Request IR-1:

Page 1 of the application notes that this project is for the replacement of all 120 stoplogs at the Lower Great Brook (LGB) Generating Station on the Mersey Hydro System. There are six sluiceway bays at LGB, with each bay containing 20 stoplogs. Two of the six sluiceway stoplog bays were previously jammed, preventing the operational control of the sluiceway.

Page 2 of the application notes, this project allows bays 1 and 6 to regain their full functionality and mitigates the risk of failures and further jamming of the 4 other stoplog bays. Further, the stoplogs themselves are deteriorated, and required replacement to reduce the likelihood of stoplog failures. This project also included the necessary refurbishment of four of six concrete piers that provide structural support for the stoplogs, as significant deterioration of the piers was observed during the project drawdown.

Page 3 of the application notes, during a 2024 inspection, stop logs in Bays 1 and 6 were observed to be jammed and were not functional for water management.

(a) When was the last time these logs were replaced?

(b) What should be the expected lifespan of these logs?

(i) If the lifespan is shorter than expected, what are the possible reasons for the degradation?

(c) When was the 2024 inspection performed?

(d) Why was the application not submitted in 2024 after the inspection report?

(e) Please share the inspection engineering report recommending the proposed solution.

(f) Please provide the power produced by each unit (LGB 7 & LGB 8) for the past five years.

Response IR-1:

(a) NS Power does not have records detailing the precise date of the last stoplog replacement; however, based on observations by experienced Hydro Operators and NS Power's third-party engineering support provided by Wood Canada Limited, the stoplogs are of varying ages and at least 25 years old.

The drawdown at Lower Great Brook was a highly complex operation, requiring detailed engineering analysis and regulatory approvals under the Fisheries Act to lower the reservoir below its normal operating level. Because such drawdowns are rare and involve significant planning and environmental permitting, NS Power leveraged this opportunity to replace all 120 stoplogs—which were at or approaching end of life—and refurbish deteriorated piers, rather than only addressing the jammed stoplogs in Bays 1 and 6, ensuring continued safe water management and reducing future outage risk.

(b) There is no industry-defined lifespan for stoplogs. Stoplog durability depends on multiple environmental and operational factors. However, based on historical stoplog performance at NS Power, a service life of approximately 25 years or more can generally be expected.

(i) The lifespan of the existing logs was within expectations.

(c) The 2024 inspection was performed in November 2024.

(d) NS Power submitted its application at the earliest feasible time. The November 2024 inspection identified that the stoplogs required replacement. At that time, NS Power and its consultant began work to develop the project, including preliminary engineering, and planning necessary to make a project application to the NSEB. Further, to address the

operational dam safety concerns presented by the stuck stoplogs it was necessary for NS Power to proceed with drawdown work prior to completing a project application. Finally, more detailed inspection and testing of stoplog piers revealed conditions that further informed the final project application, delaying the ultimate submission. The timeline between identification of these deficiencies and submission of a project application is not atypical for activities of this nature.

(e) Please refer to Attachment 1.

(f) Please refer to the table below:

Lower Gate Brook Generation (MWh)					
	2021	**2022**	**2023**	**2024**	**2025**
LGB7	431	9,863	5,008	4,215	6,218
LGB8	14,072	10,246	4,005	2,081	4,821

Lower Great Brook Sluiceway Assessment - Final Report

Project No. 264364
Report No. 264364-0000-DD10-RPT-0001

Nova Scotia Power Inc.

1223 Lower Water Street
Halifax, NS
B3J 3S8

Wood Canada Limited
133 Crosbie Road
P.O. Box 9600
St. John's, NL A1A 3C1
Canada
T: (902) 724-1900
F: 709-739-5458
www.woodplc.com

April 17, 2025

Tony Urquhart, M. Eng., P.Eng.
Nova Scotia Power Inc.
1223 Lower Water Street
Halifax, NS B3J 3S8

Via Email: tony.urquhart@nspower.ca

Dear Mr. Urquhart,

Re: Lower Great Brook Sluiceway Assessment - Final Report

Please find attached one (1) PDF file of the **Lower Great Brook Sluiceway Assessment - Final Report**

Thank you for the opportunity to work with you and your staff on this project. Please contact us if you require any explanation or further discussion.

Sincerely,

Ellis O'Neil, P.Eng.
Senior Project Manager

EO

'Wood' is a trading name for John Wood Group PLC and its subsidiaries

Lower Great Brook Sluiceway Assessment - Final Report

Prepared for:

Nova Scotia Power Inc.



0	April 17, 2025	Final	AC	EO	EO	
REV.	DATE	REVISION(S)	PREPARED BY	CHECK	APP	CLIENT

Lower Great Brook Sluiceway Assessment - Final Report		
	Wood Job No. 264364	
wood.	DOCUMENT NO. **264364-0000-DD10-RPT-0001**	REV. 0
	PAGE 1 OF 1	

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ENF.04 Rev. 2

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4. The work described in the report is based solely upon the site visit carried out on November 5, 2024, by the CONSULTANT, and the information received from the Client.
5. The report speaks only as of its date and to conditions observed at that time, which conditions may change (or may have changed) by virtue of the passage of time or due to direct or indirect human intervention causing any one or more changes in plans or procedures or due to other factors.
6. The report does not extend to any latent defect or other deficiency in the Project which could not have been reasonably discoverable or discovered by such observation, with the exception of any latent defect or other such deficiency of which the CONSULTANT had actual knowledge.
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Attachments

1 Site Photos

2 NSPI Drawings

1.0 Introduction

1.1 General

This report discusses the initial assessment of the performance issues observed at the sluiceway of Lower Great Brook Dam, including recommendations for next steps. It is noted this report is based on a limited visual inspection of the sluiceway only, undertaken from the sluiceway deck. Findings from the recommended investigations noted in this report may result in changes to the conclusions and recommendations noted here and will take precedence over this report.

1.2 Background

The Lower Great Brook Development is one of six developments in the Mersey Hydro System, located in Queens County in south-western Nova Scotia. Originally constructed in 1955, it includes three earthfill dams, a reinforced concrete sluiceway structure, an uncontrolled spillway, and a powerhouse with two units, as shown in Figure 1-1.

The sluiceway structure consists of six bays, each approximately 12 ft wide by 24 ft high, controlled by wooden stoplogs. An overview of the sluiceway is shown in Photo A-1. The sill elevation of each bay is El. 106 ft, while the sluiceway deck is at elevation 130 ft. The rock foundation is irregular and is estimated to be at approximately 105 ft, as shown in Figures 1-2 and 1-3. The wooden stoplogs are operated using a recently installed hydraulic stoplog lifter. According to the design drawings, the stoplog checks on the sides of the piers are unlined, formed directly in the pier concrete, and measure 1'-6" in the upstream-downstream direction and 11" in depth. There is a steel angle located on the outside downstream corner of the check for the wooden stoplogs to bear against, and this forms the sealing surface for the stoplogs.

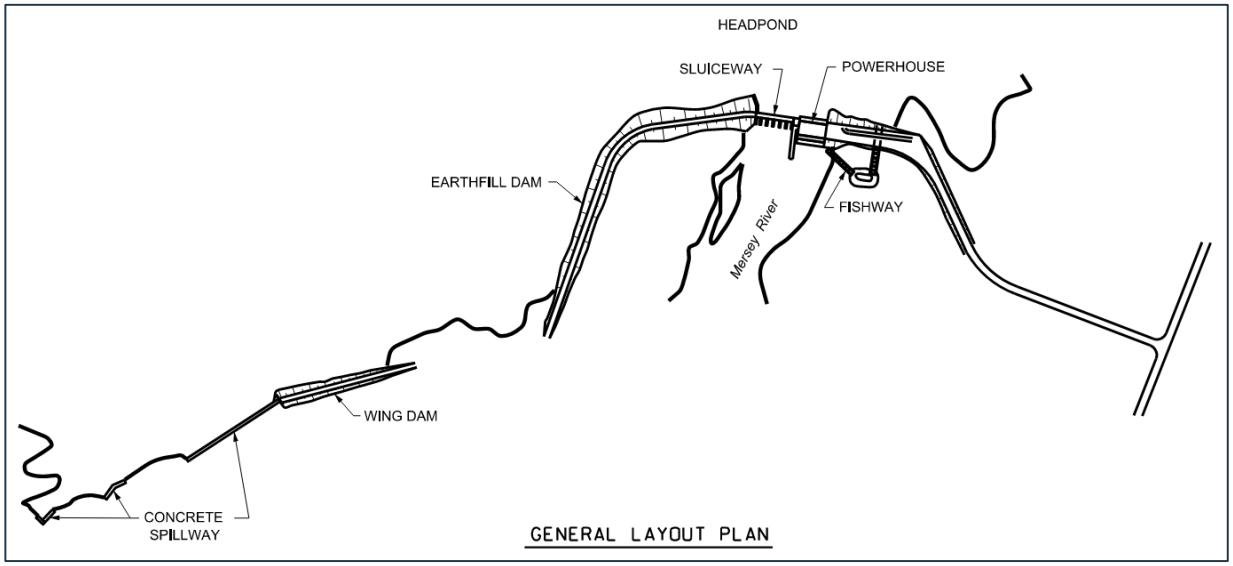


Figure 1-1: General Layout of Lower Great Brook Development (extracted from NSPI Drawing No. H-001W1-1-670-00-036)

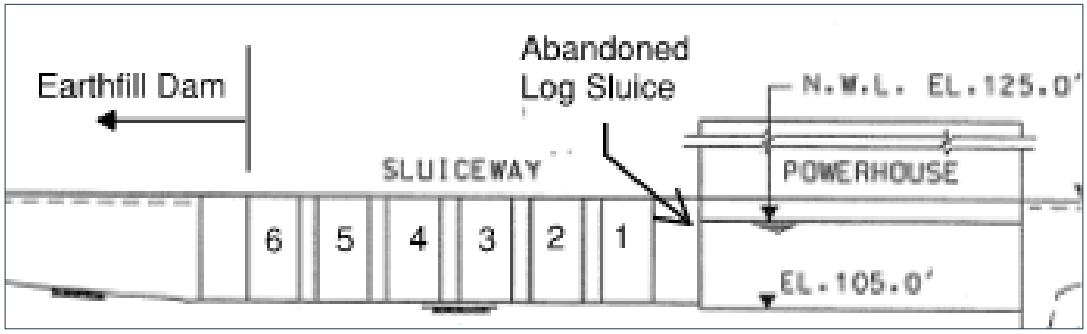


Figure 1-2: Longitudinal Profile of Sluiceway at Lower Great Brook Dam

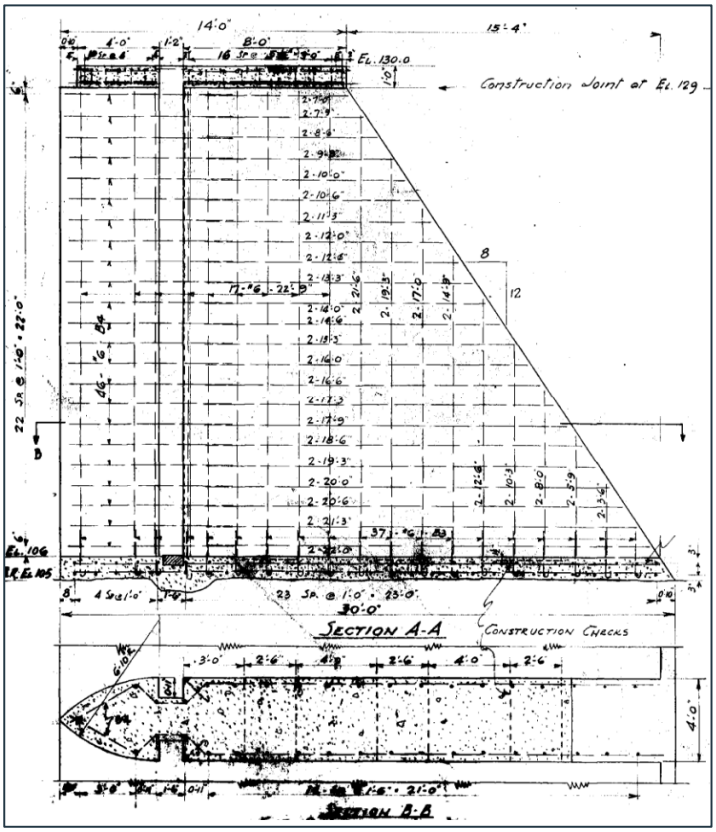


Figure 1-3: Section Through Lower Great Brook Sluiceway Pier (Taken from NSPI Drawing H-004W1-1-631-00-002)

The stoplogs in Bay 1 are currently not operational reportedly due to the bay being squeezed laterally and jamming the stoplogs in the stoplog checks. Recently, a similar performance issue has developed in Bay 6, where some of the stoplogs have also become difficult to remove. There are no records indicating when

the issues in Bay 6 were first observed. However, Nova Scotia Power Inc. (NSPI) operations staff have indicated that the stoplogs in Bay 1 have not been operated since at least 2019, and possibly much earlier. NSPI has engaged Wood to conduct an initial assessment of the above-noted performance issues at the Lower Great Brook Development sluiceway.

Since only 4 of the 6 stoplog bays are operational, the discharge capacity of the sluiceway is reduced below its original design capacity. The discharge capacity of the sluiceway, considering only 4 of the 6 stoplog bays are operational should be determined to confirm the flood handling capacity is adequate from a Dam Safety perspective.

2.0 Site Visit

2.1 General

A site visit was undertaken on November 5, 2024. The weather was overcast with temperatures between 8 and 11°C. The site visit team consisted of:

- Ellis O'Neil (Wood)
- Alex Campbell (Wood)
- Tony Urquhart (NSPI)
- Grant Kelly (NSPI)
- Martin Huntley (NSPI)

The site visit aimed to investigate potential causes for the operational difficulties (stoplogs jamming in stoplog check) of the stoplogs in sluiceway Bays 1 and 6. This was achieved through:

1) A visual inspection of the sluiceway structure;
2) Observation of stoplog operations, including placement and removal of the top stoplog in Bay 2 and a few stoplogs in Bay 6; and,
3) Measurement of several stoplogs and the length of the upper sections of some of the stoplog checks (in the left-right direction)

The sluiceway bays are numbered 1 through 6, starting with Bay 1 to the right of the abandoned log sluice and ending with Bay 6 next to the right abutment of the sluiceway, as shown in Figure 2-1 at the end of this Section. Photos taken during the site visit are provided in the Attachments.

2.2 Visual Inspection

2.2.1 General

The visual inspection of the sluiceway took place primarily from the sluiceway deck. Due to access limitations, the upstream and downstream faces of the sluiceway could not be inspected closely. Furthermore, the submerged portion of the upstream face of the sluiceway was not visible and, therefore, was not inspected. During the site visit, only Bay 2 was spilling (with a few stoplogs removed), while minor

leakage was observed through the other bays (Photo A-1). For safety reasons, each of the stoplog openings in the sluiceway deck were covered by a stoplog (called "deck log" for the purposes of this report) supported by steel u-brackets at deck level. The tops of the deck logs were flush with the deck surface. During the site inspection, the deck logs were removed from Bays 2 and 6 only. The observations on the checks in Bays 1, 3, 4 and 5 were made with the deck logs in place

2.2.2 Observations

In general, no visible signs of significant movement were observed in the vertical construction joints on the sluiceway deck, located above the piers and at both abutments (Photos A-2 to A-10). The width of a vertical construction joint near the left abutment of the sluiceway deck next to the powerhouse varied from tight to approximately ½ inch over a span of 7 feet, extending from the downstream stoplog lifter rail to the downstream edge of the sluiceway deck (Photo A-3). Uniform, minor extrusion of joint sealant material was observed from the vertical construction joints between the abandoned log sluice and Bay 1 (Photo A-4), as well as between Bay 6 and the right abutment wall (Photo A-10).

The handrail on the downstream edge of the sluiceway deck was separated from the powerhouse wall at the left abutment (Photo A-11). This indicates some relative movement between the powerhouse and the sluiceway, and it is thought to be caused by movement / deformation of the powerhouse. The upstream and downstream edges of the sluiceway deck appeared straight (Photos A-12 and A-13, respectively). Local distortions in the alignment of the upstream and downstream handrails are believed to have been caused by impacts from heavy equipment.

The concrete of the sluiceway deck generally appeared to be in good condition (Photos A-14 to A-19). The top surface of the sluiceway deck above Bay 2 was recently grouted to address local scaling (Photo A-16). The rails for the stoplog lifters, which had been recently replaced as part of the installation of the new stoplog lifter, extended approximately 20 ft beyond the right bay of the sluiceway onto the crest of the concrete cut-off wall / corewall in the adjacent embankment dam (although the exact detail of the cut-off wall / corewall is not clear from the drawings). The visible portion of the concrete cut-off wall / corewall appeared to be in good condition (Photo A-20). The levelness of the sluiceway deck was assessed using a 4-foot level at several locations in both the upstream-downstream and left-right directions and was generally found to be level. No pronounced tilting of the structure was observed.

The visible (unsubmerged) portion of the upstream right retaining wall appeared to be in good condition (Photo A-21), straight, and plumb (Photo A-22). The downstream right retaining wall also appeared straight and plumb, but was in only fair condition, with some cracking and efflorescence on its left face (Photo A-23).

The concrete on visible portions of the upstream face of the piers appeared to be in a deteriorated condition, showing significant wear and spalling - especially near the waterline - as well as exposed rebar (Photos A-24 to A-26).

The downstream side faces of the piers appeared to be in fair condition, exhibiting widespread, minor cracking and efflorescence (Photos A-27 to A-30).

Many of the piers displayed large vertical cracks along their sloped downstream faces (Photos A-31 to A-34).

The downstream face of the abandoned log sluice appeared to be in fair condition, displaying significant cracking with efflorescence (Photo A-35). The vertical construction joint between the downstream sloped face of the abandoned log sluice and the adjacent powerhouse wall appeared tight, though some reddish-brown staining was observed around the joint near the waterline (Photo A-36).

The stoplog checks of Bays 2 and 6 were observed from the sluiceway deck and appeared to be in fair overall condition (Photos A-37 to A-40). In both bays, the vertical concrete face at one end of the slot protruded somewhat, possibly up to 2 or 3 inches - from the opening in the sluiceway deck above. For safety reasons, it was not possible to accurately measure these dimensions with a steel tape. In Bay 6, it was the right check (Photo A-38), while in Bay 2, it was the left check (Photo A-39) that protruded inwards. As previously noted, the stoplog checks for Bays 1, 3, 4, and 5 could not be observed in great detail during the site visit because the deck logs were in position in these bays.

2.2.3 Discussion

The cracking observed in the structure is likely due to alkali aggregate reactivity (AAR), exacerbated by freeze – thaw damage due to moisture present in the cracks. Structures in the Mersey Hydro system have a long and well-documented history of damage due to AAR. The nature of the observed surface cracking and significant deterioration of the upstream noses of the piers above the waterline are consistent with AAR-induced damage. The large vertical cracks observed in the downstream faces of the piers indicate some increase in the width of the piers may have occurred which could result in some narrowing of the clear opening in the sluiceway bays and potential for jamming of the stoplogs.

Adjacent to Bays 1 and 6 are the powerhouse / abandoned log sluice and the right abutment / wingwall respectively. Both of these elements represent a large mass of concrete which, if affected by AAR, could result in lateral expansion toward the sluiceway (squeezing it), effectively reducing the clear widths of Bays 1 and 6, and possibly increase the potential for jamming of the stoplogs. This is consistent with the observations made of the right check in Bay 6 (Photo A-38) and the left check in Bay 2 (Photo A-39). Both of these photos indicate some inward lateral movement of the pier below, independent of the deck slab.

2.3 Observation of Stoplog Operations

Limited operation of the stoplogs in Bays 2 and 6 was observed during the site visit. Stoplogs were operated by two NSPI staff members using hydraulic lifters (Photos A-41 and A-42). A few stoplogs were removed from Bay 6 until one became difficult to remove (the same issue which had been previously reported by NSPI). This stoplog, the top of which was still above the headpond surface, was left in place (Photos A-37 and A-38). A few stoplogs were temporarily placed in Bay 2, causing it to stop spilling, and were removed shortly thereafter without difficulty.

2.4 Measurement of Stoplog Checks and Stoplogs

2.4.1 Observations

The outer and inner lengths of each stoplog opening (in the left-right direction) were measured during the site visit using a steel measuring tape. As previously noted, the stoplog checks for Bays 1, 3, 4, and 5 could not be observed in detail during the site visit because the deck logs were in position in these bays.

The lengths were measured based on projecting the back face of the concrete check immediately below the stoplog as seen from deck level, with the deck logs in position. These dimensions should be considered preliminary, subject to further confirmation. These measurements are summarized in Table 2-1. For clarity, in Table 2-1:

- The outer length refers to the length of the opening at the top surface of the deck, including the approximately 2-inch-wide by 2-inch-deep recess around the perimeter of the opening at deck level (see Photo A-18).
- The inner length refers to the minimum distance between the back face of right and left stoplog checks (i.e. the overall length of the check that receives the stoplogs). These measurements should be considered approximate, as any protrusions of the left or right faces of the stoplog checks were visually projected to the deck surface, where the measurement was taken.

Table 2-1: Lengths of the Stoplog Checks

Bay	Measured		Design	
	Outer	Inner	Outer	Inner
1	170	164 – ½ *	170	166
2	171 – ⅝	166	170	166
3	170 – ½	165	170	166
4	170 – ½	165 – ⅜	170	166
5	171	165 – ½	170	166
6	170 – ½	164 – ½ *	170	166

*Shortest measured inner lengths of the stoplog checks.

Notably from Table 2-1, the inner length of the stoplog checks measured at Bays 1 and 6 — both currently experiencing performance issues — was 164½ inches, which is ½ inch to 1½ inches shorter than those measured at the other bays. Select stoplogs from several bays were measured on-site. The lengths consistently ranged between 164 and 164½".

2.4.2 Discussion

According to NSPI Drawing No. H-004W1-1-631-00-002 (copy included in the Attachments), the stoplog checks were originally designed to be 166" long. NSPI Drawing No. H-004W1-1-631-00-004 for the original stoplog lifter (copy included in the Attachments) also shows the stoplog checks as 13'-10" (166") long, and the stoplogs having an overall length of 13'-8" (164"). This design would provide a 1" clearance at each end.

