated that the Town has no jurisdiction over the housing list.

- Councillor Smith suggested inquiring with the Department of Municipal Affairs and Housing to see if they have a policy on the matter.

- Councillor Bartlett asked for an update on the Property Opportunity Notices (PON) and the 438 Main Developments. He inquired if any permits have been submitted.
  - PSC Marceau provided an update on the PON development. A developer has reached out to initiate the process; however, the information has not been made public yet.
  - CAO Crocker provided an update on the 438 Main Developments. The engineering work is still underway, and an update is expected soon.

- Councillor Smith inquired about policing and whether Council can meet with the RCMP directly or if it must go through the Police Advisory Board, as discussed at the last council meeting. Is there any information on this?
  - CAO Crocker will have an answer by the December 16 Council meeting.

9. ADJOURNMENT

The Mayor declared the meeting adjourned at 7:29 p.m.

_____ _____

MAYOR RECORDING SECRETARY

Feb 2025

Economic Development Progress Report

Prepared By: Daniela Siggia-Beasant
Economic Development Coordinator

Economic Development Focus

Priority Areas of Work:

✅ **Business Engagement & Support –** Direct outreach, coaching, identify training/support needs and economic vulnerabilities.

✅ **Investment Attraction –** Identifying methodologies to attract development investment.

✅ **Economic Research & Strategy –** Business climate assessment, population trends.

✅ **Community Profile Development –** A professional tool to market Middleton's and The County's potential.

Middleton has unique economic challenges, but also real opportunities for growth. The goal is to provide tangible economic support and create a foundation for long-term investment.

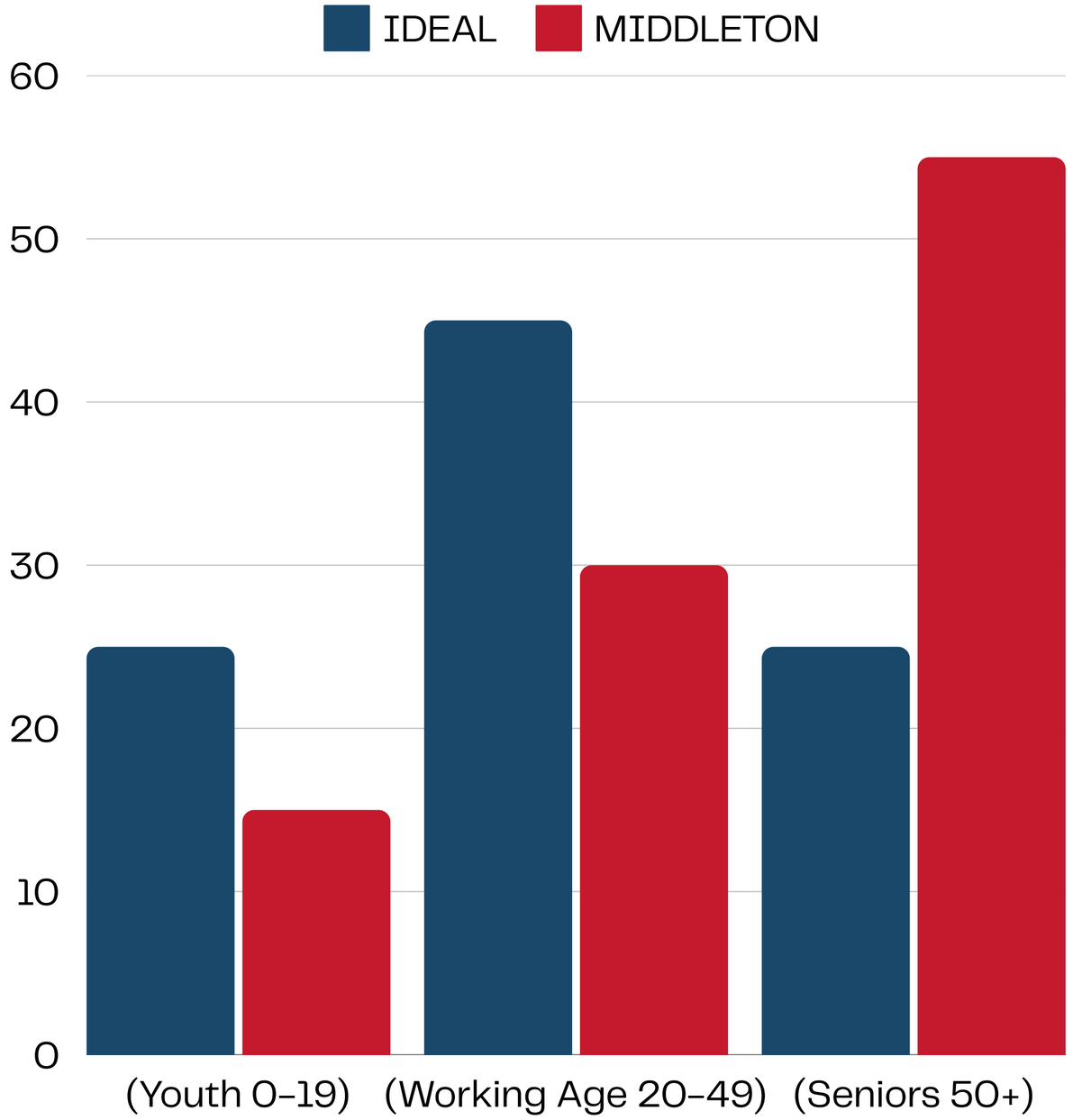
Middleton Economic Development – Key Accomplishments

✅ Business & Community Engagement
📍 Held direct meetings with business owners, developers, and community leaders.
📍 Launched a community survey to gather business needs and priorities.
📍Created a business directory & grant directory in development

✅ Investment Attraction & Marketing
📍 Engaged residential & commercial developers for new projects.
📍 Developed Community Profile (in progress) – a high-impact tool for attracting investment.

✅ Business Support & Training
📍 Identified high-demand training needs for local businesses (social media, marketing, finance).
📍 Established a plan for a One-Stop Business Hub to offer direct support.

✅ Infrastructure & Economic Growth Planning
📍 Identified gaps in commercial space, housing, and key services.
📍 Advocated for higher-level funding and government support for economic initiatives through provincial and federal levels of government.
📍Designed a 3 year economic revitalization plan



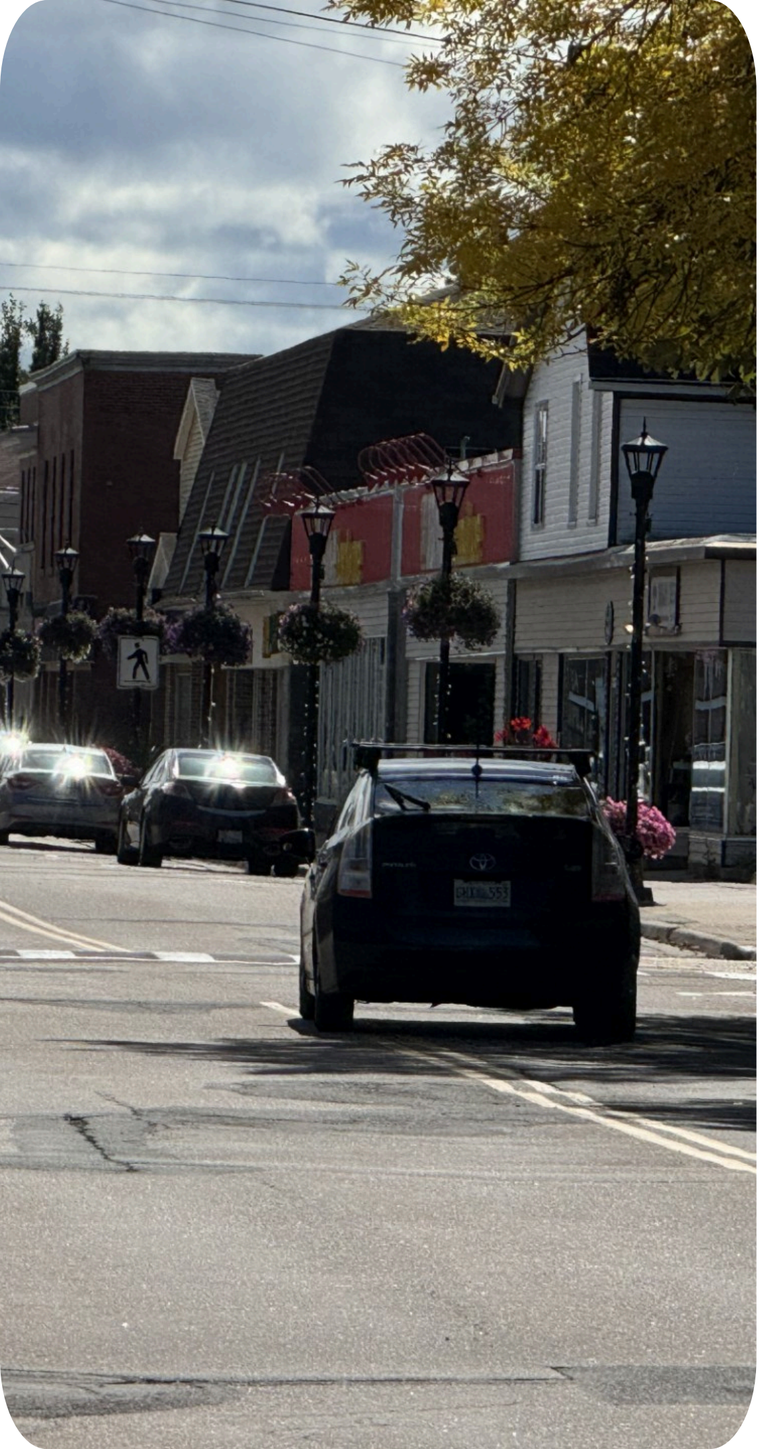
POPULATION & ECONOMIC DISTRIBUTION

Low Household Income →
Middleton $40,896 vs. NS $61,724.

Employment Rate Falling →
Middleton 52% vs. NS 59%.

AT A GLANCE...

- Need for year-round restaurants, specialty niche stores, fitness centers, personal/professional services.
- Lack of affordable rental spaces for new businesses.
- Dated downtown storefronts impacting economic vibrancy
- Lack of rental housing
- Existing businesses could use more vibrancy
- Local business needs their spirits lifted



Business Support – Beyond Referrals

✅ Middleton’s businesses need more than just referrals—they need hands-on support.

✅ Biggest challenge? Many small businesses lack the resources or skills to market & manage effectively.

✅ Most requested training topics:

- Social media & digital marketing
- Business management & financial planning
- Customer attraction & retention

Is Business Training a Municipality's Job?

Some might say no BUT a strong local economy requires both new investment & strong existing businesses.

Why this approach works for Middleton:

- Local businesses directly asked for this support.
- When businesses struggle, storefronts stay empty—hurting investment potential.
- A tailored approach means we fill gaps, not duplicate services.

It's not about doing everything—it's about providing what's needed to strengthen Middleton's economy.

Middleton’s Competitive Advantage – Attracting Investment

✅ **Strategic Location** – Positioned as a regional hub for commerce & services.
✅ **Available Land & Commercial Space** – Opportunities for business expansion & development.
✅ **Untapped Market Potential** – Gaps in key services & amenities make Middleton an attractive location for new investment.
✅ **Growing Economic Initiatives** – A structured investment strategy will help showcase opportunities to the right investors.

Middleton has the right ingredients for investment—now we need to market and position it effectively to attract the right opportunities.

\

Why Middleton Needs More Than the REN

The REN is High-Level, But Middleton Needs Local Solutions

📌 What the REN Doesn't Do:

❌ Actively market Middleton's available properties to investors.

❌ Provide hands-on business support beyond referrals.

❌ Use modern tools like Guru's 3D zoning visualization to showcase development potential even though they have GURU

📌 What Middleton Can Do Instead:

✅ Create targeted investment materials (Community Profile, site packages).

✅ Offer direct business support tailored to local needs.

✅ Leverage Guru's 3D tools to give developers an interactive view of properties.

To truly grow, Middleton needs an economic development approach designed for Middleton

One Foot Over the Line – Why Local Economic Development Matters

The Challenge:
A local agri-tourism entrepreneur needed support to expand his business.

Problem: His property was just outside Middleton's borders—only one foot was within town limits.
Result: REN couldn’t help him due to jurisdictional restrictions, so he was referred to me.
Bank Rejection: His original business model was turned down by the bank for being too risky & now he’s stuck.

📌 **The Solution:**
✅ **Created a staged development approach –** Helping him break the project into affordable phases.
✅ **Provided financial guidance –** Ensuring he had a fiscally viable plan for sustainable growth.
✅ **Supported revenue planning –** Helping him adjust his model for long-term success.

🚀 Why This Matters:

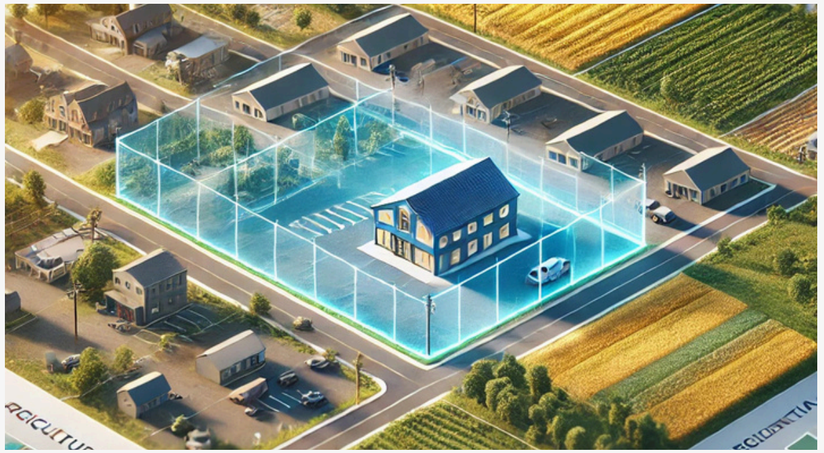
- Without local economic development support, he would have had no guidance.
- This is the kind of hands-on assistance that goes beyond traditional referrals.
- Middleton businesses need tailored solutions, not just links to other agencies.

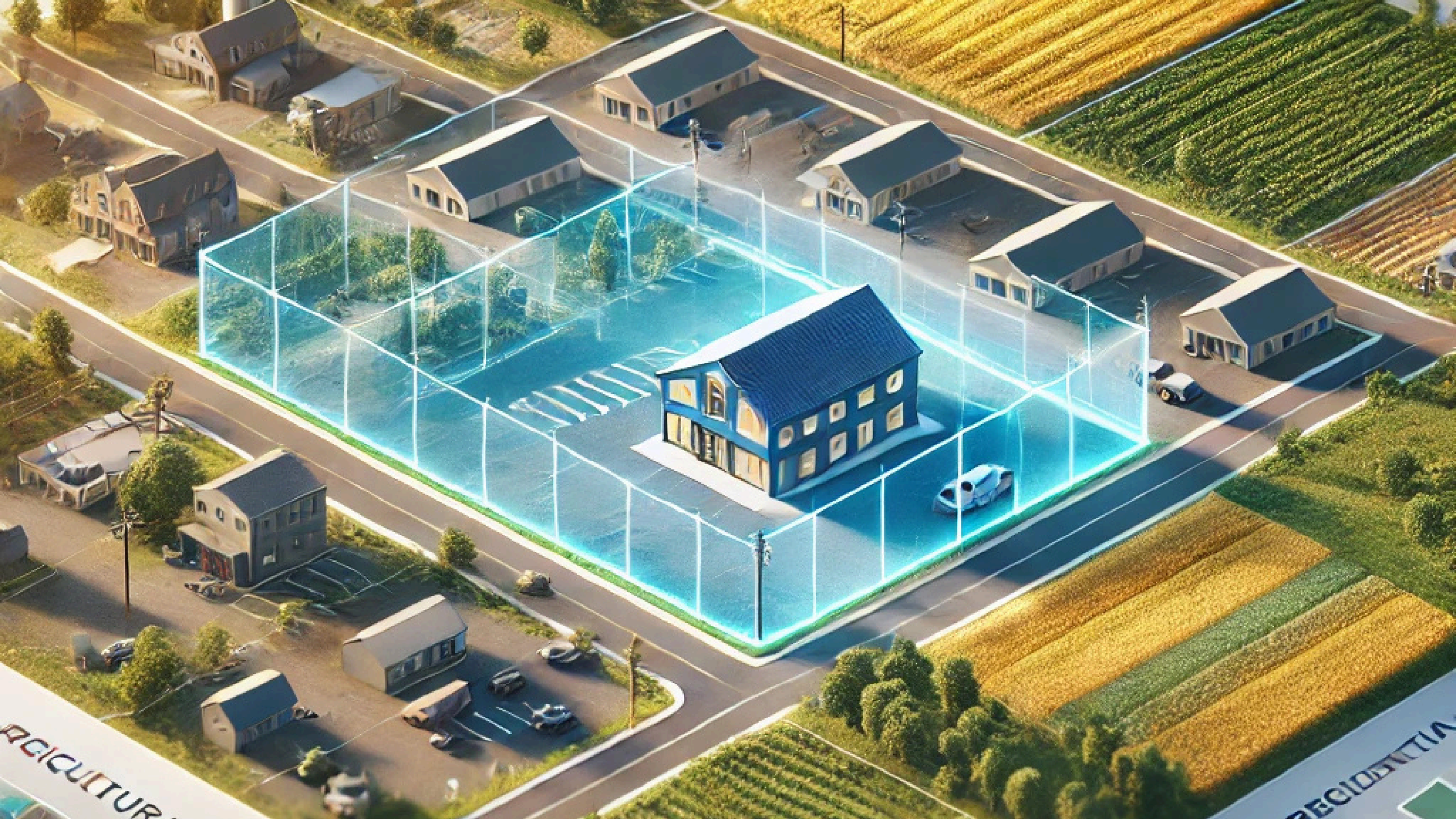
Guru – A Smarter Way to Attract Investment

A real estate visualization and marketing platform that helps municipalities showcase development opportunities to investors and developers.

🚀 Why This Matters:
📌 **Developers want clarity** – Guru makes it easy to visualize project potential.
📌 **Saves time & effort** – Instead of static PDFs, investors get real-time, interactive insights.
📌 **Puts Middleton on the map** – Competes with larger municipalities using cutting-edge marketing tools.

🌍 How Guru Helps Middleton Attract Investment:
✅ **3D Zoning Visualization** – Developers can see what's possible on available land.
✅ **Interactive Site Maps** – Allows investors to explore property details, zoning, and infrastructure.
✅ **Customizable Marketing Packages** – Professional site reports that make Middleton's opportunities stand out.





What Investment in EcDev Can Achieve

What Investment in Economic Development Can Achieve:

✅ Professional Investment Marketing
📍 Fund the Community Profile & priority site marketing.

✅ Expand Developer Outreach
📍 Use Guru’s 3D tools for an interactive, modern approach to site promotion.

✅ Ongoing Business Support & One-Stop Hub
📍 Launch a dedicated space for business coaching & resources.
📍 Deliver targeted workshops based on real business needs.

✅ High-Level Advocacy & Funding
📍 Push for provincial & federal funding to drive economic growth
📍 Provide targetted white glove service/support for new & existing businesses

Thank you!

REQUEST FOR DECISION
Reservoir Project Management
Change Order 1
RFD#: 007-2025

To: COTW and Town Council
From: Adam Verran, Director of Public Works
Date: February 3, 2025 and February 18, 2025
Subject: Reservoir Project Management – Change Order #1

Guiding Principles for Decision-Making

Accountability	Transparency	Diversity	Sustainability	Engaged	Informed

References/Attachments

- Reservoir Project Management Proposal – CBCL
- Tank QA Testing Proposal – CBCL
- Capital Project Sheet 22-12-A

Legislation

- *Nova Scotia Municipal Government Act*
- Town Policy Code A – General Administration Procurement and Purchasing Policy
- Public Procurement Policy

Recommendation

That Town Council authorize and approve the QA Testing Proposal from CBCL for an amount not exceeding $19,480 plus HST.

Background

One of the requirements of the Municipal Capital Growth Program funding for the new reservoir is that the Town hire external project management (external from the Town) for the duration of the project. The Town is also required to have an engineer inspect the installation of the tank, the foundation and the base of the tank and have all the shop drawings reviewed as part of the Town's due diligence. The Town does not have a certified engineer on staff. A tender was put out for these services and the Town awarded it to CBCL. In CBCL's original proposal, they recommended QA testing on the tank, but did not have firm quotes at the time. Quotes are now available and attached is CBCL's proposal.

Financial Implications

The proposal is for $19,480 plus HST. Council already awarded the Project Management Services to CBCL for $374,121. The UARB Reservoir Approval request outlines how the entire project will be funded, including the construction engineering services. Engineering services for this phase of the project were budgeted at $375,160, with a contingency of 10%, or $37,516. If Council approves this work, we will still be within the budget that was approved by the UARB. $18,036 would be left of the contingency. 50% of the cost will come from the MCGP grant and the other 50% will be funded through a combination of the Water Utility Depreciation Reserve, long-term debt and other grants.

If Council approves this additional expense, the overall reservoir project is still within the Capital Budget originally approved by Council, as well as the proposal and budget approved by the UARB.

Strategic Plan/Operating Plan Alignment

Check Applicable	Strategic Priority Area	Comments
	Environment	
X	Infrastructure	Overseeing the construction of the new reservoir project
	Economy	
	Community	
	Governance	
	Council Strategic Initiative	

Alternatives

1) Council could choose not to have the tank inspected

Community Engagement/Communication

N/A

CAO Comments

The CAO supports the recommendation of staff.

CAO Initials: AC

Target Decision Date: 18 February 2025

Maritime Centre, 1505 Barrington Street, Suite 901, Box 606, Halifax, NS,
B3J 2R7 | 902-421-7241 | CBCL.ca | info@CBCL.ca

January 24, 2025

Ashley Crocker
CAO
Town of Middleton
131 Commercial Street
PO Box 340
Middleton, NS B0S 1P0

Dear Ms. Crocker:

RE: MID 2024-06 Reservoir Project Management – Tank QA Testing

Tank QA Testing

This project includes the construction of a AWWA D103 standard glass lined bolted steel tank. The tank panels are manufactured and coated in factory and shipped to site where they are assembled by a qualified tank erecting contractor. We are recommending that the Town of Middleton conducts third-party testing of the manufactured tank panels as part of the Quality Assurance (QA) inspections. The scope includes the following:

1. Engage a qualified third-party company to perform QA inspections and testing prior to shipping of the panels from the factory. Quote from Brouco is attached.
2. Engage a qualified third-party company to perform QA inspections and testing in the field after delivery of the panels to the construction site. Quote from Fastec is attached.
3. Time for CBCL to coordinate the work, review the testing and coordinate with the contractor regarding the results. We have included 16 hours of CBCL's time for this scope.

The Tank QA Testing was described but the price was not included in the original proposal as we were collecting quotes. We propose to complete this work as an extra to the original contract based on the scope of work and assumptions stated in this proposal. A 10% markup is included on the subconsultants price. Based on the assumptions presented here our fee estimate including expenses to complete the above is **$19,480** plus tax. If you have any questions about this proposal, please do not hesitate to contact us at the undersigned.

Yours very truly,

CBCL Limited

Paul Young, P.Eng.
Municipal Engineer
Direct: 902-421-7241

Ashley Crocker
January 24, 2025

E-Mail: pyoung@cbcl.ca

Attachments:

A – Factory Inspection Quotation
B – Field Inspection Quotation

Project No: 201014.06

Attachment A

Factory Inspection Quotation

Brouco Services Inc
703 Cezanne Cr. Orleans ON, K4A 2A7
Tel: (613) 867-5065 Fax: (613) 830-3360

Mr. Jeffrey Clair, P.Eng. January 6th, 2025
CBCL Limited.
Halifax, NS

Re: Glass-Lined Bolted Reservoir QA inspections – Consultant Services.

Dear Jeffrey,

Brouco Services is pleased to present you its quotation for the above mention project.

Task 1 Shop Inspection, and review of the Mill-test reports and thickness data.

We are to perform visual inspection of the fabricating practices, coating system application to ensure compliance to the project specifications. This shall include review of the mill test reports, review of the coating QC program at the fabrication/coating plant and including random coating thickness measurements as part of our QA mandate of the coating process. We understand the factory is located near Dekalb Illinois. If feasible witnessing of low voltage holiday detection will also be performed although we suspect it shall be completed at the tank assembly stage.
For a three days site inspection, plus an additional review of the coating QC data and mill test data as above discussed, our lump sum fee for Task 1 which shall include all our travel disbursements will be set at $7,650 plus HST. If preferred by CBCL, as alternate pricing we can proceed as per the below fee schedule presented under Task 2.

Task 2 Middleton NS Coating Inspection, Low Voltage Holiday testing

We assume that coating holiday testing and also final coating repairs are to be completed at the final assembly location in Middleton Nova Scotia. As the budget for the actual inspection requirements will vary greatly based on the sequence of the final construction assembly of the tank, at this time, we can only provide a fee schedule. All specialized test equipment and tools required are included in the pricing of our fee schedule presented as follows for all coating quality assurance activities discussed in this proposal:

Rejean Brousseau PhD	$170/hr (if applicable)
NACE Level II Coating Inspectors	$135/hr
Travel and other disbursements	Cost plus 10%
Mileage	$0.65/Km

Should you have questions or comments, please do not hesitate to contact us at (613) 867-5065.

Yours truly,

Rejean Brousseau, Ph.D.

Attachment B

Field Inspection Quotation

48 Venture Cres.
Elmsdale NS, Canada
B2S 0B2
Office Phone: 902-883-3176
Email: info@fasteccoatings.ca
HST# 707767711RT0001
Date: 15-Jan-25

Quotation # 00493

Attention: Paul Young
P.Eng. Municipal Engineer
CBCL
1505 Barrington Street, Suite 901 PO Box 606 Halifax, NS B3J 2R7

Reference: Middleton Reservoir - Holiday Testing Quote

Item Description	Quantity		Total
NACE Inspector Daily Rate	5	$1,260.00	$6,300.00
		Sub-Total	$6,300.00
		Tax 15%	$945.00
		Total	$7,245.00

TERMS AND CONDITIONS

This Quote is Based on required equipment, man hours, consumables and product required as discussed during or just after our initial site visit and is subject to change due to unforeseen circumstances such as extra work not previously discussed. If changes are to be made written consent from the customer must be obtained prior to starting work. This Quote is valid for 30 Days.

Quote is based on a minimum 8 hours per day. Pricing includes all associated cost including transportation and equipment.

Quote is based on employees working regular time. If weekend or night shift work is required Customer will be required to cover premium Over Time Rates.

Customer to initiate Lock Out/Tag Out Procedures and provide Specialized Lock Out Equipment if required.

Quote does not include a Confined Space Attendant or Confined Space Rescue and is to be supplied by the customer if required.

Terms Net 30 Total price reflects the customers request of 5 Days.

Maritime Centre, 1505 Barrington Street, Suite 901, Box 606, Halifax, NS,
B3J 2R7 | 902-421-7241 | CBCL.ca | info@CBCL.ca

October 3, 2024

Ashley Crocker
CAO
Town of Middleton
131 Commercial Street
PO Box 340
Middleton, NS B0S 1P0

Dear Mr. Verran:

RE: MID 2024-06 Reservoir Project Management

Introduction

CBCL has a long history of completing work for the Town of Middleton on their water system and other infrastructure and planning. After completing the geotechnical work, preliminary design, detailed design and tendering of the Town's proposed reservoir, CBCL is well positioned to complete construction phase engineering services for the new reservoir.

Organizational Structure/Background

For over sixty (60) years, CBCL has been a respected and trusted firm delivering multidiscipline engineering and technical services throughout Canada and around the world. We foster mutual success with our clients, value our employees and strive to contribute to the communities in which we live and work. Creating today, committed to tomorrow, summarizes our focus on environmental responsibility. We endeavor to go beyond conventional fundamentals of functionality to include due consideration of a project's short and long-term social and environmental effectiveness and sustainability.

Since 1955, CBCL has developed into one of the largest multidiscipline engineering firms in Atlantic Canada. The head office is in Halifax (see letterhead above) with branch offices in Saint John, Moncton and Fredericton, NB; Sydney, NS, Charlottetown, PE; St. John's and Goose Bay, NL, and Ottawa. CBCL is an employee-owned firm that offers services in four major market sectors – Infrastructure, Environmental, Buildings, and Industrial. The total staff numbers approximately 480 and includes civil, municipal, structural, geotechnical, environmental, chemical, industrial, mining, mechanical and electrical engineers; biologists and environmental scientists; quantity surveyors and cost estimators; as well as development and environmental planners. Qualified technical and clerical personnel who work in areas such as automated design and drafting, construction inspection, and technical specification production are available to support professional staff.

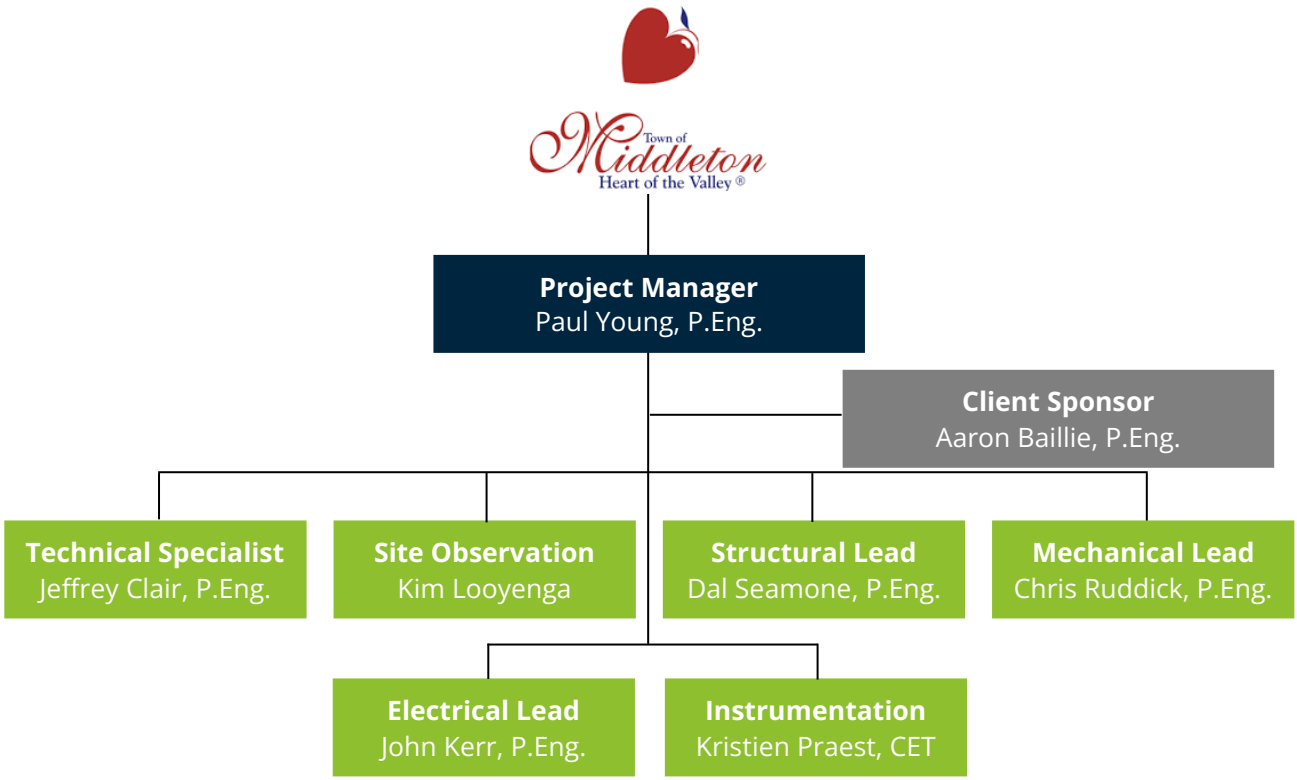
Ashley Crocker
October 3, 2024

Project Team and Qualifications

Paul Young will be the main project contact and project manager, and his contact information is as follows:

Paul Young
Direct: 902-421-7241
Email: pyoung@cbcl.ca

The key project team members are provided on the following page with short bios describing their work experience.



