

November 21, 2025

Andrew van Doorn, P.Eng.
Chief Operating Officer
PowerBank Corp.
Unit 803 – 505 Consumers Road
Toronto, ON, M2J 4V8

Emailled to: andrew.vandoorn@solarbankcorp.com

Subject: Peer Review Response for Storm Water Management – FINAL
219 Peggs Mountain Road, Armour Township, ON
PRI Project No.: 25-253

Dear Mr. van Doorn,

As requested, PRI Engineering Corp. (PRI) has reviewed the report are to address the comments made by TULLOCH Engineering (TULLOCH) dated October 2, 2025.

Review Comment 1 by TULLOCH

Section 2 and 3 of the letter discusses SWM runoff and quantity control. It is proposed that a SWM pond be designed to handle the quantity discharge from the site. The total catchment area is approximately 2.8 ha in size with the BESS being 0.1 ha in size. To estimate the volume of discharge from the site, the rational method formula was used to estimate peak flows. To size a SWM facility the Modified Rational Method was used based on the 100-year storm event peak flow. The pond volume was estimated to be 43m³. The proposed design does show a control structure, however, it does not show the operating characteristics of the pond and whether the controlled peak flows have matched predevelopment peak flows for the 2-, 5-, 10-, 25-, 50- and 100-year storm events. Therefore, we are unable to confirm that the proposed facility works. In addition, when using the rational method for computation of flows, other computation methods should also be utilized and the most conservative results used.

Review Comment 2 by TULLOCH:

In reviewing the Rational Method Flow calculation, refer to the MTO Drainage Manual Design Chart 1.07 Runoff Coefficient. A copy of Design Chart 1.07 has been attached. The chart states the following "For return periods of more than 10 years, increase above values as 25-year – add 10%, 50-year – add 20%, 100-year – add 25%." It appears that these required increases in the runoff coefficient were not used in the calculation and as a result, peak flows were underestimated for the larger storm events as well as the proposed pond volume.

PRI Response to Comments 1 and 2 by TULLOCH:

The pond volume and runoff calculations have now been updated using the suggested increase in C factors for the higher intensity storms. The new storm pond size requirement is 53 m³, and is shown in **Appendix A** on the revised drawings. The orifice leaving the pond is sized to limit the flows to pre-development 100 year storms. Calculations are attached in **Appendix B**.

Review Comment 3 by TULLOCH:

Section 4 of the report states, "it is not anticipated that the site will be a source of significant water quality issues." No specific water quality control measures have been stated; therefore, we are unable to assess the reasonableness of any water quality control measures. However, as part of the MECP Stormwater Management Manual (2003), water quality is required to be addressed to meet a specified target for any proposed development. We presume that the level of water quality treatment will be for an enhanced system (80% TSS removal efficiency).

PRI Response to Comment 3:

To account for the requirement to treat up to 80% TSS and contain any oil on site, we have added a new oil / grit separator downstream of the control structure .

General Comment 1 by TULLOCH:

For any site with transformers, there is the potential for transformer oil spills, therefore, it is necessary to consider spill containment.

PRI Response to General Comment 1:

As noted by the Electrical Engineer of Record (EER) in the attached correspondence included in **Appendix C**, containment of the transformer is not required as per the appropriate Ontario legislation, furthermore the EER noted the likelihood of these types of failures are very low. Even though spills are not expected to ensure spill containment on site in such an event, we have added a new isolation valve downstream of the control structure and maintained a geomembrane as a precautionary measure and in response to the comments from Tulloch on behalf of the municipality.

General Comment 2 by TULLOCH:

In order to protect against any interaction with the groundwater in the event of a spill or contaminant discharge from an emergency, an impermeable layer is necessary for the stormwater management system. This would also include the SWM pond having a system to completely close off the discharge of the pond to ensure zero discharge of contaminants from the site.

PRI Response to General Comment 2:

Further to our comments above, no spill containment is expected and therefore this is not considered a requirement.

General Comment 4 by TULLOCH:

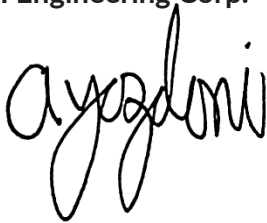
In TULLOCH's experience for a BESS, a SWM pond is sized to accommodate stormwater runoff plus the potential volume to contain contaminants from a spill. The water from a SWM pond could also be utilized to assist in fire suppression in the event of an emergency at the site.

PRI Response to General Comment 4:

The use of water for fire suppression of the batteries is not recommended by the manufacturer, because of the harmful toxins which are released if they encounter water. See attached documentation from EVLO in **Appendix C**.

We trust this meets your current requirements, please contact the undersigned if you have any questions.

Sincerely,
PRI Engineering Corp.

A handwritten signature in black ink, appearing to read 'ayazdani', written in a cursive style.

Arash Yazdani, FEC, CED, P.Eng.
Chief Operating Officer



PRI ENGINEERING

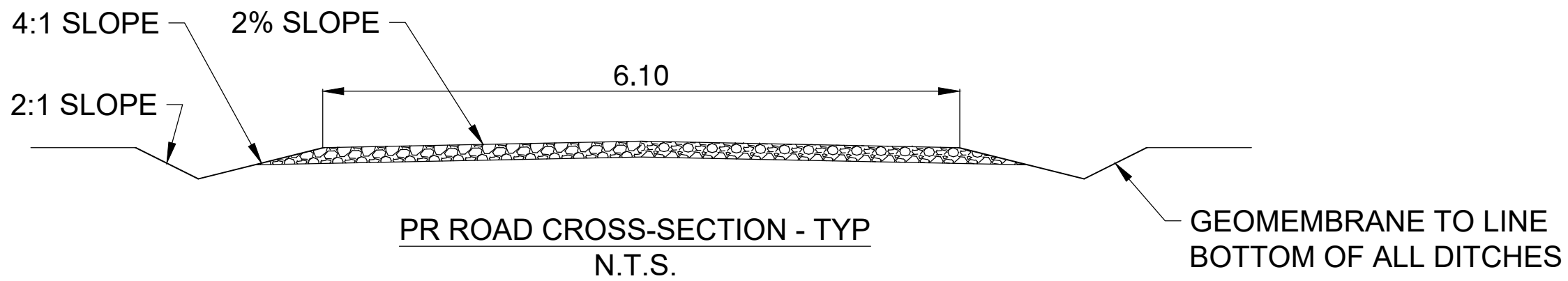
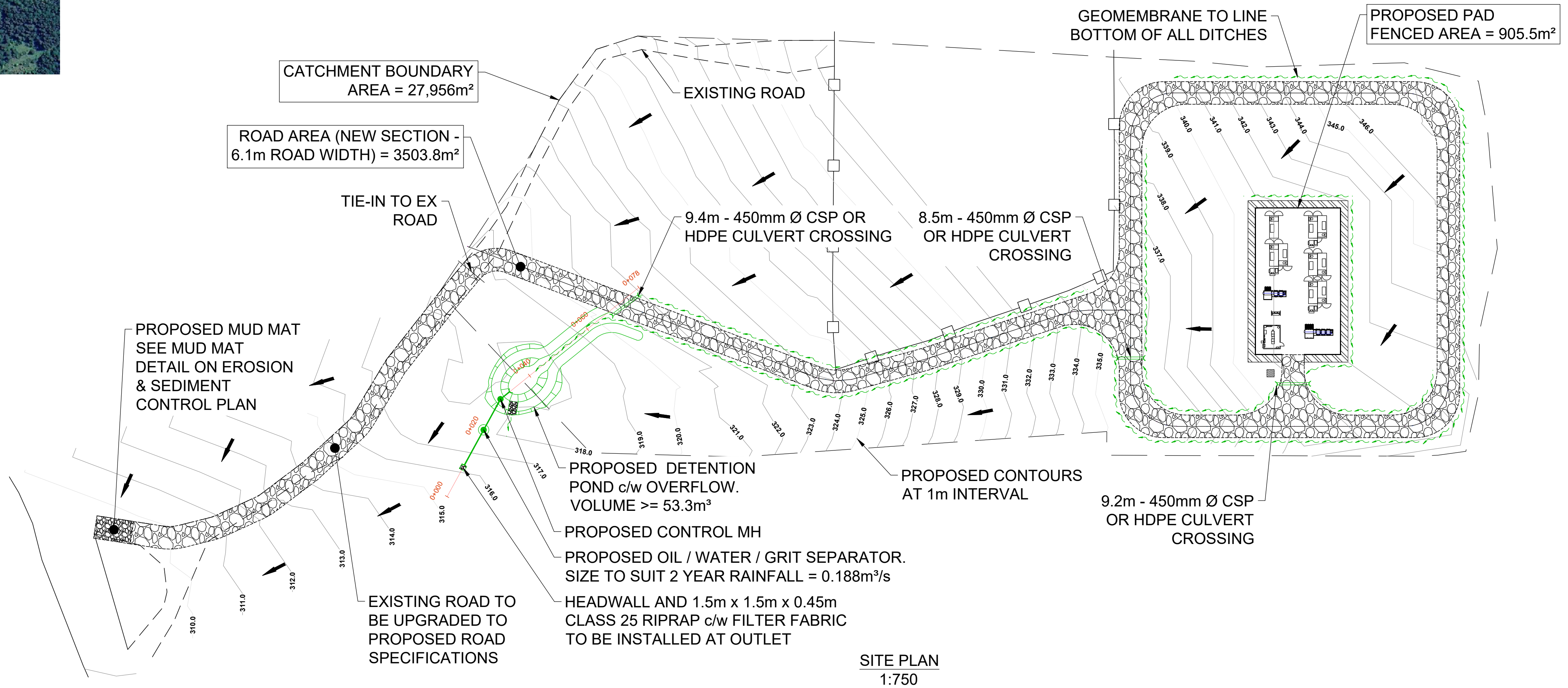
Appendix A

