LADYSMITH

Parks, Recreation & Culture

Invatation to Tender No. 2025-PRC-02

Forrest Field – Phase 2

This Addendum contains:

A change to the closing date and one Q&A.

For further information
please contact:
Chris Barfoot
250-245-6421
cbarfoot@ladysmith.ca

Addendum Issue Date: **November 5, 2025**
RFT Issue Date**: November 5, 2025**
RFT Closing Date**: November 28, 2025 1:30 pm**
Location of Bid Opening**: Ladysmith City Hall**

Details of Addendum

CHANGES TO RFT

This Addendum is an integral part of the Tender Documents for the project referenced above. The following revisions supersede the information contained in the original drawings, specifications or previously issued Addenda. The Tenderer shall acknowledge this addendum by noting the number of Addenda in their submission.

1.0 Tender Documents:

1. Tender Closing Date – Revise as follows:
   - Tender Closing: 1:30 pm Nov. 28th, 2025
   - Tender Opening: 1:45 pm Nov. 28th, 2025
2. Schedule of Prices – Replace with attached version R1. Changes as follows:
   - Quantities added for items 3.2, 3.3, 3.4, 3.10
   - Quantities revised for items 3.6, 3.8, 3.9, 3.12
3. Appendix B Pay Item Descriptions – Replace with attached version R1. Changes as follows to align with schedule of prices:
   - Measurement for items 3.3 & 3.4 to be per tonnes of material
   - Measurement for item 3.6 to be per cubic meter of material
   - Measurement for item 3.8 to be per square meter of finished surface
   - Geotechnical testing scope (section 0.1 c) revised to include only retesting as incidental work
4. Geotechnical Report added to tender documents
5. CAD .dwg grading file added to tender documents

2.0 Questions and Answers:

1. The tender form has quantities of zero in a few areas - can you advise as given its a unit priced contract I assume those numbers are missing.

A1: See section 1.2 of this addendum and attachments.

2. The aggregate is in tonnes in the tender form but M3 in the documents and pay items - can we keep as the Tonnes?

A2: See section 1.3 of this addendum and attachments.

3. What is the spec for the sub base in various areas? Are you looking for a pit run, screened pit run or a higher end product such as sgsb - sieve please.

A3: sub-base material is to be pit run gravel in accordance with section 7B.3 of the Town of Ladysmith Standards and Specifications.

4. Do you want a surfacing subcontractor like Tomko completing this work and the line painting or do you have a list of preferred subs so the end product is well done.

A4: Surfacing and paint lines to be completed to specifications. Sub-contractors can be used at tenderer's discretion.

5. Spec for item 3.18. [Imported Fill]

A5: Fill material is to be in accordance with section 3.7 of the Town of Ladysmith Standards and Specifications. Refer to section 3.7.3 for backfill of untraveled areas.

6. Net posts and nets - there are suppliers of these nets - your design has them manufactured - would you consider naming a product and number as there is a wide range of prices and quality.

A6: Manufactured pickleball net posts for outdoor use & meeting standard dimensions would be acceptable. The following products would be approved:

- **EIGHTYNINE Sports – Professional Pickleball Posts - 3" Diameter - In-Ground https://shorturl.at/aD8tU**
- **Sports Direct in ground Pickleball posts https://shorturl.at/Iz9UR**

7. I assume the concrete slab for the benches and picnic tables excludes any of those two items and they are NIC?

A7: Benches and picnic tables are not part of this contract.

8. Can we use wire mesh in concrete SW vs rebar?

A8: No

9. 4.4/4.5 spec please. Also assume that existing water is c900 pvc and not DI?

A9: Water meter is to be 19mm as per section 4A. 7.10 of the Town of Ladysmith Standards and Specifications. Meter box is to be per section 4 W11.

The existing water is noted as 200mm PVC DR18 on records.

10. Can ultra rib or csp pipe be used for culvert.

A10: Culvert pricing is to be 450mm PVC DR35 pipe in the proposed schedule of prices. Alternates may be considered after award of the project.

11. What permits are required from Ladysmith as normally owner would provide on their own work?

A11: A Work in Town Streets permit will have to be obtained by the contractor prior to work.

12. Would Ladysmith not hired testing firm to complete all testing and we only pay if tests fail?

A12: See section 1.3 of this addendum and attachments. The town will be responsible for initial testing. Contractor will be responsible for retesting due to failed tests.

13. Can we have the construction budget for phase 2 in general terms please as I know it's public.

A13: The approved budget for Phase 2 of the Lot 108 Implementation is $807,072. This amount covers all components of the project, including (but not limited to) the pickleball courts and parking lot, outdoor fitness area surfacing, bike skill development area, and site landscaping. Individual areas have not been assigned separate budgets.

14. On the earthworks - after the clearing is the intent to save money and use the material on site as either berm building, cut and fills and or stockpile given you have lots of area and it would save a lot of $?

A14: Tender pricing is to reflect imported material. Cut material is intended to be reused in fill areas with the approval of the geotechnical engineer. Credits and price adjustments will be discussed after geotechnical approval of material.

15. Same comment with any topsoil.

A15: Tender pricing is to reflect imported material. Cut material is intended to be reused in fill areas with the approval of the geotechnical engineer. Credits and price adjustments will be discussed after geotechnical approval of material.

16. Were there any drillhole/geotech info available from phase 1 you could share?

A16: See section 1.4 of this addendum and attachments.

17. I see the width of parking lot but what is the length please.

A17: The parking area is 51.54m long measured from gutter lines.

18. What is anticipated award date?

A18: Award is anticipated 2 weeks after tender opening.

19. Can Tenders be submitted electronically?

A19: No

20. On the ESC Plan (drawing C07) there is reference to a series of "compost berms" within an existing ditch line. I've seen these in-stream berms constructed with pea gravel or drain rock. I'm not familiar with a compost berm. Could you provide further details on its composition?

A20: Compost berms are to be comprised of drain rock material. Detail to be revised on IFC drawings.

21. Sue and Charles are both designated as the contact for questions regarding this tender, in different areas of the tender documents. Which one should questions go to?

A21: Charles is listed as the contact for technical questions only. All questions, including technical, should include Sue Bouma.

22. When reviewing the TOL standard, it indicates that contraction/control joints are to be created using a parting tool while the concrete is wet. However, the project's Typical Sidewalk Detail notes to "refer to TOL standards" but also states that control joints shall not be tooled into wet concrete. Can you please confirm our interpretation:

- All **standard roadside and parking lot sidewalks (adjacent to curb and gutter)** are to follow the **TOL standard**, allowing joints to be **tooled while wet**.
- All **amenity slabs and walkways adjacent to the pickleball courts** are to follow the **project detail**, requiring joints to be **saw-cut** after placement.

A22: Yes. Please base tenders on this interpretation.

