

# Infrastructure & Operations

## REQUEST FOR PROPOSALS

Expansion of Construction and Demolition Cell  
Detailed Design & Engineering Services  
RFP50781

Release date: March 4, 2025

Proposals will be received up to  
2:00:00 pm local time on March 26, 2025

Contact: Michael Hatfield  
Procurement Officer  
Municipality of East Hants  
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**EAST HANTS**  
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# 1. INSTRUCTIONS TO PROPONENTS

## 1.1. INTRODUCTION

- 1.1.1. The Municipality of East Hants (“East Hants”) requires the services of a qualified firm to provide detailed design and engineering services for the proposed expansion of the Construction and Demolition (C&D) cell at the East Hants Waste Management Centre, located at 1306 Georgefield Road in Upper Kennetcook, Nova Scotia.
- 1.1.2. Appendix C contains Aerial drone photos of the Waste Management Centre relevant to the scope, for information purposes only. Additionally, Appendix D contains the Construction and demolition debris (C&D) Cell Analysis Report (Dated October 2024, Dillon File No. 24-8663), which outlines the design and approval requirements for the proposed cell 4 expansion.
- 1.1.3. To this end, East Hants is seeking competitive Proposals from the marketplace to identify a Consultant to possibly provide these Services.

## 1.2. DEFINITIONS

- 1.2.1. **Proponent:** An individual or company who submits a Proposal.
- 1.2.2. **Successful Proponent:** Proponent whose Proposal is selected for award.
- 1.2.3. **Independent Contractor:** Proponent, successful or otherwise, is considered to be an Independent Contractor, not an employee of East Hants.

## 1.3. PROPOSAL SUBMISSION

- 1.3.1. Proposals will be received up to 2:00:00 pm local time on **March 26, 2025** by upload only using the East Hants online procurement application.
- 1.3.2. The Proponent is responsible for uploading and submitting all documents by closing time. The Go to <https://www.easthants.ca/procurement/>, select the applicable competition, and register using a valid email address. The online procurement application will generate an automatic email which will provide a link to the competition dashboard through which a bidder may download documents and submit responses.
- 1.3.3. Proponent must account for the time to upload documents which depends on the size of the document. East Hants shall not be liable for, and Proponent releases East Hants from, any damage or loss of any kind whatsoever related to Proponent’s failure to submit documents by closing time for any reason.
- 1.3.4. Remember to sign the Proposal form. Electronic signatures are acceptable.
- 1.3.5. Prior to submitting their Bid, Bidders are to review the Electronic Submission Protocol at: <https://www.easthants.ca/government/procurement/> for the latest information with respect to submissions.

## 1.4. INQUIRIES

- 1.4.1. All questions or requests for additional information or clarifications regarding this Request for Proposals shall be in writing, **by email only**, to the attention of:  
  
Michael Hatfield  
Procurement Officer  
Municipality of East Hants  
Email: [procurement@easthants.ca](mailto:procurement@easthants.ca)
- 1.4.2. East Hants will provide clarifications and additional information, if required, by way of Addenda.

- 1.4.3. Inquiries and questions will be accepted up to **2:00:00 pm local time on March 18, 2025.**
- 1.4.4. Proponents are solely responsible to ensure that any such inquiries are received by East Hants as described above. East Hants will not be responsible if a Proponent chooses to act based on information received in any other way than an approved Addendum or communication, in writing, from the representative named in this section.

#### **1.5. WITHDRAWING OR MODIFYING A PROPOSAL**

- 1.5.1. Proposals can only be withdrawn by email to [procurement@easthants.ca](mailto:procurement@easthants.ca). The Proponent must provide the unique identifying number they received when submitting the Proposal in order to withdraw the Proposal.
- 1.5.2. Once a Proposal has been submitted, it cannot be modified. The Proponent must submit a new Proposal and then contact East Hants as above to withdraw the Proposal which is no longer valid.
- 1.5.3. The request to withdraw a Proposal may occur at any time, but certain competitions may contain bid security or other requirements which may impact a Proponent's legal responsibilities once the competition has closed, so withdrawal of a Proposal, where possible, should occur prior to closing.
- 1.5.4. New or replacement Proposals must be submitted before the Competition Deadline.

#### **1.6. PROPOSAL ACCEPTANCE (PRIVILEGE CLAUSE)**

- 1.6.1. This document and Request for Proposal process does not constitute a call for Tenders. This RFP process will not give rise to any Contract A-based tendering law duties or legal obligations.
- 1.6.2. This Request for Proposals neither expresses nor implies any obligation on the part of East Hants to enter into a contract with any party submitting a response or responses.
- 1.6.3. All Proposals become the property of East Hants once submitted.
- 1.6.4. Late Proposals will be rejected and will be returned unopened. Incomplete Proposals may be rejected.
- 1.6.5. Any Proposal that does not include all of the information required in this RFP may be considered incomplete and may be rejected. East Hants will, in their sole discretion, determine if the missing information is material to their ability to evaluate a response; if East Hants believes they have sufficient information to evaluate, it may proceed to do so.
- 1.6.6. Proponents undertake any expenditure related to the submission of a Proposal at their own risk. The Proponent is responsible for all costs associated with preparing and submitting this Proposal. This includes, without limitation, any and all costs, fees, expenses (travel, accommodations or meals) or other incidentals related to preparing, printing, binding, transporting, presenting, defending, or clarifying the Proposal.
- 1.6.7. East Hants may include evaluation criteria within this Request for Proposal document to be used as a guideline for Proponents. East Hants reserves the right to deviate from the evaluation criteria where it is in the best interests of the Municipality. Without limiting the generality of the foregoing, decisions to deviate from the evaluation criteria may be made based on budgetary and/or service delivery considerations having regard to all of the Proposals received and the needs of East Hants.
- 1.6.8. East Hants does not bind itself to accept any Proposal, but may accept any Proposal, in whole or in part, or discuss with any Proponent different or additional terms to those described in this RFP or in such Proponent's Proposal. East Hants may:
  - reject any or all of the Proposals;
  - accept any Proposal;
  - if only one Proposal is received, choose to accept or reject it;



- choose not to accept the lowest bid price;
  - alter the schedule, RFP process, or any other aspect of the RFP, as it may determine in its sole and absolute discretion.
- 1.6.9. Without limiting the preceding in any way, East Hants may accept any Proposal or any portion of any Proposal that may be considered to be in the best interests of East Hants. East Hants reserves the right to reject any and all Proposals that, in its sole discretion, are not in the best interests of East Hants.
  - 1.6.10. East Hants reserves the right to waive formality, informality or technicality in any Proposal. This includes the right to accept a Proposal that is not compliant with the instructions in the Request for Proposals document.
  - 1.6.11. East Hants reserves the right to amend this Request for Proposal document at any time before the Request for Proposal's closing date and will issue an addendum in the event of a change.
  - 1.6.12. East Hants reserves the right to negotiate, after the Request for Proposal's Proposal Deadline, with any Proponent and to finalize service arrangements in the best interests of East Hants.
  - 1.6.13. In applying this privilege clause, East Hants shall not be bound by trade or custom in dealing with and/or evaluating the responses to the Request for Proposals.
  - 1.6.14. East Hants reserves the right to interpret any and all aspects of this Request for Proposals as may be most favourable to East Hants. East Hants may, but is not obligated to, request clarifications of information in a proponent's proposal in order to facilitate evaluation.
  - 1.6.15. Should a Proponent find any discrepancies, errors, or omissions in this RFP, or if a Proponent is unsure as to the meaning of anything in this RFP, they are to advise East Hants in writing; East Hants may, in its sole discretion, respond to such written inquiry, to all Proponents, in an addendum.
  - 1.6.16. It is the responsibility of the Proponent to be sure they understand the requirements prior to submitting a Proposal and before the deadline for questions has passed. Insurance requirements, if any, should be reviewed by the Proponent's insurer.
  - 1.6.17. East Hants may cancel the RFP process at any time, for any reason, in its sole discretion. In the event that an RFP process is cancelled, East Hants will not be obligated to pay any costs, damages, or claims of any type to any Proponent or potential Vendor or Proponent.
  - 1.6.18. Suppliers who have been disqualified from bidding on contracts with East Hants may not respond to this RFP and any RFP which features a subcontractor who is disqualified from bidding may also be rejected.
  - 1.6.19. In providing a Proposal, the Proponent warrants that their Proposal is in all respects fair and is provided without collusion or fraud. No representative of the company from which a Proposal is to be provided may discuss the subject matter of a competition with any East Hants' staff member, Councilor, consultant, or any person involved in the procurement process, evaluation, or award, other than the designated contact or their designate. Under no circumstances may a Proponent extend entertainment, gifts, gratuities, discounts, or special services, regardless of value, to any employee of East Hants in connection with this or any other procurement of goods, services, or construction.
  - 1.6.20. Proponents must advise East Hants of any potential conflict of interest that may affect, or appear to affect, the RFP process, including the influence of award. East Hants may disqualify a Proponent, rescind an invitation to negotiate, or terminate a contract subsequently entered into if East Hants determines that the Proponent has engaged in any conduct prohibited by this RFP.

- 1.6.21. Proponents are advised that no commitment to purchase Goods or Services shall exist until the successful Proponent is advised by East Hants, in writing, of an award. If an award is made, the method of procurement may be, at East Hants's discretion, Procurement Card, Purchase Order, or other method of contract East Hants may identify.
- 1.6.22. The procurement of goods and services, if any, resulting from this RFP will require a written agreement between the parties. Unless otherwise agreed to in writing by East Hants, the terms and conditions of the attached Sample Agreement shall be the basis for such agreement; while some negotiation may be acceptable, if a Proponent has objection to a specific clause, in particular indemnification or insurance requirements, they must raise them **during** the competition and East Hants, in their sole discretion, may choose to alter the clause or not. East Hants may, at their sole discretion, consider objections raised in proposals, but the extent to which a Proponent accepts, rejects, or proposes modifications to contract terms may be taken into account when evaluating Proposals. Any Proposal may, in the sole discretion of East Hants, be rejected at any time on the basis of proposed contract terms and conditions that are unacceptable to East Hants.
- 1.6.23. Proponents are advised that East Hants is governed by Nova Scotia's *Freedom of Information and Protection of Privacy Act (FOIPOP)* and any information submitted to East Hants in response to this RFP may be subject to disclosure under *FOIPOP*. Proponents may identify any confidential information in their Proposals or any accompanying documentation and are advised to consult with their own legal advisors regarding the appropriate way to identify such information. East Hants will make reasonable efforts to safeguard confidential information, subject to its disclosure requirements under *FOIPOP* or any disclosure requirements imposed by law or by order of a court or tribunal. Proponents are advised that their Proposals will, as necessary, be disclosed, on a confidential basis, to advisers retained by East Hants to advise or assist with the RFP process, including the evaluation of Proposals. Proponents are further advised that East Hants may make public the names of any or all Proponents and intends to publish the name of the successful Proponent and the total value of any contract entered into with the successful Proponent. If a Proponent has any questions about the collection and use of information pursuant to this RFP, questions are to be submitted to the RFP Contact.
- 1.6.24. In submitting a Proposal, the Proponent has accepted the reservation of rights (privilege clause) as set out herein and agrees to be bound by same. In addition, the Proponent confirms that it has, and will, comply with all policies of East Hants, including the *Procurement Policy* and *Supplier Disqualification Policy*. No Proponent shall have any claim for compensation of any kind whatsoever as a result of participating in this RFP and by submitting a Proposal each Proponent shall be deemed to have agreed that it has no claim.
- 1.6.25. Submitting a Proposal shall be deemed proof that the Proponent was aware of and understood the requirements, the terms and conditions, and all other provisions of the RFP. East Hants will not be liable for claims made by a Proponent that they were uninformed or unaware of the requirements, terms, or conditions of this RFP.

## 1.7. PROPOSAL OPENINGS

- 1.7.1 East Hants will proceed with private openings for this RFP. Proponents will be advised of their status in the RFP once a determination of award has been made.

## 1.8. PROPOSAL VALIDITY

- 1.8.1. All responses to this RFP should be held firm for a period of sixty (60) days from the Proposal Deadline or such additional time as may be mutually agreed upon in writing.

## 1.9. FEES, EXPENSES AND DISBURSEMENTS

- 1.9.1. The Proponent is responsible to ensure that their Proposal clearly describes Total Cost which will be charged to provide the Services. The Proponent must supply a detailed breakdown of the Total Cost including all fees, expenses, and disbursements for which the Proponent expects to be paid.

## 1.10. PROPOSAL REQUIREMENTS

- 1.10.1. The background, nature of the required Services, and other details which the Proposal must address are described in Section 2, Service Description. East Hants has tried to clearly describe what it wants to achieve in requesting these Services, its service expectations, and the level of support we may expect from the Successful Proponent during the term of the Service delivery.
- 1.10.2. **Generally:**
  - 1.10.2.1. While there is no maximum page limit, Proponents should only include information which they believe is relevant to the Services being requested and which demonstrates the Proponent's capability and capacity to complete the Services, in accordance with these instructions and being mindful of the Evaluation Criteria.
  - 1.10.2.2. Proponents should avoid relying on assumptions. If a Proponent is unsure of something which is material to their Proposal, they are encouraged to ask questions within the specified period in which to do so.
  - 1.10.2.3. Proponents should not rely on assistance from East Hants as part of their Work Plan unless such assistance can only be obtained from East Hants. East Hants will meet their reasonable obligations to supply information, access, and, where solely within their responsibility to do so, such assistance as is required to facilitate the Services, but the Proponent must plan to supply all other information and labour as part of the Services and included in their Total Cost.
- 1.10.3. **Methodology:** The Proponent must clearly and concisely describe in their Proposal how they propose to deliver the Services. This is the Proponent's one opportunity to convince East Hants they have the capability and capacity to complete the Services in a timely and professional way.
  - 1.10.3.1. East Hants wishes to understand how the Proponent will approach this project if successful. It is up to the Proponent to create compelling argument as to why their firm should be selected, in accordance with the scoring parameters East Hants provides.
  - 1.10.3.2. Proponents should demonstrate how the team they are proposing are qualified to complete the Services. A brief overview, typically one or two paragraphs, of each team member should be provided so East Hants can understand the role each are playing. Subconsultant roles must be clear from the narrative of the RFP response as well.
- 1.10.4. **Experience and Staff:** The Proponent must supply the résumés of the Primary Team Members listed in their Proposal. The proposed construction inspector is to be considered a Primary Team Member. Résumés should be brief, one page or less, and demonstrate that the team member has experience applicable to the project.
  - 1.10.4.1. Where specific experience may be lacked, demonstrate how the general experience the proponent has will be applied to this project.
  - 1.10.4.2. Discuss quality control and methods used to ensure the work produced is correct and of good quality.
- 1.10.5. **Safety:** Safety is an important component of every project. Briefly discuss how safety is managed at your organization, including:
  - 1.10.5.1. Safety Certified status, or equivalent acceptable to East Hants, is a requirement of this contract. Provide a valid Certificate of Recognition (COR) or equivalent with your response. To be considered, the safety certification must have an external auditing element, verified by a third-party certifier.
  - 1.10.5.2. If your company has any non-compliance or outstanding issues with the Nova Scotia Department of Labour and Advanced Education or Nova Scotia Department of Environment (or other similar non-compliance issues in any jurisdiction), such as stop work orders, pending



charges/prosecutions, or recent (within the last year) convictions or fines, describe the circumstances and provide a summary of actions take to prevent reoccurrence.

- 1.10.5.2.1. Describe how you will ensure Services are performed safely. Include discussion of environmental and worker safety, public safety, if applicable, with respect to the services you will supply, and safety generally with respect to hazard identification and mitigation.
- 1.10.6. **Cost:** Proponents must provide realistic cost and level of effort figures as part of their Proposal. The Proponent must include a schedule of fees and expenses detailing the planned hours and associated hourly rates for project team members which make up their lump sum Total Cost. If awarded, the lump sum Total Cost may not be exceeded.
- 1.10.7. **Schedule:** The Proposal must include a schedule indicating any stages proposed for the Services, together with the time required to complete each stage. The schedule shall indicate milestone dates and dates that items are to be delivered to East Hants. Provide a work breakdown schedule which lists each staff member, the hours assigned to the project, and the related activities.
- 1.10.8. **Examples and references:** Proponents must provide descriptions and references for three similar projects that they have completed, ideally where the same team members were involved and their roles similar to that proposed. Include the name, phone number, and email address for a representative of the client in case East Hants wishes to contact them. Discuss why the example was chosen and its relevance to East Hants' requirements.
- 1.10.9. The following is a list of documents and other materials that East Hants suggests the Consultant review prior to submitting a Proposal.
  - 1.10.9.1. Construction and Demolition Debris (C&D) Cell Analysis Report, dated Oct. 2024
  - 1.10.9.2. [Solid Waste Management Facility Guidelines, dated July 5, 2023](#)
  - 1.10.9.3. [Municipal Standards, dated October 25, 2023](#)
- 1.10.10. Proponents must complete and submit with their Proposal Appendix A, the Proposal Form.
- 1.10.11. The Proponent may include any tables or attachments it feels will help clarify their Proposals above the minimums identified in the RFP document.
- 1.10.12. Proponents must indicate whether they are the sole undertakers of the work or whether sub-consultants will be used. Proposed sub-consultants shall be subject to approval by East Hants.
- 1.10.13. The Proponent must supply a list of all staff they anticipate to assign to the complete the Services, and must include an organizational chart showing the lines of responsibility and reporting structure of these staff.
- 1.10.14. If a sub-consultant is to be used, the Proponent must include a list of the sub-consultant's staff, their organizational chart and the resumes of Primary Team Members. The role of any sub-consultant must be clearly defined and outlined in the Proposal.
- 1.10.15. East Hants may, without creating an obligation to any Proponent, request clarifications, additional information, supporting documentation not otherwise supplied, up to including a request for a meeting or presentation, for any Proposal or from any Proponent, prior to award.
- 1.10.16. It is the responsibility of the Proponent to be sure they understand the requirements prior to submitting a Proposal and before the deadline for questions has passed.
- 1.10.17. To qualify for award, a Proponent be registered with the Workers' Compensation Board of Nova Scotia (WCBNS), regardless of the size of the company or its usual status with WCBNS. The Proponent is required to provide a Clearance Letter with their Proposal, except where:
  - 1.10.17.1. A Proponent is not currently registered, but intends to register as a condition to providing the Services; and

1.10.17.2. The Proponent confirms in Appendix A that they have inquired with WCBNS and have determined they will be able to obtain such coverage.

