



**VILLAGE OF BELCARRA
REGULAR COUNCIL MEETING AGENDA
Village Hall
September 23, 2024
7:00 PM**



*This meeting is live streamed and recorded by the Village of Belcarra
To view the meeting click: [Village of Belcarra - YouTube](#)*

Note: This agenda is also posted on the Village's website at www.belcarra.ca

The purpose of a Council meeting is to enact powers given to Council by using bylaws or resolutions. This is the venue for debate of issues before voting on a bylaw or resolution.

We wish to acknowledge that this meeting is taking place on the unceded territory of the Coast Salish Peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

COUNCIL

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzycki
Councillor Liisa Wilder

1. CALL TO ORDER

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

3.1 Special Council Meeting, September 9, 2024

Recommendation:

That the minutes from the Special Council Meetings held September 9, 2024 be adopted.

3.2 Regular Council Meeting, September 9, 2024

Recommendation:

That the minutes from the Regular Council Meeting held September 9, 2024 be adopted.

4. PUBLIC INPUT (15 minutes)

A period of fifteen (15) minutes will be made available on each Regular Council Meeting Agenda for members of the public to make submissions to Council. Any person wishing to speak during Public Input Period must so indicate by raising their hand. Each person will be permitted 2 minutes to comment on items presented on the agenda. A second opportunity to speak is permitted when all other interested parties have had an opportunity to provide their comments. Comments must be directed to the Chair of the meeting and not to individual members of Council. Public Input Period is a venue for submissions in the form of statements. Questions can be directed to Question Period at the end of the agenda.

5. DELEGATIONS**5.1 Trustee Kerri Palmer Isaak. School District No. 43, Villages of Anmore and Belcarra**

- Overview of School District No. 43 and the Ministry of Education for back to school.

6. ITEMS ON CONSENT AGENDA

Council may adopt in one motion all recommendations appearing on the Consent Agenda, or prior to the question on the vote, any Council member may request that an item be removed from the Consent Agenda and placed in Section 7 for debate or discussion, voting in opposition to a recommendation, or declaring a conflict of interest with an item.

6.1 Correspondence

- 6.1.1** Brian Ashford, Sy Rodgers, Lynda Spence (Farrer Cove Road Committee), letter dated September 5, 2024 regarding the appointment of a member of Council to the Farrer Cove Road Committee.
- 6.1.2** Ian Devlin, Belcarra resident, email dated September 13, 2024 and an attachment letter dated September 12, 2024 regarding the Village of Belcarra water system.
- 6.1.3** E-Comm 9-1-1, Nancy Blair, Chief Transformation Officer and Stephen Thatcher, Vice President, Operations, email dated September 13, 2024 providing a mid-year "Transformation Update" detailing improvements to the service.

6.2 Reports

No items

6.3 Recommendation to Receive Items on Consent

That the items on the Consent Agenda of the September 23, 2024 Village of Belcarra Regular Council Meeting be received into the record.

7. ITEMS REMOVED FROM THE CONSENT AGENDA

8. CORRESPONDENCE/PROCLAMATIONS (ACTION ITEMS)

- 8.1** Madeline Leaf, International Wrongful Conviction Day Committee, email dated July 15, 2024 requesting that the Village of Belcarra proclaim October 2, 2024 as “Wrongful Conviction Day.”

Recommendation:

That the Village of Belcarra proclaim October 2, 2024 as “Wrongful Conviction Day” and that staff be directed to illuminate the Village Hall in yellow on that date.

9. UNFINISHED BUSINESS**10. STAFF REPORTS**

- 10.1** Manjit Sohi, Sohi Consulting & Code Solutions, report dated September 23, 2024 regarding an extension for a Temporary Use Permit for 8 Corners Canada Inc., a subsidiary of the Evangelical Laymen’s Church (ELC)

Recommendation:

1. That the report dated September 17, 2024, Amendments to and extension of Temporary Use Permit, TUP #2019-01 for 8 Corners Canada Inc. be received into the record for information; and
2. That the Temporary Use Permit, TUP # 2019 -01 be extended for one term not exceeding 3 years from October 20, 2024; and further
3. That staff be directed to prepare the amendments to the Temporary Use Permit, #TUP 2019-01 for consideration at the next Council meeting.

- 10.2** Stewart Novak, Public Works and Emergency Preparedness Coordinator, staff report dated September 23, 2024 regarding the Marine Avenue Road Rehabilitation Tender Summary

Recommendation:

That Contract No. 2024-ITT-01: Marine Avenue Road Rehabilitation Project, be awarded to 1166618 BC LTD DBA Save on Blacktop in the amount of \$294,246.33 including taxes; and

That a contract contingency of \$30,000 be approved to address potential variations in field conditions; and

That additional funding for ISL Engineering of \$13,300 to provide for full-time inspection and monitoring throughout the construction phase be approved; and further

That the Chief Administrative Officer be authorized to execute the contract.

- 10.3** Stewart Novak, Public Works and Emergency Preparedness Coordinator, staff report dated September 23, 2024 regarding the Bedwell Bay Road and Kelly Road Upgrade Project

Recommendation:

That the report dated September 23, 2024 titled “Bedwell Bay and Kelly Road Upgrade Project Update – Class D Cost Estimate and Concept Design” be received into the record for information.

- 10.4** Stewart Novak, Public Works and Emergency Preparedness Coordinator, staff report dated September 23, 2024 regarding a cost estimate for a Tatlow Reservoir Chlorination Station by WSP Canada Inc.

Recommendation:

That the *New Tatlow Reservoir Chlorination System Design Brief* dated June 14, 2024 prepared by WSP Canada Inc. be received into the record for information; and

That the cost estimate of \$173,9000 for the construction phase of a new chlorination system project be approved; and further

That the Village of Belcarra Public Works and Emergency Preparedness Coordinator and representatives from WSP Canada Inc. be authorized to submit an application to Fraser Health requesting permission to modify the water distribution system and construct a chlorination system at the Tatlow Reservoir.

11. BYLAWS

No items

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

13. MAYOR AND COUNCILLOR REPORTS

- TransLink Mayors’ Council Public Affairs & Governance Committee – September 11
- Metro Vancouver Mayors’ Committee Meeting – September 12
- Metro Vancouver Council of Councils – September 14
- UBCM – September 16 to 20

13.1. CHIEF ADMINISTRATIVE OFFICER REPORT

14. OTHER MATTERS DEEMED EXPEDIENT

15. NOTICES OF MOTIONS AND MATTERS FOR INTRODUCTION AT FUTURE MEETINGS

16. PUBLIC QUESTION PERIOD

The public is invited to ask questions of Council regarding any item pertaining to Village business. A person wishing to make a submission will be limited to two (2) minutes and the submission must be in the form of a question. A second opportunity to ask a follow up or new question is permitted if no one else is waiting to participate. Questions, including follow up questions, must be directed to the Chair of the meeting and not to individual members of Council or staff. If a question(s) to staff arises during Public Question Period, the question(s) must be addressed to the Chair and the Chair can request clarification from staff.

The total session is limited to 20 minutes and will be completed by 11:00 pm unless extended with approval of Council through an affirmative vote.

17. ADJOURNMENT



**VILLAGE OF BELCARRA
SPECIAL COUNCIL MEETING MINUTES
September 9, 2024**



This meeting was held in Council Chambers

Council in Attendance

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzycki (Lisa was not in attendance at the start of the meeting)
Councillor Liisa Wilder

Staff in Attendance

Paula Richardson, Chief Administrative Officer
Stewart Novak, Public Works and Emergency Preparedness Coordinator
Amanda Seibert, Corporate Officer/Recording Secretary

We wish to acknowledge that this meeting took place on the unceded territory of the Coast Salish peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

1. CALL TO ORDER

The meeting was called to order at 5:00 pm

2. APPROVAL OF THE AGENDA

2.1 Special Council Meeting, September 9, 2024

Moved by: Councillor Clark
Seconded by: Councillor Ruzycki

That the agenda for the Special Council Meeting of September 9, 2024 be approved.

CARRIED

3. RESOLUTION TO MOVE INTO CLOSED COUNCIL MEETING

Moved by: Councillor Ruzycki
Seconded by: Councillor Clark

That the September 9, 2024 special meeting of Council be closed pursuant to Sections 90(1) and 90(2) of the *Community Charter* as the subject matter being considered relates to the following:

Section 90(1)(g) Potential litigation affecting the municipality.

Section 90(1)(i) The receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

Section 90(1)(k) Negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

CARRIED

4. ADJOURNMENT

Moved by: Councillor Clark
Seconded by: Councillor Elworthy

That the September 9, 2024 Special Council Meeting be adjourned.

CARRIED

The meeting was adjourned at 5:02 pm

Certified Correct:

Jamie Ross
Mayor

Amanda Seibert
Corporate Officer



**VILLAGE OF BELCARRA
REGULAR COUNCIL MEETING MINUTES
September 9, 2024**



This meeting was held in Council Chambers and live streamed at
[Village of Belcarra - YouTube](#)

Council in Attendance

Mayor Jamie Ross
Councillor Carolina Clark
Councillor Joe Elworthy
Councillor Janet Ruzycki
Councillor Liisa Wilder

Staff in Attendance

Paula Richardson, Chief Administrative Officer
Stewart Novak, Public Works & Emergency Preparedness Coordinator
Amanda Seibert, Corporate Officer/Recording Secretary
Jane Dreier, Clerk

We wish to acknowledge that this meeting took place on the unceded territory of the Coast Salish peoples. Tum-Tumay-Whueton, or Belcarra, is home to an ancestral village of the Tsleil-Waututh Nation. We are thankful to conduct our work within their territory.

1. CALL TO ORDER

Mayor Ross called the meeting to order at 7:00 pm

2. APPROVAL OF THE AGENDA

2.1 Regular Council Meeting, September 9, 2024

Moved by: Councillor Elworthy
Seconded by: Councillor Clark

That the agenda for the Regular Council Meeting of September 9, 2024 be amended with the release of items from the September 9, 2024 Closed Council meeting:

- **Item 4.3 Letter dated September 6, 2024 from John McEwen, Mayor, Village of Anmore, regarding the Sasamat Volunteer Fire Department Service Review**
- **Item 4.4 Letter dated July 31, 2024 from Anne Kang, Minister of Municipal Affairs, regarding the Village of Belcarra's request for a service review for the Sasamat Volunteer Fire Department; and further**

That the agenda for the Regular Council Meeting of September 9, 2024 be approved as amended.

CARRIED

3. ADOPTION OF MINUTES

3.1 Special Council Meetings, July 22, 2024 and July 24, 2024

Moved by: Councillor Ruzycki
Seconded by: Councillor Clark

That the minutes from the Special Council Meetings held on July 22, 2024 and July 24, 2024 be adopted.

CARRIED

3.2 Regular Council Meeting, July 22, 2024

Moved by: Councillor Clark
Seconded by: Councillor Elworthy

That the minutes from the Regular Council Meeting held on July 22, 2024 be adopted.

CARRIED

4. PUBLIC INPUT

The Chief Administrative Officer reviewed the process for public input. She advised that questions or comments pertaining to the Official Community Plan Bylaw brought forward at the April 8, 2024 Public Hearing will not be considered.

Klaus Bever, Belcarra resident, suggested that the recommendation in Item 10.1 to consider the hiring of a project manager for the tennis court site is a pre-mature recommendation as Council has yet to make a decision as to what they wish done with the site.

5. DELEGATIONS AND PRESENTATIONS

No items

6. ITEMS ON CONSENT AGENDA

6.1 Correspondence

6.1.1 Kerri Palmer Isaak, School District 43 Trustee, Community Update Newsletter for Belcarra and Anmore.

6.1.2 Mike Hurley, Chair, Metro Vancouver Board, letter dated August 20, 2024 regarding Metro 2050 a proposed Type 3 amendment to the City of Surrey for a 1.3 hectare site comprising one property located on 128 Street in the Newton area.

The full report can be viewed at the link below:

[MVRD Board report dated June 3, 2024, titled "Metro 2050 Type 3 Proposed Amendment – City of Surrey \(7880 128 Street\) \(pg. 498\)](#)

6.1.3 Kermit Dahl, Mayor, City of Campbell River, letter dated August 26, 2024 addressed to The Honourable David Eby, Premier, regarding an urgent request for Provincial support in addressing homelessness in Campbell River.

6.1.4 Paul Horn, Mayor, City of Mission, letter dated August 29, 2024 addressed to The Honourable David Eby Premier, regarding infrastructure investment for complete communities.

6.2 Reports

No items

6.3 Recommendation to Receive Items on Consent

Moved by: Councillor Clark

Seconded by: Councillor Ruzycki

That the items on the Consent Agenda of the July 22, 2024 Village of Belcarra Regular Council Meeting be received into the record.

CARRIED

7. ITEMS REMOVED FROM THE CONSENT AGENDA

No items

8. CORRESPONDENCE/PROCLAMATIONS (ACTION ITEMS)

No items

9. UNFINISHED BUSINESS

No items

10. STAFF REPORTS

10.1 Paula Richardson, Chief Administrative Officer, report dated September 9, 2024 regarding the West Road Recreational Site.

The Chief Administrative Officer reviewed the staff report.

MAIN MOTION

Moved by: Councillor Ruzycki

Seconded by: Councillor Elworthy

That staff be directed to engage a project manager to allow for further work to be carried out on the West Road Recreational Site.

Council discussion ensued on the merits of engaging the services of a project manager for the West Road recreational site.

MOTION TO AMEND

Moved by: Councillor Elworthy

Seconded by: Councillor Ruzycki

That the text of the motion be replaced with the text “That prior to staff engaging a project manager, quotes from three organizations experienced with this type of work be requested and following receipt of such information, that direction to staff to engage a project manager to allow for further work be reconsidered.”

AMENDMENT CARRIED

Question on the Main Motion

The Mayor called the question on the Main Motion as amended.

MAIN MOTION AS AMENDED

That prior to staff engaging a project manager, quotes from three organizations experienced with this type of work be requested and following receipt of such information, that direction to staff to engage a project manager to allow for further work be reconsidered.

CARRIED AS AMENDED

11. BYLAWS

11.1 Fire Prevention and Regulation

11.1a Village of Belcarra Fire Prevention and Regulation Bylaw No. 627, 2024

A bylaw for the prevention and suppression of fires, for regulating personal conduct at fires, and for authorization of permits in the Village of Belcarra

11.1b Village of Belcarra Fees and Charges Bylaw No. 517, 2018, Amendment Bylaw No. 629, 2024

A bylaw to amend fees and charges for services

11.1c Village of Belcarra Bylaw Notice Enforcement No. 520, 2018, Amendment Bylaw No. 630, 2024

An amendment bylaw to amend penalties of bylaw enforcement notices in conjunction with Village of Belcarra Bylaw Adjudication Registry

Moved by: Councillor Clark

Seconded by: Councillor Ruzycki

That Village of Belcarra Fire Prevention and Regulation Bylaw No. 627, 2024 be adopted; and

That Village of Belcarra Fees and Charges Bylaw No. 517, 2018, Amendment Bylaw No. 629, 2024 be adopted; and further

That Village of Belcarra Bylaw Notice Enforcement Bylaw No. 520, 2018, Amendment Bylaw No. 630, 2024 be adopted.

CARRIED

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

From the Closed Council Meeting of September 9, 2024

- Item 4.3 Letter dated September 6, 2024 from John McEwen, Mayor, Village of Anmore, regarding the Sasamat Volunteer Fire Department Service Review
- Item 4.4 Letter dated July 31, 2024 from Anne Kang, Minister of Municipal Affairs, regarding the Village of Belcarra's request for a service review for the Sasamat Volunteer Fire Department

13. MAYOR AND COUNCILLOR REPORTS

Mayor Ross attended the following events:

- TransLink Mayors' Council – July 25, 2024
- Metro Vancouver Regional Parks Committee – September 4, 2024
- Metro Vancouver Climate Action Committee – September 5, 2024
- Sasamat Volunteer Fire Department Board of Trustees Meeting – September 5, 2024
- CRAB "Potluck in the Park" – September 8, 2024

13.1 CHIEF ADMINISTRATIVE OFFICER'S REPORT

The Chief Administration Officer provided an update on Active Transportation Network Plan Request for Proposal (RFP). She reported that 5 responses to the RFP were received, and that the successful proponent was Bunt & Associates Engineering Ltd., a company with extensive experience in developing active transportation plans for smaller and lower density communities.

She advised that Metro Vancouver is encouraging public engagement pertaining to their 2025 Budget & Five Year Financial Plan and that a link has been posted on the Village's website to allow residents to participate in the process.

The Chief Administrative Officer also advised that BC Hydro has notified surrounding areas that as of September 9, crews will begin construction work on the main access road and boat launch access road at Buntzen Lake. Further information on the BC Hydro project can be found at www.bchydro.com/buntzen.

She announced that on Friday, September 6, 2024 the Metro Vancouver Regional Planning Committee supported the recommendation by Metro Vancouver staff to accept the Village of Belcarra's Regional Context Statement as submitted and that the staff report will be moved forward to a meeting of the Metro Vancouver Board of Directors on September 27, 2024 for consideration.

14. OTHER MATTERS DEEMED EXPEDIENT

No items

15. NOTICES OF MOTION AND MATTERS FOR INTRODUCTION AT FUTURE MEETINGS

No items

16. PUBLIC QUESTION PERIOD

The process for public question period was reviewed. The Chief Administrative Officer advised that questions or comments pertaining to the Official Community Plan Bylaw brought forward at the April 8, 2024 Public Hearing will not be considered

Jim Chisholm, Belcarra resident, inquired on the status of the chlorination of the water tank.

The Public Works and Emergency Preparedness Coordinator advised that a detailed design has been completed and has been forwarded to Fraser Health for review.

Jim Chisholm, Belcarra resident, asked whether a cost estimate is available and when the project will be complete.

The Public Works and Emergency Preparedness Coordinator advised that updated information on the chlorination project will be provided at the next Council meeting.

Klaus Bever, Belcarra resident, queried when he will receive a response to a letter written on June 28, 2024.

The Chief Administrative Officer advised that a response will be provided.

Peter Boekhout, Belcarra resident, asked what the Village has to gain when councillors attend the UBCM conference.

Upon request from the Chair, members of Council individually reported on the benefits of attending UBCM conferences.

Jim Chisholm, Belcarra resident, asked whether Council has the authority to spend \$500,000 to \$700,000 on the tennis court site. He commented on the amount of monies required for archaeological studies and stated he did not feel the citizens of Belcarra are willing to spend that sum of money on the site. He also asked whether the public has been polled on this topic.

Through the Chair, Councillor Clark advised on the intent of the amended motion put forward for Item 10.1 and Councillor Elworthy advised that public input on the site will be sought should the item move forward.

Klaus Bever, Belcarra resident, asked what work the Village has done in the past 4 months to provide improvements for pedestrians and cyclists in the Village.

The Public Works and Emergency Preparedness Coordinator provided information on projects recently completed including work on crosswalk signs and the development of a future project which will improve safety in the area.

Klaus Bever, Belcarra resident, asked what work the Village has done in the past 4 months on reduction of wildfire fuels on Village properties.