Organizational Chart

Paul Young, P.Eng. – Project Manager

Paul is a Civil Engineer with over ten years of experience in design and construction for municipal engineering services. His areas of expertise include water distribution and modelling, sanitary systems, storm water systems, municipal roads and parking lots. His design experience also includes large-diameter water transmission mains and potable water storage tanks. Paul has helped municipalities and developers complete new site developments and infrastructure upgrades on a variety of projects in residential, commercial, and industrial settings. His experience coordinating with multi-discipline design teams through

design and construction has become an asset for both municipal clients and private developers. Before joining CBCL in 2018, Paul worked on the west coast of Canada in consulting engineering.

Paul will be the project manager for this project and the main point of contact.

Aaron Baillie, P.Eng. – Manager, Municipal Engineering – Client Sponsor

Aaron is the Municipal Department Head in CBCL's Halifax office. He has degrees in Environmental Engineering (P.Eng.) and Agricultural Mechanization (B.Sc.) with more than twenty-two years of experience in the design development, project management, detail design, procurement, construction, and cost estimating of municipal infrastructure projects. Aaron has been involved in all aspects of project delivery including planning, detail design, assessments, project management, construction administration, and commissioning. Aaron has worked in most of the communities along the proposed corridor and is familiar with existing municipal infrastructure within those communities.

Aaron will provide oversight for the project and a second point of contact for the client.

Jeffrey Clair, P.Eng. – Technical Specialist

Jeff is a municipal engineer with over seventeen years of experience in civil/municipal design, project management, construction administration, and commissioning. He is experienced in potable water pump stations, water treatment plants, sanitary lift stations, storm sewer and water mains, water feedermains and trunk sewers, stormwater ponds, and river bank stabilization. He has worked on various, civil, municipal, and process projects on which he has been responsible for project management, the development of tender packages including plan and specification development, the development of technical reports and the technical design for the civil components of multi-disciplinary engineering projects. Jeff has been involved in a number of projects for the Town of Windsor and Falmouth, including the current water model calibration project. He has experience in booster station design and watermain bridge crossings.

Jeff will provide engineering oversight for the booster station and reservoir.

Kim Looyenga – Site Observation

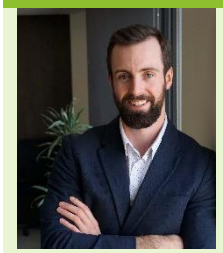
Kim joined CBCL in 2019. She has more than fourteen years of experience in the operation of water and wastewater treatment plants throughout the Atlantic provinces.

Kim has a diploma in Civil Engineering Technology and Business Administration. Additionally, she has a Class I Water Treatment, Wastewater Treatment, and Wastewater Collection Operator Certificate, and a Class II Water Distribution Certificate in Nova

Scotia. She has a Class I Water Treatment Operator Certificate and a Class II Water Distribution Operator Certificate in Newfoundland.

Kim has extensive experience in operations (including experience as an ODRC), plant upgrade services, and manual creation. She has been involved in projects from data collection to design, tender, quality assurance during build, site supervision, contact compliance inspection, public liaison, and payment verification.

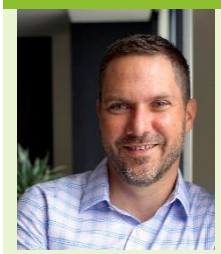
Dal Seamone, P.Eng. – Structural Lead



Dal is a Structural Engineer in CBCL's Halifax, NS office with approximately eight years of design experience, and is currently registered as a Professional Engineer in the province of Nova Scotia. During this time, he has been involved primarily in the design of wastewater treatment plants, water treatment plants, and industrial buildings. He also has experience in construction site inspections and assessments of existing structures.

Dal is proficient in structural design and analysis of steel, concrete, masonry, and timber structures included buildings, tanks, chambers, platforms, and slabs/pads. He is also well versed in the design of post-disaster structures and detailing requirements of higher ductility seismic force resisting systems.

Chris Ruddick, P.Eng. – Mechanical Lead



Chris is a registered Professional Mechanical Engineer working in the fields of building design, construction, commissioning, and energy efficiency. Chris received his degree from Dalhousie University in 2000 and has been working in this field since 2001. Prior to joining CBCL in 2008, he worked for ADI in Fredericton, NB, and Stantec in Vancouver, BC.

Chris has fulfilled the role of Project Manager and Lead Mechanical Engineer on numerous multi-discipline projects including multiple LEED projects. He has experience in the fields of plumbing, heating, ventilation, air-conditioning, humidity control, fire protection, controls, filtration, refrigeration, energy management, commissioning, and building audits. Chris has worked on a wide range of projects such as office buildings, educational facilities, commercial kitchens, laboratories, ice rinks, pools, data centres, museums, airports, treatment plants, pump stations, and retail.

John Kerr, P.Eng. – Electrical Lead

John is an Electrical Engineer with nine years of experience in industrial, water/wastewater treatment plants, and onshore/offshore oil and gas industries. John's responsibilities include preliminary and detailed design packages including drawings, bid evaluation, datasheets, specifications, development of work packs/instructions, material lists, and construction support. Projects include Main Service and Generator sizing, ATS, Electrical distribution, Plant SCADA & RTU systems, Lighting, Data/Voice networks and backbone infrastructure, CCTV, Access Control and E, I&C interface for a wide spectrum of Process equipment packages at various Industrial, Water, Wastewater and Oil & Gas sites.

From 2015 to 2020, John was employed with a consulting firm based in Dartmouth, NS as an Electrical engineer. During this period, he worked various onshore and offshore facilities covering a wide variety of electrical, instrumentation and controls EPCM projects including construction, testing, and commissioning. Mr. Kerr joined the electrical engineering department at CBCL in November 2019.

Kristien Praest, CET – Instrumentation

Kristien is an electrical technologist with fifteen years of experience in automation. He graduated from the Nova Scotia Community College in 2009 with a diploma in Electrical Engineering Technology and joined CBCL Limited in August 2014. Since graduating in 2009, Kristien has programmed and commissioned over fifteen (15) new SCADA systems, of varying complexity. He has extensive experience programming PLC's and HMI's from various vendors, including Allen Bradley, Schneider Electric, General Electric, and Maple Systems. As well as SCADA and visualization platforms Trihedral VTScada, FactoryTalk View, and FactoryTalk VantagePoint EMI. Kristien is knowledgeable in serial and ethernet communication protocols, including Ethernet/IP, Modbus, DNP3.

All team members have a current workload of approximately 80% and have availability to complete the required work.

Previous Relevant Experience & References

Project Name: Cowie Hill Reservoir Replacement	Year Completed: 2023

Project Description: CBCL provided consulting engineering services for the preliminary design, detailed design, and contract administration of the Cowie Hill Reservoir Replacement. The project included review of the existing reservoir, pump station/valve chamber and operation; topographic survey; geotechnical investigation; approvals; review of hydraulic requirements; tank materials analysis; capital and life cycle analysis; water quality system review; location assessment; hazmat investigation; upgrades of existing control chamber; and drainage assessment. In consultation with Halifax Water, The Cowie Reservoir was selected to be a Type III Pre-stressed Concrete tank

(AWWA D110) with a volume of 11.5 ML (2.5 IMG), 35.3 m diameter, 11.4 m height. CBCL completed construction phase engineering services in 2022 and 2023 including contract administration services, site inspection and geotechnical materials testing.

Relevance of Reference Project to Proposed Project: This was a potable water reservoir, CBCL provided contract administration and site observations services.

Owner:	Halifax Water
Owner's Project Manager:	Jonathan MacDonald
Telephone Number:	902-818-0913
Email Address:	jonathanm@halifaxwater.ca

Project Name: Windsor Water Storage	Year Completed: 2025 Anticipated

Project Description: CBCL provided consulting engineering services for the preliminary design, detailed design, and contract administration of the Windsor Water Storage Tank. The project included siting the new reservoir, determining valve chamber requirements and operation; topographic survey; geotechnical investigation; approvals; review of hydraulic requirements; and a gravel access road and site servicing for undeveloped land. CBCL is currently in the construction phase and conducting engineering services including contract administration services, site inspection and geotechnical materials testing.

Relevance of Reference Project to Proposed Project: This is a potable water reservoir, CBCL provided contract administration and site observations services.

Owner:	West Hants Regional Municipality
Owner's Project Manager:	Erin Amirault
Telephone Number:	902-798-8391 Ext. 126
Email Address:	EAmirault@westhants.ca

Knowledge of the Town of Middleton's Water System

CBCL has completed several projects for the Town of Middleton is recent years and has a unique understanding of the water system. In recent years CBCL has completed the following work on the Town's water system:

- Water Supply Wells Modelling and Source Water Protection Plan (2007).
- Water Supply Contingency Planning and Pressure Relief Valve (2021).
- Inspection of the Existing Reservoir (2011, 2019 and 2024).
- Completed a hydraulic water model of the Town's water system including all existing infrastructure and use of the model for checking future system upgrades, checking future reservoir location options, and making updates of the model when needed (2019-2024).
- Geotechnical work to support the proposed reservoir project (2019-2022).
- Preliminary, Detailed Design and Tendering of the Town's proposed reservoir (2018-2024).

Construction Phase Engineering Services Scope

CBCL Limited (CBCL) will complete construction phase engineering services for the construction of the Town of Middleton's proposed reservoir as outlined as follows in this proposal. The engineering services during the construction phase are summarized below:

- Provide contract administration services.
- Review of shop drawings.
- Provide inspection during construction.
- Material testing QA / QC.
- Approval & closeout documents.
- Facility start up & commissioning services.
- Completion of Record Drawings.
- Warranty Period Services.

This proposal has been prepared considering a the 65-week construction schedule indicated in the successful contractor's bid.

Construction phase engineering services is a critical element for the success of the project. CBCL will provide timely responses to inquiries and requests using established procedures outlined in the contract documents.

Contract Administration

CBCL will provide Contract Administration services during construction for the 65-week construction schedule including:

- Attending bi-weekly construction meetings.
- Interpretation of the contract documents and answering technical inquiries during construction related to the design, including response to RFIs, preparation of supplementary instructions or responding to other requests.
- Consider and advise on alternative methods, equipment and materials proposed by the General Contractor.
- Provision of advice on the validity of charges for additions/deletions or change orders relating to the contract; preparation of site instructions and change orders as required.
- Process the General Contractor's progress claims, taking into account contractual and statutory holdback requirements.
- Issue progress certificates.
- Prepare deficiency list and confirm substantial performance and final payment.

Shop Drawing Review

CBCL will review all submitted shop drawing for conformance to the contract documents and provide comment back to the contractor is the product is acceptable or not. This task typically occurs at the start of construction and can continues throughout. This type of project is expected to generate several shop drawings and is an important step in the construction phase of the project.

Construction Inspection

We have included fees for services to observe key phases of the project. We can provide inspection services as needed on an hourly rate if this is preferred. For the purpose of this proposal, we have estimated the following inspection visits:

- Weekly observation at 10 hours per week for a duration of 65 weeks.
- Structural – 3 visits for the Pump Station.
- Architectural – 2 visits for the Pump Station.
- Electrical – 3 visits for the Pump Station plus 1 visit for the site electrical.
- Instrumentation – 4 visits for PLC / HMI programming and coordination with the Town's SCADA control system integrator.
- Civil – 10 visits for the Pump Station plus 20 visits for the yard piping and site civil.
- Geotechnical – compaction and concrete testing (estimated at $20,000).

Material Testing QA / QC

CBCL's geotechnical personnel will conduct periodic inspections and material testing during construction to confirm the quality of subgrade, gravel compaction, and concrete for the foundations. The contractor's geotechnical engineer is ultimately responsible for the work, the intention of these testing services and geotechnical reviews is to provide third-party QA/QC of the contractor's field compaction and test results. We have included the following Materials QA / QC testing:

- 1 trip for pipe bedding and site fill material sieve and proctor.
- 10 trips total for compaction of subgrade, site fill, yard piping backfill, and backfill of foundations.
- 4 trips total for concrete QA/QC Testing (reservoir and pump station foundations).

We will coordinate all required QA/QC materials testing visits based on the contractor's schedule.

Tank QA Testing

This project includes the construction of a AWWA D103 standard glass lined bolted steel tank. The tank panels are manufactured and coated in factory and shipped to site where they are assembled by a qualified tank erecting contractor. We are recommending that the Town of Middleton conducts third-party testing of the manufactured tank panels as part of the Quality Assurance (QA) inspections. The scope would include the following:

1. Engage a qualified third-party company to perform QA inspections and testing prior to shipping of the panels from the factory.
2. Engage a qualified third-party company to perform QA inspections and testing in the field after delivery of the panels to the construction site.
3. Time for CBCL to coordinate the work, review the testing and coordinate with the contractor regarding the results.

The price of this Tank QA Testing is not currently included in our scope of work. CBCL is working to obtain quotes for this work.

Approval & Closeout Documents

CBCL will provide deficiency inspection on substantial completion of the work. Approval and close out documents include items such final payment certificate, deficiency list development, confirmation of completion of deficiency list, confirmation of substantial performance, and warranty and other contractual documents required to be submitted by the contractor, including O&M manuals. CBCL will review the contract and assist the Municipality in reviewing and confirming that the contractor has completed their contractual requirements. Any certificate of approval required under approvals obtained for this project will be completed and submitted once the CBCL has confirmed all work complies with the design and approvals.

Facility Start Up & Commissioning

CBCL will oversee the start-up and commissioning process starting with review of the start-up and commissioning plans and sequencing. This will include filling, draining, testing, disinfection, and de-chlorination of the reservoir to ensure conformance with applicable AWWA standards. We will also respond to RFI's during the start-up phase. CBCL will review the contractor's commissioning plan and provide site observation during the process.

Record Drawings

The contractor will be responsible for providing CBCL with an as build survey of the access road and red line markup of any structural modification they may have made. This information, along with and change orders that were issued, will be incorporated into a record drawing package.

Warranty Period Services

CBCL will conduct an inspection with the Town and the contractor near the end of the warranty period. Any deficiencies will be identified, and a tracking list will be completed for any outstanding work.

Cost Proposal

We propose to complete this work on a lump sum bases based on the scope of work and assumptions stated in this proposal. If construction is extended or additional effort is required, the fee will be renegotiated. Based on the assumptions presented here our fee estimate including expenses to complete the above tasks is **$374,121** plus tax. The Cost Proposal table on the following page matches the format provided in Appendix B of the RFP and provides a breakdown of fees according to the project tasks, the Detailed Cost Proposal can be found in Appendix E.

Ashley Crocker
October 3, 2024

Task Description	Fees (excl. HST)
Contract Administration	$104,696
Shop Drawing Review	$21,253
Construction Inspection	$202,926
Material testing QA / QC	$20,444
Approval & Closeout Documents	$7,849
Facility Start Up & Commissioning	$6,478
Record Drawings	$5,713
Warranty Period Services	$4,762
TOTAL COST (excl. HST)	**$374,121**

If you have any questions about this proposal, please do not hesitate to contact us at the undersigned.

Yours very truly,

CBCL Limited

Prepared by:
Paul Young, P.Eng.
Municipal Engineer
Direct: 902-421-7241
E-Mail: pyoung@cbcl.ca

Reviewed by:
Andrew Gates, P.Eng.
VP Infrastructure Services

Attachments:

	A	Declaration
	B	CBCL Limited Standard Terms and Conditions
	C	Corporate Information
	D	Curricula Vitae
	E	Detailed Cost Proposal

Proposal No: 201014.05

Attachment A

Declaration

APPENDIX A: DECLARATION

Declarations:

We hereby acknowledge and declare that:

a) we agree to perform the Work in compliance with the requirements set out in the RFP and details provided in the RFP submission.

b) no person, firm, or corporation other than the undersigned has any interest in this RFP or in the proposed Contract for which this RFP is made;

c) we hereby acknowledge and confirm that the TOWN has the right to accept any RFP or to reject any or all RFPs in accordance with the RFP;

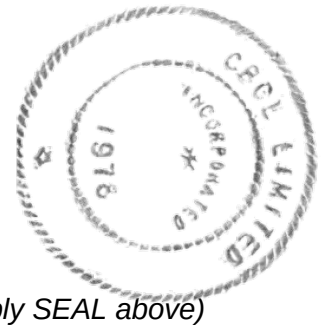
Signatures:

Signed, sealed, and submitted for and on behalf of:

Company: CBCL Limited
(Name)

1505 Barrington Street, Suite 901
(Street Address or Postal Box Number)

Halifax, NS B3J 3K5
(City, Province & Postal Code)



(Apply SEAL above)

Signature:

Name &Title: Aaron Baillie, P.Eng., Manager, Municipal Engineering
(Please Print or Type)

Witness: Vanessa Bourbonniere

Dated at October this 2 day of 2024.

Attachment B

CBCL Limited Standard Terms and Conditions

SCHEDULE "A"
CBCL Limited ("CBCL") and Client
STANDARD TERMS AND CONDITIONS (NS)

1. ENTIRE AGREEMENT. The attached proposal together with this Schedule "A" constitutes the entire agreement between Client and CBCL (this "Agreement"). This Agreement supersedes all prior communications, undertakings and agreements, written or oral made between the parties. Amendments to this Agreement must be in writing, signed by both Client and CBCL.
2. SCOPE OF WORK. Upon receipt of notice from Client of a requested change in the scope of the work hereunder, CBCL will promptly notify Client of any estimated impact on the schedule, price or terms of this Agreement resulting from such a change. The parties agree to expeditiously negotiate any such changes to this Agreement and to promptly execute any such agreed upon amendments to this Agreement. Client acknowledges and agrees that its use of any purchase order or other form to procure services is solely for administrative purposes and in no event shall CBCL be bound by any terms or conditions on such purchase order or form regardless of reference to or signature on behalf of CBCL. Client shall endeavor to reference this Agreement on any purchase order (or any other form), but Client's failure to do so shall not operate to modify this Agreement.
3. SITE INFORMATION AND ACCESS. Client shall make available to CBCL all relevant information, data and documents under its control regarding past, present and proposed conditions of the work site. The information shall include, but not be limited to, plot plans, topographic survey, hydrologic data and soil and geologic data including borings, field or laboratory tests and written reports. Client shall immediately transmit to CBCL any new or revised information, data or documents that become available. Client shall make all necessary arrangements to ensure ready and uninterrupted work site access for CBCL, its personnel and equipment throughout performance of this Agreement, at no cost to CBCL. Client acknowledges that subsurface conditions may vary from those encountered at the location where borings, surveys or other explorations are made by CBCL and that the data, interpretations and recommendations of CBCL are based solely on such borings, surveys and explorations and on the information provided to it by the Client. CBCL will not be responsible for the interpretation by others of the results of CBCL's borings, surveys or explorations. Similarly, CBCL will not be responsible for the accuracy of Client provided information of any kind nor for the consequences of incorporating such information in the work.
4. FEES, DISBURSEMENTS AND EXPENSES. Unless otherwise stated or agreed to in writing by CBCL and the Client, terms of payment for professional services, invoiced expenses, and office disbursements shall be as presented on each invoice submitted by CBCL to the Client. Fees shall be charged at the hourly rates or for the stipulated price specified in the proposal. Fees shall be net of invoiced expenses and office disbursements. Sub- consulting fees shall be subject to a 10% mark-up. Expenses such as hotel, travel, meals and the like shall be charged at cost. Office disbursements such as printing, communication, delivery, internal lab and the like shall be billed at 6% of fees charged.
5. PERMITS AND UTILITIES. Client shall obtain all required approvals, permits, licenses and access rights from municipal and other governmental authorities and utilities having jurisdiction over or easements on the work site. The Client shall advise CBCL of the location of all underground utilities and structures at the work site.
6. TERMS OF PAYMENT. Unless otherwise stated in the Letter Agreement, invoices will be submitted by CBCL on a period by period basis where a period constitute four (4) weeks (28 days) or, at the option of CBCL upon completion of the services, and will be due and payable on the invoice date. Invoices will be considered past due if not paid within thirty (30) days thereafter (the "overdue date"). Invoices not paid on or before the overdue date shall bear interest at the rate of one and one-half percent (1.5%) per month computed from the overdue date. In addition, any collection fees, legal fees, court costs and other related expenses incurred by CBCL in respect of the collection of delinquent invoice amounts shall be paid by Client.
7. OWNERSHIP RIGHTS. All reports, drawings, plans, models, designs, surveys, photographs, specifications, computer files, field data, notes and other documents and instruments produced by CBCL shall be and remain the sole property of CBCL. CBCL shall retain all common law, statutory and other reserved rights therein, including copyright.
8. LEGAL FEES. In the event either party makes a claim or commences legal proceedings against the other for any act arising out of the performance or interpretation of this Agreement, including the payment of professional fees, the unsuccessful party shall pay to the prevailing party all reasonable costs incurred by the prevailing party in prosecuting or defending such claim or action, including staff time, court costs, solicitors' fees and other related expenses. In the event of a non- adjudicative settlement of a claim or legal proceedings between the parties or resolution by arbitration, the term "prevailing party" shall be determined by that process.
9. STANDARD OF CARE. In the performance of professional services, CBCL will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same or similar localities. CBCL makes no warranties, either expressed or implied, as to its professional services rendered under this Agreement. CBCL will perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the project. Nothing in this Agreement shall be construed to establish a fiduciary relationship between the parties.

10. INSURANCE. CBCL will maintain professional liability insurance, comprehensive general liability insurance and automotive insurance throughout the term of this Agreement, with the exception of automotive insurance, for a period of at least one year thereafter.

11. OPINION OF PROBABLE COST. CBCL shall, where required, prepare an opinion of probable construction cost. This opinion of probable costs is presented on the basis of experience, qualifications, and best judgment. It has been prepared in accordance with acceptable principles and practices. Market trends, non-competitive bidding situations, unforeseen labour and material adjustments and the like are beyond the control of CBCL Limited and as such we cannot warranty or guarantee that actual costs will not vary from the opinion provided.

12. ENVIRONMENTAL LIABILITY. Because Client owns and operates the site where work is being performed, Client has and shall retain all responsibility and liability associated with the environmental conditions at the site and shall be solely responsible for the handling and disposal of any bore samples, asbestos, or other toxic or hazardous materials, substances or products (collectively "Hazardous Waste") located on the worksite or generated on the site as a result of CBCL's performance hereunder. Client agrees to indemnify and save harmless CBCL from any claims, damages or liability whatsoever, arising out of the detection, presence, handling, removal or disposal of Hazardous Waste on or about the work site.

13. LIMITATION OF LIABILITY. Notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of CBCL, its officers, directors and employees or any of them to Client, for any and all claims, losses, costs, demands, damages, including solicitors' fees, expert witness fees and costs of any kind arising under or related to this Agreement or any services provided hereunder, whether based in contract or tort, shall not exceed the total compensation actually paid to CBCL under this Agreement, or the total amount of $50,000, whichever is less. All claims by Client shall be deemed relinquished unless filed within one (1) year after substantial completion of the services rendered under this Agreement. CBCL's liability shall be absolutely limited to direct damages arising out of the services provided under this Agreement and CBCL shall not be liable in any way for any consequential or indirect loss, injury or damages of any kind incurred by Client, including but not limited to loss of profits, loss of income or loss of use of property. CBCL shall not be liable for any damages or costs arising out of the failure of any manufactured product or any manufactured or factory assembled system of components to perform in accordance with manufacturer's specifications or product literature or otherwise.

14. DISPUTES. Any dispute arising hereunder shall be resolved by taking the following steps, where a successive step is taken if the issue is not resolved at the preceding step: (1) by negotiation between the technical and contractual personnel for each party, (2) by negotiation between executive management of each party, (3) by submission to mediation, (4) by arbitration if both parties agree or (5) litigation in the courts of the Province whose laws govern this Agreement, pursuant to Paragraph 21 hereof.

15. DELAYS. Client agrees that CBCL shall not be liable for any damages arising, directly or indirectly, from any delays due to causes beyond CBCL or the Client's reasonable control.

16. COVID-19. Client agrees that CBCL shall not be liable for any damages arising, directly or indirectly, from any delays related to the existence or impact of COVID-19 or any variant thereof. If any such delay arises, Client and CBCL will work together to devise and implement work around plans as may be reasonably necessary in the circumstances, which may involve mutually agreed upon adjustments to schedule, scope and compensation.

17. JOBSITE SAFETY. Client agrees that the responsibility for site safety and construction means and methods remains with the contractor, not the design professional.

18. TERMINATION. CBCL may terminate this Agreement upon at least seven (7) calendar days' notice to Client, in the event that (a) Client fails to perform any of its obligations hereunder, including payment of fees for service, in a timely manner, or (b) the parties fail to promptly reach agreement on the compensation and schedule adjustments necessitated by requested changes to the scope of the work hereunder. In the event of such termination by CBCL, Client shall pay to CBCL, in addition to payment for services rendered hereunder to the time of termination and reimbursable costs, all reasonable expenses of CBCL in connection with the orderly and safe termination of its services.

19. INCONSISTENCY. In the event that there is any inconsistency or contradiction between any of the provisions of the Proposal and the provisions of this Schedule "A", then in such case, the provisions of the Proposal shall prevail.

20. ASSIGNMENT. Neither Client nor CBCL shall assign its interest in this Agreement without the prior written consent of the other except that CBCL may assign its interest in this Agreement to a related or affiliated company of CBCL without the consent of Client.

21. GOVERNING LAWS. This Agreement shall be governed by the laws of, and any legal proceedings arising out of this Agreement shall be brought in a court of competent jurisdiction in, the Province in which the work site is located, if applicable, and otherwise, then by the laws of the Province of Nova Scotia.

Attachment C

Corporate Information

Solutions today | Tomorrow IN mind

As an employee-owned firm, CBCL is committed to creating a positive and lasting impact on people and our planet by providing world-class multidisciplinary engineering, geotechnical, and environmental consulting services.

CBCL.ca

INnovative

Our teams deliver more than 1,500 projects a year in multiple sectors, including:

Bridges
Buildings
Climate Resilience
Coastal
Environmental
Geotechnical
Industrial
Municipal
Ports & Marine
Sustainability
Transportation
Water

Since 1955, CBCL has focused on making meaningful global contributions. With experience in over 100 countries, our multi-talented team creates innovative solutions for our clients that positively shape tomorrow. We have 12 offices in the provinces of Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland Labrador, and Ontario. Our diverse team of over 400 employees is committed to providing technical excellence and exceptional service.

INvested

We're committed to affecting positive change in our communities. Our Atlantic Canadian roots keep us accountable, dependable, and respectful. We focus on doing what's right, not what's easy. We define corporate social responsibility by how we treat our employees, how our business activities affect the larger environment, how our organization and employees contribute to the communities we live in, and how our values control the governance of our privately held company.

We pursue solutions that benefit the communities where we work and live. As healthy communities need a healthy environment to thrive, sustainability is always a priority. We're committed to the integration of social, economic, and environmental concerns in all aspects of our operation. We strive to develop and implement practical engineering solutions that respect the current social and environmental impacts, as well as future implications of our designs.

We are committed to being a company that values and promotes diversity and inclusion. This commitment strengthens us by engaging and empowering individuals with unique backgrounds. Through a variety of new initiatives, we continue to further establish a diverse and inclusive environment where all employees can thrive. We strongly believe diversity and inclusion allows us to provide exceptional consulting services to our clients and contributes to our mutual success.

Our Mission is thoughtful...
to provide world-class engineering and environmental services that are valued by our clients, contribute to our mutual success, and positively impact the environment and communities we serve.

Our Vision is strong...
to grow by expanding our range of services and locations, retain our strong collaborative employee-owned culture, and offer exciting career opportunities through impactful, and sustainable projects.

Our Purpose is clear...
to create a positive and lasting impact on people and our planet.

Health & Safety Policy Statement

January 1, 2022

At CBCL, we operate in accordance with our four core values of client experience, openness, respect, and excellence. While each value is connected to health and safety, our excellence includes a commitment to reducing or preventing the risk of injury and illness to our people and those connected to our work.

We will contribute to the **health** and wellbeing of our employees and drive a **safety** culture that promotes conducting business in the safest possible manner.

Our commitment

- **Provide visible safety leadership**
- **Fulfill client requirements, company programming, and legal and regulatory obligations**
- **Promote a positive approach to safety as part of our overall work environment, with the goal of being free of incidents**
- **Foster an organizational culture that promotes psychological health and provide a workplace free from psychological harm**
- **Work to provide clarity for competence of our people with respect to their health and safety responsibilities**
- **Provide continued health and safety education, and maintain training records for our people**
- **Consult our people, such as through safety committees, and encourage participation in safety programming**
- **Promote our behaviour-based safety program**
- **Encourage relevant external stakeholders, such as subcontractors and subconsultants, to manage health and safety with practices that align with our commitments**
- **Provide personal protective equipment and instruction for its use and care**
- **Monitor safety performance and statistics, and drive continuous improvement**

While the President & CEO is accountable for health and safety at CBCL, all of our people and our relevant stakeholders must share our principles. Everyone is responsible for their own health and safety as well as that of their colleagues.