1.10.18. The successful Proponent will be expected to deliver the Services specified in Section 2, Services Description. The Sample Agreement included as Appendix B represents the terms and conditions which East Hants expects will govern the performance of the Services.

## 1.11. PROPOSAL EVALUATION

1.11.1. East Hants will evaluate each Proposal using the criteria specified below.

Criteria	Available Points
<b>Proposal Document</b>	
General ( <i>demonstrated understanding of the requirements and objectives in performing the Services, quality of proposal, completeness</i> )	/5
Methodology ( <i>detailed and reasonable approach to the requirements and objectives</i> )	/25
Experience and Staff ( <i>relevant experience of both the firm and team members, training, quality control methods</i> )	/15
Schedule ( <i>overall timeline, deliverables, and milestones; adequate work breakdown</i> )	/10
Safety ( <i>discussion of safety</i> )	/5
Examples and References ( <i>examples of similar projects and references appropriate to this project</i> )	/10
<b>Sub-Total</b>	<b>/70</b>
Cost Rating	/20
Hours	/10
<b>Total</b>	<b>/100</b>

1.11.2. When evaluating the Proposals, East Hants will assign points for Cost based on the following formula:

**(Lowest Total Proposal Cost divided by Proponent's Total Proposal Cost) multiplied by the Available Points**

1.11.3. When evaluating the Proposals, East Hants will assign points for Hours based on the following formula:

**(Proponent's Hours divided by the highest number of hours from all compliant Proposals) multiplied by the Available Points**

1.11.4. Rejected proposals will not be considered when evaluating Cost or Hours.

1.11.5. Once the References have been checked and the Presentations have been completed, East Hants will assign points to each Proponent who was selected to present. The Proponent who, having achieved the minimum number of points required herein for Section 1, has the highest number of Total Points once all scores are calculated will be considered for award.

1.11.6. In the case of a tie, East Hants may flip a coin to determine which Proponent to consider for award.

1.11.7. Award is subject to approval by Council or the CAO.



## 2. SERVICES DESCRIPTION

### 2.1. GENERAL

- 2.1.1. The Municipality of East Hants requires the services of a qualified firm to undertake the detail design & engineering services, and the application for approval package & submission with the Nova Scotia department Environment & Climate Change (“NSECC”) for the expansion of the construction and demolition landfill cell at the East Hants Waste Management Centre (“WMC”), which includes the following:

**Liner System:** Detailed design and specifications of the landfill liner system to provide adequate containment of leachate and protection of ground water;

**Separation Distances:** Documentation demonstrating compliance with the required separation distances from sensitive receptors, such as water bodies, residential areas and other environmental sensitive areas;

**Topographic Survey:** A comprehensive topographic survey of the site to provide accurate elevation data and inform the design of the landfill;

**Geotechnical Investigation:** A thorough geotechnical investigation to assess soil and subsurface conditions, ensuring the structural stability of the landfill. The Consultant will be responsible for facilitating a geotechnical investigation of the areas to evaluate the subsurface conditions in support of the design and amendment of approval to operate in accordance with Solid Waste Management Facility Guidelines, dated July 5, 2023. This investigation will, at a minimum, determine the type and competency of the existing on-site soils and/or imported materials and will present factual results of the investigation and support engineering recommendations for proposed design.

**Surface Water Run-Off Control:** Design and specifications for the surface water run-off control measures to reduce erosion and manage stormwater;

**Leachate Management:** Detailed plans for the collection and management of leachate to prevent potential contamination of soil and water resources; and

**Detailed Engineering Drawings and Technical Specifications:** Comprehensive engineering drawings and technical specifications for the construction and operations of the landfill. Stamped electronic and hard copies of drawings to be prepared.

- 2.1.2. The Municipality of East Hants will share data from our environmental monitoring program with the Consultant to support any required submissions with NSECC.

### 2.2. TENDER DOCUMENTS

- 2.2.1. East Hants will be responsible for the preparation of standardized tender documents; however, the Consultant will be responsible for providing drawings, schedule of quantities, non-standard pay item descriptions, and additional documentation necessary to release a tender for construction. When applicable, tender documents are to be based on the current edition of the ‘Standard Specification for Municipal Services’ and otherwise be acceptable to East Hants.
- 2.2.2. East Hants will manage the tendering process and the Consultant will provide originals of all required documents in a format acceptable to East Hants, for use by East Hants. Design related questions that may arise during the tendering process will be directed to East Hants and technical questions will be forwarded to the Consultant for review and appropriate response. Typically, the Consultant will need to provide a response to East Hants by **4:00:00 pm** local time the following business day, so East Hants can incorporate the response into an addendum, if necessary. The Consultant shall not respond directly to questions posed to them by potential bidders during the tendering process unless directed by East Hants to do so.

## 2.3. CONSTRUCTION SUPPORT & REVIEW

- 2.3.1. The Consultant will be responsible for providing 'Issued for Construction' drawings as well as typical construction support activities which include, but are not limited to, responding to design questions that may arise during construction, visiting site to investigate the same, issuing Change Orders for approval by East Hants, or approving necessary changes to the design (in consultation with East Hants). The Consultant will also be responsible for providing 'on-site' review services which include but are not limited to maintaining a presence on site to document construction, witness tests, and verify that the work is being undertaken in accordance with the design and to a sufficient standard of quality.
- 2.3.2. The Consultant, in conjunction with the Contractor, will be responsible for recording any changes to the design during construction, and for producing 'as-built' record drawings from information provided by the Contractor. Record Drawings will be provided to East Hants in electronic format (both PDF and .dwg).

## 2.4. PROJECT SCHEDULE

- 2.4.1. The following schedule is preliminary and somewhat flexible. Proposals are to include any required or anticipated revisions to the following:

Description of Task	Responsibility	Date
Award of RFP	East Hants	April 2025
Detailed Design, Topographic Survey, & Geotechnical Investigation	Consultant	May 2025 to August 2025
Submit preliminary drawings for review	Consultant	August 1, 2025
Review preliminary drawings	East Hants	August 15, 2025
Submit IFT drawings and NSECC application package	Consultant	August 29, 2025
MEH Issues Tender for Construction (Awarded Prior to May 2026)	East Hants	January 2026 to March 2026
Project Construction / Support	Consultant	May 2026 to October 2026
Project Closeout & Final Approval	Consultant	November/December 2026
Landfill Open for Use	East Hants	January/February 2027

## 2.5. EAST HANTS REPRESENTATIVE

- 2.5.1. The East Hants Representative for these Services is Jared Mullett, P. Eng. East Hants may, through the Representative or their designate, supply either verbal or written instructions to a Contractor with respect to the Services to be completed.

## APPENDIX A - COST FORM

### 1. Contact information for Proponent:

Name of Primary Proponent Firm	
Address	
Phone Number (office)	
Fax Number	
Primary Project Contact Name	
Email Address for Primary Contact	
Cell Phone Number for Primary Contact	

### 2. Sub-consultant List (if any):

Name of Sub-consultant Firm	
Address	
Phone Number (office)	
Fax Number	
Project Contact Name	
Name of Sub-consultant Firm	
Address	
Phone Number (office)	
Fax Number	
Project Contact Name	
Name of Sub-consultant Firm	
Address	
Phone Number (office)	
Fax Number	
Project Contact Name	



### 3. COST

The Proponent must complete the following table to be submitted with their Proposal.

Work Element	Hours on Task (Total)	Total Fee	Total Expenses	Total Cost per Element
Detailed Design				
Tender Documents				
Application for Approval Package and Submission with NSECC				
Construction Support (Office)	100*			
Construction Support (Site)	400*			
Record Drawings				
<b>Column Totals</b>				
<b>Total Proposed Cost (less HST)</b>				

\*The number of hours is provided to establish a point of comparison between proposals; the intent is that the actual number of hours required will be what is invoiced, whether more or fewer.

All fees shown will be exclusive of Harmonized Sales Tax (HST).

#### 4. BY SIGNING BELOW THE BIDDER AGREES THAT:

- a. The Proponent has read and understands the requirement of this RFP and agrees to abide by the terms and conditions.
- b. The Proponent has read and understands the following addenda: Addendum \_\_\_\_\_ to \_\_\_\_\_ (if any). Failure to acknowledge an addendum containing information pertinent to the Services may be cause to reject a Proponent's Proposal.
- c. The Proponent has read, understands and will, if awarded the work, comply with insurance requirements specified in the Sample Agreement.
- d. The Proponent will, if awarded the work, obtain and will maintain for the duration of the contract Workers' Compensation Board of Nova Scotia workplace insurance coverage (attach Letter of Good Standing if available).
- e. The Proponent hereby agrees that the work proposed in the table will be completed by the dates stated in the Schedule for the Total Cost indicated in the table above, inclusive of, without limitation, all fees, expenses or costs for which the Proponent may wish to be reimbursed, except HST.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Name (Printed)

\_\_\_\_\_  
Title (Printed)

\_\_\_\_\_  
Date

## APPENDIX B - SAMPLE AGREEMENT

THIS AGREEMENT is effective <<date>> (“Effective Date”)

Between

**THE MUNICIPALITY OF THE DISTRICT OF EAST HANTS**, a body corporate pursuant to the *Municipal Government Act* (SNS 1998, c. 18), having its chief place of business at Elmsdale, in the District of East Hants, Nova Scotia, hereinafter called “**East Hants**”

-and-

<<LEGAL NAME>>, a body corporate under the laws of <<jurisdiction>> (the “**Consultant**”)

### BACKGROUND

East Hants wishes to retain the Consultant to provide the following Services <<Describe>>, more fully explained in Section 2, Services Description.

IN CONSIDERATION of mutual obligations and agreements specified herein, the parties agree as follows:

### DEFINED TERMS

- 1 **Services** means the services supplied by the Consultant as specified within this Agreement.
- 2 **East Hants Representative** means the employee of the Municipality of East Hants, or their designate, assigned by East Hants to be responsible for managing this Agreement.
- 3 **Schedule** means the timeline, including deadlines, review dates and any other milestones or dates established by East Hants for the delivery of the Services. The Schedule may only be modified with written permission from East Hants.

### CONTRACT DOCUMENTS

- 4 This Agreement consists of the following documents:
  - a. This Agreement;
  - b. Section 2, Services Description;
  - c. <<insert proposals, confidentiality agreements, etc. as applicable>>; and
  - d. <<insert additional documents as applicable>>.

### STANDARD OF CARE

- 5 East Hants hereby engages the Consultant to supply the Services described herein and the Consultant agrees to provide these Services.
- 6 East Hants expects that any Consultant capable to perform the Services will perform the Services in a manner consistent with the degree of care, skill, and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. East Hants expects the Consultant to act with good faith and in the interests of East Hants.
- 7 The Consultant declares that it has the necessary resources to complete the Services in a competent and professional manner. Such resources shall include, without limitation, qualified, skilled, and sufficient personnel, adequate financial resources, and any other unique or general resources necessary to complete the Services.



**TERM**

- 8 This Agreement shall commence on the Effective Date and shall end on the earlier of the following:
- a. Full completion of the Services to the in accordance with the requirements; or
  - b. Termination in accordance with the terms of this Agreement (see TERMINATION).
- 9 Unless amended by East Hants in writing, the Consultant agrees to complete Services on or before **December 31, 2026**.

**PAYMENT**

- 10 East Hants shall pay the Consultant as follows:
- a. The maximum amount payable under this Agreement, including fees, expenses and disbursements, shall not exceed the aggregate sum specified below, exclusive of Harmonized Sales Tax (HST).  
  
Total Cost, less Harmonized Sales Tax (HST): \$\_\_\_\_\_
  - b. The following fees, expenses and disbursements are included in the Total Cost and are deemed to be included in the Services. The Consultant is responsible to complete the Services for the stated Total Cost.  
  
[Insert table from proposal where fees, expenses, and disbursements are itemised, if applicable]
  - c. The following rates will apply should East Hants wish the Consultant to provide any additional Services using such personnel as described in the table:  
  
[Insert table from proposal showing personnel and associated rates per hours, if applicable]
  - d. Costs, or part thereof, are only payable when the Consultant, as determined by East Hants, has satisfactorily delivered the Services or part thereof. Payment for any part of the Services shall not be deemed a waiver of East Hants' rights of set-off at law or under contract for costs or expenses arising from default or negligence of the Consultant.
  - e. All invoices submitted by email must be sent to [vendors@easthants.ca](mailto:vendors@easthants.ca). Invoices submitted by mail or hand-delivered must be to the attention of the Payables Administrator. When a Purchase Order is specified by East Hants, the invoice must reference this Purchase Order in order to be processed for payment. Include the name of the East Hants Representative on the invoice.
  - f. Invoices must be submitted in accordance with the schedule established by East Hants at the beginning of the contract, typically monthly. Invoices must be supported in such detail as East Hants may request, including individual personnel hours, their rate(s) and the total hourly expense for the individual; individual mileage, the rate(s) and the total mileage expense for the individual; and any expenses, listed by category. Mark-ups (if any) for recovery of administrative or incidental expenses are to be clearly identified on the invoice.
  - g. East Hants will review each invoice for completeness in a timely manner and, if acceptable, will approve such invoice for payment. Where there is a discrepancy, error, or other anomaly, East Hants may reject an invoice, request clarification or additional information, or otherwise require the invoice to be made acceptable prior to approval or payment.
  - h. No payments will be made by East Hants to the Consultant unless their invoice is accompanied by a valid Clearance Letter confirming they are in good standing with WCBNS.
  - i. East Hants may reject an invoice on the basis that the Services are not in accordance with the requirements of the Agreement. In the case where East Hants determines, acting reasonably, that the Services are not complete or that the Consultant has not met the requirements of the

Agreement, the Consultant will be required to make changes to the Services to become compliant at no additional cost. If the Services cannot be made compliant, in East Hants' sole opinion, East Hants may terminate the Agreement.

- j. Payment will be made on a net thirty (30) days basis from approval of an invoice in accordance with this section.
- k. No payment made by East Hants under this Contract shall constitute acceptance of work or products that are not in accordance with the requirements of the Agreement.
- l. The Consultant shall not be entitled to payment in respect of costs incurred by the Consultant in remedying errors and omissions in the Services that are attributable to the Consultant, the Consultant's employees, or persons for whom the Consultant had assumed responsibility in performing the Services.
- m. If, and to the extent that, the time for completion of the Services is exceeded or extended through no fault of the Consultant, payment for the Services required for such extended period of this Agreement shall be subject to review and equitable adjustment.
- n. In the event the Agreement is terminated before the satisfactory completion of the Services, East Hants shall only be liable to pay, and the Consultant shall accept in full settlement, an amount for Services satisfactorily performed up to the date of termination. Upon payment for services completed in accordance with this Agreement to the date of termination, the Consultant will have no further claim against East Hants for any damages related to termination of this Agreement.
- o. All expenses and disbursements are considered to be included in the Total Cost unless authorized, in writing, by East Hants to be reimbursed separately. Disbursements and expenses so authorized shall be reimbursed to the Consultant at actual cost plus a nominal mark-up to cover the administrative cost associated with the disbursement or expense.
- p. The Consultant shall be solely responsible to pay for all costs and expenses arising out of this Agreement, whether or not they may qualify for reimbursement.
- q. The Consultant is responsible to maintain a thorough cumulative record of all fees, expenses and disbursements over the term of the Contract. The Consultant must provide East Hants with an electronic copy of such record upon request.