The Public Works and Emergency Preparedness Coordinator advised on works carried out or in progress with respect to wildfire management.

Klaus Bever, Belcarra resident, commented on wildfire fuel areas on Village property identified over the past year and asked when progress will be made on reducing the fire fuels in those areas.

The Public Works and Emergency Preparedness Coordinator advised on works done to mitigate fire hazards on Village properties.

Jim Chisholm, Belcarra resident, asked whether Council is considering connecting the Village water system to the main system in the Village of Anmore.

The Mayor responded to the question.

Peter Boekhout, Belcarra resident, queried why the Belcarra Garden Club cannot hold meetings in the Village Hall.

The Chief Administrative Officer advised that insurance through the Municipal Insurance Authority is required to allow use of the facilities by any outside groups and that the Garden Club currently does not have this insurance.

17. ADJOURNMENT

Moved by: Councillor Wilder

Seconded by: Councillor Clark

That the September 9, 2024 Regular Council Meeting be adjourned.

CARRIED

The meeting was adjourned at 8:06 pm

Certified Correct:

Jamie Ross
Mayor

Amanda Seibert
Corporate Officer

September 5, 2024

Mayor Jamie Ross. jross@blecarra.ca

Councillors:

Carolina Clark cclark@belcarra.ca

Joe Elworthy. jelworthy@belcarra.ca

Janet Ruzycki jruzycki@belcarra.ca

Liisa Wilder lwilder@belcarra.ca

cc Paula Richardson prichardson@belcarra.ca

Dear Mayor Ross and Councillors,

Please include this letter in the Council Meeting Agenda of September 9th, 2024.

As Council is aware, the Farrer Cove Road Committee has been working for several years to secure legal road access to Farrer Cove. To date, much progress has been made by the Committee towards reaching that goal.

We, the Farrer Cove Road Committee, are now requesting that Mayor and Council appoint a Council Representative to the Committee, once the OCP is adopted.

Given that the 2024 OCP Draft states that,

“...the Village will participate in and support an appropriate planning process, initiated and paid for by the owners of Farrer Cove (South) properties, which involves all relevant stakeholders to develop legal road access to this area. (Policy M25)”,

a Council representative is much needed to support and work with the Committee and the residents of Farrer Cove to liaise with the Village and other stakeholders in securing legal road access to our Community. We are also aware of how busy Village Staff is and, having a Council member as part of our team would likely mean less use of Staff time by the Committee.

We appreciate your attention to this matter.

Respectfully submitted.

Brian Ashford

Sy Rodgers

Lynda Spence

(Farrer Cove Road Committee)

Freedom of Information &
Protection of Privacy Act

Section 22(1)

(Severed portions are shaded)

From: Ian Devlin <[REDACTED]>

Sent: Friday, September 13, 2024 7:41 AM

To: Jamie Ross <jross@belcarra.ca>; Carolina Clark <cclark@belcarra.ca>; Janet Ruzycski <jruzycki@belcarra.ca>; Joe Elworthy <jelworthy@belcarra.ca>; Liisa Wilder <lwilder@belcarra.ca>

Cc: Paula Richardson <prichardson@belcarra.ca>

Subject: 2024-09-12 Water System Letter to Council

Attached letter for the information of Council regarding a summary of information regarding outstanding items for the Village of Belcarra water system. I hope that you will find this list useful and staff can provide the requested information to council.

Cheers

Ian Devlin

[REDACTED]

Sent from my iPad

September 12, 2024.

Dear Mayor Ross and Belcarra Council,

1. Chlorination System for the Municipal Water System

The July 19th, 2021, letter from ‘**Fraser Health Authority**’ (FHA) identified two areas that Council needs to address. First, the need for installation of a chlorination system, and second, a written monitoring plan to document that the requisite chlorine residual is maintained: “*Fraser Health recommended chlorine disinfection equipment be obtained for future needs in a 2019 inspection report.*” In other words, the regulatory agency indicates they require a measurable chlorine level in the potable water supply.

The Council meeting on September 25th, 2023, established a budget of \$46,000 for installation of a chlorination system. It was further recommended that the project be identified in the *Strategic Work Plan* and that the *Financial Plan* be amended to reflect the work. Was this done?

The chlorination system has been pending for over 11 months and staff advised Council that the FHA has been sent the plans for chlorination for their “approval”. As a retired federal public health inspector, I know that such approval is unlikely as there is no technical expertise to undertake that responsibility, and the FHA would not assume the liability associated with that responsibility. The FHA only deals with the measurable chlorine levels in a potable water supply. The council should have asked for the actual timeline of this project — it should not have taken 11 months to get to this point.

The FHA recommended that Belcarra install a chlorination system within the municipal water system, and the municipality has had an engineering company (competent in public health water systems) designing the new system. A chlorination system design plan signed by a registered engineer takes the responsibility for the safety of the plan and I cannot understand why the FHA would want to assume the liability of interfering with the design of the chlorination system.

2. Recommendations Re Inspection of Tatlow and Dutchman Creek Water Tanks

The WSP report of September 28th, 2023, included recommendations for correcting issues in the two water storage tanks — 7 for the Dutchman’s Creek and 10 for Tatlow. How many of those recommendations have been acted upon? Those recommendations are as follows:

3.1 RECOMMENDATIONS Considering the report findings, it was recommended that the following actions be taken in response to the identified issues:

1. The eight loose anchor bolts should be tightened to ensure the stability and structural integrity of the tank.
2. It is recommended to overcoat the graffiti-covered area on the east face of the tank, approximately 18 square meters in size, to remove the graffiti and restore the tank's appearance.
3. No anodes were observed inside the tank. Due to the importance of anodes in corrosion protection, it should be confirmed whether they are required for this structure.
4. During the next scheduled emptying of the tank, clean off areas of surface rust as well as areas where loss of panel coating have been observed and recoat or patch with approved sealant as per manufacturer's specifications.
5. With the tank emptied, it is recommended that connectors, brackets, bolts, etc. be inspected, and cleaned recoated or patched with approved sealant where required.
6. It is recommended to remove the snag along the roadway for safety reasons and to prevent damage.
7. An in-person inspection of the emptied tank is also recommended as this will allow inspectors to assess the current condition, stability, and safety as well as provide a more detailed examination of visible defects.

3.1 RECOMMENDATIONS Considering the report findings, it was recommended that, the following actions be taken in response to the identified issues:

TATLOW STEEL RESERVOIR the following actions be taken in response to the identified issues:

1. Implement effective drainage systems to address water collection on the uphill east side of the tank. This could be as straightforward as addition of a perimeter drain or regrading of the areas.
2. Monitor the corrosion on the embedded anchor bolts and take necessary actions if further deterioration is observed.
3. Clean and prevent algae growth on the panels, especially above the horizontal joint.
4. Repair the localized coating loss areas to maintain the integrity of the coating system.
5. Conduct regular inspections and maintenance of electrical/SCADA equipment, roof, and roof vent.
6. Replace missing securing bolt on the Main Fill Valve Chamber hatch.
7. During the next scheduled emptying of the tank, clean off areas of surface rust as well as areas where loss of panel coating have been observed and patch with approved sealant.
8. No anodes were observed inside the tank. Due to the importance of anodes in corrosion protection, it should be confirmed whether they are required for this structure.

9. With the tank emptied, it is recommended that connectors, brackets, bolts, etc. be cleaned of rust and inspected, and recoated or patched with approved sealant where required.
10. An in-person inspection of the emptied tank is also recommended as this will allow inspectors to assess the current condition, stability, and safety as well as provide a more detailed examination of visible defects.

Please advise as to the status of the following “top three” priorities for both tanks:

- a) Is there a need for anodes to be installed in the water storage tanks? (items #3 for Dutchman, and Item #8 for Tatlow)
- b) Has an empty tank inspection been performed to clean-off areas of surface rust and patch with approved coating? (item #7 for Dutchman and item #9 for Tatlow)
- c) Has an engineering inspection of the empty tanks for visible defects been performed to assess the current condition, stability, and safety? (item #10 for Tatlow)

3. Inspection of the Twin 200mm HDPE Pipes that supply Belcarra’s Water System

Regarding the inspection frequency for the twin 200mm HDPE water mains under Indian Arm that supply Belcarra’s water system, what is the recommended inspection frequency specified in Belcarra’s ‘Water System Operation and Maintenance Manual’?

I suspect that inspection of the twin 200 mm HDPE water mains is overdue. Will the Council ensure that this critical inspection will be completed as specified in the ‘Water System Operation and Maintenance Manual’?

4. Letter to Council regarding Item 6.1.2 of July 22nd, 2024

With reference to Ralph Drew’s email dated July 14th, 2024, regarding water main looping within Belcarra’s water system, it was suggested that Belcarra approach Metro Vancouver (MV) Park staff regarding the following:

“There is one solution that warrants further consideration by Council and that is connection of Camp Sasamat (MV property) to the eastern end of the Bedwell Bay Road water main. Such a connection would be a win-win scenario which would eliminate the need to spill water at that end of the system.”

Such a connection would greatly assist Belcarra’s water system by eliminating the need to spill water at the eastern water main dead-end on Bedwell Bay Road. Also, the additional water usage by Camp Sasamat would increase the overall flow within Belcarra’s water system which would assist in maintaining the residual chlorine level.

It is budget time for the MV Parks Department and has MV Park staff been approached regarding this potential connection?

From: E-Comm Updates <updates@ecomm911.ca>
Sent: September 13, 2024 3:24 PM
Subject: E-Comm 9-1-1: Transformation Update

Some people who received this message don't often get email from updates@ecomm911.ca.
[Learn why this is important](#)

Dear local government partner,

We are pleased to share with you this mid-year “Transformation Update,” detailing the improvements E-Comm 9-1-1 is making to strengthen our services, modernize our operations and technology, and streamline our corporate and financial structure, on behalf of you our partners and the public we serve.

Highlights include:

- Sustained strength in service levels for the first six months of 2024, surpassing targets in the key areas of 9-1-1, police emergency and fire emergency call-taking.
- Significantly improving our police non-emergency call taking service levels, including introducing answering calls faster, a notable decrease in abandoned calls, and the introduction of new technology to enhance the caller experience through call-back options, estimated wait times and SMS capabilities.
- Positive progress on improvements to our operations and supports for our people, which has resulted in measurable increases in employee engagement, and a decrease in attrition rates for key work groups such as police call-takers.
- Enhancements to our cyber safeguards and commencement of work to increase data resiliency.
- An update on the progress and work still ahead for the implementation of the federally-mandated Next Generation 9-1-1 (NG9-1-1) in 2025.

More details are in the attached report, and online at www.ecomm911.ca.

We fully recognize, as we continue to make progress on our transformation goals, that there remains significant work and challenges ahead, including improving our business continuity, modernizing our governance structure and establishing financial sustainability into the future.

Thank you for your ongoing support, which has helped to enable the improvements outlined in the mid-year update. Please contact us anytime if we can provide more information or assist in any way.

With appreciation,

Nancy Blair, *Chief Transformation Officer*; and
Stephen Thatcher, *Vice President, Operations*

E-Comm 9-1-1
Helping to Save Lives and Protect Property



E-Comm 9-1-1
Mid-Year Transformation Progress Update
September 2024

INTRODUCTION

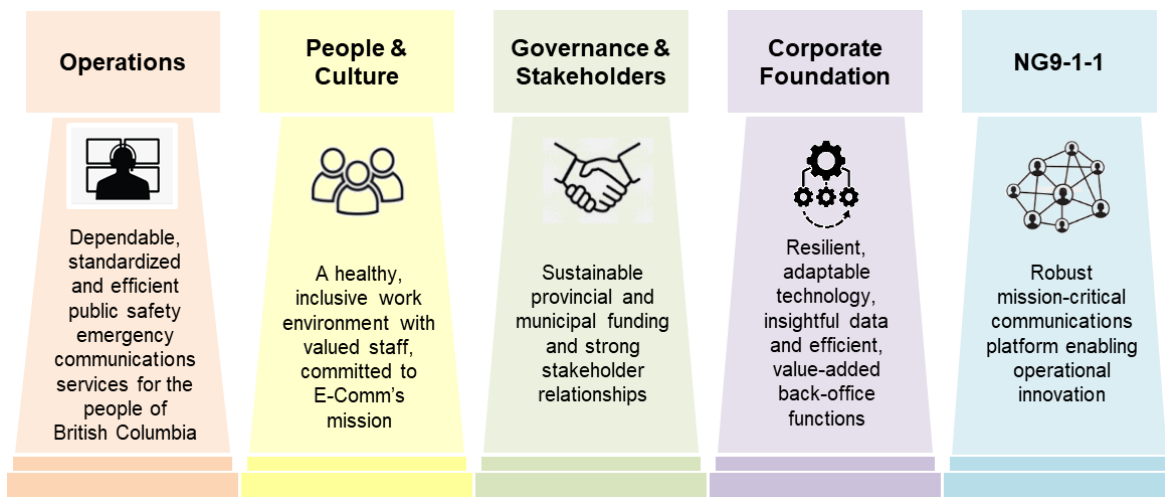
In 2022, E-Comm launched a comprehensive transformation plan, to modernize our operations and technology, strengthen our governance and people supports, and ensure our services are sustainable for the future. The following mid-year update is intended to provide a report on our progress to date from January to end of June 2024, and the improvements we are making for the benefit of our people, our agency partners, and the public we serve.

While we continue to make progress on our transformation goals, we recognize there is still significant work to be done, including building a more technologically resilient organization, modernizing our governance structure and establishing financial sustainability into the future.

This year, we received the results of the comprehensive independent [governance review](#) conducted by Deloitte. Our business has changed considerably in 25 years, and it's important our governance and financial models evolve to keep pace. We are consulting with our shareholders and partners on these future changes, which are aimed at improving Board oversight, efficiency, and representation for our many partners. A new financial model for our services is also in development, to ensure greater transparency and fairness of E-Comm's costs for services.

At this pivotal point in our organization's history, we have also marked two considerable milestones in 2024: the 5th anniversary of our Vancouver Island Emergency Communications Centre, and the 25th anniversary of E-Comm on June 8th, which we celebrated with a formal employee awards and service recognition event. Thank you to our hard-working and dedicated staff who keep the public and first responders safe. They are a key focus of our ongoing transformation efforts outlined in this update.

Transformation Plan objectives



SUSTAINED STRENGTH IN SERVICE LEVELS

Service levels have remained strong in the first six months of 2024, following last year’s best results on record since 2016. We are continuing to develop more training and recruiting options for our operations team, while bolstering police non-emergency call-taking through streamlined procedures, increased staff, and new technology.

- 9-1-1 service levels remain above target** – E-Comm’s 9-1-1 call-taking service levels held at 98% for the year to June 30, exceeding our target of 95% of calls answered within five seconds. With close to a million 9-1-1 calls (992,480), call volumes are the second highest on record for this period over the past five years, with the exception of a large spike of accidental calls in 2023 due to an Android operating system upgrade.
- Police and Fire emergency call-taking service levels exceed targets** – Our service levels for emergency call-taking for both police and fire surpassed set targets throughout the first half of the year. From January to June, 92% of police emergency calls in the Lower Mainland were answered within ten seconds, and 90% on Vancouver Island. For fire emergency calls, 94% were answered within 15 seconds. Stabilizing emergency call-taking and dispatch services has been a key focus in the initial stages of our transformation plan, and has included new hires, revamped training, additional peer coaching and mental health supports.
- Police non-emergency service levels strong** – Our non-emergency service levels for police call-taking in the Lower Mainland remained above target at 81% from January to June. Since it launched in May, our new contact centre technology platform, Genesys, has offered Lower Mainland callers to non-emergency lines greater options, including call-back requests and wait-time estimates. We have also seen a notable decrease from 2023 in the rate of abandoned calls over the service target window of three minutes, to just 6% in the Lower Mainland and 5% on Vancouver Island.

Lower Mainland Service Results, Year to June 30

	Target	2021	2022	2023	2024
9-1-1	95%/5s	99%	97%	99%	98%
Police Emergency	88%/10s	89%	83%	89%	92%
Police Non-Emergency	80%/180s	66%	44%	66%	81%
Fire Emergency	90%/15s	93%	90%	94%	94%

Vancouver Island Service Results, Year to June 30

	Target	2021	2022	2023	2024
9-1-1	95%/5s	99%	97%	98%	98%
Police Emergency	88%/10s	92%	90%	88%	90%
Police Non-Emergency	80%/180s	88%	84%	79%	79%

ENHANCED POLICE NON-EMERGENCY CALL-TAKING

We have taken several key steps towards our transformation goals of reducing non-emergency wait times and improving service, including streamlining procedures and introducing new technology to enhance user experience.

- Successful launch of new contact centre technology platform Genesys:** Following months of planning, the first call came through the new Genesys call centre platform on May 8 as part of a smooth and successful implementation. Genesys provides more options for callers to our Lower Mainland police agencies, including wait time estimates, SMS text capabilities and call-back features. Early results indicate callers are making use of the call-back function, and that abandoned calls continue to decrease with these new features.
- Increased data intelligence, service improvements:** With the support of our Data and Analytics team, we are also gaining new insights into the nature of non-emergency calls and how Genesys is performing, which is part of our strategy to improve public experience. From the May launch date through to the end of June, around 75% of police non-emergency calls were handled through the new system. Approximately 85% of call backs implemented as a result of Genesys were successful in connecting with callers and having their issue addressed. Genesys also provides us insight into what other services the public are calling the non-emergency lines for, whether it be referrals for civil or landlord/tenant issue, or information on police record checks.
- Extended hours for dedicated non-emergency (NER) coverage:** The dedicated NER team established in 2023 is now providing service seven days a week with extended hours from 5:30 am to 11 pm to address peak call volume times.



First call taken through Genesys May 8

NEW TRAINING AND RECRUITING INITIATIVES

- ***Police call takers benefit from new e-learning training program:*** In February, we launched interactive e-learning modules for new police call takers, with a goal of creating a more modern educational experience which applies research-based methodology and adult-learning best practices. The launch has generated positive feedback from both staff and trainers.
- ***Peer support positions for dispatch:*** E-Comm created a new peer coach position to provide support on the job for new dispatchers. These peer coaches offer mentorship and are specially trained to guide new dispatchers as they learn and develop their skills. The dispatch work group remains under significant staffing pressures due to the high demand for dispatchers, unique skillset required, making positions hard to fill and causes too much reliance on staff working overtime. We continue to look for solutions to expand recruitment, increase retention of our experienced dispatchers, attract new dispatchers to our workforce, and make the dispatch model more efficient.
- ***Partnership with ACCESS Futures:*** E-Comm is partnering with community-led Indigenous organization ACCESS Futures to develop a targeted and intentional recruitment effort within Vancouver Indigenous communities. Working alongside ACCESS Futures, E-Comm developed a training curriculum aimed at the 9-1-1 call taker role and supported the implementation of a 12-week skills training program, which welcomed its first cohort of students.