It is noted the measured length of one of the checks (see Table 2-1) exactly matches the 166" original design dimension, but the other five checks were measured to be shorter than this length (two slots were measured to be as much as 1-1/2" shorter). There are no visible signs of significant pier movement or displacements observed at the vertical construction joints in the deck that would suggest large scale expansion / deformation of the concrete due to AAR. However, a review of the NSPI design drawings indicates there is no vertical reinforcing steel connecting the piers to the deck slab. Therefore, it is possible that some deformation of the piers has occurred, but this deformation has not translated into any major deformation of the deck slab due to lack of continuity between the piers and the deck slab. Further

investigations such as an accurate dimensional survey would be required to confirm this, as well as detailed testing of the concrete for evidence of AAR.

Given the large discrepancy from the design drawing of up to 1-1/2" in the lengths for the stoplog checks, it is also possible the checks in the piers may have been constructed shorter than shown on the design drawings (likely inadvertently due to the forms for the piers spreading under the weight of the wet concrete). This may have occurred since the checks were formed in the primary concrete, i.e. no secondary concrete was observed around the checks. In other words, when the forms spread during the placement of the concrete in the piers, the formed checks for the stoplogs also moved, and they moved closer to each other, effectively reducing the length of the stoplog checks.

In addition to the measured lengths of the stoplog checks being typically shorter than the original design length of 166", the measured length of the stoplogs on site varied between 164" and 164½", compared to a design length of 164". Stoplogs with lengths greater than the design length of 164" would increase the potential for jamming in the checks. It is noted the measured length of the check in Bays 1 and 6 is 164½", exactly matching the measured length of the longer stoplogs.

Based on the discussions above, the performance issues in Bays 1 and 6 may be due to the stoplog checks in these bays being effectively shortened due to deformation issues related to AAR, or due to the forms inadvertently spreading during the initial construction of the sluiceway. Another potential cause for the shortening of the stoplog check in Bay 6 could be due to deformation / instability of the right wingwall. It is noted no tilting of the right wingwall was observed during the site inspection, but a small tilt may be too subtle to recognize from a distance. A detailed dimensional survey would be required to confirm this.

Since NSPI reported the issue related to removal of the stoplogs in Bay 6 is a recent occurrence, this suggests some deformation is ongoing in this area and requires a detailed review to determine the cause(s) and to develop any required remedial action. Until that is carried, an option to temporarily reinstate the ability to operate the stoplogs in Bays 1 and 6 for flood management is to install shorter stoplogs in these bays. The stoplogs will still need to be capable of being lifted with the existing stoplog lifter without any modifications to it.

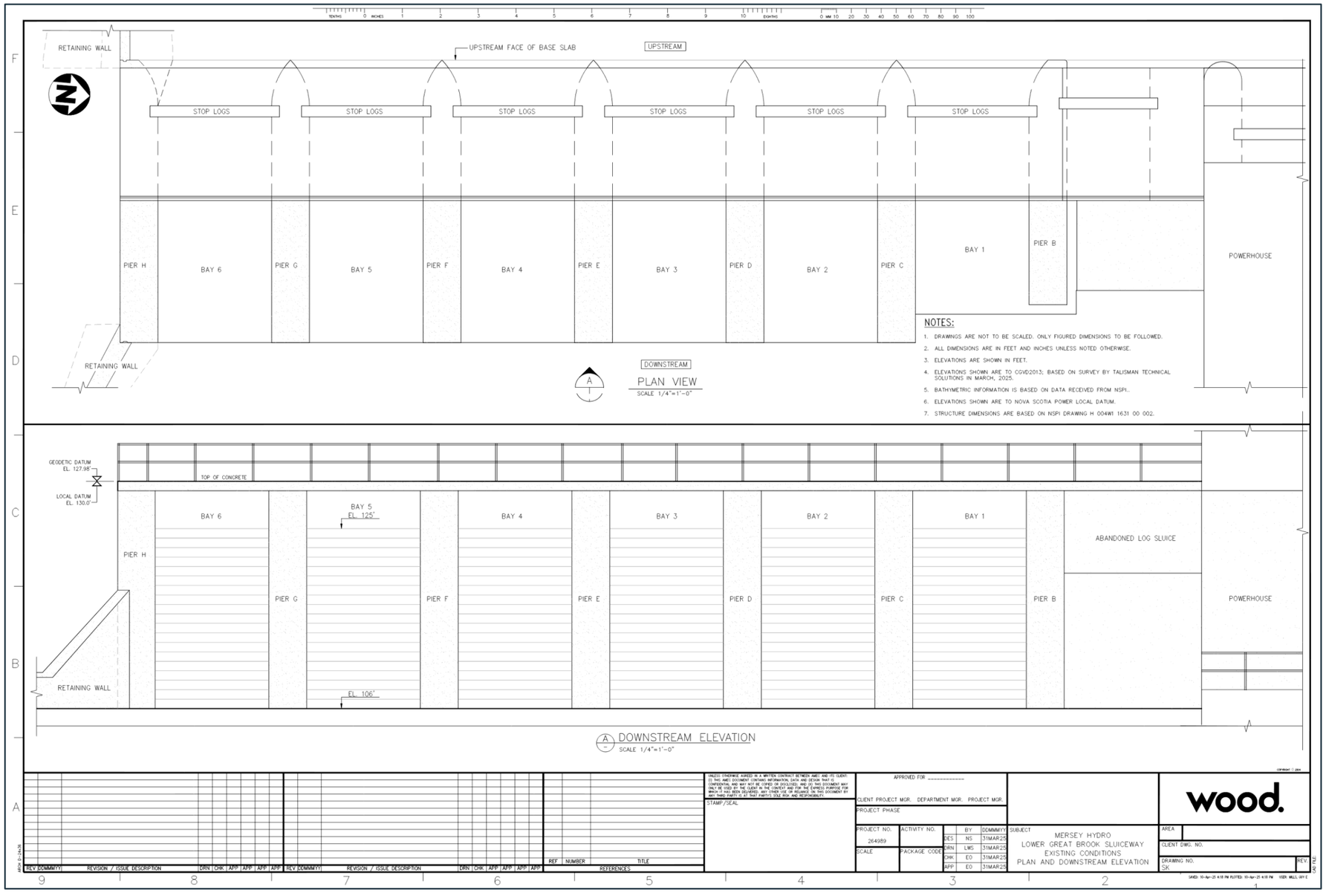


Figure 2-1: Numbering Convention for the Sluiceway Bays (Looking Upstream)

3.0 Conclusions and Recommendations

3.1 Conclusions

1) The stoplogs in Bay 1 are currently not operational reportedly due to the bay being squeezed laterally and jamming the stoplogs in the stoplog checks.
2) Recently, some of the stoplogs in Bay 6 have become difficult to remove.
3) No clear evidence of significant global structural movement in the sluiceway deck was observed.
4) The concrete of the sluiceway deck and the visible (unsubmerged) portion of the upstream right retaining wall appeared to be in good condition.
5) The concrete in the downstream right retaining wall and downstream face of abandoned log sluice appeared to be in fair condition, exhibiting widespread, minor cracking and efflorescence.
6) The concrete in the side faces of the piers downstream of the stoplog checks appeared to be in fair condition, exhibiting widespread, minor cracking and efflorescence.
7) There were large surface cracks extending vertically along the downstream sloping faces of the piers.
8) The concrete on the upstream face of the piers (unsubmerged and near the waterline) is in a deteriorated condition, with spalling and missing pieces of concrete observed.
9) It was not possible to inspect the condition of the concrete on the upstream face of the sluiceway piers below the waterline.
10) During the site inspection, a few stoplogs were removed from Bay 6 until one became difficult to remove, and it was left in place.
11) The length of the stoplog checks measured at Bays 1 and 6—both currently experiencing performance issues—was 164½ inches, which is ½ inch to 1½ inches shorter than those measured at the other bays.
12) The lengths of several stoplogs were measured on-site, with lengths consistently ranging between 164 and 164½ inches. This matches the measured lengths of the stoplog checks in Bays 1 and 6 and is the same or slightly longer than the design stoplog length of 164".
13) According to the NSPI design drawings, there is no reinforcing steel extending from the piers into the sluiceway deck slab.
14) Some inward lateral movement of the piers was observed below the deck slab at the right side of Bay 6 and at the left side of Bay 2.
15) The lack of continuity between the piers and the deck slab could explain why lateral movement and deformation of the piers may have occurred with little evidence of deformation of the deck slab.
16) The performance issues in removing the stoplogs observed in sluiceway Bays 1 and 6 may be the result of the following, or a combination thereof:
    a. Stoplog slots being constructed shorter than shown on the design drawings, possibly due the concrete forms for the adjacent piers spreading during the original construction

b. Deformation of the concrete structure due to the effects of AAR and freeze-thaw cycles

c. Instability of the right wingwall (Bay 6 only)

3.2 Recommendations

1) Review the discharge capacity of the sluiceway, considering only 4 of the 6 stoplog bays are operational to confirm the flood handling capacity is adequate from a Dam Safety perspective.

2) As an interim solution, re-establish the full design discharge capacity for the sluiceway by installing shorter stoplogs in Bays 1 and 6, ensuring that they are still compatible with the stoplog lifter on site (i.e. centre-to centre distance of the lifting points in the stoplogs must be compatible with the spacing of the stoplog lifter arms).

3) Develop a better understanding of the structure and the extent/severity of deterioration and deformation of the concrete by undertaking the following:

   a. Drone survey/photos of downstream face and sides of piers, underside of deck, and visible (unsubmerged) portion of upstream face.

   b. Underwater survey/video of submerged portion of upstream side of the sluiceway.

   c. Concrete sampling and testing to determine condition of the concrete (cause, depth and extent) in anticipation of confirming its adequacy for continued service in the short term and designing refurbishment to the structure.

3) Undertake a stability analysis of the right wingwall

4) Rehabilitate the sluiceway structure to restore its long-term integrity and reliability.

5) Develop a plan to monitor structural movement of the sluiceway and its components until it is refurbished.

Attachments:

1. Site Photos
2. NSPI Drawings:
    a. H-001W1-1-670-00-036 – Mersey Hydro System – Lower Great Brook Development – Plan and Details (June 2014)
    b. H-004W1-9-001-01-001 – Mersey Hydro System – Lower Great Brook Dam – General Layout (Dec. 1989)
    c. H-004W1-9-001-01-002 – Mersey Hydro System – Lower Great Brook Dam – Longitudinal Profile (Dec. 1989)
    d. H-004W1-1-631-00-002 – Mersey System – Lower Great Brook Development – Log Sluice and Stop Log Sections – Plan, Elevations and Sections Showing Details of Reinforcement (5 May 1954)
    e. H-004W1-1-631-00-004 – Mersey System – Lower Great Brook Development – General Arrangement for Stoplog Hoist (8 April 1954)

ATTACHMENT 1

SITE PHOTOS



Photo A-1: Downstream face, looking right/upstream from tailrace deck

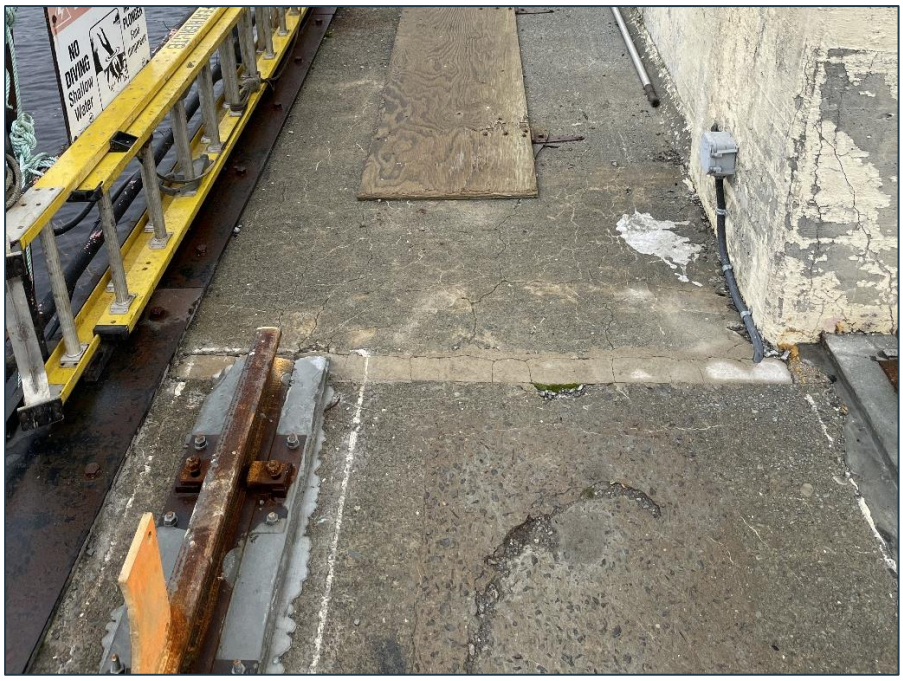


Photo A-2: Left abutment of sluiceway deck with powerhouse intake deck, looking left



Photo A-3: Left abutment of sluiceway deck with powerhouse, looking downstream



Photo A-4: Construction joint on sluiceway deck between the old log sluice and Bay 1, looking downstream



Photo A-5: Upstream end of construction joint on sluiceway deck between Bays 1 and 2, looking left/upstream



Photo A-6: Downstream end of construction joint on sluiceway deck between Bays 1 and 2, looking left



Photo A-7: Construction joint on sluiceway deck between Bays 3 and 4, looking downstream



Photo A-8: Upstream end of construction joint on sluiceway deck between Bays 5 and 6, looking upstream



Photo A-9: Downstream end of construction joint on sluiceway deck between Bays 5 and 6, looking left



Photo A-10: Construction joint between right abutment of sluiceway deck and main embankment dam, looking left

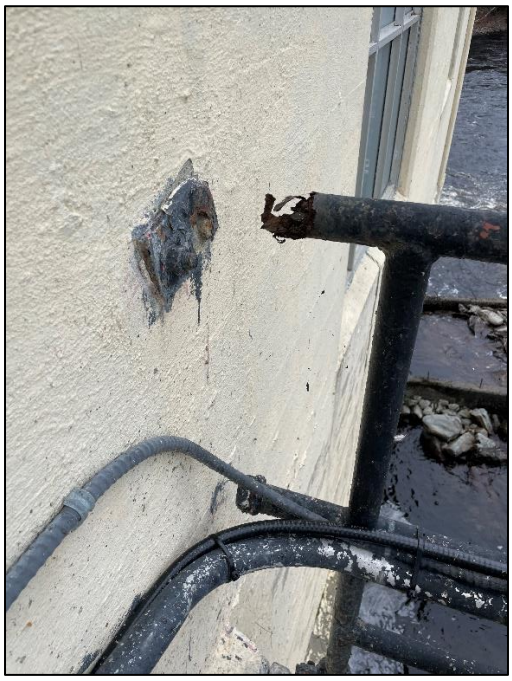


Photo A-11: Handrail separated from powerhouse wall at left abutment of sluiceway deck, looking downstream



Photo A-12: Upstream edge of sluiceway deck, looking right



Photo A-13: Downstream edge of sluiceway deck, looking right



Photo A-14: Downstream side of sluiceway deck at Bay 1, looking right



Photo A-15: Upstream side of sluiceway deck at Bay 1, looking right



Photo A-16: Sluiceway deck at Bay 2, looking right



Photo A-17: Downstream side of sluiceway deck at Bay 4, looking right



Photo A-18: Upstream side of sluiceway deck at Bay 4, looking right



Photo A-19: Downstream side of sluiceway deck at Bay 6, looking right



Photo A-20: Concrete slab and stoplog lifter rails extending onto crest of the main dam embankment, looking right/upstream



Photo A-21: Upstream right retaining wall, looking right



Photo A-22: Overhead view of upstream right retaining wall, facing upstream



Photo A-23: Downstream right retaining wall, looking right



Photo A-24: Upstream face of piers (right side of pier between Bays 5 and 6 shown in foreground), looking left from right abutment



Photo A-25: Upstream face of pier between Bays 3 and 4, looking right from sluiceway deck



Photo A-26: Upstream face of pier between Bays 1 and 2, looking left from sluiceway deck



Photo A-27: Right downstream face pier between Bays 5 and 6, looking left from sluiceway deck



Photo A-28: Left downstream face of pier between Bays 5 and 6, looking right from sluiceway deck



Photo A-29: Left downstream face of pier between Bays 3 and 4, looking right from sluiceway deck



Photo A-30: Right downstream face of pier between Bays 1 and 2, looking left from sluiceway deck

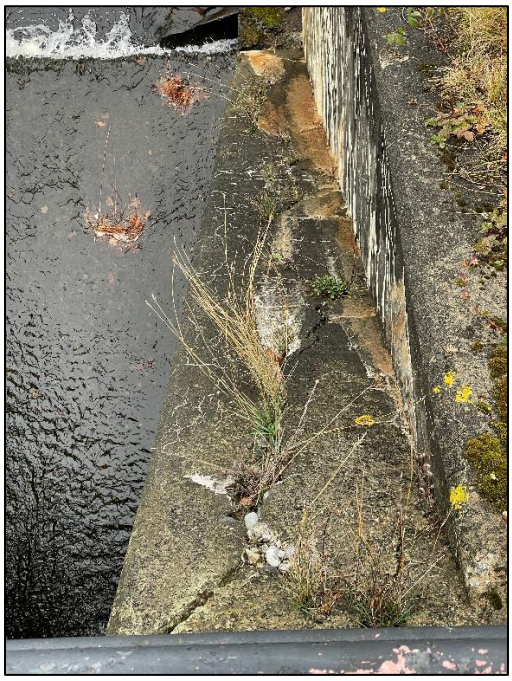


Photo A-31: Sloped downstream face of pier on the right side of Bay 6, viewed from sluiceway deck, facing downstream

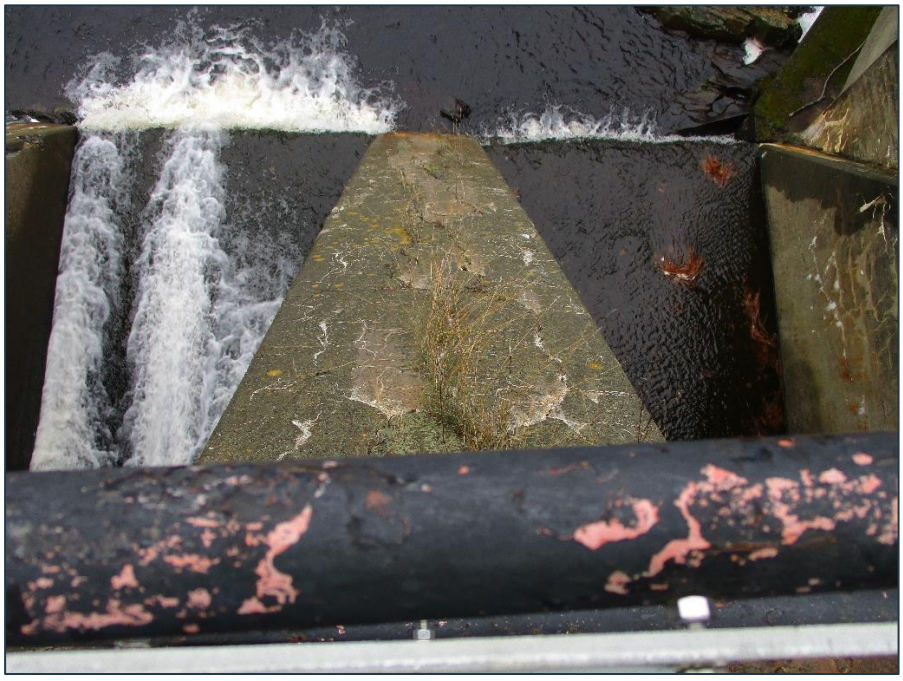


Photo A-32: Sloped downstream face of pier between Bays 5 and 6, looking down from sluiceway deck, facing downstream



Photo A-33: Sloped downstream face of pier between Bays 3 and 4, looking down from sluiceway deck, facing downstream



Photo A-34: Sloped downstream face of pier between Bays 1 and 2, looking down from sluiceway deck, facing downstream



Photo A-35: Downstream face of abandoned log sluice, looking upstream from tailrace deck



Photo A-36: Construction joint between the downstream sloped face of abandoned log sluice and powerhouse wall, looking down and left from sluiceway deck



Photo A-37: Left stoplog check of Bay 6, looking down from sluiceway deck, facing upstream



Photo A-38: Right stoplog check of Bay 6, looking down from sluiceway deck, facing upstream



Photo A-39: Left stoplog check of Bay 2, looking down from sluiceway deck, facing upstream



Photo A-40: Right stoplog check of Bay 2, looking right/upstream from sluiceway deck



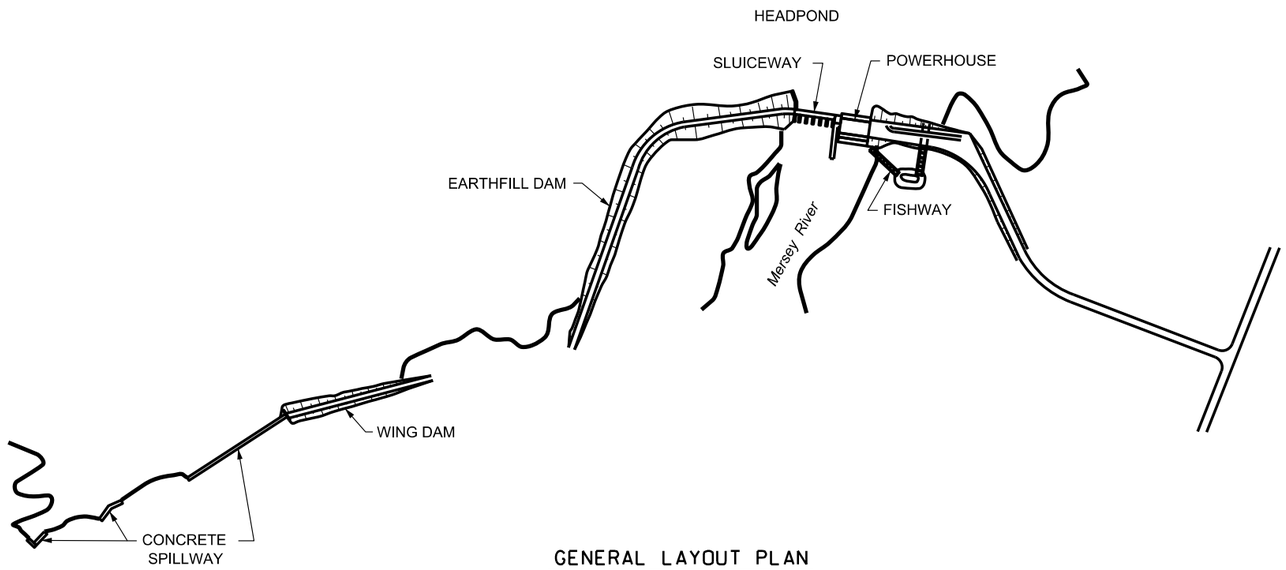
Photo A-41: Operation of hydraulic stoplog lifter at Bay 2