#### **INDEPENDENT STATUS**

- 11 The Consultant will provide the Services to East Hants as an Independent Contractor and not as an employee. The Consultant agrees that East Hants shall have no liability or responsibility for the withholding, collection, or payment of any payroll taxes, employment insurance premiums, or Canada Pension Plan contributions, or any other relevant payroll deductions on any amounts paid by East Hants to the Consultant or amounts paid by the Consultant to its employees or contractors.
- 12 The Consultant shall not have any power to accept an obligation, incur any liability, promise any performance, and/or request or obtain any credit on behalf of East Hants.
- 13 The Consultant is free to provide services to other clients, so long so long as there is no interference with the Consultant's contractual obligations to East Hants or degradation in the STANDARD OF CARE.

#### **SCHEDULE AND DELAY**

- 14 The Consultant shall contact the East Hants Representative weekly, or on such other frequency acceptable to East Hants, to provide an update on the progress of the Services. An updated Schedule indicating progress of the Services shall be provided to East Hants monthly, or more frequently if so requested.
- 15 Any circumstances that will result in changes to the agreed Schedule or delay in performance of the Services must be brought to attention of the East Hants Representative by the Consultant within 24

- hours of the change or delay being identified. Changes to the Schedule must be approved by East Hants in writing.
- 16 In identifying a period of delay, the Consultant must make reasonable effort to quantify the expected period of delay and to minimize such delay.
  - 17 Except in the case of an excusable delay, the Consultant will be liable to pay for any expenses East Hants may incur which are a result of the delay in performance. This may, without limitation, include additional contract management fees (if any), additional fees claimed by a contractor as a result of the delay, and any costs which can be reasonably attributed to the delay.
  - 18 Provided that the Consultant identifies the delay as specified herein and makes reasonable effort to quantify and minimize the delay, the Consultant shall be excused of any delay (“excusable delay”) that:
    - a. Is beyond the reasonable control of the Consultant;
    - b. Is not avoidable by the exercise of reasonable foresight; and
    - c. Occurred without the fault or neglect of the Consultant.
  - 19 For greater clarity, any delay caused by the lack of financial resources, labour disputes/strikes, insolvency, any event that is a ground for termination provided for in this Agreement, or any delay in the Consultant fulfilling an obligation to deliver a bond, guarantee, letter of credit, insurance, WCB certificate or other security relating to the performance or the payment of money, shall not qualify as an excusable delay.
  - 20 In the event of an excusable delay, any delivery date, schedule, or other date that is directly affected by the delay shall be postponed for a reasonable time not to exceed the duration of the excusable delay.
  - 21 Where an excusable delay continues for 30 days or more, East Hants may, in East Hants’s absolute discretion, choose to terminate this Agreement. In such a case, the parties agree that neither party will make any claim against the other for damages, costs, expected profits or any other loss arising as a result of the termination or the event that gave rise to the excusable delay.
  - 22 Except to the extent that East Hants is responsible for the delay for reasons of failure to meet an obligation under the Agreement, East Hants shall not be liable for any costs or charges of any nature incurred by the Consultant or any of its sub-contractors as a result of an excusable delay.

#### PERSONNEL

- 23 East Hants expects the personnel listed in the Consultant’s duly signed proposal to perform the Services indicated. The Consultant must obtain written permission from East Hants before changing any member of the work team. In the case of personnel being changed, the new personnel being assigned must have a similar length and breadth of experience relevant to the matter of this contract as the personnel being replaced and they must be acceptable to East Hants.

#### SUBCONTRACTOR

- 24 The Consultant is advised that the subcontractor listed in the Consultant’s proposal and their work scope cannot be changed without the written permission of East Hants. Failure to comply with this provision will be considered a breach of contract and may result in termination of the Agreement.
- 25 If the Consultant finds that a subcontractor named in this Agreement cannot perform some or all of the Services for which they were named, the Consultant may request permission from East Hants to engage an alternative subcontractor for such Services. In making such a request, the Consultant must:
  - a. Identify the reasons why the named subcontractor cannot complete the Services;

- b. Provide the name, qualifications and experience of the proposed replacement subcontractor;
  - c. Make such request in writing; and
  - d. Must select a replacement who is in all respects equal to the subcontractor being replaced.
- 26 Permission to replace a subcontractor will not be unreasonably withheld. However, East Hants reserves the right to, in its sole discretion, reject any proposed replacement subcontractor the Consultant may name. The rejection of a replacement subcontractor shall not relieve the Consultant of their obligation to perform the Services under this Agreement.

#### CONFIDENTIALITY

- 27 In the course of discharging its duties under this Agreement, the Consultant, its subcontractors, its agents, and/or employees will hear, see and/or otherwise come to know, possess or have access to confidential information about and/or belonging to East Hants, its clients and/or third parties interacting with East Hants or the Consultant, including but not limited to contact lists, personal information about identifiable individuals, security information, and information about East Hants' clients, methods and processes (the "Confidential Information").
- 28 The Consultant agrees not use, disclose, reproduce or otherwise make available, Confidential Information to any person, firm or enterprise (other than to the Consultant's subcontractors, employees, or agents who have a need to know such information for the purposes of this Agreement) unless specifically authorized in writing to do so by East Hants. The Consultant agrees that if a subcontractor, employee, or agent will receive Confidential Information as contemplated in this section, it will obtain a confidentiality agreement from such subcontractor, employee, or agent which provides equal or greater protection to the Confidential Information than set out in this section and that they will provide proof of same to East Hants upon obtaining a fully executed agreement.
- 29 The Consultant agrees to exercise all due care and diligence and take all reasonable precautions to prevent any unauthorized collection, use, disclosure, retention, destruction or disposal of Confidential Information.
- 30 Upon termination of the Agreement for any reason, the Consultant will return to East Hants any and all documents in its possession, electronic or otherwise, containing Confidential Information, except for Confidential Information the Consultant may be required to retain for its professional files and records.
- 31 The Consultant recognizes that if any of the provisions of this section are violated, East Hants is entitled to an injunction to prevent it from disclosing Confidential Information and/or using Confidential Information for any purpose. The Consultant further recognizes that East Hants would be entitled to other legal remedies, including legal fees and costs in the event of such a violation.
- 32 The use and disclosure of the confidential information shall not apply to information which
- a. Was known to the Consultant before receipt of same from East Hants; or
  - b. Becomes publicly known other than through the Consultant; or
  - c. Is disclosed pursuant to the requirements of a governmental authority or judicial order.
- 33 The Consultant shall utilize reasonable precautions, including administrative, physical, and technical safeguards, to protect the information and data associated with the Services from unauthorized access, disclosure, acquisition, destruction, use, or modification. The Contractor shall adhere to any applicable law relating to data security. The Contractor shall not disclose such information and data associated with the Services to any third party except where required by law.

**INFORMATION COLLECTED**

- 34 All information and material produced by the Consultant in the course of the Services, including, but not limited to, calculations, design notes, criteria, graphs, figures, maps, reports, drawings, analysis, profiles, and plans, will become the property of East Hants and an electronic copy of such information must be turned over to East Hants upon completion or termination of the Services.
- a. The Consultant understands that East Hants intends to use such collected information to perform the business of the Municipality of East Hants; to that end, the Consultant agrees that East Hants may, without limitation, use, distribute, reproduce, and/or publish such information without penalty or exclusion; and
  - b. East Hants reserves the right to amend such collected information whenever and for whatever purposes it chooses to do so.
- 35 Where the Consultant identifies that certain information is proprietary and the release of which would cause the Consultant harm, East Hants may, in their sole discretion and acting reasonably, agree not to release such information, provided that agreement does not harm their interests. East Hants reserves the right to benefit from the use of such information even if not disclosed.

**INDEMNIFICATION**

- 36 The Consultant shall defend, indemnify and save harmless the Municipality of the District of East Hants, its elected officials, officers, and employees from and against claims, actions, causes of action, losses, expenses, fines, costs (including reasonable legal defence costs), interest or damages, including but not limited to bodily injury, sickness, disease or death or to damage to or destruction of tangible property including loss of revenue or incurred expense resulting from disruption of service, to the extent reasonably attributable to the negligent acts, errors, or omissions, fraud or willful misconduct of the Consultant, its directors, officers, employees, agents, contractors and subcontractors, or any of them, in connection with or in any way related to the delivery or performance of this Agreement. This indemnity shall be in addition to and not in lieu of any insurance to be provided by the Consultant in accordance with this Agreement, and shall survive this Agreement.

**INSURANCE**

- 37 The Consultant shall, without limiting its obligations or liabilities, maintain Commercial General Liability insurance on an occurrence basis with a minimum limit of \$5,000,000.00 for bodily injury including death, personal injury and property damage including loss of use, and shall include provisions for: Blanket contractual liability; Owners' and contractors' protective liability; Broad form property damage; Hostile fire; Tenant's legal liability; Non-owned automobile liability; Contingent employer's liability; and Products and completed operations liability.
- 38 The Consultant must provide a certificate of insurance (COI) from their insurer for this coverage. The COI, at a minimum, must:
- a. List the Municipality of the District of East Hants as an additional insured and contain both cross-liability and severability of interest clauses;
  - b. The Consultant's insurance must provide for bodily injury or property damage that may result from the Consultant's performance of the Services; and
  - c. Excess or umbrella insurance may be used to achieve the required insurance limits noted in this section.
- 39 The Consultant must have and must maintain automobile insurance in the amount of \$2,000,000.00 for the duration of the Agreement and must provide a certificate of insurance confirming this coverage.

- 40 The COI for Commercial General Liability insurance must provide for 30 days' written notice of cancellation. The Consultant must provide a new certificate of insurance each time the insurance is renewed for the duration of this contract and including any warranty period. The COI must identify any exclusions which apply to the Policy with respect to the Services.
- 41 The Consultant shall take out and keep in force errors and omissions insurance in the amount of \$3,000,000.00 providing coverage for acts, errors and omissions arising from their services performed under this Agreement. The policy SIR/deductible shall not exceed \$100,000 per claim and if the policy has an aggregate limit, the amount of the aggregate shall be \$53,000,000. The policy shall be underwritten by an insurer licensed to conduct business in the Province of Nova Scotia and acceptable to East Hants. If the policy is to be cancelled or non-renewed for any reason, 90-day notice of said cancellation or non-renewal must be provided to East Hants.
- 42 The Consultant is responsible to have and to maintain insurance on the equipment and materials used to provide the Services for the duration of the Agreement. East Hants will not be responsible in any way for lost, damaged or stolen equipment.
- 43 In addition:
- a. The Consultant's insurance shall be primary coverage and not additional to and shall not seek contribution from any other insurance policies available to East Hants.
  - b. In the case where the Consultant will use subcontractors or third-party suppliers, such subcontractors and third-party suppliers must obtain and provide proof of insurance coverage that is applicable to the services they will provide and which is acceptable to East Hants, including, at minimum, Commercial General Liability insurance.
  - c. Failure to maintain the required insurance coverage may be grounds for termination of the Agreement;
  - d. If the Consultant no longer is in Good Standing with WCBNS, the Consultant must disclose the change in WCB status immediately. Inability to return to Good Standing before the next performance of the Services may result in the termination of the Agreement;
  - e. East Hants will not accept any provisions which seek to limit the liability of the Consultant with respect to these insurance requirements;
  - f. Changes to incorporation information must be disclosed within a reasonable time of the change; and
  - g. Changes to insurance coverage must be disclosed to East Hants within a reasonable period after the change, at least prior to the next performance of any Services under this Agreement affected by the change, and the Consultant must provide a revised certificate. The amended coverage must be in accordance with the requirements of this Agreement or otherwise acceptable to East Hants.

## REGULATIONS

- 44 The Consultant shall comply with all applicable Federal, Provincial and Municipal laws and regulations and the regulations of any other authorities that may have jurisdiction. The Consultant shall also comply with any policies or other requirements related to occupational health and safety or security that may be in place or implemented during the course of the Agreement.

**TAXES**

- 45 The Consultant shall pay all Federal and Provincial Taxes as required by the appropriate enactments.

**WORKERS' COMPENSATION**

- 46 The Consultant must be registered and in good standing with the Workers' Compensation Board of Nova Scotia (WCBNS) regardless of their jurisdiction of incorporation, location of premises, or typical status with under the Workers' Compensation Act of Nova Scotia. Under some circumstances, Consultant may be covered by a public workers' compensation program in their home province and East Hants may, in their sole discretion, accept this coverage as equivalent.

**CONFLICT OF INTEREST**

- 47 The Consultant must promptly bring to the attention of East Hants, in writing, any possible conflict of interest related to delivering these Services. For greater clarity, any business relationships between East Hants staff and Consultant, either direct or through a third party, which may appear to create an unfair advantage for the Consultant or where it may appear that an employee of East Hants may personally benefit from this Agreement, must be identified.

**PERFORMANCE**

- 48 If any part of the Services is found to be deficient or not in accordance with the terms of this Contract or standards specified herein, East Hants may, at its sole discretion:
- a. Require the Consultant to re-perform the Services or make any required corrections to the work, at its own expense, to comply with the terms of the Contract; or
  - b. If the Consultant cannot or will not make such corrections or re-performance, or if the proposed delay in making such corrections or re-performance may compromise health, safety, or the ability of East Hants to perform the business of the Municipality in any way, East Hants may choose either to engage a third party to correct the work or to perform the Services or to perform such corrections or to perform such Services themselves. The cost of such action will be deducted from any monies owing to the Consultant until the entire amount is offset or, where there is not amount to offset, the Consultant must pay any remaining cost back to East Hants in the form of credits of payments already made; or
  - c. Where the deficiency is embedded in the work or Services, East Hants may deduct an amount from any monies owing, or the Contract value, that is equivalent to the difference between the value of the defective work and what was specified in the Contract. Such amount shall correspond to the costs that would reasonably be incurred to correct the deficiency; and
  - d. East Hants may terminate the Contract in accordance with the Termination clauses herein.

**CHANGE**

- 49 If the instructions provided by East Hants are interpreted by the Consultant as increasing or decreasing the scope of the Services, they must inform East Hants prior to acting on these instructions. At minimum, any change in scope that affects the cost of the Services or the Schedule must be approved by East Hants in writing and the Consultant must provide, at minimum:
- a. A description of the change in Services as a result of the instructions;
  - b. The impact, if any, on the Schedule;
  - c. The amount, exclusive of HST, by which the cost will either be increased or decreased; and
  - d. A summary of the fees, expenses and disbursements which make up the amount of increase or decrease.



**RESPONSIBILITY FOR DAMAGE**

- 53 The Consultant shall, at their sole expense, repair and restore to its original condition any material or surface damaged by their operations.
- 54 The Consultant shall be solely and entirely responsible for any loss or damage to their materials, supplies, and equipment.

**TERMINATION**

- 55 East Hants may terminate this Agreement at any time, for any reason, by providing thirty days' written notice to the Consultant. This notice period may be increased by written agreement between the parties. Agreement to extend this notice period does not release the Consultant of their duty to remedy and, under no circumstances will East Hants be responsible for interest or other charges or fees related to the process of remedy.
- 56 Notwithstanding the above, East Hants may terminate this Agreement without notice if the Consultant makes changes to the approved list of Consultant's personnel tasked to complete the Services or to the subconsultant engaged to complete the Services without first obtaining the written permission of East Hants.
- 57 East Hants may terminate this Agreement if the performance of the Services, or portion thereof, is found to be unacceptable or if there is unreasonable delay, other than an excusable delay, in performing the Services. Both East Hants and Consultant agree that each will attempt to remedy the situation and to find a way to make the Services, or portion thereof, acceptable. Under no circumstances may such remedy represent additional cost to East Hants. If no remedy can be found within thirty days of the initial communication to the Consultant by East Hants that the performance of the Services is unacceptable, such notice shall be considered notice to terminate the Agreement.
- 58 East Hants reserves the right to terminate this Agreement if the Consultant fails to act in accordance with their safety protocols or where, in East Hants' sole opinion, there have been an unreasonable number of safety violations, near misses, or orders/corrective actions issued to the Consultant by government officials.
- 59 East Hants reserves the right to terminate this Agreement, without penalty of any kind, if the Consultant is judged to be bankrupt or makes general assignment for the benefits of its creditors.
- 60 Termination of the Agreement by East Hants shall not relieve that Consultant of any obligations or liability it may have to East Hants except as provided for herein.

**RECEIVERSHIP**

- 61 In the event that a Receiver is appointed to manage the affairs of the Consultant, East Hants reserves the right to enter into a contract with another party to perform the Services. Under no circumstances shall East Hants be responsible for any losses suffered by the Consultant.

**ASSIGNMENT**

- 62 The Consultant may not transfer or assign this Agreement without the express prior written permission of East Hants. Assignments or transfers with are attempted to be made to this Agreement without such permission will be void.

**ENTIRE AGREEMENT**

- 63 This Agreement, together with the Exhibits, Contract Documents, and the Schedule, form the complete Agreement between the parties and shall supersede any and all previous communications, oral or written, express or implied, between the parties. This Agreement may only be amended in writing, with such amendment being signed by authorized representatives for each party and clearly indicating this specific Agreement.