PRIORITIZING OUR PEOPLE AND CULTURE

- **High participation in employee engagement survey:** Our annual employee engagement survey conducted in March received an 82% response rate, well above industry standards and an increase from 77% in 2023. The survey is just one of the ways our organization collects input in order to look for ways to continually improve our staff experience at E-Comm.
- **Streamlining our internal processes:** Our internal “corporate optimization of processes and systems” (COPS) project launched in March, with the goal of enhancing the efficiencies of current processes for our People & Culture and Finance teams. The project is aimed at identifying internal procedures which could be consolidated, leading to greater efficiency and an improved workload for our staff.
- **Ongoing roll-out of Resilient Minds training:** All of our staff members will benefit from attending a peer-led Resilient Minds session in 2024, in support of employee mental health and wellness. This customized training for emergency communications staff is intended to help people manage occupational stress and was developed through a collaboration between E-Comm, the Canadian Mental Health Association, and retired fire captain Steve Fraser, who co-authored the Resilient Minds program.
- **Significantly decreased attrition rates in key workgroups:** One encouraging measure of the positive impact of our People and Culture improvements is a decreased level of attrition within our emergency call-taking and dispatch work groups. For the period of January 1 to June 30, 2024, compared to the same time in 2023, attrition for police emergency call takers dropped from 18% to just 4%, and within our much smaller dispatch workgroup fell to just 0.7% from 2.5% in 2023.



TECHNOLOGY UPDATES

- **Enhancing our cyber safeguards:** Like many government and public safety organizations, E-Comm is a potentially high-value target for cyber attacks. Our Security team has implemented a number of measures to help protect critical assets and sensitive data from the evolving threat of malicious cyberattacks, which have recently made headlines internationally for high-profile impacts on organizations. Our safeguards include a “vulnerability management” program to proactively scan our network for security issues, external testing to identify weaknesses from an outside viewpoint and effectively address gaps in our defence, and targeted access reviews and continuous updates pertaining to account permissions and confidential information. Internal phishing exercises have also been conducted to build employee awareness and a culture of heightened vigilance amongst our staff.
- **Cyber security training for employees:** As part of our ongoing work to protect against cyber threats and data breaches, we are empowering our employees through a new security awareness training course launched in June. This mandatory annual course provides staff with the tools and knowledge to better protect themselves and ensure a secure work environment which safeguards sensitive information and company assets.
- **Strengthening Data Resiliency:** We have advanced our data centre resiliency, including the creation of a robust back-up system to ensure our core services continue to function following an adverse event or disruption. A key priority for the remainder of 2024 and into 2025 will be continuing to build resiliency for our critical infrastructure as well as the call-taking and dispatch services our partners rely on to keep themselves and the public safe.



NEXT GENERATION 9-1-1 (NG9-1-1)

E-Comm continues to make positive progress in the implementation of new federally-mandated “Next Generation” or NG9-1-1 technology improvements to modernize 9-1-1 networks across Canada, including enabling in future sharing of information with 9-1-1 via text and video.

In 2023, the Province provided \$90 million to E-Comm to complete these improvements on behalf of our local government and agency partners. E-Comm has met its key project deadlines and deliverables to date, including its core infrastructure build, and implementation-planning to begin transition of partner sites to the new network.

Before implementation can proceed, an important requirement beyond E-Comm’s control is the completion of agreements between Regional Districts and TELUS. To date, only 14 of the 25 Regional Districts involved in the project have signed agreements. In June, E-Comm announced a revised project schedule, to provide Regional Districts more time to complete this requirement, with transition to the new network now scheduled to begin next spring, and completion and go-live anticipated by November 2025.

E-Comm is continuing to work with the Province and Regional Districts to facilitate this process. In the interim, we are utilizing the extra time and the fact that all five of the NG9-1-1 system environments have been stood up to further multiple testing programs to validate all system aspects: functions, integrations to other systems, call flow configurations, fail over mechanisms, and connectivity to the NG9-1-1 Network.

IMPROVING GOVERNANCE OVERSIGHT AND SERVICE

As noted, E-Comm has now completed a comprehensive, independent governance review of our organization, led by Deloitte, and is now actively consulting with its shareholders to provide information and receive feedback about proposed changes. The results of the review were shared with our shareholders and agency partners in June and include ten key recommendations to improve our corporate shareholder and board structure, as well as our financial governance and oversight.

As part of this process, E-Comm is working to develop an improved financial model based on recommendations from the review, as the current system has not kept pace with the growth of our organization and evolving technological needs. A new pricing structure is in development, with the goal of creating a more equitable and transparent pricing and cost-allocation model for our partners.

Read more details and find the full report on our [website](#).

LOOKING FORWARD

For the remainder of 2024 and beyond, we will focus on initiatives to support our operations staff, fortify our cyber security and data resiliency, and streamline our corporate and financial governance to offer more effective and efficient oversight of our organization.

As part of our commitment to improving transparency and predictability around costs, we are engaging with our partners regarding a long-term forecast for pricing and investments needed to ensure stability of our operations, while recognizing the financial pressures facing our local agency and government partners.

We also continue to work collaboratively with the Province and local government partners toward a new provincial mandate for 9-1-1 services in B.C., which would include consistent service standards, and sustainable funding through a levy on monthly cell phone bills in line with most other provinces.

While there are still many challenges ahead, we believe our transformation plan is creating a modern, reliable framework for strong, stable operations which will provide British Columbians with exceptional emergency communications services now and into the future.

From: Madeline L <madelinedanielleleaf@gmail.com>
Sent: Monday, July 15, 2024 12:50 PM
To: Jamie Ross <jross@belcarra.ca>
Subject: City of Belcarra Wrongful Convictions Day 2024 Proclamation

Mayor Ross,

On behalf of the International Wrongful Conviction Committee, I am writing to request that the City of Belcarra proclaim October 2, 2024, as “Wrongful Conviction Day”.

Wrongful Conviction Day is designated as an annual International Day to recognize the tremendous personal, social and legal costs associated with wrongful criminal convictions. This day recognizes those persons who have been forced to endure the tremendous consequences brought by a wrongful criminal conviction. The purpose of this day is to inform and educate the broader international community on the causes, consequences and complications associated with wrongful criminal convictions. More information on the day can be found at: <http://wrongfulconvictionday.com>.

It is important to raise awareness in order to work toward the prevention of further wrongful convictions. Proclaiming October 2nd as Wrongful Conviction Day can direct the public’s attention to this issue and generate support and understanding.

Wrongful Conviction Day was spearheaded by the International Wrongful Conviction Day Committee and now many organizations are leading events in its honor. The committee is committed to raising awareness of and advocacy against wrongful convictions globally.

The colour for “Wrongful Conviction Day” is yellow. We also are requesting on October 2, 2024, that the city illuminate their building in yellow if possible.

I have provided an example of the proclamation linked in this email.

Thanks in advance for your continued support!

Respectfully,

Madeline Leaf

International Wrongful Conviction Day Committee
madelinedanielleleaf@gmail.com
iwcdcommittee@gmail.com



COUNCIL REPORT

File: 6410-04

Date: September 23, 2024

From: Paula Richardson, Chief Administrative Officer
Manjit S. Sohi, Consultant, Sohi Consulting and Code Solutions

Subject: Amendments to and extension of Temporary Use Permit # TUP 2019-01 for 8 Corners Canada Inc., a subsidiary of the Evangelical Laymen's Church (ELC)

Recommendation

1. That the report dated September 17, 2024, Amendments to and extension of Temporary Use Permit, TUP #2019-01 for 8 Corners Canada Inc. be received into the record for information; and
2. That the Temporary Use Permit, TUP #2019 -01 be extended for one term not exceeding 3 years from October 20, 2024; and further
3. That staff be directed to prepare the amendments to the Temporary Use Permit, TUP #2019-01 for consideration at the next Council meeting.

Purpose

The purpose of this report is to present amendments to the Temporary Use Permit (TUP #2019-01) and the extension to the Temporary Use Permit (TUP #2019-01) for Council's issuance subject to conditions and to provide Council with an update on the activities of current operations of Evangelical Laymen's Church of Canada at their property along with an update on future aspirations and progress on the OCP and Zoning bylaw amendments of the Evangelical Laymen's Church of Canada, for their property.

Background

The subject lands (ELC Lands), legally described as PARCEL "E" (EXPLANATORY PLAN 10236) WEST HALF OF THE NORTH WEST QUARTER SECTION 30 TOWNSHIP 39 NEW WESTMINSTER DISTRICT are owned by the Evangelical Laymen's Church (ELC) of Canada and located in Farrer Cove. The site is approximately 61 acres; however, the "Tea Room", Bakery, Lodge are confined to two buildings on site identified on Appendix A.

The ELC currently operates several programs including:

- Church gatherings on Tuesdays (7 pm-11 pm), Wednesdays (7-11 pm), Saturdays (2-11 pm), and Sundays (11 am.-7 pm)
- About 5 workshops a year (bread and tea workshops usually on Saturdays (9 am to 9 pm)
- Annual tea festival (the 2nd and the 3rd weekends in July consisting of 2 Fridays, 2 Saturdays, 2 Sundays: 11 am-7 pm)
- During the tea festival, Water service (every 60-90 minutes from Rocky Point and Cate's Point marinas; boat access (at 4000 sq. ft. dock) is also welcome
- 2 gospel conferences (usually March and August: Monday-Friday (8 pm-11 pm)
- About 2 children's camps (usually in March and August)

Timeline – Camp Howdy Lands Recent History and Correspondence and Activity Summary

1946	YMCA acquires 76.5 acre property as well as other smaller properties in Farrer Cove
1989	Crown Land around Sasamat Lake granted to GVRD as part of Belcarra Regional Park
2006	YMCA land sold to ELC
2016	Commencement of “Tea Festival” events at ELC Lands
June 21, 2017	Building permit application, to renovate the Tea Room for the work completed without permit
February 26, 2018	Letter from Village of Belcarra to ELC <ul style="list-style-type: none"> · States that the Tea Room is not permitted by the Zoning Bylaw. · OCP amendment, rezoning, and an assessment of building code compliance are required to continue operating the Tea Room.
August 23, 2018	Letter from Village of Belcarra to ELC <ul style="list-style-type: none"> · Outlines requirements / steps for rezoning. · Indicates that rezoning is not guaranteed and that identifying a suitable access plan is a requirement. · Requests a Letter of Inquiry from the ELC outlining proposed operations, access, and parking intent.
September 4, 2018	Letter from ELC to Village of Belcarra <ul style="list-style-type: none"> · Indicates size, capacity, and proposed hours of operation for the tea room. · Indicates anticipated traffic volume is lower than under YMCA operation of the property. · Suggests, rather than rezoning, to consider the Tea Room to be equivalent to concession stands at Belcarra Park and White Pine Beach or as an accessory operation (e.g. a restaurant operating within a church).
September 5, 2018	Request by Village for clarity on ownership of ELC Lands and request for agent authorization.
January 2019	Informal indication that ELC will re-commence operations of Tea Room in March 2019.
February 11, 2019	The Council authorize staff to work with the ELC toward a Temporary Use Permit (TUP) to enable the operation of a Tea Room on the ELC Lands for an initial period of three years with the possibility to renew for another three years.
March 28, 2019	A TUP application and the Letter of Intent received by the Village from ELC.

April 24, 2019	The Council directed staff to: <ul style="list-style-type: none"> · prepare amendments to the OCP to accommodate Temporary Use Permits process, · permits ELC to open Tea Room for April, May & June 2019, · direct staff to process TUP application once received, · directed staff to consider rezoning and OCP amendment application when received.
July 22, 2019	The Council <ul style="list-style-type: none"> · read the OCP amendment a first and second time · Authorized ELC to operate Tea Room for July, August and September 2019, · directed staff to communicate with adjacent jurisdictions, · prepare a TUP for ELC for consideration at future meeting, and · legislative steps to hold public hearing and 3rd reading.
September 9, 2019	The Council adopted the Bylaw No. 541, 2019 to amend Official Community Plan Bylaw No. 435, 2011, to permit TUP #2019-01, and directed staff to issue TUP #2019-01.
April 27, 2020	The Council amended TUP #2019-01 to include "Breadmaking Workshops"; and added conditions including that the ELC to provide Access Plan to the Village.
May 25, 2021	The conditions outlined in April 27, 2020 substantially in compliance and Council authorized Mayor and CAO to sign TUP #2019-01
July 14, 2021	Building Permit, BP 620/17, received on June 21, 2017 issued as directed by Council on May 25, 2021
October 21, 2021	The Village of Belcarra issued Temporary Use Permit, TUP #2019-01
May 20, 2022	A building permit application received to convert a storage building into a Bakery as "Breadmaking Workshops".(Permit # 710/23)
December 5, 2022	That Council defer the preliminary application until sufficient information is provided to enable further review; and the preliminary application be deferred for six months.
August 2, 2023	Building Permit, BP 710/23 issued with several conditions.
November 6, 2023	The Council directed staff and the Village's Planning Consultant to process a detailed development application for the ELC proposal once the following activities are undertaken: <ul style="list-style-type: none"> · work with the applicant on the items outlined in the Council report, as well as any other items that may arise through the review process and · consult with Tsleil-Waututh First Nation, Metro Vancouver, and any other relevant organizations, groups, agencies, or municipalities regarding the preliminary application.

November 10, 2023	The staff received information and complaints from various social media advertisements that ELC is offering dinner service in domes at its facility, contrary to the TUP conditions. Additionally, the Tea Room and Bakery was open without first obtaining final inspection on building permit, permit numbers BP 620/17 and 710/23. and occupying Tea Room
December 5, 2023	Anonymous letter received concerning various life safety issues regarding ELC and its operations.
December 6 & 8, 2023	Staff visited the site to investigate the complaint about ELC.
December 11, 2023	Upon investigation, the staff determined that the ELC was operating contrary to the conditions of TUP #2019-01 and sent a first cease and desist letter. There were several email exchanges between staff/consultant and the ELC and its representative. The issues remain outstanding.
December 16, 2023	Staff and Village consultant visited the site around 6 pm; the ELC was operating in full force. There were 11 vehicles parked in the parking lot. The access to the site was only to be via water.
December 19, 2023	Bylaw infraction tickets were issued.
December 20, 2023	A second cease and desist order was issued via email. Again, there were several email exchanges between staff and the ELC representative. However, the issues remained outstanding.
January 16, 2024	Four bylaw violation tickets were issued.
January 24, 2024	A third cease and desist letter was issued.
April 25, 2024	A building permit application (BP 719/24) received to modify the existing commercial kitchen exhaust fan as identified during December inspection as life and safety concerns.
June 4, 2024	Building Permit, BP 719/24 issued.
July 9, 2024	During a building inspection, it was discovered that the scope of building permits BP 620/17 and 710/23 have changed considerably. Staff is reviewing the revised drawings.
September 4, 2024	Building Permit BP 719/24 received final inspection approval.

On October 21, 2019, at the direction of Council Mayor and Chief Administrative Officer issued a Temporary Use Permit, TUP #2019-01 (the TUP) to 8 Corners Canada Inc., one of the subsidiaries of ELC.

The primary purpose of the TUP was to permit certain commercial activities, not permitted by current zoning, while the ELC applies to amend the OCP and Zoning Bylaw. The ELC have inquired about OCP and Zoning Bylaw amendments, however, no formal application has been received yet. Under the current TUP the following activities are permitted:

- "Tea Room," defined as the use of premises for the primary purpose of selling and serving prepared food and non-alcoholic beverages to the public during hours of operation, where food and non-alcoholic beverages are consumed on the premises;
- Tea Festivals;
- Breadmaking and Tea Workshops; and
- Uses of a similar nature.

The TUP is valid for three years and it expires on October 20, 2024.

Amendments to TUP 2019-01

The ELC has applied for amendments to the TUP to accommodate their additional commercial activities. These activities are listed in the Letter of Intent dated September 17, 2024 (Appendix B). The ELC has requested to expand the commercial activities in the form of various festivals. These festivals will be open to public to provide tea, bread, dining, and other foods prepared for sale and purchase for onsite and offsite consumption. These festivals are limited to the following::

- *April and May weekends*
 1. Romantic Festival (theme of gourmet healthy dining with music, flowers and romance)
February weekends
 2. Bloom Festival (theme of flowers and renewal with healthy organic meals)
- *June: 1st weekend (11 am to 7 pm)*
 3. Sourdough Bread Festival
- *July: 2nd and 3rd weekends (11 am to 7pm)*
 4. Tea festival
- *August weekends Thursdays to Sundays (11 am to 7 pm)*
 5. Classical Music Festival
- *October Fridays to Sundays (4:30 pm to 9:30 pm)*
 6. Glo-Fest (theme of harvest with healthy organic meals and lights)
- *November to end of December Thursdays to Mondays (4:30 pm to 9:30 pm)*
 7. Christmas festival

Under the requested amendments, the Tea Room activities will essentially remain the same.

The existing breadmaking bakery building, adjacent to the Tea Room is being renamed as "Hemlock Room" and it is proposed to convert the building from Bakery to an Assembly Use. This Hemlock building will primarily include church activities and additionally will be used as storage, retail and overflow seating during the festivals listed above.

The Lodge building will primarily be used for food preparation and service including tea and bread workshops for onsite and offsite consumption. Additionally, the Lodge building will be used for religious gatherings.

The ELC has also requested the addition of 10 Hypedomes to facilitate dining of up to 8 people at one time per dome.

All cooking activities will be conducted from the commercial kitchen located in the Lodge building.

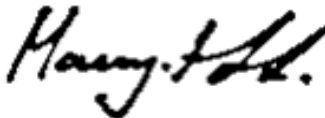
Any modifications, renovations, and the Hypedomes must comply with the current BC Building Code, and to the satisfaction of Village's Building Official. The ELC must obtain written permissions or building permits from the Village for such improvements

Conclusion

On September 9, 2019, Council amended the Official Community Plan (OCP) Bylaw No. 435, 2011, Amendment Bylaw No. 541, 2019 to permit Temporary Use Permits to allow activities explicitly listed in the OCP or Zoning Bylaw. The Temporary Use Permits are limited to three years.

Temporary Use Permits may be extended for one time for a term not exceeding three years.

The ELC has requested a three-year extension to Temporary Use Permit #2019-01 expiring no later than October 21, 2027. In the event that Council amends the OCP and Zoning Bylaw for the subject property, the TUP will expire with the adoption of such changes.



Prepared by: Manjit S. Sohi, Consultant,
Sohi Consulting and Code Solutions



Concurrence: Paula Richardson
Chief Financial Officer

The following appendices are attached hereto:

- Appendix A: ELC TUP Renewal
- Appendix B: ELC Letter of Intent – TUP Renewal



ELC
TUP RENEWAL & AMENDMENT
AUGUST 19, 2024



ELC TUP RENEWAL AND AMENDMENT
BELCARRA, BC



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Project number: 20240703
Date: JULY 3 2024
Scale:

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TUP-01

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ELC MISSION

OUR MANDATE IS TO LOOK AFTER PEOPLE'S WELL-BEING, PHYSICAL, MENTAL AND SPIRITUAL

EVANGELICAL LAYMEN'S CHURCH OF CANADA (VANCOUVER) IS A NON-DENOMINATIONAL CHRISTIAN CHURCH DEDICATED TO SPREADING THE TRUTH OF THE GOSPEL. IT WAS INCORPORATED ON JUNE 2, 2005 AS A RELIGIOUS, CHARITABLE AND EDUCATIONAL ORGANIZATION.