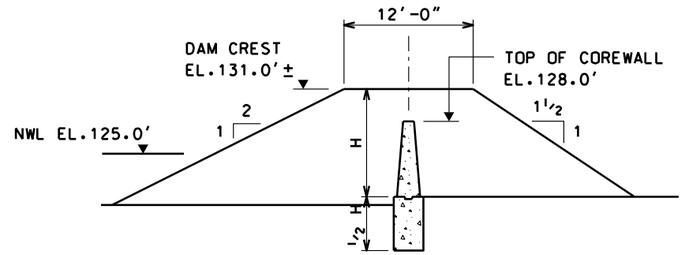
Photo A-42: Operation of hydraulic stoplog lifter at Bay 2

ATTACHMENT 2

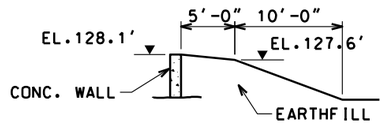
NSPI DRAWINGS



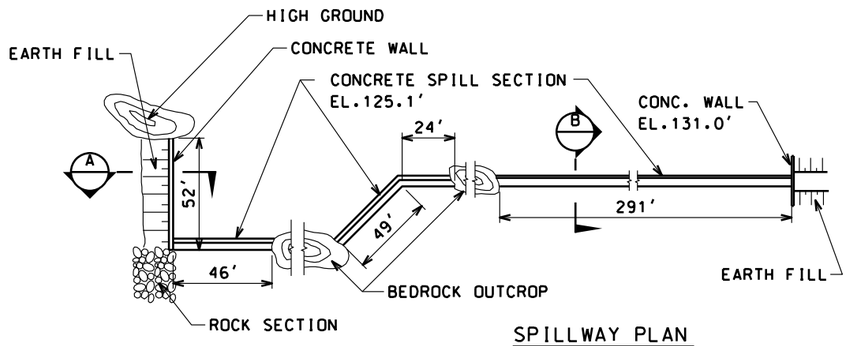
GENERAL LAYOUT PLAN



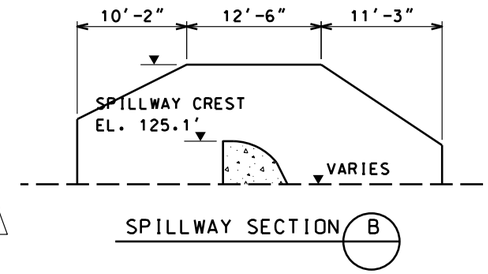
TYPICAL EARTHFILL DAM SECTION



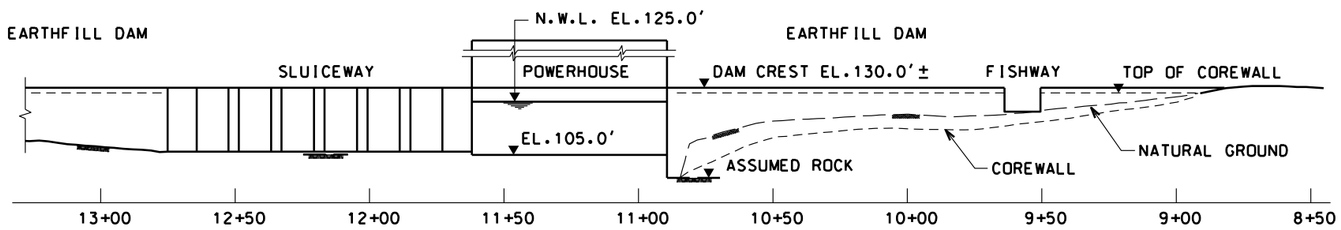
SPILLWAY SECTION A



SPILLWAY PLAN



SPILLWAY SECTION B



LONGITUDINAL PROFILE

Sheet Size 11"x17"

MERSEY
HYDRO SYSTEM

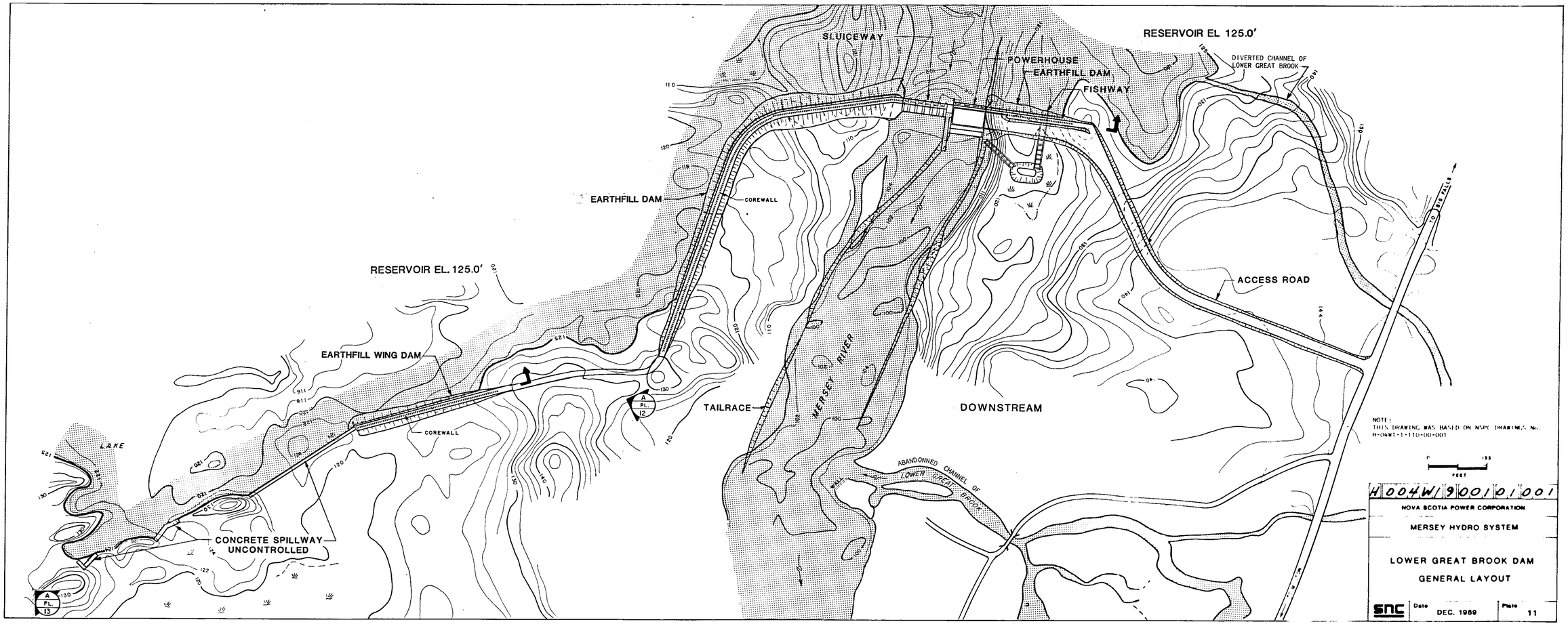
Nova Scotia POWER An Emera Company

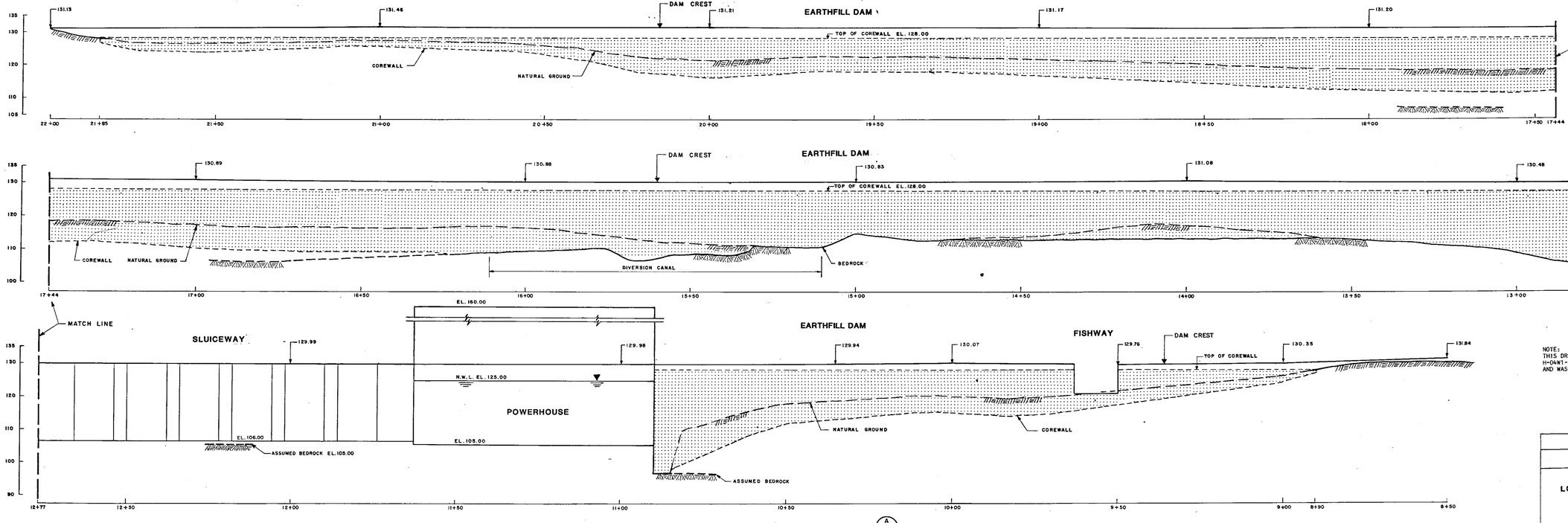
LOWER GREAT BROOK DEVELOPMENT
PLAN AND DETAILS

Figure 11.5

Drawn By:	Scale:	Issue Date:
BJA	NTS	JUNE 2014

Dwg. No. H001W116700036 REV 19


SLUICEWAY
RESERVOIR EL 125.0'
POWERHOUSE
EARTHFILL DAM
FISHWAY
DIVERTED CHANNEL OF LOWER GREAT BROOK
EARTHFILL DAM
COREWALL
RESERVOIR EL. 125.0'
ACCESS ROAD
EARTHFILL WING DAM
COREWALL
TAILRACE
MERSEY RIVER
DOWNSTREAM
LAKE
CONCRETE SPILLWAY
UNCONTROLLED
ABANDONNED CHANNEL OF LOWER GREAT BROOK
NOTE:
THIS DRAWING WAS BASED ON NSPC DRAWING No.
H-DWG-1-110-00-001
FEET
H004W/9001/01/001
NOVA SCOTIA POWER CORPORATION
MERSEY HYDRO SYSTEM
LOWER GREAT BROOK DAM
GENERAL LAYOUT
SNC
Date
DEC. 1989
Plate
11



NOTE:
THIS DRAWING WAS BASED ON NSPC DRAWINGS No.:
H-DWG-1-631-00-001
AND WAS UPDATED WITH SURVEYED CREST ELEVATION.

0 8' 16
FEET

LONGITUDINAL PROFILE (A, Pl. 11)

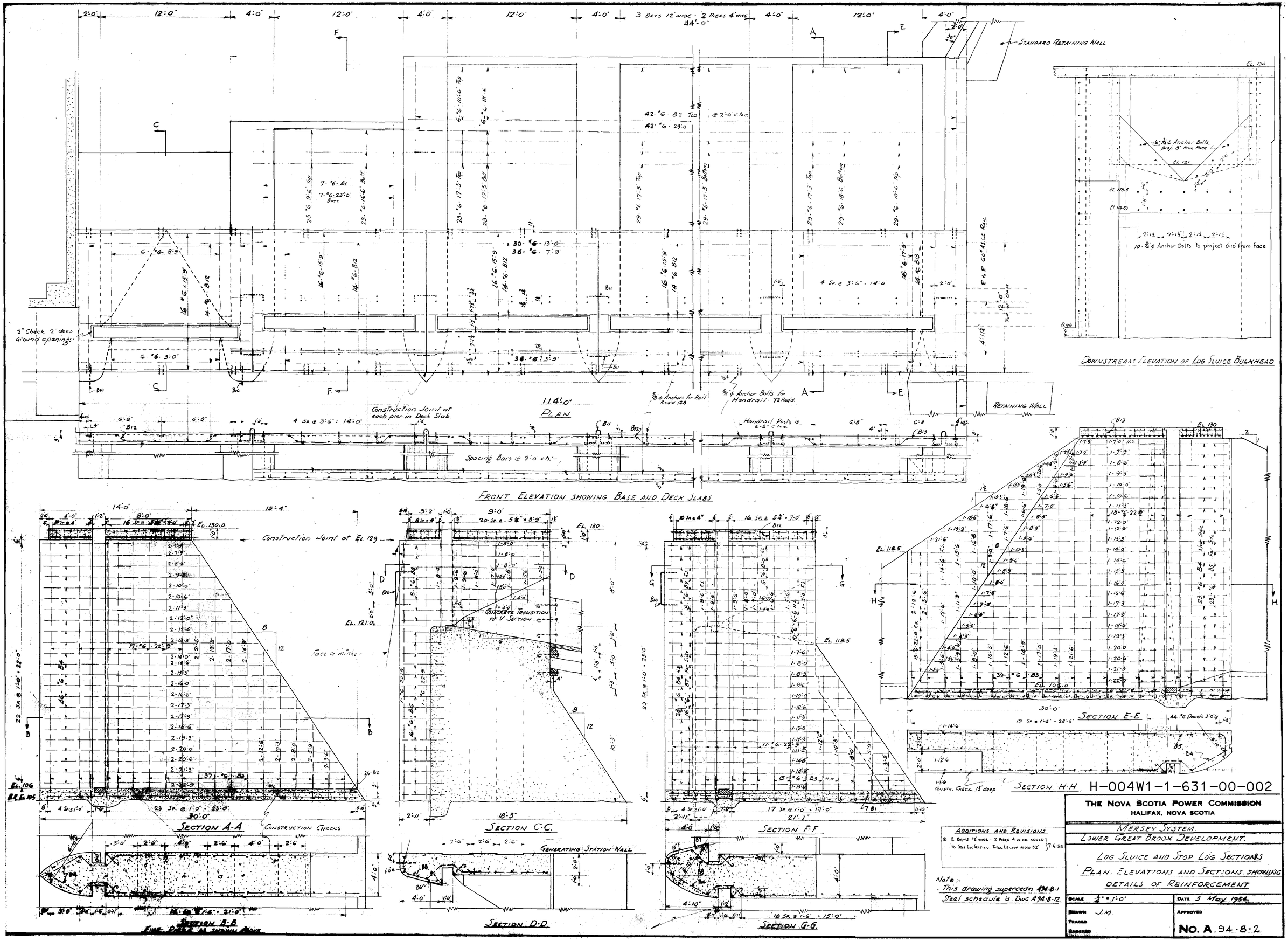
NOVA SCOTIA POWER CORPORATION

MERSEY HYDRO SYSTEM

LOWER GREAT BROOK DAM
LONGITUDINAL PROFILE

H 004W1 9 00.1 0.1 00.2

SNC | Date DEC. 1989 | Plate 12



H-004W1-1-631-00-002

THE NOVA SCOTIA POWER COMMISSION
HALIFAX, NOVA SCOTIA

MERSEY SYSTEM.
LOWER GREAT BROOK DEVELOPMENT.

LOG SLUICE AND STOP LOG SECTIONS
PLAN. ELEVATIONS AND SECTIONS SHOWING DETAILS OF REINFORCEMENT

Additions and Revisions
① 2 Bays 12'wide - 2 Piers 4'wide added to Stop Log Section. Total Length now 52' 17-6-54

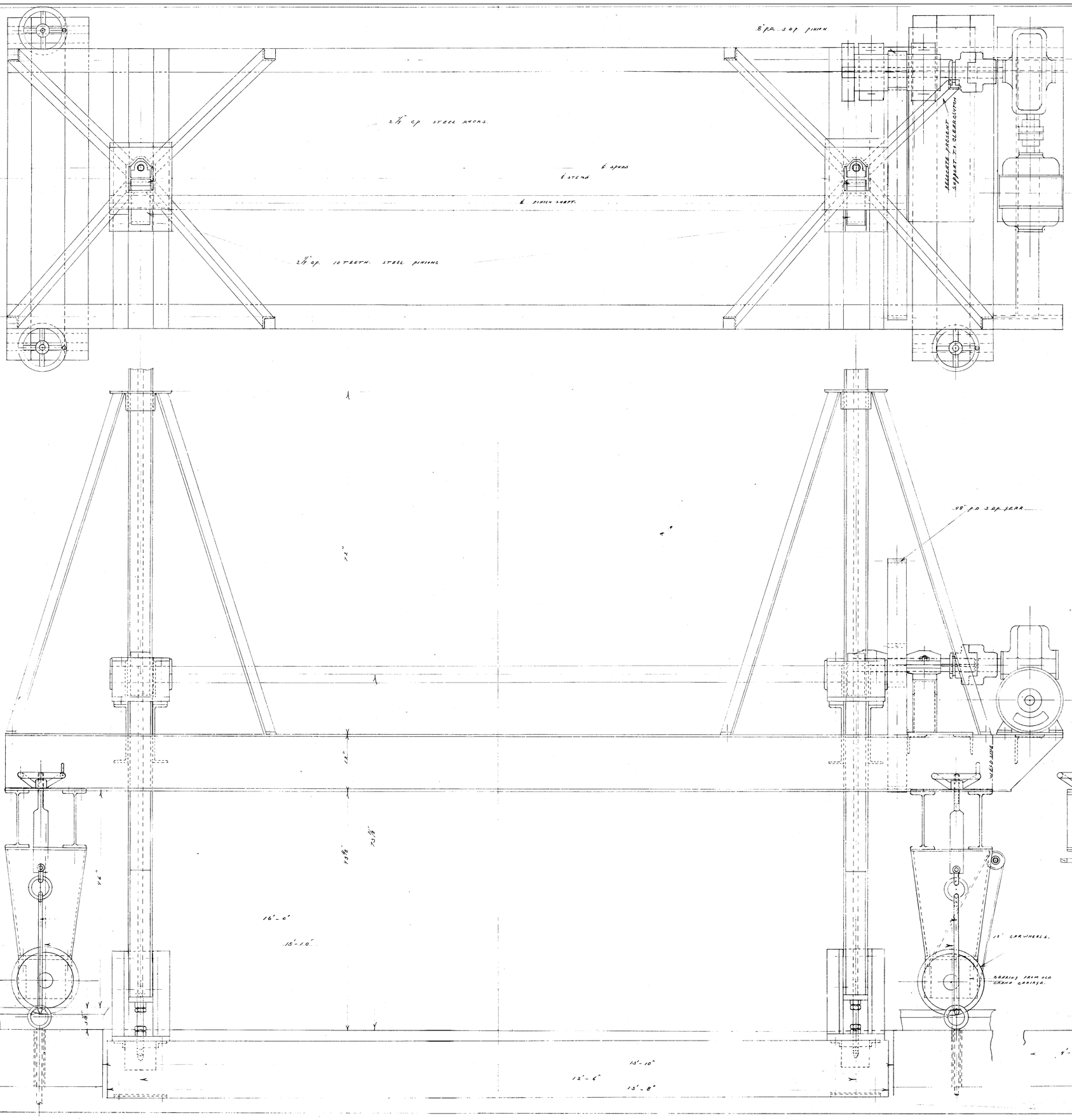
Note:-
This drawing supercedes 194-8-1
Steel schedule is Dwg A 94-8-12.

Scale	1/4" = 1'-0"
Date	5 May 1954
Drawn	J.M
Traced	
Checked	
Approved	

No. A. 94-8-2

BILL OF MATERIAL

No. REQUIRED	DESCRIPTION	DRWG. No.	OBTAIN AT
1	MAINFRAME WITH WHEELS ETC.	34-8-7a	BUILD AT HERSEY
2	STEMS WITH SPROCS.	34-8-10	" "
	RACKS, GEARS, SHAFT EXT.	34-8-11	ORDER AS REQ'D TRANS. ASSN. ALL AT HERSEY BUILD AT HERSEY
2	BEARING PEDESTALS	34-8-8	
1	5 HP. 220 V. 1200 RPM FRAME L&M MOTOR	34-8-6	C.G.E.
1	7½" SC-1 CUSHTI REDUCER	34-8-6	ORDER
1	FLEXIBLE COUPLING	34-8-6	" "
2	TOP GUIDE BRACKETS	34-8-9	BUILD AT HERSEY
1	2 15/16" JAW CLUTCH COUPLING	DODGE	ORDER
1	#12 AUTOMATIC BAND BRAKE	"	"



NOTE: CLUTCH AND BRAKE ARRANGEMENT AS REQ'D FOR DEC. 8 V

THE NEW SOUTH POWER COMMISSION
HALIFAX, NOVA SCOTIA.
RELEASED BY STEM.
LOWER BOOM ASSY. DEVELOPMENT.
GENERAL ARRANGEMENT 10A
STORAGE HOIST.

SCALE 1/2" = 1'-0" | DATE 8 - '54
DRAWN E. DOAN | No. A94-8-6

H-004W1-1-631-00-004

Request IR-2:

(a) What is the estimated duration of this project?

(b) With respect to the cost provided in the detailed estimated cost sheet (DCE)?

(i) Please provide a breakdown of the travel expenses and meal costs.

(ii) What is the purpose of the OT labour? Please provide a breakdown of this cost.

(iii) Do any of the contracts or consulting services include OT hours? If yes, please provide their breakdown in terms of tasks and costs.

(iv) Why can the work not be done during normal working hours?

(v) Please explain why labour, contracts, and consulting costs constitute 87% of the total, while materials account for only 13% (excluding AO and AFUDC).

Response IR-2:

(a) The project is already underway and is anticipated to have a total duration of two years from initial development to completion. As of January 2026, construction activities are complete, with environmental and archaeological post-monitoring underway. Post-monitoring is anticipated to be complete in December 2026, with project close out activities happening through March 2027.

(b)

(i) Please refer to the table below.