Proposed Overall Drainage Plan



KEY MAP
N.T.S.

APPROXIMATE SITE LOCATION



PR ROAD CROSS-SECTION NOTES:
- 150 mm GRANULAR A COMPACTED TO 98 S.P.M.D.D
- APPROVED NATIVE MATERIAL. TOPSOIL AND ORGANICS TO BE REMOVED. SUBGRADE TO BE APPROVED
BY GEOTECHNICAL ENGINEER OF RECORD AS PER PRI ENGINEERING CORP GEOTECHNICAL REPORT.

PRI ENGINEERING

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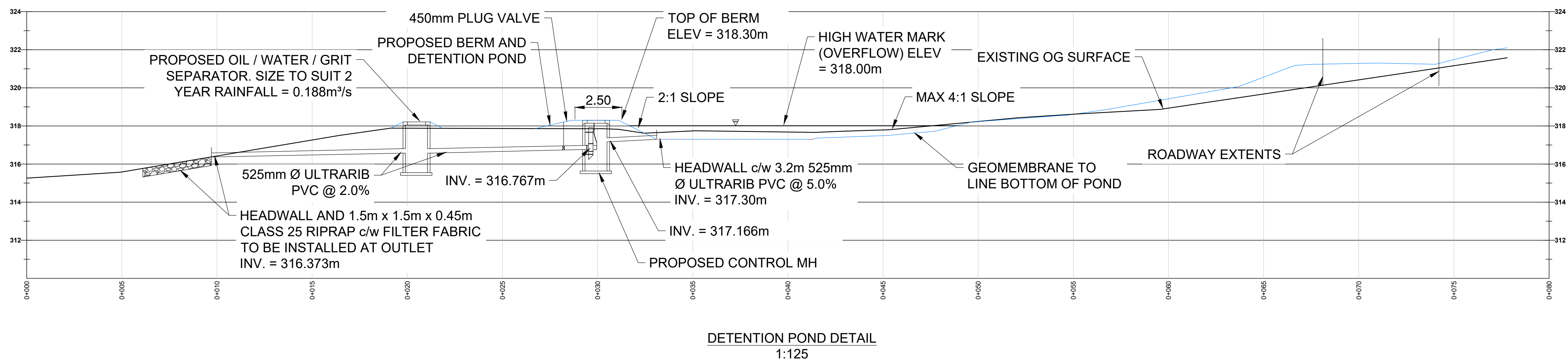
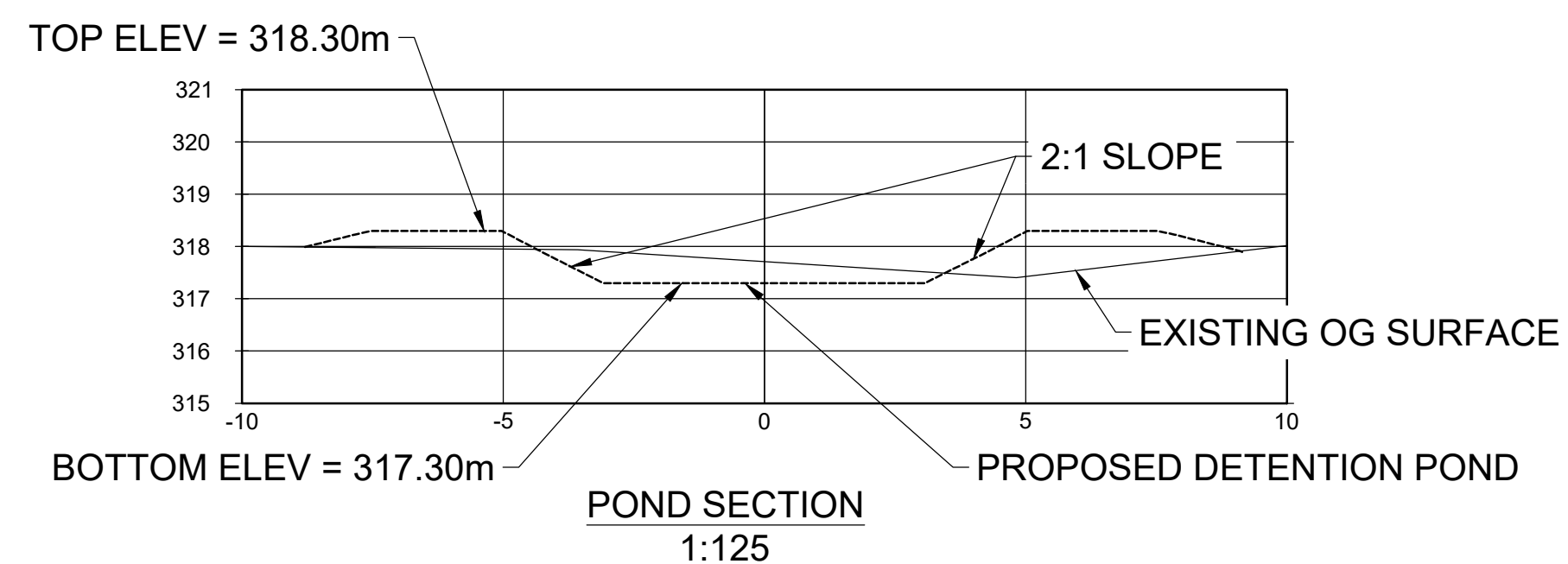
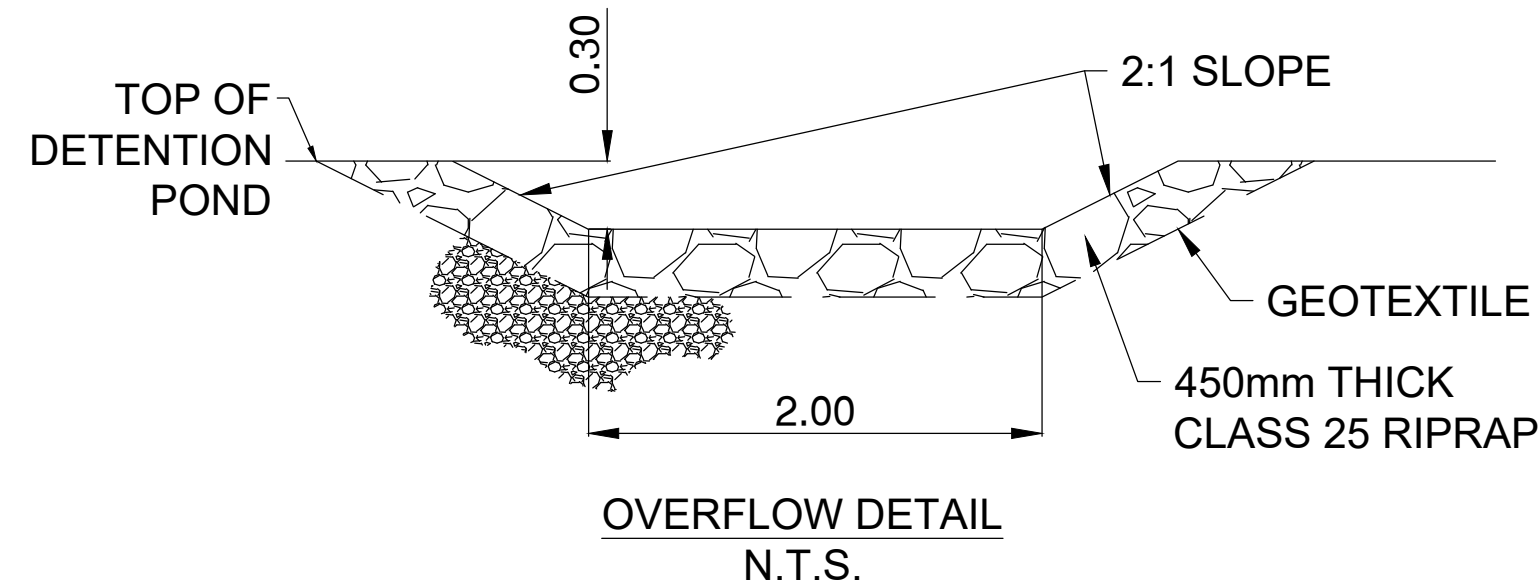
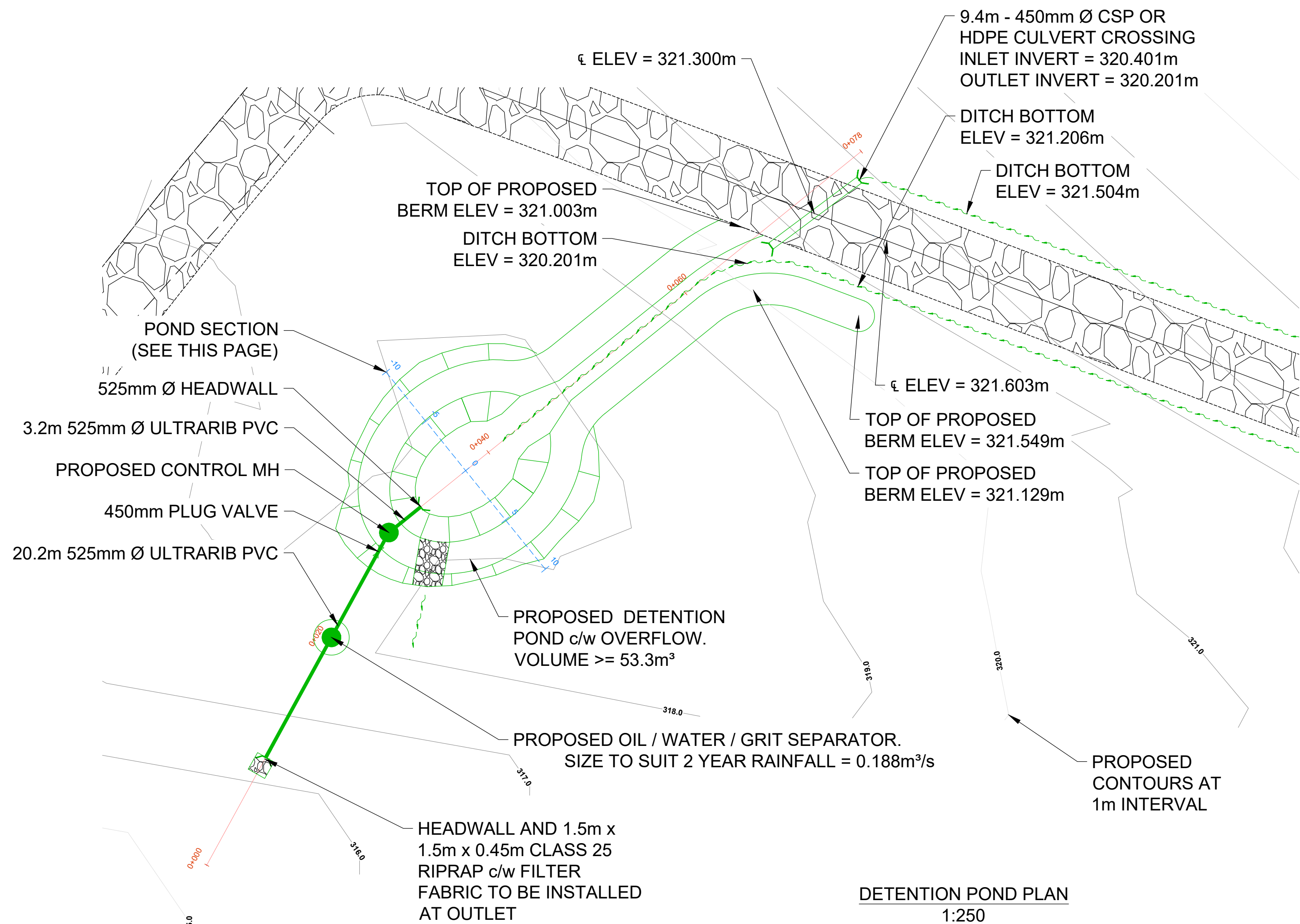
REV NO.	ISSUANCE	DATE
01	ISSUED FOR REVIEW	24-10-25
00	ISSUED FOR REVIEW	24-12-24

