22 May 2025

Desalegn Edossa, D.Eng., P.Eng.
Environmental Engineer
Land Use, Waste Management & Energy
Environmental Approvals Branch
Department of Environment and Climate Change
14 Fultz Blvd,
Winnipeg, MB R3Y 0L6

Via email: desalegn.edossa@gov.mb.ca

Re: **Responses to EAB Questions for Tank Farm Notice of Alteration**
GFL Environmental Services Inc.
File No 4320.10 GFL Kenaston Hazardous Waste Facility Licence No 334 HW

Dear Mr. Edossa:

GFL is in receipt of your email dated May 6, 2025, seeking clarification on items related to GFL's Notice of Alteration (NoA), that was submitted to EAB on March 18, 2025. This letter will outline the question posed by EAB and provides GFL's corresponding response.

1. Please provide location and design details of the following:
    a. bulk truck/tanker off-loading pad(s);
    b. and secondary containment includes berm height, freeboard, floor slope, and sump. Additionally, please confirm that the secondary containment meets the required volumetric capacity.

    Design drawings are attached.

2. Please confirm if there will be replacement for process tanks P1 to P4 and explain how the removal of these tanks will affect the existing process;

    There will be no replacement for these tanks as the process of dewatering used oil has changed to avoid excessive heat and associated air emissions. The existing tanks P1 to P4 are now used as storage tanks for both waste and processed fuel. GFL's process has been modified so that any tank at the facility can be used for alternate fuel production. The Site operations plan has been updated to reflect this change as well as the SOPs for the Site.

3. Please identify if there will be any changes to process tanks P5 to P8;

    There are no changes to process tanks P5 to P8 inside Building A.

4. Please specify the method used to transfer processed oil from the process tank farm to the main/storage tank farm. What is the secondary containment for the transfer areas (from the storage to process tanks and bulk truck/tanker to storage tank);

   Waste fluids are transferred using the truck mounted pump to tank farm tanks using appropriately rated flexible hoses. Hose to hose connection is done through a cam lock. There are SOPs in place and additional containment practices in place (i.e., spill tray underneath the connection point). The transfer points into the tanks are located inside the berm area around the tank farm which has been designed for secondary containment. The spill trays provide an additional level of mitigation.

5. Please describe the fate of Monitoring Well (MW4), which appears to be located along the east property line near the proposed new tank farm;

   The monitoring well will be left in place, with a buffer of 2.0 m from the farm so that it can be accessed.

6. Please provide a description of the adjacent properties. Please identify any potential impacts on the surrounding and adjacent properties (due to the tank farms activities) and propose ways to mitigate those impacts.

Direction	Adjacent Property	Potential Impacts and Mitigation
North	Lowsen Crescent, A&W/Husky Card Lock across the road	Site operations are contained within a fenced compound. The tank farm is constructed in accordance with the applicable codes and standards. This includes ensuring the tank farm is sited at the required set back distances as outlined in the National Fire Code Section 4.3.2.1. The tank farm will have in place operational controls to minimize any potential hazards or risks associated with its operation.
East	Wallace and Wallace Fencing	
South	Foundations Buildings Materials	
West	Kenaston Boulevard, IKEA across the road	

7. Please correct the following inconsistencies in the NoA report, and resubmit the corrected version:
   a. the table on Page 3 lists volume of the new tanks as “24,000L,” which appears to be an error; and
   b. the number of existing tanks to be removed from the main tank is noted as “14” on Page 2 and Page 4 (section 1.1) and “15” on Page 3. Please clarify the correct number and indicate the fate of the horizontal storage tank (identified as Tank B1 in clause 58 of the licence) if only 14 tanks are to be removed.

   Corrected and resubmitted with this letter. Tank B1 will remain.

8. For new tanks such as Tank #3, the contents are listed as Waste Solvent, Waste Oil, and Waste Flammable Liquids. Are these wastes intended to be mixed, or will the tank be used alternately for each type?