REDACTED

Group	Expense type			Tasks
	Travel to site ($)	Accommodations ($)	Meals ($)	
Hydro Operations	-	-	1,000	LGB GS operation during drawdown and watering up and assistance to remove old and insert new logs. Unplanned OT meals are part of the unionized collective agreement. Since this project has potential for planned and unplanned OT, some cost to meals was included.
Engineering	13,350	4,600	6,462	Includes stoplog manufacturer shop visit (located in Montreal) for inspection, 7 months of project development with frequent site visits to facilitate assessments/inspections, and onsite support for 3.5 months during construction.
Project Support Staff	4,600	4,200	2,795	Required frequent presence on site for various stakeholders and contractors coordination by project management team.

1
2

Group	Expense type			Tasks
	Travel to site ($)	Accommodations ($)	Meals ($)	
Environmental	2,575	14,800	5,930	Includes: • fish rescue during reservoir drawdown (8 people for 8 days) • 1 environmental check per week for 14 weeks duration • archaeological site monitoring work supervision and related meetings

(vi) The Fisheries Act Authorization issued for the Project by Fisheries and Oceans Canada (DFO) required that the drawdown be completed over a minimum of 8 days. Overtime labour was required to maintain the drawdown schedule. Please refer to the table below for a breakdown of OT labour costs. It is not possible to break the overtime labour categories further from what was provided in the detailed cost estimate, however in an attempt to be responsive to the question, the Company has provided additional detail around the tasks completed during overtime work hours.

Group	OT cost ($)	Tasks
Hydro Operations	52,787	• 10-12 hour working days for seven full time operators, for the 8-day drawdown, including working through weekends to remove jammed stoplogs and reinstall new ones. • Evening call outs as needed while the entire system was being operated manually.
Engineering	2,500	Support was provided on weekends as needed.
Environmental	3,000	Environmental monitoring during the eight-day fish rescue.

Group	OT cost ($)	Tasks
Term OT – Hydro Operations	2,163	Term labour to support operations during the drawdown.

(iii) Yes. Please refer to the table below for a breakdown of consultant and contract OT task description and costs.

Contractor	OT Cost ($)	Tasks
Elliot Excavators	Elliot's contract was lump sum and included two weekends of work (prime time) as part of their proposal. The cost was not broken out and this allowance of two weekends was used.	Sluiceway concrete piers repair
Irving Equipment	[redacted]	Stoplogs cranage after hours and weekends
Acuren		Rope access works: assistance with stoplogs removal and sluiceway concrete repairs after hours and weekends
Dominion Diving		ROV inspection after hours

(iv) Work outside normal working hours, which included archeological monitoring, security, drawdown management and fish rescue, cement pour completions, and stuck stoplog removal and re-installation, was required to maintain the 8-day drawdown schedule as outlined in the Fisheries Act Authorization for the Project.

(v) The higher proportion of non-material costs reflects the nature of drawdown projects, which require significant expenditure related to major construction contracts, archaeological reconnaissance/monitoring, and environmental offsetting.

Request IR-3:

(a) Does the cost of this work appear similar to other similar projects performed by the utility?

(i) If yes, please provide the matter number and cost for comparison.

(b) What was the process to procure Consulting and Contracts services as noted in the detailed cost estimate sheet?

(i) Please provide the quotations received from each vendor.

Response IR-3:

(a) While individual elements of the work may have similarities to other projects performed by NS Power, the specific scope of drawdowns, environmental offsetting costs, and archeology are unique to each specific reservoir, permit conditions, and as-found conditions of the site.

(i) N/A

(b) The following contracts and consulting items were procured through a competitive procurement process:

- Crane Services;
- Rope Access Contractor Support;
- Site Security Support; and
- New Stoplogs.

The following contract and consulting items were procured using Master Services Agreements (MSA):

- Engineering design, field studies, and environmental permitting support;
- Engineering support during construction and concrete repair design;
- Site construction supervision; and
- ROV inspection.

The MSAs in place with engineering and environmental services providers referenced above were procured through a competitive procurement process.

The following contract and consulting items were not procured through a competitive procurement process:

- Concrete pier refurbishment – The condition of the stop log check piers was discovered after the drawdown, and refurbishment was required to ensure the system could be safely restored. Once the issue was identified, NS Power engaged its already-contracted engineering consultant to begin developing refurbishment designs. While those designs were being finalized, Elliot Excavators, the only contractor available and capable of completing the work within the required timeframe, was simultaneously engaged. Due to the need to minimize the drawdown extension and complete the refurbishment before winter, there was insufficient time to follow the standard procurement process for selecting a construction contractor.

- Dock installation and removal – during reservoir drawdown, archaeological monitoring revealed a significant archaeological site which requires passing from one side of a flowing river to the other in a remote location. To ensure safe access to the team of archeologists, Mi'kmaw monitors, and Mi’kmaw community members, NS Power found a creative solution of building a pedestrian bridge made

of aluminium dock sections. Upon researching possible sources, Eagle Beach was the only supplier who had available products (aluminum docks) in stock and was available to mobilize to build such a bridge within a week of notice.

- Project Environmental Offsetting – Ducks Unlimited Canada was contracted to develop and execute an offsetting plan for the Project. Ducks Unlimited's Conservation Pro Division have expertise in fish habitat restoration and compensation and have completed several offsetting projects in accordance with DFO's offsetting policy and guidelines. Ducks Unlimited had a suitable project that met DFO offsetting policy criteria and was sufficiently advanced to be used as an offset project for the drawdown, which was a requirement for NS Power to apply for and receive the project FAA in a timely manner.

- Archaeological Reconnaissance and Monitoring – Wasoqopa'q First Nation (WFN) are a Mi'kmaq owned/operated group trained in security who have completed archaeological security contracts for NS Power in the past. Through capacity funding for the Tusket Main Dam Project, NS Power supported the training of WFN staff in archaeological security. The Nova Scotia Department of Communities Culture Tourism and Heritage (CCTH) has affirmed that extended drawdowns (i.e. exceeding a month) are expected to have archaeological security. Given the proximity of WFN, which is located on and adjacent to the Mersey River, their experience with archaeological security, and the requirement for archaeological security, the Company moved forward with engaging WFN to complete this scope of work.

(c) Please refer to Partially Confidential Attachment 1 for a copy of vendor quotations. Quotes may differ from costs outlined in the detailed cost estimate as filed, change orders were issued during construction which were not captured in the original quotes. Costs in the detailed cost estimate include actuals as well as forecast costs.

PARTIALLY CONFIDENTIAL (Attachment Only)

Vendor	Attachment Page Number	DCE Category
Acuren	1-3	Contracts - Rope Access
Acuren	4-6	Contracts -Rope Access
Acuren	7-12	Contracts - Rope Access
Acuren	13-15	Contracts - Rope Access
Boreas Heritage	16-18	Consulting - Archeology Reconnaissance
Boreas Heritage	19	Consulting - Archeology Reconnaissance
Commissionaires	20-26	Contracts - Security
Dominion Diving	27	Contracts - ROV Inspection
Ducks Unlimited	28	Consulting - Environmental Offsetting
Eagle Beach	29	Contracts - Dock Installation/Removal
Elliot Excavators	30	Contracts - Concrete Pier Repair
Groupe Carbonneau	31-32	Materials - New Stoplogs
Irving Equipment Limited	33	Contracts - Crane Services
Irving Equipment Limited	34-38	Contracts - Crane Services
Kent Mobile Shelters	39-46	Rentals - Site Office
Myette Engineering Ltd	47	Consulting - Site Construction Supervision
Myette Engineering Ltd	48	Consulting - Site Construction Supervision
Myette Engineering Ltd	49	Consulting - Site Construction Supervision
Wasoqopa'q First Nation	50	First Nations Commitments
Wasoqopa'q First Nation	51	First Nations Commitments
Winchester Disposal	52	Rentals - Portable Washrooms
Wood Canada Limited	53-74	Consulting - Engineering Design field studies, and environmental permitting support; Engineering support during construction and concrete repair design

1

Nova Scotia
61 Raddall Avenue, Unit O
Dartmouth, NS, B3B 1T4
Phone: (902) 434 4405

Project Estimate

September 9, 2025

Reference **801-090425 NSPI Mersey River - LGB Dam Concrete Inspections & Repairs**

Nova Scotia Power
Mersey River, NS

Attention: **Roberts, Jacob<Jacob.Roberts@nspower.ca>**

Subject **LGB Dam Concrete Inspections & Repairs**

Tacten is pleased to have this opportunity to submit a proposal and to work with you and your team. Your business is very important to us and we are well positioned to provide you with exceptional value.

The following highlights the requirements and work scope as it is understood:

- Investigate multiple high concern areas throughout the dam that were identified during inspection
- Supply, set up, and install access platform

Tacten will provide:

- Resources and equipment to complete the work scope as per above

Nova Scotia Power will provide:

- Safe access to the site and equipment
- Technical information and background information

ACUREN

Date Issued	**September 9, 2025**
Nature of Quote	**Time and Materials**
Reference	**801-090425 NSPI Mersey River - LGB Dam Concrete Inspections & Repairs**

Summary of Costs:

Onsite Labour, Equipment & Consumables	[redacted]	
Travel & Expenses		
Offsite Reporting		
Subtotal: Engineering		
Time and Materials Cost		

Acuren is dedicated to delivering top-notch and dependable services to our clients. Our highly skilled staff, combined with our numerous locations and a unified management team, ensures both expertise and local support.

We appreciate this opportunity and look forward to working with you. Should you have any questions regarding this proposal, please contact us at your convenience.

Prepared By:	*Cory Dearman, NS Operations Manager*	cory.dearman@acuren.com 902.579.0422
Reviewed By:	*Devin Hardy, Division Manager*	devin.hardy@acuren.com 902.580.5339

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ACUREN

Time and Materials

Nova Scotia Power

NDT & RAIS

LABOUR

PERSONNEL CLASSIFICATION	DESCRIPTION	ST RATE	OT RATE	DT RATE	NS PREMIUM	NIGHT SHIFT (Y/N)	SUN ST	SUN OT	SUN DT	MON ST	MON OT	MON DT	TUE ST	TUE OT	TUE DT	WED ST	WED OT	WED DT	THU ST	THU OT	THU DT	FRI ST	FRI OT	FRI DT	SAT ST	SAT OT	SAT DT	TOTAL COST
IRATA Rope Access Level 3	Mobilization	[redacted]				N					2.0					2.0												[redacted]
IRATA Technician	Mobilization					N					2.0					2.0												
IRATA Technician	Mobilization					N					2.0					2.0	2.0		2.0	2.0								
IRATA Technician	Mobilization					N					2.0																	
IRATA Rope Access Level 3	On Site					N					4.0					8.0			8.0	2.0								
IRATA Technician	On Site					N					4.0					8.0			8.0	2.0								
IRATA Technician	On Site					N					4.0					6.0			6.0									
IRATA Technician	On Site					N					4.0																	
TOTAL LABOUR COST																												**$8,551.50**

EQUIPMENT & RENTALS

EQUIPMENT DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Service Vehicle	Day	3.0	[redacted]	
Rope Kit (per person)	Day	10.0		
Conventional NDT Small Tools & Inspection Equipment (Per Technician)	HR	26.0		
TOTAL EQUIPMENT COST				**$1,972.26**

REPORTING LABOUR TIME

REPORTING TASK	PERSONNEL CLASSIFICATION	RATE	HOURS	TOTAL COST
TOTAL REPORTING LABOUR				**$0.00**

CONSUMABLES

DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
TOTAL CONSUMABLES COST				**$0.00**

EXPENSES

DESCRIPTION	QUANTITY	RATE	TOTAL COST
Living Out Allowance (Lodging)	6.0	[redacted]	
Living Out Allowance (Subsistance Only)	10.0		
Travel Mileage Service Vehicle	155.0		
TOTAL EXPENSES COST			**$2,084.47**

Nova Scotia
61 Raddall Avenue, Unit O
Dartmouth, NS, B3B 1T4
Phone: (902) 434 4405

Project Estimate

November 28, 2025

Reference **801-110525 NSPI Mersey River - LGB Dam Sill Cleaning R01**

Nova Scotia Power
Mersey River, NS

Attention: **Roberts, Jacob<Jacob.Roberts@nspower.ca>**

Subject **LGB Dam Sill Cleaning (PO# 2161898)**

Tacten is pleased to have this opportunity to submit a proposal and to work with you and your team. Your business is very important to us and we are well positioned to provide you with exceptional value.

The following highlights the requirements and work scope as it is understood:

- Ensure stoplog checks and sill are clean before reinstallation of stoplogs
- Check steel repair

Tacten will provide:

- Resources and equipment to complete the work scope as per above

Nova Scotia Power will provide:

- Safe access to the site and equipment
- Technical information and background information

ACUREN

Date Issued	**November 28, 2025**
Nature of Quot	**Time and Materials**
Reference	**801-110525 NSPI Mersey River - LGB Dam Sill Cleaning R01**

Summary of Costs:

3 Person Crew		[redacted]
Onsite Labour, Equipment & Consumables		
Travel & Expenses		
Offsite Reporting		
Subtotal: Engineering		
Time and Materials Cost		

Acuren is dedicated to delivering top-notch and dependable services to our clients. Our highly skilled staff, combined with our numerous locations and a unified management team, ensures both expertise and local support.

We appreciate this opportunity and look forward to working with you. Should you have any questions regarding this proposal, please contact us at your convenience.

Prepared By:	*Cory Dearman, NS Operations Manager*	cory.dearman@acuren.com 902.579.0422
Reviewed By:	*Devin Hardy, Division Manager*	devin.hardy@acuren.com 902.580.5339

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ACUREN

Time and Materials

Nova Scotia Power

NDT & RAIS

LABOUR

PERSONNEL CLASSIFICATION	DESCRIPTION	ST RATE	OT RATE	DT RATE	NS PREMIUM	NIGHT SHIFT (Y/N)	SUN ST	SUN OT	SUN DT	MON ST	MON OT	MON DT	TUE ST	TUE OT	TUE DT	WED ST	WED OT	WED DT	THU ST	THU OT	THU DT	FRI ST	FRI OT	FRI DT	SAT ST	SAT OT	SAT DT	TOTAL COST
IRATA Rope Access Level 3	Mobilization	[redacted]				N				8.0			2.0															[redacted]
IRATA Technician	Mobilization					N							2.0															
IRATA Technician	Mobilization					N							2.0															
IRATA Rope Access Level 3	Sill/Check Cleaning					N							8.0			8.0	2.0											
IRATA Technician	Sill/Check Cleaning					N							8.0			8.0	2.0											
IRATA Technician	Sill/Check Cleaning					N							8.0			8.0	2.0											
TOTAL LABOUR COST																												[redacted]

EQUIPMENT & RENTALS

EQUIPMENT DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Service Vehicle	Day	2.0	[redacted]	
Rope Kit (per person)	Day	6.0		
Conventional NDT Small Tools & Inspection Equipment (Per Technician)	HR	15.0		
Generator & Hammer Drill Rental	Ea	1	[redacted]	
TOTAL EQUIPMENT COST				$1,695.08

REPORTING LABOUR TIME

REPORTING TASK	PERSONNEL CLASSIFICATION	RATE	HOURS	TOTAL COST
TOTAL REPORTING LABOUR				$0.00

CONSUMABLES

DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Hilti Rods & Epoxy	Ea	1	[redacted]	
Steel Plate & Angel	Ea	1		
Paint	Ea	1		
TOTAL CONSUMABLES COST				

EXPENSES

DESCRIPTION	QUANTITY	RATE	TOTAL COST
Living Out Allowance (Lodging)		[redacted]	
Living Out Allowance (Subsistance Only)	6.0		
Travel Mileage Service Vehicle	150.0		
TOTAL EXPENSES COST			[redacted]

Nova Scotia
61 Raddall Avenue, Unit O
Dartmouth, NS, B3B 1T4
Phone: (902) 434 4405

Project Estimate

April 15, 2025

Reference **801-041525 NSPI Mersey River - Lower Great Brook Dam Coring**

Nova Scotia Power
Mersey River, NS

Attention: **Roberts, Jacob<Jacob.Roberts@nspower.ca>**

Subject **Lower Great Brook Dam Coring**

Tacten is pleased to have this opportunity to submit a proposal and to work with you and your team. Your business is very important to us and we are well positioned to provide you with exceptional value.

The following highlights the requirements and work scope as it is understood:

- Retrieve 8 concrete core samples from the downstream side of the Nova Scotia Power Lower Great Brook Dam on the Mersev River Hvdro Svstem near Milton. NS
- Deliver samples to WS Langley's lab at 219 Waverley Road, Suite 200, Dartmouth, NS
- See attached core sample location layout

Tacten will provide:

- Resources and equipment to complete the work scope as per above

Nova Scotia Power will provide:

- Safe access to the site and equipment
- Technical information and background information

ACUREN

Date Issued	**April 15, 2025**
Nature of Quot	**Time and Materials**
Reference	**801-041525 NSPI Mersey River - Lower Great Brook Dam Coring**

Summary of Costs:

Engineering	[redacted]	
Onsite Labour, Equipment & Consumables		
Travel & Expenses		
Offsite Reporting		
Subtotal: Engineering		
NDE & RAIS		
Onsite Labour, Equipment & Consumables		
Travel & Expenses		
Offsite Reporting		
Subtotal: NDE & RAIS		
Time and Materials Cost		

Acuren is dedicated to delivering top-notch and dependable services to our clients. Our highly skilled staff, combined with our numerous locations and a unified management team, ensures both expertise and local support.

We appreciate this opportunity and look forward to working with you. Should you have any questions regarding this proposal, please contact us at your convenience.

Prepared By: *Cory Dearman, NS Operations Manager* — cory.dearman@acuren.com 902.579.0422

Reviewed By: *Devin Hardy, Division Manager* — devin.hardy@acuren.com 902.580.5339

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ACUREN

Time and Materials

Nova Scotia Power

NDT & RAIS

LABOUR

PERSONNEL CLASSIFICATION	DESCRIPTION	ST RATE	OT RATE	DT RATE	NS PREMIUM	NIGHT SHIFT (Y/N)	SUN ST	SUN OT	SUN DT	MON ST	MON OT	MON DT	TUE ST	TUE OT	TUE DT	WED ST	WED OT	WED DT	THU ST	THU OT	THU DT	FRI ST	FRI OT	FRI DT	SAT ST	SAT OT	SAT DT	TOTAL COST
IRATA Rope Access Level 3	Mobilization					N				2.0						2.0												
IRATA Technician	Mobilization					N				2.0						2.0												
IRATA Technician	Mobilization					N				2.0						2.0												
IRATA Rope Access Level 3	On Site Coring					N				8.0			8.0	2.0		8.0												
IRATA Technician	On Site Coring					N				8.0			8.0	2.0		8.0												
IRATA Technician	On Site Coring					N				8.0			8.0	2.0		8.0												
IRATA Rope Access Level 3	Job Planning/Safety Paperwork					N													8.0									

TOTAL LABOUR COST

EQUIPMENT & RENTALS

EQUIPMENT DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Rope Kit (per person)	Day	9.0		
Service Vehicle	Day	3.0		
Conventional NDT Small Tools & Inspection Equipment (Per Technician)	HR	22.0		
TOTAL EQUIPMENT COST				$1,786.76

REPORTING LABOUR TIME

REPORTING TASK	PERSONNEL CLASSIFICATION	RATE	HOURS	TOTAL COST
TOTAL REPORTING LABOUR				$0.00

CONSUMABLES

DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Wedge/Drop In Anchors	Ea	1		
Sand Bags	Ea	1		
TOTAL CONSUMABLES COST				

EXPENSES

DESCRIPTION	QUANTITY	RATE	TOTAL COST
Travel Mileage Service Vehicle	300.0		
Living Out Allowance (Subsistance Only)	6.0		
Living Out Allowance (Lodging)	6.0		
Core Drill Rental (cost +5%)	1.0		
TOTAL EXPENSES COST			

DOWNSTREAM

POWERHOUSE

2" Check 2" deep Grouty openings

STOPLOG BAY

BAY 1

BAY 2

BAYS 3 to 5

BAY 6

RIGHT ABUTMENT

PLAN

FRONT ELEVATION SHOWING BASE AND DECK SLABS

DOWNSTREAM ELEVATION OF LOG SLUICE BULKHEAD

SECTION A-A (5 LOCATIONS: BAYS 2 TO 6)

SECTION C-C (1 LOCATION: STOLOG BAY)

SECTION F-F (1 LOCATION: BAY 1)

SECTION E-E (1 LOCATION: RIGHT ABUTMENT)

SECTION B-B

SECTION D-D

SECTION G-G

SECTION H-H

H-004W1-1-631-00-002

THE NOVA SCOTIA POWER COMMISSION
HALIFAX, NOVA SCOTIA

MERSEY SYSTEM
LOWER GREAT BROOK DEVELOPMENT

LOG SLUICE AND STOP LOG SECTIONS
PLAN, ELEVATIONS AND SECTIONS SHOWING DETAILS OF REINFORCEMENT

SCALE 1/4" = 1'-0" | DATE 5 May 1954
DRAWN J.M. | APPROVED
TRACED | CHECKED

NO. A.94-8-2



STOPLOG BAY AND BAY 1



PIERS IN SLUICEWAY



RIGHT ABUTMENT



POTENTIAL ANCHOR POINTS ON DECK

Location	Quantity	Min. Diameter (mm)	Min. Depth (mm)
Sides of Piers	5	100	350
	1	100	700
Downstream sloping face of decommissioned log sluice	1	100	350
Base Slab	1	100	350

Nova Scotia
61 Raddall Avenue, Unit O
Dartmouth, NS, B3B 1T4
Phone: (902) 434 4405

Project Estimate

August 21, 2025

Reference **801-070825 NSPI Mersey River - LGB Dam Stoplog Removal R02**

Nova Scotia Power
Mersey River, NS

Attention: **Roberts, Jacob<Jacob.Roberts@nspower.ca>**

Subject **LGB Dam Stoplog Removal**

Tacten is pleased to have this opportunity to submit a proposal and to work with you and your team. Your business is very important to us and we are well positioned to provide you with exceptional value.

The following highlights the requirements and work scope as it is understood:

- Assist in removing stuck stop logs throughout bay 1 and 6 of the Lower Gates Brook Dam. Upwards of 40 stoplogs 20/bay.
- Checks in each of the 6 bays to be visually inspected for damages and cleaned of debris.
- The sills in the bottom of each sluiceway to be cleaned (if needed/if possible due to water flow), and replaced.
- Adjust/wedge all stoplogs so they are seated to the downstream side of the dam.
- It is possible that the crew will be on standby at times while other work takes place. Tacten will be available to complete any inspection/services outside of the above scopes as needed by NSP.