PROJECT NAME:
SOLARBANK
SITE 903 - BESS SITE
221 PEGGS MOUNTAIN RD

DRAWING NAME:
PROPOSED OVERALL
DRAINAGE PLAN

PROJ. NO.:	DWG. BY:	CHKD. BY:	APPR. BY:
2500349	BC	KW	KW

DRAWING NUMBER: FIGURE 1



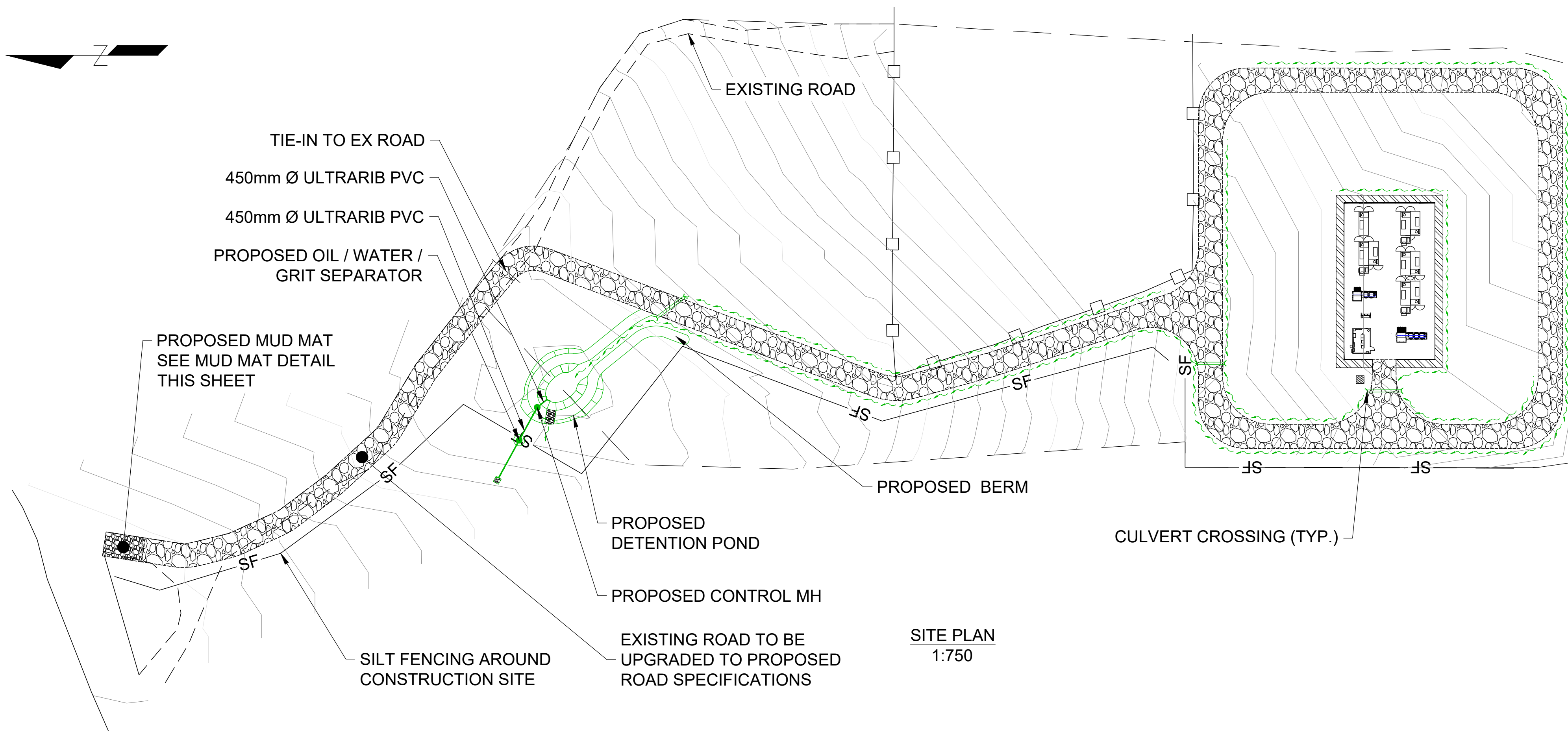
REV NO.	ISSUANCE	DATE
01	ISSUED FOR REVIEW	24-10-25
00	ISSUED FOR REVIEW	24-12-24

PROJECT NAME:
**SOLARBANK
SITE 903 - BESS SITE
221 PEGGS MOUNTAIN RD**

DRAWING NAME:
**PROPOSED DRAINAGE
PLAN - POND DETAILS**

PROJ. NO.:	DWG. BY:	CHKD. BY:	APPR. BY:
2500349	BC	KW	KW

DRAWING NUMBER: FIGURE 2



LEGEND

EXISTING FENCELINE

EXISTING EDGE OF PAVEMENT

EXISTING EDGE OF GRAVEL

PROPOSED SILT FENCE

PROPOSED GRAVEL ACCESS ROAD

PROPOSED CRUSHED STONE (DESIGNED BY OTHERS)

