

Atlantis®
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Cloverdale Detention

Project Location

Cloverdale, BC, Canada

Atlantis Application

On-Site Stormwater Detention

Project Overview

The project required an underground on-site detention tank measuring 97 m long × 3.5 m wide × 0.50 m high. The system was constructed using Single Flo-Vault® Heavy Duty modules, with geofabric and a plastic liner forming part of the underground tank configuration.

The tank design incorporated up to 3 metres of cover, together with 375 mm pipe connections integrated into the modular structure using pipe boots. Atlantis also provided technical design assistance and prepared project-specific shop drawings in coordination with a local engineer.

Technical Summary

Project	Cloverdale Detention
Location	Cloverdale, BC, Canada
Application	On-Site Stormwater Detention
Completion	April 2026
Size	170 m^3
Surface Use	--
Atlantis System	Flo-Vault®

Design Challenge

The project required a long, shallow underground detention tank capable of providing stormwater storage within a 97 m × 3.5 m footprint and an overall tank height of 0.50 m.

In addition to the tank geometry, the design needed to accommodate substantial burial conditions, with up to 3 metres of cover above the system. The detention tank also needed to interface directly with 375 mm stormwater pipes, requiring the pipe penetrations to be integrated into the lined modular tank without compromising the required connection arrangement.

Atlantis worked with a local engineer during the design development and prepared shop drawings for the project, coordinating the modular tank configuration and pipe interfaces before installation.

01 Provide an underground on-site detention tank.

02 Configure the tank to approximately 97 m long × 3.5 m wide × 0.50 m high.

03 Use Single Flo-Vault® Heavy Duty modules.

04 Accommodate up to 3 metres of cover above the tank.

05 Integrate 375 mm stormwater pipes into the modular tank.

06 Incorporate pipe boots at the 375 mm pipe connections.

Solution

The detention system was configured using Single Flo-Vault® Heavy Duty modules, forming a long, shallow tank measuring 97 m × 3.5 m × 0.50 m.

The modular tank was incorporated within a geofabric and plastic liner system, creating the lined underground detention structure. The Heavy Duty Flo-Vault® configuration was selected for an installation condition incorporating up to 3 metres of cover.

The 375 mm stormwater pipes were connected to the tank using pipe boots, allowing the pipework to interface directly with the lined modular system. Atlantis provided technical input during the design process in coordination with the local engineer and prepared shop drawings detailing the project-specific tank configuration.

Benefits

- Long, shallow 97 m × 3.5 m × 0.50 m tank configuration.
- Single Flo-Vault® Heavy Duty modules used throughout the underground detention system.
- System designed to accommodate up to 3 metres of cover.
- 375 mm pipe connections integrated directly into the tank.
- Pipe boots incorporated at the pipe penetrations.
- Project-specific design assistance and shop drawings provided by Atlantis.

Considerations

The underground tank incorporated Single Flo-Vault® Heavy Duty modules together with geofabric and a plastic liner.

The installation required coordination of the modular tank with 375 mm stormwater pipes, which were connected through the tank using pipe boots. The tank configuration also needed to account for burial conditions of up to 3 metres of cover.

At 97 metres in length but only 0.50 metres high, maintaining the required tank geometry and coordinating the pipe interfaces were key considerations addressed through the project-specific shop drawings.

Project Outcomes

- 97 m long × 3.5 m wide × 0.50 m high underground detention tank configured for the project.
- Single Flo-Vault® Heavy Duty modules incorporated throughout the tank.
- Tank configuration designed for up to 3 metres of cover.
- 375 mm stormwater pipes connected using pipe boots.
- Geofabric and plastic liner incorporated into the underground detention system.
- Project-specific shop drawings prepared by Atlantis in coordination with the local engineering team.

The defining engineering characteristic of the project was the combination of a long, shallow tank geometry and substantial cover depth. The 97 m-long Flo-Vault® Heavy Duty system provided a tank height of only 0.50 m while accommodating up to 3 metres of cover, with 375 mm pipe connections incorporated into the lined modular structure using pipe boots.

Did You Know?

Despite extending 97 metres in length, the underground detention tank was only 500 mm high and was designed to accommodate up to 3 metres of cover above the Single Flo-Vault® Heavy Duty system.


CWD - Cloverdale T.P. Lot (26-003-000)
Shawn Melnick (MELSHA)
49.100108, -122.692978 | 100.0° E
06/04/2026
03:44 PM GMT-7


CWD - Cloverdale T.P. Lot (26-003-000)
Shawn Melnick (MELSHA)
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Dean Munnelly (MUNDEA)
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06/10/2026
02:02 PM GMT-7


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Dean Munnelly (MUNDEA)
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Adriene Meister (MEIADR)
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06/11/2026
05:04 PM PDT

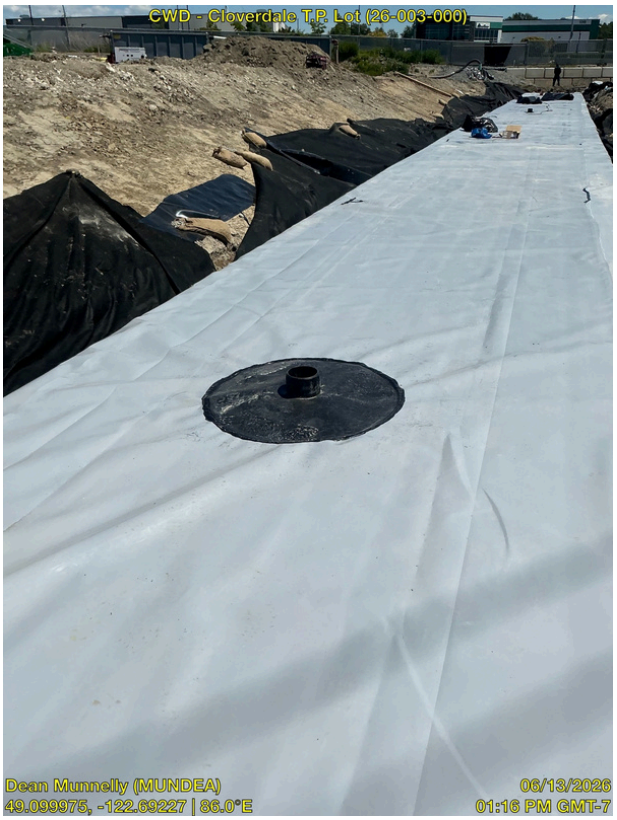

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Adriene Meister (MEIADR)
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CWD - Cloverdale T.P. Lot (26-003-000)
Adriene Meister (MEIADR)
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06/11/2026
11:56 AM PDT


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Dean Munnelly (MUNDEA)
06/15/2026
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CWD - Cloverdale T.P. Lot (26-003-000)
Adriene Meister (MEIADR)
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06/16/2026
08:39 AM PDT


CWD - Cloverdale T.P. Lot (26-003-000)
Dean Munnelly (MUNDEA)
06/18/2026

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Thank You For Your Attention



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