Tacten will provide:

- Resources and equipment to complete the work scope as per above

Nova Scotia Power will provide:

- Safe access to the site and equipment
- Technical information and background information

ACUREN

Date Issued	**August 21, 2025**
Nature of Quote	**Time and Materials**
Reference	**801-070825 NSPI Mersey River - LGB Dam Stoplog Removal R02**

Summary of Costs:

4 Person Crew	[redacted]	
Onsite Labour, Equipment & Consumables		
Travel & Expenses		
Offsite Reporting		
Subtotal: Engineering		
Time and Materials Cost		

Acuren is dedicated to delivering top-notch and dependable services to our clients. Our highly skilled staff, combined with our numerous locations and a unified management team, ensures both expertise and local support.

We appreciate this opportunity and look forward to working with you. Should you have any questions regarding this proposal, please contact us at your convenience.

Prepared By:	*Cory Dearman, NS Operations Manager*	cory.dearman@acuren.com 902.579.0422
Reviewed By:	*Devin Hardy, Division Manager*	devin.hardy@acuren.com 902.580.5339

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ACUREN

Time and Materials

Nova Scotia Power

NDT & RAIS

LABOUR

PERSONNEL CLASSIFICATION	DESCRIPTION	ST RATE	OT RATE	DT RATE	NS PREMIUM	NIGHT SHIFT (Y/N)	SUN ST	SUN OT	SUN DT	MON ST	MON OT	MON DT	TUE ST	TUE OT	TUE DT	WED ST	WED OT	WED DT	THU ST	THU OT	THU DT	FRI ST	FRI OT	FRI DT	SAT ST	SAT OT	SAT DT	TOTAL COST
IRATA Rope Access Level 3	Mobilization	[redacted]				N	2.0			2.0																		[redacted]
IRATA Technician	Mobilization					N	2.0			2.0																		
IRATA Technician	Mobilization					N	2.0			2.0																		
IRATA Technician	Mobilization					N	2.0			2.0																		
IRATA Rope Access Level 3	On Site Stop Log Removal					N				8.0			8.0	2.0		8.0	2.0		8.0	2.0		8.0	2.0			10.0		
IRATA Technician	On Site Stop Log Removal					N				8.0			8.0	2.0		8.0	2.0		8.0	2.0		8.0	2.0			10.0		
IRATA Technician	On Site Stop Log Removal					N				8.0			8.0	2.0		8.0	2.0		8.0	2.0		8.0	2.0			10.0		
IRATA Technician	On Site Stop Log Removal					N				8.0			8.0	2.0		8.0	2.0		8.0	2.0		8.0	2.0			10.0		
IRATA Rope Access Level 3	On Site Stop Log Removal					N		8.0																				
IRATA Technician	On Site Stop Log Removal					N		8.0																				
IRATA Technician	On Site Stop Log Removal					N		8.0																				
IRATA Technician	On Site Stop Log Removal					N		8.0																				

TOTAL LABOUR COST [redacted]

EQUIPMENT & RENTALS

EQUIPMENT DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Service Vehicle	Day	7.0	[redacted]	
Rope Kit (per person)	Day	24.0		
Conventional NDT Small Tools & Inspection Equipment (Per Technician)	HR	66.0		
Drone with HD or Thermography Camera	HR			

TOTAL EQUIPMENT COST $4,756.86

CONSUMABLES

DESCRIPTION	UNITS	QUANTITY	RATE	TOTAL COST
Concrete Anchors	Ea	1	[redacted]	
Concrete Grout	Ea	1		
Eye Bolts (lag bolts)	Ea	1		
Pressure Washer & Pump	Ea	1		
Wedge Anchors (sill)	Ea	1		

TOTAL CONSUMABLES COST [redacted]

REPORTING LABOUR TIME

REPORTING TASK	PERSONNEL CLASSIFICATION	RATE	HOURS	TOTAL COST

TOTAL REPORTING LABOUR $0.00

EXPENSES

DESCRIPTION	QUANTITY	RATE	TOTAL COST
Living Out Allowance (Lodging)	24.0	[redacted]	
Living Out Allowance (Subsistance Only)	28.0		
Travel Mileage Service Vehicle	310.0		

TOTAL EXPENSES COST [redacted]

BOREAS HERITAGE

46 Arlington Avenue
Halifax, NS, B3N 2A1
902.240.6687
boreasheritage.ca

Jared DiCarlo
Nova Scotia Power Inc.
1223 Lower Water St,
Halifax, Nova Scotia,
B3J 3S8

January 31, 2025

RE: ARCHAEOLOGICAL ASSESSMENT – LOWER GREAT BROOK DRAWDOWN

Jared,

With respect to your request, Boreas Heritage Consulting Inc. is pleased to provide the following methodology and costing for archaeological reconnaissance in association with the proposed temporary drawdown of the Lower Great Brook Headpond, located on the Mersey Hydro System in Queens County. This proposal is based on the requested scope of services in conjunction with our experience in conducting archaeological impact assessments, and the terms of the *Special Places Protection Act* and associated guidelines. Boreas Heritage Consulting Inc. is committed to providing quality professional services and products at competitive rates and employing the latest developments in relevant technologies.

As indicated in your email, Nova Scotia Power Inc. (NSPI) is planning to draw down the reservoir in order to conduct repairs. This will expose a portion of the natural pre-hydro shoreline exposing several registered archaeological sites as well as the possibility of previously unrecorded archaeological sites.

The proposed methodology consists of the following four components: application for a Heritage Research Permit; archaeological reconnaissance within the reservoir; documentation and mitigative artifact collection; and analysis and reporting, including the preparation of a report summarizing the results of the field investigations (including the generation of GIS-based mapping of archaeologically sensitive areas), as well as recommendations for the proper management of known archaeological resources.

Heritage Research Permit

All archaeological work undertaken within the province of Nova Scotia is conducted under the terms of the *Special Places Protection Act* and the associated permit guidelines. Accordingly, the submission of a Heritage Research Permit application *(Category C: Archaeological Resource Impact Assessment)* to the Special Places Program is the first stage of the archaeological program. The application will include the qualifications of the Principal Investigator, a detailed description of the project and proposed methodology, and a commitment to the conservation of any fragile material culture recovered during the course of the field investigation.

Archaeological Reconnaissance

The objectives of the archaeological reconnaissance are to inspect the exposed shoreline for evidence of any registered, as well as previously unrecorded, archaeological resources within the dewatered reservoir, and document the condition of any archaeological sites discovered within the study area. In the event that any previously unknown archaeological sites are encountered during the course of the survey, they will be swiftly recorded and sufficient data will be collected to complete a Maritime Archaeological Resource Inventory (MARI) form for registration within the Archaeological Sites Database maintained by the Nova Scotia Museum. BHCI is committed to working collaboratively with NSPI to ensure an effective exchange of information. In the event that sites of particular significance and/or sensitivity are encountered, BHCI will immediately notify the appropriate agent within NSPI. Following discussion with NSPI, the SPP and Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) will be advised of the discovery. Site locations will be recorded using a hand-held GPS instrument. Geographic deliverables will be submitted to NSPI in GIS format compatible with systems operated, and as specified, by NSPI.

Documentation and Mitigative Artifact Collection

The visual inspection will focus on the identification of exposed cultural resources and the documentation of site condition, and will involve close examination of the ground surface along closely- spaced transects. During reconnaissance, all precontact artifacts will be systematically documented and recovered. The survey will not involve subsurface testing. Each identified archaeological site will be inspected in order to record and photograph its archaeological resources, and to simultaneously collect exposed artifacts. Artifact locations will be flagged in order to determine the site area and artifact distribution. A GPS survey instrument will be used to document artifact findspots, which will be assigned a unique identifying number. The exposed artifacts will then be collected and bagged according to their findspot number. Throughout the fieldwork, site condition and archaeological field activity will be documented in the form of fieldnotes and photographs.

Analysis and Reporting

All artifacts recovered during the fieldwork will be transported to BHCI's office in Halifax for analysis. The artifacts will be processed and catalogued in accordance with standards set by the SPP. Upon completion of field activities, analysis and interpretation, the results of the assessment will be summarized in a report prepared in accordance with permit requirements established by the SPP. The report will include the documentation of all significant archaeological resources encountered during field investigations and recommendations for appropriate resource management strategies. Photos, detailed plans and GIS-based mapping of the study area (incorporating LiDAR and bathymetric data, if available) and specific find locations will be incorporated into the report. A draft version of the report will be submitted to NSPI for review prior to submission to the SPP.

PROJECT PERSONNEL

Boreas Heritage Consulting Inc. proposes that the project will be managed and fieldwork directed by Principal and Senior Archaeologist, Stephen G. Garcin. It is proposed that up to three teams of four individuals will conduct the survey on the reservoir, with one team identifying and flagging while the other team records and collects.

BUDGET

The archaeological assessment can be undertaken at a cost of **$258,066.00** plus applicable taxes. Budget details are provided below:

ARCHAEOLOGICAL ASSESSMENT – LOWER GREAT BROOK DRAWDOWN						
TASK	PERSONNEL	RATE	HRS.	FEES	DISBURSEMENTS	TOTAL
Permit	[redacted]					
Project Management						
Safety Admin.						
Archaeological Plan Development						
Fieldwork – Reconnaissance						
Reporting						
Artifact Processing						
Drafting						
TOTAL COST						
					Fees: $	[redacted]
					Disbursements: $	
					TOTAL COST: $	

Please note – the above quote does not include HST.

We look forward to discussing our proposal with you. If you have any questions or comments, please do not hesitate to contact me by phone (902) 240-6687 or email (sgarcin@boreasheritage.ca).

Thank you,

[redacted]
Principal and Senior Archaeologist

BOREAS HERITAGE

46 Arlington Avenue
Halifax, NS, B3N 2A1
902.240.6687
boreasheritage.ca

LOWER GREAT BROOK DRAWDOWN – SPOT CHECK – 25 mm +						
TASK	PERSONNEL	RATE	HRS.	FEES	DISBURSEMENTS	TOTAL
Project Management	[redacted]					
Travel / Mobilization						
Fieldwork – Reconnaissance						
Reporting						
Artifact Processing						
Drafting						
TOTAL COST						
					Fees: $	[redacted]
					Disbursements: $	
					TOTAL COST: $	

Please note – the above quote does not include HST.

LOWER GREAT BROOK DRAWDOWN – WIDER SPOT CHECK – 50 mm +						
TASK	PERSONNEL	RATE	HRS.	FEES	DISBURSEMENTS	TOTAL
Project Management	[redacted]					
Travel / Mobilization						
Fieldwork – Reconnaissance						
Reporting						
Artifact Processing						
Drafting						
TOTAL COST						
					Fees: $	[redacted]
					Disbursements: $	
					TOTAL COST: $	

Please note – the above quote does not include HST.

COMMISSIONAIRES

ONWATCH

NSP Various Sites in NS

Short Term	
Report #	175137
Report Date	08/19/2025
Report Time	08:28
Created By	[redacted] #18712
Client	NSP Various Sites in NS

Information	
Type:	Commercial
Contract Site:	NSP (Lower Great Brook)
Site Number:	4855
Location:	236 River Rd
Contact on Site:	Jacob Roberts
Start Date:	08/18/2025
End Date:	N/A
Description of Services Required and Fees	
Type of Work	Guarding
Total Number of Commissionaires Required	1 per shift
Clearance Level Required:	None Required
Hours for Service	24/7 Coverage
Billing Rate:	[redacted] per hour plus tax
Earning Rate:	N/A
Additional Fees for Special Requirements:	Use of Vehicle (Shelter)-[redacted] per hour, Personal Vehicle for Escort/Travel-[redacted] per KM
Fee	
HST	
Total	
Client Information:	
Company Name:	Noa Scotia Power
Billing Address:	shawn.goudge@nspower.ca
Company Representative Name:	Shawn Goudge
Phone Number:	902-399-5093
Email:	Shawn.Goudge@nspower.ca
Please note:	-Payments are due upon receipt of invoice. Late payments are charged 2% per month., -Depending on the holidays to which you may be subject, billing will be 2.5 times the regular hourly billing rate., -Commissionaires' hours over 48 hours per week will be billed at 1.5 times. Hours are not to exceed 16 hours per day per Commissionaire., -Any scheduling cancellations with less than 24 hours notice will result in billing of 4 hours., -The minimum call out is payment for 4 hours., - Payment conditions will correspond with clients request

From: [redacted]
Sent: Tuesday, August 19, 2025 3:08:00 PM
To: Goudge, Shawn <shawn.goudge@nspower.ca>
Subject: Re: Lower Great Brook- 236 River Rd Schedule

Exercise Caution - This is an external email from: aconnors@commissionaires.ns.ca. **Beware of links or attachments from external sources. If you are unsure, click "Report Email" to submit for review.**

Shawn,

Based on the scheduling here is the mileage and shift count for each guard. We have guards travelling from Yarmouth, different areas of the Valley band HRM. We also had to run 8-hour shifts to get the guards to commit with the travel time to and from the location. Hopefully this helps.

[redacted] 187.6 km per shift x 8 shifts

[redacted] 290 km per shift x 11 shifts

[redacted] 318 km per shift x 6 shifts

[redacted] 352 km per shift x 9 shifts

[redacted] 318 km per shift x 5 shifts

[redacted] 332 km per shift x 9 shifts

[redacted] 296 km per shift x 10 shifts

[redacted] 320 km per shift x 2 shifts

From: Goudge, Shawn <shawn.goudge@nspower.ca>
Sent: August 19, 2025 2:15 PM
To: [redacted]>
Subject: RE: Lower Great Brook- 236 River Rd Schedule

Hi [redacted]

Are you able to get me estimates on how many kms will be traveled per day ?

Thanks

Shawn

From: [redacted]
Sent: Tuesday, August 19, 2025 8:31 AM
To: Goudge, Shawn <shawn.goudge@nspower.ca>
Subject: Re: Lower Great Brook- 236 River Rd Schedule

Exercise Caution - This is an external email from: aconnors@commissionaires.ns.ca. **Beware** of links or attachments from external sources. If you are unsure, click "Report Email" to submit for review.**

Shawn,

I have sent over an agreement that outlines the price of [redacted] per hour plus tax for the guard, [redacted] per hour for shelter (use of vehicle), [redacted] per km.

It will come in from an email that says Automatic Alert- it may go to your junk/spam. If you do not receive it I will try sending it another way.

If you can review, sign and send back I would appreciate it.

[redacted]

From: Goudge, Shawn <shawn.goudge@nspower.ca>
Sent: August 18, 2025 4:48 PM
To: [redacted]
Subject: RE: Lower Great Brook- 236 River Rd Schedule

Thanks again for this. Our work unit needs the agreement for tomorrow. I hate being a bother

Hope you can help.

Shawn

From: [redacted]
Sent: Monday, August 18, 2025 9:14 AM
To: Goudge, Shawn <shawn.goudge@nspower.ca>
Subject: Lower Great Brook- 236 River Rd Schedule

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Shawn, as discussed here is the schedule for the next 3 weeks

[redacted]



[redacted]
Manager, Atlantic Operations Centre and Detail 85
COMMISSIONAIRES NOVA SCOTIA
T 902-480-2121

C [redacted]

COMMISSIONAIRES

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Land Acknowledgement

Commissionaires Nova Scotia is located in Mi'kma'ki, the ancestral and traditional lands of the Mi'kmaq people. CNS acknowledges the Peace & Friendship Treaties signed in this Territory and recognizes that we are all Treaty People. We also acknowledge that people of African descent have been in Nova Scotia for over 400 years, and we honour and offer gratitude to those ancestors who came before us to this land.

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Canada Anti-Spam Law Notice – To stop receiving commercial electronic messages from us, please forward this email to unsubscribe@nspower.ca with the word "unsubscribe" in the subject line. | Nova Scotia Power | 1223 Lower Water Street, Halifax NS B3J 3S8 | www.nspower.ca

Guard	Km/Shift	Total Shifts	Total Km	$/km	Cost
1	187.6	8	1500.8		
2	290	11	3190		
3	318	6	1908		
4	352	9	3168		
5	318	5	1590		
6	332	9	2988		
7	296	10	2960		
8	320	2	640		
				Total	

Total Cost

Hourly Wage	Shelter $/hr	Total Hours	Daily Cost	Days	Total Cost
		24		22.00	

[redacted]

Year	Phases		July	Aug	Sep	Nov	Dec	Cost
2024	Project Proposal	Fish/bathymetry survey, landowner engagement, initial project proposal for DFO review						$ 2,400.00
2025	Studies	Land survey and geotechnical investigation						$ 28,935.00
	Preliminary Engineering Design	Hydrology, geotech support, surficial design and drafting						$ 15,540.00
	Preliminary Project Plan	Completed detailed offsetting plan and permit approvals						$ 7,000.00
	Final Design	Complete detailed engineering design, senior engineering signoff, drafting, ready to begin tender process						$ 11,280.00
								$ 65,155.00

CONSERVATION PRO
A PROUD DIVISION OF DUCKS UNLIMITED CANADA

EAGLE BEACH
Contractors Limited
www.eaglebeach.ca

2033 Hammonds Plains Road
Hammonds Plains, N.S. B4B 1P3
(O) 902-835-7664 (F) 902-835-5403

18 September 2025

QUOTATION – Revised 29 Oct 2025

Nova Scotia Power
1223 Lower Water Street
Halifax, NS
B3J 3S8

Attention: Mr. Yuri Gal
Yuri.Gal@nspower.ca

Re: Aluminum post Docks for Mersey River
We hereby offer the following:

1.	Supply and install 240' of 52" of Lighthouse Aluminum Docks (Removal not included)	$ 68,800.00+HST
2.	Removal of docks and store on NSPI property	$ 25,300.00+HST
3.	Deliver and install 40' Sea Can for dock storage	$ 8,000.00+HST

Notes:
EZ Docks are guaranteed for 10 years, with a life expectancy of 50-60 years.
This offer is valid for 30 days. HST is not included in above pricing.
We assure you of our best services if awarded the work. If awarded the work, we will invoice you at the end of the job and payment becomes due upon receipt. Overdue accounts carry an interest charge of 2% per month.

Personnel, products & equipment subject to availability.
If you have any questions or comments, please do not hesitate to call.

Yours truly,

Amy Publicover
Safety Coordinator & Dock Sales
Eagle Beach Contractors Limited
902-835-7664 ext. 1

ELLIOT
EXCAVATORS LTD.

September 16, 2025

Nova Scotia Power Inc.
Yuri Gal
1223 Lower Water Street
Halifax, NS B3J 3S8

Re: Sluiceway Repairs: Lower Great Brook

Elliot Excavators Limited is pleased to provide you with the following quotation for Sluiceway Repairs at Lower Great Brook on the Mersey River Hydro System.

Our lump sum quote of $536,875.00+HST includes the following items:

- Prepare a project safety plan
- Supply and install and move as required scaffolding to complete work
- Site lighting as required
- Sealing Nova Scotia Power stoplogs as required to have dry work areas to facilitate concrete pours
- Xray piers to locate rebar and then core drill for anchors
- Install and grout anchors in piers
- Supply and install rebar
- Form and pour concrete in 6’ vertical lifts
- Strip forms and cut off the tie rods and epoxy ends so no steel is exposed
- Clean up and remove any debris prior to removing stoplogs
- Provide quality control and testing on concrete
- Prime time for two weekends

Not included are the following items:

- Gaps under deck slabs that require a grout layer will be at cost plus15%
- Office trailer
- Washrooms
- Installing or removing stoplogs
- If scaffolding is required to be removed and re-installed due to impending storm this will be at cost plus 15%

Thank you,

Scott Haverstock, President

103 Park Road Elmsdale, Nova Scotia B2S 2L3 Ph: 902-883-0616 F: 902-883-8900 E-mail e.excavators@ns.sympatico.ca

8138 R1

GROUPE CARBONNEAU GROUP

ISO 9001 : 2015 ENREGISTRÉ par QUASAR

CWB CERTIFIÉE CSA W47.1

26, rue du Pacifique
Bromont, (Qc), Canada J2L 1J5

Tél : 450 534-2792
Fax : 450 534-1564

Quotation

Offeree	Reference number
Att: **Rachel Vidal** **NOVA SCOTIA POWEF** Procurement Team HALIFAX, NS **Canada** Phone: Email: Rachel.Vidal@nspower.ca	**8138 R1**
	Project name Wooden Stoplogs (BC Fir, Hot, 14")
	Date of quotation May 9, 2025

As requested, it is with pleasure that we quote you the following work:

Supplies

Wooden Stoplogs with HOT dip galvanized steel caps

- wooden stoplogs acc DWG H-001W0-1-636-00-002 rev0
- 12" x 12" x 13'8" overall lenght
- BC FIR, Green, No.1 Structural (as per NLGA pa.131b)
- 14" x 14" machined to 12" x 12"
- CCA (Chromated Copper Arsenate) Pressure Treated to Refusal

Exceptions:
- Wood tolerences according to NLGA (National Lumber Grades Authority)

Our price for this work: **$** [redacted]

The conditions and terms of this offer are valid for a period of one month after the date of this offer. Note: The price aforementioned is without the applied taxes. Plus it is understood that Paul Carbonneau & Fils Inc. resides the sole owner of all products in this quotaiton until final payement.

FOB: **DDP Nova Scotia Power Inc. (14 River Rd, Milton, NS B0T 1V0 Canada)**
Lead time: **10-11 weeks from PO**
Payment Terms: **20% Upon PO**
(Net 30 days) **50% Ready for delivery**
30% Delivered on site

We hope that everything is to your satisfaction, please contact us if more information was required.
Best Regards,

Yannick Labonté
Tél.: 450 534-2792 **Cell.: (450) 525-2510**

Annex 1

Conditions



					Irving
Item	Section	Description	Estim Quantity	Unit	[redacted]
1.1	General	Mobilization	1	LS	
1.2	General	Demobilization	1	LS	
1.3	General	Travel & subsistance	1	LS	
1.4	General	Site-specific safety planning & documentation	1	LS	
2.1	Removals	Stoplog Removal (Old)			
2.1.1	Removals	Stoplog Removal from Sluiceway Deck to Trailer	120	LS	
2.1.2	Removals	Stoplog Transport Offsite	120	LS	
2.1.3	Removals	Stoplog Disposal	120	LS	
3.1	Additions	Stoplog Instalation (New)			
3.1.1	Additions	Load & Transport Stoplogs from Big Falls to LGB	120	LS	
3.1.2	Additions	Stoplog Transfer from Trailer to Sluiceway Deck	120	LS	
				Total	

Irving Unit Rates		
Description	Unit	[redacted]
Operated Equipment Regular Time (300 Ton Crane)	Hourly	
Operated Equipment Overtime (300 Ton Crane)	Hourly	
Operated Equipment Double Time (300 Ton Crane)	Hourly	
Regular Time (Rigger)	Hourly	
Overtime (Rigger)	Hourly	
Double Time (Rigger)	Hourly	

IRVING EQUIPMENT LIMITED
43 Atlantic St | Dartmouth, NS | B2Y 4P4
Office: (902) 429-7000 | Fax: (902) 455-9335

Quotation

27-Oct-25

Customer Information	
Quote #:	IEQ-09.16.2025MC2 Rev0
Revision #:	0
Organization:	NSPI Milton
Contact Name:	Jacob Roberts
Quoter Name:	Mike Clancey
Quoter Title:	Account Manager
Quoter Phone:	782-641-1765

Contact	
Number:	902-221-0398
email:	jacob.roberts@nspower.com

Project Name	Date of Work	City	Province
Lower Great Brook Stoplog Replacement	2025-10-01	Milton	NS

Scope of Work

300 ton crane to replace stoplogs to deck of the dam.