PROPOSED SWALE

PROPOSED POWER SUPPLY PANEL

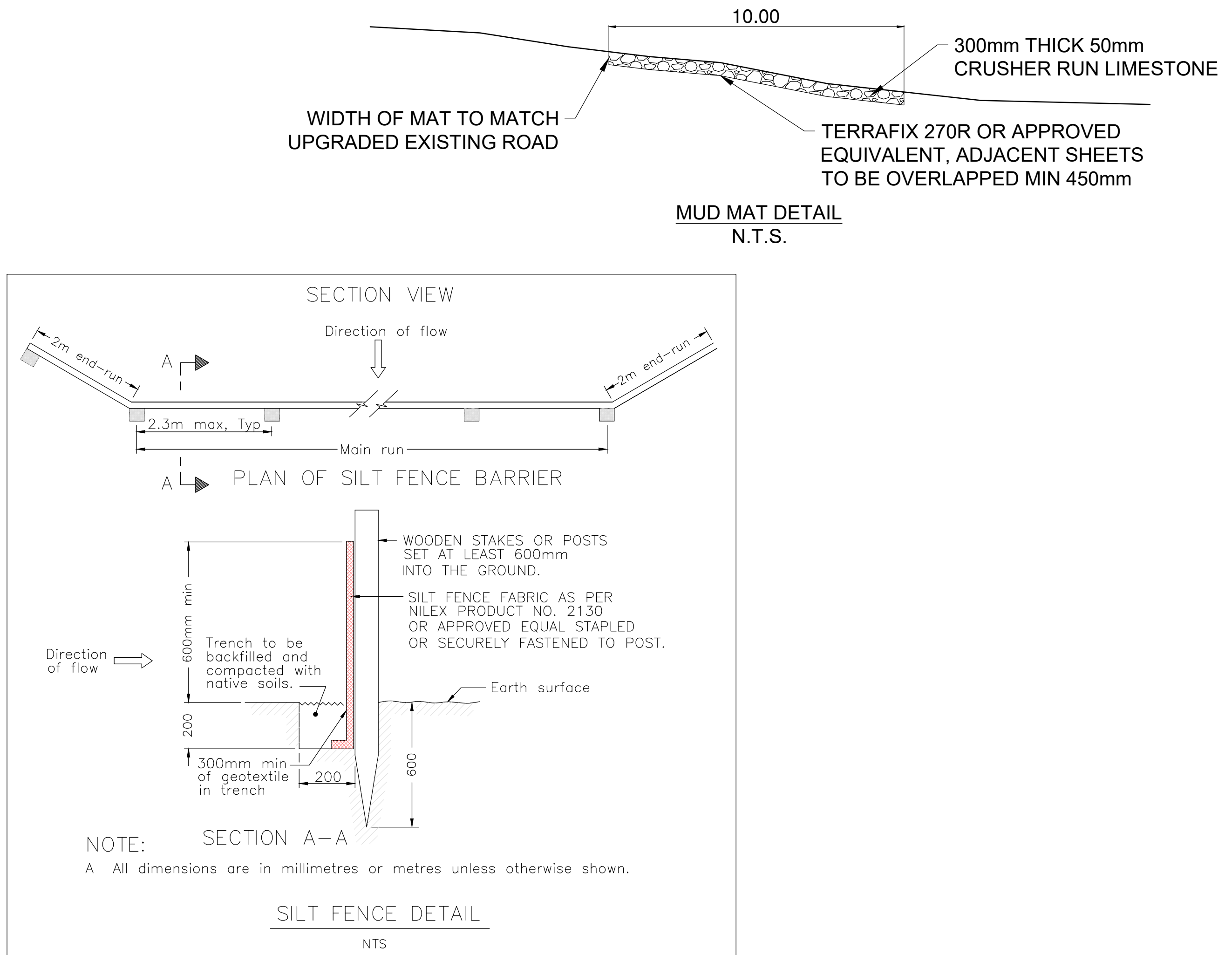
PROPOSED E-HOUSE

PROPOSED LARGE INVERTER

PROPOSED BESS CONTAINER

PROPOSED SMALL INVERTER

PROPOSED PAD MOUNTED UTILITY AUXILIARY TRANSFORMER (DESIGNED BY OTHERS)



EROSION AND SEDIMENT CONTROL PLAN

GENERAL NOTES:

- EROSION AND SEDIMENT CONTROL DRAWINGS ARE PROVIDED FOR REFERENCE ONLY. THEY MAY NOT INCLUDE ALL THE MEASURES REQUIRED. THE CONTRACTOR(S) SHALL COMPLY WITH ALL REGULATORY AUTHORITIES, MINISTRY OF THE ENVIRONMENT, DEPARTMENT OF FISHERIES AND OCEANS CANADA IN THE PROTECTION OF FISH AND RECEIVING WATERBODIES DURING THE CONSTRUCTION OF THE WORKS AND SHALL BE RESPONSIBLE FOR ALL COSTS IN COMPLYING WITH THESE REQUIREMENTS.
- PRIOR TO, AND DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ADEQUATE STEPS, INCLUDING BUT NOT LIMITED TO: DIVERTING FLOWS FROM EXPOSED AREAS, PROVIDING CHECK DAMS AND CHANNEL PROTECTION IN TEMPORARY AND PERMANENT ON SITE DRAINAGE COURSES, INSTALLATION OF SEDIMENT FENCES AROUND THE DEVELOPMENT PERIMETER AS SHOWN AND SOIL STOCKPILES, INSTALLATION OF FILTER OR COMPOST TUBES AROUND THE PERIMETER OF ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCES, POLY SHEETING, HYDRO SEEDING, STRAWING, DITCHING AND ANY OTHER MEASURES AS MAY BE NECESSARY TO PREVENT SEDIMENT AND OTHER DELETERIOUS MATERIALS FROM THE WORKS ENTERING THE STORM SEWER SYSTEM AND RECEIVING WATER COURSE.
- ALL WORK TO BE UNDERTAKEN AND COMPLETED BY THE CONTRACTOR IN SUCH A MANNER AS TO PREVENT THE RELEASE OF TURBID AND SEDIMENT LADEN WATER INTO ANY WATER COURSE AND STORM SEWER. THE QUALITY CRITERIA FOR THE SITE IS THAT ALL RUNOFF GENERATED FROM THE SITE IS TO CONTAIN LESS THAN 75mg/L TSS AFTER SIGNIFICANT RAINFALL EVENTS. TURBIDITY TO BE 25 NTU'S OR LESS DURING NORMAL WEATHER CONDITIONS (LESS THAN 25mm OF RAIN IN A 24 HOUR PERIOD).
- ALL SEDIMENT CONTROLS FACILITIES TO REMAIN IN PLACE UNTIL 90% OF ON-SITE CONSTRUCTION IS COMPLETE.
- DURING CONSTRUCTION AND ONCE ALL CIVIL SITE WORKS ARE COMPLETE, THE DEVELOPER IS RESPONSIBLE FOR ENSURING THAT SEDIMENT CONTROL FACILITIES ARE MAINTAINED AND WORKING ADEQUATELY TO CONTROL ALL DISCHARGES FROM THE SITE.
- ANY IRREGULARITIES BE SHALL BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PAVED ROAD SURFACES ARE KEPT CLEAN OF ANY ACCUMULATIONS OF SOIL UNTIL COMPLETION OF ALL CIVIL WORKS FOLLOWING WHICH IT WILL BECOME THE DEVELOPERS RESPONSIBILITY. FLUSHING IS PROHIBITED. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DUST CONTROL.
- DURING CONSTRUCTION, THE CONTRACTOR MAY NEED TO EMPLOY ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, INTERCEPTOR DITCHES, SILT FENCES, ROCK CHECK DAMS, ETC TO PREVENT THE RELEASE OF SEDIMENT LADEN WATER TO THE EXISTING WATERCOURSES. THE CONTRACTOR SHALL HAVE AN EMERGENCY SUPPLY OF EROSION CONTROL MEASURES ON SITE AT ALL TIMES.
- ALL WORK IN AND AROUND THE EXISTING WATERCOURSES SHALL BE COMPLETED FOLLOWING SPRING FRESHET.

STAGE 1—CLEARING, GRUBBING, STRIPPING & GRADING

- CONTRACTOR TO INSTALL SILT FENCE AT LOCATIONS AS SHOWN ON THIS DRAWING.
- CONTRACTOR TO INSTALL GRAVEL SITE ACCESS PAD AT SITE ENTRANCE. ALL VEHICLES TO ENTER AND EXIT THE SITE VIA THE GRAVEL ACCESS PAD. THE ACCESS PAD SHALL BE CONSTRUCTED WITH 150mm-, CLEAN, WELL GRADED RIP RAP 300mm THICK ON NON-WOVEN FILTER FABRIC.
- CONTRACTOR TO PROVIDE MECHANICAL SWEEPING OF ROADS TO REMOVE ANY ACCUMULATIONS OF SEDIMENT AS A RESULT OF CONSTRUCTION ACTIVITIES. SUCH OPERATIONS TO BE CARRIED OUT ON A WEEKLY BASIS (MIN) OR AS DIRECTED BY THE ENGINEER OF RECORD OR HIS REPRESENTATIVE, PARTICULARLY IN ADVANCE OF INCLEMENT WEATHER CONDITIONS. NO FLUSHING ALLOWED.

STAGE 2—ROADWAY & FACILITY CONSTRUCTION

- STOCKPILES OF EXCAVATED MATERIALS ARE TO BE PROTECTED WITH 6mm THICK POLYETHYLENE SHEETING (OR SIMILAR) AND SURROUNDED BY SILT FENCE TO MINIMIZE SOIL EROSION DUE TO RAINFALL EVENTS.
- STOCKPILES OF EXCAVATED MATERIAL TO BE PROTECTED WITH 6 MIL POLYETHYLENE SHEETING (OR SIMILAR) AND SURROUNDED BY SILT FENCE TO MINIMIZE SOIL EROSION DUE TO RAINFALL EVENTS.

STAGE 3—DECOMMISSIONING

- DECOMMISSIONING OF ALL SEDIMENT CONTROL FACILITIES: ON COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND 90% LANDSCAPING, THE CHECK DAMS, SILT TRAPS ON THE CATCHBASINS AND DITCH INLETS CAN BE REMOVED. THE BALANCE OF SILT FENCE SHALL ALSO BE REMOVED.