## INTERPRETATION

- 64 The headings introducing each paragraph or section are for reference only and shall not affect the interpretation of the Agreement. Any numbers or changes of gender will be interpreted in context.

## NOTIFICATION

- 65 Any notifications of a general nature related to this Agreement may be provided by any written means, including email. It remains the responsibility of the sender to ensure the notification has been received and acknowledged by the intended recipient. Material notifications such as relate to clauses covering termination or changes to personnel shall be delivered by registered mail, courier requiring the signature of the person specified in this clause, or in person where the person specified in this clause may confirm acceptance in writing.

- 66 The Notifications shall be addressed as follows:

**c. By mail, in person, or courier to East Hants:**

**Municipality of East Hants**  
**RFP50781 - Construction & Demolition Cell Detailed Design**  
Box 230, Suite 170  
15 Commerce Court  
Elmsdale, NS B2S 3K5

Attention: Procurement Officer

**d. By email to East Hants:**

Primary: [procurement@easthants.ca](mailto:procurement@easthants.ca)  
Cc: email address of Project Manager

**e. By mail to the Consultant:**

<<Company Name>>  
**RFP50781 - Construction & Demolition Cell Detailed Design**  
<<Address>>

Attention: <<Name>>

**f. By email to Consultant:**

Email: <<email address>>

## GOVERNING LAW

- 67 The laws of Nova Scotia shall govern this Agreement. If any dispute should arise under the terms of this Agreement, the Courts of Nova Scotia shall have exclusive jurisdiction to such dispute.

## ENUREMENT

- 68 This Agreement shall ensure to the benefit of and be binding upon the parties and their lawful heirs, executors, administrators, successors and assigns.

## SEVERABILITY

- 69 If a provision of this Agreement is deemed void or invalid by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.



## DISPUTE RESOLUTION

- 70 In the event of a disagreement regarding any aspect of the Services or any instructions given by East Hants to the Consultant under this Agreement:
- a. The Consultant must promptly deliver written notice of disagreement to East Hants. Such notice must contain the particulars of the disagreement, any changes in time or amounts claimed, and reference to the applicable provisions of this Agreement;
  - b. The Consultant shall continue to deliver the Services in accordance with East Hants' instructions; and
  - c. The Consultant and East Hants shall attempt to resolve the disagreement by negotiation conducted in good faith. The parties shall negotiate firstly at the level of the Consultant's project representative for each party. If such negotiations are unsuccessful, the parties may escalate the negotiations to the level of a principal of the Consultant firm and a Director at East Hants;
  - d. If both parties agree that East Hants gave instructions in error or contrary to this Agreement, East Hants shall compensate the Consultant a reasonable fee for any extra work completed due to such instruction, together with those reasonable disbursements arising from the extra work.
  - e. The parties shall calculate those fees in accordance with this Agreement;
  - f. If the parties cannot settle the disagreement, the Consultant may ask East Hants for a written decision regarding their dispute and, within 14 days of receiving that request, East Hants must deliver such decision to the Consultant, in which they shall set out the particulars of their response and any applicable clauses of this Agreement upon which they base this decision;
  - g. If the Consultant rejects the decision, the parties may refer the matter to arbitration in accordance with *The Commercial Arbitration Act of Nova Scotia*.
  - h. Negotiations conducted under the dispute resolution provisions of this Agreement are without prejudice to either party's other rights under this Agreement or at law.

**WAIVER**

- 66 Any failure by East Hants to enforce or require the strict compliance and performance of any of the terms or conditions of this Agreement shall not constitute a waiver of such terms or conditions and shall not affect or impair such terms or conditions in any way or the right of East Hants to enforce same and/or to avail itself of such remedies as it may have for any breach or breaches of such terms or conditions.

**SIGNED** hereunder by representatives of the parties with authority and capacity to do so:

MUNICIPALITY OF THE DISTRICT OF EAST HANTS	<<CONSULTANT LEGAL NAME>>
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____





## APPENDIX C - REFERENCE PHOTOS (AERIAL)



Ph 1 - Existing C&D Area/Landfill (Cell 1, 2 and 3)



Ph 2 - Existing C&D Area/Landfill (Cell 1, 2 and 3)





**Ph 3 - Approximate Proposed Location for, Cell 4, Expansion.**



**Ph 4 - Approximate Location for, Cell 4, Expansion.**





Ph 5 - Existing Sedimentation Control Ponds

## APPENDIX D - CONSTRUCTION AND DEMOLITION DEBRIS (C&D) CELL ANALYSIS REPORT





MUNICIPALITY OF EAST HANTS

# Construction and Demolition Debris (C&D) Cell Analysis

Final Report





October 29, 2024

Municipality of East Hants  
15 Commerce Court  
Box 230, Suite 170  
Elmsdale, Nova Scotia  
B2S 3K5

Attention: Andrea Trask  
Manager of Solid Waste

***Construction and Demolition Debris (C&D) Landfill Cell Analysis***

Dillon Consulting Limited (Dillon) is pleased to submit this final version of the Construction and Demolition Debris (C&D) Landfill Cell Analysis report to the Municipality of East Hants (MEH). This report details an analysis outlining the remaining airspace and site life of the existing C&D cells, as well a completed preliminary design and Class 'C' opinion of probable costs to construct a new C&D cell at the East Hants Waste Management Center (EHWMC), located in Upper Kennetcook, Nova Scotia.

This report was finalized based on discussions with MEH and confirmation of necessary revisions to our submitted draft report. Thank you for the opportunity to assist with this project. Should you have any comments or questions regarding this document, please contact the undersigned.

Sincerely,

**DILLON CONSULTING LIMITED**

Stuart King, P.Eng.  
Project Manager

RMAA:lmk

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Dillon Consulting  
Limited

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## Executive Summary

Dillon Consulting Limited (Dillon) was engaged by the Municipality of East Hants (MEH) to provide an airspace and site life analysis, and preliminary design services in support of the proposed expansion of the Construction and Demolition Debris (C&D) Landfill at the East Hants Waste Management Centre (Facility). The active waste management facility is located at 1306 Georgefield Road in Upper Kennetcook, Nova Scotia.

In 2005, Dillon was engaged by the Municipality to develop a closure plan for a first-generation landfill and to design the C&D landfill. Dillon delivered a conceptual layout of eight landfill cells and a detailed design for Cell 1. Dillon currently understands that Cell 1 has reached capacity, and waste is being placed in Cells 2 and 3.

Considering this, Dillon has conceptualized horizontal and vertical expansions for the Municipality's C&D landfill in accordance with the updated July 2023 requirements of Nova Scotia Environment and Climate Change (NSECC)'s *Solid Waste Management Facility Guidelines for Construction and Demolition Debris Storage, Transfer, Process and Disposal* (Guidelines).

The proposed horizontal expansion aims to redefine the eight landfill cells introduced in 2005. Dillon understands that waste has been placed in the footprint of Cells 4, 5 and 6 (proposed in 2005). The horizontal expansion accommodates this by redefining the footprint of Cells 1, 2, and 3, in addition to relocating Cells 4 and 5 such that the landfill will consist of five larger cells in contrast to the eight smaller cells from the original conceptual design. The benefits to this approach include:

- Financial Economies of Scale;
- Reduced Operational Complexity;
- Improved Resource Utilization;
- Extended Lifespan;
- Efficient Regulatory Compliance; and
- Reduced Construction Disruption.

The proposed vertical expansion will increase airspace by raising the top of waste by approximately 5 m, to a new top of waste elevation of approximately 160 m. The vertical expansion is limited by a top of waste pile that provides an area approximately 50 m x 50 m of slope relief for operational and (future) cap construction considerations.

The Municipality has provided Dillon with weigh scale records from 2010 to 2024. This information was used to determine the average annual tonnage received by the C&D landfill (approximately 3,300 tonnes/year). A topographic survey of the C&D landfill was completed by Gallant Land Surveyors Incorporated (Gallant Surveyors) in August 2024. This data was used to determine the volume of airspace consumed by the landfilled material (approximately 61,814 m<sup>3</sup>). The above values were used to

determine an average in-situ density of landfilled material (approximately 617 kg/m<sup>3</sup>). Evaluating this information with a model of the proposed horizontal and vertical expansions indicates a remaining site life of approximately 47 years.

To further analyze the site life of the C&D landfill, Dillon has used Statistics Canada *Census of Population* data to evaluate three population growth scenarios. The three population growth scenarios are:

- Low Growth (2% increase per 5-year period);
- Maintained Growth (6% increase per 5-year period); and
- High Growth (10% increase per 5-year period).

The site life of the C&D landfill was calculated to be approximately 44 years with low population growth, 39 years with maintained population growth, and 34 years with high population growth.

Prior to receiving approval to construct or expand a C&D landfill, the required documentation must be prepared in accordance with the updated Guidelines. The typical documentation required to support the application package includes, but is not necessarily limited to, the following:

- Liner System;
- Separation Distances;
- Topographic Survey;
- Archaeological Resource Impact Assessment;
- Natural Habitat and Biophysical Assessment;
- Geotechnical Investigation;
- Hydrogeological and Surface Water Assessment;
- Surface Water Run-Off Control;
- Leachate Management; and
- Detailed Engineering Drawings and Technical Specifications.

Dillon's total Class 'C' estimated opinion of probable costs for the detailed design and construction of Cell 4 is approximately **\$1,400,000**.

## 1.0

# Introduction

Dillon Consulting Limited (Dillon) was engaged by the Municipality of East Hants (MEH) to complete an airspace analysis to determine the remaining airspace and site life, as well as to provide preliminary design services to support the proposed expansion of the Construction and Demolition Debris (C&D) Landfill at the East Hants Waste Management Centre (EHWMC), located at 1306 Georgefield Road in Upper Kennetcook, Nova Scotia.

The EHWMC plays a critical role in managing the region's solid waste, ensuring that solid waste management is conducted in a safe and environmentally responsible manner in accordance with the site's Nova Scotia Environment and Climate Change (NSECC) Approval.

This report provides an analysis of the C&D landfill's airspace and site life capacity, based on the annual tonnage of C&D waste currently being accepted at the EHWMC, while also including projections based on three population growth scenarios: low, high, and maintained. These scenarios help forecast potential future waste generation and allow the MEH to plan and provide adequate landfill capacity.

Following the airspace analysis, the report presents a preliminary design for the proposed Cell 4 expansion at the landfill, developed in accordance with the *Solid Waste Management Facility Guidelines for Construction and Demolition Debris Storage, Transfer, Process and Disposal* (Guidelines) issued by NSECC in July 2024. The conceptual design is supported by preliminary design drawings, a Class 'C' Opinion of Probable Costs, and a description of the necessary work and documentation required for submitting an Application for Approval for the landfill cell construction to NSECC. The proposed expansion of the C&D landfill is essential to accommodate future waste volumes so that the MEH can continue providing efficient and economic waste management services to the region.

The objectives of this project report are to:

- Determine the remaining airspace and expected site life of the existing C&D landfill cells;
- Present a preliminary design for the expansion of the landfill that complies with regulatory requirements; and to
- Provide detailed cost estimates and descriptions of the recommended next steps for the MEH.

By addressing these objectives, this report aims to support the MEH in making informed decisions surrounding the future of the EHWMC and the long-term sustainability of its C&D waste management operations.



## 2.0

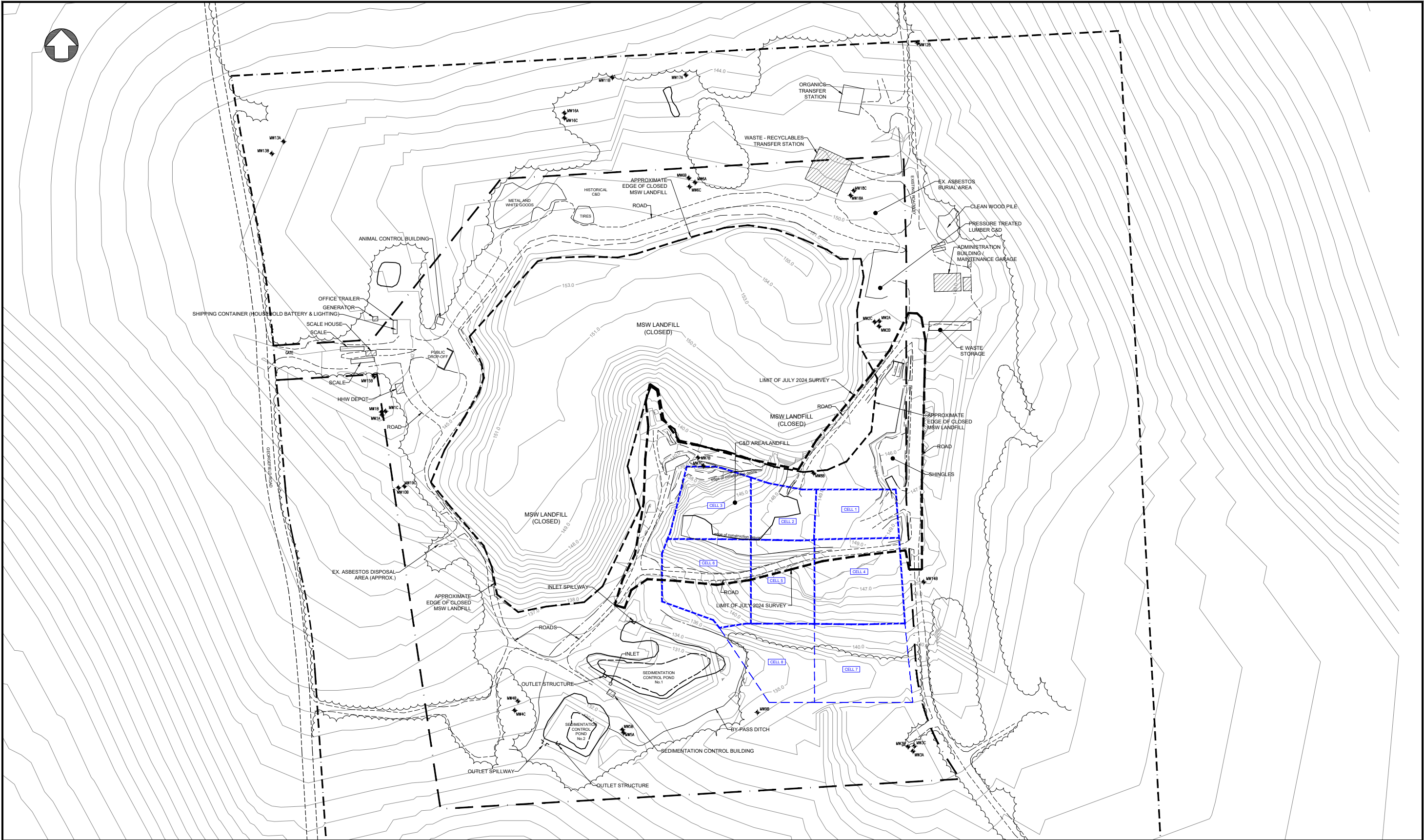
## Background Information

The EHWMC is a comprehensive waste management facility spanning 61.2 hectares. In 2005, the EHWMC revised its operations to comply with the amended *Municipal Solid Waste Landfill Guidelines* issued by NSECC. Consequently, on January 1, 2006, the MEH began transferring MSW to a new second-generation landfill in West Hants, Nova Scotia. The facility currently includes:

- A scale house with incoming and outgoing scales;
- Various site infrastructure including but not limited to roadways, drainage ditches, and overhead power lines;
- An administration and maintenance building;
- A residential household hazardous waste (HHW) depot;
- A drop-off facility for electronic waste (e-waste);
- Metal, tire and clean wood stockpiles;
- A MSW and recyclables transfer station;
- An organics transfer station;
- A closed and capped first-generation municipal solid waste (MSW) landfill;
- An active C&D landfill; and
- Sediment and effluent control ponds.

Dillon was engaged by the MEH in 2005 to design the closure of the first-generation landfill and to design the C&D landfill. Dillon provided a conceptual layout for the landfill for Cells 1 to 8 and completed the detailed design for Cell 1, which finished construction in 2007. Cells 2 and 3 were subsequently constructed in 2008 and 2010, respectively. The existing conditions and layout of the site are shown in **Figure 1** on the following page.

Cell 1 has now reached its capacity, and waste is currently being placed in Cells 2 and 3. The MEH seeks to determine the remaining site life of these active cells and to obtain an opinion of probable costs for expanding the existing C&D landfill through the construction of Cell 4. This expansion must comply with the updated Guidelines issued by NSECC in July 2023, which notably include enhanced design requirements for the soil liner system and additional specifications for leachate collection and management.



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## 3.0

## Annual C&D Landfill Tonnages

Weigh scale records were provided by the MEH from 2010 to 2024 (the time of this assessment). The provided records indicated that a total of 38,135 tonnes of C&D waste has been landfilled in the C&D landfill footprint. The total annual tonnages of C&D waste received and landfilled from 2010 to 2024 are presented below in **Table 1**.