John Flewelling, P.Eng.
President & CEO

James Beck, P.Eng., CRSP, PMP
Quality, Health & Safety Manager

Operational Organizational Chart

- CBCG Board of Directors
  - CBCG Chair — Steve Mitchell
- President and CEO — John Flewelling
  - VP Atlantic — Steve Mitchell
    - BM Charlottetown — Jody MacLeod
    - BM Fredericton — Mark Kohler
    - BM Moncton — Brennan Thorne
      - GL Buildings Electrical, NB — Marc Melanson
    - BM Saint John — Brian Moreau
      - GL Municipal, SJ — Tim McCluskey
        - GL Bldgs. Mech & Electrical, NB — Matthew Peachman
          - BM St. John's — Keith Bartlett
            - BM Sydney — Brad Kennedy
  - VP Buildings — Tom Watson
    - DH Buildings Mechanical — Kerry Fraser
    - DH Structural — Geoff Axell
      - GL Structural Buildings, Halifax — Stacey Myatt
        - GL Structural Industrial & Treatment Plants, Halifax — Judy Fowler
    - DH Electrical, Buildings — Jared Smith
      - Group Lead Buildings, Ontario — David O'Connor
  - VP Earth & Environment — Jason Bernier
    - DH Environmental — Brad Trask
      - GL Env. NB, PE — Stephanie Kilfoil
    - BM Geotechnical and Materials Engineering, Bedford, NS — Colin Fisher
    - BM Geotechnical and Materials Engineering, NB — Jessica Fredericks
      - GL Materials Engineering — JT Nugent
        - GL Geotechnical, NB — Kris Leclair
    - DH Environmental Science — Kelly MacDougall
    - Manager, Environment Ottawa — Melissa Rutherford
  - VP Industrial — Randy O'Connor
    - DH Industrial Mechanical — Gregor Archibald
    - DH Electrical Utilities & Renewables — Mark Chapman
    - Manager, Electrical & Instrumentation — Lohn Hick
      - GL Automation & Controls — Kristien Praest
  - VP Infrastructure — Andrew Gates
    - DH Municipal/ Project Services — Aaron Baillie
      - GL Project Services — Adam Strachan
        - GL Transportation Planning & Engineering — Emanuel Nicolescu
    - Director, Bridges, Ports and Marine — Kevin Bezanson
      - DH Ports and Marine — Greg Peters
      - DH Bridges — Colin Jim
        - GL Bridges NB, PE — Jason Young
    - DH Coastal — Amaury Camarena
    - DH Water Resources & Climate Change — Lindsay Bolton
  - VP Water Treatment — Mike Abbott
    - DH Process — Mike Chaulk
- VP Atlantic — Steve Mitchell
  - Director of Business Development — Tim McLeod
  - IT Manager — Chris MacLeod
- Human Resources Manager — Bonnie Elliott
- CFO — Tara Larsen
  - Group Controller — Andrew Nesbitt
- General Counsel — Melanie McGrath
  - Quality, Health & Safety Manager — James Beck
  - Corporate Compliance Officer — Miles MacInnes

Clearance Letter

CBCL LIMITED
MILES MACINNES
1505 BARRINGTON ST, SUITE 901
PO BOX 606
HALIFAX, NS B3J 2R7

Date of Issue: September 20, 2024

Account Holder:

CBCL LIMITED
BN: 100849066

This letter confirms that **CBCL LIMITED** is registered with the WCB Nova Scotia and is in good standing. It is valid until **December 31, 2024**.

Sincerely,

WCB Nova Scotia

Attachment D

Curricula Vitae

Paul YOUNG

P.ENG. MUNICIPAL ENGINEER

AREAS OF SPECIALTY

Water Distribution & Transmission, Sanitary Sewers, Sanitary Forcemains, Storm Systems, Municipal Roads, Parking Lots and Site Development

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Engineers Nova Scotia, P.Eng.

EDUCATION

B.Sc. Engineering (Civil), University of New Brunswick, 2013

EXPERIENCE

Paul is a Civil Engineer with over ten (10) years of experience in design and construction of municipal engineering services. His areas of expertise include water distribution and modelling, sanitary systems, stormwater systems, municipal roads, parking lots and site development. His design experience also includes large-diameter water transmission mains and potable water storage tanks. Paul has experience working on all phases of planning, design and construction and has helped municipalities and developers complete new site developments and infrastructure upgrades on a variety of projects in municipal, residential, commercial, and industrial settings. His experience coordinating with multi-discipline design teams through design and construction has become an asset for both municipal clients and private developers. Before joining CBCL in 2018, Paul worked on the west coast of Canada in consulting engineering and volunteered as a member and chair of the BCWWA Young Professionals Committee. Paul has participated as a course instructor for several ACWWA operator training courses. Paul's other professional interests include water governance, sustainable infrastructure, and trenchless technologies.

WATER SYSTEMS

- BURNSIDE OPERATIONS CENTRE, HALIFAX WATER, DARTMOUTH, NS: Civil design lead for the Integrated Project Delivery (IPD) team for Halifax Water's Burnside Operations Centre. Worked in a multi-discipline collaborative environment with other design leads and construction team to deliver the project with a focus on developing solutions to meet requirements within a defined schedule and budget. Included domestic water, site water and sprinkler servicing.
- COWIE HILL RESERVOIR REPLACEMENT, HALIFAX WATER, HALIFAX, NS: Conducted the design the civil engineering aspects of the project including yard piping including inlet, outlet, overflow and drain lines, pipe connection details to the reservoir, new meter chambers, site modifications and reinstatement. Worked closely with the tank designers/manufacturers to coordinate the design of piping to best suit the concrete tank design and account for construction constraints and considerations. Construction phase and contract admiration ongoing.
- HEMLOCK RESERVOIR, HALIFAX WATER, HALIFAX, NS: Assisted the project team by completing and checking hydraulic calculations for the new Hemlock Reservoir including the motive mixer, inlet, overflow, and drains.
- NSHA HALIFAX INFIRMARY WATER SERVICE REPLACEMENT, NOVA SCOTIA HEALTH, HALIFAX, NS: Civil engineering design lead for the design of two new water services for the Halifax Infirmary. Consulted with NSH, Halifax Water, the fire protection subconsultant and the mechanical engineering team to develop and implement a phased approach to the work to ensure continuous water service to the hospital during construction. The phasing plan considered critical water needs including adequate supply and pressure for potable water and fire protection for the Halifax Infirmary campus including critical fire protection needs for the helipad.

- NSHA Halifax Infirmary Ring Main Study, Nova Scotia Health, Halifax, NS: Completed a study and assessment of the existing ring main and fire hydrants at the QEII Halifax Infirmary (HI) site. The scope of includes completing a review of available information, the development of a testing and inspection plan, coordination of the inspections and assessment of the ring main, the development of a report summarizing all the study findings and recommendations. Inspections were coordinated to ensure the work would minimize disruption to normal operations.
- Sheshatshiu Innu First Nation Water Distribution System Hydraulic Model Development, SIFN, Sheshatshiu Innu First Nation, NL: Project manager for the creation of a new water model for the community including two new wells, one reservoir, and approximately 15 km of watermain. The water model included existing and future water demands, and future residential development areas were added to assess the capacity of the distribution system for planning purposes. Field testing and model calibration is upcoming in 2022.
- West Hants Windsor Water Model Calibration, Windsor, Three Mile Plains, Falmouth, NS, West Hants Regional Municipality, NS: Worked on the planning and executing of hydrant flow testing for the calibration of the water model for the West Hants Regional Municipality. Completed a 4-day hydrant flow testing program, comprised of 23 tests across 5 system zones. The testing was replicated within the model to complete calibration.
- Windsor Watermain Relocation at Hwy 101, Town of Windsor, Windsor, NS: Design Engineer for the replacement of two water transmission mains crossing below Highway 101 in Windsor. The design included the extension of casing pipes under Highway 101 to accommodate highway twinning and slip lining of the new HDPE transmission mains through the extended casings.
- Middleton Brooklyn Road Watermain Extension, Town of Middleton, Middleton, NS: Completed the detailed design of the new watermain extension for approximately 800m of new watermain over two phases. Provided technical support for the water modelling, sizing and feasibility stage for the watermain extension.
- Middleton Reservoir, Transmission Main and Distribution Upgrades, Town of Middleton, Middleton, NS: Design of new transmission main and distribution upgrades to improve water system hydraulics in the Town of Middleton and accommodate the proposed reservoir. Work is ongoing.
- Middleton Reservoir Pre-Design, Town of Middleton, Middleton, NS: Evaluated pre-design options and developed a design concept and cost estimate for a new reservoir for the Town of Middleton. Conducted hydraulic modeling of the water system to analyse the impact of various reservoir options. Worked closely with the Town to understand their current operations and future needs.
- Middleton Water System Pressure Relief, Town of Middleton, Middleton, NS: Identified the need for a pressure relief valve to help facilitate reliable water service to the community. Developed design options and costs for the Town. Currently in the construction phase working closely with the operations department to install a pressure the relief valve in the existing well control building.
- Mill Cove Fire Protection System, MODC, Mill Cove, NS: Assisting MODC to prioritize maintenance of the municipal fire protection water system. Conducted water modelling, in-situ testing, and condition inspections to prioritize the required infrastructure upgrades including: the repair of two tanks, yard piping replacements, hydrant replacements, pump station upgrades, and partial replacement of fire protection mains.
- Fall River Plaza, Crombie REIT, Fall River, NS: Project Engineer for connecting the commercial plaza to the new municipal water system, design of a new Halifax Water meter chamber, and sub-metering of tenants, while maintaining water service and fire protection. Scope of decommissioning work includes: decommissioning of water treatment system, decommissioning of existing raw water intake on the lake with close coordination with NSE and DFO.
- Town of Truro WaterCAD Training, Town of Truro, Truro, NS: Lead a two-day workshop on water modelling for Town of Truro Engineering and Public Works staff to establish the condition and accuracy of their water model and to provide training focussed on introducing town staff to WaterCAD software while making useful updates to the model. Established an intimate

understanding of the Town's needs and capabilities over the two-day workshop to maximize the benefit of the training to the Town.

- RAPID HOUSING SUBDIVISION, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Project manager for the preliminary design, detailed design, and construction administration of the roads, water, sanitary and stormwater management for the subdivision to provide 19 new housing units to the community.
- SUBDIVISION FEASIBILITY AND ENVIRONMENTAL ASSESSMENT, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Completed a subdivision feasibility assessment including an assessment of water and sanitary infrastructure and an opinion of probable cost for construction of roads and utilities. The feasibility report also included a community housing assessment and population projections and an environmental assessment for the development area.
- LEXINGTON PARK PHASE 2 SUBDIVISION, GARDINER PROPERTIES, BIBLE HILL, NS: Design lead for the detailed design of the roads, water, sanitary and stormwater management for the subdivision to provide 28 new housing units to the community. Currently in approval phase.
- POTLOTEK FIRST NATION CAMPSITE AND RV PARK, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Civil engineer responsible for the design of water, sanitary, drainage, gravel roads, and site layout for the 22-hectare development for the campsite and RV park. The project includes over 3 km of gravel roads, campsites, pedestrian pathways, stormwater management, coastal access, water distribution, sanitary sewers, a sanitary pump station and forcemain, power service, street lighting,
- MANN MAIN NO. 2 SOUTH, METRO VANCOUVER, SURREY, BC: Project Engineer for the design 2.5 km of large diameter (1500 mm) steel water transmission main located in an urban environment. Worked closely with the client, the city, and the multi-discipline design team to deliver the design of the supply main and three large valve chambers. Made design allowances for connecting to a future reservoir expansion. Conducted constructability assessments and triple bottom line options analysis for various water main alignments and construction methodologies.
- CAPILANO MAIN NO. 7, METRO VANCOUVER, DISTRICT OF NORTH VANCOUVER, BC: Project Engineer for the design of a 100 m relocation of a large diameter (1200 mm) steel water supply main. The project also included the relocation of an existing distribution water main for the District of North Vancouver. Delivered the design while meeting schedule and design constraints to construct the water mains as part of the Mountain Highway Interchange Upgrades.
- TSAWWASSEN MILLS ON-SITE CIVIL SERVICES, IVANHOE CAMBRIDGE, DELTA, BC: Water modelling and design of the on-site water distribution system for the Tsawwassen Mills mall which includes over 2 km of seismic and settlement-resistant 300 mm diameter water main. Analysed the system parameters under multiple demand scenarios and incorporated phased boundary conditions to confirm appropriate sizing and layout of the system.
- HALFWAY RIVER DOMESTIC WATER SYSTEM IMPROVEMENTS, HALFWAY RIVER FIRST NATION, BC: Project Engineer for preliminary design of water system upgrades for the community of approximately 180 residents. Used population projections to estimate future demands and to conduct water modeling and preliminary reservoir sizing. Developed design options to provide potable drinking water and fire protection for the community.
- ASHNOLA DOMESTIC WATER SYSTEM IMPROVEMENTS, LOWER SIMILKAMEEN INDIAN BAND, BC: Assisted in design of the transmission main and reservoir access road to serve the community. Developed design solutions to avoid disturbance to archeologically sensitive soil and minimize capital cost.

SANITARY SYSTEMS

- BURNSIDE OPERATIONS CENTRE, HALIFAX WATER, DARTMOUTH, NS: Civil design lead for the Integrated Project Delivery (IPD) team for Halifax Water's Burnside Operations Centre. Worked in a multi-discipline collaborative environment with other design leads and construction team to deliver the project with a focus on developing solutions to meet requirements within a defined schedule and

budget. Sanitary system included special considerations for operations equipment, vac truck dumping, fueling station, and oil separation.

- BRUCE STREET PUMP STATION RELOCATION, HALIFAX WATER, DARTMOUTH, NS: Design of new twin forcemains, sanitary sewer, overflow, and new site layout to accommodate the proposed relocation of the Bruce Street sanitary pump station. Worked closely with electrical, and mechanical to coordinate the pump station design and relocation and coordinated easement acquisition with Halifax Water.
- MORRIS LAKE FORCE MAIN REPAIRS, HALIFAX WATER, DARTMOUTH, NS: Worked closely with Halifax Water to produce a request for proposal/tender outlining detailed repair requirements for 20 separate sections of the Morris Lake and Russell Lake force mains. Prepared detailed sequencing plans and schedules to coordinate the project timeline with the concurrent Russell Lake Pump Station Upgrades and to work within time windows set out by NSE and Halifax Water.
- KINGS COUNTY REGIONAL FORCEMAIN (2022 PHASE), COUNTY OF KINGS, KENTVILLE, NS: Project manager and design lead for the replacement of the twin forcemains. Approximately 675 m of 450 mm and 155 m of 100 mm diameter HDPE pipe. Special considerations for maintaining flow of the regional forcemains during construction including options for trenchless work. Currently in design phase and optioneering phase.
- KINGS COUNTY REGIONAL FORCEMAIN (2020 PHASE), COUNTY OF KINGS, KENTVILLE, NS: Design Engineer for the replacement of twin forcemains. Approximately 750 m of 450 mm and 200 mm diameter HDPE pipe. Special considerations for maintaining flow of the regional forcemains during construction. Currently in approval phase.
- RAPID HOUSING SUBDIVISION, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Project manager for the preliminary design, detailed design, and construction administration of the roads, water, sanitary and stormwater management for the subdivision to provide 19 new housing units to the community.
- SUBDIVISION FEASIBILITY AND ENVIRONMENTAL ASSESSMENT, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Completed a subdivision feasibility assessment including an assessment of water and sanitary infrastructure and an opinion of probable cost for construction of roads and utilities. The feasibility report also included a community housing assessment and population projections and an environmental assessment for the development area.
- LEXINGTON PARK PHASE 2 SUBDIVISION, GARDINER PROPERTIES, BIBLE HILL, NS: Design lead for the detailed design of the roads, water, sanitary and stormwater management for the subdivision to provide 28 new housing units to the community. Currently in approval phase.
- POTLOTEK FIRST NATION SUBDIVISION FEASIBILITY STUDY, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Completed a subdivision feasibility assessment for sanitary sewer, forcemain and pump station infrastructure for the multi-phase feasibility study. Included a review of the existing community sanitary conveyance infrastructure capacity. Worked with the project team to complete the feasibility report for the multi phase subdivision feasibility study.
- POTLOTEK FIRST NATION CAMPSITE AND RV PARK, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Civil engineer responsible for the design of water, sanitary, drainage, gravel roads, and site layout for the 22-hectare development for the campsite and RV park. The project (currently in development) includes new water distribution mains, sanitary sewers, a sanitary pump station & forcemains, storm systems, power service, street lighting, pedestrian paths, and over 3 km of gravel roads.
- MEE ROAD SIDEWALK AND SEWER, COUNTY OF KINGS, KENTVILLE, NS: Project Engineer for replacement of the existing sanitary system sewers on Mee Road, as well as approximately 1 km of new sidewalk, curb, bicycle lane, grass boulevard, stormwater collection and piping. Included consideration of trenchless methods for sewer replacement.
- YVR SANITARY DUMP STATION, INTEGRAL, RICHMOND, BC: Civil Engineer for preliminary design of site services for a new airside sanitary dump station at YVR Vancouver International Airport. Worked

with an engineering team to design the system to pre-treat and convey sanitary sewage dumped from airplanes which is high in organic solids and detergents.

- CAMPBELL HEIGHTS FORCEMAIN, CITY OF SURREY, SURREY, BC: Performed contract administration for construction of the 2.1 km long 450 mm diameter sanitary forcemain. Met with the City of Surrey and the contractor on a bi-weekly basis to track project progress and discuss construction issues.
- RICHMOND INDUSTRIAL CENTRE, ECORIDGE DEVELOPMENTS, RICHMOND, BC: Project Engineer for detailed design of sanitary system including gravity sewer and sanitary forcemain for the 13 building, 65 hectare industrial development. Included special considerations and design details for utility construction on a previous landfill site.
- WHISTLE BEND SUBDIVISION, GOVERNMENT OF YUKON, WHITEHORSE, YT: Developed a sanitary sewer master plan for Phase 3 of the 7-phase subdivision project. Designed the sanitary system layout and selected pipe sizes and grades to convey sanitary flows based on the various land uses to the existing sanitary pump station. Accounted for flows from future phases of the development and interfaced with the existing Whistle Bend sanitary system.

STORM SYSTEMS

- BURNSIDE OPERATIONS CENTRE, HALIFAX WATER, DARTMOUTH, NS: Civil design lead for the Integrated Project Delivery (IPD) team for Halifax Water's Burnside Operations Centre. Worked in a multi-discipline collaborative environment with other design leads and construction team to deliver the project with a focus on developing solutions to meet requirements within a defined schedule and budget. Implemented project-specific low-impact development stormwater solutions including raingardens integrated into landscapes.
- TCI CLIMATE RESILIENT COASTAL PROTECTION & MANAGEMENT, TURKS AND CAICOS: Civil engineer responsible for stormwater management for the approximately 800m long coastal seawall. The project includes coordination of the work with existing roads and coastal environment.
- RAPID HOUSING SUBDIVISION, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Project manager for the preliminary design, detailed design, and construction administration of the roads, water, sanitary and stormwater management for the subdivision to provide 19 new housing units to the community.
- LEXINGTON PARK PHASE 2 SUBDIVISION, GARDINER PROPERTIES, BIBLE HILL, NS: Design lead for the detailed design of the roads, water, sanitary and stormwater management for the subdivision to provide 28 new housing units to the community. Currently in approval phase.
- POTLOTEK FIRST NATION CAMPSITE AND RV PARK, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Civil engineer responsible for the design of water, sanitary, drainage, gravel roads, and site layout for the 22-hectare development for the campsite and RV park. The project (currently in development) includes new water distribution mains, sanitary sewers, a sanitary pump station & forcemains, storm systems, power service, street lighting, pedestrian paths, and over 3 km of gravel roads.
- MEE ROAD SIDEWALK AND SEWER, COUNTY OF KINGS, KENTVILLE, NS: Project Engineer for new stormwater collection and piping, as well as approximately 1 km of new sidewalk, curb, bicycle lane, grass boulevard, and replacement of existing sanitary sewers on Mee Road.
- VITERRA DRAINAGE DESIGN AND ANNEX ACCESS ROAD, VITERRA, VANCOUVER, BC: Designed the drainage system to collect, attenuate, pump, treat and convey stormwater from site and improve existing ground conditions. Design of the system incorporated geotechnical considerations, coordination with pump station designers, and environmental permitting.
- NICO WYND EMERGENCY DYKE REPAIR, CITY OF SURREY, SURREY, BC: Construction Inspector and Project Engineer for the emergency dyke repair of a critically eroded coastal dyke and reinstate the coastal trail. Worked closely with environmental staff to monitor construction adjacent to an environmentally sensitive water body.
- FRASER RIVER TRAIL BURNABY GATEWAY DYKE UPGRADES, CITY OF BURNABY, BURNABY, BC: Construction Inspector and Project Engineer for the dyke upgrades and riverside multi-use trail upgrades along

the Fraser River. Included retaining walls, scour protection, ground improvements, and stormwater management.

- GRAY CREEK RESTORATION, CITY OF BURNABY, BURNABY, BC: Inspected construction of the Gray Creek Restoration including inspection of boulder weirs, riprap armouring, slope stabilization, planting, and water diversions. Closely observed size and properties of soils being used in creek construction for quality control and tracked quantities.

DEVELOPMENT

- RAPID HOUSING SUBDIVISION, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Project manager for the preliminary design, detailed design, and construction administration of the roads, water, sanitary and stormwater management for the subdivision to provide 19 new housing units to the community.
- SUBDIVISION FEASIBILITY AND ENVIRONMENTAL ASSESSMENT, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Completed a subdivision feasibility assessment including an assessment of water and sanitary infrastructure and an opinion of probable cost for construction of roads and utilities. The feasibility report also included a community housing assessment and population projections and an environmental assessment for the development area.
- LEXINGTON PARK PHASE 2 SUBDIVISION, GARDINER PROPERTIES, BIBLE HILL, NS: Design lead for the detailed design of the roads, water, sanitary and stormwater management for the subdivision to provide 28 new housing units to the community. Currently in approval phase.
- POTLOTEK FIRST NATION SUBDIVISION FEASIBILITY STUDY, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Completed a subdivision feasibility assessment for sanitary sewer, forcemain and pump station infrastructure for the multi-phase feasibility study. Included a review of the existing community sanitary conveyance infrastructure capacity. Worked with the project team to complete the feasibility report for the multi phase subdivision feasibility study.
- POTLOTEK FIRST NATION CAMPSITE AND RV PARK, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Civil engineer responsible for the design of water, sanitary, drainage, gravel roads, and site layout for the 22-hectare development for the campsite and RV park. The project (currently in development) includes new water distribution mains, sanitary sewers, a sanitary pump station & forcemains, storm systems, power service, street lighting, pedestrian paths, and over 3 km of gravel roads.
- SERVICING ASSESSMENT FOR GREENHOUSE SITE, POTLOTEK FIRST NATION, POTLOTEK, NS: Assisted Potlotek First Nation with development planning by providing a high-level infrastructure assessment to determine water and sanitary servicing options for the greenhouse site which falls outside of the serviced area. The assessment considered current and future development in the area including the greenhouse, food centre and nearby residential housing.
- TSAWWASSEN MILLS ON-SITE / OFF-SITE ROAD WORKS AND UTILITIES, IVANHOE CAMBRIDGE, DELTA, BC: Assisted project management of the multidiscipline team and obtaining approvals for the civil infrastructure of the 43-hectare Tsawwassen Mills commercial development and related off-site road works and utilities. The project included new water distribution mains, sanitary sewers, pump stations, forcemains, storm systems, open channel flow control, riparian areas, bioswales, landscaping, third party utilities, signalized intersections, street lighting, SCADA systems, and over 6 km of multi-lane roads with multi-use pedestrian and cycling paths.
- WEAVERS WAY SUBDIVISION, CLAYTON DEVELOPMENTS LIMITED, FREDERICTON, NB: Municipal inspector for the private development of the 32-lot residential subdivision overseeing work on all municipal infrastructure including: water, sanitary, storm, and roads. Reviewed lot stripping and grading with guidance of the geotechnical engineer. Served as the onsite representative to the private developer, municipality and the public.

SITE SERVICES

- BURNSIDE OPERATIONS CENTRE, HALIFAX WATER, DARTMOUTH, NS: Civil design lead for the Integrated Project Delivery (IPD) team for Halifax Water's Burnside Operations Centre. Worked in a multi-discipline collaborative environment with other design leads and construction team to deliver the project with a focus on developing solutions to meet requirements within a defined schedule and budget.
- NSHA HALIFAX INFIRMARY WATER SERVICE REPLACEMENT, NOVA SCOTIA HEALTH, HALIFAX, NS: Civil engineering design lead for the design of two new water services for the Halifax Infirmary. Consulted with NSH, Halifax Water, the fire protection subconsultant and the mechanical engineering team to develop and implement a phased approach to the work to ensure continuous water service to the hospital during construction. The phasing plan considered critical water needs including adequate supply and pressure for potable water and fire protection for the Halifax Infirmary campus including critical fire protection needs for the helipad.
- YVR WESTJET HANGAR MODIFICATIONS, INTEGRAL, RICHMOND, BC: Civil design engineer for modifications to WestJet's hangar at YVR South Terminal which included both airside and groundside work. Designed separation of combined sanitary and storm services to improve operation of the maintenance hangar and protect the environment from detergents, hydrocarbons, and particulates associated with plane washing and maintenance.
- VANCOUVER CHRISTIAN SCHOOL, OMICRON, VANCOUVER, BC: Responsible for contract administration and site inspection of site services including water, sanitary, storm, parking lot and site grading. Conducted and delegated site visits, reviewed and approved shop drawings, and prepared inspection reports.
- L'ÉCOLE BILLINGUE, COLBORNE ARCHITECTURAL GROUP, VANCOUVER, BC: Assisted in the design of site services including water, sanitary and storm for the school upgrade. Developed a comprehensive plan of catchment areas to assist in the design of the stormwater system.

WASTEWATER TREATMENT PLANT PROJECTS

- IONA ISLAND WWTP SOLIDS HANDLING UPGRADE, METRO VANCOUVER, RICHMOND, BC: Civil designer for layout of process piping, gravity overflow piping, process waste drainage, storm sewer, water services, parking lot grading and site layout for the new Sludge Screening and Degritting Building, Primary Sludge Thickener #3, and Digester Pump Buildings #1 to #4. Incorporated spill containment measures into the storm system and parking lot grading surrounding the Screening and Degritting Building to minimize the risk of environmental contamination in the event of a spill.
- LIONS GATE WWTP SLUDGE THICKENER NO.2, METRO VANCOUVER, VANCOUVER, BC: Civil Designer of pressure piping, gravity piping, site grading and gravel access for Thickener No. 2 at Lions Gate Wastewater Treatment Plant. Coordinated with process engineers to determine requirements for underground piping and coordinate designs.
- IONA ISLAND WWTP SOLIDS HANDLING UPGRADE (SITE PREPARATION CONTRACT), METRO VANCOUVER, RICHMOND, BC: Designer for site preparation contract. Developed a conceptual layout for the site of the new Sludge Screening and Degritting Building and Primary Sludge Thickener #3. Created a 3D design model of the proposed preload based on the site layout and geotechnical requirements. Produced accurate quantity estimates of proposed preload material and biosolids removal from the 3D model.

ROADS AND PARKING

- RAPID HOUSING SUBDIVISION, SIPEKNE'KATIK FIRST NATION, INDIAN BROOK, NS: Project manager for the preliminary design, detailed design, and construction administration of the roads, water, sanitary and stormwater management for the subdivision to provide 19 new housing units to the community.

- LEXINGTON PARK PHASE 2 SUBDIVISION, GARDINER PROPERTIES, BIBLE HILL, NS: Design lead for the detailed design of the roads, water, sanitary and stormwater management for the subdivision to provide 28 new housing units to the community. Currently in approval phase.
- POTLOTEK FIRST NATION CAMPSITE AND RV PARK, INDIGENOUS SERVICES CANADA, POTLOTEK, NS: Civil engineer responsible for the design of water, sanitary, drainage, gravel roads, and site layout for the 22-hectare development for the campsite and RV park. The project (currently in development) includes new water distribution mains, sanitary sewers, a sanitary pump station & forcemains, storm systems, power service, street lighting, pedestrian paths, and over 3 km of gravel roads.
- MEE ROAD SIDEWALK AND SEWER, COUNTY OF KINGS, KENTVILLE, NS: Project Engineer for design of approximately 1 km of new sidewalk, curb, bicycle lane, grass boulevard, stormwater collection and piping, and replacement of the existing sanitary system sewers on Mee Road. Included coordination with the County of Kings engineering department, the municipality of Kentville and NSTIR.
- 2015 GROUNDSIDE ROAD UPGRADES, YVRAA, RICHMOND, BC: Provided construction administration and inspection services on YVR's 2015 Groundside Road Upgrades. Inspected road works and drainage utilities on high priority traffic corridors on Sea Island. Coordinated closely with the client and project team to address construction issues and develop solutions in the field.
- SWING LOT UPGRADES, YVRAA, RICHMOND, BC: Provided construction administration and inspection services on YVR's Swing Lot upgrades. The project included the use of reclaimed asphalt and work with existing and proposed utilities. Worked closely with geotechnical engineers to identify areas of soft subgrade and ensure proper pavement structure would be provided to the client.
- BRIDGE RIVER I.R. NO.1 DOMESTIC WATER SYSTEM IMPROVEMENTS, BRIDGE RIVER INDIAN BAND, LILLOOET, BC: Conducted the detailed design of a 300 m gravel access road upgrade and parking area to provide vehicle access to the proposed drinking water treatment plant. Improved the road geometry for safety and ease of access for large vehicles while minimizing cost by optimizing cut and fill.
- MOODY STREET SEISMIC AND WIDENING, CITY OF PORT MOODY, BC: Civil construction inspector for the raised pedestrian pathway and stormwater system. Worked closely with the project manager and contractor to address construction issues including high water table causing adverse soil conditions during construction of the raised pathway. Observed pathway construction including placement and compaction of road structure and asphalt paving.
- JOHNSTON ROAD SIDEWALK RESTORATION, THE CITY OF WHITE ROCK, WHITE ROCK, BC: Developed a design concept for the sidewalk upgrades on Johnston Road in downtown White Rock. Worked with the City project manager and arborist to develop solutions to existing tree roots causing upheaval of the sidewalks. Assisted in working with the client to assess the possibility of upgrading underground utilities and road grading.
- MITSUI HOMES PARKING LOT, OMICRON, RICHMOND, BC: Grading design for improvements to an existing truck loading bay. Improved stormwater drainage and increased relative height of loading platform to improve efficiency of operations. Provided design with limited budget while meeting strict grading requirements to improve truck access.

UTILITY COORDINATION

- RICHMOND INDUSTRIAL CENTRE, ECORIDGE DEVELOPMENTS, RICHMOND, BC: Coordinated planning and design of private utilities including BC Hydro, Telus, Shaw and Fortis BC to service the 13 building, 65 hectare industrial development. Strategically planned and managed meetings with multiple stakeholders to coordinate the designs of the various design disciplines.
- TSAWWASSEN MILLS ON-SITE / OFF-SITE ROAD WORKS AND UTILITIES, IVANHOE CAMBRIDGE, DELTA, BC: Coordinated with the various engineering disciplines to plan, coordinate, review and approve third party utility servicing of the Tsawwassen developments and account for future community growth. Developed a master plan of utility corridors and servicing locations for BC Hydro, Telus, Shaw, Fortis and Metro Vancouver for the 6 kilometers of proposed road network and 43 hectare commercial site.