ELC IS ONE PART OF A BODY OF APPROXIMATELY 50,000 MEMBERS IN OVER 40 COUNTRIES. ALONG WITH ITS SISTER CHURCHES SUCH AS ELC EUROPE AND ELC US, ELC CONTINUES ITS WORK THROUGH MISSIONS IN ASIA, EUROPE, AND THE AMERICAS AND THROUGH ITS MEDIA ARM.

ELC IS EXCITED FOR OUR PLANS FOR THE FUTURE OF CAMP HOWDY IN THE COMMUNITY. IT IS OUR INTENTION TO CREATE VALUED EVENTS AND OPERATE TO BE AN INTEGRAL PART OF THE COMMUNITY.

WE HAVE BEEN CREATING SOME EXCITEMENT THROUGH OUR ANNUAL TEA FESTIVAL, BREAD AND TEA WORKSHOPS, AND THE TEA ROOM. WE ARE OPERATING THESE EVENTS WITH THE MINDSET OF CREATING MINIMAL IMPACT ON TRAFFIC AND OUR SURROUNDING ENVIRONMENT.

ELC PROPERTIES

ELC HAS CREATED MANY EXCEPTIONAL VENUES WITH EXCEPTIONAL QUALITY OF WATER, AIR AND SOIL AROUND THE WORLD TO PRODUCE AN EXTREMELY HIGH STANDARD PRODUCTS SUCH AS GREEN TEA, OLIVE OIL, AND OTHER PRODUCTS TO ACHIEVE OUR GOAL OF PROVIDING WELL-BEING

AT THESE VENUES, ELC HOLDS FESTIVALS, GOSPEL CONFERENCES, HEALTH CAMPS, AND CULTIVATES MANY DIFFERENT PRODUCTS.

ELC CREATES OUR OWN RECIPES USING INGREDIENTS FROM OUR OWN FARMS AND OTHER FARMS THAT MEET OUR STANDARDS. FOR EXAMPLE, WE GET OUR GREEN TEA FROM OUR WILD ORCHARD FARM ON JEJU ISLAND IN KOREA WHICH WAS THE FIRST FARM IN THE WORLD TO RECEIVE ROC (REGENERATIVE ORGANIC CERTIFICATE)

ELC ADDITIONALLY HAS A GREEN TEA FARM IN BOSUNG, KOREA, A SELKIRK PROPERTY OUTSIDE TORONTO, A FARM IN NEW YORK, AND A SHEEP FARM IN CHASE, B.C.

ELC OPERATIONS

ELC OPERATIONS

CHURCH OPERATIONS

CHURCH GATHERINGS HELD WEEKLY
2 CHURCH CONFERENCES PER YEAR

COMMERCIAL OPERATIONS

- ANNUAL TEA FESTIVAL - 2 WEEKENDS IN JULY
- APPROXIMATELY 5 WORKSHOPS A YEAR (BREAD AND TEA WORKSHOPS)
- TEA ROOM AND FUTURE BAKERY OPEN WEEKENDS FROM SPRING TO FALL
- FUTURE CHRISTMAS LIGHTS FESTIVAL & VALENTINE'S FESTIVAL

PROPOSED FUTURE COMMERCIAL OPERATIONS

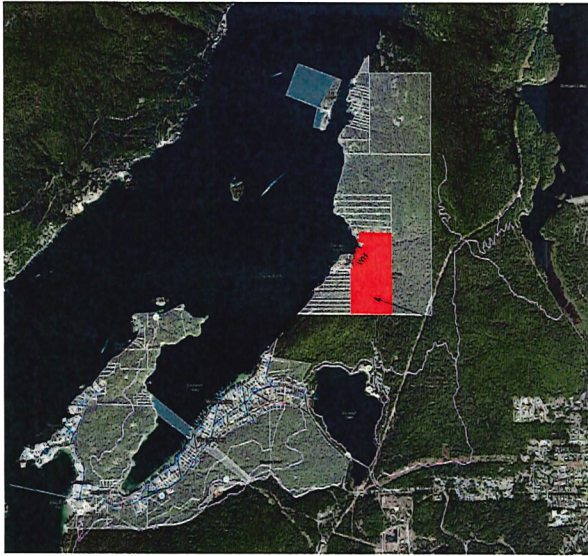
- WELLNESS CENTRE FOR THE PURPOSE OF PROMOTING COMMUNITY WELL-BEING
- MEETING/GATHERING HALL FOR CHURCH GATHERINGS AND COMMUNITY EVENTS
- SPA FOR WELL-BEING
- RESTAURANT SERVING ORGANIC FOODS
- GALLERY AVAILABLE FOR ELC ART COLLECTION, PUBLIC DISPLAYS, AND LOCAL ARTISTS
- RETREAT FOR GUESTS

ELC GOALS

ELC HAS THE FOLLOWING DRIVING GOALS:

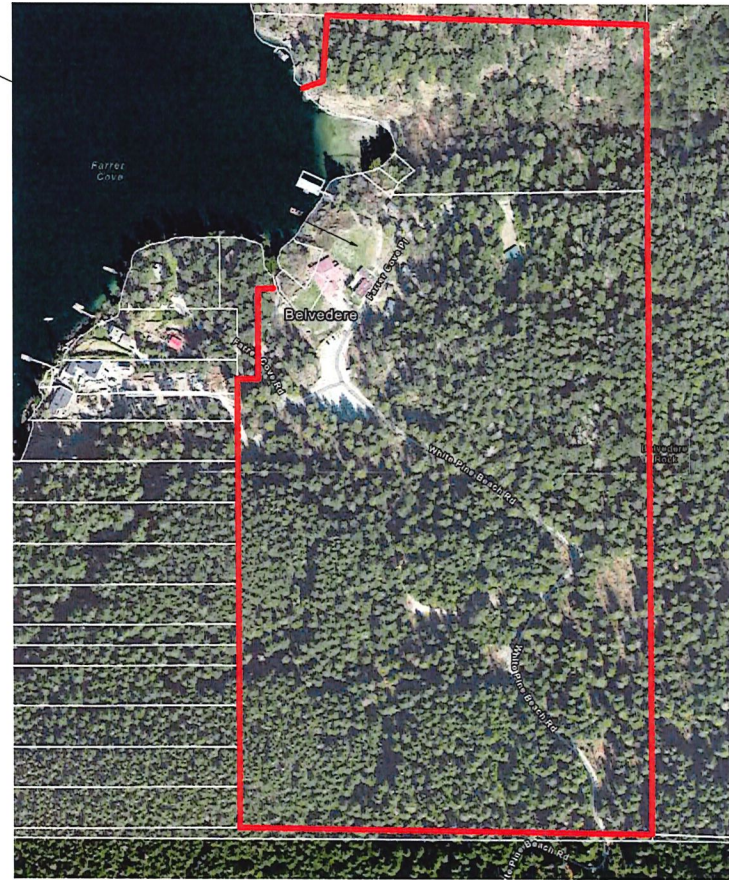
1. WE ARE CONSERVATIONISTS.
2. WE SUPPORT THE COMMUNITY.
3. WE BELIEVE IN THE PRESERVATION OF AND CO-EXISTING WITH NATURE.
4. WE WANT TO SUPPORT PEOPLE'S WELL-BEING.
5. OUR FOODS NEED TO BE OF THE HIGHEST QUALITY AND ORGANIC. ELC AVOIDS ANY PROCESSED FOODS OR INGREDIENTS.
6. OUR ARCHITECTURAL DESIGN IS GEARED TOWARDS CREATING A SOOTHING AMBIANCE TO TAKE CARE OF YOUR SOUL.
7. WE TEACH AND DEVELOP PROGRAMS SUCH AS BREAD WORKSHOPS, TEA WORKSHOPS, AND HEALTH CAMPS.



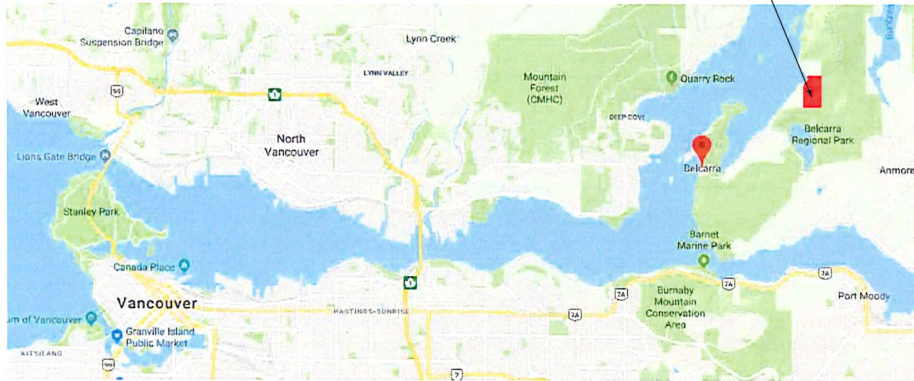


ELC PROPERTY
80 ACRES

ELC PROPERTY
80 ACRES



REGIONAL LOCATION



ELC PROPERTY
80 ACRES



elc

ELC TUP RENEWAL AND AMENDMENT
BELCARRA, BC



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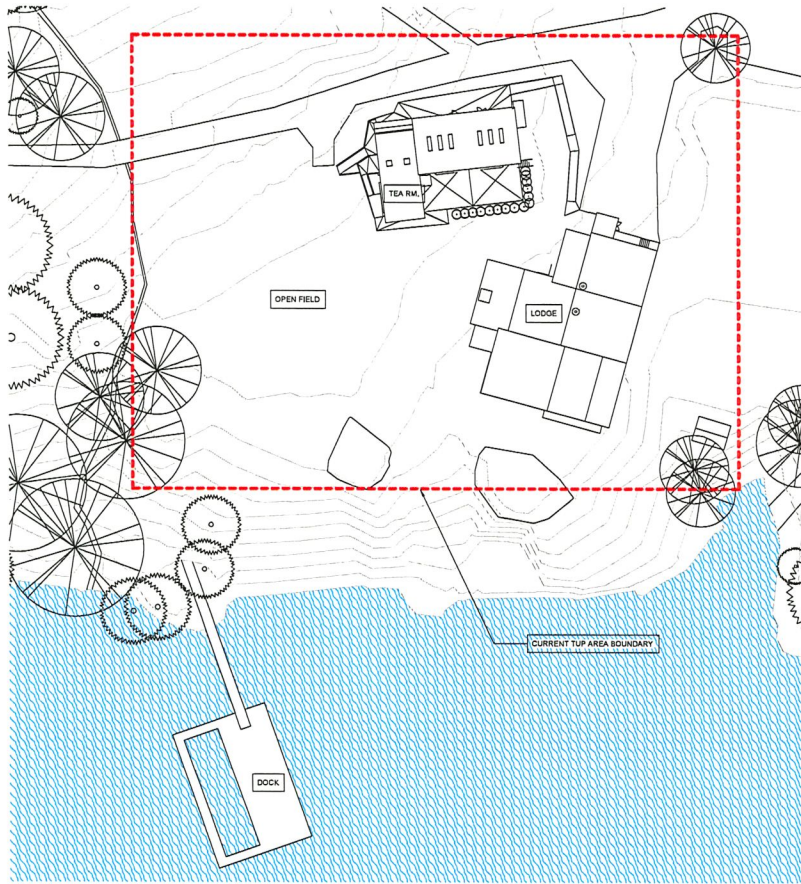


Project number: 20240705
Date: JULY 3 2024
Scale: As indicated

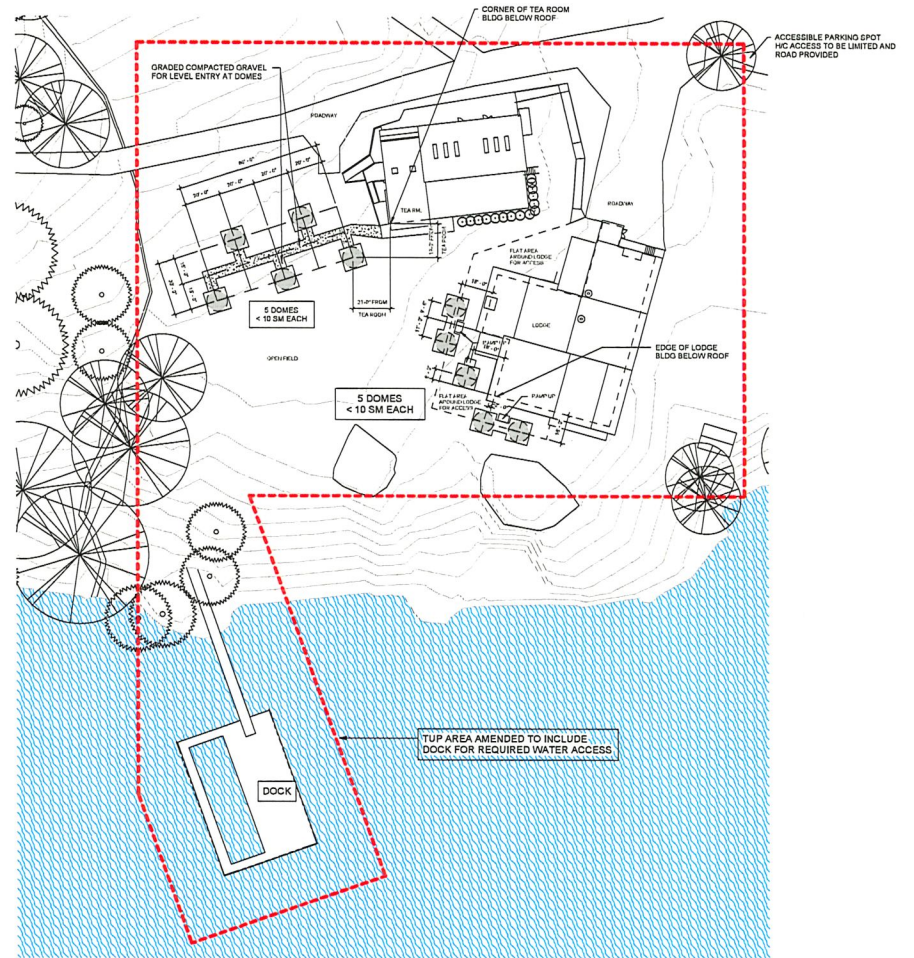
LOCATION PLAN

TUP-03

6/13/2024 11:29:43 AM



1 SITE - EXISTING TUP AREA
1/32" = 1'-0"



2 SITE - AMENDED TUP AREA
1/32" = 1'-0"



ELC TUP RENEWAL AND AMENDMENT
BELCARRA, BC



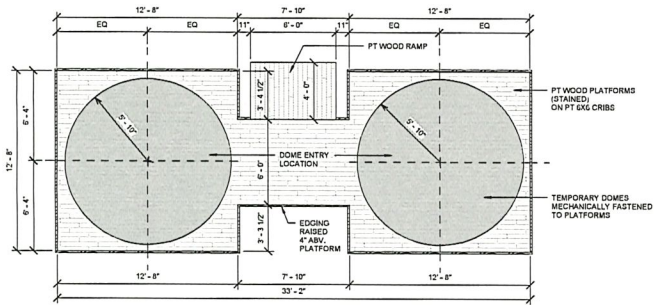
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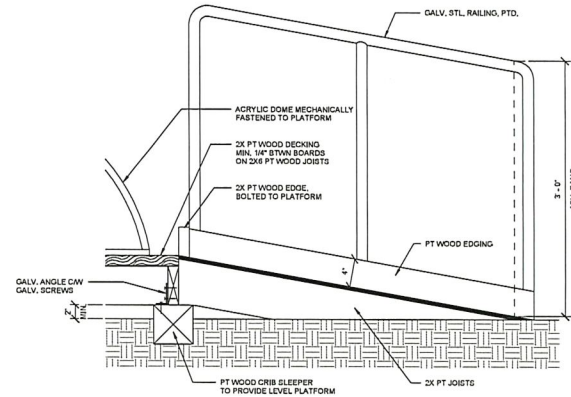
PROJECT: TUP24-04
Date: JULY 9 2024
Scale: 1/32" = 1'-0"

TUP AREA
TUP-04

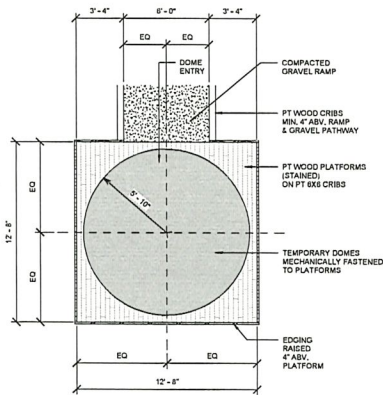
8/13/2024 11:27:19 AM



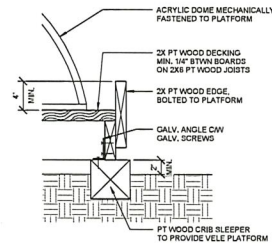
2 TYPICAL DBL DOME PLAN
1/4" = 1'-0"



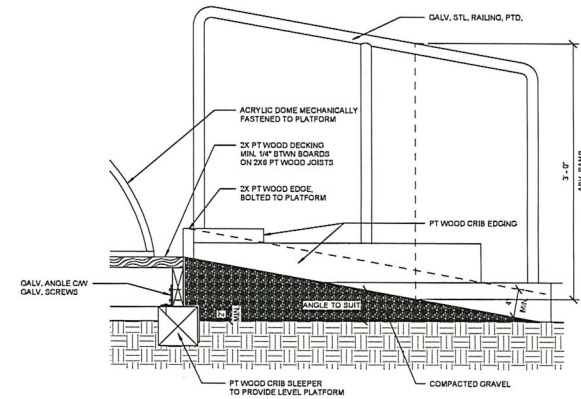
5 DOME WOOD RAMP DETAIL
1 1/2" = 1'-0"