23. Could you please share with us a grading DWG for the Forrest fields project - with existing topo. For accurate estimating purposes.

A23: See section 1.5 of this addendum and attachments.

END ADDENDUM 1

(Total 4 pages)

Attachments:

Schedule of Prices – R1

Pay Item Descriptions – R1

Geotechnical Report

CAD .dwg grading file

Schedule of Prices - R1

The following are our tendered prices for the cost of the work for each item as outlined in the respective pay item descriptions in the Tender Documents.

Item	Description	Est. Qty	Units	Unit Price	Total
Section 1	**General Requirements**				
1.1	Mobilization / Demobilization	1	ls		
1.2	Location of Works - Project Layout	1	ls		
1.4	2.5m Tall Black Chainlink Fence & Gates	110	m		
1.5	Stairs & Hand Rails	2	ls		
1.6	Construction Fencing	220	m		
	Total Section 1				
Section 2	**Storm Sewer**				
2.1	200mm PVC SDR35 CB Lead	8.5	m		
2.2	450mm PVC SDR35	20	m		
2.3	Catch Basin	1	ea		
2.4	Sandbag Headwall	2	ea		
2.5	Connect to Existing	2	ea		
2.6	Ditch Grading	145	m		
	Total Section 2				

Item	Description	Est. Qty	Units	Unit Price	Total
Section 3	**Earthworks, Surface Works & Misc.**				
3.1	Clearing & Grubbing	0.49	ha		
3.2	Stripping & Common Excavation	***2075***	m^3		
3.3	20mm minus Base Gravels	***652***	tonne		
3.4	75mm minus Sub-Base Gravels	***1792***	tonne		
3.5	High Fines Surfacing Aggregate	60	m^3		
3.6	Cart Path Material	***23***	m^3		
3.7	Acrylic Court Surface	670	m^2		
3.8	100mm Topsoil & Seed	***1788***	m^2		
3.9	Sub-Grade Preparation	***2825***	m^2		
3.10	Non-mountable Curb & Gutter	***157***	m		
3.11	Concrete Sidewalk & Slabs (150mm Thick)	290	m^2		
3.12	Concrete Sidewalk & Slabs (100mm Thick)	***380***	m^2		
3.13	50mm Thick Asphalt	1329	m^2		
3.14	Streetlights, bases, conduit & Wiring	2	ea		
3.15	Tree Planting	32	ea		
3.16	Concrete Wheel Stops	16	ea		
3.17	Net Posts	1	ls		
3.18	Imported Granular Fill	500	m^3		
3.19	Existing Gravel Road Regrading	80	m^2		
	Total Section 3				
Section 4	**Bike Park Water Service**				
4.1	a) Clearing & Grubbing - Bike Park	0.34	ha		
	b) Clearing & Grubbing - Perimeter Trail	0.063	ha		
4.2	25mm Service Pipe & Tracer Wire	85	m		
4.3	Corp. Stop & Saddle	1	ea		
4.4	Water Meter & Meter Box	1	ea		
4.5	Standpipe & Valve	1	ea		
4.6	Class 300 Excavator & Operator Time	100	hr		
	Total Section 4				
	Total All Sections				

Pay Item Descriptions – R1

General Requirements

.1 Scope

Payment for the various items of the Schedule of Prices, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the Work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction.

No separate payment shall be made for any item that is not specifically set forth in the Schedule of Prices, and all costs therefore shall be included in the prices named in the Schedule of Quantities for the various appurtenant items of Work.

In addition to other incidental items of Work listed elsewhere in the contract, the following items shall also be considered as incidental to other Items of Work under this contract:

a) Repair of any damage to existing facilities caused by the Contractor in the course of Work.
b) Erosion and pollution control.
c) Geotechnical testing (density testing, proctors, sieve analysis, etc.) that is redone due to initially failed test results. Coordination of all testing to be the responsibility of the contractor.

1.0 General

.1 Mobilization / Demobilization (Pay Item No. 1.1) Price based on Lump Sum

Measurement for payment for this item shall be based upon the completion of the entire pay item as a Lump Sum Pay Unit, complete, in accordance with the requirements of the Contract Documents.

This item includes the obtaining of all permits; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the Work. This item also includes demobilization of the above. Mobilization shall include the following principal items:

a) Moving on to the site of all Contractor's plant and equipment required for operations
b) Providing all on-site communication facilities, including radios and cellular phones
c) Obtaining all required permits
d) Having all WCB required notices and establishment of safety programs
e) Having the Contractor's superintendent at the job site full time
f) Submitting initial submittals

Payment for this item shall be made at the lump sum amount tendered for this item in the Schedule of Prices, with 50% payable after mobilizing to the site and 50% payable after demobilization.

.2 Location of Works / Project Layout (Pay Item No. 1.2) Price based on Lump Sum

This item includes locations of any and all underground works whose location is required to be known during construction. In addition, full survey layout as required for construction.

Payment for this item shall be made at the lump sum amount tendered for this item in the Schedule of Prices

.3 2.5m Tall Black Chainlink Fence & Gates (Pay Item No. 1.3) Price based on unit rate

This price shall include materials, base preparation, forming, jointing, reinforcing, finishing, curing, footings and sleeves, connections, and all work incidental to the completed installation.

Payment for fences will be made at the unit price per linear metre per fence type shown in the Tender Form. Linear measurement will be made from the center of the applicable fence post.

.4 Stairs & Handrails (Pay Item No. 1.4) Based on Lump Sum

Payment for stairways and handrails will be made at the unit price shown in the Tender Form. The price shall include materials, supply, base preparation and all work incidental to the completed installation. Payment for import fill, excavation, subgrade preparation, subbase and base materials will be made at the lump sum amount as shown in the Tender Form.

.5 Construction Fencing (Pay Item No. 1.5) Based on Unit Rate

Payment for the supply and installation of the construction fencing shall be made at the price per linear metre as shown in the Tender Form. Measurement will be made along the surface of the ground for the length of fence installed. Payment for these items will be made at a unit rate and shall include all labour, equipment and materials required for the installation as per the contract drawings.

2.0 Storm Sewer

The Contractor will note that the tendered price for all items specified in this section will include but not be limited to the following:

(a) materials
(b) excavation
(c) dewatering
(d) bracing & sheeting
(e) bedding
(f) pipe installation
(g) backfill with native material
(h) maintenance

Payment will not be made as a separate item for excavation, backfill and work applicable thereto required at any structure specified in this section. The cost of such work shall be included in the applicable prices for the various structures shown in the Tender Form.

Tender quantities are based on the allowable trench width limits as shown on the Civil Drawing, with allowances for site conditions. Placement of import granular fill beyond these limits will be at the Contractor's expense where the Contractor employs methods that excavate beyond these limits without prior authorization from the Engineer.