300T Liebherr LTM 1250-6.1

Charge	Description	Hourly	Est Time	Units	Pricing
Round trip Mob/Demob	Mob/ Demob	[redacted]			[redacted]
Operated Equip (Dayshift)	300 ton Crane with jib		24	Hours	
Operated Equip (Dayshift)	OT		6	Hours	
Rigger/Signaler/Driver (Dayshift)	Rigger Steve Tomlinson		24	Hours	
Rigger/Signaler/Driver (Dayshift)	OT		6	Hours	
Minimum rental period for 300T Liebherr LTM 1250-6.1 is 1 hours/day.		All pricing excludes applicable taxes			

Tractor & Trailer - IEQ

Charge	Description	Hourly	Est Time	Units	Pricing
Operated Equip (Dayshift)	Transport of logs Dartmouth, Big Falls etc	[redacted]	12	Hours	[redacted]
Operated Equip (Dayshift)	Transport of logs Dartmouth, Big Falls etc		12	Hours	
Rigger/Signaler/Driver (Dayshift)	2 riggers		36	Hours	
Rigger/Signaler/Driver (Dayshift)	OT 2 riggers (6 each)		12	Hours	
Minimum rental period for Tractor & Trailer - IEQ is 2 hours/day.		All pricing excludes applicable taxes		Estimated Total	
				All pricing excludes applicable taxes	

Special Services

Charge	Description	Hourly	Est Time	Units	Pricing
Equipment Rental (hrs)	Telehandler per week	[redacted]	1	Hours	[redacted]
Operated Equip (Dayshift)	telehandler Operator		10	Hours	
Round trip Mob/Demob					
		All pricing excludes applicable taxes		Estimated Total	

Special Services

Charge	Description	Hourly	Est Time	Units	Pricing
Room & Board	per person per night. 4 persons x 2 nights	[redacted]		Total	[redacted]
		All pricing excludes applicable taxes		Estimated Total	
				All pricing excludes applicable taxes	

<-- Equipment 5

Charge	Description	Hourly	Est Time	Units	Pricing
Rigger/Signaler/Driver (Dayshift)		[redacted]			

		All pricing excludes applicable taxes		Estimated Total	[redacted]
				All pricing excludes applicable taxes	
			GRAND TOTAL	$	[redacted]

Additional Rates (as required)		DAY SHIFT		NIGHT SHIFT	
Charge	**Description**	**Units**	**Pricing**	**Units**	**Pricing**
Operator	Straight Time	Hourly	[redacted]	Hourly	[redacted]
Operator	OT Premium	Hourly		Hourly	
Operator	DT Premium	Hourly		Hourly	
Rigger/Signaler/Driver	Straight Time	Hourly		Hourly	
Rigger/Signaler/Driver	OT Premium	Hourly		Hourly	
Rigger/Signaler/Driver	DT Premium	Hourly		Hourly	
Supervisor	Straight Time	Hourly		Hourly	
Supervisor	OT Premium	Hourly		Hourly	
Supervisor	DT Premium	Hourly		Hourly	

Additional Notes
Room & Board, if necessary, will be charged at [redacted] / per person / per night. Travel to accommodations included.

Additional Terms and Conditions

The rates quoted in this proposal are for NSPI Milton only and are considered private and confidential. They may not be disclosed or discussed with others without the prior consent of Irving Equipment Limited.

Break out pricing is shown for information purposes only. Pricing is based on Irving Equipment Limited being awarded the full scope of these works.

This proposal is based on regular hours of work Monday - Friday 7:00am to 3:30pm, with (1) 30 min break. If operator works through their 30 min lunch break, that time will be charged at overtime rates.

See the section below each equipment for minimum hours to be charged for rental. Mob/demob charges and labour travel is charged from Ns Power Office Location Unless Indicated Otherwise.

This proposal is based on weight information provided at time of tender by client and is subject to change after review of all final technical details, including center of gravity.

On site delays beyond Irving Equipment Limited's control may result in additional labour and equipment charges.

Prior to mobilization of equipment, final inspection of work area should be completed by Irving Equipment Limited to verify equipment will be on good ground conditions and within working radius.

Client is to ensure free and easy access to on site for hoisting operations, at no cost to Irving Equipment Limited.

Load (s) must have adequate, engineered lift points for balanced hoisting and must ensure structural integrity of the load with lift points provided.

Connecting / disconnecting of load rigging are by others at no cost to Irving Equipment Limited unless stated otherwise.

After initial rig-up and final rig-down, all rig-ups, rig-downs and crane movements on-site will be charged at applicable hourly rates.

Landowner/ Leaseholder permission must be granted for applicable access roads to site and with no charge to Irving Equipment Limited.

Bridge crossings must be certified safe for transport of equipment. Certification will be at no cost to Irving Equipment Limited.

Street closures and/or NAV Canada Airport Obstruction clearances are to be supplied by customer at no extra cost to Irving Equipment Limited.

Lane closures, parking restrictions, traffic control and barriers are the responsibility of the client.

Unless specified, this quotation is in Canadian funds and is valid for 30 days.

This quotation is subject to the enclosed General Terms and Conditions.

Quotes are subject to customer credit approval.

A purchase order must be given to Irving Equipment Limited prior to any work being done.

Overtime meals shall be charged at a rate of [redacted]/meal when an operator works 2.5 hours after regular shift and every 4 hours thereafter

General Terms and Conditions

1) Complete Agreement - These general terms and conditions and the provisions of either the proposal, quotation or order confirmation provided by Irving Equipment Limited (the "Company"), which incorporate these general terms and conditions by reference (referred to below as the "Contract"), shall govern the supply of the goods and services set out in the Contract (the "Good and Services", collectively the "Work") to be performed by the Company for the customer referred to in the Contract (the "Customer"). The Contract shall govern the Work and shall constitute the sole and entire agreement between the Company and the Customer in respect of the Work. Any terms and conditions of the Customer which may be communicated by the Customer to Irving at any time are excluded and of no force and effect unless accepted by the Company in writing.

2)Price and Payment –
A) The price governing the Work shall be as set out in the Contract. Payment terms are net 30 days from date of invoicing for the Work.

B) All other amounts specified in the Contract to be payable by the Customer shall be payable as provided therein, or if not provided for therein, shall be payable on demand.

C) All provincial, federal, or other taxes, duties or levies applicable with respect to the Work (excluding income taxes payable by the Company) shall be for the Customer's account and shall be payable as provided in the Contract.

D) Interest at the prime rate of the Royal Bank of Canada from time to time plus five percent (5%) per annum, compounded monthly, will be charged on all amounts not paid when due and shall be payable on demand.

3) Cancellation of Work - The Company reserves the right to charge a cancellation fee, along with any out-of-pocket expenses incurred to the time of cancellation, if any Work is cancelled or if work scope is reduced with less than forty-eight (48) hours' notice.

4) Weather Bound Work - In the event the Work is prevented by weather, there shall be a minimum daily charge of four (4) hours at the applicable regular hourly rate for the equipment plus a charge for each operator equal to the respective hourly rate in effect from time to time for such personnel for eight (8) hours less the number of hours for which the equipment was charged on such weather-bound day.

5) Ground Conditions/Customer Data - Customer hereby agrees that it will assume all responsibility for the ground or soil conditions in the area where the Company's equipment is to be stored, parked, or operated. The Customer shall perform or have performed all necessary inspections or testing to determine the nature of the ground or soil and its ability to support the equipment while in operation or otherwise. If the ground or soil condition is such that it cannot support the equipment, the Customer shall take all necessary measures to ensure that these conditions are remedied prior to the equipment being placed on that ground or soil. These measures included, but are not limited to, the provision of proper shoring or cribbing or other measures. The Customer is responsible for the accuracy of all information it supplies to The Company including, without limitation, measurements engineering data and drawing and shall indemnify and hold the Company harmless from any claims or damages caused by the use of such data.

6) Term - The term of the Contract shall commence from the time the equipment leaves the Company's yard (or equivalent if such equipment does not come from the Company's yard) and shall cease upon return of the equipment to the Company's yard (or equivalent if such equipment is not to be returned to the Company's yard).

7) Permits - The Customer is required to obtain any and all permits, approvals and consents required in connection with the Work.

8) Delay - The Company shall have the right to stop the operation of the Work at any time and/or remove its equipment, if the Company deems it advisable for the safety of the equipment, any other property, the operator of the equipment or any other person. The Customer hereby grants permission to the Company to enter its property in order to remove its equipment without becoming liable for damages for trespass, breach of contract or otherwise.

9) Insurance –
a) In the event that the work involves the movement of goods, cargo or other property (collectively, "cargo"), the risk of loss for such cargo will at all times remain with the Customer. Any insurance which the Customer deems necessary to protect its interests in, and risk of loss to, such cargo must contain a waiver of subrogation in favour of the Company. All insurance required hereunder must be in such form and with such companies acceptable to the Company and certificates of all such insurance coverage must be furnished to the Company prior to the mobilization of the equipment, which certificates will provide that the policies may not be cancelled except after thirty (30) days prior notice to the company.

b) In the event that the Customer does not secure coverage as noted in (a) above, the Company will maintain hook liability insurance, covering direct loss or physical damage to cargo in the care, custody and control of the Company for purpose of rigging, lifting, moving or erection resulting from the Company's negligence to a maximum amount of CAD $1,000,000 in the aggregate.

10. Warranty –
a) The Company warrants that it shall carry out the Services in a good and workmanlike manner using qualified personnel, and in the performance of the Services shall meet the standards of care, skill and diligence normally met by qualified service providers providing similar services in Canada at the time the Services are performed. The liability and obligation of the Company to the Customer in respect of any breach of warranty set out above shall be limited, at the Company's option, to the re-performance of the Services or refund of the fees for the Services to which the breach of warranty relate; provided that the Company will have no liability for breach of warranty unless it is notified in writing by the Customer within thirty (30) days after the Services are completed.

b) The Company does not warrant or provide any other type of representation with respect to the Goods provided under this Contract. The Customer's sole warranty with respect to the Goods, if any, is that provided by the manufacturer of the Goods.

11) Indemnity - The Customer agrees to indemnify, defend and hold the Company, its directors, officers, employees and agents (each an "indemnitee") harmless to the fullest extent permitted by law from and against any and all costs, expenses, damages (including damage to the equipment or cargo and personal injury), fees (including any legal, professional or advisory fees or disbursements), and amounts paid to settle or satisfy any civil, criminal or other proceeding, judgment, fines, penalties or liabilities ("Claims"), including any third party Claims which any indemnitee may reasonably suffer, sustain, incur or be required to pay in connection with the performance of the Work under the Contract or the Customer's breach of the Contract. The Customer shall not be required to indemnify an indemnitee to the extent that there has been gross negligence, fraud, or willful misconduct on the part of such indemnitee in connection with the performance by the Company of the Contract.

12) Limitation of Liability - The Company's liability to the Customer under or arising in connection with this Contract is limited to the following:
i) with respect to claims for breach of warranty, re-performance of the Services or refund of fees as set out in the warranty section; and
ii) with respect to any other liability, direct damages up to a maximum amount equal to the value of the Services to which the claim relates. In no event shall the Company be liable for loss of use of equipment or facilities, downtime costs, lost profits, lost business revenue or failure to realize expected savings or liability of the Customer to third parties for breach of contract, or for any special, indirect, or consequential damages, even if the Company has been advised of the possibility of such damages. The limitations of and exclusions from liability contained in this Section shall apply regardless of the basis upon which the claim is made, including but not limited to breach of contract, even if a fundamental breach, or tort, including but not limited to negligence or misrepresentation, and shall also apply for the benefit of the Company's directors, officers, employees, agents, and subcontract.

13) Termination - The Company may terminate the Contract by giving notice to the Customer to such effect (which notice shall be immediately effective):
a) if the Customer fails to pay, when due, any amount payable to the Company under the Contract;

b) if the Customer fails to observe or comply with anything required to be done by the Customer under the Contract; or

c) if the Customer becomes bankrupt, insolvent or makes an assignment for the benefit of creditors or the Customer is unable to meet its obligations as they become due.

In the event that the Contract is terminated, the Customer hereby grants permission to the Company to, without notice, remove its equipment from the Customer's possession or from its property without becoming liable for damages for trespass or otherwise.

14) Force Majeure - The Company shall not be liable for any nonperformance or delay in performance that is due wholly or partly and directly or indirectly to fire, flood, any Act of God or public enemy, riot, act of war (whether or not declared), terrorism, labour dispute, transportation contingencies or shortages, inadequate supply of labour or materials, accident, fortuitous event or other cause beyond the reasonable control of the Company.

15) Notices - Any notice, instruction, or document to be given by either the Customer or the Company in connection with the Contract shall be given in writing and may be delivered personally, by fax, by prepaid courier or registered mail addressed, in the case of the Company, to Irving Equipment Limited, 300 Union Street, P. O. Box 5777, Saint John, New Brunswick E2L 4M3, Attention: General Manager, with a copy to J. D. Irving, Limited, 300 Union Street, P. O. Box 5888, Saint John, New Brunswick E2L 4L4, Attention: The Secretary, and in the case of the Customer, to the place of business set out in the Contract. Any notice shall be deemed (in the absence of evidence of prior receipt) to be received the same day if personally served, the next business day if sent by fax and the fifth business day following where sent by courier or registered mail.

16) Assignment and Subletting - All rights and obligations of the Company and the Customer set out in the Contract shall inure to the benefit of and be binding upon their successors and permitted assigns. Neither party shall have the right to assign the benefits or obligations under the Contract without obtaining the prior written consent of the other, except that the Company shall be permitted to assign its benefits and obligations to any parent, subsidiary, or affiliated corporation and in the event of such assignment by the Company, the Company shall be automatically released from all liability and obligations under the Contract. The Company shall have the right to subcontract all or any part of the Work to third parties provided that the Company shall at all times be responsible to the Customer for the performance of any such subcontractor.

17) Amendment - All amendments to the Contract shall be in writing and signed by both the Customer and the Company.

18) Independent Contractors - Neither party shall be or be deemed an agent of the other for any purpose and their relationship to each other shall be that of independent contractors. Neither party shall have the right to incur expenses or liabilities on behalf of the other party.

19) Waivers - Any waiver of or consent to depart from the requirements of any provision of this Contract shall be effective only if it is in writing and signed by the party giving it, and only in the specific instance and for the specific purpose for which it has been given. No failure on the part of either party to exercise, and no delay in exercising, any right under this Contract shall operate as a waiver of such right. No single or partial exercise of any such right shall preclude any other or further exercise of such right or the exercise of any other right.

20) Interpretation- The headings in this Contract are for convenience of reference only and shall not be considered part or affect the interpretation thereof. Words expressed in the singular include the plural and vice-versa and words of one gender include all genders.

21) Governing Law - This Contract is subject to and shall be construed in accordance with the laws of New Brunswick and the federal laws of Canada applicable therein. Each of the Company and the Customer consents to the non-exclusive jurisdiction of the courts of New Brunswick with respect to all disputes or claims originating in respect of the Contract.

22) Order of Precedence - In the event of any conflict or inconsistency between the proposal, quotation or order confirmation and these general terms and conditions, the proposal, quotation, or order confirmation shall take precedence and govern.

Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

Lessee:

202939-E1
NOVA SCOTIA POWER
PO BOX 910

HALIFAX, NS
B3J 2W5

Lessor:

KENT MOBILE SHELTERS
28 CHEMIN DU COUVENT
BOUCTOUCHE, NB
E4S-3B9
1-800-561-7993

Contact:

Salesperson:

Brian Jones

Job Details:

Ship To: Jacob Roberts
902-221-0398
NS Power
1281 River Road
Milton, NS

Requested Delivery Date: 8/6/2025
Number of Terms: 1
Ship Via:

PO No:

Finance Notes:

Additional Notes:

Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

Recurring Charges

Product[1]	Configuration[1]	Quantity	Price ($/28 Days)[2]	Term	Total
10X20 TRAILER 30406	Open	1	[redacted]	1	[redacted]
STEPS		1		1	
LUNCHROOM TABLES		2		1	
LUNCHROOM CHAIRS		10		1	
FRIDGE		1		1	
				Total/28 Days	
				Grand Total	

One-Time Charges

Product	Quantity	Price		Total
JACKSTANDS 10X20	1	[redacted]		[redacted]
CLEANING	1			
DELIVERY	1			
PICKUP	1			
FUEL SURCHARGE 34%	1			
		Total		

By signing, you have agreed to the Terms & Conditions attached.

Signature: _____ Date: _____

[1]The Lessee is responsible for electrical and/or water connections and necessary site permits

[2]Prices are subject to all applicable taxes (GST/HST/QST)

Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

[redacted]

Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

[redacted]

Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

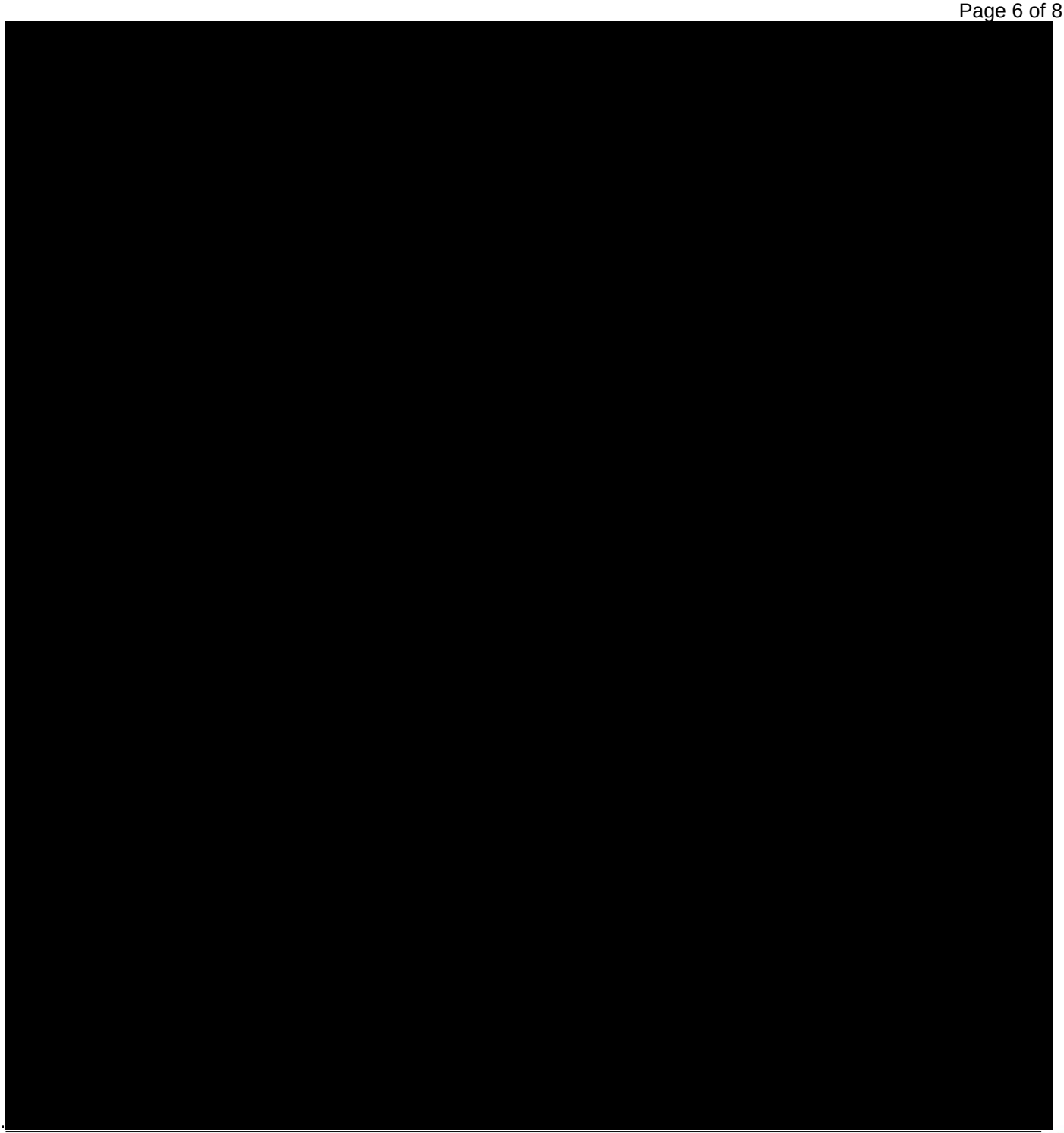
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Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