    Tanks that have been identified as storing Class I Flammable Liquids (waste solvent, waste fuel) and Class II Combustible Fluids (waste oil), as defined by section 4.1.2.1. of the National Fire Code of Canada, can potentially contain mixed fluids. The process of producing alternative fuel allows for the addition of Class I fluids to the used oil therefore a mix of Class I and Class II fluids can occur as per the authorized process. Tanks that are identified as only containing Class II Combustible fluids will not be authorized to contain Class I Flammable fluids.

9. Will this alteration result in traffic interruption and changes to traffic volume (during the construction/ tanks removal/ tanks installation and operating stages), and is there a plan in place to mitigate any potential negative impacts on the surrounding community?

    The removal of the existing tank farm and the construction of the new tank farm does not result in changes to the traffic volumes. The construction of the new tank farm and decommissioning of the existing tank farm is being scheduled to reduce the potential for increased traffic or traffic concerns to the surrounding area – i.e., outside of peak traffic flow times in the area.

10. As per section 4.3.2.2. of the National Fire Code (2020), the minimum distance between every combination of two aboveground storage tanks shall be 0.25 times the sum of their diameters, but shall be not less than 1 m. Please confirm that this requirement is met in your design plan.

    Section 1.3 of the NoA addresses the minimum distance required as per Section 4.3.2 of the NFC.

11. Does the proposed liner material (LLDPE) meet the requirements for secondary containment? Please provide documentation demonstrating that the proposed liner meets the relevant regulatory or industry standards for secondary containment. Please also comment on the compatibility of the LLDPE liner material with the type of waste being stored in the tank.

    The liner that is being proposed follows the ULC “Standard for Liners Used for Secondary Containment of Aboveground Flammable and Combustible Liquid Tanks.” The standard outlines the minimum requirements for the material properties and performance of liners used for secondary containment under and around the area of tanks that are installed above ground for the storage of flammable liquids and combustible liquids. Liners used for secondary containment are intended for permanent installation to contain spills or leakage of product for a temporary period. Specifications and drawings are attached.

12. Is the proposed tank material compatible with the types of waste to be stored or processed? Please provide supporting information to confirm that the proposed tank material complies with applicable standards. Additionally, clarify whether the aboveground storage tanks will be filled manually or automatically. We also noted that Drawing No. VSW 125000 25003479 references ULC S601; however, some tanks are intended to store used oil, which may require compliance with ULC S652. Please clarify.

    The CAN/ULC-S601-14 is a National Standard of Canada that focuses on aboveground steel tanks used for flammable and combustible liquids The standard is applicable to the storage of flammable and combustible liquids, which can include used oil, and is not limited to specific types of oil. The standard covers tanks that are fabricated, inspected, and tested for leakage before shipment. Westeel uses this standard for the construction of both single walled and double walled tanks. As noted in the standard these tanks are designed for use in stationary installations. The specific gravity of liquids to be stored in the tanks cannot be greater than 1.0. The specific gravity of used oil typically falls within the range of 0.8 to 1.0.

13. Please comment on the susceptibility of the tanks to side wall buckling due to strong winds. What standards are followed to construct them such that their structural integrity is not compromised due to wind?

    The tanks that are being installed have been constructed by Westeel in compliance with the ULC standard S601. These tanks are engineered with high-quality materials and construction techniques to ensure structural integrity, including using superior quality carbon steel like ASTM A1011 or A36. Westeel tanks undergo rigorous testing, including pressurized air tests and liquid soap seam tests, to confirm their integrity.

14. Please provide information about the proposed overfill prevention and corrosion protection for the tank farm.

    The ULC Standards for overfill prevention and corrosion protection as required under the various regulatory requirements, such as the B139 Series and the CCME Guidelines, will be in place for the new tank farm, which is consistent to what is currently in place for the existing tank farm.

If you require any additional information, please contact the undersigned at 780-805-6107 or cprichard@gflenv.com.

Yours Sincerely,

GFL Environmental Services Inc.