**Table 1 – Annual Tonnages of C&D Waste (2010-2024)**

Year	C&D Waste (tonnes)	Average
2010-2011	2,642	
2011-2012	2,622	
2012-2013	2,344	
2013-2014	2,076	
2014-2015	2,094	
2015-2016	3,245	
2016-2017	2,132	
2017-2018	1,969	
2018-2019	2,062	
2019-2020	2,173	3,215
2020-2021	2,341	
2021-2022	4,694	
2022-2023	3,167	
2023-2024	3,698	
2024-2025 <sup>1</sup>	876	
<b>Total</b>	<b>38,135</b>	

<sup>1</sup>The 2024-2025 tonnages are only inclusive of April 2024 to June 2024.

For this analysis, Dillon assumed that the average annual tonnage of C&D waste received would be the average of the annual tonnages from the last five fiscal years with complete records (2019-2020 to 2023-2024). This was calculated to be an average annual tonnage of 3,215 tonnes per year. To be conservative with this assumption, this value was rounded up to approximately **3,300 tonnes per year**.

## 4.0

## C&D Landfill Airspace and Site Life Analysis

The figures referenced in this section (**Figure 2** to **Figure 6**) are meant to be read in conjunction with this text and are provided on the succeeding pages for reference. The C&D landfill airspace and site life analysis is based on the following critical assumptions:

- **Final Design Top of Waste Contours:** The final design top of waste contours are based on the original approved Cell 1 record drawings completed by Dillon in 2007. These top of waste elevation contours are illustrated in **Figure 2**;
- **Average C&D Waste Tonnage:** An average of 3,300 tonnes per year of C&D waste is assumed to be placed and compacted, with waste composition and in-situ compaction density consistent with the existing site conditions; and
- **Infilled Shingles:** The shingles that were used as infill between Cell 1 and the closed MSW landfill do not need to be relocated (NSE approved placement of shingles outside of disposal cell in August 2011).

In August 2024, Gallant Land Surveyors Incorporated (Gallant Surveyors) conducted a topographic survey of the C&D landfill. The topographic survey data was analyzed in conjunction with the assumed top of waste and top of liner boundary conditions mentioned above. The analysis determined the following:

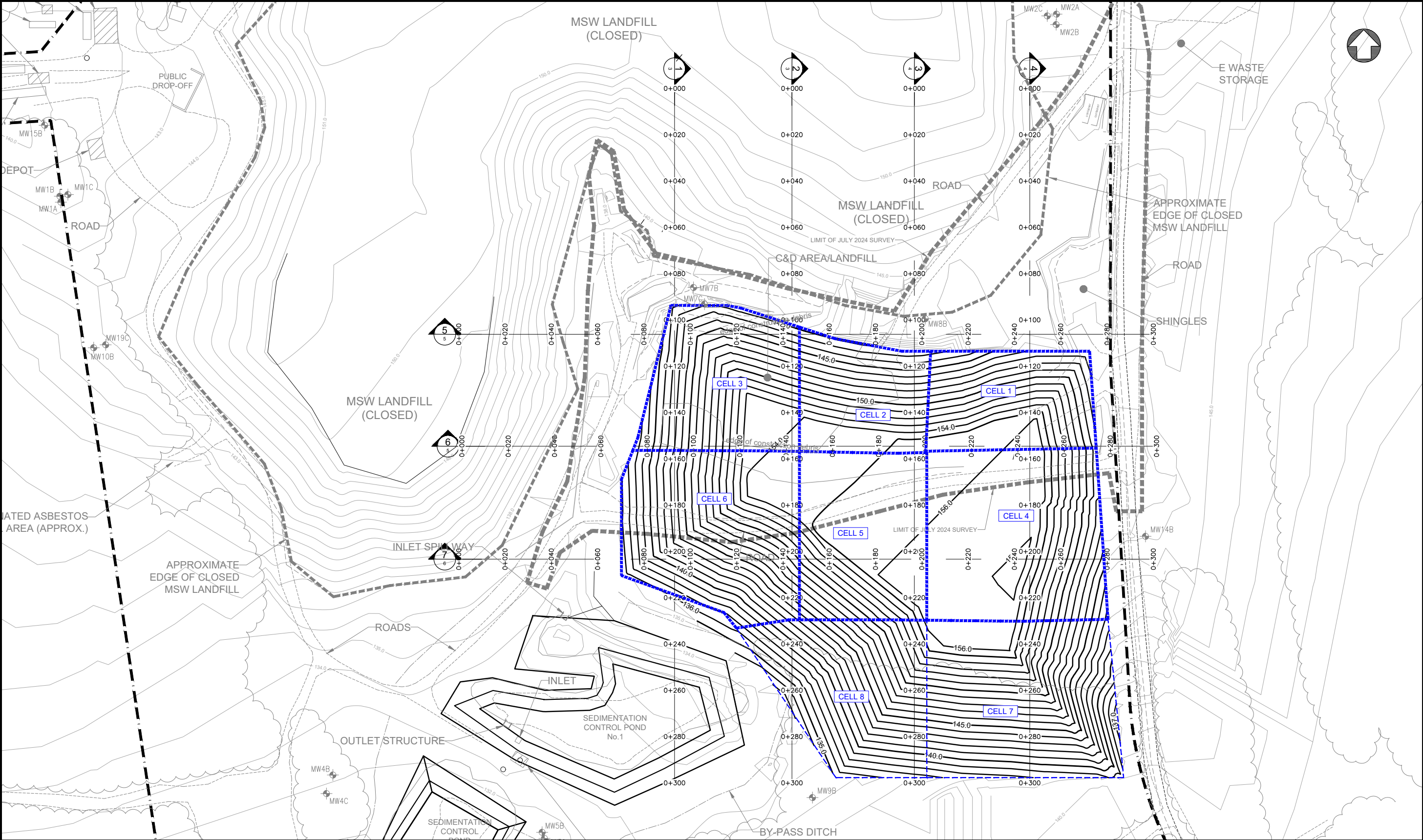
- **Total Volume of Airspace Consumed:** The total volume of airspace consumed to date by C&D waste in Cells 1, 2 and 3 is approximately 61,814 m<sup>3</sup>, with a density of 617 kg/m<sup>3</sup> (38,135 tonnes of waste placed divided by 61,814 m<sup>3</sup> of airspace consumed); and
- **Remaining Airspace:** There is approximately 17,667 m<sup>3</sup> of remaining airspace collectively in Cells 1, 2 and 3 based on the cell design volumes. However, there is currently an additional 16,197 m<sup>3</sup> of waste that has been placed beyond the footprint these cells (primarily within the conceptual layout of Cells 4, 5 and 6. When accounting for this excess volume, the remaining airspace in Cells 1, 2 and 3 is approximately 1,470 m<sup>3</sup>. Although theoretically, this waste should be relocated to fit within the footprint of Cells 1, 2 and 3, Dillon understands that this is impractical. Therefore, this volume is accounted for in the preliminary design of the landfill expansion Cell 4 discussed in **Section 5.1**.

The volume of waste consumed, and the remaining airspace are illustrated in **Figure 3** to **Figure 6**.

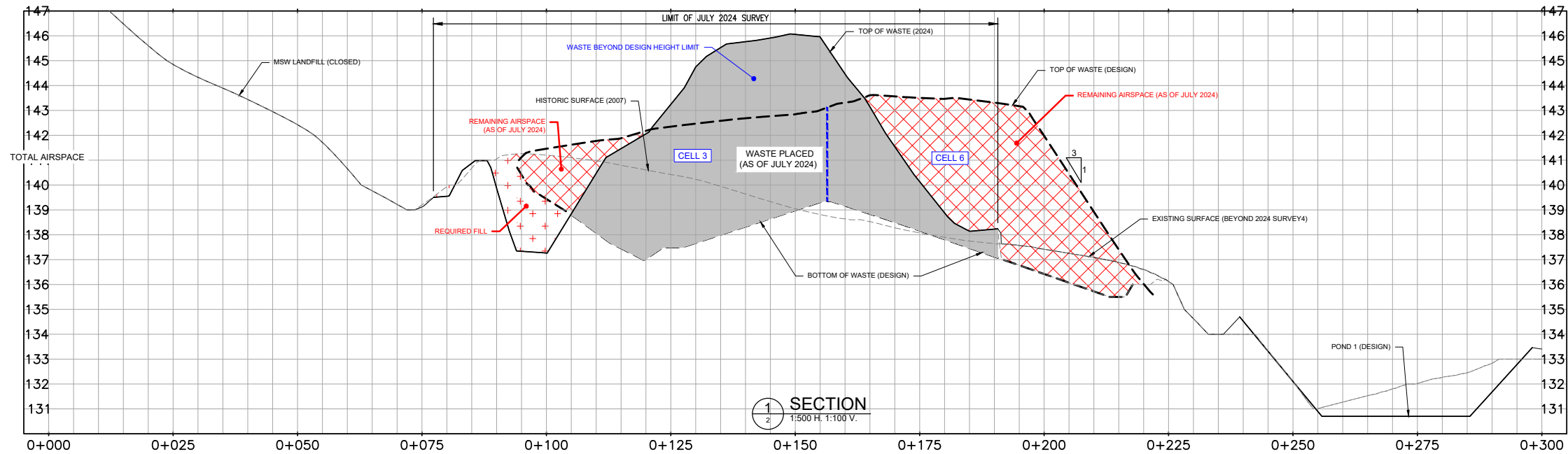
Assuming a constant waste density of 617 kg/m<sup>3</sup>, the annual waste placement of 3,300 tonnes per year correlates to an annual airspace consumption of approximately 5,400 m<sup>3</sup> per year. Based on this consumption rate, the estimated remaining site life of the C&D landfill is:

- **With Relocating Waste Beyond the Footprint of Cells 1, 2 and 3:** Approximately 3 months; and
- **Without Relocating Waste Beyond the Footprint of Cells 1, 2 and 3:** Approximately 3.5 years.



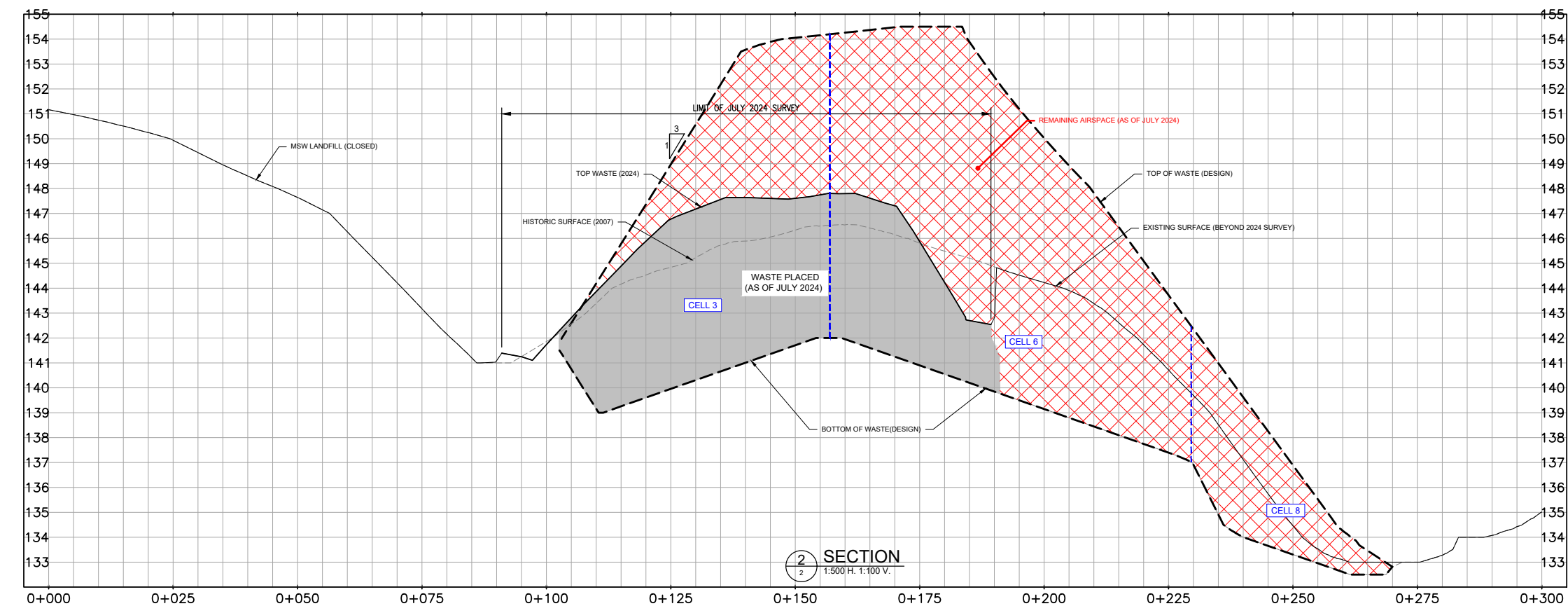


<div>Conditions of Use</div> <div>Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.</div> <div>Do not scale dimensions from drawing.</div> <div>Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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CELL	TOTAL DESIGN CAPACITY (m³)	VOLUME PLACED INSIDE CELL (m³) *	VOLUME PLACED OUTSIDE CELL (m³) *	AIRSPACE REMAINING INSIDE CELLS (m³) *
1	17,135	10,630		6,505
2	19,320	15,527		3,793
3	28,829	19,460	1000	8,369
4	55,243	2,408		52,835
5	51,369	5,582		45,787
6	35,747	8,207		26,699
7	48,986	0		48,986
8	32,024	0		32,024
TOTAL	288,653	61,814		225,998

SHINGLES  
Volume: \* 29,670 m³  
\* - VOLUMES AS OF JULY 2024



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.  
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Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.



DESIGN	R.A.	REVIEWED BY	R.A.
DRAWN	N.B.	CHECKED BY	S.T.K.
DATE	OCTOBER 2024	SCALE	AS NOTED
2	FINAL	2024/10/29	R.A.
1	DRAFT	2024/10/24	R.A.
No.	ISSUED FOR	DATE	BY

MUNICIPALITY OF EAST HANTS  
CONSTRUCTION & DEMOLITION CELL ANALYSIS

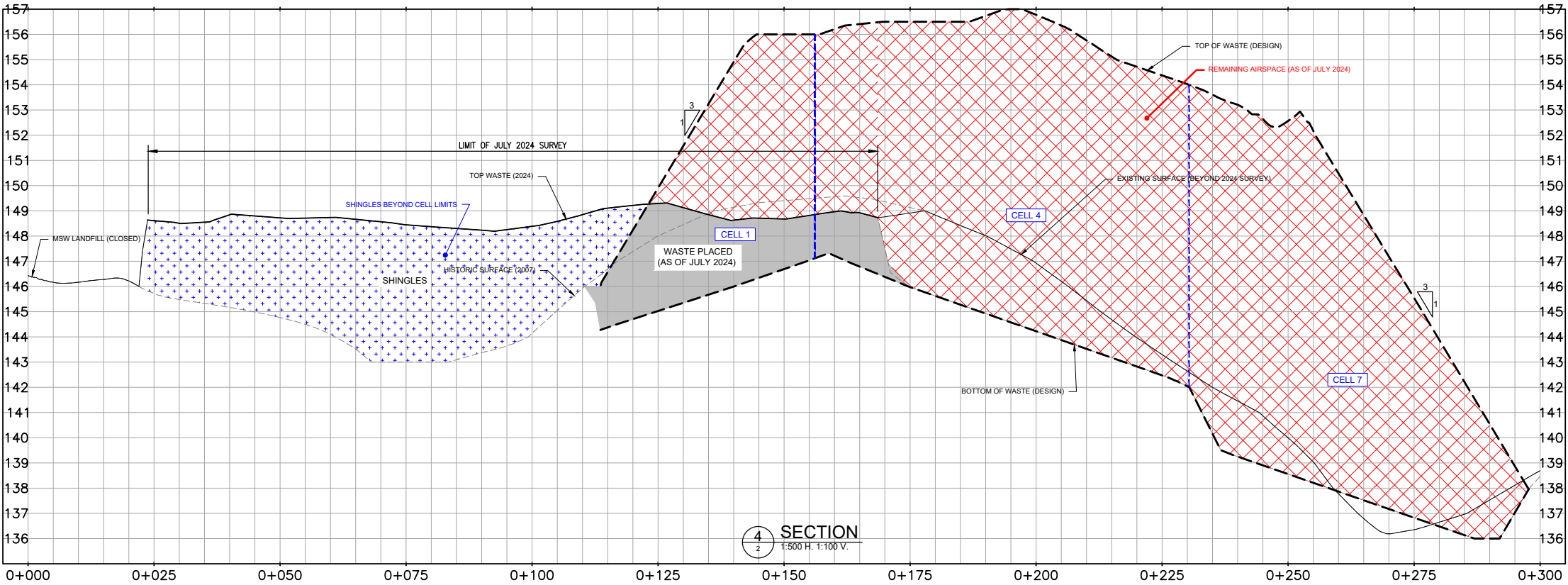
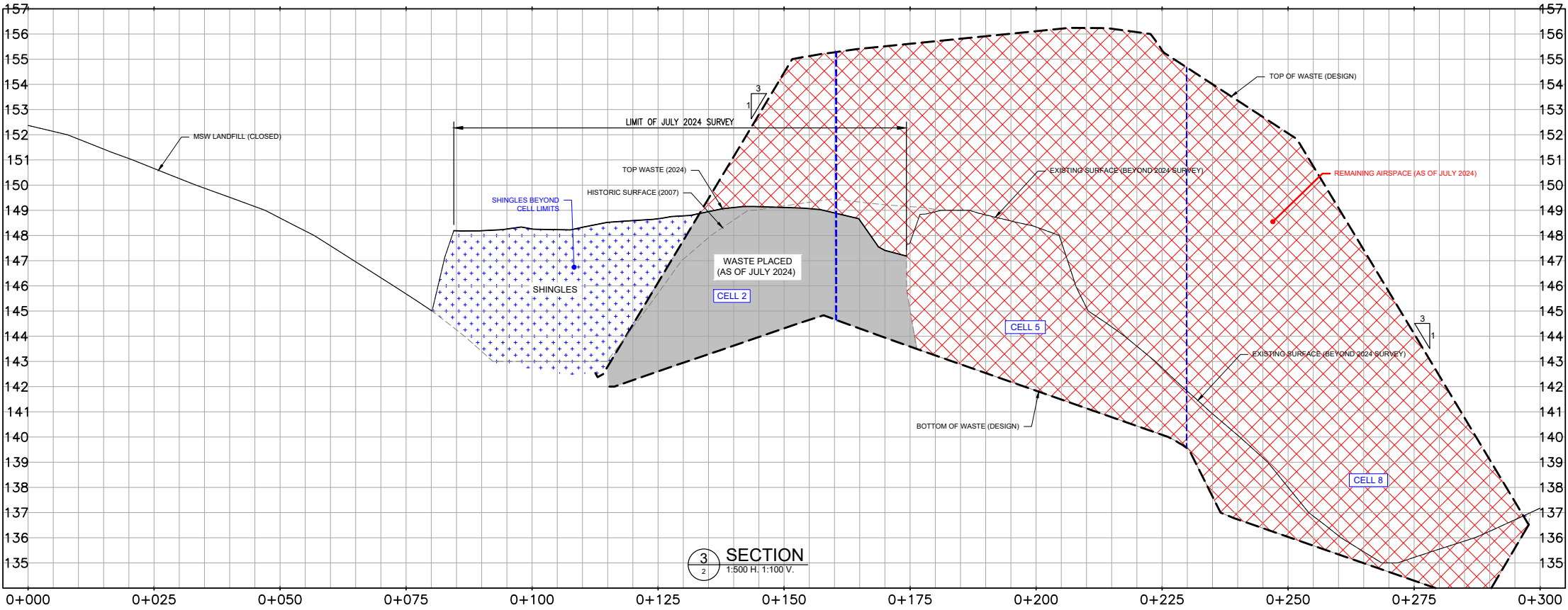
PROJECT NO.  
24-8663