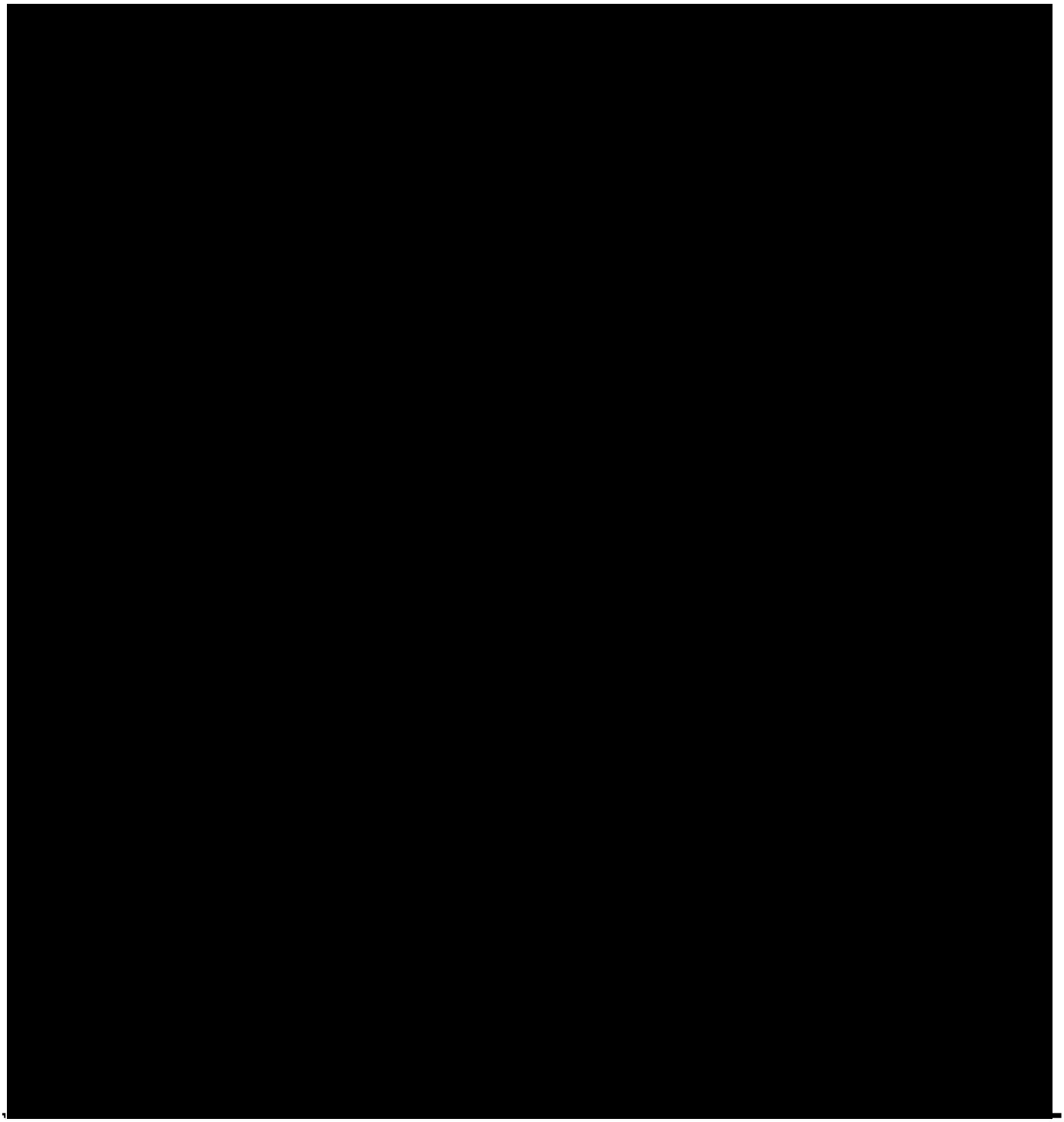


Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025

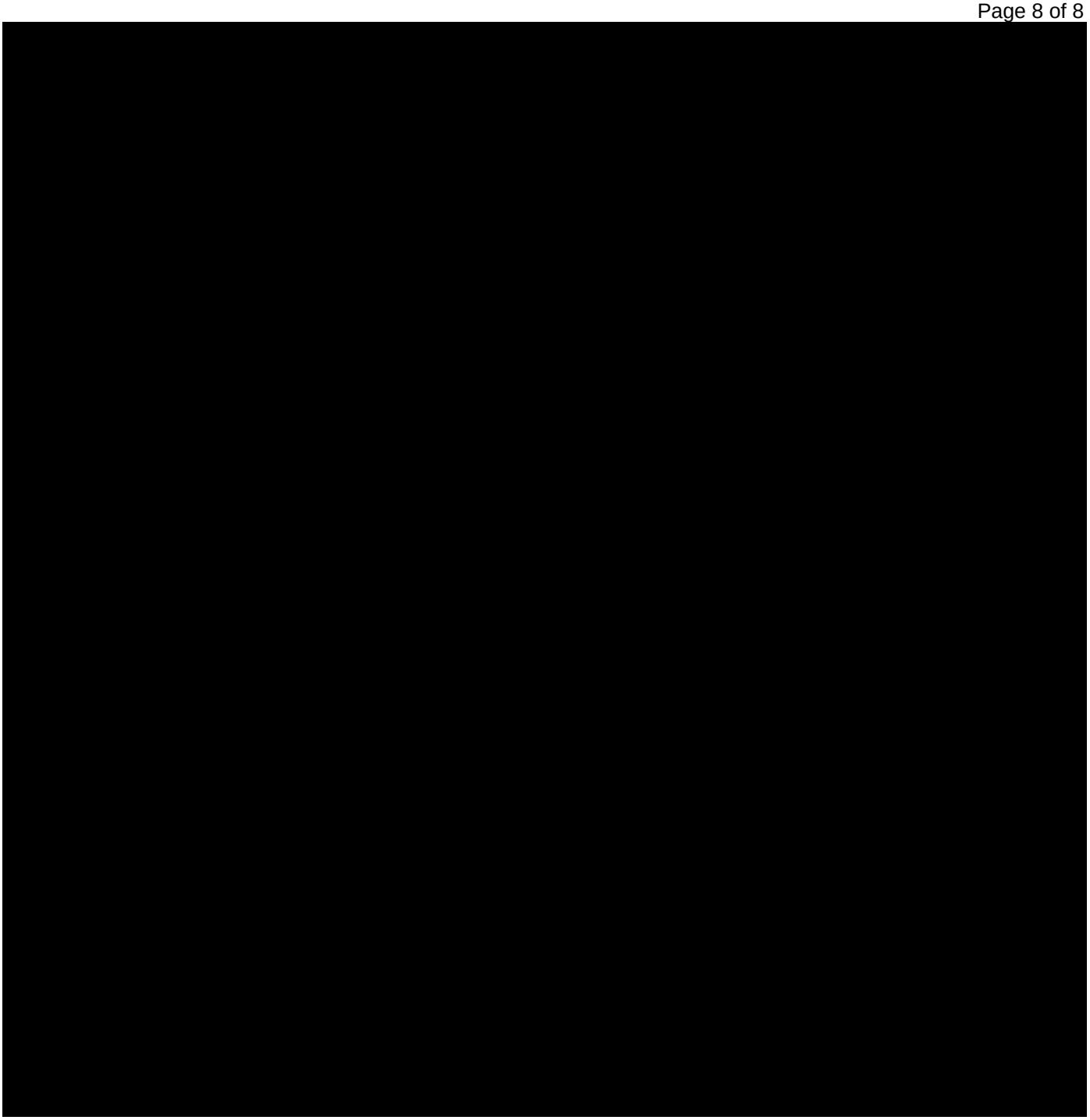


Kent Mobile Shelters
Workspace Solutions®

RENTAL ORDER

Order Number: ORD-05636-C7H3T3

Date: 7/11/2025



Myette Engineering Ltd.
38 Seabreeze Lane
Tracadie, Antigonish Co.
Nova Scotia
B0H 1W0
Phone: (902) 870-0443

January 5, 2026

Nova Scotia Power Inc.

Attention: Jacob Roberts, EIT

Re: Mersey – Dock Removal

Jacob,

Myette Engineering is pleased to provide you with the following proposal for the services of Glenn Terris as a consultant for NSPI Hydro.

Rate:	-	16 hours @ $87/hr	=	$ 1392
Meal allowance	-	1 days @ $55/day	=	$ 55
Travel Rate:	-	500 kms @ $.70/km	=	$ 350
Accommodations	-	1 day @ $150/night	=	$ 150
Extra Expenses:	TBD –	To be billed at cost	=	$ 100
Total Cost			**=**	**$ 2047**

Thank you for the opportunity to quote this work.

Regards,

Roger Myette, P. Eng.

Myette Engineering Ltd.
38 Seabreeze Lane
Tracadie, Antigonish Co.
Nova Scotia
B0H 1W0Phone: (902) 870-0443

January 5, 2026

Nova Scotia Power Inc.

Attn: Jacob Roberts, EIT

Re: Consultant – LGB

Jacob,

Myette Engineering is pleased to provide you with the following proposal for the services of Paul Hawkes as a consultant for the Hydro Group, it is based on the timeline provided:

-	Wages – 252 hours @ $84/hr	= $	21168.00
-	Travel – 420 kms @ $0.70/km	= $	294.00
-	Meals – 21 days @ $55/day	= $	1155.00
-	Accommodations – 0 days @ $150/day	= $	0.00
-	Expenses – TBD	= $	300.00
-	**Total Cost**	**= $**	**22917.00**

Regards,

Roger Myette, P. Eng.

Myette Engineering Ltd.
38 Seabreeze Lane
Tracadie, Antigonish Co.
Nova Scotia
B0H 1W0Phone: (902) 870-0443

January 5, 2026

Nova Scotia Power Inc.

Attn: Jacob Roberts, EIT

Re: Consultant – LGB

Jacob,

Myette Engineering is pleased to provide you with the following proposal for the services of Paul Hawkes as a consultant for the Hydro Group, it is based on the timeline provided:

-	Wages – 504 hours @ $84/hr	= $	42336.00
-	Travel – 840 kms @ $0.70/km	= $	588.00
-	Meals – 42 days @ $55/day	= $	2310.00
-	Accommodations – 0 days @ $150/day	= $	0.00
-	Expenses – TBD	= $	600.00
-	**Total Cost**	**= $**	**45834.00**

Regards,

Roger Myette, P. Eng.

"Schedule B"
Budget

ITEM DESCRIPTION	2025 *September 30 – November 24*
Monitor Labour – Part-Time *(10 hours per day, 7 days a week, with a total of 70 hours, 8 monitors rotating throughout the week in teams of 4, [redacted] per hour, for 9 weeks) (1 week of 12 hours per day, 7 days a week, with a total of 84 hours, 9 monitors rotating throughout the week in teams of 5 @ [redacted] hour.)*	$ [redacted]
Monitor Labour – Full-Time *(1 Supervisors @ [redacted] per hour, 65 hours per week, for 9 weeks), (1 Supervisor @ [redacted] /hour, 66 hours per week, for 1week).*	$
MERCS *(9 positions @ [redacted] including EI, CPP, WCB and Vacation). ([redacted]* *(2 Supervisor positions @ [redacted] including EI, CPP WCB and Vacation).* *([redacted]*	$
Fuel *(1 WFN work vehicle, initial travel from Yarmouth to Liverpool, and return, Shelburne to Liverpool and return based on Government of Canada Treasury Board Rates.)* *(1 WFN Work vehicle, travel from Liverpool to Lower Great Brook daily, to all access and drop off points, 7 days a week, for four weeks, based on Government of Canada Treasury Board Rates.)* *(1 Supervisor vehicle, travel to all access points multiple times per day, for 9 weeks, based on Government of Canada Treasury Board Rates)*	$
Accommodations and Meals *(accommodations @ [redacted] per night, seven nights a week, five rooms, for 55 days [redacted])* *(meals for 8 employees, one supervisor, [redacted] per person per day for nine weeks [redacted]*	$
Health and Safety *(First Aid & CPR, OH&S, training costs and logistics)*	$
Equipment, Supplies and Misc.	$
SUBTOTAL	**$**
Administration	$
TOTAL	**$**

Should NSP require a change of work scope and or timelines, WFN expects to amend Schedule "B" that has been quoted for this project to accommodate those changes.

"Schedule B"
Budget

ITEM DESCRIPTION	2025 *September 30 – November 24*
Monitor Labour – Part-Time *(10 hours per day, 7 days a week, with a total of 70 hours, 8 monitors rotating throughout the week in teams of 4, [redacted] per hour, for 9 weeks) (1 week of 12 hours per day, 7 days a week, with a total of 84 hours, 9 monitors rotating throughout the week in teams of 5 @ [redacted] /hour.)*	$ [redacted]
Monitor Labour – Full-Time *(1 Supervisors @ [redacted] per hour, 65 hours per week, for 9 weeks), (1 Supervisor @ [redacted] /hour, 66 hours per week, for 1week).*	$
MERCS *(9 positions @ [redacted] including EI, CPP, WCB and Vacation). ([redacted]* *(2 Supervisor positions @ [redacted] including EI, CPP WCB and Vacation).* *([redacted]*	$
Fuel *(1 WFN work vehicle, initial travel from Yarmouth to Liverpool, and return, Shelburne to Liverpool and return based on Government of Canada Treasury Board Rates.)* *(1 WFN Work vehicle, travel from Liverpool to Lower Great Brook daily, to all access and drop off points, 7 days a week, for four weeks, based on Government of Canada Treasury Board Rates.)* *(1 Supervisor vehicle, travel to all access points multiple times per day, for 9 weeks, based on Government of Canada Treasury Board Rates)*	$
Accommodations and Meals *(accommodations @ [redacted] per night, seven nights a week, five rooms, for 55 days [redacted]* *(meals for 8 employees, one supervisor, [redacted] per person per day for nine weeks [redacted]*	$
Health and Safety *(First Aid & CPR, OH&S, training costs and logistics)*	$
Equipment, Supplies and Misc.	$
SUBTOTAL	**$**
Administration	$
TOTAL	**$**

Should NSP require a change of work scope and or timelines, WFN expects to amend Schedule "B" that has been quoted for this project to accommodate those changes.

Deliver Sept 13/25

WINCHESTER DISPOSAL
P.O. Box 1456, Liverpool, Nova Scotia B0T 1K0 902-354-5229 sales@winchesterdisposal.ca

PORTABLE TOILET RENTAL CONTRACT

Date Aug 11 2025	Length of rental: Month.
Nova Scotia Power	Name/Contact Jacob Roberts
Site: Lake Rossignol / Lower Great Brook.	Phone: 902 221 0124
Mailing address: on file	Email: on file

- **Received in good order from Winchester Disposal Service Limited (Owner) 2 for rent** urinals.
- The renter must ensure access to portable toilets for servicing. The truck must be able to park within 10 feet of the portable unit and the driver must have clear and safe approach.
- The undersigned becomes responsible for the safe keeping of the said unit(s) and are liable for any accidents or loss which may happen to the said unit(s) outside normal wear and tear. The undersigned becomes responsible for the replacement of damaged unit(s), outside of regular wear and tear, at a cost of [redacted] + HST + Cleanup. Additional rental items (ie) heaters, winter unit covers etc are also agreed to be replaced, at MFRC, due to loss or damage.
- Winchester Disposal Service Limited is not responsible for any water or sewage leaks/spills. The renter is responsible for monitoring the toilet units and other equipment daily to ensure all connections, hoses, pipes etc are in good working order once the unit is delivered and set up.
- The undersigned hereby releases Winchester Disposal Service Limited from any and all claims, actions or damages without any limitations whatsoever, whether consisting of loss, personal injury, property damage or death, that does or may result in any way from the transportation or use of the said equipment and assuming and accepting sole responsibility for any and all such claims, actions and damages.
- The renter further agrees to indemnify and hold harmless Winchester Disposal Service Limited from any damages, costs or expense whatsoever, which they or any person on site and any claim brought about by anyone against any person on site as a result of the use or transportation of the said equipment
- Winchester Disposal Service Limited agrees to remove unit(s) within TWO working days of cancellation notice by renter, unless an alternate time in agreed upon by both parties.
- The undersigned further agrees NOT to remove the unit(s) from the site nor transfer or assign this contract to any other party without written consent of Winchester Disposal Service Limited. The undersigned is responsible for any and all expenses incurred if the toilet has been moved from its original location or is placed in a location, at the customer's request, against the driver's better judgment.
- Winterization of all units during the winter months, is at the discretion of the Driver.
- First month's **rent** is collected PRIOR to delivery of the unit. Cleaning fees are then responsible to be paid after they occur.

Cleans weekly on Tuesday.

Rental -Toilet	$ [redacted]
Rental - Sink Unit	$
Rental - Miscellaneous	$
Clean - Toilet	$
Clean – winter solution	$
Delivery	$
Fuel surcharge	$
Subtotal	$
HST	$
TOTAL	$

Signature: x_____ Date: _____

Wood Canada Limited
133 Crosbie Road
PO Box 9600
St. John's, NL A1A 3C1
Canada
T: 709-724-1900
F: 709-739-5458
www.woodplc.com

January 21, 2025

264720-1.14

Nova Scotia Power Inc.
1223 Lower Water Street
Halifax, NS
B3J 3S8

Attention: Mr. Yuri Gal, Manager, Project Development – Capital Projects

Re: Proposal for Lower Great Brook Stoplog Refurbishment Project

Dear Mr. Gal,

Wood Canada Limited (hereafter Wood) is pleased to submit the following proposal for *"Lower Great Brook Stoplog Refurbishment Project"*.

Thank you for the opportunity to provide this proposal and we look forward to hearing from you soon. Should you have any further questions regarding our proposal, please do not hesitate to contact the undersigned.

Sincerely,

Paul Broders

Paul Broders, P. Eng.
Operations Manager
Wood Canada Limited
Mobile: (709) 687 9785
E-mail: paul.broders@woodplc.com

Encl.

1.0 Introduction

1.1 Background

The Lower Great Brook Development is one of six developments in the Mersey Hydro System, located in Queens County in south-western Nova Scotia. Originally constructed in 1955, it includes three earthfill dams, a reinforced concrete sluiceway structure, an uncontrolled spillway, and a powerhouse with two units.

The sluiceway structure comprises six individual sluiceways approximately 12 ft wide by 24 ft high controlled by wooden stoplogs. An overview of the sluiceway is shown in Photo 1. The sill elevation of the six sluiceways is at 106 ft, while the sluiceway deck is at elevation 130 ft. The rock foundation is irregular and is estimated to be at approximate 105 ft. The wooden stoplogs are operated using a recently installed hydraulic stoplog lifter. According to the design drawings, the stoplog checks in the side of the piers are unlined, and were formed in the pier concrete, and measure 1'-6" in the upstream-downstream direction, and are 11" deep (laterally). There is a steel angle located on the downstream face of the check for the wooden stoplogs to bear against , and this forms the sealing surface for the stoplogs.

The stoplogs in one of the sluiceway bays (Bay 1) are currently not operational, reportedly due to being squeezed laterally and jamming the stoplogs in the gate checks. There are no records indicating when this issue in Bay 1 was first observed. However, Nova Scotia Power Inc. (NSPI) operations staff have indicated that the stoplogs in Bay 1 have not been operated since at least 2019, and possibly much earlier. Recently, a similar performance issue has developed in Bay 6, where some of the stoplogs have become difficult to remove.



Wood has recently completed an initial assessment of the sluiceway and provided the memo *"Lower Great Brook Sluiceway Assessment"*. That report provided a number of recommendations which included additional

investigations to better define the extent/severity of the observed deterioration of the concrete in the structure. The recommended investigations consisted of the following:

a. Drone survey/photos of downstream face and sides of piers, underside of deck, and visible (unsubmerged) portion of upstream face.

b. Underwater survey/video of submerged portion of upstream face.

c. Concrete sampling and testing to determine depth of deterioration in anticipation of designing a refurbishment to the structure.

In addition to further assessing the condition of the concrete in the sluiceway, NSPI want to replace all 120 wooden stoplogs in the sluiceway due to their deteriorated condition.

1.2 Objective and Scope of Work

The project is comprised of two separate scopes, as noted below:

Part A: Environmental Application Support / Stoplog Design

The objective of Part A is the provision of technical support and developing water management alternatives to achieve NSPI's primary and secondary objectives noted below. This includes providing technical support during the environmental permitting process.

Primary Objective:

1) Replace the 120 wooden stoplogs in the sluiceway. This involves temporarily lowering the Lower Great Brook headpond from El. 125.0 ft to El. 105 ft.

Secondary Objectives:

1) Replace the gate sills of the intakes to the powerhouse
2) Replace the seals on the intake gates
3) Clean the trash racks
4) Assess the trash racks
5) Replace the trash racks

Part B: Sluiceway Rehabilitation / Conceptual Designs

The objective of Part B is to undertake the additional investigations and testing recommended in Wood's memo *"Lower Great Brook Sluiceway Assessment"*, develop conceptual designs to refurbish the structure, and prepare a concept design report summarizing the concept designs.

Wood's approach to completing the Part A and Part B scopes of work is described in detail in Section 2.

2.0 Methodology

As previously noted, the project is divided into two separate scopes of work. The methodology for executing these scopes of work are described in detail below.

2.1 Part A: Environmental Application Support / Stoplog Design

Scope of Work Part A has been divided into three stages and six phases as detailed below.

Stage 1 – Inception and Feasibility

Phase 1 – Data Review and Site Visit

Task 1-1: Review existing drawings;

Wood will review drawings provided by NSPI. It is assumed the drawings will be accurate and represent actual installed conditions. Wood will not field-verify the information shown these drawings.

Task 1-2: Review provided bathymetric data;

Wood will review the bathymetric data provided by NSPI. It is assumed the data will be complete and in a useable format, and it will be referenced to CGVD 2013 or the plant local datum. It is assumed the data will be accurate and represent actual installed conditions. Wood will not field-verify this data. Wood suggest an underwater inspection of the sluiceway be conducted as soon as possible to confirm the geometry and condition of the submerged structure to help determine alternate concept design for isolating the sluiceway from the headpond. This will be discussed further with NSPI.

Task 1-3: Review existing LiDAR and topographic survey data;

Wood will review the existing LiDAR and topographic survey data provided by NSPI. It is assumed the data will be complete and in a useable format, and it will be referenced to CGVD 2013 or the plant local datum. It is assumed the data will be accurate and represent actual installed conditions. Wood will not field-verify this data.

Task 1-4: Undertake a site visit to the dam site;

Although Wood personnel are familiar with the Lower Great Brook site, Wood's team will re-visit the site with NSPI personnel to discuss NSPI's anticipated methodology for removing and replacing the stoplogs in the sluiceway, as well as replacing the gate sills of the intake structure and the seals on the headgates. It will be an opportunity to discuss potential access for further investigation and testing of the sluiceway concrete material (for Part B: Sluiceway Rehabilitation / Conceptual Designs scope of work). It is assumed NSPI operating personnel will accompany Wood staff during the site visit, and NSPI will make all necessary arrangements for access to the site.

Phase 2 – Develop Design Basis Memorandum

Task 2-1: Prepare a Design Basis memorandum (DBM);

A DBM will be prepared which summarizes the functional design criteria for the Part A scope of work. The DBM will also include a description of general isolation options, as well as the design criteria to be used to design the replacement wooden stoplogs. An allowance of $3,000 has been made for a hydrologist to review NSPI's most recent flood study and operational data and provide guidance for design flows and peak water levels for assessing isolation options and designing the wooden stoplogs. The memo will be issued as a Draft, and subsequently finalized to incorporate NSPI's comments.