Aaron BAILLIE

P.ENG., MANAGER MUNICIPAL ENGINEERING

AREAS OF SPECIALTY

Project Management, Water Distribution, Wastewater Collection & Pumping, Water and Wastewater Treatment, Stormwater, Detail Design, Construction Administration, and Commissioning

EDUCATION

2000 B.Eng. Biological Engineering (Environmental), Technical University of Nova Scotia
1998 B.Sc.H, Agricultural Mechanization, Nova Scotia Agricultural College

AWARDS

2014 - New Victoria Mine Water Treatment Plant won the Tree if Life award at the Association of Consulting Engineering Companies of Canada – My role was Lead Designer and Process Design Engineer.

MEMBERSHIPS

APENS – Since 2000
PEO – Since 2016
Consulting Engineers of Nova Scotia – Former Director
AWWA – 2015

EXPERIENCE

Mr. Baillie is a registered professional engineer with more than twenty (20) years of experience in the design development, planning, project management, detail design, tendering, procurement, construction administration, and cost estimating of infrastructure projects. The following is a partial list of recent projects of which Mr. Baillie has managed and/or designed. Mr. Baillie's typical responsibilities include project management, preliminary and detail design, cost control, scheduling, procurement, construction administration and commissioning. Mr. Baillie has worked on several First Nation projects in various capacities. Below is a summary of recent First Nation projects where Mr. Baillie acted as project manager and/or design lead for the civil portion of the project.

SITE DEVELOPMENT AND SERVICES

- Lead the site civil component of the Turks and Caicos Port Authority south dock project. This included site grading, water supply, wastewater collection, and stormwater management. Provided oversight to the design team and provided QA/QC on the final design.
- Gloosecap Landing – A commercial development for a fist nation community on NS. I was the project manager and design lead. The project included extending water and sewer services by an adjacent community, street design, roundabout design, site grading, and parking lot design.
- Annapolis Valley First Nation is planning an expansion to the community which included street design, environmental permitting, and sewer and water extensions.
- Sobeys – municipal water service was extended to the site. Investigated options to replace existing lake water supply and fire pump system with the municipal water supply. Resulted in modifications to the existing sprinkler system to allow for the fire pump to be removed and the design of a meter chamber and site service extensions.
- Wallace Hills is a First Nations development in Halifax NS that will be a future residential and commercial development. The development is outside the service boundary and as such I lead the review of servicing options which included wells, onsite sewer treatment and extensions of water and sewer services. We also provide transportation planning for the site.

MUNICIPAL WATER SUPPLY AND TREATMENT

- Completed various watermain and street renewal projects for the community of Parrsboro. The projects included water service extensions to unserviced areas, replacement of existing water and sewer services, and replacement of street surface.
- Review of existing water treatment and distribution system servicing a Parks Canada campground with recommendation to improve public health and operational control.
- Design lead for process improvement to the Indian Brook First Nations greensand water treatment system.
- Process lead for water and wastewater infrastructure for the Town of Wabush.
- Design lead for new booster station with fire pump to services the community of Pennywell in Saint John's.
- Project Manager for the well field upgrades to satisfy the NS Groundwater Treatment Standard. This work including raising well casing above grade, remote monitoring of the well field and reservoir for automatic shut off and notification in the event of chorine failure, and trending of critical process values such as flows, chlorine residuals, and turbidity.
- Project Manager and lead process design engineer for the Town of Shelburne WTP. This project included the design of a new 2.45 MLD flocculation, DAF, and filtration treatment train. Auxiliary systems included stand by power generation, residual wastewater treatment, chloramines disinfection, a main plant PLC and SCADA system.
- Project Manager and lead process design engineer for the Town of Mahone Bay WTP. This project included the construction a 100% redundant 1 MLD membrane treatment plant with pre-treatment. Auxiliary system included process chemical pumping systems, stand by power, and SCADA system.
- Lead design engineer for the Town of Canso WTP. This project included the construction of a new DAF treatment process, residual management system, chemical handling systems, stand-by power, and SCADA system.
- Conducted a treatability assessment of the Shoreham Village groundwater supply to determine if the existing treatment equipment is acceptable due to complaints over coloured water. The study resulted in upgrades for disinfection and iron and manganese removal.
- Lead process engineer in the pre-design of municipal water treatment plants for the Town of Mahone Bay and the Town of Canso. Responsibilities included raw water quality analysis and bench scale treatability testing, watershed hydrology (i.e., reservoir yield), plant siting, distribution system hydraulics, lifecycle cost analyses, preliminary plant design and pre-design cost estimate. Innovative treatment technologies such as membranes were also investigated for their applicability in each case.
- Assessment of Alternative Water Treatment Technologies for 5 Wing Goose Bay. Responsibilities included conducting bench scale treatability testing, researching alternative treatment methods, review of historic hydrogeological reports and mapping, preparation of report, which included advantages, disadvantages, capital costs, and operating costs for all option.

MUNICIPAL WASTEWATER COLLECTION, TREATMENT AND DISPOSAL

- Evaluated rehabilitation vs replacement of sewer pipes in the Town of Middleton. The investigation identified that CIPP rehabilitation was the most economical. Tender documents were developed and the rehabilitation is schedule to be completed in spring 2020.
- Rehabilitation of the 100 year old NW Truck Sewer in Halifax
- Design of onsite sewage treatment systems for various first nation building, schools and public building throughout Atlantic Canada.
- Review of existing wastewater treatment servicing a Parks Canada campground and made recommendation to replace the system.
- Design of wastewater treatment system to service a hospital in rural Nova Scotia.
- Project Manager for wastewater collection and treatment option study for the Town of Parrsboro.

- Design engineer for preliminary design of upgrades to an existing 75MLD enhanced primary treatment system to a 200MLD biological nutrient removal treatment process.
- Infrastructure audits of several wastewater treatment facilities to identify the current condition of existing infrastructure and document expected life and replacement costs for future capital budgeting.
- Process energy efficiency audits of several wastewater systems to document process modification to reduce energy consumption.
- Design engineer for secondary clarifier upgrades for Mill Cove WWTF.
- Project Manager for Town of Digby regional wastewater project.
- Design engineer for the 1.5 MLD Falmouth Phase II STP upgrades. This project included a second oxidation ditch, two new circular clarifiers, RAS/WAS pumping, and an aerobic digester.
- Technical advisor for the design of a 35,000 Lpd re-circulating sand filter and 1,500 Lpd on-site contour wastewater disposal systems to service DND - Newport Corners communication facility.
- Lead project engineer for the investigation of upgrades and replacement options for an aerated lagoon system servicing DND Camp Aldershot, NS. The evaluation process investigated upgrading the existing aeration system and installing baffles in the existing lagoons, using the existing lagoons as pre-treatment for a second bioreactor followed by microfiltration, SBR process, and MBR process.
- Project Manager for the evaluation of the existing wastewater treatment system servicing the Cabot Trail Camp Ground. This project received the limited historic operating performance of the system and assessed if the design was in compliance with the most Atlantic Canada Wastewater Treatment Design Manual.
- Lead design engineer for wastewater collection and treatment upgrades to YARA, Trinidad and Tobago. This project included the preparation of pre-design to explore several collection system upgrades and treatment options. The most feasible option was to design a RSF to treatment the bulk of the wastewater with remote re-circulating textile filter to treat two remote sites where connecting to the central system was not feasible.
- Design engineer for the design of a septage receiving system and dewater system for the County of Cumberland.
- Detailed design of a re-circulating sand filter and wastewater collection system to service condominium development in Halifax; flows ranging from 45,000 Lpd to 171,000 Lpd.
- Detailed design of a re-circulating sand filter and wastewater collection system to service the community of Tusket.
- Performed assessments of proposed subdivisions to determine lot sizing and placement of on-site sewerage disposal systems based on environmental regulations.
- Wastewater collection and treatment study for a day use park in Halifax.
- Performed a hydraulic assessment of the Town of Antigonish's storm water collection system and monitored the town's sewage and water treatment plants using a SCADA system.

ACADIAN FIRST NATION

- Planning, design and construction services for the redevelopment of the existing water and sewer infrastructure as well as extension of existing roads and services for the development of new homes

GLOOSCAP FIRST NATION

- Design and construction services of infrastructure to support the development of Glooscap Landing which included roads, roundabout, sewer, water, stormwater, and lot development
- Design and construction services for the Tim Hortons, gas bar and convenience store located at Glooscap Landing. Our scope included site civil, onsite sewer, building mechanical, structural, electrical.
- Design and construction services for the renovations to the Band Office. Our scope included site civil, onsite sewer, building mechanical, structural, electrical.

- Design and construction services for the new community hall and day care. Our scope included site civil, onsite sewer, building mechanical, structural, electrical.
- Design and construction services for a gas bar, convenience store, takeout, and gaming facility located on the Reserve. Our scope included site civil, onsite sewer, building mechanical, structural, electrical.

SIPEKNE'KATIK FIRST NATION

- Concept design of roads, sewer, and water infrastructure to support a funding applications for new housing development
- Planning study to identify infrastructure improvements to accommodate additional growth in the community. This work included looking as existing sewer and water systems and determining where growth could be located with minimal impacts to the existing system
- Upgrades to the water treatment building, process controls,
- Upgrades to the wastewater treatment contrails and SCADA system

WAYCOBAH FIRST NATIONS

- Construction services for water extension within the existing community

POTLOTEK FIRST NATION

- Design of infrastructure (sewer, water, roads, power) to support a proposed new campground and recreational area
- Design of new water reservoir and transmission main

BEAR RIVER FIRST NATION

- Design and construction services of new road to support additional housing

ANNAPOLIS VALLEY FIRST NATION

- Investigation of infrastructure options to support the planning of new highway commercial development and addition housing outside the Reserve boundaries.

Jeffrey CLAIR

P.ENG., SENIOR MUNICIPAL ENGINEER

AREAS OF SPECIALTY

Construction Administration
Project Management
Water Distribution and Pumping
Concept Level Studies
Detail Design
Commissioning

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

APENS – Since 2017

EDUCATION

2007 B.Eng. Civil Engineering, Dalhousie University
2004 Diploma of Engineering, University of Prince Edward Island

EXPERIENCE

Mr. Clair is a registered professional engineer with over fifteen (15) years of experience. Mr. Clair's responsibilities include project management, master planning and concept studies, preliminary and detailed design, tendering, procurement, construction administration, commissioning, and cost estimating.

Relevant projects that Mr. Clair has participated in are as follows:

- WATER SYSTEM CAPACITY STUDIES – Project manager and senior engineer for water distribution system capacity studies for several clients including the Region of Queens Municipality, Town of Wolfville, Town of Truro and Town of Pictou. The scope of work generally includes reviewing historical demands, developing design demands for both present and future conditions; distribution system modelling including field testing and model calibration. System constraints inhibiting the ability to service growth were identified and upgrades were recommended.
- HALIFAX WATER SILVERSIDE BOOSTER STATION UPGRADES – Project Manager and design engineer for the upgrades to replace all the mechanical and electrical equipment for an existing inline domestic only booster pump station.
- TOWN OF LUNENBURG – MASTER PLAN – Lead engineer for the development of a hydraulic water mode and analysis of the water distribution system. The project included field testing to collect relevant data for model calibration. The study evaluated present day system capacity and ability to service potential growth. System constraints inhibiting the ability to service growth were identified and upgrades were recommended.
- COWIE AND HEMLOCK WATER RESERVOIRS – Project Manager and design engineer for the preliminary and detailed design of two potable water reservoirs for the Halifax Water distribution system. The Cowie Reservoir is an existing 11.2 million Litre Pre-stressed Concrete tank at the end of its useful life and is to be replaced under this contract. The Hemlock Reservoir will be an all-new 21.1 million Litre tank intended to service the needs of the growing residential developments in the community of Bedford. The project included sizing analysis to verify volume requirements, tank material analysis to select a material with the lowest life cycle cost, control system upgrades and water quality analysis.
- NORTH END FEEDERMAIN TWINNING – Project Manager and lead design engineer for a routing analysis to twin a critical section of a 900 mm diameter water feedermain in the Halifax Water Pockwock

Transmission System. The existing water feedermain is located in an existing tunnel crossing a highly congested utility and traffic corridor. Stakeholder engagement was a necessary step in the routing analysis due to the limited high traffic volume right-of-way, and two existing railway mainlines and a number of landowners. The project considered new routing options that included modern trenchless technologies to establish five routing options. High level costing was developed and incorporated land acquisition costs to compare options.

- LYLE STREET BOOSTER STATION OPTIMIZATION STUDY – Conducted a condition assessment and optimization study for an existing water booster station that provides an emergency water source to Dartmouth. The study evaluated updates to the supply and receiving systems to determine the required upgrades to optimize the station for three capacity scenarios. The study also identified deficient items with regards to the condition of the station as well as costs for repair.
- PORT WALLACE MASTER PLAN INFRASTRUCTURE STUDY – Responsible for the hydraulic analysis of the extension of the existing Halifax water system as part of an overall infrastructure study for the Port Wallace Development. The hydraulic analysis involved input from stakeholders and Halifax Water to understand to impacts of the proposed Port Wallace development area on the existing distribution system. The analysis considered both development requirements and evaluated the distribution system.
- MOUNT HOPE, DARTMOUTH WATER SYSTEM PLANNING – Performed engineering services to develop the water servicing requirements for a new community within Halifax Water East Region water distribution system.
- QUIGLEY'S CORNER PUMP STATION UPGRADES – Design engineer for the upgrades to an existing sanitary lift station. The upgrades will replace the existing pumps with three (3) dry-pit submersible pumps operating on variable frequency drives to provide a firm station capacity of over 500 l/s (8,000 USgpm). A thorough analysis was undertaken to understand station inflows based on storm return periods to arrive at the suitable design flow for the station.
- WILLIAMS LAKE PUMP STATION UPGRADES – Design engineer for the upgrades to an existing sanitary lift station. The upgrades will replace the existing pumps with three (3) dry-pit submersible pumps operating on variable frequency drives to provide a firm station capacity of 254 l/s (4,025 USgpm). Existing flow records as well as the upstream and downstream constraints were evaluated to establish a suitable firm capacity.
- CALEDONIA TRANSMISSION MAIN REPLACEMENT AND TACOMA PRV REPLACEMENT – Project manager design engineer and construction administrator for a 1.7 km long 750 mm diameter (30") potable water transmission main. The new main will twin the existing 600 mm diameter (24") concrete cylinder pipe. The existing main is a critical feed to a large portion of the Halifax Water East Region system. Interconnections between the new and existing mains required careful planning to limit disruptions to the water supply. The project involved a routing analysis to determine the preferred alignment and coordination with an archaeological assessment. The project is being constructed in two Phases which Phase 1 is complete. This project also involved the replacement of a Pressure Reducing Valve Chamber.
- BEDFORD CONNECTOR REPLACEMENT PHASE 3 – design engineer for the replacement of a 750 mm diameter water feedermain that is the primary water supply for Bedford and Sackville. The project includes 1 km of high-pressure concrete and ductile iron piping, a highway tunnel crossing and interconnections around existing infrastructure. A hydraulic analysis was carried out in the preliminary design to understand the impacts of the replacement piping and interconnections. The project was constructed and successfully commissioned in 2017.
- ARMDALE PUMP STATION UPGRADES – design engineer for the upgrading of an existing sanitary lift station which also included civil works. The upgrade included the replacement of existing 100 hp pumps with new 160 hp pumps operated on variable frequency drives, replacement of all interior piping and modifications to the existing wet well. Was involved in the construction administration and commissioning to bring the project to a successful completion.

- BURNSIDE DEVELOPMENT PHASE 12-6 – design engineer for a water booster station to service an industrial area. Conducted a hydraulic analysis of the boosted system along with model verification. Involved with preliminary and detailed design, tendering and construction stages of the project for the Booster Station.
- WEST HANTS REGIONAL MUNICIPALITY WATER MODEL CALIBRATION – Lead engineer for the update and calibration of the Town of Windsor and Falmouth Water Model.
- VILLAGE OF PORT WILLIAMS WATER MODEL AND GROWTH ASSESSMENT – Lead design engineer and Project Manager for the development and calibration of a water model for the water distribution system. The model was then used to evaluate the capacity of the system to support additional growth.
- WEST HANTS REGIONAL MUNICIPALITY WATER SYSTEM REVIEW – Lead civil engineer for an overall assessment of the Town of Windsor and Community of Falmouth to determine required capital projects to maintain the current level of service. The project accessed existing demands, predicted future demands, evaluated storage capacity.
- TOWN OF WINDSOR WATER WITHDRAWAL APPROVAL – Project manager for the Town of Windsor Water Withdrawal approval renewal. The project required engagement of provincial and federal regulators to address their concerns.
- HEBB'S LAKE LOW LIFT PUMP STATION REPLACEMENT – Design engineer for a new low lift pump station for the Public Service Commission of Bridgewater. The pump station is currently under construction and will house a total of three (3) split case centrifugal pumps with a firm station capacity of 133 l/s (2,113 USgpm)
- ANNAPOLIS VALLEY FIRST NATIONS INFRASTRUCTURE PLANNING – Provided QA/QC of concept level water servicing for planned growth areas within the community.
- MIDDLETON RESERVOIR REPLACEMENT CONCEPT DESIGN – Project Manager and lead design engineer for a study to determine a preferred location for a new 3.4 million Litre reservoir to replace the existing earthen reservoir. A hydraulic analysis was conducted utilizing modelling software to determine necessary upgrades to the distribution system to maintain the current level of service for three different reservoir locations. To undertake the analysis, a water model was updated and calibrated using field data collected by CBCL for the engagement. Three different storage scenarios were considered which included gravity fed ground level storage, pumped ground level storage and elevated storage. Integration of the existing water supply system was critical due to the interconnection of the water supply to the distribution system.
- POTLOTEK FIRST NATION WATER TREATMENT PLANT – Lead civil engineer for the preliminary and detailed design of 700 m long 200 mm diameter water transmission main, 680 cubic meter (180,000 USgal) water storage standpipe. The project also included civil site development for the storage standpipe and water treatment plant and maintenance upgrades for an existing sanitary lift station. An active mixing system was incorporated in the standpipe to ensure a well-mixed tank and high-quality potable water. Additionally, to minimize water temperature heat gain or loss and to reduce the risk of ice cap formation the tank will be insulated.
- MILL COVE FIRE PROTECT SYSTEM EVALUATION– Conducted a life cycle and capital cost study to determine if a centralized fire protection system could be decommissioned. Fire protection requirements were established, and a suitable alternative decentralized system was developed. The existing fire protection system is aging and in need of repairs and capital and O&M costs for repairs for the centralized system were evaluated against capital and O&M costs for a decentralized system. Advantages and disadvantages to each system were also considered.
- WEST HANTS PANUKE PUMP STATION REPLACEMENT STUDY – Lead design engineer in the analysis of an existing Pump Station located within West Hants. The study developed options for and scenarios for replacement stations complete with capital costs. System hydraulics were evaluated, and available fire protection was confirmed.

Dal SEAMONE

P.ENG.
STRUCTURAL ENGINEER

AREA OF SPECIALTY
Structural Design

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS
Association of Professional Engineers of Nova Scotia

EDUCATION
2016 Bachelor of Civil (Infrastructure) Engineering, Co-op Program, Dalhousie University, Halifax, Nova Scotia
2013 Certificate of Applied Science, Acadia University, Wolfville, Nova Scotia

SAFETY TRAINING
2021 WHIMIS 2015
2021 Confined Space Entry
2021 Fall Protection
2021 Emergency First Aid

EXPERIENCE
Dal Seamone is a Structural Engineer in CBCL's Halifax, NS office with approximately 6 years of design experience, and is currently registered as a Professional Engineer in the province of Nova Scotia. During this time, he has been involved primarily in the design of wastewater treatment plants, water treatment plants, and industrial buildings. He also has experience in construction site inspections and assessments of existing structures.

Dal is proficient in structural design and analysis of steel, concrete, masonry, and timber structures included buildings, tanks, chambers, platforms, and slabs/pads. He is also well versed in the design of post-disaster structures and detailing requirements of higher ductility seismic force resisting systems.

Relevant projects that Mr. Seamone has participated in are as follows:

- SCOTIA RECYCLING EXPANSION, NS: Structural design of a concrete loading dock slab.
- MUNICIPALITY OF THE COUNTY OF KINGS STP SCREENING BUILDINGS, NS: Structural design of two single-storey masonry buildings.
- BRASS HILL WASTEWATER FACILITY UPDATES, NS: Structural design of a single-storey masonry building.
- SHUBENACADIE WASTEWATER TREATMENT PLANT REPLACEMENT, NS: Structural design of a single-storey masonry screening building, a single-storey timber process building, concrete grit chamber, and a concrete SBR and sludge holding tank.
- MICHELIN NKM ADDITION, NS: Structural design of a steel industrial building addition and concrete equipment pits.
- HEBBVILLE OPERATIONS BASE BUS GARAGE, NS: Design of a steel industrial building.
- LOYOLA PARKING RAMP REPLACEMENT, NS: Design of a concrete slab on grade parking ramp.
- METHALS SCROLL CASE ASSESSMENT, NS: Concrete condition assessment of a scroll case for a hydroelectric generation station.
- HALIFAX REGIONAL MUNICIPALITY ORGANICS MANAGEMENT FACILITY, NS: Structural design of a masonry elevator shaft and concrete pit, two single-storey masonry electrical buildings, concrete leachate tank, concrete bio tank, and a concrete bio-filter and process water tank.

- SYDNEY HARBOUR WEST WASTEWATER SYSTEM, NS: Structural design of a single-storey steel administration building, single+storey masonry process building, and concrete SBR/sludge holding tanks.
- CAPE BRETON BATTERY POINT UV DISINFECTION IMPROVEMENTS, NS: Structural modifications to existing UV channels for new equipment including thickening of concrete slabs, aluminum planks, checker plate, and misc. steel supports.
- TOWN OF SOURIS TREATMENT FACILITY UPGRADES, PEI: Structural design of a concrete SBR/sludge holding tank.
- TOWN OF THREE RIVERS SLUDGE STORAGE TANK, PEI: Structural design of a sludge holding tank.
- HEBB LAKE PUMPSTATION, NS: Structural design of a single-storey masonry pump station.
- CHARLOTTETOWN POLLUTION CONTROL PLANT EXPANSION, CHARLOTTETOWN, PEI: Structural design of a concrete primary clarifier tank, concrete screening building, and a single-storey masonry sludge thickening building.
- TRANSAQUA GMWC WASTEWATER TREATMENT FACILITY UPGRADES PHASES 3 AND 4, MONCTON, NB: Structural design of a concrete bioreactor tank, channels, two single-storey masonry buildings, and a single-storey steel building.
- GREEN GABLES VISITOR CENTRE, DARTMOUTH, NS: Structural design of a concrete potable water cistern.
- MUNICIPALITY OF DISTRICT OF CHESTER WWTP UPGRADES, CHESTER, NS: Structural design of two concrete tanks.
- MARGARETTA APARTMENT BUILDING, HALIFAX, NS: Structural design of a 10-storey apartment building including two levels of underground parking, 150 apartment units and 30,000 ft^2 of commercial space.
- HALIFAX HOSPICE RESIDENCE, HALIFAX, NS: Structural design and inspection of a 3-storey timber framed building.
- AKOMA HOME RESTORATION, DARTMOUTH, NS: Renovation of an existing 3 -torey timber framed building including the addition of a new masonry elevator shaft and stairwell.
- BRIDGETOWN PUMPING AND TREATMENT, BRIDGETOWN, NS: Structural design of a single-storey masonry building.
- TOWN OF SHELBURNE WWTF UPGRADES, SHELBURNE, NS: Structural design of a concrete clarifier tank, concrete sludge tank, and concrete splitter tank.
- PLYMOUTH PRV UPGRADES, NEW GLASGOW, NS: Structural design of a single-storey masonry building.
- GANDER WWTP COLLECTION SYSTEMS UPGRADES, GANDER, NL: Structural design of a concrete tank.

Chris J. RUDDICK

P.ENG.
SENIOR MECHANICAL ENGINEER

AREAS OF SPECIALTY

Design of Building Mechanical Systems (HVAC, plumbing, fire protection, controls, commissioning, refrigeration, project management, LEED, Green Globes)
Energy Analysis and Energy Audits

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Association of Professional Engineers of Nova Scotia (APENS)
Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
Association of Professional Engineers of Prince Edward Island (APEPEI)
American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE) – Member
Canada Green Building Council, Atlantic Chapter (CaGBC) – Member
Canadian Healthcare Engineering Society – Member

EDUCATION

2012 Canadian Healthcare Engineering Society Construction Certificate
2000 Bachelor of Mechanical Engineering with Distinction, Dalhousie University, Halifax, NS

EXPERIENCE

Mr. Ruddick is a registered Professional Mechanical Engineer working in the fields of building design, construction, commissioning, and energy efficiency. Mr. Ruddick received his degree from Dalhousie University in 2000 and has been working in this field since 2001. Prior to joining CBCL Limited in 2008, he worked for ADI in Fredericton, NB, and Stantec in Vancouver, BC.

Mr. Ruddick has fulfilled the role of Project Manager and Lead Mechanical Engineer on numerous multi-discipline projects including multiple LEED projects. He has experience in the fields of plumbing, heating, ventilation, air-conditioning, humidity control, fire protection, controls, filtration, refrigeration, energy management, commissioning, and building audits. Mr. Ruddick has worked on a wide range of projects such as office buildings, educational facilities, commercial kitchens, laboratories, ice rinks, pools, data centres, museums, airports, treatment plants, pump stations, and retail.

RELEVANT PROJECT EXPERIENCE

- CAPE BRETON UNIVERSITY (CBU) ARENA RENOVATION AND BUILDING ADDITION, SYDNEY, NS (2022), LEAD MECHANICAL ENGINEER – Revitalization of the CBU arena complex and the addition of a new attached building housing a fitness centre, arena storage, health clinic, and fit-up space.
- UNIVERSITY OF KING'S COLLEGE ALEXANDRA HALL UPGRADES, DRKR ARCHITECTS, HALIFAX, NS, (2020-2023), PROJECT MANAGER – Multi-phase project to provide accessibility upgrades for the largest residence building on campus. CBCL provided mechanical and electrical engineering design services.
- CODIAC REGIONAL FACILITY, MONCTON, NB, LEAD MECHANICAL ENGINEER – Design and construction administration services of a renovation and fit-up to a 60,000 ft² police headquarters building including detention centre, emergency management centre, server room, and office spaces.
- FISHERIES MUSEUM OF THE ATLANTIC, LUNENBURG, NS, LEAD MECHANICAL ENGINEER – Renovation of the museum galleries as well as offices. This office facility is heated and cooled via a variable refrigerant heat pump system and ventilated by a heat recovery ventilator.
- GREEN GABLES VISITOR CENTRE, CAVENDISH, PE, LEAD MECHANICAL ENGINEER – Provision of engineering design and construction administration services for a new visitor centre building. This facility is

heated and cooled via a variable refrigerant heat pump system and ventilated by a heat recovery ventilator. Includes gallery space, offices, and gift shop. The project design targeted a Gold Rating under the CaGBC LEED® Green Building rating system. Responsibilities included mechanical design, production of construction drawings and specifications, responding to RFIs, attending construction meetings, completing shop drawing review, Change Directives, site inspections, and progress claim reviews.

- VAV AND AHU UPGRADES, CANADA POST, HALIFAX, NS – Lead Mechanical Engineer for the replacement of multiple large AHU's serving office and plant areas and upgrade to variable volume ventilation system. Author of multiple HVAC reports outlining various AHU replacement options complete with projected savings and construction costs.
- COOLING TOWER UPGRADES, CANADA POST, HALIFAX, NS – Mechanical Engineer for the replacement of a cooling tower. Co-author of a report outlining replacement options, as well as construction cost estimates.
- BOILER UPGRADE STUDY, CANADA POST, SOURIS, PE- Lead Mechanical Engineer for a study outlining boiler replacement options complete with cost estimates.
- DALHOUSIE UNIVERSITY STEELE OCEAN SCIENCES BUILDING LEVEL 4 LABS FIT-UP, LEAD MECHANICAL ENGINEER AND ACTING CBCL PROJECT MANAGER – Design and construction administration services for the fit-up of approximately 7,000 ft² of wet and dry laboratory space, as well as office space, conference rooms, and equipment rooms. Responsibilities included design of mechanical systems, production of construction drawings and specifications, responding to RFI's, attending construction meetings, completing shop drawing review, Change Directives, site inspections and progress claim reviews.
- RCMP HEAT PUMP STUDY, SOURIS, PE – Lead Mechanical Engineer for a study examining options to replace the current in-floor heating system with an air-to-air heat pump system at an RCMP station. Study included three options complete with energy analysis and cost estimates.
- RCMP BUILDING, EAST PRINCE, PE – Served as project manager and lead mechanical engineer for building systems energy study of a police headquarters building. Assessment focussed on improving occupant comfort as well as improving energy efficiency.
- RCMP DETACHMENT INTERIOR UPGRADES PARRSBORO, NS – Lead Mechanical Engineer for upgrades to the building's HVAC and plumbing systems. New or upgraded systems were also commissioned as part of this work.
- RCMP DETACHMENT INTERIOR UPGRADES NORTH SYDNEY, NS – Lead Mechanical Engineer for upgrades to the building's HVAC and plumbing systems. New or upgraded systems were also commissioned as part of this work.
- RCMP DETACHMENT BUILDING LIFE EXTENSION PROJECT, BADDECK, NS – Lead Mechanical Engineer for upgrades to the building's HVAC and plumbing systems. New or upgraded systems were also commissioned as part of this work.
- DANIEL J. MACDONALD BUILDING, CHARLOTTETOWN, PE – Lead Mechanical Engineer for detailed energy audit to identify potential energy savings.
- RCMP H DIVISION HVAC UPGRADE, DARTMOUTH, NS – Lead Commissioning Agent.
- RCMP DETACHMENT INTERIOR UPGRADES BRIDGETOWN, NS – Lead Mechanical Engineer for upgrades to the building's HVAC and plumbing systems. New or upgraded systems were also commissioned as part of this work.
- NATUASHISH AND SHESHATSHIU SCHOOLS SUMMER WORKS PROGRAM, LABRADOR, LEAD MECHANICAL ENGINEER – CBCL provided engineering and construction administration services for school upgrades. Priority was given to items which posed immediate life safety concerns such as fire suppression systems, fire alarms, and exposed combustible materials.
- NATUASHISH AND SHESHATSHIU SCHOOL ASSESSMENTS LABRADOR, LEAD MECHANICAL ENGINEER – Performed building condition assessment on each school, providing a report complete with recommended upgrades and associated cost estimates.