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SOLARBANK
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221 PEGGS MOUNTAIN RD

DRAWING NAME:
PROPOSED EROSION AND
SEDIMENT CONTROL PLAN

PROJ. NO.: 2500349	DWG. BY: BC	CHKD. BY: KW	APPR. BY: KW
DRAWING NUMBER:		FIGURE 3	



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Appendix B

Stormwater Drainage Calculations

STORM DRAINAGE CALCULATIONS (MODIFIED RATIONAL METHOD)

Calculations by:
Ecora Consultants Ltd
Kevin Wiens
October 24, 2025

DEVELOPMENT LOCATION

Armour Township - BESS Site 903
Ontario

Catchment Area # 1

PRE DEVELOPMENT FLOW RATES

Q=0.0028CIA^{Ca}

WHERE

Q=FLOWRATE

C=WEIGHTED RUNOFF COEFFICIENT

I=RAINFALL INTENSITY

A=AREA

Ca=ANTECEDENT PRECIPITATION COEFFICIENT

Assuming

28000 m2

Woodland -Silty Loam

C= 0.35

0 m2

Landscaping

C= 0.3

0 m2

Asphalt/Concrete

C= 0.95

0 m2

Building

C= 0.95

Weighted C= 0.35

Area=

2.80 Ha

CALCULATING THE TIME OF CONCENTRATION USING THE AIRPORT FORMULA AS FOLLOWS:

$$T_c = 3.26 (1.1 - C) L^{0.5} S_w^{0.33}$$

WHERE

C=WEIGHTED RUNOFF COEFFICIENT

L=WATERSHED LENGTH

S_w=WATERSHED SLOPE

L= 267 m

S_w= 15 %

T_c= 16.3 min.

Tc		0.0028	*	C	*	I	*	A	Q=	
16.3	2 year	0.0028		0.350		62.4		2.80		0.170 m ³ /s
16.3	5 year	0.0028		0.350		83.2		2.80		0.226 m ³ /s
16.3	10 year	0.0028		0.350		97.7		2.80		0.266 m ³ /s
16.3	25 year	0.0028		0.385		114.5		2.80		0.343 m ³ /s
16.3	50 year	0.0028		0.420		126.8		2.80		0.414 m ³ /s
16.3	100 year	0.0028		0.438		139.4		2.80		0.474 m ³ /s

Note: Intensities include 15% adjustment to account for climate change

POST DEVELOPMENT FLOW RATES

Q=0.0028CIA

WHERE

Q=FLOWRATE

C=WEIGHTED RUNOFF COEFFICIENT

I=RAINFALL INTENSITY

A=AREA

Assuming

23591 m2

Sandy Loam

C= 0.35

3504 m2

Gravel Road

C= 0.5

905 m2

Battery Facility

C= 0.9

Weighted C= 0.39

Area=

2.36 Ha, Pervious

84.25 %

Area=

0.44 Ha, Impervious

15.75 %

Area=

2.80 Ha, Total

Tc		0.0028	*	C	*	I	*	A	
16.3	2 year	0.0028		0.387		62.4		2.8	0.188 m ³ /s
16.3	5 year	0.0028		0.387		83.2		2.8	0.250 m ³ /s
16.3	10 year	0.0028		0.387		97.7		2.8	0.294 m ³ /s
16.3	25 year	0.0028		0.425		114.5		2.8	0.379 m ³ /s
16.3	50 year	0.0028		0.464		126.8		2.8	0.457 m ³ /s
16.3	100 year	0.0028		0.483		139.4		2.80	0.524 m ³ /s

STORAGE VOLUME REQUIRED

Q₁₀₀(POST) - Q_N(PRE) X DURATION X 10% SAFETY FACTOR

Tc	(Post Dev Flow - Pre Dev Flow) * Duration * 10% safety Factor	
16.3	0.524 - 0.474	53.3 m ³

REQUIRED VOLUME

53.3 m³

Orifice Calc s

Size for 100 year predevelopment flow

Orifice = 525mm diameter to restrict flow to 0.474 m3/s

Set units: <input type="checkbox"/> m <input type="checkbox"/> mm <input type="checkbox"/> ft <input type="checkbox"/> in [Hide this line]				Results			
				Flow depth, y	0.5250	<input type="text" value="m"/>	<input type="checkbox"/>
				Flow area, a	0.2165	<input type="text" value="m^2"/>	<input type="checkbox"/>
				Pipe area, a0	0.2165	<input type="text" value="m^2"/>	<input type="checkbox"/>
				Relative area, a/a0	1.0000	<input type="text" value="fraction"/>	<input type="checkbox"/>
Inputs				Wetted perimeter, P _w	1.6493	<input type="text" value="m"/>	<input type="checkbox"/>
Pipe diameter, d ₀	0.525	<input type="text" value="m"/>	<input type="checkbox"/>	Hydraulic radius, R _h	0.1313	<input type="text" value="m"/>	<input type="checkbox"/>
Manning roughness, n	0.013	<input type="text" value=""/>	<input type="checkbox"/>	Top width, T	0.0000	<input type="text" value="m"/>	<input type="checkbox"/>
Pressure slope (possibly ? equal to pipe slope), S _p	5	<input type="text" value="% rise/run"/>	<input type="checkbox"/>	Velocity, v	4.4423	<input type="text" value="m/s"/>	<input type="checkbox"/>
Relative flow depth, y/d ₀	1	<input type="text" value="fraction"/>	<input type="checkbox"/>	Velocity head, h _v	1.0062	<input type="text" value="m H2O"/>	<input type="checkbox"/>
				Froude number, F	0.00	<input type="text" value=""/>	<input type="checkbox"/>
				Average shear stress (tractive force), tau	64.3519	<input type="text" value="N/m^2"/>	<input type="checkbox"/>
				Flow, Q (See notes)	0.9616	<input type="text" value="m^3/s"/>	<input type="checkbox"/>
				Full flow, Q0	0.9616	<input type="text" value="m^3/s"/>	<input type="checkbox"/>
				Ratio to full flow, Q/Q0	1.0000	<input type="text" value="fraction"/>	<input type="checkbox"/>



PRI ENGINEERING

Appendix C

Background Information

Arash Yazdani

From: Ina Lila <ina.lila@powerbankcorp.com>
Sent: November 18, 2025 10:29 AM
To: Ina Lila
Subject: FW: PRI 903 peer review response back up documents.

From: Andrew Durward <adurward@raveneng.ca>
Sent: November 18, 2025 10:13 AM
To: Dennis Stainton <dennis.stainton@powerbankcorp.com>
Cc: Ina Lila <ina.lila@powerbankcorp.com>
Subject: RE: PRI 903 peer review response back up documents.

Dennis,

Further points:

- Transformers have the lowest failure rate of all major electrical equipment
- Most transformer failures do not result in a release of oil
- Transformers are equipped with pressure relief devices to prevent tank rupture in the event of an internal fault

Regards,

Andrew Durward, P.Eng.

Raven Engineering Inc.

905-357-4413 x101 Office
905-327-6838 Cell
adurward@raveneng.ca

6251 O'Neil St., Unit #2
Niagara Falls, ON
L2J 1M6
www.raveneng.ca

From: Andrew Durward <adurward@raveneng.ca>
Sent: Tuesday, November 18, 2025 9:49 AM
To: Dennis Stainton <dennis.stainton@powerbankcorp.com>
Cc: Ina Lila <ina.lila@powerbankcorp.com>
Subject: RE: PRI 903 peer review response back up documents.