Cameron Prichard
EHS Manager - Compliance
(cell): 780 805 6107
cprichard@gflenv.com

cc: Colin Dutton, Ray Poppl

NOTES:
Refer to ENG-TECH Geotechnical Report 25-166-17
(4.2. Foundation / 4.2.1 Compacted Granular Pad)

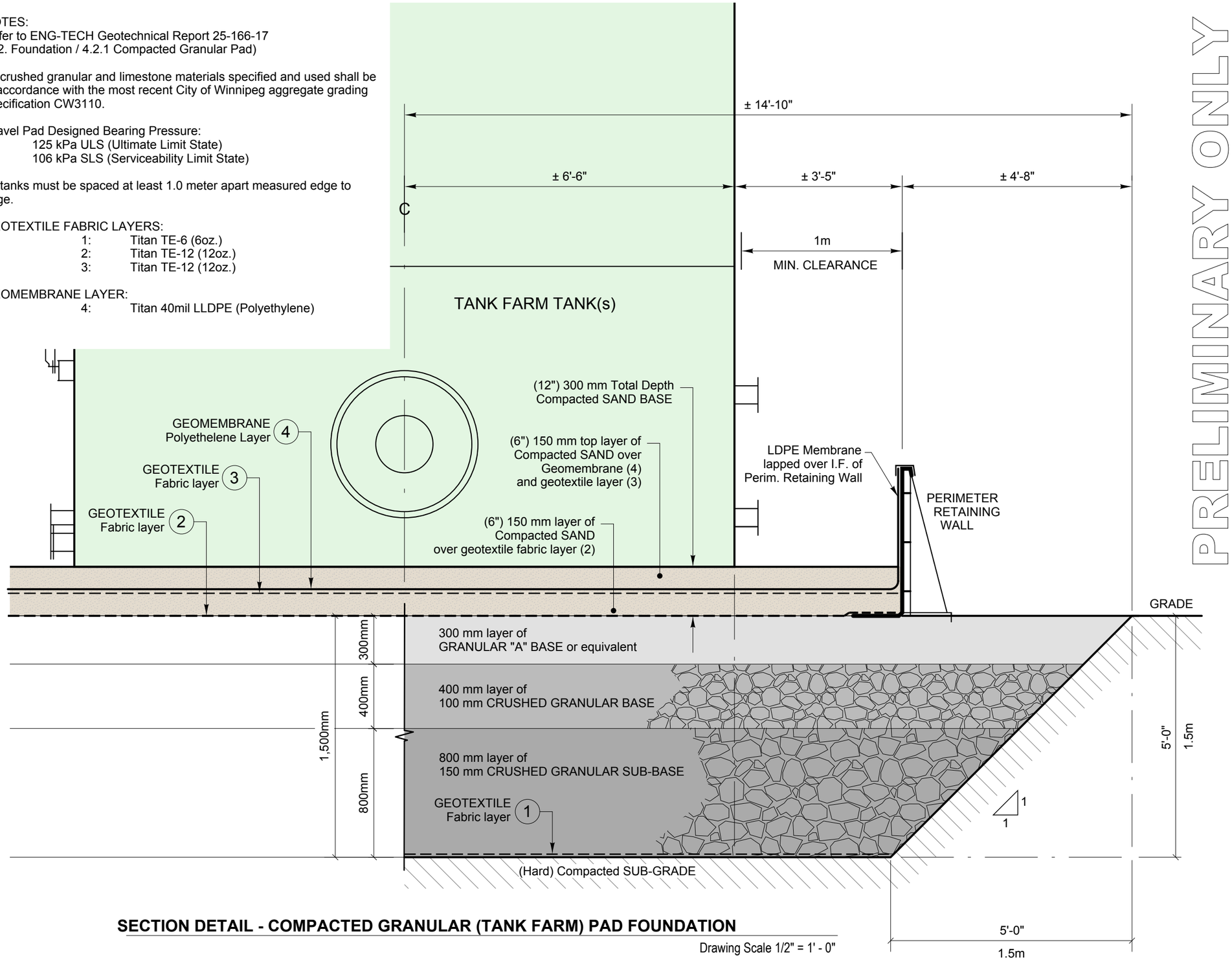
All crushed granular and limestone materials specified and used shall be in accordance with the most recent City of Winnipeg aggregate grading specification CW3110.