SECTIONS 1 AND 2

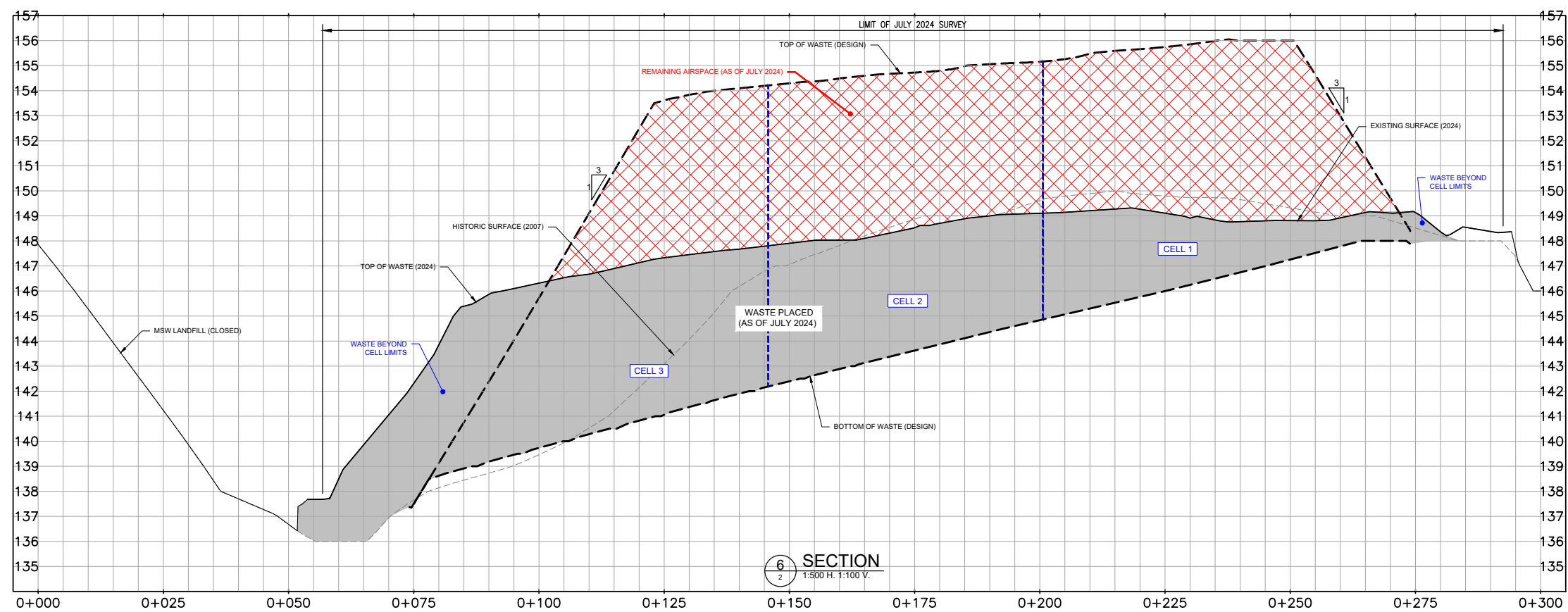
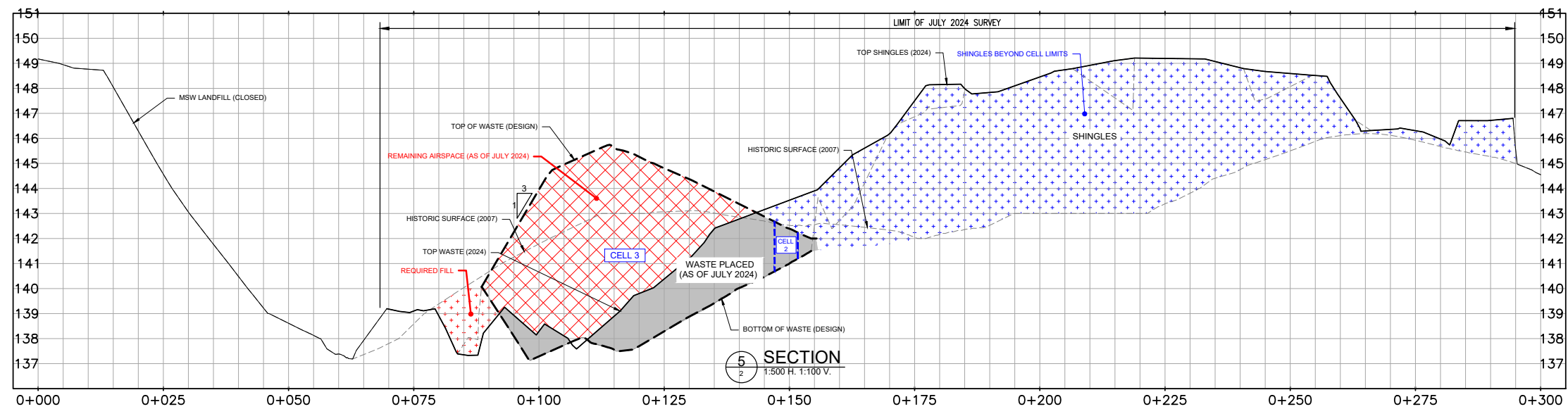
SHEET NO.

3





<b>Conditions of Use</b>  Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.  Do not scale dimensions from drawing.  Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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## Conditions of Use

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							DESIGN	REVIEWED BY
							R.A.	R.A.
							DRAWN	CHECKED BY
							N.B.	S.T.K.
							DATE	
							OCTOBER 2024	
2	FINAL				2024/10/29	R.A.		
1	DRAFT				2024/10/24	R.A.		
No.	ISSUED FOR				DATE	BY	AS NOTED	

**MUNICIPALITY OF EAST HANTS  
CONSTRUCTION & DEMOLITION CELL ANALYSIS**

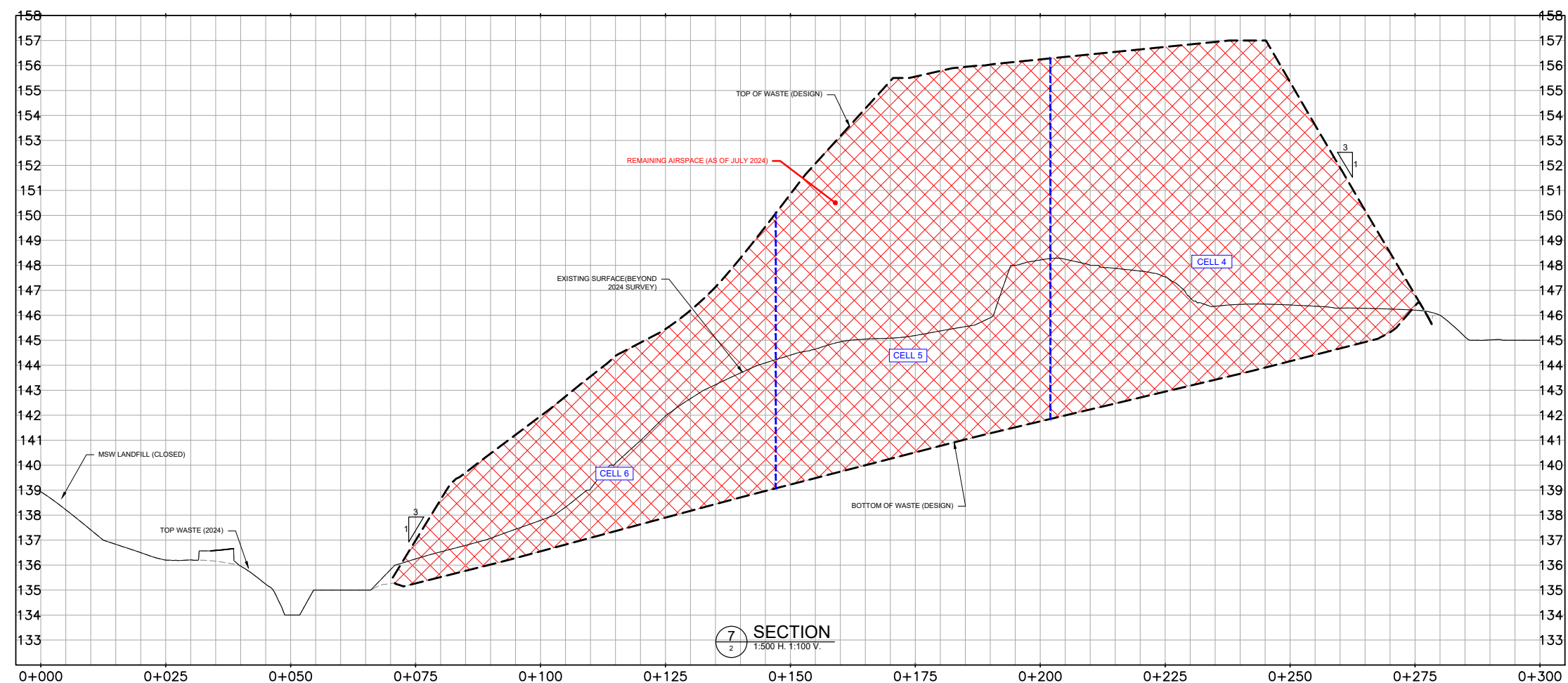
PROJECT NO.

**24-8663**

SHEET NO.

## SECTIONS 5 AND 6

5



Conditions of Use

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				DESIGN	REVIEWED BY
				R.A.	R.A.
				DRAWN	CHECKED BY
				N.B.	S.T.K.
				DATE	
				OCTOBER 2024	
				SCALE	
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No.	ISSUED FOR	DATE	BY	AS NOTED	

MUNICIPALITY OF EAST HANTS  
CONSTRUCTION & DEMOLITION CELL ANALYSIS

PROJECT NO.  
24-8663

SECTION 7

SHEET NO.

6

## 5.0

## Cell 4 Preliminary Design Overview

This section provides an overview of the design considerations and strategies for the expansion of the C&D landfill. The conceptual design encompasses features and components to manage surface water runoff, collect generated leachate, and comply with NSECC's Guidelines.

## 5.1

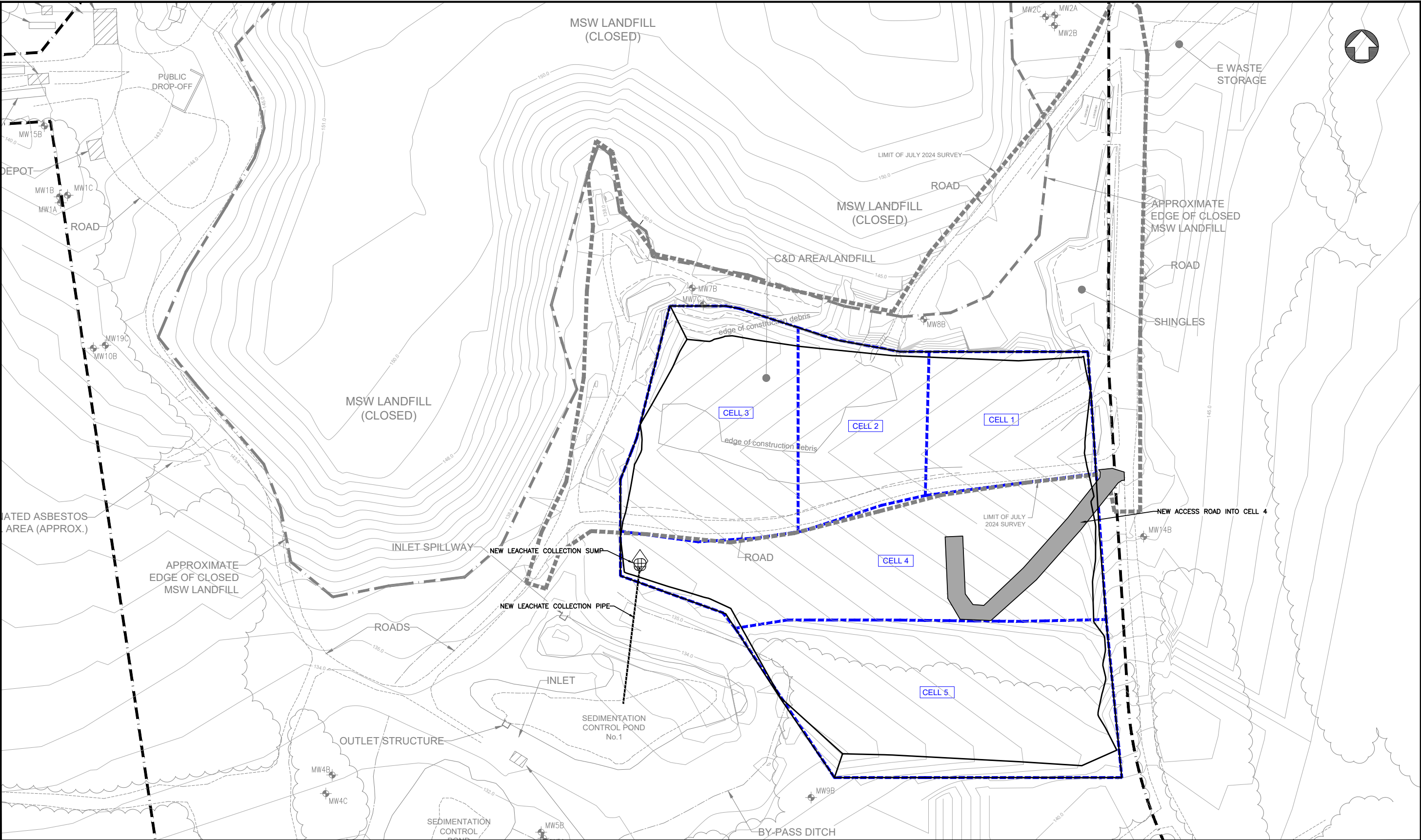
### Horizontal Expansion

The conceptual design of the proposed horizontal expansion consists of an additional two cells, Cell 4 and Cell 5, along with the required infrastructure (cell access road and leachate collection), as illustrated in **Figure 7** on the following page. This layout differs from Dillon's original 2005 design, which comprised Cells 1 to 8. The original design was altered because waste has already been placed in the footprint of the previously proposed Cells 4, 5 and 6. The proposed conceptual design of building fewer, larger cells versus multiple smaller cells is based on the following considerations:

- **Financial Economies of Scale** – Larger landfill cells can benefit from economies of scale with respect to design and construction costs. The cost per unit of waste disposed of can be lower because the fixed costs (such as design, permitting, and construction) are spread over a smaller amount of projects and a larger volume of waste;
- **Reduced Operational Complexity** – Managing larger cells can be simpler than managing multiple smaller cells. This can lead to more efficient operations, reduced administrative overhead, and fewer potential logistical challenges;
- **Improved Resource Utilization** – Larger cells can make more efficient use of resources such as liners and leachate collection systems. These systems can be more effectively designed and implemented on a larger scale with less future connections and re-work needed;
- **Extended Lifespan** – Larger cells could have a longer operational lifespan before it reaches capacity, reducing the frequency of constructing new cells. This can lead to long-term planning and stability in landfill operations;
- **Regulatory Compliance** – Larger cells can be designed to meet regulatory requirements more efficiently. For example, the design and implementation of environmental protection measures can be more robust and comprehensive during the construction of a larger cell; and
- **Reduced Construction Disruption** – Building larger cells can minimize the disruption caused by construction activities. Multiple smaller cells would require multiple construction efforts, which can be disruptive to ongoing landfill operations.