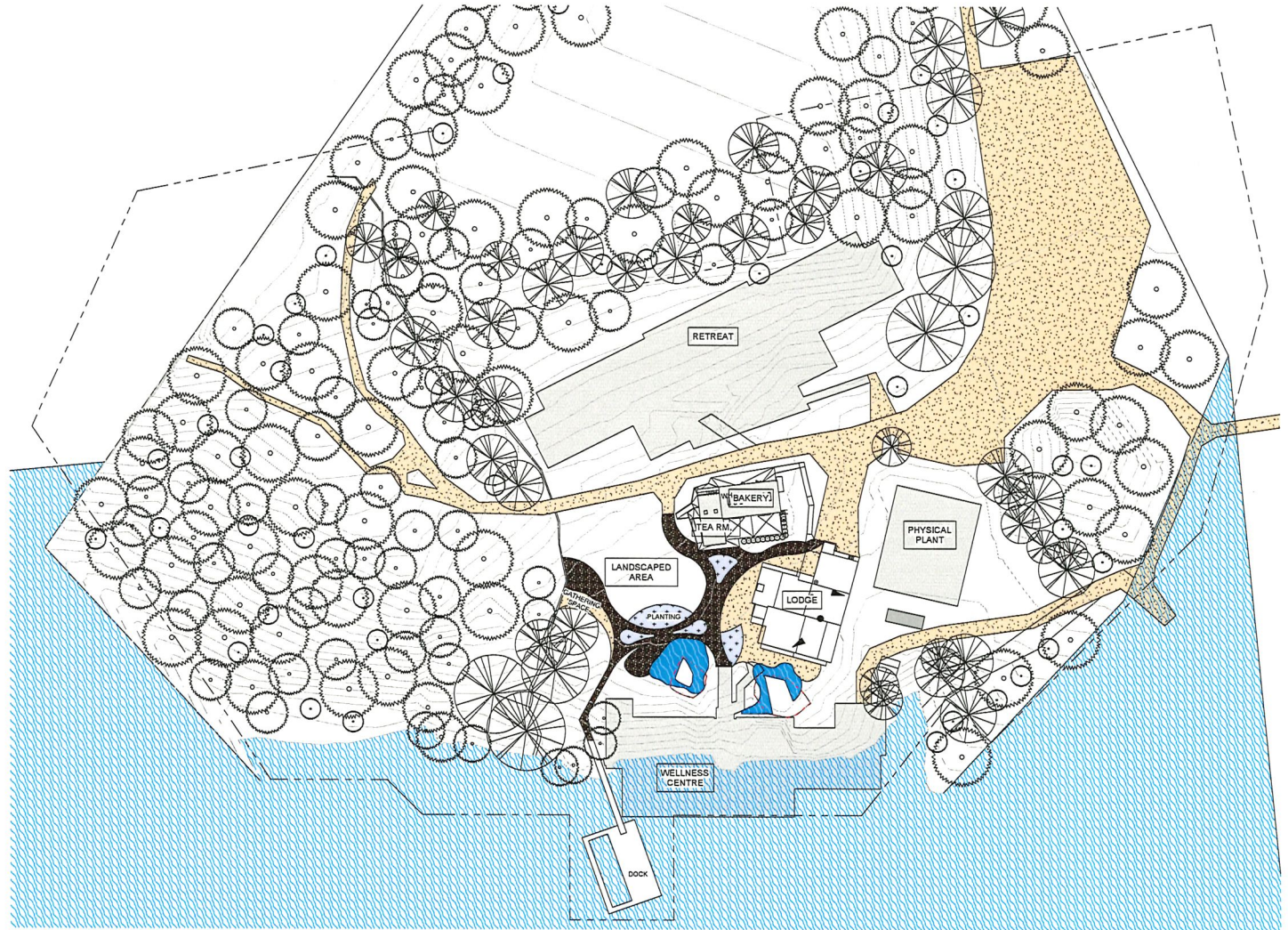
1 TYPICAL SGL DOME PLAN
1/4" = 1'-0"



3 DOME PLATFORM DETAIL
1 1/2" = 1'-0"



4 DOME GRAVEL RAMP DETAIL
1 1/2" = 1'-0"



SITE AREA
80 ACRES

AREA TO BE REZONED COMMERCIAL
15 ACRES (18.8% OF TOTAL AREA)

WELLNESS CENTRE
4 LEVELS
35,000 SQUARE FEET (APPROXIMATE)
ACCESSIBLE ROOF
SUPPORTED ON EXISTING ROCK AND CANTILEVERED.
NO PORTION TO BE BUILT IN WATER.

MAIN SPACES
TEA ROOM
RESTAURANT
GALLERY
CONFERENCE ROOM
SPA

RETREAT
8 LEVELS
200 BEDS (TO MATCH EXISTING ELC/FORMER YMCA CAMP)
70,000 SQUARE FEET (APPROXIMATE)
ACCESSIBLE ROOF
SUPPORTED ON EXISTING ROCK AND PLANTED ROOF.

MAIN SPACES
100 DOUBLE OCCUPANCY ROOMS (200 BEDS)
SMALL RESTAURANT AND KITCHEN
CONFERENCE ROOMS FOR SMALL GATHERINGS
SUPPORT OFFICES FOR WELLNESS CENTRE AND RETREAT

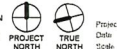
2 SITE PLAN - FUTURE DEVELOPMENT
1" = 50'-0"



ELC TUP RENEWAL AND AMENDMENT
BELCARRA, BC



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FUTURE DEVELOPMENT PLANS
TUP-06

Project number: 20240705
Date: JULY 3 2024
Scale: As indicated

8/12/2024 11:27:58 AM

To:

Village of Belcarra
4084 Bedwell Bay Road
Belcarra, BC V3H 4P8

From:

Evangelical Layman's Church of Canada (Vancouver)
3000 Camp Howdy Road
Belcarra BC V3H 5B6

September 17, 2024.

Attn: Ms. Paula Richardson, Chief Administration Officer, Village of Belcarra
Mr. Manjit Sohi, Building Official, Village of Belcarra

Re: Revised Letter of Intent for Renewal of TUP at Camp Howdy

I am pleased to write this letter of intent with excitement about our plans for the future of Camp Howdy in the community.

It is our intention to create valued events and operate to be an integral part of the community. We have been creating some excitement through our annual tea festival, a Christmas festival, a Spring festival, bread and tea workshops, and the Tea Room. We are operating these events with the mindset of creating minimal impact by using our water access agreement with Camp Jubilee and limiting our impact on the surrounding environment. We have built a 4000 sq. ft. dock, so that people with boats can arrive by water.

We have eliminated weddings and movies to continue to focus on community-oriented events with a theme of health and wellness through nature-based festivals, workshops and retreats.

We will continue to work with all sectors of the government such as Metro Vancouver, The Village of Belcarra, and the health department, the ministry of Environment regarding sewage, the Fire department, and VPA.

We would like to propose the following which will allow us to continue to do what we have been doing, as well as to create a few more events throughout the year.



Evangelical Laymen's Church
of Canada (Vancouver)

Proposal: Temporary Use Permit (TUP) for 8 Corners Tea Room, 123 Dough Bakery, and ELC Canada.

Desired opening: September 2024 (Lodge Building), October 2024 (Tea Room)

Current Zoning: CI – Civic Institutional, TUP 2019 – Commercial Operations

Proposed Zoning: CI – Civic Institutional, TUP 2024 – Commercial Operations

Current operations:

- Church gatherings on Tuesdays (7pm-11pm), Wednesdays (7-11pm), Saturdays (2-11pm), and Sundays (11am-7pm)
- About 5 workshops a year (bread and tea workshops usually on Saturdays: 9am-9pm)
- Annual tea festival (the 2nd and the 3rd weekends in July consisting of 2 Fridays, 2 Saturdays, 2 Sundays: 11am-7pm)
- During the tea festival, Water service (every 60-90 minutes from Rocky Point and Cate's Point marinas; boat access (at 4000 sq. ft. dock) is also welcome.
- 2 gospel conferences (usually March and August: Monday-Friday: 8pm-11pm)
- About 2 children's camps (usually in March and August)

Note: ELC would like to amend the TUP to add 10 dining domes for our festivals and events and expand the TUP area to include the dock facility for the required water access.

Requested Updates to Existing TUP – 2019-01

We request that the TUP permit be amended and extended to include the following organizations:

1. 8 Corners Canada, Inc.

Incorporation Number BC1041748
#148 – 1489 Marine Drive
West Vancouver, BC V7T 1B8

2. 123 Dough Canada, Inc.

Incorporation Number 1558131-1
3200 – 650 West Georgia Street
Vancouver, BC V6B 4P7

3. ELC Canada, Inc.

Incorporation Number S-49226 (June 2, 2005)
3000 Camp Road
Belcarra, BC V3H 5B6

TUP Extension Period

We request that the TUP permit be extended for an additional 3 years to the 21st of October 2027, or until the property is rezoned to Commercial as per the current rezoning process underway with the Village of Belcarra.

TUP Amended Area

We request that the TUP area be amended as per the submitted drawings to include the dock area for the required water access.

TUP Facilities – Purpose (Uses), Frequency of Use, Hours of Operation

We request that the TUP permit be amended to include the following uses:

1. Tea Room

- 500 sq. ft. space with about 24 seating capacity
- Compliant to the BC Building Code 2024 (Work currently underway under existing BP)
- Obtained Health Permit, clearance from Ministry of Environment regarding sewage, clearance from Fire Department, and clearance from VPA
- Planned hours of operation: Fridays and Saturdays (11am-4pm); open more days and longer hours in Summer (weather permitting)
- Access by water service as outlined above
- Boat access (at 4000 sq. ft. dock) welcome

2. Hemlock Room adjacent to tea room (former 123 Dough Bakery space under permit)

- 1,350 sq. ft. space
- To be used for church activities primarily
- Secondary Use: Available for storage, retail, and overflow seating during festivals
- Church gatherings on Tuesdays (7pm-11pm), Wednesdays (7-11pm), Saturdays (2-11pm), and Sundays (11am-7pm)

3. Lodge Building

- 2,588.55 sq. ft. space
- Primarily to be used for 8 Corners Tea Room, 123 Dough Bakery activities, Tea and bread workshops, and during festivals.
- Tea room and Bakery hours of operation: Fridays and Saturdays (11am-4pm); open more days and longer hours in Summer (weather permitting)
- Secondary Use: occasional church activities such as gospel conferences. 9am to 5 pm during conferences.
- 123 Dough Bakery – Organic Ancient Grain Pizzas and noodles: Fridays to Mondays (4:30 pm to 8:00 pm)

4. Kitchen of Lodge Building

- 1,850 sq. ft. space
- Primarily to be used for 8 Corners Tea Room, 123 Dough Bakery activities, church activities and during festivals for cooking and food preparation.
- Kitchen hours of operation: Daily from 7 am to 9 pm.

5. 10 dining domes

- Less than 10 sq. m. space each
- Primarily to be used for dining for festivals (See list of proposed festivals below)
- Domes accommodate up to 8 people.
- Typical operation is 2 seatings for dining during festivals.

6. Festivals proposed

1. Romantic Festival (theme of gourmet healthy dining with music, flowers and romance)
 - February weekends
2. Bloom Festival (theme of flowers and renewal with healthy organic meals)
 - April and May weekends
3. Sourdough Bread Festival
 - June 1st weekend
 - 11am-7pm
4. Tea festival
 - July: 2nd and 3rd weekends
 - 11am-7pm
5. Classical Music Festival
 - August weekends
 - Thursdays to Sundays 11 am to 7 pm
6. Glo-Fest (theme of harvest with healthy organic meals and lights)
 - October
 - Fridays to Sundays 4:30 pm to 9:30 pm
7. Christmas festival
 - November to end of December
 - Thursdays to Mondays 4:30 pm to 9:30 pm

Dome Information

The following is the information regarding the domes requested to be included as part of the amended TUP extension application.

Hypedome US & Canada

2000 Lee Rd, Cleveland Heights, OH 44118

Phone: +1 216-868-7104 E-mail: us@hypedome.com

Web: hypedome.com

Key Dimensions: Base area: 9.65 m²
Diameter: 3.5m at the ground level
Height: 2.3m
Door width: 32 inches (82 cm)

Features: Fully recyclable polycarbonate material
200x more impact-resistant than glass
Waterproof, resistant to rain, snow and wind
Temperature resistance: -35°C to +100°C
Coated with two layers of UV-protection
Door frame made of milled aluminum, non-corrosive
Rollable door: transparent PVC membrane with industrial-grade zip



COUNCIL REPORT

File: 5400-20-3

Date: September 23, 2024
From: Stewart Novak, Public Works & Emergency Preparedness Coordinator
Subject: **Marine Avenue Road Rehabilitation, Award of Contract**

Recommendation

That Contract No. 2024-ITT-01: Marine Avenue Road Rehabilitation Project, be awarded to 1166618 BC LTD DBA Save on Blacktop in the amount of \$294,246.33 including taxes; and

That a contract contingency of \$30,000 be approved to address potential variations in field conditions; and

That additional funding for ISL Engineering of \$13,300 to provide for full-time inspection and monitoring throughout the construction phase be approved; and further

That the Chief Administrative Officer be authorized to execute the contract.

Purpose

The purpose of this report is to obtain Council approval to award the Marine Avenue Road Rehabilitation Project contract to repair a stretch of road between 3960 block and 3700 block of Marine Avenue to 11666 18 BC LTD DBA Save on Blacktop and to obtain Council approval for additional funding for ISL Engineering.

Background

On January 22, 2024, Council passed a motion to repair a portion of Marine Avenue currently in poor condition and listed as a priority in Belcarra's Strategic Plan.

ISL Engineering provided a class 'D' cost estimate of \$250,410.60. to repair the slumping portions and a full repave of the road between 3960 and 3700 block of Marine Avenue and as a result Council approved a motion to proceed with the provision of a detailed design and class 'B' cost estimate.

On July 8, 2024, upon completion of ISL Engineering's detailed design work, Council approved a Class 'B' cost estimate of \$446,959.80 including a 20% contingency and 5% tax.

An additional \$22,345.00 was also approved for ISL Engineering fees to finalize detailed documents, create tender documents and construction services which brought the approved funding to \$469,304.80.

Tender Evaluations

On September 12, 2024, the tender posting closed for the 2024 Marine Avenue Road Rehabilitation Contract (2024-ITT-01). Six bids were received, listed below from lowest to highest price.

Contractor	Tender Price (inclusive of GST)
1166618 BC LTD DBA Save on Blacktop	\$294,246.33
All Roads Construction Ltd.	\$358,937.78
Jack Cewe Construction Ltd.	\$361,693.50
Lafarge Canada Inc.	\$394,511.25
Burnaby Blacktop Ltd.	\$448,605.11
GPM Civil Contracting Inc.	\$590,397.15

Upon review by ISL Engineering of the submitted tenders and discussion with Village of Belcarra staff, both ISL Engineering and staff recommend awarding the contract to 1166618 BC LTD DBA Save on Blacktop. Save on Blacktop's bid was the lowest bid price in the amount of \$294,246.33.

Staff are recommending additional funding of \$13,300 for work to be carried out by ISL Engineering equating to approximately 80 hours of time. This will allow for a more concentrated effort through the construction phase for inspections and monitoring of the project rather than on a part-time basis as originally budgeted for.

ISL Engineering services include:

- Pre-Construction Meeting
- Submittal/Shop drawing review
- Traffic Management Plan review
- Contract Administration, including:
 - Preparation of Issue For Construction drawings
 - Preparation of Progress Draws for the Village to execute
 - Preparation and review of any change orders that come up during construction
 - Daily Quantity Review
- Site inspection
 - Based on Save On Blacktop's provided schedule, the on-site work is expected to be completed over two weeks (~80 hours).
 - review the subgrade and reclamation through construction if required.
- Substantial completion walkthrough and documentation

Total Budgeting Overall

1166618 BC LTD DBA Save on Blacktop	\$294,246.33
ISL Engineering additional work	\$ 13,300.00
10% Contingency	<u>\$ 30,000.00</u>
Subtotal	<u>\$307,546.33</u>
ISL Engineering remaining allocated budget	<u>\$ 10,850.00</u>
Total	<u>\$348,396.33</u>

Conclusion

On January 22, 2024, Council approved a motion for a road repair between 3960 and 3700 block of Marine Avenue.

EXP Geotechnical Engineering brought forward four options for consideration and upon review. Council moved forward Option 1 which included asphalt removal and replacement with added granular base layer and replace with 150 mm of granular base compacted followed by 80 mm compacted asphalt and to provide a complete repave of the road.

On July 8, 2024 Council approved a budget of \$469,304.80 for a class B cost estimate to repair the section of Marine Avenue and funding for ISL Engineering to create tender documents, review, and provide managing services of the project.

On September 12, 2024 at 2:00 pm a total of 6 tenders were received.

After reviewing the tender bids by ISL Engineering and discussion with staff it is recommended that Council approve a motion to award the tender to 1166618 BC LTD DBA Save on Blacktop who came in with the lowest tender offer of \$294,246.33 inclusive of tax.

Staff also request additional budgeting of \$13,300 for additional monitoring and site visits by ISL Engineering during the construction process.

Upon Council approval, the total cost of the project including a 10% contingency will be \$348,396.33 which is \$98,563.47 lower than Belcarra's previous budget allocation of \$446,959.80.



Prepared by: Stewart Novak
Public Works and Emergency
Preparedness Coordinator



Concurrence: Paula Richardson
Chief Administrative Officer



COUNCIL REPORT

File: 5400-10-15

Date: September 23, 2024

From: Stewart Novak, Public Works & Emergency Preparedness Coordinator

Subject: **Bedwell Bay Road and Kelly Road Upgrade Project Update – Class D Cost Estimate and Concept Design**

Recommendation

That the report dated September 23, 2024 titled “Bedwell Bay and Kelly Road Upgrade Project Update – Class D Cost Estimate and Concept Design” be received into the record for information.

Purpose

This report is to provide an update the Bedwell Bay Road and Kelly Road Upgrade Project (BBUP) intended to improve conditions for vehicular, bicycle and pedestrian traffic.

Background

The Bedwell Bay Road and Kelly Road Upgrade Project (BBUP) is part of Belcarra’s key infrastructure projects which will improve road and pedestrian safety on Bedwell Bay Road, namely at the intersection of Kelly Road and up to Main Avenue.

This rehabilitation/upgrade infrastructure project is listed in Belcarra’s strategic plan and supported in the asset management study conducted by LandInfo Technologies.

The project includes rebuilding a gabion wall west of the Kelly Road intersection and adjusting the road to provide space for a walkway for pedestrian traffic. The project will also replace and adjust the locations of catch basins along the subject area.

This project is partially funded through TransLink and the Growing Communities Fund and is required to be completed by December 2027 by TransLink for funding purposes. Additional rounds of funding may be secured each year during the timeline of project’s term.

ISL Engineering has provided a Class D cost estimate of \$1,724,310.00, including a 40% contingency as well as concept design for the project. (Appendices A and B).

Conclusion

This report has been provided to keep Council current on information received regarding the Bedwell Bay Road and Kelly Road Upgrade Project to date. More detailed information relating to budget will be provided at a later date.