Gravel Pad Designed Bearing Pressure:
125 kPa ULS (Ultimate Limit State)
106 kPa SLS (Serviceability Limit State)

All tanks must be spaced at least 1.0 meter apart measured edge to edge.

GEOTEXTILE FABRIC LAYERS:
1: Titan TE-6 (6oz.)
2: Titan TE-12 (12oz.)
3: Titan TE-12 (12oz.)

GEOMEMBRANE LAYER:
4: Titan 40mil LLDPE (Polyethylene)



SECTION DETAIL - COMPACTED GRANULAR (TANK FARM) PAD FOUNDATION

Drawing Scale 1/2" = 1' - 0"

PRELIMINARY ONLY

Design-Build:

VALLEY BUILDERS
Box 157 Morris, MB. R0G 1K0
Ph: 204.746.8792
Email: info@valleybuilders.ca

MAY 17 / 2025 DRAFT 03

Revision	Date	Description	By

Project Title

GFL Environmental Services Inc.

1090 KENASTON BLVD.
Winnipeg, MB

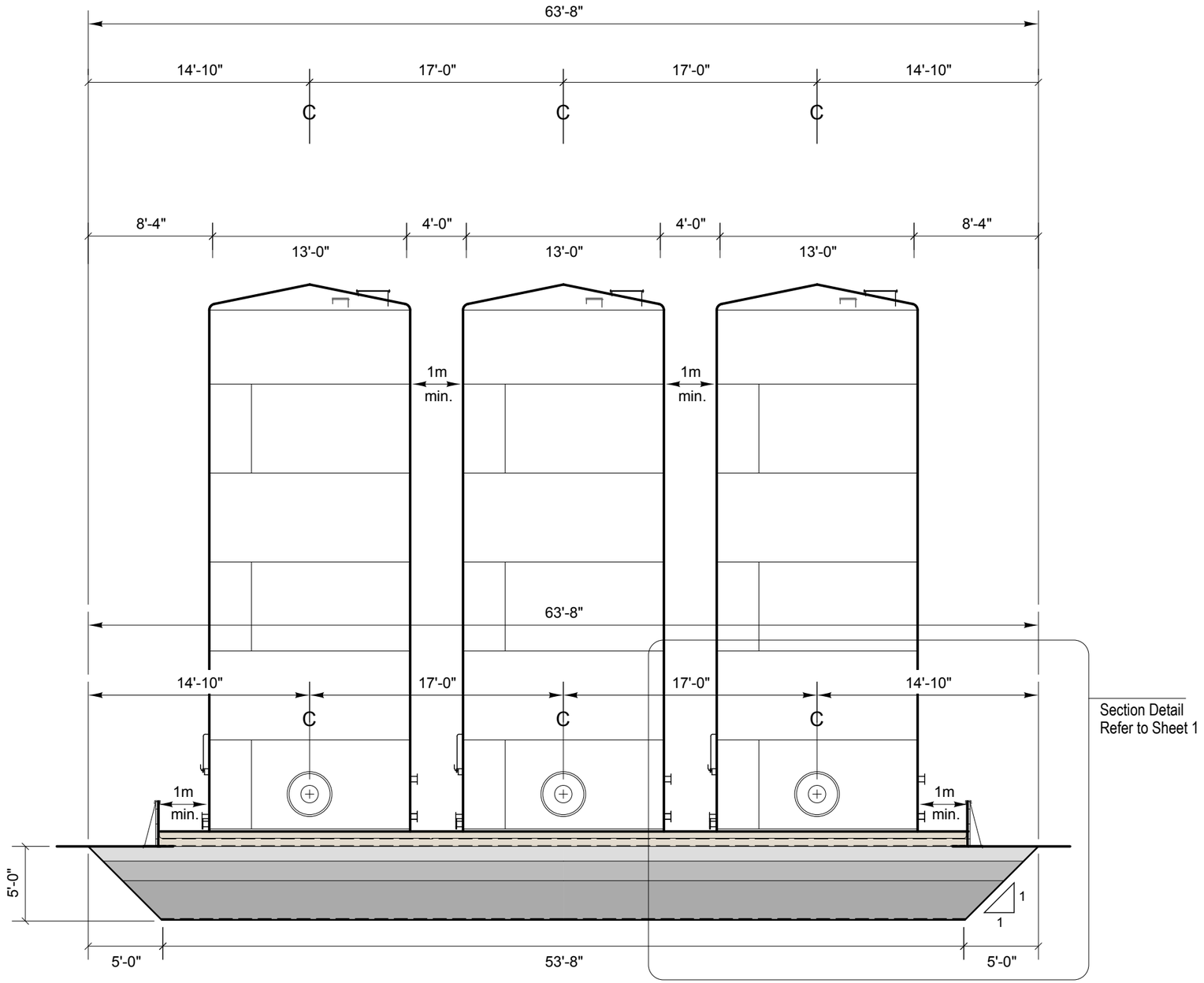
Sheet Title

GRANULAR PAD FOUNDATION DETAIL

Drawn By: TW