.1 Piping and Fittings (Pay Item Nos. 2.1 and 2.2) Price base on unit rate

Payment for piping and fittings, will be made at the unit price per linear meter shown in the Tender Form for the various sizes and class of pipe. Measurement will be made horizontally along the centreline of the installed pipe, including fittings, from centre-to-centre of manholes or to the end of the pipe, whichever is applicable. This price shall include materials, excavation, dewatering, bracing & sheeting, bedding, pipe installation, backfill with native material, video inspection and maintenance, testing as specified, and all work incidental thereto except those items for which payment is specified additional to that for gravity sewer pipe.

.2 Catch Basins (Pay Item No. 2.3) Price based on unit rate

Payment for catchbasins will be made at the unit price as shown in the Tender Form for the specified type of catchbasin. This price shall include materials, installation, brickwork, concrete, grouting, adjustment to grade and all work incidental thereto.

.3 Sandbag Headwall (Pay Item No. 2.4) Price based on unit rate

Payment for sandbag headwalls will be made at the unit price per headwall as shown in the Tender Form. This price shall include materials, preparation and placing of the headwall and all work incidental thereto.

.4 Connect to Existing (Pay Item No. 2.5) Price based on unit rate

Payment for connection to the existing storm system will be made at the unit price shown in the Tender Form for the specified type of connection. This price shall include excavation, materials, installation, fittings, adjustment to grade and all work incidental thereto.

.5 Ditch Grading (Pay Item No. 2.6) Price based on unit rate

Payment for ditch grading will be made at the unit price per linear metre shown in the Tender Form. Linear measurement will be made along the centreline of the regraded ditch. This price shall include all earthworks and all work incidental to the completed installation.

3.0 Earthworks, Surface Works, & Misc.

.1 Clearing & Grubbing (Pay Item No. 3.1) Price based on unit rate.

This item includes removal and disposal of all trees, tree clusters, stumps, bushes, organics, and other items within the construction limits, as shown or described on the Plans, to a depth of 150mm. This price shall include materials, and all work incidental thereto.

Payment for this item will be made at the listed unit rate.

.2 Stripping & Common Excavation (Pay Item No. 3.2) Prices based on unit rate

This item includes stripping & common excavation and removal of material of whatever nature, to the approved subgrade, as shown or described on the Drawings, or required to complete the Project.

Payment for these items will be made at the unit price tendered on the Schedule of Prices.

.3 Base Course (Pay Item No. 3.3) Price based on unit rate

Payment for base course will be made at the unit price per **tonne** shown in the Tender Form. This price shall include materials, materials handling, placing, watering, shaping, compacting, compaction testing and all work incidental thereto. Payment by cubic metre will be based on the volume used on the construction between the existing

.4 Sub-Base (Pay Item No. 3.4) Price based on unit rate

Payment for sub-base course will be made at the unit price per **tonne** shown in the Tender Form. This price shall include materials, materials handling, placing, watering, shaping, compacting, compaction testing and all work incidental thereto. Payment by cubic metre will be based on the volume used on the construction between the prepared sub-grade and the base course. Cross sections of the fill area will be taken every 15 metres or at such lesser interval as the Engineer may deem necessary.

.5 High Fines Surfacing Aggregate (Pay Item No. 3.5) Price based on unit rate

Payment for High Fines Surfacing Aggregate course will be made at the unit price per cubic metre shown in the Tender Form. This price shall include materials, materials handling, placing, watering, shaping, compacting, compaction testing and all work incidental thereto. Payment by cubic metre will be based on the volume used on the construction between the existing ground after stripping of topsoil and unsuitable material and the final cross sections of the fill area. Cross sections of the fill area will be taken every 15 metres or at such lesser interval as the Engineer may deem necessary.

ground after stripping of topsoil and unsuitable material and the final cross sections of the fill area. Cross sections of the fill area will be taken every 15 metres or at such lesser interval as the Engineer may deem necessary.

.6 Cart Path Material (Pay Item No. 3.6) Price based on unit rate

This item is for all costs associated with installing Cart path material to the design elevations and will be measured by the **cubic** meter of material placed all in accordance with the civil drawings. Work includes supplying, placing, watering, and compacting the material to design grades and thicknesses. Payment for this item will be made at the unit price listed on the Schedule of Prices.

.7 Acrylic Court Surface (Pay Item No. 3.7) Price based on unit rate

Payment for Acrylic Court Surfacing will include all cost associated with supplying and installing the acrylic and paint layers as described in the design drawing. This price shall include all materials, application, curing, and all work incidental to the completed installation.

.8 100mm Topsoil & Seed (Pay Item No. 3.8) Price based on unit rate

Payment for topsoil and seed will be made at the unit price per **square** metre of material incorporated into the work as shown in the Tender Form. This price shall include materials handling, supply, loading, hauling, placing, grading, application of fertilizers, spreading of seed, maintenance, watering, shaping, and all work incidental thereto.

.9 Subgrade Preparation (Pay Item No. 3.9) Price based on unit rate

Payment for the subgrade preparation will be made at the unit price per square metre shown in the Tender Form. This price shall include scarifying, windrowing, watering and dewatering, shaping, compacting, proof rolling and all work incidental thereto. No additional payment will be made for reworking the subgrade because of damage from weather conditions.

.10 Non-mountable Curb and Gutter (Pay Item No. 3.10) Price based on unit rate

Payment for curbs will be made at the unit price per linear metre per curb type shown in the Tender Form. Linear measurement will be made along the centreline of the curbs. This price shall include materials, base preparation, forming, jointing, reinforcing, finishing, curing, curb and all work incidental to the completed installation. Payment for granular base materials will be made at the unit price per material type shown in the Tender Form.

.11 Concrete Sidewalk around Pickleball Court (150mm Thick) (Pay Item No. 3.11) Price based on unit rate

Payment for sidewalks and slabs will be made at the unit price per square metre shown in the Tender Form. The price shall include materials, base preparation, and all work incidental to the completed installation. Payment for this item will be made at the unit price shown in the Tender Form.

.12 Concrete Sidewalk (100mm Thick) (Pay Item No. 3.12) Price based on unit rate

Payment for sidewalks and slabs will be made at the unit price per square metre shown in the Tender Form. The price shall include materials, base preparation, and all work incidental to the completed installation. Payment for this item will be made at the unit price shown in the Tender Form.

.13 50mm Thick Asphalt (Pay Item No. 3.13) Price based on unit rate

Payment for 50mm thick asphalt will be at the unit price per square metre shown for the various thicknesses and locations shown in the Tender Form. Payment by square metre will be based on the actual area of asphaltic laid. The price shall include final base preparation, supply of aggregate and asphaltic cement, mixing, weighing, transporting, placing, tack coat, compacting, construction joint preparation, adjusting and cleaning frames, covers and lids of all castings affected, taped temporary pavement markings and all other work incidental thereto.