- DALHOUSIE UNIVERSITY LIFE SCIENCES CENTRE GREENHOUSE, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Energy modelling and HVAC upgrade feasibility study for the Dalhousie LSC Greenhouse.
- MACKENZIE BUILDING CORE LAB, HALIFAX, NS, CBCL PROJECT MANAGER, LEAD MECHANICAL ENGINEER AND LEAD COMMISSIONING AGENT – Renovation and fit-up of 6000 ft² of laboratory space. The new laboratory included a fully automated samples handling track system, new UPS room, new compressed air system, and new heat pump system.
- HOPEDALE ASSEMBLY BUILDING DESIGN AND CONSTRUCTION SERVICES, HOPEDALE, NL – CBCL Project Manager, Lead Mechanical Engineer and Lead Commissioning Agent for a new $10M government assembly building with office, meeting, and public spaces. The design included a hydronic boiler system with a large exterior oil tank and 90% efficient heat recovery ventilation system that is able to work year-round in arctic conditions without frosting or losing efficiency, air-conditioning systems, plumbing, and fire protection.
- DR. WILLIAM D. FINN CENTRE FOR FORENSIC MEDICINE, DARTMOUTH, NS, MECHANICAL ENGINEER – 25,000ft² administration and autopsy process building. Targeting LEED Gold notable features include: rainwater collection and re-use for process and sewage conveyance, solar hot air heating, solar hot water heating, laboratory airflow control and pressurization system, pathogen neutralization system for autopsy waste, formalin handling recycling and dispensing system, odor control systems, radiant heating, ultra high efficiency natural gas condensing boilers, ultra high efficiency regenerative heat recovery system, green roof, native landscaping, fully digital lighting control system, digital building control system. FBM Architects, $10.2M.
- HALIFAX CENTRAL LIBRARY, SPRING GARDEN ROAD, NS, LEAD MECHANICAL ENGINEER – 135,000 ft² new central library for Halifax Libraries. FBM and SHL Architects, certified LEED Gold.
- DALHOUSIE HOWE HALL CAFETERIA, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Renovation of an 8,000 ft² commercial kitchen and dining room for the university residences. Mechanical included grease ventilation, make-up air, controls, and plumbing.
- CONNE RIVER DISTRICT HEATING STUDY, CONNE RIVER, NL – District heating study exploring the use of a wood-fired heating plant to provide heat for five band buildings including school, clinic, fire station, band offices, and community hall.
- ALDERNEY LANDING OFFICE BUILDING, HALIFAX, NS – Lead Mechanical Engineer and Commissioning Agent for the renovation and fit-up of 25,000 ft² office space for the Canadian Revenue Agency and Veterans Affairs Canada located on the 3rd and 4th floors. Systems included revisions to existing variable volume air handling system and computer room air conditioning systems. This renovation met the requirements of the Government of Canada's Workplace 2.0 Fit-Up standards. Commissioned systems include variable volume boxes, controls, perimeter heating, computer room cooling, and fire protection.
- 4TH FLOOR RENOVATIONS DOMINION BUILDING, BEDFORD ROW HALIFAX, NS – Lead Commissioning Agent for the complete renovation to the 24,000 ft², 4th floor of the historic Dominion Building in Halifax as a pilot project for the Canadian Government's new Workplace 2.0 concept. Commissioned systems include variable volume boxes, controls, perimeter heating, computer room cooling, and fire protection.
- DEFENCE DEPARTMENT BUILDING CONDITION ASSESSMENTS, PWGSC, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Audit of 15 buildings. Produced a report examining condition, remaining life, and replacement value for all mechanical systems.
- DALHOUSIE DENTISTRY BUILDING, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Assessment of the facility's heating and cooling system. Complete with recommendations for replacement/refurbishment of equipment.
- BUILDING CONDITION ASSESSMENTS, FREDERICTON, NB – Lead Mechanical Engineer for building condition assessment of all city arenas and pool facilities (approximately 15 buildings total). Complete with recommendations for replacement/refurbishment of equipment.

- MARINE HOUSE FEDERAL BUILDING, PWGSC, DARTMOUTH, NS – Project Manager and Lead Mechanical Engineer for the 60,000 ft² renovation and fit-up to house Environment and Climate Change Canada (ECCC). This renovation meets the requirements of the Government of Canada's Workplace 2.0 Fit-Up standards.
- ARGO FEDERAL BUILDING RENOVATION, B.I.O., PWGSC, DARTMOUTH, NS – Lead Mechanical Engineer and Commissioning Agent for the complete retrofit of an existing light industrial building to a new modern office facility to meet Workplace 2.0 design standards. Work included new radiant heating panels, new variable volume air handling system, new computer room cooling system, new plumbing, and sprinkler throughout. Commissioned systems include boilers, variable volume heating pumps, digital controls, fans, computer room air conditioning unit, and fire protection.
- CORNWALL CIVIC CENTRE, CORNWALL, PEI – Lead Mechanical Engineer for a new $2.5M community center with office, public, and recreational spaces. Design included a new refrigeration plant, new pool treatment and heating system, HVAC, plumbing and fire protection.
- SAINT JOHN AMBULANCE BUILDING, HALIFAX, NS – Lead Mechanical Engineer and CBCL Project Manager for a new $2.5M training and headquarters building. This training and office facility is heated and cooled via a variable refrigerant heat pump system and ventilated by a heat recovery ventilator. The building has a radon mitigation system through slab.
- NSLC HEADQUARTERS RENOVATION, HALIFAX, NS – Lead Mechanical Engineer for a renovation of 5,000 ft² of office and washroom space.
- PROVINCIAL DATA CENTRE, HALIFAX, NS – Lead Mechanical Engineer for the addition of a new computer room air-conditioning system. This system provides underfloor hot deck/cold deck cooling to vital server racks for the centre.
- CANADIAN COAST GUARD COLLEGE HOTEL RENOVATION, SYDNEY, NS – Lead Mechanical Engineer and Commissioning Agent for the renovation and fit up of new office and operations space in an existing hotel building. Design included a new heat pump system, new cooling system for the server room, plumbing, and fire protection.
- BEDFORD ROW FEDERAL BUILDING, PWGSC, HALIFAX, NS – Lead Mechanical Engineer for the complete retrofit of an existing 7-storey tower to provide renovations to multiple federal government tenants. Office spaces were designed to Workplace 2.0 design and Activity Based Workplace standards. Variable volume air handling system was retrofitted with new VAV boxes and digital controls. CBCL served as the commissioning agent.
- DALHOUSIE UNIVERSITY KILLAM LIBRARY LINC CLASSROOM AND L2 WASHROOMS, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Multiple renovations including conversion of book storage to a 120-person classroom; required new ventilation system; and a new washroom group.
- COGSWELL TOWER, HALIFAX NS – Lead mechanical engineer for the natural gas conversion and boiler replacement at the 14-storey office tower.
- NSLC, HALIFAX, NS – Lead Mechanical Engineer for a variety of projects including design of new retail stores (LEED Silver or Gold), upgrades to NSLC Headquarters office building, energy efficiency audits and recommendations for main distribution center and multiple retail locations.
- LIFE SCIENCES CENTRE PSYCHOLOGY CLASSROOMS, DALHOUSIE UNIVERSITY, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Multiple theatre style classroom renovations.
- NS DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE RENEWAL, Halifax, NS – Author of report outlining energy saving initiatives for eight public housing high rise buildings such as heat recovery and fuel conversion.
- SACKVILLE SPORTS STADIUM, LOWER SACKVILLE, NS, LEAD MECHANICAL ENGINEER – Replacement of pool air handling unit, incorporating heat recovery from dehumidification system.
- DENTISTRY BUILDING CLASSROOMS, DALHOUSIE UNIVERSITY, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Theatre style classroom renovations with an emphasis on acoustical improvement of the existing HVAC system.

- WELDON LAW OFFICES, LEAD MECHANICAL ENGINEER – Renovation of executive offices including reconfiguration of existing HVAC to deal with acoustical and comfort complaints.
- ENGINEERING D BUILDING, LEAD MECHANICAL ENGINEER – Renovation of an office group including the reconfiguration of the existing HVAC.
- DALHOUSIE UNIVERSITY, SHIRREFF HALL WASHROOM RENOVATIONS, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Conversion of washrooms to provide gender neutral facilities. Provided completely new layout and all new plumbing infrastructure.
- DALHOUSIE UNIVERSITY, BRONSON HALL WASHROOM RENOVATIONS, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Conversion of washrooms to provide gender neutral facilities. Provided completely new layout and all new plumbing infrastructure.
- DALHOUSIE UNIVERSITY, CAMERON HALL WASHROOM RENOVATIONS, HALIFAX, NS, LEAD MECHANICAL ENGINEER – Conversion of washrooms to provide gender neutral facilities. Provided completely new layout and all new plumbing infrastructure.

WATER AND WASTEWATER TREATMENT PLANT

- PICTOU WATER TREATMENT PLANT, PICTOU, NS – Lead Mechanical Engineer for the design of a new water treatment facility in Pictou, NS. Design included dehumidification and air conditioning using raw water, office and laboratory HVAC, and Plumbing.
- FREDERICTON WATER TREATMENT PLANT, FREDERICTON NB – Lead Mechanical Engineer for the design of a new water treatment facility in Fredericton, NB. Design included radiant heating, office and laboratory HVAC, and Plumbing.
- NEW MARYLAND WASTEWATER TREATMENT FACILITY, NEW MARYLAND, NB: Provided mechanical design for four new buildings in new WWTF including HVAC and Plumbing. Mechanical work included wet and dry well ventilation, office/lab ventilation, heat recovery systems, etc.
- FREDERICTON WASTEWATER TREATMENT FACILITY, FREDERICTON NB – Lead Mechanical Engineer for ventilation upgrades including dust separator for lime dust and odor control for the nearby residents.
- JD KLINE WATER TREATMENT PLANT, HALIFAX NS – Served as Project Manager and Lead Mechanical Engineer for multiple projects at the main plant and pumping station. Projects included heat pump upgrade, boiler replacement, ventilation upgrades.
- TRANSAQUA, MONCTON, NB – Served as Lead Mechanical Engineer. CBCL provided complete multidisciplinary engineering for the design of an expansion to the wastewater treatment facility in Moncton NB. Mechanical work included HVAC and plumbing. Also provided the design for the heat recovery system using the waste heat from the wastewater in the aeration tanks.
- HALIFAX WATER, HALIFAX, NS – Served as Lead Mechanical Engineer for a heat recovery system to pre-heat incoming air using exhaust air at the Dartmouth Wastewater Treatment Plant. Reference: Jeremy Stewart, Project Manager, Halifax Water, 902-817-1327, jeremys@halifaxwater.ca.
- AEROTECH WASTEWATER TREATMENT FACILITY, HALIFAX, NS – Served as Lead Mechanical Engineer. HVAC upgrades including heat recovery ventilation and heat pump to improve air quality in office and pumping areas.
- EASTERN WASTEWATER TREATMENT PLANT, SAINT JOHN, NB – Served as Lead Mechanical Engineer. CBCL provided complete multidisciplinary engineering for the design of a new wastewater treatment facility in Saint John NB. Mechanical work included Industrial and office HVAC, Plumbing.

CAREER HISTORY

11/2008 – Present:	CBCL Limited, Halifax, NS, Canada, Mechanical Engineer
2007 – 2008:	Stantec Consulting, Vancouver, BC, Canada, Building Mechanical Engineer
2002 – 2007:	ADI Limited, Fredericton, NB, Canada, Mechanical Engineer

John R. W. KERR

P.ENG.
ELECTRICAL ENGINEER

AREAS OF SPECIALTY

Electrical, Telecommunication, Control and Instrumentation Design
Maintenance and Construction Support
Commissioning and Testing
Project Management

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Engineers Nova Scotia
Professionals Engineers and Geoscientists of Newfoundland and Labrador (Inactive)

EDUCATION

2015 Bachelors of Electrical & Computer Engineer (Co-op), Dalhousie University, Halifax, NS
2012 Diploma in Engineering (Electrical), Saint Mary's University, Halifax, NS
2010 Diploma in Electronic Engineering Technologist, Nova Scotia Community College, Halifax, NS
2009 Diploma in Electronic Engineering Technician, Nova Scotia Community College, Stellarton, NS

CONTINUING EDUCATION

Emergency First Aid CPR Level 'C' and AED
Mental Health First Aid Basic
WHMIS/GHS Awareness

EXPERIENCE

Mr. Kerr is an Electrical Engineer with nine (9) years of experience in industrial, water/wastewater treatment plants, and onshore/offshore oil and gas industries. Mr. Kerr's responsibilities include preliminary and detailed design packages including drawings, bid evaluation, datasheets, specifications, development of work packs/instructions, material lists, and construction support. Projects include Main Service and Generator sizing, ATS, Electrical distribution, Plant SCADA & RTU systems, Lighting, Data/Voice networks and backbone infrastructure, CCTV, Access Control and E, I&C interface for a wide spectrum of Process equipment packages at various Industrial, Water, Wastewater and Oil & Gas sites.

From 2015 to 2020, John was employed with a consulting firm based in Dartmouth, NS as an Electrical engineer. During this period, he worked various onshore and offshore facilities covering a wide variety of electrical, instrumentation and controls EPCM projects including construction, testing, and commissioning. Mr. Kerr joined the electrical engineering department at CBCL in November 2019.

Relevant projects that Mr. Kerr has participated in during his time at CBCL are as follows:

GENERAL

- LOBSTER STORAGE FACILITY, HALIFAX, NS FOR FIRST CATCH FISHERIES – Designed instrumentation and controls for new seawater treatment storage tanks, pumps, filters, and waste treatment systems.
- CAUSTIC STORAGE TANK UPGRADE, PORT HAWKESBURY, NS, FOR PORT HAWKESBURY PAPER – Power feed and control of sump pump, temperature and level instrumentation loop drawings for tie-in to PLC, and instrument data sheets.
- IWK EMERGENCY DEPARTMENT (ED) REDEVELOPMENT, NS FOR NOVA SCOTIA HEALTH - Design of the new ED for the IWK Hospital. The facility is 5-storeys, approximately 170,000 ft², and consists of emergency

medical services areas, underground parking, and technical and infrastructure support spaces. Detail design of the telecommunications backbone; horizontal distribution; Real Time Location Systems (RLTS) for staff, patient wandering, and equipment; Distributed Antenna System (DAS) for cellular coverage; and IP Master Clock System

OIL AND GAS

- PORT OF MONTREAL AIRPORT FUEL SUPPLY TERMINAL, QC FOR FSM MANAGEMENT GROUP - Electrical Engineer for the design of a 110 million litre jet fuel marine facility, for storage, loading and unloading by truck, ship, pipeline, and rail. The design included a basic process control system, overfill and safety shutdown system, and instrumentation for the facility.
- MONCTON CUSTODY TRANSFER STATION METER AND REGULATOR MODIFICATIONS, NB FOR ENBRIDGE - Provided electrical engineering services associated with the modifications of the Moncton CTS M&R Number 33007 to allow for the installation of a low flow meter and low flow regulators.
- GAS CHROMATOGRAPH ANALYSIS BUILDING, HALIFAX, NS FOR ENBRIDGE – Designed electrical and instrumentation drawing package for new gas analysis building being added to existing natural gas distribution site, including tie-ins to existing SCADA system, new power feeds, and ground grid.
- DELIVERED NATURAL GAS SITE, GREENWOOD, NS, FOR IRVING OIL LIMITED – Design of the electrical and instrumentation drawing package and work pack for the decompression module power feeds, instrumentation, fire and gas controls, lighting, and ground grid.
- LINCOLN GAS CHILLING, LINCOLN, NB, FOR IRVING OIL LIMITED – Designed the power feeds and instrumentation tie-ins for a glycol chiller used to cool CNG for transportation.

WASTEWATER TREATMENT

- WASTEWATER TREATMENT UPGRADES, SOURIS, PE FOR TOWN OF SOURIS – Designed electrical, instrumentation, and controls drawings and specifications for new SBR and sludge tanks including a new electrical building for main service, generator, ground grid, lighting and power feeds to the existing UV treatment building.
- WWTP SOLIDS LOADOUT AND UV BUILDINGS, MONCTON, NB FOR TRANSAQUA – Designed the instrumentation and controls drawing package and specification for a new solid loadout conveyor systems building and a secondary building housing two channel UV system with bypass including integration into the existing SCADA network.
- SEWAGE LIFT STATION REPLACEMENT (RUSSELL LAKE), DARTMOUTH, NS FOR HALIFAX WATER – Design of the electrical and instrumentation drawings and specifications for a new electrical building including VFD lift pumps, wet well instrumentation, ground grid, generator, and lighting.
- WASTEWATER TREATMENT PLANT, SYDNEY HARBOUR WEST, NS FOR CBRM – Designed instrumentation, controls, and communications drawings and specifications for the WWTP headworks and screenings building, SBR and sludge waste tanks, sludge pumps, and UV system.
- WASTEWATER TREATMENT PLANT REPLACEMENT, NS FOR SHUBENACADIE – Detailed design of electrical, instrumentation, and controls drawings and specifications. WWTP included Fine Screen, SBR and sludge tanks and UV Treatment systems including standby generator, Process and Fine Screen buildings.

DOMESTIC WATER

- WATER TREATMENT FACILITY CLARIFIER RETROFIT, GREATER MONCTON, NB FOR CITY OF MONCTON – Designed the instrumentation and controls drawing package and specifications for four clarifier retrofits including instrumentation, communications, and integration into the existing SCADA network.

- SCADA, PLC AND UV UPGRADE, NATUASHISH, NL FOR MIFN – Designed the instrumentation and controls drawing package and specifications to update the existing PLC and SCADA system at the water treatment plant and installation of a new UV water treatment package.
- WATER SYSTEM UPGRADES, SHESHATSHIU, NL FOR SIFN – Designed the electrical, instrumentation, and controls drawing package and specifications for a new well control building and retrofit of the existing well control building to integrate it into the existing community SCADA radio communications network.
- WATER TREATMENT FACILITIES UPGRADES – NS FOR WE'KOQMA'Q FIRST NATION – Electrical, Instrumentation and Controls design to upgrade the Water Treatment facility and Water Tower RTU Control panels, radio communication link, pump controls, and treatment systems upgrades for flow metering and water quality monitoring.
- GREENSAND FILTRATION UPGRADE, NB FOR PUBLIC SERVICES AND PROCUREMENT CANADA - ATLANTIC INSTITUTION - Instrumentation and Controls design for an upgrade of water treatment systems servicing the Atlantic Institution penitentiary.

Projects in which Mr. Kerr has participated during previous employment include the following:

- DIGITIZATION PROJECT, ST. JOHN'S NL, FOR WOOD PLC – Designed and developed all construction work packs for new fibre optic and CAT6 network to upgrade existing networks to support new Industrial WAP, RFID and Business WAP on an offshore platform.
- DRILL RIG INTERFACE, SABLE, NS, FOR EXXONMOBIL – Design, developed work packs, installation and commissioning of telephone, fire and gas and safety system tie-ins between the drill rig and the gas production platforms for decommissioning.
- SATELLITE COMMUNICATIONS SYSTEM, SABLE, NS, FOR EXXONMOBIL – Design, installation, and commissioning of a new satellite communications system with tie-ins for power and to existing LAN network on offshore platform.
- UHF AND VHF REPEATER FOR FIELD RADIO, SABLE, NS, FOR EXXONMOBIL – Design of UHF and VHF handheld radio communications on an offshore platform.
- PABX SYSTEM UPGRADE, SABLE, NS, FOR EXXONMOBIL – Design, installation, and commissioning of a private automatic branch exchange (PABX) telephone system for analog and digital phone lines over a trunk line on an offshore platform.
- PAGA SYSTEM UPGRADE, POINT TUPPER, NS, FOR EXXONMOBIL – Design, installation, and commissioning of a new public address and general alarm (PAGA) system for an existing fractionation plant including the removal of the existing PAGA system..
- HELI-DECK LED LIGHTING SYSTEM, ST. JOHN'S, NL, FOR HUSKY ENERGY – Design and commissioning of a Heli-deck LED system for an offshore platform. Also, the training of site personnel on the operation of the new equipment.
- FLARE FLOW METER, SABLE, NS, FOR EXXONMOBIL – Design of a flare line ultrasonic flowmeter and instrument tie-ins to DCS system for an offshore platform.
- MICROWAVE RADIO COMMUNICATION, SABLE, NS, FOR EXXONMOBIL – Completed a preliminary study on a proposed microwave communications system upgrade based on ITU-R publications between offshore platforms.
- YEARLY CONSTRUCTION AND MAINTENANCE SUPPORT, SABLE, NS, FOR EXXONMOBIL – Working with electricians and instrumentation technicians to troubleshoot issues with instrumentation, DCS, PLC support, power and firewater diesel generators, VFDs, ground faults, UPS systems, UHF/VHF field radios and repeaters, antenna, microwave radio diagnostics, PAGA systems, Thermographic surveys of live electrical equipment.

CAREER HISTORY

2019 to present	CBCL Limited, Halifax, NS, Canada, Electrical Engineer
2015 – 2019:	AMEC Black and McDonald Ltd., Dartmouth, NS, Canada, Intermediate Electrical Engineer and Junior Electrical Engineer.
2014	Rolls-Royce Canada Ltd., Dartmouth, NS, Canada, Electrical Engineering Co-op Student
2013	AMEC Black and McDonald Ltd., Dartmouth, NS, Canada, Electrical Engineering Co-op Student

Kristien E.S. PRAEST

CET

AUTOMATION SPECIALIST, ELECTRICAL TECHNOLOGIST

AREAS OF SPECIALTY

PLC – Allen Bradley, Schneider Electric, GE
HMI – Allen Bradley, Schneider Electric, GE, Maple Systems
SCADA – FactoryTalk View & VantagePoint EMI, VTScada
Communication – Leased Line, Radio, Serial, Ethernet

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Member of TechNova

EDUCATION

2009 Electrical Engineering Technology Diploma, Nova Scotia Community College

CONTINUING EDUCATION

2014 VTScada Advanced Configuration and Scripting, Trihedral Engineering Ltd., Bedford, NS
2014 VTScada Operations and Configuration Training, Trihedral Engineering Ltd., Bedford, NS
2013 ICS 100, Halifax Regional Municipality, Halifax, NS
2012 DeltaV Implementation I, Emerson Process Management, Round Rock, TX
2012 Water Distribution System Operation & Maintenance, California State University, Bedford, NS

EXPERIENCE

Mr. Praest is an electrical technologist with fifteen (15) years of experience in automation. Mr. Praest's responsibilities include: PLC, HMI, and SCADA system programming & troubleshooting, PLC control system migrations; control system design; setup of site-to-site & remote access VPN networks; and the setup and troubleshooting of instrumentation.

RELEVANT PROJECT EXPERIENCE

DESIGN

- NATUASHISH FIRST NATION – WTP VTScada system; Allen Bradley SLC 5/03 migration to CompactLogix at WTP and pump house; Site-to-site communication upgrade from serial to ethernet.
- CONNE RIVER FIRST NATION – WTP VTScada system and OMRON CS1 migration to CompactLogix; water booster station CompactLogix PLC system; distributed fiber network to 15 sites for SCADA network.

GENERAL

- MUNICIPALITY OF GUYSBOROUGH SABLE WIND – Schweitzer Engineering Laboratories (SEL) Real-Time Automation Controller; DNP3 communication protocol.

CONTROL SYSTEM MIGRATION

- TOWN OF YARMOUTH WTP – Allen Bradley SLC500, ControlLogix; Schneider Electric SCADAPack and Accutech Wireless; Trihedral VTScada; Leased telephone line communications. Responsibilities included: Upgrade VTScada from v6.5 to v11.2. Migration from SLC500 DH-485 to ControlLogix Ethernet/IP network.
- TOWN OF STELLARTON WTP – Allen Bradley ControlLogix; Trihedral VTScada. Responsibilities included: Co-ordinating the switchover of field terminations from individual skid PLCs to a central PLC to allow

for minimal plant downtime; Programming and commissioning of new PLC & SCADA system to replace existing skid PLCs; Operator training.
- Town of Happy Valley – Goose Bay WTP – Allen Bradley CompactLogix; Trihedral VTScada. Responsibilities included: Programming and commissioning of PLC migration from Schneider Electric Modicon M340 to Allen Bradley CompactLogix.

Oil and Gas
- St. John's Fuel Facility Corp. YYT Fuel Farm – Allen Bradley ControlLogix; Trihedral VTScada. Responsibilities included: Programming and commissioning of control system; operator training.
- Alton Natural Gas Storage LP – Allen Bradley ControlLogix, PanelView Plus; Rockwell Automation FactoryTalk View SE and ME. Responsibilities included: Programming for pump and valve controls, and operator interfaces; Field testing all I/O points, for instrumentation, valve control and pump control; Operator training.
- Irving Oil Compressed Natural Gas – Allen Bradley ControlLogix, CompactLogix, MicroLogix, PanelView Plus; Rockwell Automation FactoryTalk View SE and ME. Responsibilities included: Programming changes and control upgrades to their main fill station and twelve decant sites. Technical services.
- Heritage Gas Compressed Natural Gas – Allen Bradley ControlLogix, CompactLogix, PanelView Plus; Rockwell Automation FactoryTalk View SE and ME. Responsibilities included: Programming changes and control upgrades. Technical services.
- Island Gas Compressed Natural Gas – Allen Bradley CompactLogix, PanelView Plus; FactoryTalk View ME. Responsibilities included: Programming changes and control upgrades. Technical services.

Water and Wastewater
- Abegweit First Nations Scotchfort WTP – Allen Bradley MicroLogix; Trihedral VTScada; Cellular modem communications. Responsibilities included: Programming and commissioning of SCADA system for integration of vendor skids.
- Broad Cove Campground Water System, Parks Canada - Schneider Electric SCADAPack; Trihedral VTScada; Radio communications. Responsibilities included: Programming and commissioning of PLC's at three sites and SCADA application at main site. PLC's are communicating with a mix of buried fibre and radio.
- Sipekne'katik First Nations WTP & WWTP – Allen Bradley CompactLogix; Trihedral VTScada; Radio communications. Responsibilities included: Programming changes and control upgrades. Technical services.
- Town of New Glasgow WTP –Schneider Electric Modicon Momentum, Magelis XBTGT; Trihedral VTScada. Responsibilities included: Addition of new Remote I/O rack via Ethernet; Programming for upgraded chemical dosing systems, and a third sand filter. All completed while maintaining operation of existing WTP process.
- Town of Paradise WWTP – Allen Bradley ControlLogix; Trihedral VTScada. Responsibilities included: Programming and commissioning of Main PLC and SCADA system for integration of vendor skids into the WWTP process.
- Town of Hantsport WTP – Allen Bradley CompactLogix, MicroLogix; Trihedral VTScada; Radio communications. Responsibilities included: Programming and commissioning of SCADA system for integration of vendor skids. Ongoing programming changes and control upgrades. Technical services.
- Town of Falmouth WTP – General Electric Fanuc 90-30, and QuickPanel+; Trihedral VTScada. Responsibilities included: Programming changes and control upgrades. Technical services.

- City of Saint John Eastern Waste Water Treatment Facility – Allen Bradley ControlLogix and SLC 5/05. Communications troubleshooting.
- City of Saint John District Metering – FactoryTalk VantagePoint EMI. Dashboard creation for easy, visual analysis of water consumption by zone for operations and management.
- City of Saint John Thorne Ave PS #4 – Allen Bradley ControlLogix, PanelView Plus; ProSoft RS-485 Modbus. Responsibilities include: Programming and commissioning the complex pumping duty arrangement, due to multiple pump types being installed in the wet well.
- Town of Pictou Water Supply Wellfield – Schneider Electric SCADAPack and HMI; Trihedral VTScada. Instrumentation troubleshooting.
- Town of Pictou WTP – Allen Bradley CompactLogix; Trihedral VTScada. Responsibilities included: Integrating well field into WTP controls via radio communication; Programming and commissioning of Main PLC and SCADA system for integration of vendor skids into the WTP process; Site-to-Site VPN with the existing WWTP, creating a single control network between the WTP & WWTP and having the WTP & WWTP on a single VTScada application, accessible from both sites.
- Town of Windsor WTP & Sewer SCADA – Allen Bradley ControlLogix; Trihedral VTScada. Programming changes and control upgrades. Technical services.
- City of Charlottetown Pollution Control Plant – Allen Bradley ControlLogix and CompactLogix. Programming changes and control upgrades. Technical services.
- High Liner Foods Waste Water Treatment – Allen Bradley CompactLogix and PanelView Plus; FactoryTalk View SE and ME.
- HIAA Lav Building – Allen Bradley CompactLogix and PanelView Plus; Rockwell Automation FactoryTalk View ME.
- HIAA Pyritic Slate Treatment Facility – Allen Bradley PLC5; Trihedral VTScada.

Halifax Water

- Fall River WWTF, Halifax Regional Water Commission, Utility Tech – ABB VFD; Schneider Electric SCADAPack; Maple Systems HMI. Responsibilities included: Reprogramming of Eq tank and sludge wasting & recirculation system; design of new control panel [DraftSight].
- Timberlea WWTF, Halifax Regional Water Commission, Utility Tech – Allen Bradley SLC 5/03; Schneider Electric SCADAPack; Trihedral VTScada. Responsibilities included: SCADA system design and commissioning; design of new control panel [DraftSight].

Laurentide Controls

- Domision WWTP, Laurentide Controls (Novaco Automation), Projects Technologist – Allen Bradley CompactLogix; Trihedral VTScada. Responsibilities included: Development and commissioning of the Dominion WWTP control system; Vendor PLC interconnections; Plant start-up and training of operators.