Drawing Date: MAY 17 / 2025
Checked By: TW

Sheet No.
1

Print Data: 100% TABLOID paper:11" x 17"



SECTION - COMPACTED GRANULAR (TANK FARM) PAD FOUNDATION

Drawing Scale 1/4" = 1' - 0"

PRELIMINARY ONLY

Design-Build:

VALLEY BUILDERS

Box 157 Morris, MB. R0G 1K0
Ph: 204.746.8792
Email: info@valleybuilders.ca

Revision	Date	Description	By
	MAY 17 / 2025	DRAFT 03	

Project Title

GFL Environmental Services Inc.

1090 KENASTON BLVD.
Winnipeg, MB

Sheet Title

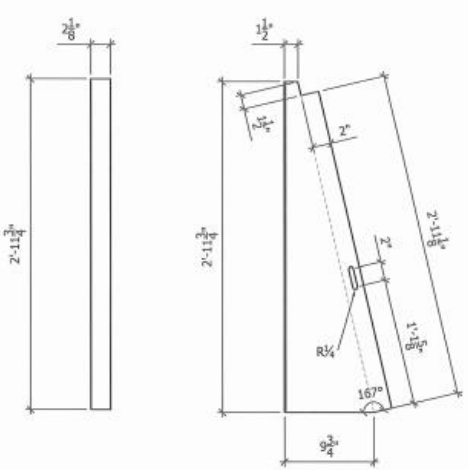
GRANULAR PAD FOUNDATION SECTION

Drawn By:	TW
Drawing Date:	MAY 17 / 2025
Checked By:	TW

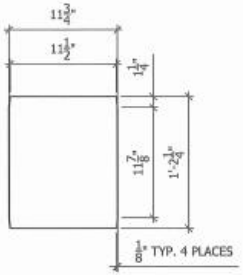
Sheet No.

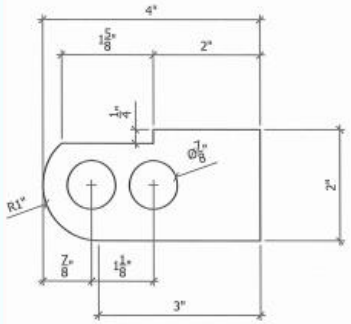
2

Print Data: 100% TABLOID paper:11" x 17"



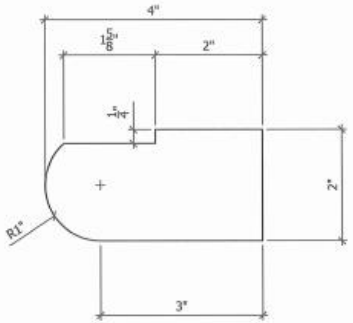
1 LEG DETAILS
1" = 1'-0"