.14 Streetlights, bases, conduit & Wiring (Pay Item No. 3.14) Price based on unit rate

Payment for poles, luminaires, and based will be made at the unit price per specified pole and luminaire type shown in the Tender Form. The price shall include conduit, junction boxes, materials, assembly, installation of the assembly and all work incidental thereto.

.15 Tree Planting (Pay Item No. 3.15) Price based on unit rate

Payment for trees will be made at the unit price shown on the Tender Form for the various species. This price shall include all labour, equipment, watering, maintenance, and material to:

- ship and store trees.
- install root deflecting barrier, if required
- excavate and plant as per specifications.
- fertilize, water and prune trees as required
- replace defective, damaged or non-complying trees

.16 Concrete Wheel Stops (Pay Item No. 3.16) Price based on unit rate

Payment for concrete wheel stops will be made at the unit price per wheel stop as shown in the Tender Form. This price shall include supply of all materials, the placement of the pre-cast concrete wheel stops, installation of rebar anchor, and all work incidental thereto.

.17 Net Posts (Pay Item No. 3.17) Price based on lump sum

Payment for net posts will include materials, fabrication, base preparation, finishing, curing, base sleeves, and all work incidental to the completed installation. Payment will be made as a lump sum shown on the tender form.

.18 Imported Fill (Pay Item No. 3.18) Price based on unit rate

This item is for all costs associated with providing and installing granular fill and will be measured by the cubic meter of material placed, meeting the specifications of Pit Run Gravel, all in accordance with the requirements of MMCD sections 31 05 17.

Payment for all imported fill will be made at the price per cubic meter as shown in the tender form. This price shall include supplying, loading, hauling, placing, compacting imported granular material, disposal of excavated material and all work incidental thereto. Payment will be based on the volume of material actually incorporated into the work unless otherwise approved by the Engineer.

Payment of this item will be made at the listed unit rate as stated in the tender form.

.19 Existing Gravel Road Regrading (Pay Item No. 3.19) Price based on unit rate

This item includes regrading of the existing gravel road, as shown or described on the Plans. This price shall include all work incidental thereto.

Payment for these items will be made at the unit price tendered on the Schedule of Prices.

4.0 Future Bike Park & Water Service

.1 Clearing & Grubbing (Pay Item No. 4.1) Price based on unit rate

This item includes removal and disposal of all trees, tree clusters, stumps, bushes, organics, and other items within the construction limits, as shown or described on the Plans, to a depth of 150mm. This price shall include materials, and all work incidental thereto.

Payment for these items will be made at the unit price tendered on the Schedule of Prices.

.2 25mm Service Pipe & Tracer Wire (Pay Item No. 4.2) Price based on unit rate

Payment for 25mm PE water service will be made at the unit price per service shown in the tender form based on the actual length of pipe installed. This price shall include supply of materials, pipe installation, installation of hydraulic barrier where required, tracer wire, excavation, disposal offsite of surplus materials, granular backfill, compaction, bedding, testing, flushing, chlorination, and all work incidental thereto.

.3 Corp. Stop & Saddle (Pay Item No. 4.5) Price based on unit rate

Payment for corp. stop & Saddle will be made at the unit price per service shown in the Tender Form. This price shall include supply of materials, installation, excavation, disposal offsite of surplus materials, granular backfill, compaction, bedding, testing, flushing, chlorination, and all work incidental thereto.

.4 Water Meter & Meter Box (Pay Item No. 4.6) Price based on unit rate

Payment for water meter & Meter box will be made at the unit price per service shown in the Tender Form. This price shall include supply of materials, excavation, disposal offsite of surplus materials, granular backfill, compaction, bedding, testing, and all work incidental thereto.

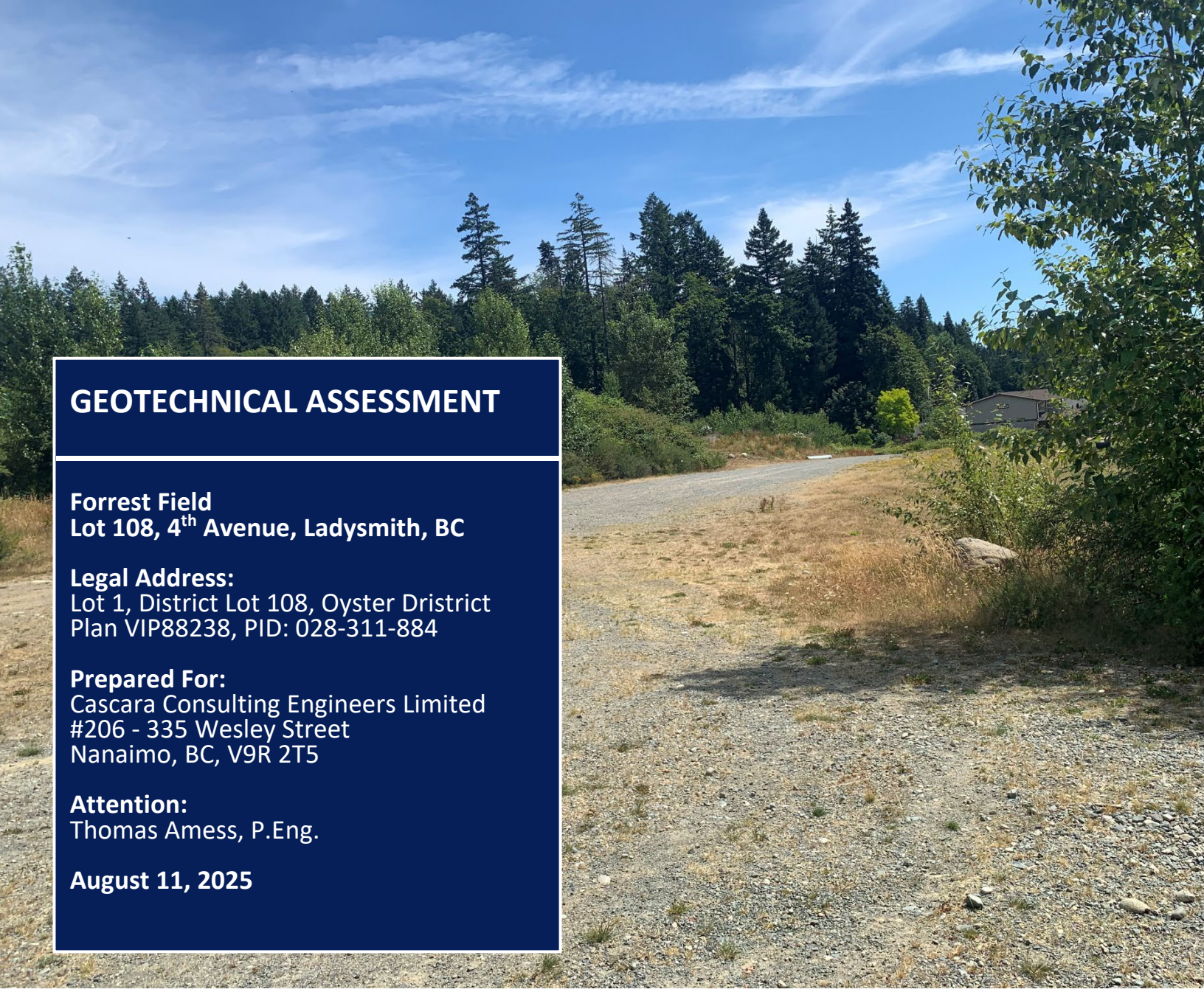
.5 Standpipe & Valve (Pay Item No. 4.7) Price based on unit rate