Dennis,

There is no legislation in Ontario requiring oil containment for outdoor oil filled transformers.

Electrical utilities typically include oil containment for larger substation transformers (10MVA+)but that depends on their internal environmental policies. I understand they may get a break on insurance if they have containment.

There are thousands of transformers in service with no oil containment, including all of the utility pad mount and pole mount distribution transformers along every street.

Oil containment was not identified as a design requirement for the BESS projects.

Hope this helps,

Andrew Durward, P.Eng.

Raven Engineering Inc.

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adurward@raveneng.ca

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THIS VERSION IS PRELIMINARY.
PENDING REVIEW, APPROVAL AND RELEASE BY THE
APPROPRIATE AUTHORITY.

SAFETY DATA SHEET

EVLOFLEX

1. Identification

Product Identifier:	EVLOFLEX
Other Means of Identification:	Lithium Batteries Installed in a Cargo Transport Unit
Recommended Use and Restrictions on Use:	Energy Storage System by batteries
Initial Supplier Identifier:	EVLO Energy Storage Inc. 1804 Boul. Lionel-Boulet Varennes, Qc, Canada, J3X 1S1 + 1-450-400-1414 info@evloenergie.com https://evloenergie.com/
Emergency Telephone Number (Hours of Operation):	+1-450-400-1527

2. Hazard Identification

Classification of the Product	This product is exempt from hazard classification according to the Hazardous Products Act. This product is not subject to the Workplace Hazardous Materials Information System (WHMIS) and the Globally Harmonized System (GHS) classification.
GHS Information Elements :	
Hazard Pictogram(s) :	Not Applicable
Signal Word :	Not Applicable
Hazard Statements :	Not Applicable
Precautionary Statement :	
Prevention :	Not Applicable
Response :	Not Applicable
Storage :	Not Applicable
Disposal :	Not Applicable

3. Composition/Information on Ingredients

Substance or Mixture :	Mixture
Chemical Name :	Not Applicable
Common Name and Synonyms	Energy Storage System by batteries, Lithium Batteries Installed in a Cargo Transport Unit, EVLOFLEX,
Formula	Not Applicable

Component	CAS Number	Concentration (% weight)
Lithium Battery		
Lithium iron phosphate	156-21-8	40.3
Graphite	7782-42-5	21.5
Copper	7440-50-8	9.86
Ethyl methyl carbonate	623-53-0	9.6
Ethylene carbonate	96-49-1	6.3
Aluminum	7429-90-5	4.68
Lithium hexafluorophosphate	21324-40-3	2.9
Polypropylene	9003-07-0	2.14
Dimethyl carbonate	616-38-6	1.5
Aluminum/Polypropylene film	Not applicable	1.22

4. First Aid Measures

Description of Necessary First Aid Measures:

If contact with the internal contents of an open lithium battery cell:

Inhalation :

Move the person to a well-ventilated area and keep them in a position where they can comfortably breathe. If not breathing, give artificial respiration. Consult a doctor.

Ingestion :

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call Poison Control Center or a doctor.

Skin Contact :

Take off immediately all contaminated clothing. Rinse skin with plenty of water for several minutes. If irritation persists, consult a doctor.

Eye Contact :

Rinse eyes with plenty of water. Remove contact lenses if easily possible. Continue to rinse. Neutral saline solution may be used for rinsing if available. If irritation persists, consult a doctor.

Most Important Symptoms and Effects:

Direct contact with internal electrolyte gel may cause severe eye damage or blindness, and skin irritation or burns. Vapors or mist may irritate eyes, mucous membranes and respiratory tract. Exposure may cause nausea, dizziness and headaches.

Indication of Immediate Medical Attention and Special Treatment Needed:

No further relevant information available.

5. Fire-Fighting Measures

Suitable Extinguishing Media :

In the event of smoke release or fire, let the product smoke or burn until self-extinction. When product is installed, refer to the intervention plan. Contact Evlo.

Unsuitable Extinguishing Media

Do not use foam or dry agent.

Specific hazards arising from the hazardous product:

The contact of water or water vapor and exposed lithium hexafluorophosphate (LiPF₆) may result in the generation of hydrogen and hydrogen fluoride (HF) gas. Fire will produce irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

Special Protective Equipment and Precautions for Fire-Fighters:

Wear self-contained breathing apparatus (SCBA) and protective clothing.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

The battery storage is made of multiple battery modules made of multiple battery cells. In the case of puncture, a limited amount of cells would release a small amount of electrolyte. Due to the internal geometry, the liquid would be contained within the container. For thermal runaway conditions resulting in smoke or fire, no spill is expected outside the enclosure.

For Non-Emergency Personnel:

Avoid contact with the product. Avoid inhalation of vapors. Evacuate hazardous areas and follow emergency procedures.

For Emergency Responders:

Protective clothing, gloves, safety glasses and wear an approved self-contained breathing apparatus. Ensure adequate ventilation. Remove all sources of ignition.

Environmental Precautions:

No specific precaution required.

Methods and Materials for Containment and Cleaning up:

Contact Evlo for maintenance and repair. No immediate action required.

7. Handling and Storage

Precautions for Safe Handling:

Handling Advice

No handling allowed in normal operation mode.

Operators should be trained and strictly abide by operating procedures. Follow Evlo's instructions for handling and transportation. Do not open, disassemble, crush, perforate or burn the container. Do not expose battery enclosure to temperatures outside the range -40°C to 55°C. Keep away from ignition sources and flames.

Hygiene Measures

Not applicable

Conditions for Safe Storage, Including and Incompatibilities:

Follow Evlo's storage recommendations

8. Exposure Controls / Personal Protection

Control Parameter :

Airborne exposures to hazardous substances are not expected when product is used for its intended purpose. The following values are for substances in lithium batteries which have exposure values.

Components	Value	Control Parameters	Basis
Graphite	TWAEV	2 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	TWA	2.5 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	TWA	2.5 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Cooper	TWAEV	Dust : 1 mg/m ³ Smoke : 0.2 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	TWA	Dust : 1 mg/m ³ Smoke : 0.1 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	TWA	Dust : 1 mg/m ³ Smoke : 0.1 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Appropriate Engineering Controls :

Handle in accordance with good industrial hygiene practices and safety procedures.

Individual Protection Measures :

Eyes

Not necessary under normal conditions. In the event of battery breakage or leakage, wear safety glasses when handling batteries.

Skin

Not necessary under normal conditions. In the event of battery breakage or leakage, wear neoprene or natural rubber gloves. Change disposable gloves within 30 minutes of obvious electrolyte contamination. Remove dirty gloves using proper technique. Do not touch the outer surface of the glove. Safety boots are recommended.

Inhalation

Not necessary under normal conditions. In the event of battery breakage or leakage, use a self-contained breathing apparatus (SCBA) or a mask with positive pressure air supply approved by NIOSH or equivalent.

9. Physical and Chemical Properties – Internal Battery cells

Physical state:	Solid
Particle characteristics	Cell
Color:	Not Applicable
Odor:	Odorless
pH:	Not Applicable
Melting point:	Not Applicable
Freezing point:	Not Applicable
Boiling point:	Not Applicable
Flash point	Not Applicable
Flammability:	Contains flammable materials
Upper and lower flammability or explosive limits:	Not Applicable
Vapor pressure:	Not Applicable
Vapor density:	Not Applicable
Relative density:	Not Applicable
Solubility:	Insoluble
Partition coefficient -n-octanol/water:	Not Applicable
Auto-ignition temperature:	Not Applicable
Decomposition temperature:	90°C
Viscosity:	Not Applicable

10.Stability and Reactivity – Internal Battery cells

Reactivity :

Considered non-reactive under normal conditions of use at ambient temperature.