Career History

08/2014 – Present: CBCL Limited, Halifax, NS, Canada, Automation Specialist
11/2010 – 07/2014: Halifax Water, Lower Sackville, NS, Canada, Utility Technician I
06/2009 – 06/2010: Laurentide Controls, Dartmouth, NS, Canada, Projects Technologist

Attachment E

Detailed Cost Proposal

Middleton Reservoir - Construction Phase Engineering Services

October 3, 2024

	ACTIVITY	Project Liason		Project Manager / Contract Administration		Technical Specialist		Engineering Support		Structural Foundations		Building Mechanical		Electrical & Instrumentation		Drafting / Technical Support / Resident Inspection		Clerical Support		TOTAL CBCL FEES		Geotechnical Fee	EXPENSES & DISBURSEMENTS (6%)	TASK TOTAL
		Aaron Baillie		Paul Young		Jeff Clair		Ryland MacLellan		Dal Seamone		Chris Ruddick		John Kerr & Kristien P				CBCL Staff						
		$255		$170		$195		$125		$155		$195		$170		$110		$85						
		Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees	Hrs	Fees			
Construction Phase Services																								
1	Construction Administration	5	$ 1,275	260	$ 44,200	33	$ 6,435	260	$ 32,500	0	$ -	0	$ -	12	$ 2,040	0	$ -	0	$ -	570	$ 86,450	$ -	$ 5,187	$ 91,637
1.1	Construction Meetings (bi-weekly)	8	$ 2,040	49	$ 8,330	10	$ 1,950	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	67	$ 12,320	$ -	$ 739	$ 13,059
2	Shop Drawing Reviews	2	$ 510	8	$ 1,360	8	$ 1,560	48	$ 6,000	8	$ 1,240	8	$ 1,560	16	$ 2,720	0	$ -	60	$ 5,100	158	$ 20,050	$ -	$ 1,203	$ 21,253
3	Construction Observation	2	$ 510	0	$ -	0	$ -	0	$ -	24	$ 3,720	4	$ 780	326	$ 55,420	950	$ 104,500	0	$ -	1306	$ 164,930	$ -	$ 37,996	$ 202,926
4	Materials Testing QA/QC Geotechnical	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	$ 20,000	$ 444	$ 20,444
5	Approval and Closeout Documents	1	$ 255	10	$ 1,700	8	$ 1,560	20	$ 2,500	2	$ 310	1	$ 195	2	$ 340	2	$ -	2	$ 170	48	$ 7,030	$ -	$ 819	$ 7,849
6	Facility Start-up & Commissioning	0	$ -	6	$ 1,020	4	$ 780	30	$ 3,750	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	40	$ 5,550	$ -	$ 928	$ 6,478
7	Record Drawings	0	$ -	4	$ 680	1	$ 195	8	$ 1,000	0	$ -	1	$ 195	4	$ 680	24	$ 2,640	0	$ -	42	$ 5,390	$ -	$ 323	$ 5,713
8	Warranty Period Services	1	$ 255	5	$ 850	10	$ 1,950	10	$ 1,250	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	26	$ 4,305	$ -	$ 457	$ 4,762
	TOTAL	**19**	**$ 4,845**	**342**	**$ 58,140**	**74**	**$ 14,430**	**376**	**$ 47,000**	**34**	**$ 5,270**	**14**	**$ 2,730**	**360**	**$ 61,200**	**976**	**$ 107,140**	**62**	**$ 5,270**	**2257**	**$ 306,025**	**$ 20,000**	**$ 48,096**	**$ 374,121**

NET TOTAL FEES & EXPENSES (EXCL. HST)	**$ 374,121**

Project Name: **WATER RESERVOIR** **Project #** 22-12-A

Department: Water **Unit:** Water **Asset Class** Water reservoir

Type of Asset: New & replacement **Reason:** Critical level of service **Expected Useful Life:** 75 years

Project Description: Replace existing water reservoir over 2 year construction period at an estimated cost of $6,026,000 plus HST, and decommission existing reservoir once the new system is operational, at an estimated cost of $230,000 plus HST. YR1 siteworks, yard-piping, zone building & engineering supervision. YR2 reservoir, pump station & engineering supervision. YR3 decommission old structure

Need for Project: Existing reservoir has been leaking treated water for many years and is not repairable. The water level cannot be maintained high enough to support most emergency and peak use requirements. There is a risk of catastrophic failure.

Project Funding: $3,465,052 in grants, plus $524,262 additional operating revenue since 2018 rate study, all in the Reservoir Reserve, and additional interest and revenue to be added in 2024/25 & 2025/26 and Borrow the balance from MFC over 20 years at estimated 5% per annum.

Carry-over Project The Town has spent $407k since 2011 on engineering and design work for this project, plus $60k for land. Funding was from Gas Tax, PCAP grant, Depreciation Reserve, Surplus and $123k of future debt.

Additional Operating Expense Net Water Revenue in 2023/24 is only forecast at $200,000. The Utility cannot fund the debt service and depreciation expense, without a significant increase in Water Rates, unless the UARB authorizes using the Depreciation Reserve to pay the debt service.

Annual Operating Impact:	**Total up to 3/31/2023**	**Budgeted for 2023/24**	**Total up to 3/30/2024**	**New Spending 2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**Total**	**Project Total**
Operating Expenses	-	-	-	-	-	-	-	-	-	-
Interest expense	-	-	-	-	122,761	122,761	122,761	122,761	491,044	491,044
Interest expense - interfund	-	-	-	-	-	-	-	-	-	-
Depreciation expense	-	-	-	26,951	90,028	93,226	93,226	93,226	396,658	396,658
Loan principal	-	-	-	-	122,761	122,761	122,761	122,761	491,044	491,044
Loan principal - interfund	-	-	-	-	-	-	-	-	-	-
Total Operating Impact	-	-	-	26,951	335,550	338,748	338,748	338,748	1,378,745	1,378,745

Capital Budget:	**3/31/2023**	**2023/24**	**3/30/2024**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**Total**	**Project Total**
Capital cost	465,801	2,308	468,109	1,553,200	4,730,800	239,858	-	-	6,523,858	6,991,967
Funding:										-
Operating	60,000	-	60,000	-	-	-	-	-	-	60,000
Grants	144,710	-	144,710	-	-	-	-	-	-	144,710
Drawdown Reserves	139,796	-	139,796	1,553,200	2,399,185	239,858	-	-	4,192,243	4,332,039
Borrow from Reserves	121,295	2,308	123,603	-	(123,603)	-	-	-	(123,603)	-
Long-term debt	-	-	-	-	2,455,218	-	-	-	2,455,218	2,455,218
Other	-	-	-	-	-	-	-	-	-	-
Total funding	465,801	2,308	468,109	1,553,200	4,730,800	239,858	-	-	6,523,858	6,991,966

REQUEST FOR DECISION
Reservoir Project Change Order Approval
RFD#: 008-2025

To: COTW and Town Council
From: Adam Verran, Director of Public Works and Ashley Crocker, CAO
Date: February 3, 2025 and February 18, 2025
Subject: Reservoir Construction – Change Orders

Guiding Principles for Decision-Making

Accountability	Transportation	Diversity	Sustainability	Engaged	Informed

References/Attachments

- Change Order Summary 201014.06 LE01 - From CBCL
- Roscoe Construction Tender Submission 2a
- Capital Project Sheet 22-12-A

Legislation

- *Nova Scotia Municipal Government Act*
- Town Policy Code A – General Administration Procurement and Purchasing Policy
- Public Procurement Policy

Recommendation

That Town Council authorize and approve the list of Change Orders for the New Reservoir Project as presented, totaling $7,495.00 plus HST.

That Town Council authorize and approve $20,000 plus HST in additional spending for future Change Orders to the Reservoir Project.

Background

The Reservoir Project is complex in scope and during the project some aspects may need to be changed, upgraded or may have been overlooked in the initial design phase of the project. With these changes there are additional costs or credits associated. Change Orders 1 through 5 have carefully been considered and have been necessary for the project to move forward and for the Reservoir to meet the Town of Middleton's requirements.

Financial Implications

The proposal is for $7,495 plus HST along with the authority to approve an additional $20,000 in Change orders. Town Council has awarded the reservoir construction tender to Roscoe Construction for $3,951,800.00. Therefore, any Change Orders, which represent an overall increase to the contract price, must be approved by Council. To avoid holding up schedules and have change orders approved in a timely manner, staff are recommending an additional $20,000 be approved for Town staff to sign off on additional Change Orders. A list of the current Change Orders's is attached from CBCL.

In the UARB Reservoir Approval request, staff included an additional 10% contingency to cover construction overages. The UARB Reservoir Approval request outlines how the entire project will be funded, including additional construction costs. If Council approves this work, we will still be within the budget that was approved by the UARB, and within the Reservoir Capital Project that was approved in the 2024-2025 budget process. 50% of the cost will come from the MCGP grant and the other 50% will be funded through a combination of the Water Utility Depreciation Reserve, long-term debt and other grants.

If Council approves this additional expense, the overall reservoir project is still within the Capital Budget originally approved by Council, as well as the proposal and budget approved by the UARB.

Summary of Change Orders to Date:

Change Order	Change Order Description	Cost
1	Programmable Keypad Lock	$2,811.47 plus HST
2	Additional Snow Guards	$644.50 plus HST
3	Supply and Install 450dia Culvert	$2,920.50 plus HST
4	Credit: Removal of Digital Power Meter	($2,875.08) plus HST
5	Revise Transformer Sizing and Breaker for Heat Pump	$3,993.61 plus HST
TOTAL		**$7,495.00 plus HST**

Strategic Plan/Operating Plan Alignment

Check Applicable	Strategic Priority Area	Comments
	Environment	
X	Infrastructure	Overseeing the construction of the new reservoir project
	Economy	
	Community	
	Governance	
	Council Strategic Initiative	

Alternatives
N/A

Community Engagement/Communication
N/A

CAO Comments
The CAO supports the recommendation of staff.

CAO Initials: AC

Target Decision Date: 18 February 2025

Maritime Centre, 1505 Barrington Street, Suite 901, Box 606, Halifax, NS,
B3J 2R7 | 902-421-7241 | CBCL.ca | info@CBCL.ca

January 30, 2025

Ashley Crocker
CAO
Town of Middleton
131 Commercial Street
PO Box 340
Middleton, NS B0S 1P0

Dear Ms. Crocker:

RE: Summary of Construction Change Orders for the Middleton Reservoir Replacement

This letter provides a summary of the change orders to date for the construction of the Middleton Reservoir Replacement project in the Town of Middleton. These modifications have been necessary to address unforeseen conditions, design adjustments, and additional requirements to ensure the project progresses. The change orders to date are summarized below:

CO Number	CO Name	Extra	Credit
1	Programmable Keypad Lock	$ 2,811.47	
2	Additional Snow Guards	$ 644.50	
3	Supply & Install 450 mm Culvert	$ 2,920.50	
4	Credit for Removal of Digital Power Meter		($ 2,875.08)
5	Revise Transformer Sizing and Size of Disconnect and Breaker for Heat Pump	$ 3,993.61	
	TOTAL	**$10,370.08**	**($ 2,875.08)**
	TOTAL Contract Change	**$7,495.00**	

Each of these changes has been carefully reviewed and discussed with the project stakeholders to ensure alignment with the project's scope, budget, and timeline. We appreciate the Town of Middleton's cooperation and support in facilitating these necessary adjustments.

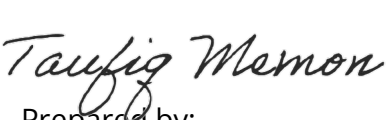
All change orders are attached to this letter. Please review the attached documentation for further details. Do not hesitate to contact us if you require any additional information or clarification.

Town of Middleton
January 30, 2025

Thank you for your continued collaboration. We look forward to your acknowledgment and approval of these modifications.

Yours very truly,

CBCL Limited



Prepared by:
Taufiq Memon
Municipal Project Coordinator
Direct: 902-421-7241
E-Mail: tmemon@cbcl.ca

Paul Young, P.Eng.
Municipal Engineer
Direct: 902-421-7241
E-Mail: pyoung@cbcl.ca

Attachments: A – Change Orders

CC: Adam Verran (Town of Middleton)

Project No: 201014.06

Attachment A

Change Orders

Change Order

Change Order No.:	01	CBCL Project No.	201014.00
Date:	27-Nov-24		
To:	Roscoe Construction Limted		
Contract Name:	Middleton Reservoir Replacement		
Contract No.:	201014		
Refer To:	Roscoe Bulletin No. 2r1, dated Nov. 19, 2024		
Copies To:	Robert Bacon, Adam Verran, Paul Young, Kerri Stanley		

You are hereby authorized, subject to the provisions of your contract, to proceed with the following work:	Credit	Extra
Provide all necessary labour, material and equipment for programmable key pad lock. (Includes the credit for the original hardware)		$ 2,811.47
SUB-TOTAL	**$ -**	**$ 2,811.47**

The amount of the contract price is INCREASED by the sum of ***$2,811.47 + HST***

Recommended Engineer/Consultant		Paul Young	27-Nov-24
	Sign	Print	Date
Authorized Owner		Adam Verran	02-Dec-24
	Sign	Print	Date
Acknowledged Contractor	Robert Bacon Digitally signed by Robert Bacon DN: C=CA, E=rbacon@roscoe.ns.ca, O=Roscoe Construction limited, CN=Robert Bacon Date: 2024.12.04 09:52:59-04'00'		
	Sign	Print	Date

Receipt of this change is hereby acknowledged and the terms thereof agreed to.

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 2r1

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Nov 19 2024

QUOTATION: Supply and install of programable key pad lock

To provide all necessary labour, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

			$ -	
G.C. O/H & P		10%	$ -	
			$ -	$ -

Own Forces

Equipment				
Materials			$ 2,278.38	
Labour			$ 277.50	
			$ 2,555.88	
G.C. O/H & P		10%	$ 255.59	
			$ 2,811.47	$ 2,811.47

TOTAL THIS BULLETIN + HST **$ 2,811.47**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Nov 19/24		

Apex Industries Door Opening Solutions Group
55 Henri Dunant St.
Moncton, NB E1E 1E4
Phone: (506) 857-1678
Fax: (506) 857-1604

PROPOSAL

Page:	1
Proposal No.:	JOB001646
Proposal Change No.:	001
Customer P.O. No.	S9800-7139
Proposal Date:	10/17/2024
Customer ID:	ROS0300
Salesperson:	Mark Vincent
Salesperson Phone:	902-943-2540
Salesperson Email:	mark.vincent@apexindustries.com
Project Manager:	SCK

Submitted To: Roscoe Construction Ltd
Robert Bacon
5769 Highway #1 P O Box 40
Cambridge, NS B0P 1V0

Job Name: Middleton Reservoir Replacement - CCO#001 - Keypad Replacement

Supply Only | 2ea Sargent 21-23-KP8977 ETL US32D @ $3460.75ea

Credit Only | 2ea Sargent 8913 F ETL US26D/US26D @ $2321.56ea

Total Price (FOB Site): $2,278.38

*HST not included

Accepted By: _____

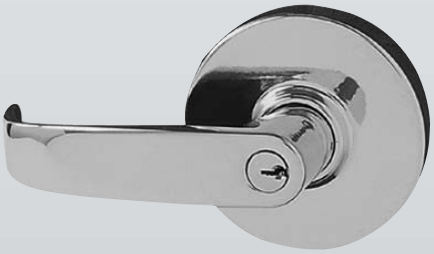
Date: _____ **Purchase Order No.** _____

Product Catalog

SARGENT
ASSA ABLOY

Keypad (KP) Series

Standalone Access Control Products



Experience a safer
and more open world

Standalone Access Control Products

Keypad (KP) Series

SARGENT
ASSA ABLOY

Note: Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Sargent Manufacturing Company makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings

MicroShield™

MicroShield®

As part of their promise to provide innovative solutions to their customers, certain ASSA ABLOY Group brands offer the MicroShield® technology, a silver-based antimicrobial coating designed to inhibit the growth of bacteria.
MicroShield® is a registered trademark of Yale Security Inc., an ASSA ABLOY Group company.

MicroShield® Coating

- Revolutionary finish coating available on all SARGENT product lines, utilizes a silver-based antimicrobial compound from Agion Technologies
- As an integral part of the finish coating, MicroShield® lasts for the life of the hardware
- MicroShield® coating permanently suppresses the growth of bacteria, algae, fungus, mold and mildew. It is effective against a broad spectrum of bacteria.
- Non-toxic and completely safe. The Agion antimicrobial compound is EPA and NSF approved and FDA listed for use in medical and food preparation equipment.
- Applications: Anywhere there is need for a clean environment (hospitals, laboratories, schools, medical centers, daycare, food processing etc.)

agion®

Agion has achieved:

CERTIFIED℠ cradle to cradle SILVER

Agion's silver antimicrobial has been certified for its material content, recyclability, and manufacturing characteristics. Cradle To Cradle Certified℠ products meet established standards for human health, environmental health and recyclability.

Cradle To Cradle Certified ℠ is a certification mark of MBDC.

On The Cover

- SARGENT KP10G77

90130 09/19

1-800-727-5477 • www.sargentlock.com

Experience a safer
and more open world

Overview and Features

Keypad (KP) Series

SARGENT
ASSA ABLOY

Overview

The KP Series Keypad locks are designed for openings that require standalone, basic authorized entry capabilities. They are battery powered, motor driven, self contained locks that use a microprocessor based controller with non-volatile memory. All programming is done at the door using the keypad with functions selected by the user according to opening requirements.

Combined with the physical security of an ANSI Grade 1 mechanical locking mechanism (cylindrical, mortise or exit device), these locks provide the security and functionality needed to control access to storerooms, offices, stairwells, conference rooms and rest rooms. With the cylinder override feature, the keypad lock can be readily integrated into a new or existing master keyed system.

Features of the Keypad Operated Products

- Non-volatile memory
- All programming at keypad
- Keypad made of ultraviolet stable textured material
- Operating temperature for keypad: 4°F – 140°F
- Adjustable unlock time
- LEDs on keypad
  - Green indicates unlocked
  - Yellow indicates programming mode
  - Flashing green and solid yellow indicates deadbolt thrown
- Use on exterior doors with weatherseal gasket and shroud
- UL Listed for fire doors (12 - required for KP8800/8900 Series)
- UL Listed to Canadian safety standards
- Built-in remote "Request to Enter" requires wire harness (52-2071)
- User Codes - over 1,100,000 possible user combinations
  - 100 user codes
  - Operates utilizing any one to six digits per code - digits may be repeated or start with "0"
  - One master code - assigns emergency, supervisory and user codes, allows access during low battery
  - One emergency code - allows entry when deadbolt is thrown (KP8276/KP8277) or during low battery
  - One supervisory code - allows temporary lockout of selected users, changes unlock time duration, requests infrared interrogation output, and may add user codes
  - "One time" user codes allows visitors "one time" entry
  - Entry of three wrong user codes in succession disables all codes for ten seconds
  - Unit can be put in "passage only" mode at keypad
- Low battery indication - four chirps after code entry
- Operates with 4 "C" alkaline batteries (included)
- Typical 40,000 operations per set of batteries

80 Series Exit Devices

Keypad (KP) Series

SARGENT
ASSA ABLOY

The Keypad Operated Products 80 Series Exit Devices provide economical access control in many different environments.

Mechanical Features:

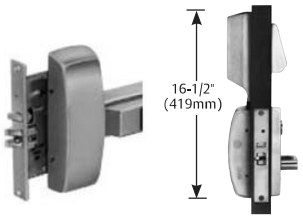
- Certified to ANSI A156.3 Grade 1 requirements
- Latchbolt 3/4" (19mm) projection
- Cylinder override use 34 rim cylinder, 8877; 46 mortise cylinder, 8977
- 8977 not available with 70-, 72-, 73-, 73-7P-, SC- or SE- options
- Includes code to activate horn when keypad buttons are pushed
- Center Case Chassis – non ferrous alloy (except 12-KP8877 & 12-KP8878)
- KP Rim Devices use 649 strike and KP Mortise Lock Devices use C908 strike
- Rim exit devices are non handed; mortise exits are handed

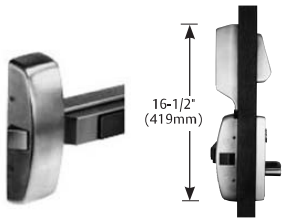
All KP Exit Devices feature:

- Push Rail always retracts latchbolt allowing free egress
- Lever outside active in "passage" mode or with valid user code

Rail Sizes:

E Rail - 24" to 32" Doors
F Rail - 33" to 36" Doors
J Rail - 37" to 42" Doors
G Rail - 43' to 48" Doors



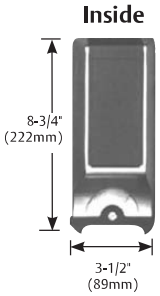


Exit Device Functions

	Mortise Exit			Rim Exit		
	Then select:			Then select:		
If the lock needs to have:	Series	Type	Function	Series	Type	Function
Cylinder override	KP	89	77	KP	88	77
No cylinder override	KP	89	78	KP	88	78

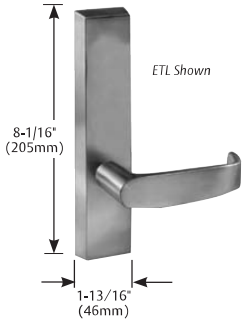
Escutcheon

- Zinc die cast
- Fits above the center chassis cover
- Projection at top 2-1/8" (54mm)



Outside ET Lever Control

- Cast escutcheon
- KP8877 uses 777-8 ET control
  KP8878 uses 778-8 ET control
- KP8977 uses 777 ET control
  KP8978 uses 778 ET control



Ordering KP Exit Devices

Options	Series	Type	Function	Rail	Trim / Lever	Hand	Finish	Door Width
Select from pages 11 - 13	Select Device Type, Function & Rail Size from chart above				ET followed by lever designation from page 8 - 10	RHR or LHR	Select from pages 7	If supplied, rails will be cut to size
12-	**KP-8877F**				**ETL**	**RHR**	**32D**	**36"**

Finishes, ET Trim and Handing

Keypad (KP) Series

SARGENT
ASSA ABLOY

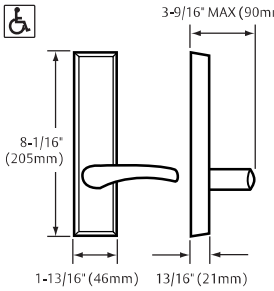
Finishes

SARGENT offers many different finishes for KP products. Please reference the chart below for finishes available.

	Finishes	ANSI	Mortise Locks	Cylindrical Locks	Exit Devices
03	Bright brass	605	X	X	X
04	Satin brass	606	X	X	X
09	Bright bronze	611	X	X	X
10	Satin bronze, clear powder	612	X	X	X
10B	Oxidized satin bronze oil rubbed	613	X	X	X
10BE	Dark Oxidized Satin Bronze — equivalent	613E	X	X	X
10BL	Oxidized satin bronze, clear power coat	–	X	X	X
14‡	Bright nickel, clear coated	618	X	X	X
15‡	Satin nickel, clear coated	619	X	X	X
20D	Dark statuary bronze, clear powder coat	–	X	X	X
26‡	Bright chrome	625	X	X	X
26D‡	Satin chrome	626	X	X	X
32	Bright stainless steel	629	X	–	X
32D	Satin stainless steel	630	X	–	X

‡ Exit Devices ordered in 32 or 32D will have the ET trims supplied in 26 or 26D; for nickel finished ET trims, specify 14 or 15 finish and the exit will be supplied in 32 or 32D accordingly

ET Lever Trim for Exit Devices



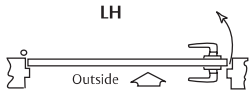
The 700 Series ET and Lever Control is the external trim with all KP-80 Series exit devices

ET Escutcheons and levers are plated brass

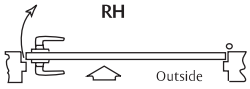
Stainless steel levers are available

Note: Exit devices are only available with ET Trim

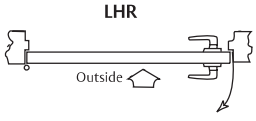
Handing



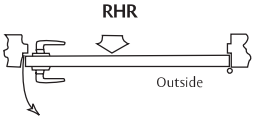
Left Hand Door



Right Hand Door



Left Hand Reverse Door



Right Hand Reverse Door

Standard and Coastal Series Levers, Rose and Thumbturn Designs

Keypad (KP) Series

SARGENT
ASSA ABLOY

KP Series products are available with the following identified lever designs to provide uniformity throughout a facility. Lever projection from door surface varies with lock type. KP mortise locks and cylindrical locks are specified by rose design followed by the lever designation (e.g., LNMX). KP Exit devices are specified by the ET designation followed by the lever designation (e.g., ETMX).

Levers

Standard Levers

Lever	Design	Handed	Mortise Locks	Cylindrical Locks	Exit Devices
A		Yes	X		X
B		–	X	X	X
E		–	X		X
F		–	X		X
J		–	X	X	X
L		–	X	X	X
P		–	X	X	X
W		–	X		X

Note: KP-8200 mortise locks with standard levers are available with LN and O roses only (not available with CO, CR, TO & TR roses)

Coastal Levers

Lever	Design	Handed	Mortise Locks	Cylindrical Locks	Exit Devices
C		–	X		X
G		Yes	X	X	
R		–	X		X
S		Yes	X		X
Y		Yes	X	X	X

Note: KP-8200 mortise locks with Coastal Series levers are available with CR & TR roses (Not available with LN, O, CO & TO roses)

Roses	Design	Diameter	Mortise Locks	Cylindrical Locks
LN		2"	X	
CR		2-3/16"	X	
TR		2-3/16"	X	
O		2-3/4"	X	
E2		2-11/16"	X	

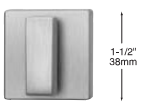
Roses	Design	Diameter	Mortise Locks	Cylindrical Locks
E3		2-1/16"	X	
CO		2-3/4"	X	
TO		2-3/4"	X	
L		3-1/2"		X
G		3-1/2"		X

Thumbturns

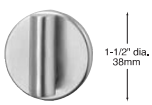
The thumbturn backplate will match the rose design chosen. The turn designation must be specified as an option before the lock order string. *The standard thumbturn will be supplied if T1, T2 or T3 are not listed. See page 10 in the 8200 mortise lock catalog for more information.

T1 Turn

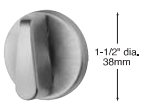
T2 Turn



T3 Turn



Standard Turn*



Studio Collection Levers

Keypad (KP) Series

SARGENT
ASSA ABLOY

Studio Collection Levers are available with the 8200 Series Mortise Locks. With Exit Device, the Studio Collection is available with the ET trim creating uniformity throughout a facility.

Aventura Series

Lever	Design	Handed	Mortise Locks	Exit Devices
MB		–	X	X
ME		–	X	X
MF		–	X	X
NF[1]		–	X	X
MG		–	X	X
MI		–	X	X
NI[1]		–	X	X
MW[1]		–	X	X

Odeon Series

MN[4]		Yes	X	X
MH[4]		Yes	X	X
MK[4]		Yes	X	X
MS[4]		Yes	X	X
MU[4]		Yes	X	X
MV[4]		Yes	X	X
NS[1,4]		Yes	X	X
NU[1,4]		Yes	X	X
MX[1,4]		Yes	X	X

Rialto Series

MO[4]		Yes	X	X
MZ[1,4]		Yes	X	X

Notting Hill Series

Lever	Design	Handed	Mortise Locks	Exit Devices
MA[3,4]		Yes	X	X
MQ[4]		Yes	X	X
MT[4]		Yes	X	X
MM[4]		Yes	X	X
MR[3]		Yes	X	X
MY[1,4]		Yes	X	X

Centro Levers

MC[3,4]		–	X	X
MD		–	X	X
MJ		–	X	X
MP[4]		–	X	X
ND[1]		–	X	X
NJ[1]		–	X	X

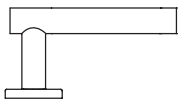
Gramercy Levers[2]

RCM		–	X	X
RAL		–	X	X
REM		–	X	X
RAM		–	X	X
RAS		–	X	X
RAG		–	X	X
RGM		–	X	X

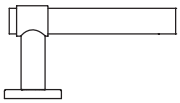
1. Lever returns within 1/2" (13mm) of door face
2. Gramercy levers are customized. Refer to page 9 for ordering information.
3. Contact factory for current lead times
4. Not available in 32D or 32 finish

Experience a safer
and more open world

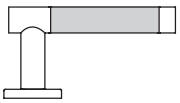
Gramercy Series Levers



REM, RGM



RCM



RAG, RAL, RAM, RAS

Gramercy Finish Codes

BHMA Finish	SARGENT Finish	Gramercy Code*	Description
630	32D	30	Satin Stainless Steel
629	32	29	Bright Stainless Steel
N/A	N/A	BH	Birch (wood insert)
N/A	N/A	BK	Black (Santoprene™ or leather insert)
N/A	N/A	BN	Brown (leather insert)

*Code used to specify Gramercy Series finishes only. Use available finishes list to specify desired finish when ordering.

Gramercy Lever Descriptions & Available Finishes

Lever Designation	Lever Description	Available Finishes (AS ORDERED)
RAG	Grooved Insert	2929 or 3030
RAL	Leather Insert	29BK, 29BN or 30BK, 30BN
RAM	Metallic Insert	2930** only
RAS	Santoprene Insert	29BK or 30BK
RCM	Raised Band	2929, 3030 or 2930**
REM	Plain	2929 or 3030
RGM	Two Grooves	2929 or 3030

**Two-tone finish - grip of lever is 32D, balance of lever is 32. Rose/escutcheon and lock finish will be 32.

To order Gramercy Series levers with SARGENT products, see the examples below. When specifying finish, use the last two digits of the BHMA standard finish code, i.e. use "29" for polished stainless, BHMA finish 629.