Payment for the installation of standpipe & valve will be made at the unit price as shown in the Tender Form. This price shall include the materials, installation and backfill with import granular fill to subgrade, compaction and all works incidental thereto.

.6 Class 300 Excavator & Operator Time (Pay Item No. 4.7) Price based on unit rate

Payment for this item will be made at the unit price as shown in the Tender Form based on hours of operator use needed by the bike park designer. This price shall include the onsite storage, fuel, maintenance, and operator time as needed to assist the bike park designer. Mobilization and demobilization of this item is to be included in pay item 1.1.

END OF SECTION



GEOTECHNICAL ASSESSMENT

Forrest Field
Lot 108, 4th Avenue, Ladysmith, BC

Legal Address:
Lot 1, District Lot 108, Oyster Dristrict
Plan VIP88238, PID: 028-311-884

Prepared For:
Cascara Consulting Engineers Limited
#206 - 335 Wesley Street
Nanaimo, BC, V9R 2T5

Attention:
Thomas Amess, P.Eng.

August 11, 2025

File No.: E4723.01
Revision No.: 00
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DISCLAIMER

1. Lewkowich Engineering Associates Ltd. (LEA) acknowledges that this report, from this point forward referred to as "the Report," may be used by the Town of Ladysmith (ToL) as a precondition to the issuance of a development and/or building permit and that this Report and any conditions contained in the Report may be included in a restrictive covenant under Section 56 of the Community Charter and registered against the title of the property at the discretion of the ToL.
2. This Report has been prepared in accordance with standard geotechnical engineering practice solely for and at the expense of Cascara Consulting Engineers Limited (CCEL). We have not acted for or as an agent of the ToL in the preparation of this Report.
3. The conclusions and recommendations submitted in this Report are based upon information from relevant publications, a visual site-assessment of the property, anticipated and encountered subsurface soil conditions, current construction techniques, and generally accepted engineering practices. No other warrantee, expressed or implied, is made. If unanticipated conditions become known during construction or other information pertinent to the development becomes available, the recommendations may be altered or modified in writing by the undersigned.
4. This Report was authored, to the best of our knowledge at the time of issuance, with considerations for local requirements specific to the Authority Having Jurisdiction (AHJ) and their standards for the preparation of such reports, the 2024 British Columbia Building Code (BCBC), and current engineering standards. Updates to municipal bylaws, policies, or requirements of the AHJ, or updates to the BCBC and/or professional practice guidelines may impact the validity of this Report.
5. This Report has been prepared by Mr. Paul Simmons, CTech, and by Mr. Chris Hudec, M.A.Sc., P.Eng. Messrs. Simmons and Hudec are both adequately experienced and are also members in good standing with their respective associations, Mr. Simmons with the Applied Science Technologists & Technicians of British Columbia (ASTTBC), and Mr. Hudec with the Engineers and Geoscientists of British Columbia (EGBC).

EXECUTIVE SUMMARY

1. The following is a brief synopsis of the property, assessment methods, and findings presented in the Report. The reader must read the Report in its entirety; the reader shall not rely solely on the information provided in this summary.
2. The subject development site is situated on Lot 108 4th Avenue in Ladysmith, British Columbia, throughout on the eastern region of Vancouver Island and falling within the jurisdiction of the Town of Ladysmith. The proposed development includes the construction of new pickleball and tennis courts, as well as plans for a future access road and parking facilities.
3. A site-specific assessment was conducted to assess the geotechnical conditions of the subsurface soils within the development area, which is adjacent to the Forrest Field practice pitch court. The investigation revealed that there are no significant geotechnical hazards that could adversely affect the proposed development, aside from the presence of existing fill soils at varying depths across the site. The findings indicate that the land is deemed suitable for its intended use, and the development can proceed as planned, provided that the recommendations outlined in the Report are adhered to.

List of Abbreviations Used in the Report

Abbreviation	Title
ASTTBC	Applied Science Technicians and Technologists of British Columbia
TP	Test Pit
ToL	Town of Ladysmith
EGBC	Engineers and Geoscientists of British Columbia
LEA	Lewkowich Engineering Associates Ltd.
MMCD	Manual Municipal Construction Documents
CCEL	Cascara Consulting Engineers Limited

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 General

a. As requested, LEA has carried out a subsurface investigation with respect to the proposed development. This Report provides a summary of our findings and recommendations.

1.2 Background

a. The proposed development includes the construction of a new pickleball and tennis court, with plans for a future access road and parking lot. This new facility will be situated directly to the west of the existing Forrest Field practice pitch court.

1.3 Assessment Methodology

a. A subsurface geotechnical investigation was carried out on July 21, 2025, using an E50 Bobcat supplied by David Stalker Excavating Ltd. A total of four (4) test pits (TPs 25-01 to TP 25-04) were advanced throughout the development area, with a particular focus on the proposed locations for the pickleball and tennis courts throughout the northern section. Due to the presence of dense vegetation, including immature trees and low-lying plants, the investigation was restricted to areas where significant vegetation was absent. All TPs were backfilled upon completion of our investigation.

b. A site plan showing the location of the TPs (Drawing No. E4723-01) and the TP logs are attached, following the text of this Report.

1.4 Covenant Review

a. As part of our assessment, we have reviewed the Property title relative to any restrictive covenants that may be registered. At the time of this Report there were no restrictive covenants registered against the title of the Property which affect the geotechnical conclusions in this Report.

2.0 SITE CONDITIONS

2.1 Physical Setting

a. The development area is located in the northwest region and jurisdictional limits of the ToL, and is identified with the following legal address:
    i. Lot 1, District Lot 108, Oyster District, Plan VIP88238, PID: 028-311-884.

b. The development area and limits of the investigation are shown below in Figure 2.1.