The proposed horizontal cell construction aims to optimize the landfill's operational efficiency, cost-effectiveness, and environmental compliance. Acknowledging the cash flow implications of larger construction projects, Dillon's preliminary design layout includes two larger cells in an effort to balance the perceived benefits with the trade-off of larger capital projects.





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## 5.2 Vertical Expansion

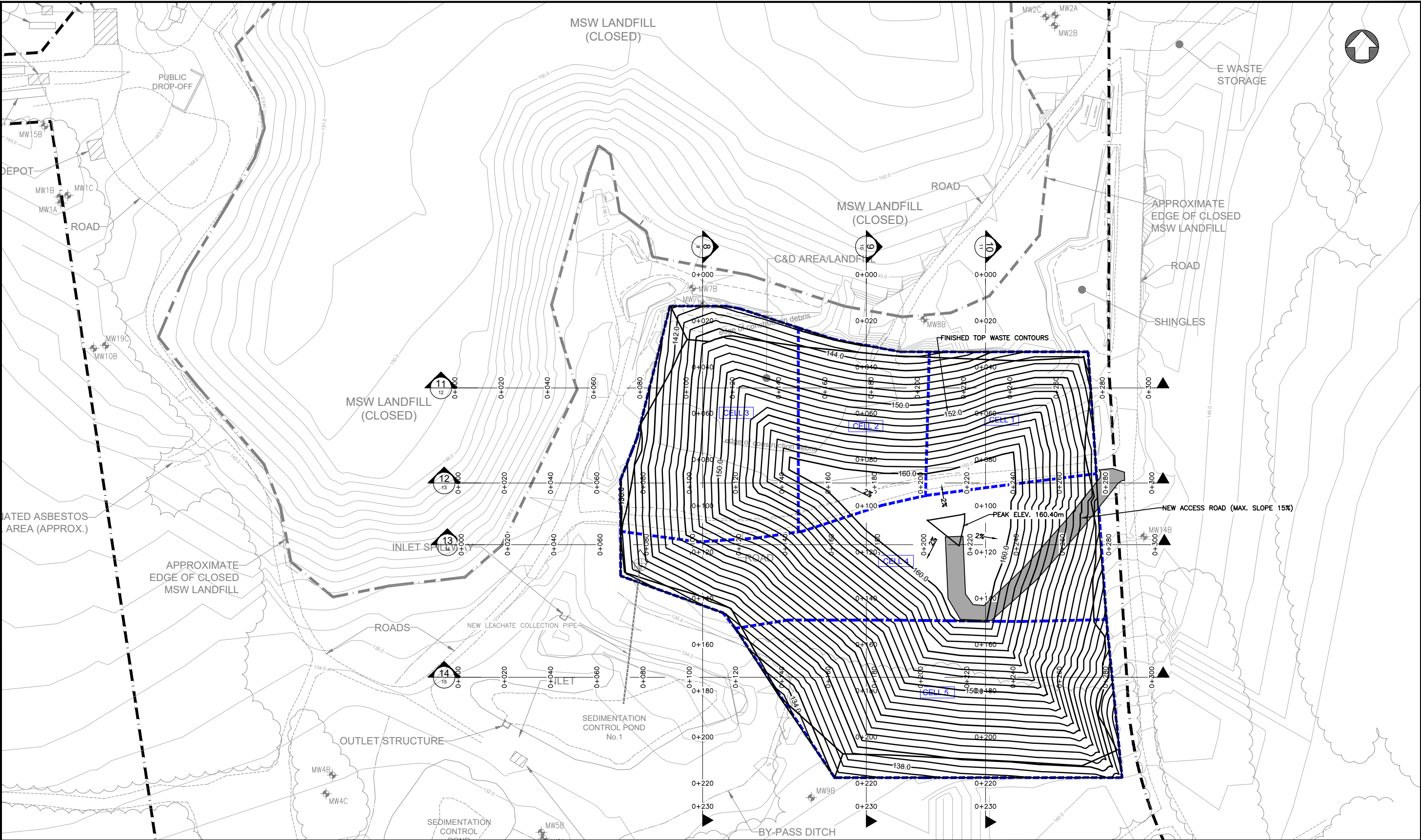
In addition to the horizontal expansion, Dillon has also assessed the viability of increasing the final design elevation for the landfill. The figures referenced in this section (**Figure 8** to **Figure 15**) are meant to be read in conjunction with this text and are provided on the succeeding pages for reference.

The additional key considerations for vertical expansion include:

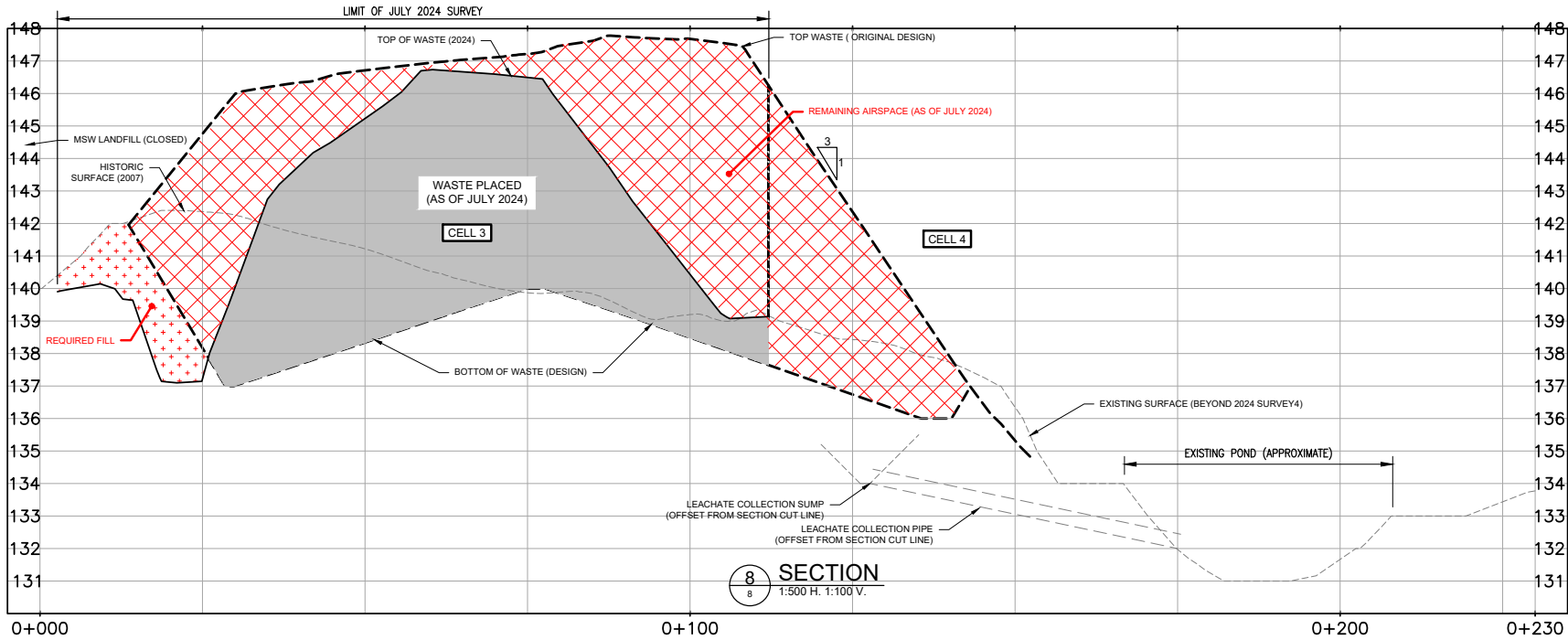
- **Structural Integrity:** Stability of the landfill is vital. Engineering measures to maintain the integrity of the landfill as the height increases need to be incorporated into the design;
- **Slope Stability:** Proper slope design is crucial to prevent landslides and ensure safe operations;
- **Leachate Management:** As the landfill height increases, the leachate collection system must also be more robust to handle the additional loading; and
- **Surface Water Management:** Proper surface water management is essential to prevent erosion, sediment transport, and to manage surface water runoff. Measures such as berms, drainage channels, and retention ponds to control surface water need to be incorporated into the design.

The new design top of waste for a potential vertical expansion of the C&D landfill is illustrated in **Figure 8**. The design includes raising the top of waste by approximately 5 m, resulting in a new top of waste elevation of approximately 160 m. The proposed new top of waste assumes 3H:1V (horizontal:vertical) side slopes and is limited by a top of waste pile that provides an area of approximately 50 m by 50 m of slope relief for operational and (future) cap construction considerations. The additional airspace gained from the vertical expansion is illustrated in **Figure 9** to **Figure 15**.





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NEW DESIGN TOP OF WASTE								SHEET NO. 8						



CELL	TOTAL DESIGN CAPACITY (EXISTING) m <sup>3</sup>	VOLUME PLACED INSIDE CELLS (EXISTING) m <sup>3</sup> *	VOLUME PLACED OUTSIDE CELLS (EXISTING) m <sup>3</sup> *	AIRSPACE REMAINING INSIDE CELLS (EXISTING) m <sup>3</sup> *	AIRSPACE EXPANSION INSIDE CELLS (PROPOSED) m <sup>3</sup> *
1	26,652	13,203		13,449	3,345
2	37,077	20,983		16,094	6,673
3	52,489	27,628	1000	23,861	2,090
4	91,067	0		91,067	11,670
5	81,368	0		81,368	592
TOTAL	288,653	61,814		225,839	24,370
SHINGLES				TOTAL	250,209 (AIRSPACE REMAINING)

Volume: \* 29,670 m<sup>3</sup>  
\* - VOLUMES AS OF JULY 2024

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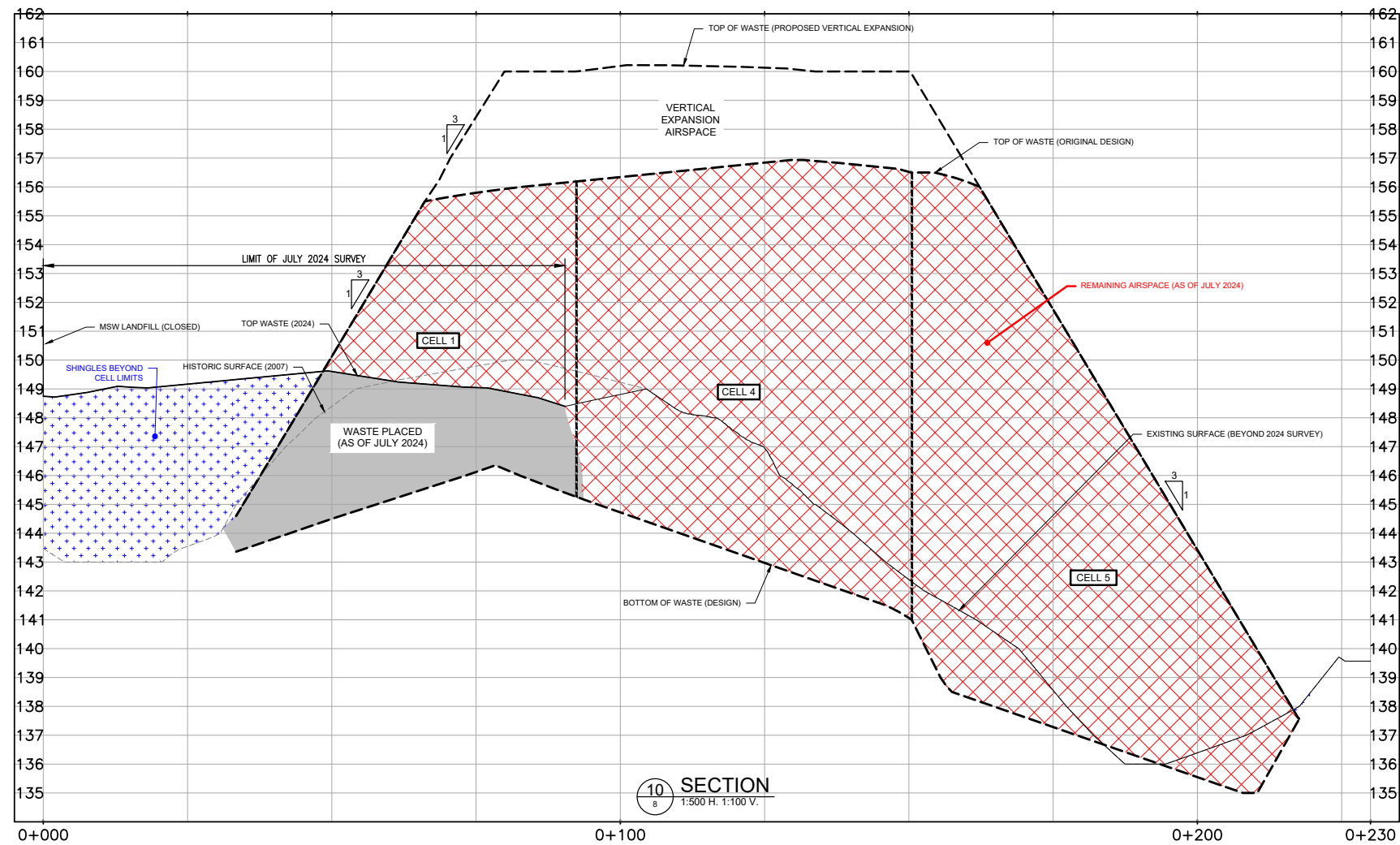
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CONSTRUCTION & DEMOLITION CELL ANALYSIS

PROJECT NO.  
24-8663

SECTION 8

SHEET NO.  
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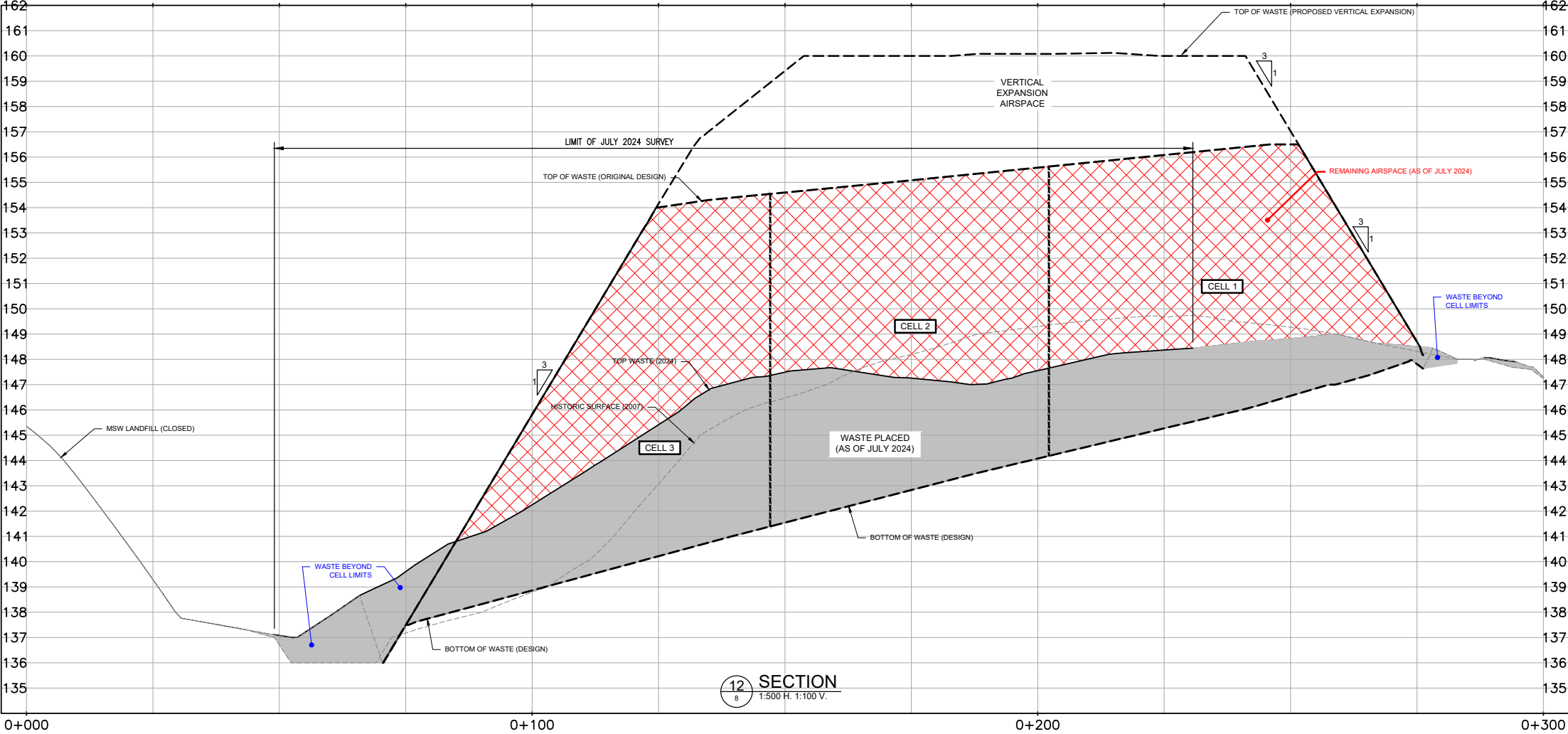


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## 5.3

## Estimated Site Life of Proposed Horizontal and Vertical Expansion

Using the same assumptions mentioned in **Section 4.0** – a constant waste density of 617 kg/m<sup>3</sup> and an annual waste placement rate of 3,300 tonnes per year – it is estimated that the remaining site life of the C&D landfill following both the proposed horizontal and vertical expansion is approximately 47 years. More specifically, the site life of Cells 1,2, and 3 following the expansion is approximately 12 years. Once developed, Cell 4 will have an approximate site life of 19 years and Cell 5 will have an approximate site life of 15 years.