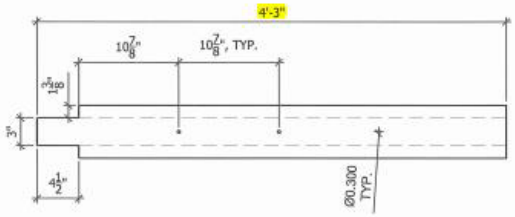
Holes

2 CLIP DETAIL
6" = 1'-0"

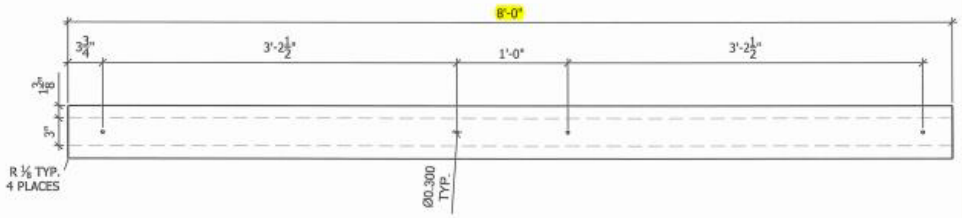


No Holes

3 CLIP DETAIL
6" = 1'-0"



4 4' RIDGE CAP DETAIL
1" = 1'-0"



5 8' RIDGE CAP DETAIL
1" = 1'-0"

BAR Engineering
t: (780) 875-3583
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e: INFO@BAReng.ca
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6004 - 50th Avenue
Lloydminster, AB
T9V 2T9

SURETUF CONTAINMENTS LTD.
www.suretuf.com

[redacted]

[redacted]

FLUID SECONDARY CONTAINMENT SYSTEM

ALBERTA

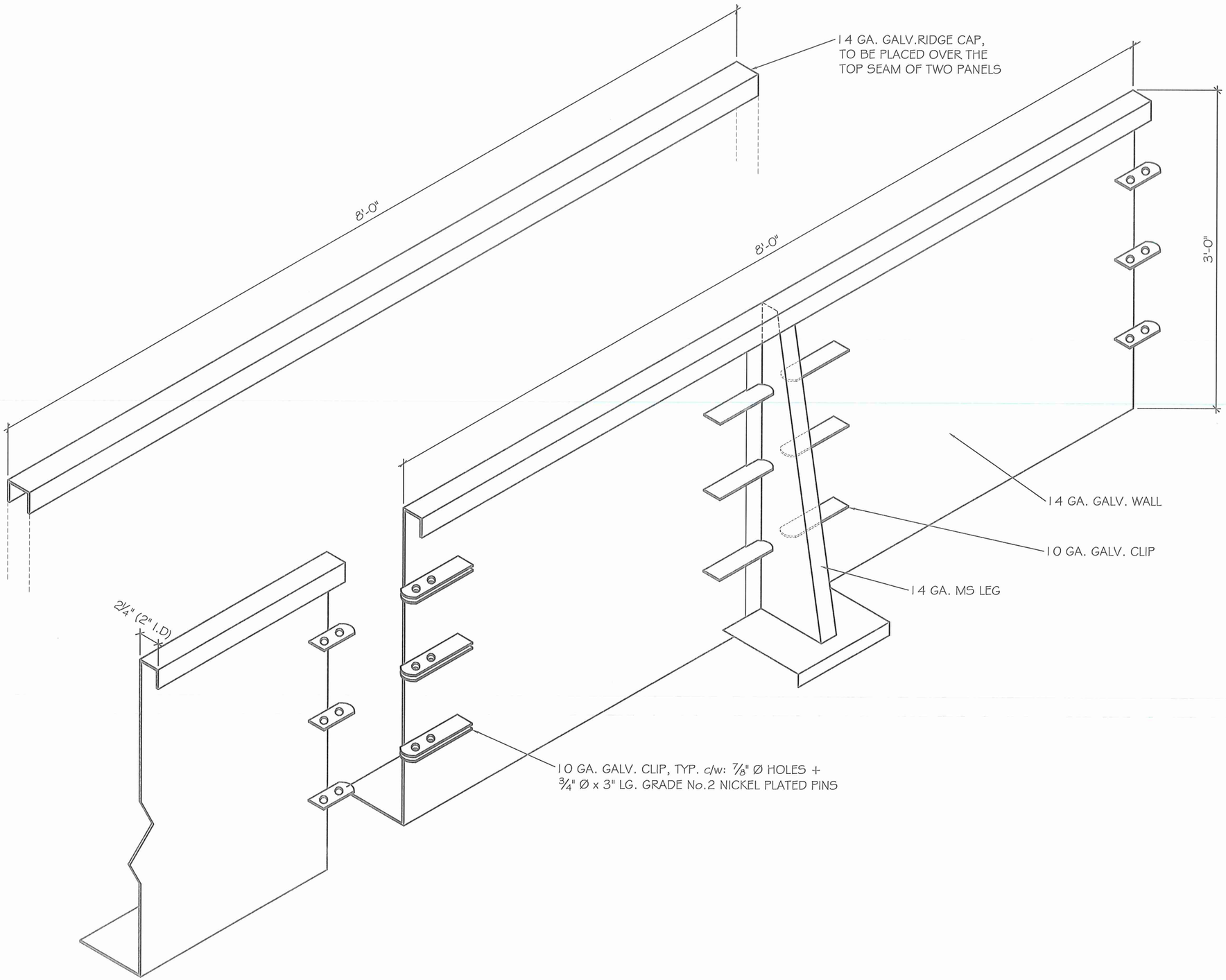
COMPONENT DETAILS (36" WALL)