Figure 2.1 – Approximate Development Limits[3]

2.2 Terrain and Features

a. The property features an existing artificial turf field along with the necessary supporting infrastructure. Recently, a new practice pitch court was added to the west of the turf field. Additionally, several gravel parking lots, and modular buildings (portables) are situated directly north of the playfield. The remaining area of the property remains undeveloped in terms of infrastructure and is primarily covered with young trees, low shrubs, and various clearings and pathways.

b. The property encompasses a large area, encompassing a varied terrain that is not uniform. Due to prior development activities, the land exhibits slopes in multiple directions; however, the general gradient trends from the northwest to the southeast and northeast, with certain localized exceptions attributable to earlier construction efforts. Within the development itself, there is a notable vertical relief of approximately 5 to 6 meters, creating a downhill slope that extends from the west towards the east.

c. The above measurements and distances are estimates based on the CCEL grading plan[6], a review of satellite imagery and topographical information available on Google Earth[2].

2.3 Regional Geology

a. Surficial geology for the area[4] is classified as part of the Finlayson and Somenos deposits.

b. The Finlayson deposits generally consist of stone free fine textured soils comprised of silty clay loam (glacial marine sediments). The soils are characterized as being imperfectly drained, with undulating and moderately sloping terrain with surface grades in the order of 9% to 15%.

c. The Somenos deposits generally consist of moderately to strongly cemented pans comprised of gravelly, loamy sand (non-glacial or late-glacial sequence). The soils are characterized as being well drained, with undulating and moderately sloping terrain with surface grades in the order of 9% to 15%.

d. Bedrock geology for the area[5] is classified as the Nanaimo Group. The Nanaimo Group is an undivided sedimentary formation from the Mesozoic era and Cretaceous Period, commonly consisting of boulder, cobble and pebble conglomerate, coarse to fine sandstone, siltstone, shale, and coal.

2.4 Soil Conditions

a. Consistent soil strata were encountered during the TP investigation. The uppermost layer consisted of variable fill, predominantly consisting of silty sand that included differing amounts of gravel, cobbles, and organic matter. Beneath this layer, a hard, light brown, low plasticity clayey silt was found, which contained minor traces of sand and gravel. This was further underlain by a very dense and over-consolidated layer of light brown silty sand, which also exhibited some gravel and trace amounts of cobbles, indicative of till.

b. Refer to the attached TP logs (TP25-01 to TP25-04) for detailed soil conditions.

2.5 Groundwater Conditions

a. Groundwater seepage was not encountered during the course of our investigation.

b. Given the encountered conditions, specifically the dense fine-grained glacial till subgrade, we expect that a shallow “perched” groundwater table is present seasonally. We expect that the groundwater flows associated with this perched condition would be related directly to the volume and frequency of storm events.

c. Groundwater levels can be expected to fluctuate seasonally with cycles of precipitation. Groundwater conditions at other times and locations can differ from those observed within the TPs at the time of our assessment.

d. If groundwater flows or conditions are different than those encountered during the TP investigation, additional measures may be required during construction. Contact our office immediately if unanticipated conditions are encountered at any point during construction.

3.0 GEOTECHNICAL DESIGN DETAILS, AND DESIGN CONSIDERATIONS

3.1 Temporary Excavations

a. While the expected soil conditions should be favorable for conventional open-cut excavation procedures, conditions are subject to review in the field and may require more robust measures to ensure temporary excavation stability.

b. All excavations that exceed Part 20 of WorkSafe BC requirements for safe excavation shall be reviewed in the field by a qualified engineering professional.

3.2 Seismic Criteria

a. As per the 2024 BCBC (Division B, Part 4, Table 4.1.8.4-B), average soil properties within the upper 30m as inferred based on regional geology and the encountered soils would be “Site Class C” (Very Dense Soil and Soft Rock) provided the recommendations in this report are followed.

4.0 CONSTRUCTION PHASE

4.1 General Excavation

a. Prior to construction, all unsuitable materials should be removed to provide a suitable base of support. Unsuitable materials include any non-mineral material such as vegetation, topsoil, peat, fill, or other materials containing organic matter, as well as any soft, loose, or disturbed soils.

b. Unsuitable material was encountered in each of the TPs at depths from 0.25m to 1.1m.

c. It is possible that localized “pockets” of more significant fill materials may be encountered during construction. The scope and limit of any localized fill deposits will likely not become known until construction.

d. Groundwater ingressing into any excavations should be controlled with a perimeter ditch and connected to positive drainage.

e. The Geotechnical Engineer is to confirm the removal of unsuitable materials and approve the exposed competent inorganic subgrade.

f. Any potential fill materials are subject to the review and approval of the Geotechnical Engineer prior to placement as a fill material.

g. All finished slopes should have a maximum configuration of 2H : 1V, or approximately 27 degrees from horizontal. A preferred finished slope configuration is 3H : 1V, or approximately 18 degrees from horizontal. A configuration of 3H : 1V is more conducive to landscaping growth, and is less susceptible to

surface erosion.

4.2 Subsurface Preparation

a. It is assumed that the final playing surface of the tennis and pickleball court will be constructed using asphaltic concrete.

b. LEA recommends a robust granular structure beneath the asphalt surface to provide essential support, drainage, and frost protection to ensure the long-term integrity and performance of the court. The recommended structure and thicknesses are as follows:

   i. Granular Base Course (19mm crush) = 150mm

   ii. Standard Subbase Preparation (75mm SGSB) = 150mm

c. The recommended granular structure materials shall conform to the following gradation specifications, which are in general accordance with typical Master Municipal Construction Documents (MMCD) standards and specifications. If an alternative(s) to the recommended materials or gradations is preferred, please contact the undersigned for additional comment.

75mm SGSB (Subbase)		
Sieve Size (mm)	Minimum Passing	Maximum Passing
75		100%
25	50%	85%
0.15	0%	15%
0.075	0%	8%

19mm Crushed Gravel Base		
Sieve Size (mm)	Minimum Passing	Maximum Passing
19	100%	100%
12.5	75%	100%
9.5	60%	90%
4.75	40%	70%
2.36	27%	55%
1.18	16%	42%
0.6	8%	30%
0.3	5%	20%
0.075	2%	8%

d. All granular materials shall be compacted to a minimum of 95% of the Modified Proctor Dry Density (MPDD) as per ASTM D1557 and in accordance with the general recommendations made in Section 4.3 of this report.

e. While asphaltic concrete is assumed for this report, it is acknowledged that concrete can also be considered as a surfacing material. If concrete is chosen for surfacing, the granular structure and its corresponding gradation specifications outlined above may need to be altered.

f. Should concrete be considered in the future, please contact the undersigned. A specific engineering review and design will be required to develop tailored subsurface specifications appropriate for a concrete court, ensuring its structural integrity and longevity.