How to Order: KP- Mortise Locks x Gramercy Levers

Options	Series/ Type	Function	Rose	Lever	Finish	Hand
select from pages 11 - 13	KP-82	select from page 5	select from below	Leather insert	Bright stainless steel with brown leather	RHR, RH, LHR, or LH
10-	KP-82	76	LN	RAL	29BN	RH

How to Order: KP- Exit Device x Gramercy Levers

Options	Series	Type	Function	Rail Size	Trim	Lever	Finish	Inside Finish	Door Width
select from pages 11 - 13	Select from 80 Series Exit Device Function chart from page 6			E, F, J or G	ET Series	Leather insert	Bright stainless steel with brown leather	select from page 7	
10-	KP	88	77	F	ET	RAL	29BN	32D	36"

Mechanical and Cylinder Options

Keypad (KP) Series

SARGENT
ASSA ABLOY

Mechanical Options:

Fire Rated	**12-**	UL Fire Label Exit hardware (KP8800 & KP8900 series Exits Only) (not available with 16-)
Cylinder Dogging	**16-**	Cylinder Rail Dogging with # 41 Cylinder (not available with 12-, 57, 59- or AL- option) (KP8800 & KP8900 Series Exits)
Less Touch Pad	**19-**	Pushbar without Lexan touchpad (KP8800 & KP8900 Series Exits)
Flat Lip Strike	**23-**	Flat 4-7/8" (124mm) ANSI strike (KP8200 SeriesMortise)
Backset Options	**23-**	3-3/4" (95mm) Backset (for KP10G77 only)
	25-	5" (127mm) Backset (for KP10G77 only)
Strike	**28-**	4-7/8" Curved Lip Strike #808 (KP10G77 only)
Security Fasteners	**36-**	Six lobe security head screws
	37-	Spanner head screws
Double Doors	**41-**	3/4" Throw Latchbolt x 2-3/4" Backset
Tactile Warning Options	**75-**	Tactile Warning - Milled Inside Lever (Not available with Exit Devices, Studio & Coastal Levers and the A Lever)
	76-	Tactile Warning - Milled Outside Lever (Not available with Studio & Coastal Levers and the A Lever)
	77-	Tactile Warning - Milled Inside & Outside Lever (Not available with Exit Devices, Studio & Coastal Levers and the A Lever)
	85-	Tactile Warning - Abrasive Coating on Inside Lever (or Push Rail for Exits)
	86-	Tactile Warning - Abrasive Coating on Outside Lever
	87-	Tactile Warning - Abrasive Coating on Outside Lever & Inside Lever (or Push Rail for Exits)
	CPC-	Clear Powder Coat (Available for 26, 26D, 32 & 32D Finishes)
	SG-	MicroShield® antimicrobial clear powder coat (Available with 15, 26D, and 32D finishes)

Cylinder Options:

Degree Key System	**DG1-**	SARGENT Degree Key System Level 1
	DG1-21-	Degree Level 1 Construction Master Keying
	DG1-60-	Degree Level 1 Removable Disposable Construction Core (not available with cylindrical locks)
	DG1-63-	Degree Level 1 Removable Core (not available with cylindrical locks)
	DG1-64-	Degree Level 1 Removable Construction Keyed LFIC (not available with cylindrical locks)
	DG1-65-	Degree Level 1 Unassembled/Uncombined Core
	DG1-78-	Degree Level 1 Exposed Plug (not available with cylindrical locks or exit devices)
	DG2-	SARGENT Degree Key System Level 2
	DG2-21-	Degree Level 2 Construction Master Keying
	DG2-60-	Degree Level 2 Removable Disposable Construction Core (not available with cylindrical locks)
	DG2-63-	Degree Level 2 Removable Core (not available with cylindrical locks)
	DG2-64-	Degree Level 2 Removable Construction Keyed LFIC (not available with cylindrical locks)
	DG2-65-	Degree Level 2 Unassembled/Uncombined Core
	DG2-78-	Degree Level 2 Exposed Plug (not available with cylindrical locks or exit devices)
	DG3-	SARGENT Degree Key System Level 3
	DG3-21-	Degree Level 3 Construction Master Keying
	DG3-60-	Degree Level 3 Removable Disposable Construction Core (not available with cylindrical locks)
	DG3-63-	Degree Level 3 Removable Core (not available with cylindrical locks)
	DG3-64-	Degree Level 3 Removable Construction Keyed LFIC (not available with cylindrical locks)
	DG3-78-	Degree Level 3 Exposed Plug (not available with cylindrical locks or exit devices)

Note: More Cylinder Options on the following page

Cylinder Options

Keypad (KP) Series

SARGENT
ASSA ABLOY

Cylinder Options:

Degree Key System	**DG1-**	SARGENT Degree Key System Level 1
	DG1-21-	Degree Level 1 Construction Master Keying
	DG1-60-	Degree Level 1 Removable Disposable Construction Core (not available with cylindrical locks)
Signature Key System	**10-**	SARGENT Signature Key System (Not Available with other Key Systems)
	10-21-	SARGENT Signature Construction Key System (Lost Ball)
Signature Large Format Interchangeable Core	**10-63-**	SARGENT Signature Large Format Interchangeable Core (Removable Core) Cylinder
XC- Key System	**11-**	XC Key System (not available with 10-, 22-)
	11-21-	XC- Construction Key System (Lost Ball)
XC- Large Format Interchangeable Core	**11-60-**	Hardware to accept XC- Permanent LFIC (Removable Core), Disposable plastic Core- provided
	11-63-	Hardware provided with XC- LFIC (Removable Core) Cylinder - (Includes masterkeying, grand masterkeying)
	11-64-	Hardware provided with Keyed construction core to accept XC- LFIC (Removable) Permanent Core (ordered separately)
XC- Interchangeable Cores	**11-70-7P-**	Hardware to accept XC- SFIC (7-Pin) XC- Permanent Cores, plastic disposable core provided (10 Line J lever not available)
	11-72-7P-	Hardware to accept XC- SFIC (7-Pin Keyed Construction Core provided) cylinder Permanent core ordered separately (10 Line J lever not available)
	11-73-7P-	Hardware supplied with XC- Small Format 7-Pin interchangeable core (Includes masterkeying, grand masterkeying) (10 Line J lever not available)
	11-65-73-7P-	Hardware provided to accept XC- Uncombinated 7-Pin SFIC (Permanent) Core (10 Line J lever not available)

Construction Key Systems	**21-**	SARGENT Lost Ball Construction Keying for Conventional, XC and Signature Series (N/A with 63- or 73-)
	22-	SARGENT Construction Split Key System for Conventional Cylinders (Existing Systems Only) (N/A with 10-, 11-, 63- or 73-)
Old Style Removable Core	**51-**	Removable Core Cylinder (Old Style) provided (Existing Systems Only)
	52-	Removable Construction Core (Old Style) Permanent Core ordered separately (Existing Systems Only)
Large Format Interchangeable Core	**60-**	Hardware to accept SARGENT Permanent LFIC (Removable Core), Disposable Plastic Core provided (Permanent Cores ordered separately)
	63-	Hardware provided with LFIC (Removable Core) Cylinder - (Includes masterkeying, grand masterkeying)
	64-	Hardware provided with Keyed construction core to accept LFIC (Removable) Permanent Core (ordered separately)
Interchangeable Cores	**70-**	Hardware to accept 6 or 7-Pin SFIC Permanent Cores, Plastic Disposable Core provided (10 Line J lever not available)
	72-	Hardware to accept 6 or 7-Pin SFIC (Keyed Construction Core provided) Cylinder (10 Line J lever not available) (Permanent Core ordered separately)
	73-	Hardware supplied with 6 pin SFIC (Includes masterkeying, grand masterkeying) (10 Line J lever not available)
	65-73-	Hardware provided to accept Uncombinated 6-Pin SFIC (Permanent) Core (10 Line J lever not available)
	65-73-7P-	Hardware provided to accept Uncombinated 7-Pin SFIC (Permanent) Core (10 Line J lever not available)
	73-7P-	Hardware supplied with Small Format 7-Pin Interchangeable Core (Includes masterkeying, grand masterkeying) (10 Line J lever not available)

Note: More Cylinder Options on the following page

Cylinder Options and Shipping Information

Keypad (KP) Series

SARGENT
ASSA ABLOY

Cylinder Options:

Keso & Keso F1	**81-**	Hardware provided with housings to accept Keso (83) & Keso F1 (F1-83-) removable cores (Not available with 10 Line) (Permanent Cores ordered separately)
	82-	Hardware provided with SARGENT Keso Security Cylinder
	F1-82-	Hardware provided with SARGENT Keso F1 Security Cylinder (Patented)
	83-	Hardware supplied with SARGENT Keso Security Removable Core cylinder (Not available with 10 Line)
	F1-83-	Hardware supplied with SARGENT Keso F1 Security Removable Core cylinder (Not available with 10 Line) (Patented)
	84-	Hardware provided with SARGENT Keso Construction Cores (Not available with 10 Line) (Permanent Cores ordered separately)
Bump Resistant	**BR-**	Bump Resistant Cylinder (Available with Conventional & Conventional XC Cylinders Only)
Less Cylinder	**LC-**	Hardware supplied less cylinder
Accept Schlage Cylinders	**30-**	Lever to accept Schlage Cylinder-Cylinder is not provided (10 Line only)
	SF-	L Lever to accept Medeco KeyMark Large Format Interchangeable and Schlage Full Size Interchangeable Core (10 Line only)
Schlage Keyways	**SC-**	Schlage C keyway cylinder, 0 bitted (Not available with 8900 Series exit devices)
	SE-	Schlage E keyway cylinder, 0 bitted (Not available with 8900 Series exit devices)

Note: V-10 cylinders and information contact ASSA, Inc. @ 800-235-7482
Note: To order the KP-10 Line lock for use with ASSA V-10 (VA & VS) cylinders, specify the less cylinder (LC-) option and the lever will accept VA & VS cylinders. (VC- & VC-VS- ASSA cylinders are not available with KP-10 Line locks)

Shipping Information

Lock	Shipping Weight	Pc. Count/Carton
KP8276 x lever trim (with cylinder)	10.0 lbs (4.5 kg)	1/carton
KP8277 x lever trim (no cylinder)	9.5 lbs (4.3 kg)	1/carton
KP8278 x lever trim (with cylinder/no deadbolt)	10.0 lbs (4.5 kg)	1/carton
KP8279 x lever trim (w/o cylinder/no deadbolt)	9.5 lbs (4.3 kg)	1/carton
KP8877	16 lbs (7.3 kg)	1/carton
KP8977	18 lbs (8.2 kg)	1/carton
KP10G77 LL	9.75 lbs (4.4 kg)	1/carton

Architectural Specifications

Keypad (KP) Series

SARGENT
ASSA ABLOY

KP10G77 Cylindrical Locks

2.0 ACCESS CONTROL CYLINDRICAL LOCK

A. Standalone access control cylindrical locks shall be KP10G77 as manufactured by SARGENT Manufacturing Company, New Haven, CT.

B. Provide cylindrical lock series and function where specified in hardware groups, with the provisions below.

1. Cylinders: Provide SARGENT Signature Series cylinders.

2. Backsets: 2-3/4 inches.

3. Strikes: Provide wrought boxes and strikes with proper lip length to protect trim but not to project more than 1/8 inch beyond trim, frame or inactive leaf.

C. Locks shall meet ANSI/BHMA A156.2, Grade 1 requirements.

D. Locks shall be UL listed for use on fire doors.

E. Provide access control products with non-volatile memory.

F. Provide keypad operated products with a minimum of 100 user codes.

G. In addition to user codes, provide a Master Code as standard. The Master Code assigns emergency, supervisory, and user codes.

H. Provide the ability to print the last fifteen entries via infrared printer.

I. Locking and unlocking of the lever handle shall be done by a motor-driven battery powered unit (solenoids not acceptable) contained completely within the body of the cylindrical lock. The inside lever is always free for egress.

J. Provide lever design to match other locks on the project.

K. Provide LED's on unit to indicate status – unlocked and programming mode.

L. Provide weatherseal gasketing for keypad at exterior applications.

KP8200 Series Mortise Locks

2.1 ACCESS CONTROL MORTISE LOCKS

A.Stand alone access control mortise locks shall be KP8200 Series as manufactured by SARGENT Manufacturing Company, New Haven, CT.

B. Provide access control mortise lock series, type, and function where specified in hardware groups, with the provisions below.

1. Cylinders: Provide SARGENT Signature Series mortise cylinders.

2. Backsets: 2-3/4 inches.

3. Strikes: Provide wrought boxes and strikes with proper lip length to protect trim but not to project more than 1/8 inch beyond trim, frame or inactive leaf.

C. Locks shall meet ANSI/BHMA A156.13, Grade 1 requirements.

D. Locks shall be UL listed for use on fire doors.

E. Provide access control products with non-volatile memory.

F. In addition to user codes, provide a Master Code as standard. The Master Code assigns emergency, supervisory, and user codes.

G. Lock shall have the ability to print the last fifteen entries via infrared printer.

H. Locking and unlocking of the lever handle shall be done by a motor-driven battery powered unit (solenoids not acceptable) contained completely within the body of the mortise lock. The inside lever is always free for egress.

I. Provide lever design to match other locks on the project.

J. Provide LED's on unit to indicate status – unlocked and programming mode.

K. Provide weatherseal gasketing for keypad at exterior applications.

KP8800/8900 Series Exit Devices

2.2 ACCESS CONTROL EXIT DEVICES

A. Standalone access control exit devices shall be KP8800/8900 Series as manufactured by SARGENT Manufacturing Company, New Haven, CT.

B. Provide access control exit device series, type, and function where specified in hardware groups.

C. All exit devices shall be UL listed for panic. Exit devices for labeled doors shall be UL listed as "Fire Exit Hardware".

D. Exit devices shall meet ANSI/BHMA A156.3, Grade 1 requirements.

E. Provide exit devices factory cut to door width and height. Locate exit devices at a height recommended by the exit device manufacturer, allowable by governing building codes, and approved by the Architect.

F. Provide access control products with non-volatile memory.

G. Provide keypad products with a minimum of 100 user codes.

H. In addition to user codes, provide a Master Code as standard. The Master Code assigns emergency, supervisory, and user codes.

I. Provide the ability to print the last fifteen entries via infrared printer.

J. Locking and unlocking of the lever handle shall be done by a motor-driven battery powered unit (solenoids not acceptable) contained completely within the body of the outside trim. Egress from the inside at all times.

K. Provide lever design to match other lock levers on the project.

L. Provide LED's on unit to indicate status – unlocked and programming mode.

M. Provide weatherseal gasketing for keypad at exterior applications.

N. Provide cylinder-dogging feature for non-rated exit devices.

O. Provide keyed removable mullions, as specified in the Hardware Groups.

P. Provide clear powder coating at exit devices used in full exterior application, highly corrosive areas, and where noted in the hardware groups.

Q. Provide SARGENT Signature Series cylinders for exit devices with cylinder override and cylinder dogging.

Change Order

Change Order No.:	02	CBCL Project No.	201014.00
Date:	15-Nov-24		
To:	Roscoe Construction Limted		
Contract Name:	Middleton Reservoir Replacement		
Contract No.:	201014		
Refer To:	Roscoe Bulletin No. 3, dated Nov 4, 2024		
Copies To:	Robert Bacon, Adam Verran, Paul Young, Kerri Stanley		

You are hereby authorized, subject to the provisions of your contract, to proceed with the following work:	Credit	Extra
Supply and installation of additional snow guards as required by the supplier.		$ 644.50
SUB-TOTAL	**$ -**	**$ 644.50**

The amount of the contract price is INCREASED by the sum of ***$644.50 + HST***

Recommended Engineer/Consultant		Paul Young	15-Nov-24
	Sign	Print	Date
Authorized Owner	Adam Verran	Adam Verran	18-Nov-24
	Sign	Print	Date
Acknowledged Contractor	Robert Bacon Digitally signed by Robert Bacon DN: C=CA, E=rbacon@roscoe.ns.ca, O=Roscoe Construction limited, CN=Robert Bacon Date: 2024.11.20 09:35:43-04'00'		
	Sign	Print	Date

Receipt of this change is hereby acknowledged and the terms thereof agreed to.

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 3

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Nov 4 2024

QUOTATION: Supply and install of one additional 16' run of S5! Snow guard

To provide all necessary labour, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

		$ -		
G.C. O/H & P	10%	$ -		
		$ -	$	-

Own Forces

Equipment				
Materials		$ 401.91		
Labour		$ 184.00		
		$ 585.91		
G.C. O/H & P	10%	$ 58.59		
		$ 644.50	$	644.50

TOTAL THIS BULLETIN + HST **$ 644.50**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Nov 4/24		

Middleton Reservoir Replacement
BULLETIN NO. 3
LOCATION :

Description	Quanty	Unit	Equipment unit	Equipment Total	Material Unit	Material Total	Labour Unit	Labour Total	Total Cost	HRS
S5! Snow guard 16'	1	ls		0	401.905	401.905		0	$401.91	
Install of snow guard	16	lft		0		0	11.5	184	$184.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
				0		0		0	$0.00	
TOTAL				$0.00		$401.91		$184.00	$585.91	6.133333
							Markup			
								Total	$585.91	

Change Order

Change Order No.:	03	CBCL Project No.	201014.00
Date:	10-Dec-24		
To:	Roscoe Construction Limted		
Contract Name:	Middleton Reservoir Replacement		
Contract No.:	201014		
Refer To:	Roscoe Bulletin No. 01r1, dated Nov 19, 2024		
Copies To:	Robert Bacon, Adam Verran, Paul Young, Kerri Stanley		

You are hereby authorized, subject to the provisions of your contract, to proceed with the following work:	Credit	Extra
Supply and installation of 450mm diameter corrugated HDPE culvert at driveway entry as per DTIR requirements.		$ 2,920.50
SUB-TOTAL	**$ -**	**$ 2,920.50**

The amount of the contract price is INCREASED by the sum of ***$2,920.50 + HST***

Recommended Engineer/Consultant	Paul Young	10-Dec-24	
	Sign	Print	Date
Authorized Owner	Adam Verran	Adam Verran	16- Dec-24
	Sign	Print	Date
Acknowledged Contractor	Robert Bacon Digitally signed by Robert Bacon DN: C=CA, E=rbacon@roscoe.ns.ca, O=Roscoe Construction limited, CN=Robert Bacon Date: 2024.12.17 08:09:10-04'00'		
	Sign	Print	Date

Receipt of this change is hereby acknowledged and the terms thereof agreed to.

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 1R1

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Nov 19 2024

QUOTATION: Supply and install culvert at driveway entry as per DTIR Requirement

To provide all necessary labor, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

			$ -	
G.C. O/H & P	15%		$ -	
			$ -	$ -
Own Forces				
Equipment			$ 685.00	
Materials			$ 1,710.00	
Labor			$ 260.00	
			$ 2,655.00	
G.C. O/H & P	10%		$ 265.50	
			$ 2,920.50	$ 2,920.50

TOTAL THIS BULLETIN + HST **$ 2,920.50**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Nov 19/24		

Change Order

Change Order No.:	04	CBCL Project No.	201014.00
Date:	10-Dec-24		
To:	Roscoe Construction Limted		
Contract Name:	Middleton Reservoir Replacement		
Contract No.:	201014		
Refer To:	Roscoe Bulletin No. 5, dated Dec 6, 2024		
Copies To:	Robert Bacon, Adam Verran, Paul Young, Kerri Stanley		

You are hereby authorized, subject to the provisions of your contract, to proceed with the following work:	Credit	Extra
Credit for Removal of Digital Power Meter	$ 2,875.08	
SUB-TOTAL	**$ 2,875.08**	**$ -**

The amount of the contract price is DECREASED by the sum of $2,875.08 + HST

Recommended Engineer/Consultant		Paul Young	10-Dec-24
	Sign	Print	Date
Authorized Owner	Adam Verran	Adam Verran	11- Dec - 24
	Sign	Print	Date
Acknowledged Contractor	Robert Bacon Digitally signed by Robert Bacon DN: C=CA, E=rbacon@roscoe.ns.ca, O=Roscoe Construction limited, CN=Robert Bacon Date: 2024.12.17 08:08:44-04'00'		
	Sign	Print	Date

Receipt of this change is hereby acknowledged and the terms thereof agreed to.

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 5

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Dec 6 2024

QUOTATION: CCO 02 - Removal of Digital power meter

To provide all necessary labour, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

Corkums electrical			-$ 2,875.08	
			-$ 2,875.08	
	G.C. O/H & P	15%		
			$ (2,875.08)	-$ 2,875.08
Own Forces				
Equipment				
Materials			$ -	
Labour				
			$ -	
	G.C. O/H & P	10%	$ -	
			$ -	$ -

TOTAL THIS BULLETIN + HST **-$ 2,875.08**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Dec 6/24		

PH:902-765-9110
FX:902-765-2772
EMAIL:randy@corkumselectrical.ca
adam@corkumselectrical.ca

CORKUM'S ELECTRICAL LTD

Quote

To:	Robert Bacon	**From:**	Adam Clarke
Date:	December 6, 2024	**Pages:**	1
Re:	CCO 2 Digital Power Meter Removal		

On behalf of Corkum's Electrical Ltd, we are pleased to offer our pricing for your consideration.

The removal of the digital power meter.

Total Credit.....$-2875.08

Regards,

Adam Clarke

For: Randy Corkum

Change Order

Change Order No.:	05	CBCL Project No.	201014.00
Date:	30-Jan-25		
To:	Roscoe Construction Limted		
Contract Name:	Middleton Reservoir Replacement		
Contract No.:	201014		
Refer To:	Roscoe Bulletin No. 4r1, dated Dec 5, 2024, and Bulletin No. dated Jan 17, 2025		
Copies To:	Robert Bacon, Adam Verran, Paul Young, Kerri Stanley		

You are hereby authorized, subject to the provisions of your contract, to proceed with the following work:	Credit	Extra
Roscoe Bulletin 4r1: Revision to building transformer sizing and associated infrastructure.		$ 2,727.28
Roscoe Bulletin 07: Revision to the size of disconnect and breaker for heat pump.		$ 1,266.33
SUB-TOTAL	**$ -**	**$ 3,993.61**

The amount of the contract price is INCREASED by the sum of ***$3,993.61 + HST***

Recommended Engineer/Consultant		Paul Young	30-Jan-25
	Sign	Print	Date
Authorized Owner			
	Sign	Print	Date
Acknowledged Contractor			
	Sign	Print	Date

Receipt of this change is hereby acknowledged and the terms thereof agreed to.

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 4r1

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Dec 5 2024

QUOTATION: CCO 01 - Revise transformer sizing and assocaited infrastructure

To provide all necessary labour, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

Corkums electrical		$ 2,311.57		
		$ 2,311.57		
	G.C. O/H & P 15%	$ 346.74		
		$ 2,658.31	$	2,658.31
Own Forces				
Equipment				
Materials		$ -		
Labour		$ 62.70		
		$ 62.70		
	G.C. O/H & P 10%	$ 6.27		
		$ 68.97	$	68.97
TOTAL THIS BULLETIN + HST			**$**	**2,727.28**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Dec 11/24		

PH:902-765-9110
FX:902-765-2772
EMAIL:randy@corkumselectrical.ca
adam@corkumselectrical.ca

CORKUM'S ELECTRICAL LTD

Quote

To:	Robert Bacon	**From:**	Adam Clarke
Date:	December 5, 2024	**Pages:**	1
Re:	CCO 1 Increase size of transformer		

On behalf of Corkum's Electrical Ltd, we are pleased to offer our pricing for your consideration.

Transformer adder 15KVA to a 30KVA	$1027.00
Breaker adder	$225.00
Wire adder	$172.03
Conduits and connectors adder	$34.50
Flexible Connections adder	$92.90
Labour	$550.00
Mark-Up 10%	$210.14
Total	$2311.57

Regards,

Adam Clarke

For: Randy Corkum

ROSCOE CONSTRUCTION LIMITED
P.O. BOX 40
WATERVILLE, N.S
B0P 1V0
FAX 902-538-8966
PHONE 902-538-8080

BULLETIN NO. 7

TO: CBCL

ATTENTION: Paul Young

PROJECT: Middleton Reservoir Replacement

ESTIMATOR: Robert Bacon

DATE: Jan 17 2025

QUOTATION: Revision to the size of disconnect and breaker for Heat pump

To provide all necessary labour, materials and equipment to complete the work as noted above will adjust the contract amount by the Total Bulletin amount outlined below.

BREAKDOWN

Sub-contractors Forces

Corkums electrical			$ 1,101.16	
			$ 1,101.16	
	G.C. O/H & P	15%	$ 165.17	
			$ 1,266.33	$ 1,266.33
Own Forces				
Equipment				
Materials			$ -	
Labour				
			$ -	
	G.C. O/H & P	10%	$ -	
			$ -	$ -

TOTAL THIS BULLETIN + HST **$ 1,266.33**

THIS BULLETIN WILL RESULT IN AN INCREASE OF 0 WORKING DAYS FROM DATE OF LATEST COMPLETION DATE.
EXECUTION BY THE OWNER IS ACCEPTANCE FOR WORK TO PROCEED AT THE QUOTED PRICE.
TIME EXTENSIONS TO THE CONTRACT MAY RESULT IN ADDITIONAL OVERHEAD COSTS WHICH ARE NOT INCLUDED IN THIS BULLETIN.

ROSCOE CONSTRUCTION LIMITED	DATE	OWNER (REPRESENTATIVE)	DATE
KEVIN ROSCOE, PRESIDENT	Jan 17/25		

PH:902-765-9110
FX:902-765-2772
EMAIL:randy@corkumselectrical.ca
adam@corkumselectrical.ca

CORKUM'S ELECTRICAL LTD

Quote

To: Robert Bacon **From:** Adam Clarke

Date: January 17, 2025 **Pages:** 1

Re: Middleton Reservoir - Heat Pump Upsize – 30Amp to 60Amp

On behalf of Corkum's Electrical Ltd, we are pleased to offer our pricing for your consideration.

Heat Pump requires a 60Amp Breaker and Disconnect.

Increase from 30Amp Nema 4X disconnect to a 60Amp Nema 4X disconnect	$535.00
Increase from 30Amp Breaker to a 60Amp Breaker	$103.95
Increase from #10RW90 to #6RW90	$107.10
Labour	$255.00
Mark-Up 10%	$100.11
Total	$1101.16

Regards,

Adam Clarke

For: Randy Corkum

TO: Town of Middleton

FROM: Roscoe Construction Limited

5769 Highway 1, Cambridge NS, B0P 1G0

The undersigned Tenderer, having carefully read and examined the undermentioned Contract Documents prepared by CBCL Limited for the completion of the Town of Middleton, Reservoir Replacement, Contract No. 201014.00, which comprise all the tender documents in accordance with the following documents:

Tender Form – Stipulated Price
CCDC 2-2020:
Agreement Between *Owner* and Contractor
Definitions
General Conditions of the Stipulated Price Contract - CCDC 2-2020
Supplementary General Conditions
Specifications
Drawings
Addendum/Addenda

hereby accepts the same as part and parcel of the Contract herein referred to, and having carefully examined the locality and site of *Work* and having full knowledge of the *Work* required and of the materials to be furnished and used, does hereby Tender and offer to enter into a contract to perform and complete, the whole of the said *Work* and provide all necessary labour, plant, tools, materials and equipment and pay all applicable taxes, as set forth and in strict accordance with the Specifications, Drawings and other Contract Documents and to do all therein called for on the terms and conditions and under the provisions therein set forth as follows.

CONTRACT PRICE	**$** 3,951,800.00
ADD HST (15% OF CONTRACT PRICE)	$ 592,770.00
TOTAL AMOUNT PAYABLE	**$** 4,544,570.00
Tenderer's HST Registration No.	R104625660

COMPLETION TIME

1. Tenderer agrees to achieve Ready-for-Takeover of the *Work* 65 weeks from notice of award but no in case later than **January 31, 2026**.

The Undersigned Tenderer:

.1 Declares that this tender is valid for acceptance until August 6, 202 4 (being sixty (60) calendar days from the Tender Closing).

.2 Declares that the Contract Price set forth in the Tender Form has been correctly computed for the purposes of this tender and that it includes and covers all duties, and handling charges; transportation; and all other charges. Harmonized sales tax is not to be included in the Contract Price.

.3 Hands you herewith by way of Tender Security a Bid Bond or Certified Cheque or irrevocable Letter of Credit in the amount of ten percent (10%) of the *Total Amount Payable* on the understanding that in the event of this tender not being accepted by you, then this Tender Security will be returned to the undersigned Tenderer either at the time that the Contract is entered into with some other Tenderer, or at the expiration of validity of this tender, whichever is the sooner.

.4 Undertakes in the event of your acceptance of this tender, to execute a formal agreement in the form hereto attached, within seven (7) calendar days of written acceptance and further agrees to provide the Contract Security in the amount specified herein, and Insurance as specified in GC 11.1

.5 Undertakes, in the event of your acceptance of the Tender, to achieve Substantial Performance of the *Work* within the number of weeks of written notification of Award indicated above.

.6 Upon request, provide evidence of ability and experience within seven (7) calendar days of request, including experience in similar *Work*, *Work* currently in progress, senior supervisory staff available for the *Work*, equipment available for the *Work*, and financial resources.

.7 Agrees prior to commencement of the *Work*, to provide to the *Owner* a Performance Bond and a Labour and Materials Bond, each in the amount of 50% of the *Total Amount Payable* or an Irrevocable Letter of Credit in the amount of 20% of the *Total Amount Payable*. The Irrevocable Letter of Credit shall be issued by a certified financial institution and must be valid until the expiration of the warranty period. Include the cost of providing the Irrevocable Letter of Credit in Contract Price. Should it become apparent that the final cost of the project will exceed the *Total Amount Payable* by more than 10%, arrange to have bonds reissued, based on the projected final cost.

.8 Agrees that in the event of failing or neglecting either to provide the Contract Security and Insurance and/or to execute the Agreement in the manner herein before undertaken, then the Tender Security shall be forfeited.

.9 Agrees that unless and until a formal agreement is prepared and executed, this tender together with your written acceptance thereof shall constitute a binding Contract between us.

.10 Understands and agrees that the *Owner* is not bound to accept the

lowest or any tender which they may receive.

.11 Agrees to provide, maintain and pay for the insurance coverages specified in the Contract Documents. One copy of all insurance policies of the Contractor and two copies of certificates of insurance, certifying to the issuance of all insurance policies, shall be furnished to the *Owner*. Each and every insurance policy shall name the Contractor, *Owner* and *Consultant* as being insured in the full amount of the insurance.

.12 Declares to have personal knowledge of the location of the proposed *Work* and is informed as to the actual conditions and requirements, including labour conditions and labour rules and shall not claim at any time after execution of the Agreement that there was any misunderstanding in regard to such conditions and requirements.

.13 Declares to have carefully examined the documents and Addenda No. 1 to 4 referred to in the first paragraph of this Tender Form, and the Tenderer hereby accepts and agrees to the same as forming a part of the Contract.

.14 Understands that in the event that the tendered Contract Price is not within the project budget, the *Owner* has the right to negotiate the Contract with the low bidder or reject all tenders received.

.15 Agrees that the Warranty Period defined in the Contract Documents shall be for a period of one (1) year from the date of Ready-for-Takeover of the *Work*.

.16 Understands that Substantial Performance of the *Work* will be established in accordance with General Conditions of the Contract and applicable lien legislation at the Place of *Work*.

.17 Understands that after the issuance of the certificate of Substantial Performance of the *Work* by the *Consultant*, provided that the Contractor has relieved the *Owner* from any and all claims, demands and lien claims for and in respect of the Contract.

.18 Understands that Ready-for-Takeover will only be given when the Contractor has completed all outstanding items and corrected all deficiencies. The Contractor can then submit an application for Final Payment and the *Consultant* will thereafter prepare the Final Certificate for payment in accordance with the General Conditions of the Contract.

.19 Understands that the payment of holdback will be in accordance with the General Conditions of the Contract and subject to the provisions of the lien legislation applicable to the Place of *Work*.

.20 Understands the occupational Health and Safety Legislation and any Workers or Workplace compensation legislation applicable to the Place of the *Work* and declares that they are in good standing and have all necessary certification as required by such legislation.

.21 Agrees that time shall be construed as being of the essence of the

Contract.

DATED THIS 7 DAY OF June , 202 4 .

[Seal]

Roscoe Construction Limited
Name of Firm Tendering

Signature of Signing Officer

Kevin Roscoe - President
Name and Title (Printed)

Willis Muir
Witness

Willis Muir
Witness

Signature of Signing Officer

Name and Title (Printed)

5769 highway 1, Cambridge NS B0P 1G0
Company Address

902.538.8080
Telephone No.

Fax No.

rbacon@roscoe.ns.ca
Email

*NOTE: Tenders submitted by or on behalf of any Corporation must be signed and sealed in the name of such Corporation by a duly authorized officer or agent.