Prepared by: Stewart Novak
Public Works and Emergency
Preparedness Coordinator



Concurrence: Paula Richardson
Chief Administrative Officer

The following appendices are attached hereto:

- Appendix A Bedwell Bay Road and Kelly Road Upgrade Class D Cost Estimate - ISL
- Appendix B Bedwell Bay Road and Kelly Road Upgrade Concept Design - ISL

APPENDIX A to Item 10.3

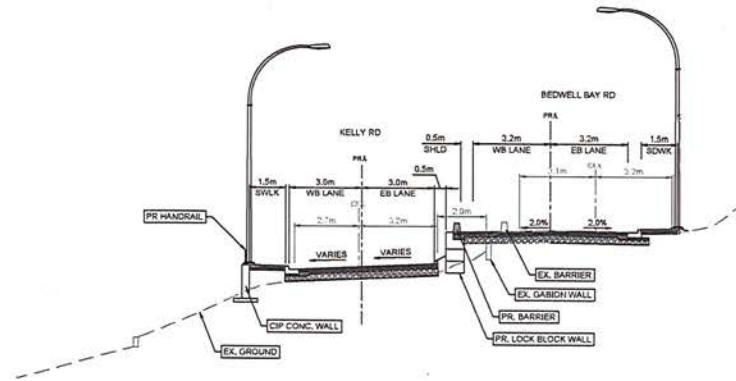
Bedwell Bay and Kelly Rd Upgrade Village of Belcarra CLASS D COST ESTIMATE

ITEM NO.	MMCD Ref./ (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
1.00	01 55 00	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	1.5.1	Traffic Control and Management	L.S	1	\$75,000.00	\$75,000.00
2.00	03 30 53	CAST IN PLACE CONCRETE				
2.01	1.4.1	CIP Concrete Wall incl. excavation and backfill	L.S	1	\$39,150.00	\$39,150.00
3.00	03 40 01	PRECAST CONCRETE				
3.01	1.4.2	Lock Block Wall incl. excavation and backfill	L.S	1	\$37,500.00	\$37,500.00
4.00	03 30 20S	CONCRETE WALKS, CURBS AND GUTTERS				
4.01	1.4.3	Concrete Barrier Curb and Gutter (MMCD C5) (incl. gravels)	lin.m	330	\$160.00	\$52,800.00
4.02	1.4.5	Concrete Sidewalk, Wheelchair Letdowns, 100mm thick - Broom Finished	sq.m	450	\$120.00	\$54,000.00
4.03	1.4.5	Concrete Driveway - 200mm thick - (incl. gravels)	sq.m	50	\$150.00	\$7,500.00
5.00	31 11 01	CLEARING AND GRUBBING				
5.01	1.4.3	Remove/Trim Existing Vegetation (Grass, Shrubs , Trees, etc.)	L.S	1	\$25,000.00	\$25,000.00
6.00	31 24 13S	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
6.01	1.8.4	Remove of Existing Gabion Wall, c/w off-site disposal and backfill	L.S	1	\$17,500.00	\$17,500.00
6.02	1.8.2, 1.8.5	Common Excavation - Off-Site Disposal, include Stripping & Top Soil Removal, Asphalts Pavement, Curb, Driveway and Sidewalks	cu.m	790	\$185.00	\$146,150.00
7.00	32 01 16.7	COLD MILLING				
7.01	1.5.1	Full Depth milling up to 200mm depth	sq.m	2320	\$25.00	\$58,000.00
8.00	32 11 16.1	GRANULAR SUB-BASE				
8.01	1.4.2	75mm Granular Subbase - 250mm thick	tonne	1700	\$65.00	\$110,500.00
9.00	32 11 23	GRANULAR BASE				
9.01	1.4.1	19mm Granular Base - 100mm thick	tonne	810	\$80.00	\$64,800.00
10.00	32 12 16S	HOT-MIX ASPHALT CONCRETE PAVING				
10.01	1.5.3/1.5.9	Upper Course #1 Asphalt Concrete (50mm thick) - Full Depth Pavement	tonne	270	\$200.00	\$54,000.00
10.02	1.5.3/1.5.9	Lower Course #1 Asphalt Concrete (50mm thick) - Full Depth Pavement	tonne	270	\$200.00	\$54,000.00
10.03	1.5.4	Extruded Asphalt Curb	lin.m	290	\$40.00	\$11,600.00
11.00	32 17 23S	PAINTED PAVEMENT MARKINGS				
11.01	1.5.3	Permanent Thermoplastic Pavement Markings and Signage	L.S	1	\$25,000.00	\$25,000.00
12.00	32 31 21S	TOP SOIL AND FINISH GRADING				
12.10	1.4.1	Topsoil - 150mm thick	cu.m	58	\$150.00	\$8,662.50
13.00	32 92 19S	SODDING				
13.01	1.8.1	Sodding	sq.m	385	\$20.00	\$7,700.00
14.00	33 40 01S	STORM SEWERS				
14.01	1.6.5	Catchbasin Leads c/w tie-in - 150mm SDR28 PVC (incl. Backfill & Permanent Trench Restoration)	lin.m	23	\$750.00	\$17,250.00

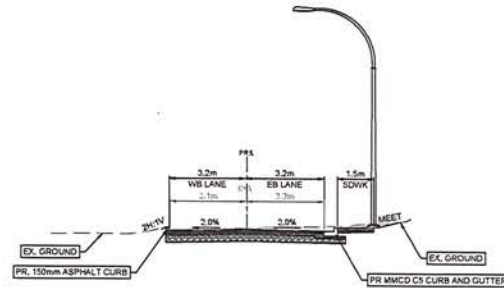
15.00	33 44 01S	MANHOLES AND CATCHBASINS		f		
15.01	1.5.2	Top Inlet Catchbasin	ea.	10	\$5,000.00	\$50,000.00
15.02	1.5.4	Remove Existing Catchbasin and Dispose Offsite	ea.	9	\$3,500.00	\$31,500.00
15.03	1.5.3	Adjust Existing Valve Box and Water Service Box	ea.	8	\$600.00	\$4,800.00
15.04	1.5.1	1200mm Manhole	ea.	2	\$10,000.00	\$20,000.00
16.00	33 11 01	WATERWORKS				
16.01	1.8.15	Hydrant Assembly Relocation	ea.	1	\$10,000.00	\$10,000.00
17.00	26 56 01	ROADWAY LIGHTNING				
17.01	1.9	Street Lighting	L.S	1	\$88,000.00	\$88,000.00

TOTAL COST (ROUNDED TO NEAREST \$1,000)	\$1,071,000.00
ENGINEERING 15% (DESIGN & CONSTRUCTION)	\$ 160,650.00
SUB-TOTAL	\$1,231,650.00
40% CONTINGENCY	\$ 492,660.00
CLASS D COST ESTIMATE	\$1,724,310.00

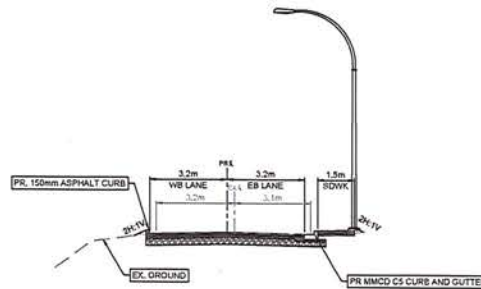
APPENDIX B to Item 10.3



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 @ STA 0+870.59 ON KELLY RD
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TYPICAL SECTION
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TYPICAL SECTION
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A	CONCEPT DESIGN	20/09/23	DN	MG



ROAD WORKS

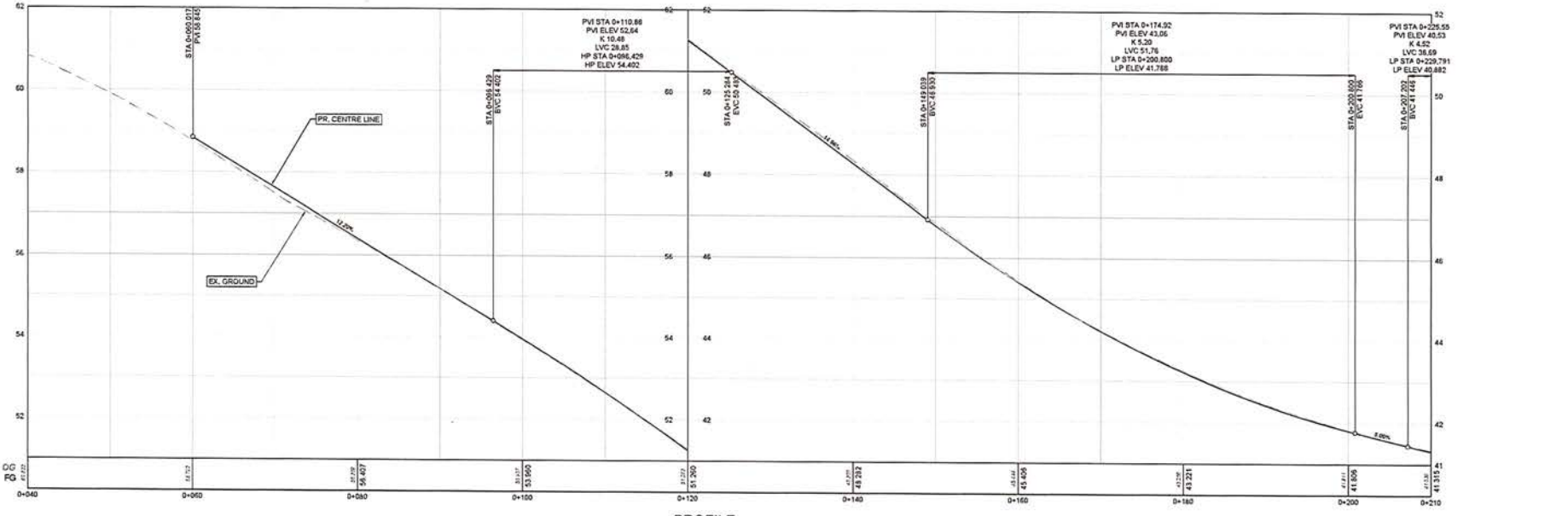
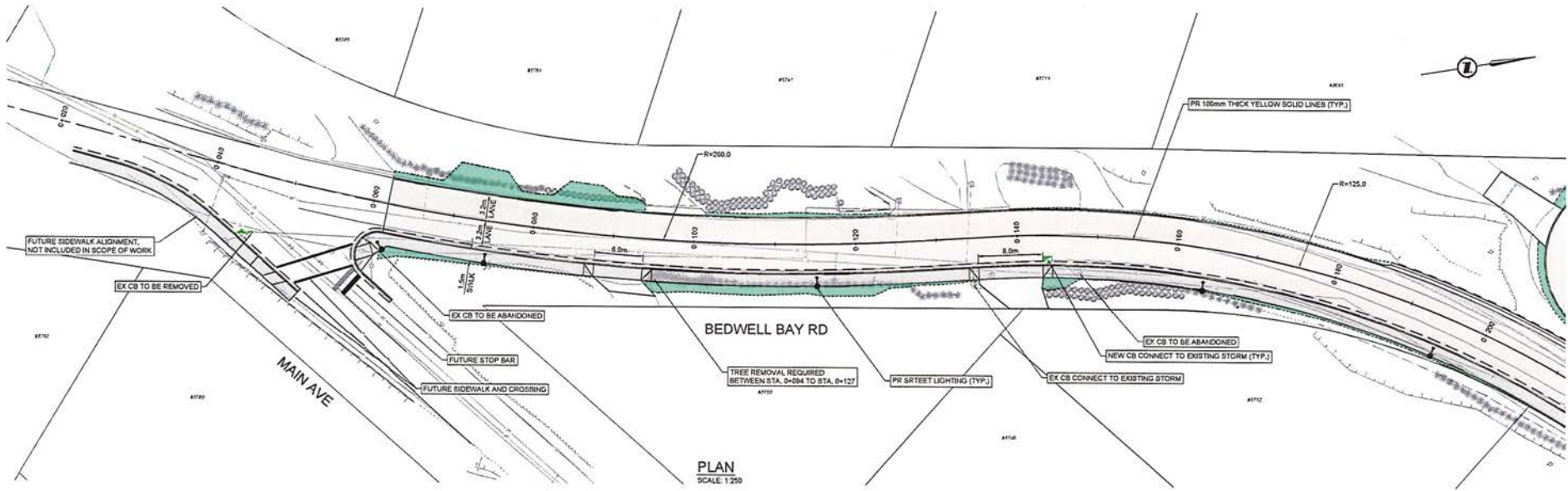
TYPICAL SECTIONS BEDWELL BAY RD AND KELLY RD CONCEPT DESIGN

CONCEPT DESIGN DESIGN NO.

32428



SCALE	AS SHOWN	CREATION DATE	FEB - 2024	DWG. NO.
DRAWN BY	EH	DESIGN BY	CJB	01
CHECKED BY	CJB	APPROVED BY	MG	04
DATE	September 13, 2024	REV.	A	



P:\2024\Projects\32428\Roadworks\Main\Drawing\Concept\32428_Roadworks_Plan_Profile.dwg, 14/02/2024, 10:40:00 AM, B:\BENTON\K.E.ENG

REV. NO.	REVISION DESCRIPTION	DATE	DRAWN BY	APPROVED BY
A	CONCEPT DESIGN	20/09/2024	EH	MO



ROAD WORKS

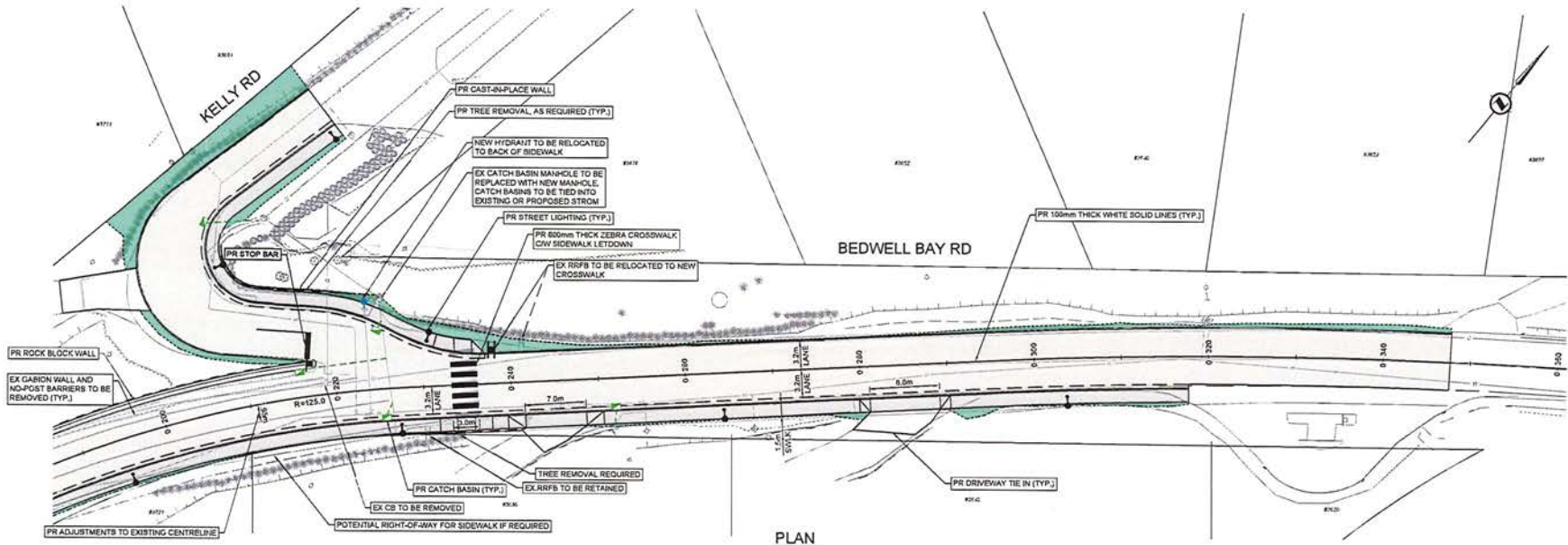
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CONCEPT DESIGN DESIGN NO.

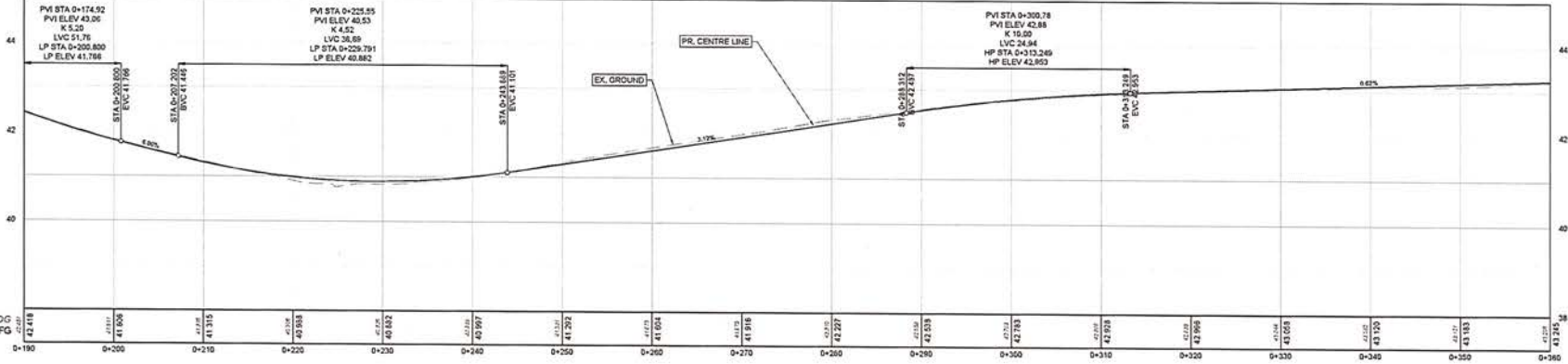


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DRAWN BY	EH	DESIGN BY	CJB	OF	04
CHECKED BY	CJB	APPROVED BY	MO	REV.	A
PLDT DATE	September 16, 2024				

32428



PLAN
SCALE 1:250



PROFILE
SCALE 1:500H/1:100V



REV. NO.	REVISION DESCRIPTION	DATE	DRAWN	APPROV
A	REVISION DESCRIPTION			
	CONCEPT DESIGN			



ROAD WORKS

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BEDWELL BAY RD

CONCEPT DESIGN DESIGN NO.