4.3 Structural Fill

a. Where fill is required to raise areas that will support buildings, slabs, or pavements, structural fill should be used. The Geotechnical Engineer should first approve the exposed subgrade in fill areas, to confirm the removal of all unsuitable materials.

b. Structural fill should be inorganic sand and gravel. If structural fill placement is to be carried out in the wet season, material with a fines content limited to 5% passing the 75µm sieve should be used, as such a material will not be overly sensitive to moisture, allowing compaction during rainy periods of weather.

c. Structural fill should be compacted to a minimum of 95% of Modified Proctor maximum dry density (ASTM D1557) in foundation and floor slab areas, as well as in paved roadway and parking areas.

d. Structural fills under foundations, roadways, and pavements should include the zone defined by a plane extending down and outward a minimum 0.5m from the outer edge of the foundation at an angle of 45 degrees from horizontal to ensure adequate subjacent support. This support zone is shown in Figure 5.2.

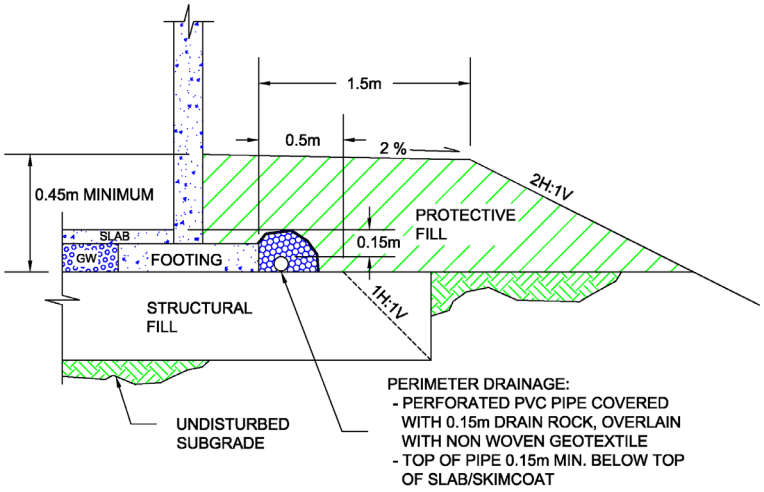

Figure 4.2 – Typical Section, Structural Fill

e. Compaction of fill should include moisture conditioning as needed to bring the soils to the optimum moisture content and compacted using vibratory compaction equipment in lift thicknesses appropriate for the size and type of compaction equipment used.

f. A general guideline for maximum lift thickness is no more than 100mm for light hand equipment such as a “jumping-jack,” 200mm for a small roller, and 300mm for a large roller or heavy (>500 kg) vibratory plate compactor or a backhoe mounted hoe-pac or a large excavator mounted hoe-pac, as measured loose.

g. It should be emphasized that the long-term performance of buildings, slabs, and pavements is highly dependent on the correct placement and compaction of underlying structural fills. Consequently, we recommend that structural fills be observed and approved by the Geotechnical Engineer. This would include approval of the proposed fill materials and performing a suitable program of compaction testing during construction.

4.4 Re-Use of Site Materials

a. Given the fine-grained nature of the subgrade soil conditions encountered (silts), we recommend that imported fill materials are used as structural fill in place of natural site materials.
b. For budgeting purposes, we recommend that imported structural fill materials are anticipated for the development works as a whole; however, there may be some areas where the natural site materials are suitable for re-use as engineered fill.
c. The re-use of any natural site materials is subject to the review and approval of this office prior to re-use.

4.5 On Site Infiltration and Stormwater Disposal

a. As part of the geotechnical investigation, field observations of the subgrade soil conditions with respect to the onsite infiltration and disposal of collected site stormwater were carried out.
b. In general, subgrade soils consist of fine-grained fill soils overlying very dense, over-consolidated till. Hydraulic conductivities of till soils in this area are typically low to very low due to the high fines content.
c. It is the opinion of LEA that site conditions are not conducive to the installation of an on-site stormwater infiltration medium.
d. Site conditions may be conducive to the installation of storm water detention measures. The location(s) of any proposed detention measures shall be reviewed by the Geotechnical Engineer to determine if the design method(s) and/or location(s) pose a hazard to the subject Property or any adjacent or adjoining properties.

5.0 CONCLUSIONS

5.1 Local Government Conformance Statement

a. Provided the recommendations in this Report are followed, we confirm that from a geotechnical point of view the site is considered safe and suitable for the development of a new pickleball and tennis court, with the probability of a geotechnical failure resulting in property damage of less than:

   i. 2% in 50 year for seismic events,

   ii. 10% in 50 years for all other geotechnical hazards.

5.2 Limitations

a. The conclusions and recommendations submitted in this Report are based upon the data obtained from a limited number of widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction or further investigation. The recommendations given are based on the subsurface soil conditions encountered during the TP program, current construction techniques, and generally accepted engineering practices. No other warrantee, expressed or implied, is made. Subgrade conditions are known only at the TP locations and have been used to infer conditions throughout the site in preparation of this Report. If unanticipated conditions become known during construction or other information pertinent to the development become available, the recommendations may be altered or modified in writing by the undersigned.

6.0 CLOSURE

a. LEA appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Lewkowich Engineering Associates Ltd.

Paul Simmons, CTech
Senior Technician

Chris Hudec, M.A.Sc., P.Eng.
Senior Project Engineer

7.0 ATTACHMENTS

1. LEA Drawing E4723-01 – Test Pit Site Plan.
2. Test Pit Logs, TP25-01 to TP25-04.

8.0 REFERENCES

1. Ladysmith Online GIS Mapping System, Access August 2025.
2. Google Earth Online Mapping System, Accessed August 2025.
3. Geoscience BC Online GIS Mapping System, Accessed August 2025.
4. Soils of South Vancouver Island, British Columbia, Soil Survey Report No. 44, Sheet 3.
5. iMap BC Online Mapping System, Accessed August 2025.
6. Cascara Consulting Engineers Limited drawing titled “Lot 108 Grading Plan, Ladysmith, BC,” Drawing No. C03, Revision D, Dated March 2, 2021.

Legend

- Test Pits

PROJECT NAME

Forrest Field - 4th Avenue, Ladysmith, BC

Drawing No.
E4723-01

DRAWING TITLE

Test Pit Location Plan

Date: 2025-07-28

Drawn By: TA

LEGAL DESCRIPTION

Lewkowich Engineering Associates Ltd.

0 20 40 60 Meters

Lewkowich Engineering Associates Ltd.

TEST PIT LOGS

File Number: E4723 TP25-01
Client: Cascara Consulting Engineers Limited
Project: Forrest Field- 4th Avenue
Location: Ladysmith, BC

Coordinates: 48.99938N, 123.84535W

Depth (m)	Soil Symbol	Description	Sample Type	Sample No.	% Recovery
		Ground Surface			
0.0		0.0-0.4m Silty SAND, some gravel, trace to some cobble, trace organics (roots, rootlets), loose to compact, brown, dry (fill)			
0.5		0.4-0.8m Silty SAND, some gravel, trace cobble, blocky, very dense, light brown, moist		GS1	
		Fill materials to 0.4m No observed groundwater seepage End of test pit at 0.8m (refusal)			
1.0					
1.5					
2.0					

Sample Type: SPT Grab Bulk Shelby Tube Core No Recovery

Logged By: Tyler Anderson, B.Sc.
Reviewed By:
Digging Method: E50 Excavator

Date: July 21, 2025
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Lewkowich Engineering Associates Ltd.