Chemical Stability :

Sealed and normally functioning power cells are considered stable.

Possibility of Hazardous Reaction :

In the event of leakage, a violent reaction may occur when in contact with hot and concentrated acid, strong oxidizers and water.

Conditions to Avoid :

Avoid exposing the cell to fire or temperatures above 80°C. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.

Incompatibles Materials :

Strong bases, combustible materials, reducing agents, strong oxidizing agents, corrosive materials, water or other conductive liquids.

Hazardous Decomposition Products:

This material may release toxic fumes if burned or exposed to fire. Breaching of the cell may lead to generation of hazardous fumes which may include extremely hazardous hydrofluoric acid.

11.Toxicological Information

Likely Routes of Exposure :

Inhalation

None under normal conditions of use. Inhalation may occur if vapors are generated by heat or if cell integrity is compromised. Inhalation of vapors may cause irritation of the upper respiratory tract and lungs.

Ingestion

None under normal conditions of use. Ingestion may occur only if cell integrity is compromised. Ingestion may cause severe chemical burns of the mouth, esophagus and digestive tract.

Skin Contact

Non-irritating to skin under normal conditions of use. Battery electrolytes may cause skin irritation.

Eyes Contact

Non-irritating to eyes under normal conditions of use. Battery electrolyte may cause eye irritation. Battery electrolyte may cause eye irritation.

Symptoms Related to Physical, Chemical and Toxicological Characteristics

Not Available

Delayed and immediate effects, and chronic effects from short term and long-term exposure

Normal safe handling of this product will not result in exposure to substances that are considered human carcinogens.

Numerical Measures of Toxicity :

Not Available

12.Ecological Information

Ecotoxicity :

Aquatic Toxicity : :

Not Available

Terrestrial Toxicity :

Not Available

Persistence and Degradability:

Not readily biodegradable

Bioaccumulative Potential :

Not Available

Mobility in Soil:

Not Available

Other Adverse Effects:

Batteries and cells released into the environment degrade slowly and may release toxic or harmful. Batteries must be disposed of or recycled in accordance with local regulations.

13. Disposal Considerations

Disposal Methods :





Recycling of batteries, cells and energy storage system components is encouraged. Recycle and dispose of waste materials at an approved waste management facility, in accordance with local, state or provincial and federal laws and regulations. Do not dispose of a used battery or cell, or any part of the energy storage system, in the dump. Lithium battery electrolyte must not be dumped in drains, on the ground or in any other waters.

Canada: Dispose of in accordance with local, provincial and federal laws and regulations. Consult the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations.

USA: Dispose of in accordance with local, state and federal laws and regulations. See Universal/Hazardous Waste Regulations for information on disposal of used batteries. In the event of battery leakage or opening, consult hazardous waste regulations under the U.S. Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA).

EU: Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

14. Transport Information

	TDG	DOT	ADR	IMDG	IATA
UN Number	UN3536	UN3536	UN3536	UN3536	UN3536
Proper Shipping Name	Lithium batteries installed in cargo transport unit	Lithium batteries installed in cargo transport unit	Lithium batteries installed in cargo transport unit	Lithium batteries installed in cargo transport unit	Lithium batteries installed in cargo transport unit
Class	 9	 9	 9	 9	9
Packing Group	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Marine Pollutant	No	No	No	No	No
Additional information	UN3536 – TDGR article 2.2 (4)	Special provision: 389	Special provision: 389	S. P.: 389 EMS: F-A, S-I; Category A	Forbidden

Special handling instructions : TDG

Use crane that can handle safely 65,000 lbs (estimated). Use four points at each corner on top of the container. Forklift of 65,000 lbs capacity can also be used.

UN3536 is not included in the RTMD, but a consignor may use the appropriate

	classification in the ICAO Technical Instructions, the IMDG Code or the UN Recommendations to transport dangerous goods within Canada by a road vehicle, a railway vehicle or a vessel on a domestic voyage if these Regulations or the document from which the classification is taken does not forbid their transport. TDGR Article 2.2(4)
DOT	This entry only applies to lithium-ion batteries installed in a cargo transport unit and designed only to provide power external to the cargo transport unit. Hazardous materials necessary for the safe and proper operation of the cargo transport unit (e.g., fire extinguishing systems and air conditioning systems), must be properly secured to or installed in the cargo transport unit and are not otherwise subject to this subchapter.
ADR	This entry applies to lithium-ion batteries installed in cargo transport unit and designed only to provide power external to the cargo transport unit. Dangerous goods necessary for safe and proper operation of the cargo transport unit (e.g. fire extinguishing systems and air-conditioning systems) shall be properly secured to or installed in the cargo transport unit, and are not otherwise subject to ADR
IMDG	This entry applies to lithium-ion batteries installed in cargo transport unit and designed only to provide power external to the cargo transport unit. Dangerous goods necessary for safe and proper operation of the cargo transport unit (e.g. fire extinguishing systems and air-conditioning systems) shall be properly secured to or installed in the cargo transport unit and are not otherwise subject to this Code.
IATA / ICAO	Typically, this applies to lithium-ion batteries installed into multi-modal shipping containers (cargo transport unit) where the completed unit acts as a large storage battery. The completed unit will contain lithium ion batteries plus battery management systems and may include air conditioning and a fire suppression system.

15.Regulatory Information

GHS	This SDS has been completed in accordance with GHS Rev10 (2023)
TDG	This product has been classified in accordance with IATA, IMDG, ADR and TDGR transport regulations.
WHIMIS	This product has been classified in accordance with the hazard criteria of the HPR and the safety data sheet contains all the information required by the HPR.

TSCA	Substances	TSCA Inventory ID#
	Lithium Battery	
	Lithium iron phosphate	19744
	Graphite	15375
	Copper	14994
	Ethyl methyl carbonate	6088
	Ethylene carbonate	1553
	Aluminum	14935
	Lithium hexafluorophosphate	21960
	Dimethyl carbonate	5895

16. Other Information

Glossary :

ADR	Agreement Concerning the International Carriage of Dangerous Goods by Road
DOT	Department of Transport U.S.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HPR	Hazardous Products Regulations
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
OHS	Occupational Safety and Health Administration
ICAO	International Civil Aviation organization
ROHS	Regulation respecting occupational health and safety
TDG	Transportation of Dangerous Goods
TDGR	Transportation of Dangerous Goods Regulations
TSCA	Toxic substances control act
TWA	Time-Weighted Average
TWAEV	Time-Weighted Average Exposure Value
WHIMIS	Workplace Hazardous Materials Information System

References :

CCOHS	https://www.ccohs.ca/index.html
CNESST	https://www.cnesst.gouv.qc.ca/en
HPR	https://laws-lois.justice.gc.ca/eng/regulations/SOR-2015-17/
ROHS	https://www.legisquebec.gouv.qc.ca/en/document/cr/s-2.1,%20r.%2013
TDGR	https://laws-lois.justice.gc.ca/eng/regulations/SOR-2001-286/
SGH Rev. 10, 2023	https://unece.org/transport/dangerous-goods/ghs-rev10-2023

SDS Information

Version :	1	2
Date :	2023-02-01	2025-09-03
By	CFT Canada	TBD - Preliminary.

The information contained in the present sheet is based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of the information provided according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.