12-3130

AS SHOWN

RH

S1.2



1 ISOMETRIC VIEW
1" = 1'-0"

Consultant:
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6004 – 50th Avenue
Lloydminster, AB
T9V 2T9

Client:
PATENT # 2362105
SURETUF CONTAINMENTS LTD.
www.suretuf.com

[redacted]

Seals:

No.	Description	Drn.	Chk.	Appr.	Date:
1	ISSUED FOR CONSTRUCTION	BA	RH	-	SEP 11 '12
0	ISSUED FOR REVIEW	BA	RH	-	AUG 29 '12

Drawing Revisions:

Project:
FLUID SECONDARY CONTAINMENT SYSTEM

Location:
ALBERTA

Drawing Name:
36" WALL STRUCTURAL ISO VIEW

Project No.: 12-3130	Drawing No.: S1.1
Scale: AS SHOWN	
Leader: RH	

TE-6

6oz CIVIL NONWOVEN GEOTEXTILE

TITAN
BUILD YOUR LEGEND

Titan has provided the containment and erosion control industries with the highest quality geotextiles available. Our nonwoven needle punched geotextiles are manufactured using polypropylene fibers, which are formed into a dimensionally stable network which allows the fibers to maintain their relative position. These products resist ultraviolet deterioration, rotting, biological degradation, and are inert to commonly encountered soil chemicals.

TESTED PROPERTY	TEST METHOD	UNIT ENGLISH (METRIC)	VALUE ENGLISH (METRIC)
Grab Tensile	ASTM D 4632	lbs (N)	160 (712)
Grab Elongation	ASTM D 4632	%	50
CBR Puncture Resistance	ASTM D 6241	lbs (N)	410 (1825)
Trapezoid Tear	ASTM D 4533	lbs (N)	60 (267)
Permittivity*	ASTM D 4491	1/sec	1.5
Water Flow*	ASTM D 4491	gal/min/ft² (l/min/m²)	110 (4482)
Apparent Opening Size (AOS)	ASTM D 4751	US Sieve (mm)	70 (0.212)
U.V. Resistance	ASTM D4355	%/hrs	70/500
TYPICAL ROLL DIMENSIONS			
Roll Width		ft	12.5 x 360 15 x 300
Roll Area		yd²	500
Estimated Roll weight		lbs	200

NOTES:
MARV. Minimum Average Roll Value.
Maximum average roll value ASTM D 4751- AOS.
Mullen Burst ASTM D 3768 has been removed. It is not recognized by ASTM D 35 on Geosynthetics.
Puncture ASTM D 4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D 6241.