END OF SECTION

Town of Middleton
Heart of the Valley ®

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

August 1, 2024
(originally submitted July 4, 2024)

Nova Scotia Utility and Review Board
1601 Lower Water Street, Suite 300
PO Box 1692, Unit "M"
Halifax, NS B3J 3P6
Via email: **board@novascotia.ca**

RE: MIDDLETON WATER UTILITY RESERVOIR APPROVAL REQUEST

Good afternoon:

Please accept the following application for capital expenditure approval for the Middleton Water Utility to construct a reservoir replacement project with a cost estimate of $5.7m.

Background:

The Middleton Water Utility provides water to approximately 1,900 residents within the Town, together with several customers in the Municipality of the County of Annapolis. Water is drawn from 3 wells, treated and pumped to an inground reservoir. Cracks in the reservoir structure are causing approximately 10,000 liters of chlorinated water to leak into the ground **per hour.** Currently, the reservoir levels are kept at 25% capacity, to minimize leakage. This has several negative impacts on the Town, as follows:

1) **Hinders growth and long-term sustainability**. Growth is needed to increase the housing stock to help to address the current housing and homelessness crisis. A developer has requested the Town amend its MPS/LUB to enable a new subdivision on 100 acres of land in Town. This would result in over 450 additional units, and the current reservoir cannot support this growth. The County of Annapolis has also approached the Town about extending water services into the County, which is not possible without a new reservoir.
2) **Reduced water for Public Fire Protection.** Water available from the hydrants for fire protection (drawing from the reservoir) lasts approximately 2.5 hours. The reservoir must be monitored during fire emergencies to ensure it does not drop below the boil- water order level.
3) **Increased cost to the Town.** Due to operating at 25% capacity, the pumps in the wellhouse and the Booster Station are running constantly, increasing wear and tear on the pumps and increasing power usage. Due to leakage, the Town must put more chlorine into the system.

Town of Middleton
Heart of the Valley ®

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

4) **Reduces the Town's ability to provide safe drinking water**. If the water level in the reservoir gets too low, the reduced pressure within the water system could lead to increased risk of cross connection contamination, backflow incidents, and water main breaks.

5) **Risk of catastrophic failure.** There are concerns that the reservoir subgrade may be unstable due to the sustained leakage. Situated on an upper slope of North Mountain, a failure would potentially cause catastrophic flooding to the Town and surrounding area. If the reservoir fails completely, the Town of Middleton would have to declare a State of Emergency:

   - The Town would need to truck water to residents and/or install temporary water storage
   - Negative impact on public services (water rationing, pool, splash pad)
   - Fire hydrants could not be used, increasing the risk of loss of life and/or property damage
   - Any watermain breaks would result in no water to the Town until the break is fixed
   - Hospitals, schools, businesses, long-term care facilities will all be severely impacted. Soldiers Memorial Hospital, a full-service hospital serving a population of 40,000, may have to explore closure, as their heat is water-based.
   - Boil Water Order likely in effect until new reservoir is constructed.

The construction of a new reservoir will take approximately two years to complete. If the reservoir fails, the above impacts will continue until a new reservoir is constructed, resulting in a prolonged State of Emergency.

In their 2018 Decision in the Utility's Water Rate Application (M08647), *"[36] The Board notes the importance of the proposed reservoir project, given the risks associated with the current level of severe reservoir cracking and the volume of non-revenue water resulting from leakage. This issue was discussed during the last rate application in 2015 and should be dealt with as soon as possible…."*

The UARB encouraged "… *the Utility to prioritize its efforts to enable receipt of outside funding*." Unfortunately, the initial grant application was not approved. The COVID pandemic precipitated delays in the approval process for subsequent applications under this program, and applicants were not informed of the success or failure of their applications until 2023. The Utility's subsequent ICIP grant application was also not approved.

Given the substantial inflationary increases that occurred during and after the COVID pandemic, the Utility obtained updated cost estimates from CBCL. The new estimate is $5.7m, which is substantially more than the $2.44m cost estimate in 2018.

The Utility submitted grant applications under two other funding programs. One application was not successful, but the other was. The Utility has obtained a $3,142,137 grant for up to 50% of the cost of the project, and the funds have been received and are in the Reservoir Replacement

Town of Middleton
Heart of the Valley ®

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

Reserve bank account. The grant agreement provides that grant funds in excess of 50% of eligible costs must be refunded.

The Utility issued tenders for the construction phase of the project and the tenders have closed.

Project Description:

Land has been purchased and geotechnical work completed. Engineering design work was completed in advance of the tender being issued. The project is expected to require two years to complete. The first phase will be to construct the underground infrastructure and Zone building. The second phase will be to construct the above-ground Reservoir tank and Pump Station.

Project Cost by Major Category:

The below table assumes the contractor is responsible for the cost of materials and labor.

Category	Cost	Previous Spending	Project Total
Construction costs	3,951,800		3,951,800
Construction contingency	395,180		395,180
Engineering costs	375,160		375,160
Engineering contingency	37,516		37,516
Engineering and design		356,507	356,507
Land purchase		62,300	62,300
Decommissioning existing	239,900		239,900
Subtotal	4,999,556	418,807	5,418,363
Non-rebateable HST	214,300	18,000	232,400
	5,213,856	436,807	5,650,763

Project Funding:

Previous Spending of $357k plus HST was funded from a combination of PCAP grant, CCBF (Gas Tax) grant, Depreciation reserve, and $123k of future debt. The $62.3k land purchase was funded from the sale and exchange of another parcel of land owned by the Town.

As previously noted, the Town has received a grant of $3,142,137 for up to 50% of eligible costs. The MCGP grant application was based on an earlier cost estimate. Under the current cost estimate $525k of this grant would need to be refunded, leaving a balance of $2.6m. The Town has also received a $322,915 grant from the Sustainable Services Growth Fund (SSGF), which Council voted to use towards the Reservoir and which funds have been placed in the Reservoir Reserve.

In the 2018 UARB Rate Decision, the UARB ordered a rate increase in connection with the additional costs that would be incurred by the Utility, based on the estimated project cost at that time. Since the project did not go ahead, the Utility transferred the excess water revenue into the Reservoir Reserve fund. Until the project is completed, the Utility plans to continue to place the additional annual revenue of $89,948 into the Reservoir Reserve.

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

In total, the grants, together with the additional income since 2018, plus estimated bank interest, will fund $ $3.7m of the total cost yet to be incurred of $5.2m. The remaining $1.5m, plus $123k of previously unfunded expenditures will be funded with long-term debt. Initially, the Utility will obtain bridge financing, and upon project completion, the Utility will obtain a debenture through Municipal Finance.

FUNDING SOURCE		**$**
Grant Funding (MCGP) (reduced to 50% of eligible project costs)		$ 2,617,146
Grant Funding (SSGF)		322,915
Additional revenue collected for project from 2018 Rate increase		
2018/19 to 2022/23		344,366
2023/24		89,948
Interest earned to 3/31/24		346
Reservoir Reserve balance at 3/31/24		3,374,721
Additional revenue from water rates 2024/25		89,948
Forecast interest earned at 3%		101,242
Less funding Year 1 construction costs (Site works, Yard pipe, Zone bldg)		(1,086,000)
Forecast Reserve balance at 3/31/25		2,479,911
Additional revenue from water rates 2025/26		89,948
Forecast interest earned at 3%		74,397
Less funding portion of Year 2 construction costs		(2,644,256)
Forecast Reserve balance at 3/31/26		-
Funding Totals		
Total funded from Reservoir Reserve	24/25	1,086,000
	25/26	2,644,256
		3,730,256
Total funded from bridge financing replaced by Long-term debt	26/27	1,494,450
		5,224,706

Other useful information:

How and why the funding plan is appropriate:

The Utility has worked diligently to obtain funding for this project to minimize the impact on the water ratepayers. As a result, the combination of grant funding, and the additional revenue

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

collected since the 2018 rate increase, will provide roughly 70% of the cost of the project. The balance will be sourced from long-term debt.

Cash flow statement:

Fiscal Year	Construction cost	Refund MCGP Grant excess	Interest income	Water rate revenue	Reserve Balance	Bridge Financing	Municipal Finance Corp LTD
previous spending						123,000	
3/31/2024					3,899,712		
2024/25	(1,553,000)		116,991	89,948	2,553,651		
2025/26	(3,420,956)	(525,000)	76,610	89,948	-	1,225,747	
2026/27	(239,900)					239,900	
2026/27						(1,588,647)	1,588,647
	(5,213,856)	(525,000)	193,601	179,896	6,453,363	-	1,588,647

Impacts of the Project on the revenues and expenditures of the water utility plus an estimate of the impact on the water rates:

The new reservoir will not generate any new revenue. However, it will permit the Town to reliably support new housing developments, which will generate additional revenue for the water utility. Assuming a 20-year debenture at 5% interest, the debt service on the long-term debt from Municipal Finance Corp will be approximately $160k per year.

At the same time, the annual depreciation on the new reservoir must also be funded. The estimated annual depreciation expense is $148k. Further, operating costs are estimated to increase by $19k per year.

The total of the debt service plus depreciation, plus operating costs will be approximately $327k per year. However, the $90k currently built into the water rates will offset part of these costs, leaving $237k per year to be covered by ratepayers. Total water revenue is currently budgeted at $890k, with water expenditures currently budgeted to exceed the revenue. To fund both the debt service and the depreciation, water rates would need to be increased by 27%. Alternatively, the UARB could authorize the annual depreciation funding to be used to partially offset the debt service until the long-term debt has been repaid. This would leave roughly $90k of debt service to be covered by a rate increase of approximately 10%. The revenue from new housing developments will help reduce the necessary rate increase somewhat.

Town of Middleton
Heart of the Valley ®

Office of the
Chief Administrative Officer
Ashley Crocker
Ph: (902)825-4841 | Fax: (902)825-6460
Email: acrocker@town.middleton.ns.ca
www.discovermiddleton.ca

Planned timing to file an application for adjustments to the rates for water and water related services:

A water rate study was begun several months ago however, it was deferred due to several staff vacancies, including the Director of Finance position, which remains unfilled to date. Once we have completed our annual audit, we plan to resume the rate study and submit in October 2024. The timetable may need to be adjusted, depending on when we are able to replace the Finance Director position.

Appendices:

Middleton Reservoir Project Description

Project Name: **WATER RESERVOIR** **Project #** 22-12-A

Department: Water **Unit:** Water **Asset Class** Water reservoir

Type of Asset: New & replacement **Reason:** Critical level of service **Expected Useful Life:** 75 years

Project Description: Replace existing water reservoir over 2 year construction period at an estimated cost of $6,026,000 plus HST, and decommission existing reservoir once the new system is operational, at an estimated cost of $230,000 plus HST. YR1 siteworks, yard-piping, zone building & engineering supervision. YR2 reservoir, pump station & engineering supervision. YR3 decommission old structure

Need for Project: Existing reservoir has been leaking treated water for many years and is not repairable. The water level cannot be maintained high enough to support most emergency and peak use requirements. There is a risk of catastrophic failure.

Project Funding: $3,465,052 in grants, plus $524,262 additional operating revenue since 2018 rate study, all in the Reservoir Reserve, and additional interest and revenue to be added in 2024/25 & 2025/26 and Borrow the balance from MFC over 20 years at estimated 5% per annum.

Carry-over Project The Town has spent $407k since 2011 on engineering and design work for this project, plus $60k for land. Funding was from Gas Tax, PCAP grant, Depreciation Reserve, Surplus and $123k of future debt.

Additional Operating Expense Net Water Revenue in 2023/24 is only forecast at $200,000. The Utility cannot fund the debt service and depreciation expense, without a significant increase in Water Rates, unless the UARB authorizes using the Depreciation Reserve to pay the debt service.

Annual Operating Impact:	**Total up to 3/31/2023**	**Budgeted for 2023/24**	**Total up to 3/30/2024**	**New Spending 2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**Total**	**Project Total**
Operating Expenses	-	-	-	-	-	-	-	-	-	-
Interest expense	-	-	-	-	122,761	122,761	122,761	122,761	491,044	491,044
Interest expense - interfund	-	-	-	-	-	-	-	-	-	-
Depreciation expense	-	-	-	26,951	90,028	93,226	93,226	93,226	396,658	396,658
Loan principal	-	-	-	-	122,761	122,761	122,761	122,761	491,044	491,044
Loan principal - interfund	-	-	-	-	-	-	-	-	-	-
Total Operating Impact	-	-	-	26,951	335,550	338,748	338,748	338,748	1,378,745	1,378,745

Capital Budget:	**3/31/2023**	**2023/24**	**3/30/2024**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**Total**	**Project Total**
Capital cost	465,801	2,308	468,109	1,553,200	4,730,800	239,858	-	-	6,523,858	6,991,967
Funding:										-
Operating	60,000	-	60,000	-	-	-	-	-	-	60,000
Grants	144,710	-	144,710	-	-	-	-	-	-	144,710
Drawdown Reserves	139,796	-	139,796	1,553,200	2,399,185	239,858	-	-	4,192,243	4,332,039
Borrow from Reserves	121,295	2,308	123,603	-	(123,603)	-	-	-	(123,603)	-
Long-term debt	-	-	-	-	2,455,218	-	-	-	2,455,218	2,455,218
Other	-	-	-	-	-	-	-	-	-	-
Total funding	465,801	2,308	468,109	1,553,200	4,730,800	239,858	-	-	6,523,858	6,991,966

REQUEST FOR DECISION
Appointment List
RFD#: 009-2025

To: **COTW and Special Town Council**
From: **Ashley Crocker, CAO**
Date: **February 3, 2025**
Subject: **Appointment List Update**

Guiding Principles for Decision-Making

Accountability	Transportation	Diversity	Sustainability	Engaged	Informed

References/Attachments

- Updated Draft Appointment list

Legislation

- *Municipal Government Act*

Recommendation

That Council, on recommendation from the CAO, appoint Patricia Leslie and John Thompson as Town citizen representatives to the Joint Police Advisory Board.

That Council appoint Councillor XX and Councillor XX to the Joint Police Advisory Board.

That Council approve the Appointment List, as presented.

Background

In November 2024 Council approved the new Inclusion Diversity, Equity and Accessibility (IDEA) Committee therefore dissolving of the Accessibility Advisory Committee.

The County of Annapolis informed the Town that Councillor Gidget Oxner was appointed by County Council to the Source Water Protection Advisory Committee, and the appointment list has been updated.

The Municipality of the County of Annapolis and the Town of Middleton receive policing services from the Annapolis District RCMP by a way of a cost-sharing agreement. Therefore, a new Joint Police Advisory Board was created and new members must be appointed.

Financial Implications
N/A

Strategic Plan/Operating Plan Alignment

Check Applicable	Strategic Priority Area	Comments
	Environment	
	Infrastructure	
	Economy	
	Community	
X	Governance	
	Council Strategic Initiative	

Alternatives
N/A

Community Engagement/Communication
N/A

CAO Comments
The CAO supports the recommendation of staff.

CAO Initials: AC Target Decision Date: 3 February 2025

TOWN OF MIDDLETON
APPOINTMENT LIST
(Approved by Council February 3, 2025)

COUNCIL AND COMMITTEES OF COUNCIL

COUNCIL
MAYOR GAIL SMITH, DEPUTY MAYOR GARY MARSHALL
COUNCILLORS DAN SMITH, JONATHAN ARCHIBALD, BERNADETTE KNAPP, SANDRA FOURNIER, JOHN BARTLETT

COMMITTEE OF THE WHOLE
MAYOR GAIL SMITH, DEPUTY MAYOR GARY MARSHALL
COUNCILLORS DAN SMITH, JONATHAN ARCHIBALD, BERNADETTE KNAPP, SANDRA FOURNIER, JOHN BARTLETT

INCLUSION, DIVERSITY, EQUITY & ACCESSIBILITY (IDEA)
ELIZABETH MASON-SQUIRES, DIANNE MCDONALD, JOHN SMITH, KATRINA KELLOGH, LESTER BARTSON, SPENCER REYNOLDS, CAMERON STIFF, PIERCE IVAN, LARRY PETERS

AUDIT COMMITTEE
Citizens: PATRICIA LESLIE, SYLVESTER ATKINSON, THI ANH DAO BUI
Town Council: COUNCILLORS BERNADETTE KNAPP, SANDRA FOURNIER

COMMUNITY CENTRE & FIRE HALL COMM
Fire Department: MIKE TOOLE, JODY SPIDLE, SCOTT VEINOT
Town Council: MAYOR GAIL SMITH, COUNCILLORS BERNADETTE KNAPP, GARY MARSHALL
Town Planner: DAWN SUTHERLAND
Staff: CAO ASHLEY CROCKER, DPW ADAM VERRAN

PLANNING ADVISORY COMMITTEE
Citizens: HILARY CAMPBELL, MARGARET JERKE, DIANNE MCDONALD, HOWARD SELIG
Town Council: COUNCILLORS JOHN BARTLETT, DAN SMITH, JONATHAN ARCHIBALD

JOINT ANNAPOLIS COUNTY POLICE ADVISORY BOARD
Citizens-Town: PATRICIA LESLIE, JOHN THOMPSON
Citizens-County: WILLIAM STREET, CAROL GREENTREE
County Council: COUNCILLOR HARDING, WARDEN LEBLANC
Town Council: COUNCILLOR XX, COUNCILLOR XX
NS Dept. of Justice: VACANT (Ad with Province)

SOURCE WATER PROTECTION ADVISORY COMMITTEE
Citizens-Town: BRENDA FORD, BRYSON CROWELL
Citizens-County: VACANT
County Council: COUNCILLOR GIDGET OXNER
Town Council: BERNADETTE KNAPP, SANDRA FOURNIER
Staff: DPW ADAM VERRAN

ASSET MANAGEMENT WORKING GROUP
Town Council: MAYOR GAIL SMITH
Staff: CAO ASHLEY CROCKER, DOF BRIGITTE STENNETT
DPW ADAM VERRAN

INTER-MUNICIPAL COMMITTEES AND WORKING GROUPS

ANNAPOLIS COUNTY INTER-MUNICIPAL WORKING GROUP
MAYOR GAIL SMITH, DEPUTY MAYOR GARY MARSHALL

IDEA GOVERNANCE COMMITTEE
MAYOR GAIL SMITH, DEPUTY MAYOR GARY MARSHALL

IMSA WORKING GROUP (VALLEY WASTE & KINGS TRANSIT)
MAYOR GAIL SMITH, DEPUTY MAYOR GARY MARSHALL (ALT)

REMO ADVISORY COMMITTEE
COUNCILLORS DAN SMITH, GARY MARSHALL

REMO PLANNING COMMITTEE
CAO ASHLEY CROCKER, DPW ADAM VERRAN

VALLEY REN LIAISON & OVERSIGHT COMMITTEE (LOC)
COUNCILLORS JOHN BARTLETT, JONATHAN ARCHIBALD (ALT)

TOWN INDIVIDUAL APPOINTMENTS

ANIMAL CONTROL & BYLAW ENFORCEMENT OFFICERS
SPECIAL CONSTABLE ZACHARY CROMWELL
SPECIAL CONSTABLE ASHLEY GERVAIS

BUILDING & FIRE OFFICIALS
DANNY WRIGHT, ANDREW DOBSON, ERIN SCHURMAN-KOLB, DANA OLMSTEAD

DANGEROUS & UNSIGHTLY PREMISES ADMINISTRATOR
DPW ADAM VERRAN, CAO ASHLEY CROCKER (ALT)

DEVELOPMENT OFFICER(S)
DAWN SUTHERLAND
CHRYSTAL FULLER
NING LAING

FIRE CHIEF & DEPUTIES
CHIEF MIKE TOOLE, DEPUTIES SCOTT VEINOT, JODY SPIDLE

RCMP NCO IN CHARGE
SGT MIKE MAXWELL

REMO COORDINATOR
BRIAN ORDE, NANCY CHISHOLM (ALT)

TOWN AUDITORS
BDO CANADA

TOWN CLERK
SARA MARCEAU

TOWN ENGINEER
DPW ADAM VERRAN

TOWN RETURNING OFFICER
SARA MARCEAU

TOWN SOLICITORS
TAYLOR MACLELLAN COCHRANE

TOWN TREASURER
BRIGITTE STENNETT

TRAFFIC AUTHORITY
SGT MIKE MAXWELL, DPW ADAM VERRAN

VWRM BYLAW ENFORCEMENT OFFICER
DALE ROBERTS

REPRESENTATION ON OTHER COMMITTEES (BY CITIZENS)

MIDDLETON SWIMMING POOL SOCIETY
ANDY RENWICK, STEPHANIE PURCELL, KATIE GREENE, TARA BALCOME, KELLEY DOUCETTE, ALEX BALCOME, SHALENE BURNS

REGIONAL LIBRARY BOARD
JILL COX

WESTERN REGIONAL HOUSING AUTHORITY
Citizen at Large: DIANNE MCDONALD

DANGEROUS AND UNSIGHTLY 2023

Complaints and Status Report

Complaint #	Date Complaint Received	Address of Owner	Complaint Form Completed	Property Inspection and Form Completed	Initial Notice Sent	Complainant Updated	Follow-up Inspection Must Be Done By:	Follow-up Property Inspection Completed	Is Clean Up Required? Y / N	Estimate of Cost for Clean Up $$	Council Approval for Clean Up Y / N	Notice to Owner of Clean Up	Owner Invoiced for Costs or Lien Placed	STATUS	Mark Complete When File is Closed
23-DU002	5-Jun-23	82 Victoria	7-Jun-23	8-Jun-23	n/a	n/a	n/a	n/a	Y			14-Nov-23		Owner requested extension of 4 months to previous deadline of March 14, 2024. New deadline was set at July 11, 2024 and another extension request was made, new deadline November 11, 2024. Owner continues to upgrade the property, most of the work has been completed. D&U Administrator to visit the property once work is completed.	
23-DU004	5-Jun-23 24-Aug-23	50 School	7-Jun-23	7-Jun-23										Fire Inspection was conducted Nov 21/23. Fire inspector is working with owner on deficiencies.	
23-DU006	6-Jun-23	121 Main	7-Jun-23	7-Jun-23	30-Jun-23	2-Aug-23	15-Jul-23	25-Jul-23 29-Nov-24	N	n/a	n/a	n/a	n/a	Property Owner intends to demolish section of building that is unsightly. A permit form was given to the Property Manager, but was never returned. Nov 29/24 - Administrators visited property. Building is still standing. Staff will issue a letter asking for an update on the demolition.	
23-DU007	7-Jun-23	75 Victoria	7-Jun-23	7-Jun-23	30-Jun-23		15-Jul-23	29-Nov-24						Property is changing hands. Property was re-visited on May 30/24 and is still dangerous/unsightly. Nov 29/24 - Administrators visited property. Looks like they're trying to clean up property. Staff will check to see when ownership changed, and ask new owners for an update.	
23-DU011	16-Jun-23	174 Main	16-Jun-23	31-Aug-23	7-Jun-24		24-Jun-24	29-Nov-24						Property was re-visited on May 30/24 and is still unsightly. Letter was sent. Nov 29/24 - Administrators re-visited property. Need to discuss path forward.	
23-DU013	16-Jun-23	28 Bridge	16-Jun-23	31-Aug-23	7-Jun-24		24-Jun-24	29-Nov-24						Property was re-visited on May 30/24 and is still unsightly. Letter was sent. Nov 29/24 - Administrators visited property. No change. Letter to be re-issued. Letter was issued after postal strike.	
23-DU016	16-Jun-23 1-Aug-23 8-Aug-24 30-Sep-24	8 Spring Garden	16-Jun-23	29-Aug-23	7-Jun-24		24-Jun-24	29-Nov-24						Property was re-visited on May 30/24 and is still unsightly. Letter will be sent. Jun 12/24 - Renter called and stated that in her rental agreement, the landlord is supposed to be taking care of all yard work. Nov 29/24 - Administrators visited property. No change. Letter to be re-issued. Letter was issued after postal strike.	
23-DU018	16-Jun-2023 13-May-2024	5 George	16-Jun-2023 13-May-2024	31-Aug-23	7-Jun-24		24-Jun-24	29-Nov-24						Property was re-visited on May 30/24 and is still unsightly. Letter was sent. Nov 29/24 - Administrators visited property. No change. Will contact Building Inspectors on next steps as it appears unsafe. Contacted building inspectors and building inspector does not believe anyone lives there currently.	
23-DU019	5-Jun-23	54 School	16-Jun-23	7-Jun-23	25-Jul-23		8-Aug-23	30-May-24 29-Nov-24						Met with property owner on Jul 31/23 and they communicated that the conveyor belt will be removed by mid-November. Property was re-visited May 30/24 and conveyor belt has not been removed. Reminder letter to be issued. Nov 29/24 - Administrators visited property. No change. Conveyor belt has not been removed.	

DANGEROUS AND UNSIGHTLY 2024
Complaints and Status Report

Complaint #	Date Complaint Received	Address of Owner	Complaint Form Completed	Property Inspection and Form Completed	Initial Notice Sent	Complainant Updated	Follow-up Inspection Must Be Done By:	Follow-up Property Inspection Completed	Is Clean Up Required? Y / N	Estimate of Cost for Clean Up $$	Council Approval for Clean Up Y / N	Notice to Owner of Clean Up	Owner Invoiced for Costs or Lien Placed	STATUS	Mark Complete When File is Closed
24-DU004	24-May-24	16 Bridge Street	24-May-24											Nov 29/24 - Administrators visited property. There is a barricade around the property. Letter likely required.	

COMMUNITY COMPLAINTS & CONCERNS 2025

Status Report

Complaint #	Date Complaint Received	Method of Complaint	Description of Concern/Complaint	Department Responsible	Complainant Updated	Staff Update	Status
25-001	8-Jan-25	Email	Concern about the shelters at our park. Concern that Riverside Park needs to be updated/improved and suggested grant programs.	Administration	10-Jan-25	Staff responded to citizen advising that the Town is working on a few grant applications to upgrade our parks	Complete
25-002	10-Jan-25	Phone	Oil on the road on the corner of Marshall and King	Public Works/Parks	20-Jan-25	Staff visited the area on Jan 10/25 and cleaned up the oil.	Complete
25-003	14-Jan-25	Email	Diabetes Association donation bin located on Main Street at the Foodland is often overflowing with an escalation of dumping of items around the bin. Items are left out for weeks and blow around.	Administration	14-Jan-25	Staff called the Diabetes Association to report the issue, and followed up with the resident. The resident emailed back on Jan 15/25 stating that the bin and garbage had been removed.	Complete
25-004	17-Jan-25	Phone	The first street light on Meadow Lane has been out a few days	Public Works/Parks	23-Jan-25	Staff contracted Berwick Electric Commission to fix multiple lights on Meadow Lane on Jan 23/25	Complete
25-005	17-Jan-25	Email	Residents are now dumping items where the Diabetes Bin used to be on Main Street at the Foodland	Administration	20-Jan-25	Staff informed the resident that the Town will give the Foodland a chance to address the issue and if not addressed, the complaint will be moved to Dangerous and Unsightly	In-Progress
25-006	20-Jan-25	In-person	Poop bags are not being refilled at the dispenser at Rotary Park. There are no poop bag dispensers or garbages at the Wetland Trail.	Public Works/Parks	30-Jan-25	Jan 30/25: Two dispensers were ordered on for the Wetland Trail, as well as more poop bags for the dispenser at Rotary Park.	In-Progress
25-007	26-Jan-25	Email	Motorized vehicles on Rails to Trails: many of them are very discourteous (and extremely rude) to people walking. The Town needs to provide a tranquil area solely for the use of non-motorized users.	Administration			New
25-007	28-Jan-25	Facebook Messenger	The location of the crosswalk at the end of Bridge Street by the Needs Store is very challenging to stop behind. When turning left, it's very hard to see oncoming traffic on Main Street due to the sign and cars parked in the Needs parking lot.	Public Works/Parks			New

January 29, 2025

The Honourable Dave Ritcey
Minister of Communities, Culture, Tourism and Heritage
Department of Communities, Culture, Tourism and Heritage
1741 Brunswick St., 3rd Floor
P.O. Box 456, STN Central
Halifax, NS B3J 2R5

Via email: MIN_CCTH@novascotia.ca

Dear Minister Ritcey,

Congratulations on your election win and on your important appointment to the Communities, Culture, Tourism and Heritage portfolio.

We are writing to you on behalf of our respective councils to request your department's finalization and implementation of a fair and equitable funding formula to support our library system.

On December 11, 2024, elected representatives of all member units of the Annapolis Valley Regional Library (AVRL) (the units from West Hants, Kings and Annapolis counties), met and received an impactful presentation on the state of the vital services provided by AVRL.

As a collective, we were duly impressed by the:

- significant growth in usage over the last three years
- amount and diversity in services being offered
- efficiency improvements being garnered through the creation of the Same Page provincial consortium of libraries and increased access to digital collections; and
- the large number of age groups and newcomers being served

We also heard tangible examples of how the AVRL branches are front and center in our communities, offering services such as rapid testing kits for COVID virus detection, and serving as a referral agency for vulnerable populations.

Unfortunately, as a collective we also heard and are dismayed by the:

- high turnover of staff and the present disparity between the current remuneration levels and a living wage
- unsustainable occurrences of deficit budgeting; and
- the resulting impact that these and other negative factors are having on the volume and reliability of services being offered by AVRL

Mr. Minister, we know you will agree that our province and region is presently in a state of unprecedented transition. We also believe, Mr. Minister that you will agree that many of these impacts couldn't have been planned for, but that our library system is integral in addressing the challenges and benefits our communities are facing.

Many of our municipalities are stepping up with significant capital improvements with respect to physical libraries. Creating modern and accessible libraries and community spaces has been and will continue to be a growing priority.

…/2

We believe that a refreshed funding formula to support a vibrant library system is an important part of the government's plan to grow the population of our province. We would be most appreciative if you would action the vital work your government has been undertaking in modernizing the financial relationship.

Respectfully,

_____
Mayor Dave Corkum
Municipality of the County of Kings
mayor.corkum@countyofkings.ca

_____
Mayor Andrew Zebian
Town of Kentville
azebian@kentville.ca

_____
Mayor Mike Trinacty
Town of Berwick
mayor@berwick.ca

_____
Mayor Jodi MacKay
Town of Wolfville
jmackay@wolfville.ca

_____
Mayor Abraham Zebian
West Hants Regional Municipality
mayor.zebian@westhants.ca

_____
Warden Diane LeBlanc
Municipality of the County of Annapolis
dleblanc@annapoliscounty.ca

_____
Mayor Gail Smith
Town of Middleton
gsmith@town.middleton.ns.ca

_____
Mayor Amery Boyer
Town of Annapolis Royal
mayorboyer@annapolisroyal.com

c. The Honourable Tim Houston, Premier
Christopher Shore, Deputy Minister of Communities, Culture, Tourism and Heritage
Stephanie Smith, Executive Director, Archives, Libraries and Museums, Dept of Communities, Culture, Tourism and Heritage
Lynn Somers, Director, Nova Scotia Provincial Library, Dept of Communities, Culture, Tourism and Heritage