This estimate considers the additional airspace gained from both the horizontal expansion (Cells 4 and 5) and the vertical expansion, which raises the top of waste by approximately 5 m. The combined effect of these expansions significantly extends the operational lifespan of the landfill so that it can continue to serve the C&D waste management needs of the MEH for several decades.

The extended site life offers several advantages:

- **Long-Term Planning:** With an estimated site life of 47 years, the MEH can engage in long-term planning and resource allocation, ensuring that waste management strategies are sustainable and cost-effective;
- **Reduced Frequency of New Cell Construction:** The extended lifespan reduces the need for frequent construction of new cells, minimizing disruption to landfill operations and reducing construction-related costs;
- **Enhanced Operational Stability:** A longer site life provides operational stability, allowing for more consistent and predictable waste management practices; and
- **Environmental Benefits:** By maximizing the use of existing landfill space, the need for additional land acquisition and disturbance is minimized, preserving surrounding ecosystems and reducing the environmental footprint of the landfill.

It is important to note that this estimated site life is based on current waste generation rates and density assumptions. Any significant changes in waste generation patterns, composition, or compaction practices could impact the actual site life. Regular monitoring and periodic reassessments will be essential to ensure that the landfill continues to operate efficiently and in compliance with regulatory requirements.

Population growth factors significantly influence the lifespan of a landfill by affecting the volume of waste generated and subsequently disposed of at the facility. The following section incorporates the potential impact of population growth factors into the estimated site life of the landfill.

## 5.4 Population Growth Scenarios

Three population growth scenarios were used to provide a more comprehensive analysis of the potential variability in the estimated site life of the C&D landfill. Statistics Canada's *Census of Population* data from the three most recent censuses (2011, 2026, and 2021) indicated that the MEH's population grew 6.0% over a 5-year period, or a 1.2% population increase annually. Low and high population growth percentages were determined based on an assumed 4% decrease or increase from the maintained census population growth rate of 6%, respectively, as presented below in **Table 2**.

**Table 2 – Population Growth Scenarios**

Population Growth Scenario	Population Increase (5-Year Period)	Population Increase (Annual)
Low	2%	0.4%
Maintained	6%	1.2%
High	10%	2%

Using each of the annual population increases, along with the assumption that the amount of C&D waste generated per person remains constant (approximately 142 kg/person), the population and annual tonnages of C&D waste were projected. A snapshot of this data (averaged for each scenario over a 25-year forecast window) is presented below in **Table 3**.

**Table 3 – Landfill Site Life based on Population Growth Scenarios**

Population Growth Scenario	Average Population	Average Annual Tonnage of C&D Waste	Cells 1,2,3 Site Life (Years)	Cell 4 Site Life (Years)	Cell 5 Site Life (Years)	Total Site Life (Years)
Low	24,414	3,477	11	18	15	44
Maintained	27,826	3,963	10	16	13	39
High	31,801	4,530	9	14	11	34

These projections illustrate how different population growth rates can influence the landfill's site life:

- Low Growth Scenario:** With a low population growth rate of 0.4% annually, the average annual tonnage of C&D waste is projected to be 3,477 tonnes. Under this scenario, the estimated site life of the landfill is approximately 44 years. More specifically, Cells 1,2, and 3 have an approximate site life of 11 years, Cell 4 has an approximate site life of 18 years, and Cell 5 has an approximate site life of 15 years;

- **Maintained Growth Scenario:** With a maintained population growth rate of 1.2% annually, the average annual tonnage of C&D waste is projected to be 3,963 tonnes. Under this scenario, the estimated site life of the landfill is approximately 39 years. More specifically, Cells 1,2, and 3 have an approximate site life of 10 years, Cell 4 has an approximate site life of 16 years, and Cell 5 has an approximate site life of 13 years; and
- **High Growth Scenario:** With a high population growth rate of 2% annually, the average annual tonnage of C&D waste is projected to be 4,530 tonnes. Under this scenario, the estimated site life of the landfill is approximately 34 years. More specifically, Cells 1,2, and 3 have an approximate site life of 9 years, Cell 4 has an approximate site life of 14 years, and Cell 5 has an approximate site life of 11 years.

These scenarios provide valuable insights into how population growth can impact the landfill's capacity and operational planning. Regular monitoring and reassessments will be essential to ensure that the landfill continues to meet the waste management needs of the MEH while also adhering to regulatory requirements and environmental standards as they (may) change in the future.

## 6.0 Approval Requirements

Prior to receiving NSECC Approval to construct or expand a C&D landfill, the required documentation must be prepared and submitted to NSECC in accordance with the updated Guidelines. The typical documentation required to support the application package includes, but is not necessarily limited to, the following:

- **Liner System:** Detailed design and specifications of the landfill liner system to provide adequate containment of leachate and protection of groundwater;
- **Separation Distances:** Documentation demonstrating compliance with the required separation distances from sensitive receptors, such as water bodies, residential areas, and other environmentally sensitive areas;
- **Topographic Survey:** A comprehensive topographic survey of the site to provide accurate elevation data and inform the design of the landfill;
- **Geotechnical Investigation:** A thorough geotechnical investigation to assess soil and subsurface conditions, ensuring the structural stability of the landfill;
- **Surface Water Run-Off Control:** Design and specifications for surface water run-off control measures to reduce erosion and manage stormwater;
- **Leachate Management:** Detailed plans for the collection and management of leachate to prevent potential contamination of soil and water resources; and
- **Detailed Engineering Drawings and Technical Specifications:** Comprehensive engineering drawings and technical specifications for the construction and operation of the landfill.

The following are also typically necessary, however NSECC may make exceptions, provided these documents were previously provided to the Department.

- **Archaeological Resource Impact Assessment:** An assessment to identify and mitigate any potential impacts on archaeological resources within the proposed expansion area;
- **Natural Habitat and Biophysical Assessment:** An evaluation of the natural habitat and biophysical conditions of the site to assess potential environmental impacts and propose mitigation measures; and
- **Hydrogeological and Surface Water Assessment:** An assessment of groundwater and surface water conditions to evaluate potential impacts and design appropriate management measures.

Dillon has assumed these three studies are not required for construction of Cell 4 (within the previously approved C&D landfill footprint). The applicable requirements noted above are further described in the following subsections for reference. Public/community/Indigenous engagement or other items to address the social implications of expanding a landfill may also be required by NSECC.



## 6.1 Liner System

The Guidelines outlined by NSECC specify the minimum requirements for a soil liner system. As such, the liner system would consist of 1 m of a low permeability soil with a hydraulic conductivity  $\leq 1.0 \times 10^{-6}$  cm/sec or an equivalent. The liner would be graded to allow for leachate generated from the landfill to be collected and directed towards a common discharge location. The bottom of the soil liner must also be a minimum of 1 m above the maximum seasonal high elevation of the groundwater table. Previously, the C&D waste material itself needed to be 1 m above the maximum seasonal high elevation of the groundwater table. Water table elevations must undergo hydrogeological monitoring for a one-year period, followed by review and acceptance by NSECC prior to construction. Dillon has assumed this information is already being gathered by the MEH through the site's current environmental monitoring program. As such, no additional costs for hydrogeological monitoring are included in the Opinion of Probable Costs provided in **Section 7.0**.

## 6.2 Separation Distances

Applications seeking Approval to construct or expand a C&D facility must include a letter confirming compliance with all relevant zoning regulations, planning restrictions and other applicable by-laws. Expansions of active sites must also meet the separation distances outlined in **Table 1** below.

**Table 4 – Separation Distances**

Feature	Horizontal Distance (m)
Watercourse (top of bank), wetland (boundary) or marine water body	30
Property line of C&D Facility (PID(s))	30
Municipal drinking water supply	See below
Foundation of any off-site structure used for commercial, industrial, or residential purpose	90
Off-site dug or drilled drinking water supply well (other than municipal drinking water supply)	90

Minimum separation distances for municipal drinking water supplies include being outside of the municipal drinking water supply's Source Water Protection Area and the boundary of any provincially designated Protected Water Area. These separation distances could be illustrated on a sheet within the detailed engineering drawings.

### 6.3 Topographic Survey

A survey of the proposed development area and access road would be required. The survey would include a topographic survey of the proposed expansion area (approximately 2 ha), identifying general undisturbed topography, roads, ditches, culverts, water features, treelines and general site features. Based on the survey, an updated base plan of the site would be developed. A comprehensive survey would need to be completed prior to (or as part of) progression of the detailed engineered drawings.

### 6.4 Geotechnical Investigation

A geotechnical investigation must be completed to support the proposed development at the subject property. It is anticipated that the geotechnical investigation would include the following:

- Initial site visit;
- Geotechnical investigation program and laboratory analysis; and
- Reporting.

An initial site visit would be undertaken to confirm the current site conditions and the approach for the proposed geotechnical investigation. It is anticipated that the geotechnical investigation would include test pitting and geotechnical personnel logging the conditions encountered, as well as collecting representative samples of the various soil layers. Geotechnical laboratory testing would be carried out on select samples to assess and confirm the engineering properties of the soils.

Based on the results of the investigation, a geotechnical report would be issued detailing the findings with respect to the subsurface conditions and providing recommendations regarding the landfill development.

### 6.5 Surface Water Run-Off Control

Surface water run-off control is crucial for environmental protection, regulatory compliance, and operational efficiency. For the expansion of Cells 4 and 5, it is assumed that the existing sedimentation ponds on site have the capacity to accommodate the additional surface water run-off, as the footprint of Cells 4 and 5 (formerly Cells 4, 5, 6, 7, and 8) were included in the original design completed in 2005.

If an additional sedimentation pond or expansion to the existing sedimentation pond would be required, it would be designed based on a 1:25 year 24-hour storm, using intensity duration curves from the area of the Municipality of East Hants. The amount and rate of runoff would be estimated using the Rational Method in sizing the ponds. The equation for the Rational Method is as follows:

$$Q = C \cdot i \cdot A$$

Where  $Q$  is the runoff rate ( $\text{m}^3/\text{sec}$ ),  $C$  is the runoff coefficient, a factor reflecting watershed characteristics including topography, soil type, vegetation and land use, it is the precipitation intensity ( $\text{mm}/\text{hr}$ ), and  $A$  is the area of the watershed area ( $\text{ha}$ ). Surface water control features would be detailed in the engineering drawings and technical specifications.

## 6.6 Leachate Management

Leachate is defined as liquid that has contacted solid waste, generating primarily from precipitation, surface water, or groundwater. Leachate percolates through the landfill and infiltrates through the waste. Leachate must be managed due to potential environmental, health regulatory implications.

A desktop area development plan would allow for the estimation of annual leachate generation quantities for the proposed expansion area. This would include active cells, cells with temporary cover (soil or synthetic) and closed cells (at final elevation and capped).

Based on these estimates, leachate management infrastructure would be assessed for capacity/size to accommodate the estimated volumes. It is anticipated that the following infrastructure will be considered:

- Leachate collection gravity piping system, discharging to the existing sedimentation pond.

The quality of the facility's leachate must also be established to determine the type of leachate treatment required. Potential treatment options could potentially include on-site treatment or pumping and transfer of the leachate off-site for treatment. Currently, based on the recent experience of Dillon on related assignments, NSECC is defining leachate treatment/discharge obligations on a site-specific basis, with the potential for significant capital and operating cost implications depending on the determination of the applicable regional office. The leachate collection system would be detailed in the engineering drawings and specifications. Analytical data would be required before determination of the treatment requirements (if any). For the purposes of this assessment, Dillon has assumed that the existing sedimentation pond is sufficient treatment for collected leachate from Cells 4 and 5.

## 6.7 Detailed Engineering Drawings and Technical Specifications

Technical specifications would be prepared and conform to the National Master Specification (NMS), as well as the current edition of the Standard Specifications for Municipal Services as published by the Joint Committee on Contract Documents in association with the Nova Scotia Road Builders Association, Consulting Engineers of Nova Scotia, and Landscape Nova Scotia. Stamped electronic and hard copies of drawings would be prepared in Civil 3D. A schedule of quantities including a measurement and payment specification would be included in the Application for Approval package. The drawings would depict proposed works, existing features identified by the topographic survey, and existing infrastructure. A Class B cost estimate for the development of the site could be prepared for the MEH at this time.

## 7.0 Opinion of Probable Cost

A 'Class C' Opinion of Probable Cost presenting the estimated capital costs associated with the design, permitting, and construction of Cell 4 is presented below. **Table 5** details the estimated costs associated with design and approval, while the estimated construction costs are detailed in **Table 6**. Note that all costs are presented in 2024 dollars.

**Table 5 – Opinion of Probable Cost for Detailed Design of Cell 4**

Item	Quantity	Units	Unit Price	Budget
Topographic Survey	1	LS	\$15,000	\$15,000
Geotechnical Investigation	1	LS	\$15,000	\$15,000
Engineering Design, Approval, Tender and Construction Services	1	LS	\$120,000	\$120,000
Estimated Price (Excluding HST)				\$150,000

**Table 6 – Opinion of Probable Cost for Cell 4 Construction**

Item	Quantity	Units	Unit Price	Budget
Clearing & Grubbing	11,200	m <sup>2</sup>	\$5	\$56,000
Excavation	38,330	m <sup>3</sup>	\$20	\$766,600
Geotextile	9,500	m <sup>2</sup>	\$3	\$28,500
Leachate Collection Layer (300 mm)	3,000	m <sup>3</sup>	\$15	\$45,000
Leachate Collection Discharge Pipe	60	m	\$425	\$25,500
Perimeter Berm	300	m	\$125	\$37,500
Cell Access Road	130	m	\$645	\$83,850
Erosion & Sedimentation Control	1	LS	\$25,000	\$25,000
Materials Testing Allowance	1	LS	\$15,000	\$15,000
Subtotal				\$1,082,950
Contingency (15% of Subtotal)				\$162,443
Total Estimated Price (Excluding HST)				\$1,245,393

Dillon's total Class 'C' estimated opinion of probable costs for the detailed design and construction of Cell 4 is approximately **\$1,400,000**.

**Table 7** on the following page presents a potential timeline that the MEH could follow outlining the phases related to the landfill expansion project. Assuming MEH submits request for proposals in April 2025, the landfill could be open for use in early 2027.

**Table 7 – Project Timeline**

<b>Time</b>	<b>Description</b>
April 2025	MEH Issues RFP for Detailed Design & Engineering Services
May 2025 to August 2025	Detailed Design, Topographic Survey, Geotechnical Investigation
September 2025 to December 2025	NSECC Approval
January 2026 to March 2026	MEH Issues Tender for Construction Contract (Awarded Prior to May 2026)
May 2026 to October 2026	Project Construction
November/December 2026	Project Closeout & Final Approval
January/February 2027	Landfill Open for Use

## 8.0 Closing

Dillon would like to thank the MEH for the opportunity to collaborate on this project and trusts that the information contained in this report is sufficient for the MEH's needs at this time. Should the MEH have any further questions about this report, please contact Stuart King, P.Eng. by phone at 902-233-4873, or by email at [sking@dillon.ca](mailto:sking@dillon.ca).