***At the time of manufacturing. Handling may change these properties**

Titan Environmental Containment

Toll free: 1-866-327-1957 | info@titanenviro.com | **TitanEnviro.com**

Rev. January 2024

TE-12

12oz CIVIL NONWOVEN GEOTEXTILE

TITAN
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Titan has provided the containment and erosion control industries with the highest quality geotextiles available. Our nonwoven needle punched geotextiles are manufactured using polypropylene fibers, which are formed into a dimensionally stable network which allows the fibers to maintain their relative position. These products resist ultraviolet deterioration, rotting, biological degradation, and are inert to commonly encountered soil chemicals.

TESTED PROPERTY	TEST METHOD	UNIT ENGLISH (METRIC)	VALUE ENGLISH (METRIC)
Grab Tensile	ASTM D 4632	lbs (N)	300 (1335)
Grab Elongation	ASTM D 4632	%	50
CBR Puncture Resistance	ASTM D 6241	lbs (N)	825 (3671)
Trapezoid Tear	ASTM D 4533	lbs (N)	115 (511)
Permittivity*	ASTM D 4491	1/sec	1.0
Water Flow*	ASTM D 4491	gal/min/ft² (l/min/m²)	75 (3055)
Apparent Opening Size (AOS)	ASTM D 4751	US Sieve (mm)	100 (0.150)
UV Resistance	ASTM D 4355	%/hrs	70/500
TYPICAL ROLL DIMENSIONS			
Roll Dimensions		ft	12.5 x 360 15 x 300
Roll Area		yd²	500
Estimated Roll weight		lbs	375

NOTES:
MARV. Minimum Average Roll Value.
Maximum average roll value ASTM D 4751 - AOS.
Mullen Burst ASTM D 3768 has been removed. It is not recognized by ASTM D 35 on Geosynthetics.
Puncture ASTM D 4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D 6241.

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Rev. January 2024

TITAN 40MIL LLDPE

LLDPE Smooth Geomembrane

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Titan's 40mil polyethylene is produced from virgin polyethylene resins. It has outstanding flexibility and elongation characteristics. Titan's 40mil Polyethylene contains approximately 97.5% polymer and 2.5% carbon black, antioxidants, and heat stabilizers, and contains no additives, fillers, or extenders. Titan's 40mil Polyethylene does not contain plasticizers which can migrate to the surface, causing premature aging. Manufactured from virgin polyethylene resins, it is designed to provide a high-quality, economical Geomembrane.

TESTED PROPERTY	TEST METHOD	UNIT ENGLISH (METRIC)	VALUE ENGLISH (METRIC)
Thickness	ASTM D 5199	mil (mm)	41.5 (1.04)
Density	ASTM D 1505	g/cm^3	0.939
Tensile Strength – Strength at Break	ASTM D 6693	lb/in-width (kN/m)	185 (32)
Tensile Strength – Elongation at Break	ASTM D 6693	%	875
Tear Resistance	ASTM D 1004	lb (N)	27
Puncture Resistance	ASTM D 4833	lb (N)	75
Dimensional Stability	ASTM D 1204	%	< 2
Carbon Black Content	ASTM D 1603	%	> 2.5
Hydrostatic Resistance	ASTM D 751	psi	250
Volatile Loss Method A	ASTM D 1203	%	< 1
Low Temp. Impact Failure	ASTM D 746	˚F	< -94
Resistance to Soil Burial	ASTM D 3083	%	± 10
Environmental Stress Crack Resistance Hours to Failure	ASTM D 5397	hrs	> 400
Perms	ASTM E96	grains/ft^2/hr/in Hg.	0.022
Bonded Seam Strength	ASTM D 4645	lbf/in width	80
Seam Peel Adhesion	AST MD 4645	lbf/in width	69

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Rev. August 2023