Phase 3 – Develop Design Alternatives

Task 3-1: Develop conceptual-level design alternatives for NSPI review:

a. Develop isolation options to execute the activities associated with the Part A scope of work. This will include a description of which activities can be completed without any added isolations and what activities will require isolations. Wood has allowed for up to three design alternatives.
b. Develop access road options required to execute the activities associated with the Part A scope of work. Outline what activities will need an access road and what activities will not need an access road.
c. Determine the approximate time it will take to lower the water level 20 feet at differing inflow rates.
   Wood assumes NSPI will provide bathymetric data for the entire Lower Great Brook headpond in sufficient detail to develop an accurate elevation-storage curve for the headpond. In addition, Wood assumes NSPI will provide historic inflow data to the Lower Great Brook headpond along with spill and power generation flows from Lower Great Brook headpond for the same time period. This data will also be required to develop isolation options. An allowance of $4,200 has been made for a hydrologist to provide guidance related to return period floods and water management during the construction period.

Task 3-2: Prepare a memo outlining the alternatives along with the pros and cons, and high-level costs for each alternative;

As noted above, for the purposes of this proposal, an allowance has been made for the development of three alternatives for the site. The level of detail of each alternative will be limited to that which is required to portray the design concept to NSPI, and to evaluate the pros and cons and high-level costs (AACE Class 5) of each. The memo will be issued as a Draft, and subsequently finalized to incorporate NSPI's comments.

Task 3-3: NSPI to select the preferred alternative;

No input is required from Wood for this activity.

Phase 4 – New Shorter Stoplog Design

Task 4-1: Review historical information

a. Design drawing of current stoplog.
   Wood will review the drawing for the existing stoplogs. It is noted the drawing recently received from NSPI for the existing stoplogs shows a centre-to-centre distance between the lifting points to be 12′-4 1/2″.
b. Design drawing of stoplog lifter onsite.
   Wood will review the drawing for the new stoplog lifter. It is noted the drawing recently received from NSPI for the new stoplog lifter shows the spacing of the lifting spuds to be capable of varying between 12′-3 ¾″ to 16′-6 ¾″. This means it is compatible with the stoplog design currently shown on the drawings.

Task 4-2: Create an Issued for Review design drawing for NSPI review

Based on observations made on site during Wood's initial assessment of the sluiceway, there may be some deviation in the widths of the stoplog openings. The stoplog opening widths for all the bays should be confirmed on site before finalizing the design drawings for the replacement stoplogs. The efforts to confirm these dimensions on site are not included as part of this proposal. This will be discussed with NSPI prior to starting the work.

Task 4-3: Create Issued for Construction (IFC) design drawings

Wood will design replacement stoplogs based on the design detail currently used for the stoplog lifting points and the confirmed width of stoplog openings on site. The drawings will be stamped by a registered professional engineer licensed to practice in the province of Nova Scotia.

Stage 2 – Conceptual Design

Phase 5 – Prepare and Submit Conceptual Design for the Chosen Isolation Option

Task 5-1: Prepare the conceptual design drawings for the preferred isolation option to the 30% design level and issue to NSPI for review

The design drawings will show the initial plan layout and general design cross-sections of the isolation (cofferdam, or similar). The drawings will not be fully annotated but will contain sufficient information to portray the general intent of the concept.

Stage 3 – Detailed Design

Phase 6 – Prepare and Submit Detailed Design for the Chosen Isolation Option

Task 6-1: Design package for environmental permit submittal (60% design)

The selected design alternative that was issued at the 30% submission will be advanced to the 60% completion level. At this level, most of the required drawings for the drawing set will have been identified, and the majority of the sections and details will have been added but not necessarily annotated. The typical notes will be evolving, but not complete. The drawings will be suitable for general co-ordination / review.

Task 6-2: Design package for Request for Proposal (RFP) (90% design)

The drawings for the 60% submission will be developed to the 90% (RFP) level. At this level, the design drawings will be substantially complete, and suitable for tendering purposes. There may be some outstanding details, but these should have minimal cost on the project. The intent is to provide notes on the design drawings, instead of a separate stand-alone Technical Specification.

Task 6-3: Design package (IFC)

Wood will upgrade the RFP drawings to IFC status. The drawings will be stamped by a registered professional engineer licensed to practice in the province of Nova Scotia.

2.2 Part B: Sluiceway Rehabilitation Feasibility / Conceptual Designs

Scope of Work Part B is currently limited to the feasibility stage, and it has been divided into three phases as detailed below.

Stage 1 – Inception and Feasibility

Phase 1 – Investigations

Task 1-1: Complete further assessment/investigative work that has been stated in the completed memo to support the conceptual design report:

a. Drone surveys / photos of downstream face and sides of piers, underside of deck, and visible portions of the upstream face.
A LiDAR survey of the downstream side of the sluiceway structure will be conducted. Due to the leakage and spray through the wooden stoplogs, it may not be possible to get an accurate survey of the structure. In addition to the LiDAR scan, drone photos will be taken of the deck, piers, stoplogs and downstream toe area of the sluiceway. Due to the project timing, it was not possible to get a firm cost estimate for carrying out the drone survey at this time. However, based on previous work of a similar nature, Wood suggests an allowance of $12,000 be carried in the project budget for this activity. NSPI will be invoiced for the actual cost.

b. Prepare scopes of work and carry out geotechnical and/or topographical studies (i.e. core drilling, laboratory testing, topography surveying, AAR testing, etc.) required to complete the conceptual design options.
The initial assessment of the sluiceway structure by Wood concluded the concrete on the visible (unsubmerged) and submerged portions (near the waterline) of the upstream face of the piers appeared to be in a deteriorated condition and need urgent rehabilitation. Further, the concrete in the sides and downstream face of the piers were also showing signs of deterioration consistent with Alkali-Aggregate Reaction (AAR) and subsequent progressive damage from freeze-thaw cycles. To determine the cause and extent of the concrete deterioration, Wood will develop and execute a field investigation program consisting of core drilling, followed by laboratory testing. The laboratory testing of the cores will consist of the following:

- Compressive strength;
- Splitting tensile strength;
- Absorption and volume of permeable voids;
- Carbonation testing (full core length);
- AAR examination (full core length);
- Residual expansion of cores for predicting future expansion;
- Basic petrographic examination;
- Damage Rating Index;
- Bulk diffusion testing; and,
- Chemical analysis of head water.

AAR testing will be conducted to establish the extent of reaction at this time and to establish the potential for further expansion.

Due to the project timing, it was not possible to get a cost estimate for carrying out the field coring or laboratory testing at this time. However, based on previous work of a similar nature, Wood suggests an allowance of $22,000 be carried in the project budget for the field coring program, and $16,000 for the laboratory testing. NSPI will be invoiced for the actual cost. The cost of the topographic survey (LiDAR scan) of the adjacent topography (to the extent possible in the vicinity of the sluiceway and for 100 ft right of the sluiceway) is included in the allowance for the drone survey of the sluiceway that was previously noted.

c. Underwater ROV investigations of submerged portion of upstream face
For the purposes of this proposal, it is assumed NSPI will carry out this work by their own personnel, and will provide the results to Wood. It is assumed the information will be complete and in a useable format, and information will be referenced to CGVD 2013 or the plant local datum. It is assumed the data will be accurate and represent actual installed conditions. Wood will not field-verify this data.

d. Determine and implement a plan to monitor movement of the sluiceway
Wood suggests the requirement and feasibility of this activity be determined following field and laboratory testing and conceptual of alternatives for refurbishment.

Phase 2 – Develop Design Basis Memorandum

Task 2-1: Prepare a DBM outlining the design criteria for this project

A DBM will be prepared which summarizes the functional design criteria for the Part B scope of work. This will include items such as the magnitude of the Inflow Design Flood (IDF) which will be provided by NSPI, the estimated peak water level during passage of the IDF, design seismic loadings, known or estimated bedrock strength parameters, backfill properties, method of stability analysis and stability acceptance criteria. An allowance of $5,000 has been made for a hydrologist to review NSPI's most recent flood study and provide guidance for the IDF design flows and peak IDF water levels for designing refurbishments to the sluiceway structure. The DBM memo will be issued as a Draft, and subsequently finalized to incorporate NSPI's comments.

Phase 3 – Feasibility Design Report (Develop Design Alternatives)

Task 3-1: Develop conceptual-level design alternatives for NSPI review, including detailed description of the feasibility of the preferred rehabilitation method.

Wood will develop up to three concepts for rehabilitation of the sluiceway structure. The currently foreseen options include the following:

- Localized interim repairs with a relatively short design life;
- Replacement of the structure, in kind; and,
- Replacement of the structure with a more operator-friendly and reliable flood handling system.

For each of these options, the areas that require repair / replacement will be identified, the means of repair, the expected duration of the construction works, extent of dewatering required to carry out the work, and suggested access and construction methodology will be discussed.

Task 3-2: Prepare a memo outlining the design alternatives that were developed, along with the pros and cons and high level AACE Class 5 cost estimates for each alternative.

As noted above, for the purposes of this proposal, an allowance has been made for the development of three alternatives for the site. The level of detail of each alternative will be limited to that which is required to portray the design concept to NSPI, and to evaluate the pros and cons and high-level costs (AACE Class 5) of each. The memo will be issued as a Draft, and subsequently finalized to incorporate NSPI's comments.

Task 3-3: NSPI to select the preferred alternative;

No input is required from Wood for this activity.

2.3 Work Not Included

We understand that the following items are not included in the current scope of work. However, Wood would be pleased to carry out this work as a separate work item.

- Geotechnical investigations beyond the field testing of the concrete cores previously noted;
- Bathymetric surveys;
- Field confirmation of geometry and dimensions of structures;
- Hydrologic or hydraulic modelling beyond reviewing the historic inflow data to the Lower Great Brook headpond, along with spill and power generation flows that was previously noted;
- Assessment of return period floods and associated peak water levels during construction;
- Underwater inspection of the structures;
- Archaeological assessments; and,
- Permitting or Permit Acquisitions.

2.4 List of Deliverables

Table 2-1 summarizes the deliverables for this project foreseen at this time.

Table 2-1: Project Deliverables

Stage and Phase	Deliverables
Part A: Environmental Application Support / Stoplog Design	
Stage 1 – Inception and Feasibility	
Phase 1 – Data Review and Site Visit	• Health and Safety Plan (site visit)
Phase 2 – Develop Design Basis Memorandum	• Draft Design Basis Memorandum • Final Design Basis Memorandum

Phase 3 – Develop Design Alternatives	• Draft memo which includes:
	  ○ Description of the design alternatives
	  ○ Sketches illustrating conceptual designs
	  ○ Pros and cons of each alternative
	  ○ High-level (AACE Class 5) cost estimate of each alternative
	• Final memo

Phase 4 – New Shorter Stoplog Design	• Issued for Review design drawing • Issued for Construction design drawing
Stage 2 – Conceptual Design	
Phase 5 – Prepare and Submit Conceptual Design for the Chosen Isolation Option	• 30% design drawings for selected alternative
Stage 3 – Detailed Design	
Phase 6 – Prepare and Submit Detailed Design for the Chosen Isolation Option	• 60% design drawings for selected alternative • 90% design drawings for selected alternative • List of Tender Quantities • Issued for Construction drawings
Part B: Environmental Application Support / Stoplog Design	
Stage 1 – Inception and Feasibility	
Phase 1 - Investigations	• Scope of work for field geotechnical investigations and laboratory testing • Topographic survey
Phase 2 - Develop Design Basis Memorandum	• Draft Design Basis Memorandum • Final Design Basis Memorandum

Phase 3 – Feasibility Design Report (Develop Design Alternatives)	• Draft Memo which includes:
	  ○ Description of the design alternatives
	  ○ Sketches illustrating conceptual designs
	  ○ Pros and cons of each alternative

Stage and Phase	Deliverables
	○ High-level (AACE Class 5) cost estimate of each alternative • Final memo

2.5 Project Schedule

A tentative milestone project schedule is provided in Table 2-2 for completing the work of the various Stages and Phases of the project. It is based on an assumed award date of January 24, 2025. The proposed schedule aligns with the timelines noted in the Statement of Work (S.O.W). It is noted this schedule is aggressive, but Wood will endeavor to meet it. The schedule does not allow for any potential weather-related delays, and it is based on timely receipt of information and data requested from NSPI. The proposed project schedule will be reviewed and finalized with NSPI upon award of the project.

Table 2-2: Milestone Schedule

Task	Approximate Activity Duration (Days)	Schedule Dates	
		Start	Finish
Part A: Environmental Application Support / Stoplog Design			
Stage 1 - Inception and Feasibility			
Phase 1 - Data Review and Site Visit		**January 27, 2025**	**January 31, 2025**
Task 1-1: Review existing drawings	2	January 27, 2025	January 29, 2025
Task 1-2: Review provided bathymetric data	2	January 27, 2025	January 29, 2025
Task 1-3: Review existing LiDAR and topographic survey data	0	January 27, 2025	January 27, 2025
Task 1-4: Undertake a site visit to the dam site	1	January 31, 2025	January 31, 2025
Subtotal for Phase 1	**5**		
Phase 2 - Develop Design Basis Memorandum		**January 29, 2025**	**February 10, 2025**
Task 2-1: Prepare Design Basis Memorandum (Draft and Final)	8	January 29, 2025	February 10, 2025
Subtotal for Phase 2	**8**		
Phase 3 - Develop Design Alternatives		**January 29, 2025**	**February 26, 2025**
Task 3-1: Develop conceptual-level design alternatives for NSPI review	20	January 29, 2025	February 26, 2025
Task 3-2: Prepare a memo outlining the alternatives along with the pros and cons, and high-level costs for each alternative (Draft and Final)	7	February 17, 2025	February 26, 2025
Subtotal for Phase 3	**27**		
Phase 4 - New Shorter Stoplog Design		**January 29, 2025**	**February 7, 2025**
Task 4-1: Review historical information	1	January 27, 2025	January 27, 2025
Task 4-2: Create an Issued for Review design drawing for NSPI review	4	January 27, 2025	January 31, 2025
Task 4-3: Prepare Issued for Construction design drawings	2	Overall length will need to be confirmd prior to final fabrication of stoplogs	February 7, 2025
Subtotal for Phase 4	**7**		
Stage 2 - Conceptual Design			
Phase 5 - Prepare and Submit Conceptual Design for the Chosen Isolation Option		**January 29, 2025**	**February 7, 2025**
Task 5-1: Prepare the conceptual design drawings for the preferred alternative to the 30% design level and issue to NSPI for review	7	January 29, 2025	February 7, 2025
Subtotal for Phase 5	**7**		
Stage 3 - Detailed Design			
Phase 6 - Prepare and Submit Detailed Design for the Chosen Isolation Option		**February 7, 2025**	**May 30, 2025**
Task 6-1: Design package for environmental permit submittal (60% design)	15	February 7, 2025	February 28, 2025
Task 6-2: Design package for Request for Proposal (RFP (90% design)	5	March 14, 2025	March 21, 2025
Task 6-3: Design package Issued for Construction (IFC)	49	March 24, 2025	May 30, 2025
Subtotal for Phase 6	**69**		
Part B: Sluiceway Rehabilitation Feasibility / Conceptual Designs			
Stage 1 - Inception and Feasibility			
Phase 1 - Data Review and Site Visit		**January 29, 2025**	**April 30, 2025**
Task 1-1: Complete further assessment/investigative work that has been stated in the completed memo to support the conceptual design report	30	January 29, 2025	April 30, 2025
Subtotal for Phase 1	**30**		
Phase 2 - Develop Design Basis Memorandum		**April 23, 2025**	**April 30, 2025**
Task 2-1: Prepare Design Basis Memorandum outlining the design criteria for this project (Draft and Final)	5	April 23, 2025	April 30, 2025
Subtotal for Phase 2	**5**		
Phase 3 - Feasibility Design Report (Develop Design Alternatives)		**May 2, 2025**	**May 30, 2025**
Task 3-1: Develop conceptual-level design alternatives for NSPI review	20	May 2, 2025	May 30, 2025
Task 3-2: Prepare a memo outlining the alternatives along with the pros and cons, and high-level costs for each alternative (Draft and Final)	15	May 9, 2025	May 30, 2025
Subtotal for Phase 3	**35**		

3.0 Project Team and Relevant Experience

3.1 Project Team

Wood proposes to use skilled and experienced personnel for this project. The key team members are summarized below. CVs are available upon request.



3.2 Relevant Experience

Wood's team members have a wide range of experience developing unique solutions to clients' varying challenges. It is this original thinking, founded on a thorough understanding of the engineering design principles, coupled with decades or real-world experience at dam sites and with hydro equipment that

enables us to provide engineering solutions that are constructible, economic and reliable. Some examples of past Wood projects that are relevant to the Lower Great Brook Stoplog Refurbishment project are provided in Appendix A.

4.0 Commercial Offer

4.1 Estimate of Hours and Fees

Wood proposes to undertake the work on a time and material basis. Table 4-1 presents Wood's estimate of probable hours and fees. It includes one site visit.

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Table 4-1: Estimate of Hours and Fees by Activity

Task	PE-Proj Manager	ST-Structural	ST-Structural	ST-Structural	CV-Civil	GT-Geo Tech	CV-Civil	CV-Civil	PC-Proj Controls	PC-Proj Controls	ZP-Procure	PA-Proj Admin	Total Time (hours)	Total Fees	Total Disbursements	Total Costs
	Project Manager	SeniorStructural Engineer	Senior Structural Engineer	SeniorStructural Engineer	Senior Dam Engineer	Senior Geo Engineer	Drafting	Drafting	Cost Estimating	Project Controls	Procurement	Document Control				
	[redacted]															
	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour	per hour				
Part A: Environmental Application Support / Stoplog Design																
Stage 1 - Inception and Feasibillity																
Phase 1 - Data Review and Site Visit																
Task 1-1: Review existing drawings		4		2	6	16				4			32	[redacted]		[redacted]
Task 1-2: Review provided bathymetric data	1	4			4	6		12					27			
Task 1-3: Review existing LiDAR and topographic survey data	1				2								3			
Task 1-4: Undertake a site visit to the dam site		12			12	12							36		[redacted]	
Subtotal for Phase 1	*2*	*20*	*0*	*2*	*24*	*34*	*0*	*12*	*0*	*4*	*0*	*0*	*98*			
Phase 2 - Develop Design Basis Memorandum																
Task 2-1: Prepare Design Basis Memorandum (Draft and Final)	2	12	4	4	24	12	16				1	2	77		[redacted]	
Subtotal for Phase 2	*2*	*12*	*4*	*4*	*24*	*12*	*16*	*0*	*0*	*0*	*1*	*2*	*77*			
Phase 3 - Develop Design Alternatives																
Task 3-1: Develop conceptual-level design alternatives for NSPI review	2	24			32	32	32	24		2	1		149		[redacted]	
Task 3-2: Prepare a memo outlining the alternatives along with the pros and cons, and high-level costs for each alternative (Draft and Final)		24	4		32	16	12	12	8			2	110			
Subtotal for Phase 3	*2*	*48*	*4*	*0*	*64*	*48*	*44*	*36*	*8*	*2*	*1*	*2*	*259*		[redacted]	
Phase 4 - New Shorter Stoplog Design																
Task 4-1: Review historical information		2		4							1		7			
Task 4-2: Create an Issued for Review design drawing for NSPI review		4	4	16			24					2	50			
Task 4-3: Prepare Issued for Construction design drawings		1	2	4			8					2	17			
Subtotal for Phase 4	*0*	*7*	*6*	*24*	*0*	*0*	*32*	*0*	*0*	*0*	*1*	*4*	*74*		[redacted]	
															Stage 1 - Total	[redacted]
Stage 2 - Conceptual Design																
Phase 5 - Prepare and Submit Conceptual Design for the Chosen Isolation Option																
Task 5-1: Prepare the conceptual design drawings for the preferred alternative to the 30% design level and issue to NSPI for review	2	8			16	32		32		2		2	94	[redacted]		[redacted]
Subtotal for Phase 5	*2*	*8*	*0*	*0*	*16*	*32*	*0*	*32*	*0*	*2*	*0*	*2*	*94*			
															Stage 2 - Total	
Stage 3 - Detailed Design																
Phase 6 - Prepare and Submit Detailed Design for the Chosen Isolation Option																
Task 6-1: Design package for environmental permit submittal (60% design)	2	8			24	46		24		4		2	110	[redacted]		[redacted]
Task 6-2: Design package for Request for Proposal (RFP) (90% design)		2			12	20		24				2	60			
Task 6-3: Design package Issued for Construction (IFC)		2			8	12		12					34			
Subtotal for Phase 6	*2*	*12*	*0*	*0*	*44*	*78*	*0*	*60*	*0*	*4*	*0*	*4*	*204*			
															Stage 3 - Total	
Subtotal for Part A: Environmental Application Support / Stoplog Design	*10*	*107*	*14*	*30*	*172*	*204*	*92*	*140*	*8*	*12*	*3*	*14*	*806*	[redacted]		
Part B: Sluiceway Rehabilitation Feasibility / Conceptual Designs																
Stage 1 - Inception and Feasibility																
Phase 1 - Data Review and Site Visit																
Task 1-1: Complete further assessment/investigative work that has been stated in the completed memo to support the conceptual design report	4	12			48	8	8	24			8		112	[redacted]		
Subtotal for Phase 1	*4*	*12*	*0*	*0*	*48*	*8*	*8*	*24*	*0*	*0*	*8*	*0*	*112*			
Phase 2 - Develop Design Basis Memorandum																
Task 2-1: Prepare Design Basis Memorandum outlining the design criteria for this project (Draft and Final)	2	12	4	4	24	12	16			2	1	2	79			
Subtotal for Phase 2	2	12	4	4	24	12	16	0	0	2	1	2	*79*			
Phase 3 - Feasibility Design Report (Develop Design Alternatives)																
Task 3-1: Develop conceptual-level design alternatives for NSPI review	2	24			30	12	32	24		2	1		127	[redacted]		[redacted]
Task 3-2: Prepare a memo outlining the alternatives along with the pros and cons, and high-level costs for each alternative (Draft and Final)		20	4		30	12	12	12	8			2	100			
Subtotal for Phase 3	2	44	4	0	60	24	44	36	8	2	1	2	227			
Subtotal for Part B: Sluiceway Rehabilitation Feasibility / Conceptual Designs	8	68	8	4	132	44	68	60	8	4	10	4	418	[redacted]		
Project Total																[redacted]

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4.2 Notification to Proceed

Wood is prepared to undertake this work within one (1) week of your authorization to proceed.

4.3 Agreement

Wood intends to perform this work on a time and materials basis under the terms and conditions of the Master Engineering Services Agreement Number 2024-NS-WOOD between Nova Scotia Power Incorporated and Wood Canada Limited effective as of September 1, 2024.

APPENDIX A
RELEVANT EXPERIENCE