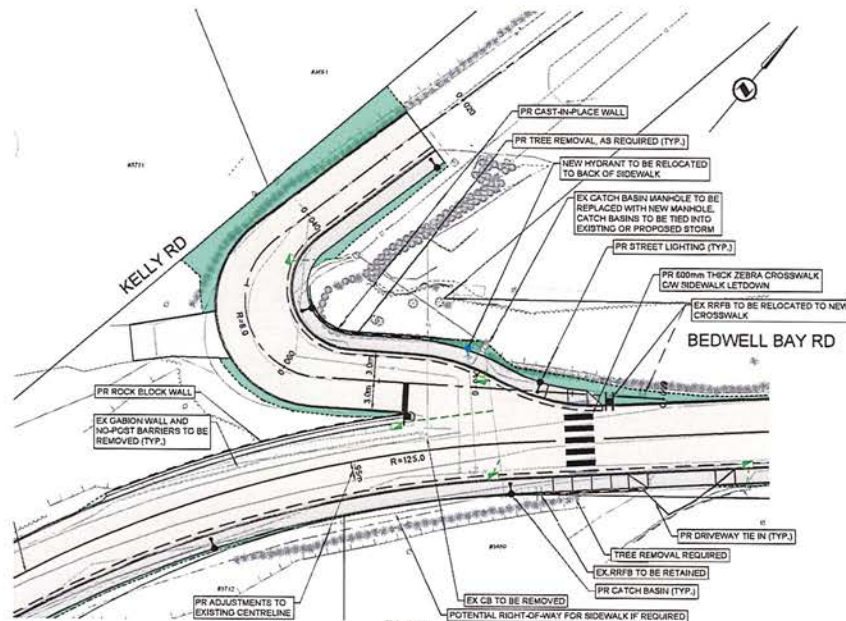


SCALE	AS SHOWN	CREATION DATE	FEB-2024
DRAWN BY	EH	DESIGN BY	CJB
CHECKED BY	CJB	APPROVED BY	MG
PLOT DATE	September 18, 2024		

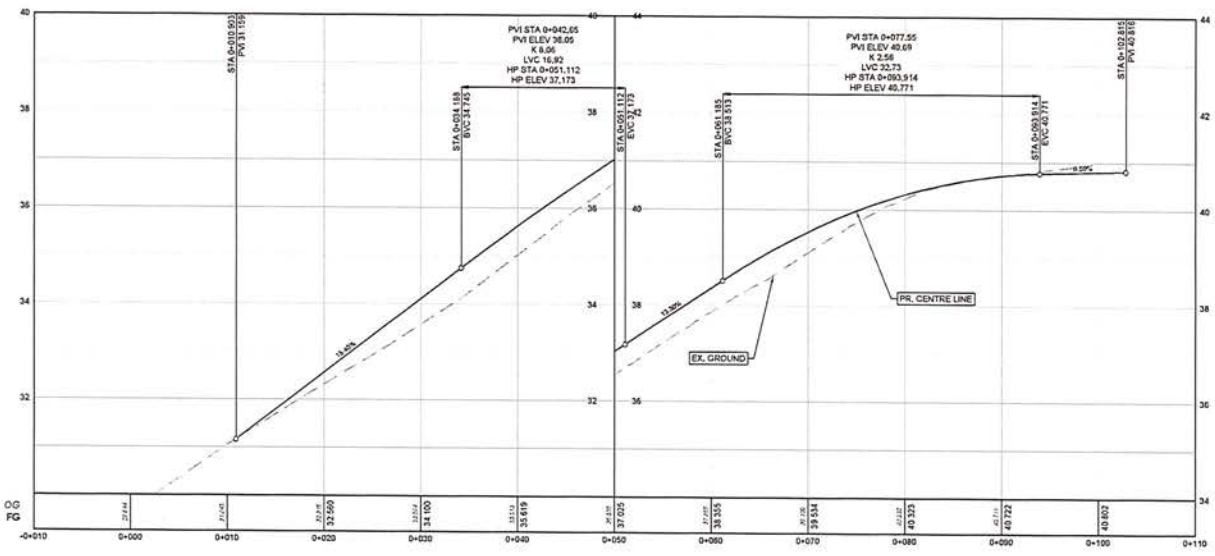
32428

DWG. NO.	03
DP	04
REV.	A

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PLAN
SCALE: 1:250



PROFILE
SCALE: 1:500H / 1:100V



REV. NO.	REVISION DESCRIPTION	DWG. NO.	DRWN.	APP'D.
A	CONCEPT DESIGN	32428/016	EH	MG



ROAD WORKS

STA 0+010 TO STA 0+110
KELLY RD

CONCEPT DESIGN DESIGN NO.

32428



SCALE	AS SHOWN	CREATION DATE	FEB - 2024	DWG. NO.
DRAWN BY	EH	DESIGN BY	CJB	04
CHECKED BY	CJB	APPROVED BY	MG	04
DATE	September 18, 2024			REV. A



COUNCIL REPORT

Date: September 23, 2024
From: Stewart Novak, Public Works & Emergency Preparedness Coordinator
Subject: Water Chlorination System Design Brief and Cost Estimate

Recommendations:

That the *New Tatlow Reservoir Chlorination System Design Brief* dated June 14, 2024 prepared by WSP Canada Inc. be received into the record for information; and

That the cost estimate of \$173,9000 for the construction phase of a new chlorination system project be approved; and further

That the Village of Belcarra Public Works and Emergency Preparedness Coordinator and representatives from WSP Canada Inc. be authorized to submit an application to Fraser Health requesting permission to modify the water distribution system and construct a chlorination system at the Tatlow Reservoir.

Purpose:

The purpose of the report is to provide up-to-date information on the construction of a chlorination system for the Tatlow Reservoir which will allow the reservoir to remain filled to its maximum capacity while protecting the minimum required chlorine residual in the drinking water supply.

Background:

Tatlow Reservoir is currently designed to allow water to circulate between a 76% and 95% capacity. Circulating the water in a continuous flushing motion ensures proper turnover of water, keeping the water fresh and preventing water stagnation and possibly losing its minimum residual of chlorine. In 2024 the chlorine residual in Belcarra's water where it discharges from Tatlow Reservoir averaged .53 mg/l. The minimum required chlorine residual is 0.2 mg/l.

Members of the public have expressed concern regarding water capacity for firefighting purposes and have requested that the reservoir be maintained at its maximum water level.

At the September 11, 2023 Council meeting, staff and WSP Canada Inc. (WSP) were directed to provide a more detailed cost design and a cost estimate for a chlorination system.

It should be noted that in a 2019 inspection report, Fraser Health recommended that chlorination equipment be obtained by the Village of Belcarra for future needs.

From a water operators' perspective, a chlorination system will provide staff more control over the chlorine residual levels and may also protect Belcarra's drinking water in the event of a chlorine residual deficiency brought from the supply of water. It should also be noted that there are no records to date of any chlorine residual deficiency brought from the supply of water to Belcarra.

At the September 11, 2023 Council meeting the WSP report titled "Costing Exercise for New Chlorination System at Tatlow Reservoir" was presented and discussed which lead to a consensus of Council that staff and WSP provide a more detailed cost estimate for a chlorination system which included the price for a geotechnical assessment. (Appendix B).

- At the September 25, 2023 Council meeting a motion was passed for a budget of \$46,000 to be established for the water chlorination system class B cost estimate (including detailed design and an estimate for a geotechnical analysis) with funding coming from the Community Building Reserve Fund.

WSP has provided staff with a detailed design in addition to a new Tatlow Reservoir Chlorination Design Brief and cost breakdown. (Appendix A)

The cost estimate provided by WSP amounts to \$173,900 plus tax and includes a 10% contingency. Belcarra's 2025 Financial Plan currently has a budget of \$175,000 to install a chlorination system for the Tatlow Reservoir.

Staff have forwarded the Fraser Health permit application package to WSP to assist in processing. Belcarra's area health officer recommended that the application be submitted as soon as possible due to a minimum three-month backlog to review applications.

To submit the application on behalf of the Village of Belcarra, which is the owner of water distribution system, Council is required to provide a letter of confirmation of authority for the individuals or company submitting the application.

Operational issues to be resolved prior to commissioning of the chlorination system are:

1. Additional courses and certifications for staff
2. Formalized procedures and operational training
3. Emergency procedures/plan for the chlorination system

Conclusion

Staff are in receipt of the cost estimate and detailed design of the chlorination system for the Tatlow Reservoir. The cost estimate, which includes a 10% contingency, amounts to \$173,900 and aligns with Belcarra's 2025 Strategic Planning Budget.

The previous estimate provided in the September 2023 Costing Exercise for New Chlorination System at Tatlow Reservoir report amounted to \$213,000.

Staff request a motion of authority to allow WSP Canada Inc. and the Public Works and Emergency Preparedness Coordinator to submit a permit application to Fraser Health on behalf of the Village of Belcarra, owner of the water distribution system.



Prepared by: Stewart Novak,
Public Works and Emergency Preparedness Coordinator



Concurrence: Paula Richardson,
Chief Administrative Officer

The following appendices are hereby attached:

Appendix A New Tatlow Reservoir Chlorination System Design Brief dated June 14, 2024

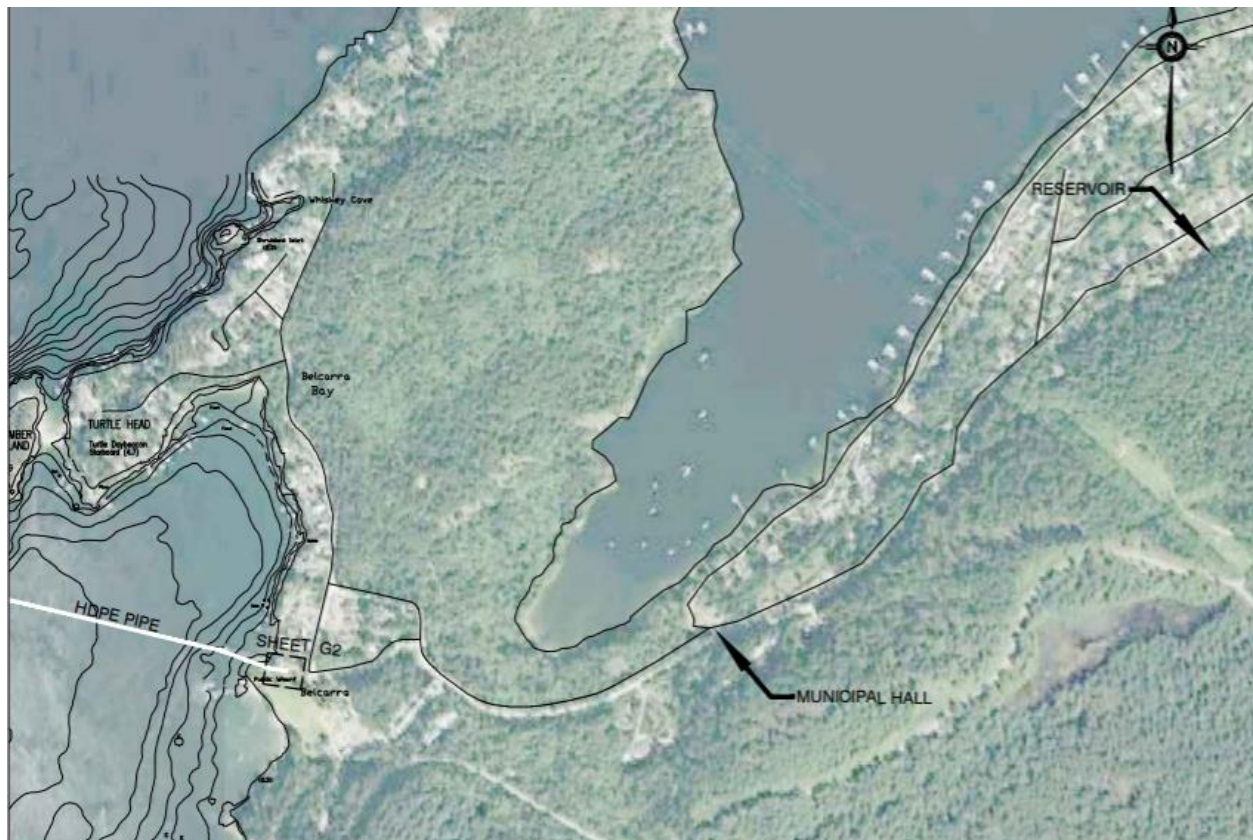
Appendix B Costing Exercise for New Chlorination System at Tatlow Reservoir dated August 30, 2024

VILLAGE OF BELCARRA
PROJECT NUMBER: 211-09148-00



NEW TATLOW RESERVOIR CHLORINATION SYSTEM DESIGN BRIEF

JUNE 14, 2024





NEW TATLOW RESERVOIR CHLORINATION SYSTEM

DESIGN BRIEF

VILLAGE OF BELCARRA

FINAL

PROJECT NO.: 211-09148-00
DATE: JUNE 14, 2024

WSP CANADA INC.
840 HOWE ST, #1000
VANCOUVER, BC
V6Z 2M1 CANADA

T: +1 604-685-9381

WSP.COM



June 14, 2024

Village of Belcarra
4084 Bedwell Bay Road
Belcarra BC V3H 4P8

Attention: Steward Novak

Dear Mr. Novak:

Subject: New Tatlow Reservoir Chlorination System Design Brief

WSP is happy to provide the Village of Belcarra with the Detailed Design for the new Tatlow Reservoir Chlorination System.

This design brief outlines the proposed design for the chlorination system, the decisions made, and a cost estimate for implementation of the design.

Yours sincerely,

Sinead McNally, P.Eng.
Project Manager

WSP ref.: 211-09148-00

REVISION HISTORY

FIRST ISSUE

May 1, 2024	DRAFT		
Prepared by	Reviewed by	Approved By	
Baylee Talan, EIT	Thomas Munding, P.Eng.	Sinead McNally, P.Eng.	

SECOND ISSUE

June 14, 2024	FINAL		
Prepared by	Reviewed by	Approved By	
Baylee Talan, EIT	Thomas Munding, P.Eng.	Sinead McNally, P.Eng.	

SIGNATURES

PREPARED BY

Baylee Talan, EIT
Junior Process Engineer

Date

APPROVED¹ BY

Sinead McNally, P. Eng
Project Manager

Date

WSP Canada Inc. prepared this report solely for the use of the intended recipient, Village of Belcarra, in accordance with the professional services agreement. The intended recipient is solely responsible for the disclosure of any information contained in this report. The content and opinions contained in the present report are based on the observations and/or information available to WSP Canada Inc. at the time of preparation. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP Canada Inc. does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report. This limitations statement is considered an integral part of this report.

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Junior Structural Engineer

Derek Lee, EIT

Designer, BIM & CAD

Eli Santos



TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	Background.....	1
1.2	Scope.....	1
2	PROCESS DESIGN.....	2
2.1	Chlorination System.....	2
2.2	Electrical System.....	2
2.3	Control Philosophy.....	3
3	CHLORINATION KIOSK.....	4
3.1	Kiosk Enclosure Design.....	4
3.2	Structural Concrete Kiosk Pad Design.....	4
4	COST SUMMARY.....	5
4.1	Class A Cost Estimate.....	5

TABLES

TABLE 2.2	ELECTRICAL DEMANDS FOR CHLORINATION SYSTEM.....	2
TABLE 3.2	WEIGHT ESTIMATE FOR CONCRETE KIOSK PAD DESIGN.....	4
TABLE 4.1	CLASS A COST ESTIMATE.....	5

1 INTRODUCTION

1.1 BACKGROUND

The Tatlow Reservoir (Reservoir) and Pump Station (PS) are two major components of the Village of Belcarra's (the Village) water infrastructure. The Reservoir delivers potable water by gravity flow to the majority of the Village's residents through a 200mm DI gravity main. The PS draws potable water from the Reservoir and supplies the other residents through a 150mm DI high-pressure main.

The Village is interested in keeping the Reservoir full at all times to ensure its maximum capacity is available for fire protection. The low turnover from keeping the Reservoir full for prolonged periods of time would result in free chlorine degradation and thermal/chemical stratification. The low chlorine residual and the "separation" of water through stratification may result in stagnant water, inadequate disinfectant residual, and biofilm growth.

The Village has retained WSP to provide a detailed design and Class A Cost Estimate for a chlorination system that will address the chlorine degradation and stratification issues that result from low Reservoir turnover. The Village has indicated a preference for a simple and economical design given that the water distribution system is expected to be upgraded to address the firefighting deficiencies, as noted in the 2022 Water Model Development Report previously completed by WSP.

1.2 SCOPE

The scope of this design brief is to provide information on the following aspects of the new Tatlow Reservoir Chlorination System:

- Background information on the existing system
- Information on the process, mechanical, electrical, and structural design
- Documentation of the design work and assumptions and decisions made

The final design will include the following main components which will be covered in more detail:

- New pad-mounted chlorination kiosk enclosure to house equipment and chemicals
- 12% Sodium Hypochlorite storage in secondary containment
- Peristaltic dosing pump to supply chemical to the Reservoir
- Free-chlorine analyzer with HMI interface
- Mounted submersible in-tank mixer
- De-chlorination of sample drain line from analyzer
- Power supply from existing Pump Station to kiosk

2 PROCESS DESIGN

2.1 CHLORINATION SYSTEM

The chlorination system is comprised of a peristaltic dosing pump, a submersible in-tank mixer, and a free chlorine analyzer. The dosing pump and free chlorine analyzer will be installed within a pre-fabricated kiosk enclosure approximately 1m northwest from the Tatlow Reservoir.

The dosing pump would draw from a five-gallon (19L) jug of 12% sodium hypochlorite seated within a spill containment tray. A close fitting gap would be installed between the jug and dosing pump suction tube to minimize chemical vapour release. The dosing pump would be configured to provide intermittent dosing to the Reservoir. The sodium hypochlorite supply is expected to last for a few weeks to several months depending on water consumption and environmental conditions.

A submersible in-tank mixer would be installed within the Reservoir to prevent thermal and chemical stratification. The mixer is installed and removed directly through the hatch of the Reservoir using the stainless-steel chain included with the mixer. No reservoir shutdowns would be required for the installation or removal of the mixer.

A free chlorine analyzer with an HMI interface would be installed in the new chlorination kiosk to monitor free chlorine residual within the Reservoir for control of the dosing pump. A 6mm sampling line will siphon water to the analyzer from the Reservoir through the reservoir roof next to the reservoir hatch.

The kiosk enclosure interior will be insulated and come equipped with a heater and thermostat for freeze protection. Additionally, the chlorine dosing line and water sample line will be run through a conduit with heat tracing for freeze protection.

A wall-mounted squeeze-bottle eyewash station installed inside the kiosk will provide emergency eye flushing.

2.2 ELECTRICAL SYSTEM

The existing PS' 120V panel board will provide service to the new chlorination system. The control signals from the analyzer and dosing pump will be integrated into the PS building's existing RTU panel.

The panel board will supply power to receptacles that will provide power for the heat trace and mixer maintenance.

120VAC power from the control panel for the mixer will be supplied by vendor cable run through the reservoir roof next to the hatch.

Table 2.2 Electrical Demands for Chlorination System

DESCRIPTION	QUANTITY	SIZE [HP]	SIZE [W]
Dosing Pump	1	1/30	25
Free-Chlorine Analyzer	1		100
Reservoir Mixer Pump	1	1/3	630
Kiosk Components (2xLED Lights, 1xVentilation Fan, 1xHeater)	1		1000
Heat Trace for Dosing and Sampling Pipes	1		500
Total load:			2,255

2.3 CONTROL PHILOSOPHY

The Reservoir will be chlorinated intermittently based on the chlorine residual measurement of the chlorine analyzer. The chlorine concentration setpoint in the reservoir is 0.7 mg/L, the low chlorine alarm setpoint is 0.3 mg/L and a high chlorine setpoint is 1.2 mg/L. The chlorine demand for this reservoir is expected to be between approximately 0.1 to possibly as high as 1.0 L/day of 12% sodium hypochlorite.

The dosing pump is a Stenner peristaltic pump with a capacity of 11 L/day will dose the 12% sodium hypochlorite into the Reservoir at the inlet to the 1/3 HP reservoir mixing pump.

The mixing pump will very slowly disperse water around the reservoir. It is expected to take several hours or up to a full day for this small mixer to “roll-over” the reservoir’s full contents, hence the mixer will run continuously 24/7. The mixer has no controls, just a GFCI circuit in the kiosk to power the mixer with an on-off switch (or receptacle plug) for mixer maintenance.

The dosing pump will be initially set to run at about 50% speed (about 5.5 L/day flow rate), and it will be run intermittently being pulsed ON for a short fixed time followed by OFF for a long time. The dosing pump speed can be set by the operator (range 20% to 100%, start testing at 50%).