TEST PIT LOGS

File Number: E4723 TP25-02
Client: Cascara Consulting Engineers Limited
Project: Forrest Field- 4th Avenue
Location: Ladysmith, BC

Coordinates: 48.99926N, 123.84533W

Depth (m)	Soil Symbol	Description
		Ground Surface
0.0		0.0-0.25m Silty SAND, some gravel, trace to some cobble, trace organics (roots, rootlets), loose to compact, brown, dry (fill)
		0.25-1.2m Silty SAND, some gravel, trace cobble, blocky, very dense, light brown, moist
0.5		
1.0		
		Fill materials to 0.25m No observed groundwater seepage End of test pit at 1.2m (refusal)
1.5		
2.0		

Logged By: Tyler Anderson, B.Sc. Date: July 21, 2025
Reviewed By: Page 1 of 1
Digging Method: E50 Excavator

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Lewkowich Engineering Associates Ltd.

TEST PIT LOGS

File Number: E4723 TP25-03
Client: Cascara Consulting Engineers Limited
Project: Forrest Field- 4th Avenue
Location: Ladysmith, BC

Coordinates: 48.99924N, 123.84549W

Depth (m)	Soil Symbol	Description	Sample Type	Sample No.	% Recovery
		Ground Surface			
0.0		0.0-0.1m SILT, some sand, trace gravel, trace organics (roots, rootlets), soft, brown, dry (topsoil)			
		0.1-1.6m Low plastic, clayey SILT, trace sand, trace gravel, blocky, hard, light brown, moist			
0.5		Pocket penetrometer maxes out at 0.7m			
				GS1	
1.0					
1.5					
		1.6-1.9m Silty SAND, some gravel, trace cobble, blocky, very dense, light brown, moist			
		No observed groundwater seepage End of test pit at 1.9m (refusal)			
2.0					

Sample Type: SPT Grab Bulk Shelby Tube Core No Recovery

Logged By: Tyler Anderson, B.Sc.
Reviewed By:
Digging Method: E50 Excavator

Date: July 21, 2025
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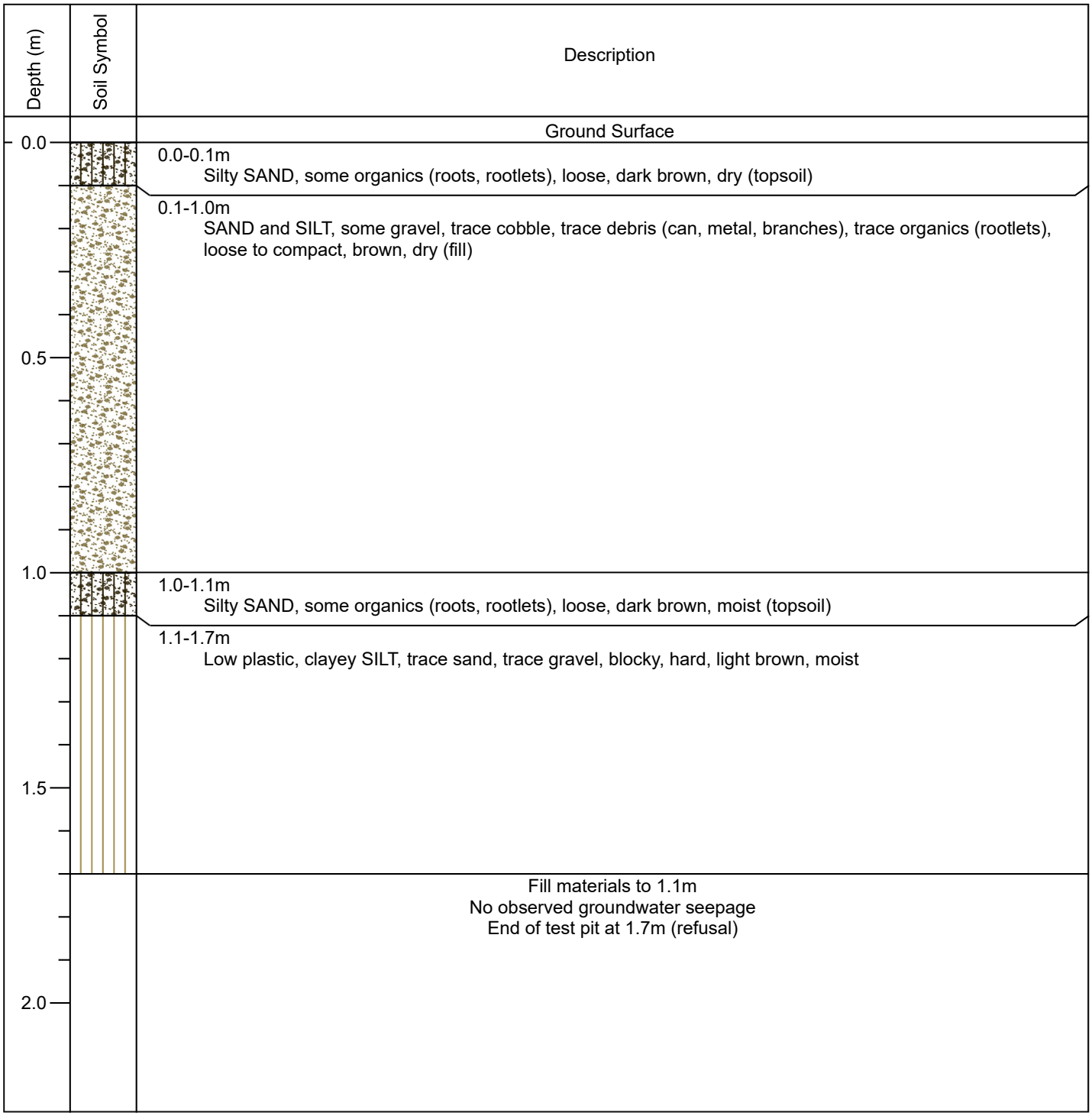
TEST PIT LOGS

File Number: E4723 TP25-04
Client: Cascara Consulting Engineers Limited
Project: Forrest Field- 4th Avenue
Location: Ladysmith, BC

Coordinates: 48.99840 N, 123.84550W



Logged By: Tyler Anderson, B.Sc.
Reviewed By:
Digging Method: E50 Excavator

Date: July 21, 2025
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