3 CHLORINATION KIOSK

The new chlorination system will be housed in a pre-fabricated kiosk enclosure located adjacent to the Tatlow reservoir. The kiosk has been designed to hold all the necessary equipment of the process design less the mixer, which will be located at the bottom of the reservoir. The layout of the new kiosk can be referenced in drawing number P-005 of the drawing set.

3.1 KIOSK ENCLOSURE DESIGN

Specifications of the new pre-fabricated kiosk enclosure are as follows:

- Dimensions of 1.8m H x 1.7m W x 1.0m D
- Marine grade aluminum construction
- CSA Type 3R rated / Powder coated PC 101 grey
- Single-sided, double-door, open-bottom, pad-mount design
- Hinged doors with pour-in-place gaskets & gas shock stays
- Padlockable, 3-point latch mechanism on door
- Galvanized back panels / Slanted roof w/ rain gutter
- Filtered, convection ventilation system
- Freeze protection heating
- Removable lifting ears

3.2 STRUCTURAL CONCRETE KIOSK PAD DESIGN

Specifications of the new kiosk design are as follows:

- Reinforced concrete with dimensions of 2.0m x 1.4m x 0.5m
- 100mm rigid insulation at the underside of concrete house keeping pad.

Table 3.2 Weight Estimate for Concrete Kiosk Pad Design

UNIT	BRAND/MODEL	WEIGHT [KG]
Steel Kiosk Shelter	Valid/Part #: KDDA726642-231222	318
Panel board	P1XT1C2-18BAB	35
Junction box	Hoffman-CSD12106LG	5
Dosing Pump	Stenner/Classic Series Single Head Adjustable	4
De-Chlorinator	Bio-Dynamic/LF-1000	3
Analyzer/HMI Interface	Walchem/W100 Series Water Treatment Controllers	3
5 Gallon (19L) Chemical Jug	N/A	19
Wall Mounted Squeeze Bottle Eye Wash	Plum/48108	2
Secondary containment tray	Uline/large 23 Gallon Utility Tray	3
Total Weight		491

4 COST SUMMARY

4.1 CLASS A COST ESTIMATE

The estimated cost of the construction phase of the project is \$173,900. A breakdown of the cost can be referenced in Table 4-1 below.

Table 4.1 Class A Cost Estimate

ITEM	DESCRIPTION	PROJECT COST
1.0 Civil and Structural		
1.1	Pipeline and Conduit Excavation	\$30,000
1.2	Concrete Slab Foundation	\$4,000
1.3	Pre-Fabricated Kiosk Enclosure	\$26,000
1.4	Installation	\$10,000
1.5	Civil Testing	\$5,000
Subtotal Civil		\$75,000
2.0 Mechanical and Process		
2.1	Stenner 45 85 Peristaltic Metering Pump	\$1,500
2.2	W100 Series Water Treatment Controller - Free Chlorine Analyzer	\$3,200
2.3	LF1000 Dechlorinator + Tablets	\$1,500
2.4	1/3 HP Aquasweep Mixer + Tripod Mount	\$3,600
2.5	Secondary Containment	\$500
2.6	Squeeze-Bottle Wall-Mounted Eye Wash Station	\$200
2.7	Installation	\$10,000
2.8	Testing and Start-Up	\$5,000
Subtotal Mechanical and Process		\$25,500
3.0 Electrical		
3.1	Controls and Commissioning	\$3,300
3.2	Junction Boxes	\$1,100
3.3	Panel board	\$2,200
3.4	Cables and conduits	\$6,600
3.5	Installation	\$8,800
Subtotal Electrical		\$22,000
4.0 Contractor General Costs		
4.1	Mobilization/Demobilization	\$10,000

4.2	Insurance & Bonding (2% of construction cost)	\$2,800
4.3	Project management (2% of construction cost)	\$2,800
Subtotal Contractor General Costs		\$15,600
5.0 Engineering		
5.1	Project Management, Contract Administration, Tender Services	\$15,000
5.2	Summary Report Technical Memo Support	\$3,000
5.3	Site Visit	\$2,000
Subtotal Engineering		\$20,000
6.0 Class A Cost Estimate Contingency		
6.1	Contingency (10%)	\$15,800
Subtotal Contingency		\$15,800
Total (Excluding GST)		
Total (Excluding GST)		\$173,900

MEMO

TO: Stewart Novak, Public Works & Emergency Preparedness Coordinator
FROM: Michael Levin P.Eng., PMP, Thomas Munding, P. Eng, Jeffrey Kung, EIT
SUBJECT: Costing Exercise for New Chlorination System at Tatlow Reservoir
DATE: August 30, 2023

BACKGROUND

The Tatlow Reservoir (Reservoir) and Pump Station (PS) are two major components of the Village of Belcarra’s (the Village) water infrastructure. The infrastructure delivers potable water to 270 homes in the connected service area. The Reservoir is a single-cell bolted steel reservoir with a capacity of 58,800 imperial gallons (0.27 ML). The Reservoir delivers potable water by gravity flow to the majority of the Village’s residents through a 200mm DI gravity main. The PS draws potable water from the Reservoir and supplies the other residents through a 150mm DI high-pressure main.

The Village is interested in keeping the Reservoir full at all times to ensure its maximum capacity is available for fire protection. The low turnover from keeping the Reservoir full for prolonged periods of time would result in free chlorine degradation and thermal/chemical stratification. The low chlorine residual and the “separation” of water through stratification may result in stagnant water, inadequate disinfectant residual, and biofilm growth.

The Village has retained WSP to provide a high-level conceptual design and Class D Cost Estimate for a chlorination system that will address the chlorine degradation and stratification issues that result from low Reservoir turnover. The Village has indicated a preference for a simple and economical design given that the water distribution system is expected to be upgraded to address the firefighting deficiencies, as noted in the 2022 Water Model Development Report previously completed by WSP.

PROPOSED CHLORINATION SYSTEM

WSP proposes that a chlorination system is installed in a pad-mounted, pre-fabricated kiosk enclosure near the Reservoir. The system will address water quality issues that result from low Reservoir turnover. The chlorination system will comprise of the following major components:

- Chlorination system
- Pad-mounted kiosk enclosure
- Buried pipelines and conduits



- Electrical upgrades

The required engineering design and installation costs for the chlorination system are also discussed in the following sections.

CHLORINATION SYSTEM

The chlorination system is comprised of a peristaltic dosing pump skid, a submersible in-tank mixer, and a free chlorine analyzer. The dosing pump skid and free chlorine analyzer will be installed within a pre-fabricated kiosk enclosure approximately 5m northwest from the Tatlow Reservoir.

The dosing pump would draw from a five-gallon (19L) jug of 12% sodium hypochlorite seated within a spill containment tray. The skid is expected to be approximately 1.20m x 0.35m in size (see Figure 2). An elastomer seal would be installed between the jug and dosing pump suction tube to minimize air and vapour release. The dosing pump would be configured to provide intermittent dosing to the Reservoir. The sodium hypochlorite supply is expected to last for a few weeks to several months depending on water consumption and environmental conditions.

A submersible tank mixer would be installed within the Reservoir to prevent thermal and chemical stratification. The mixer is installed and removed directly through the hatch of the Reservoir using the stainless-steel chain included with the mixer. No reservoir shutdowns would be required for the installation or removal of the mixer.

A free chlorine analyzer with an HMI interface would be installed within the PS building to monitor free chlorine residual within the Reservoir and control the dosing pump. A 6mm sampling line will connect the analyzer to the Reservoir. The analyzer will be integrated to the existing PS' control system.

A wall-mounted squeeze-bottle eyewash station installed inside the kiosk will provide emergency eye flushing.

Figure 1 presents the configuration of the proposed chlorination system.

Figure 2 presents the proposed layout of the chlorination system in the existing PS Building.

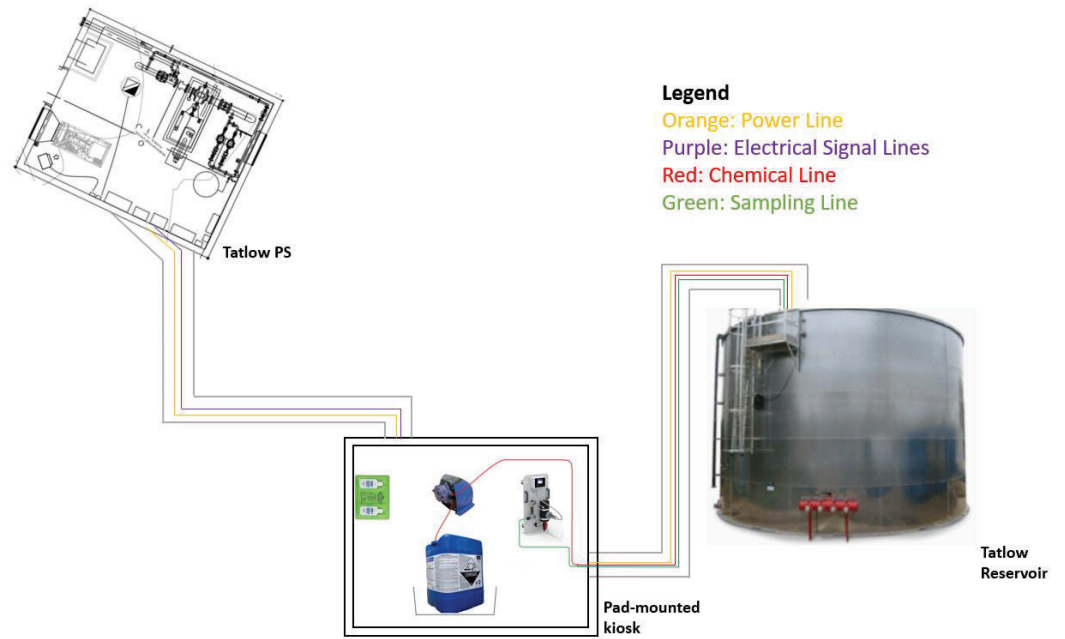


Figure 1: Configuration of proposed chlorination system (not to scale)

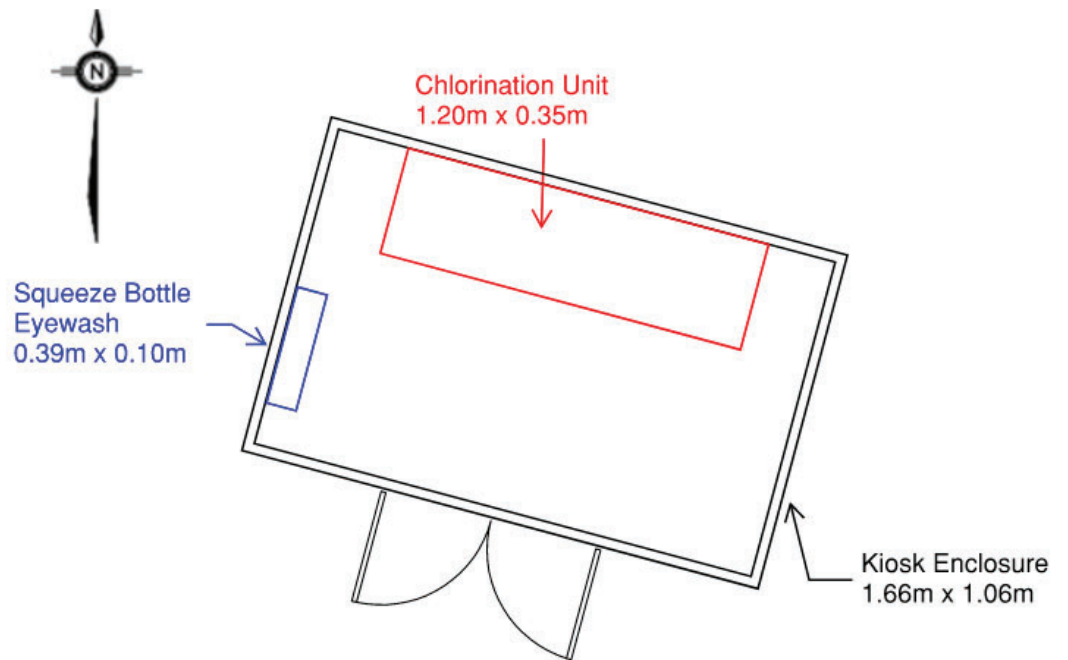


Figure 2: Layout of proposed chlorination system in kiosk enclosure



PAD-MOUNTED KIOSK ENCLOSURE

The chlorination system will be enclosed within a pad-mounted, pre-fabricated kiosk enclosure near the Tatlow Reservoir.

A concrete slab foundation would be designed and installed for the kiosk. It is expected that the ground in the vicinity of the Reservoir is capable of supporting the slab and kiosk. A review of the site's geotechnical properties needs to be completed to confirm this. A geotechnical study would be required. The costs of completing a geotechnical study have not been included in the cost estimate.

The pad-mounted kiosk is expected to be 1.80m x 1.68m x 1.05m (H x W x D) in size. The kiosk will be a single-sided, double-door, open-bottom enclosure. The kiosk will be constructed from powder-coated aluminum for corrosion resistance. The kiosk will have an enclosure rating of Type 3R to provide protection from precipitation. The kiosk will be furnished with insulation, lighting, louvres, and baseboard heating for winterization.

The proposed location of the pad-mounted kiosk is presented in the subsequent section.

BURIED PIPELINES AND CONDUIT

As presented in Figure 1, there will be two lines installed from the PS to the kiosk. A 50mm electrical conduit will supply power to the chlorination unit. A 50mm electrical conduit will transmit instrumentation data between the PS and the chlorination unit's instrumentation.

There will be three lines installed from the kiosk to the Reservoir. A 50mm dosing line would be used to convey sodium hypochlorite to the Reservoir. A 50mm sampling conduit would be used for the free chlorine analyzer. A 50mm electrical conduit would supply power to the mixer.

The buried lines would be installed in a ~25m long trench. The assumed bury depth of the dosing and sampling line is 1.50m below ground, and the assumed bury depth of the electrical and instrumentation lines are 1.00m below ground to provide adequate separation. Based on the Village's record drawings, the buried lines are not expected to cross any existing utilities.

Figure 3 presents the proposed alignment of the buried lines and the proposed location of the pad-mounted kiosk.

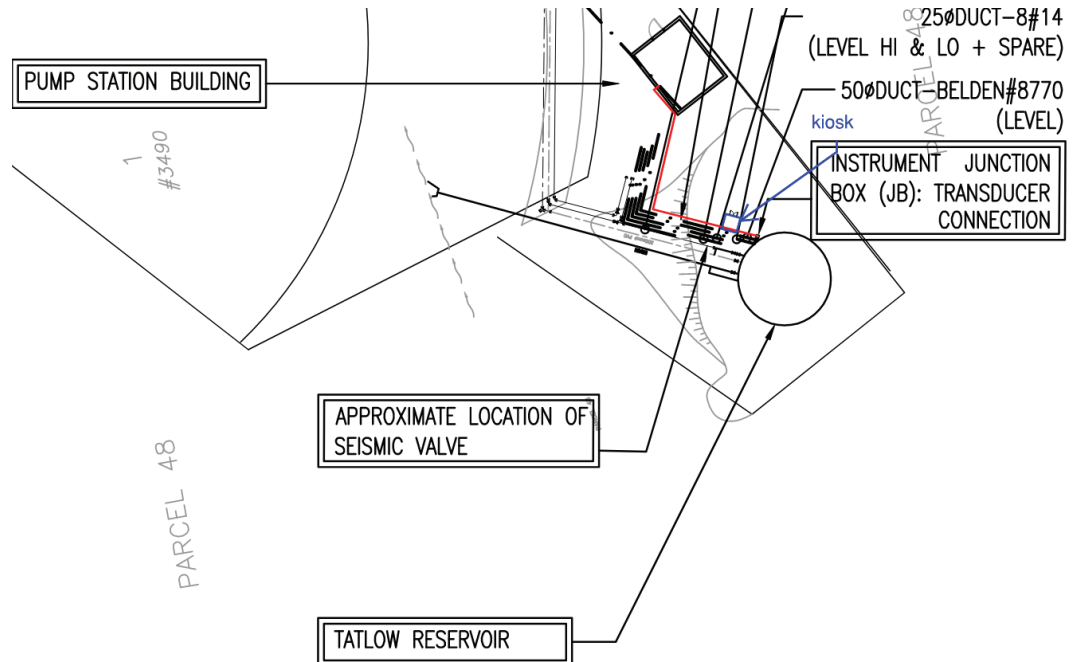


Figure 3: Proposed alignment and location of buried piping, conduit, and pad-mounted kiosks

ELECTRICAL UPGRADES

The electrical work that is required for the proposed chlorination system includes supplying power to the proposed chlorination system as well as integrating of the system to the PS building's existing control system. The power supply would be sourced directly from the existing PS. It is anticipated that the PS would need to be taken offline for approximately six hours to complete the electrical work. A junction box would need to be installed at the kiosk and the Reservoir to accommodate the chlorination system.

ENGINEERING DESIGN

Engineering design would be required to progress the chlorination system presented in this document into a constructable design. The engineering budget for the chlorination system upgrade includes preliminary and detailed design for the chlorination system. The costs for site visits have been excluded from the cost estimate.

INSTALLATION

A contractor would be hired to complete the installation of the chlorination system. The budgeted general contractor costs include general conditions, insurance, bonding, and equipment installation costs.



COST ESTIMATE

CAPITAL COSTS

WSP prepared a Class D cost estimate to provide the expected costs of the chlorination system. Please note that the cost estimate excludes GST.

Table 1: Class D Cost Estimate

ITEMS	COSTS
Civil	\$69,000
Mechanical and Process	\$30,000
Electrical	\$12,000
Contractor General Costs	\$14,500
Engineering	\$38,500
Class D Cost Estimate Contingency ($\pm 30\%$)	\$49,000
Total	\$213,000

OPERATION AND MAINTENANCE COSTS

The operation costs of the proposed chlorination system comprise of the consumption of power and sodium hypochlorite. The operational costs are expected to be approximately \$365/year.

The maintenance costs of the proposed chlorination system are negligible given that the system will require minimal maintenance.

The equipment replacement costs are calculated under the assumption that the chlorination system would be used for a five-year timespan. The chlorine analyzer sensor would likely be the only component requires a replacement within five years. The annualized equipment replacement costs are expected to be approximately \$600/year.

The total operation and maintenance costs of the system are approximately \$965/year.

SUMMARY

The Village of Belcarra is interested in fully filling the Tatlow Reservoir to ensure that its maximum capacity is available for fire protection. To this end, the Village is interested in installing a chlorination system to prevent stagnant water, inadequate disinfectant residual, and biofilm growth from occurring in the Reservoir. The major components of the chlorination system discussed in this document include a sodium hypochlorite dosing pump, a submerged tank mixer, and a free chlorine analyzer. The system would be installed in a pre-fabricated, pad-mounted kiosk



situated approximately 5m northwest from the Tatlow Reservoir. A geotechnical study should be completed to determine whether the site is capable of supporting the slab and kiosk. The cost of the upgrades, including engineering and installation costs, is expected to be approximately \$213,000 (excl. GST). This cost does not include the costs of completing a geotechnical study. The annual operation and maintenance costs of the chlorination system over a five-year timespan are expected to be ~\$965/year.