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Côte-Vertu garage, Montreal

Tunnel wall drainage

CONTEXT

As part of the development of the metro network, the STM (Société de Transport de Montréal) builds a new underground maintenance garage as well as the access tunnel on the orange line of the metro in the Côte-Vertu area.

ISSUES

To dissipate hydrostatic pressures behind the concrete walls of the underground structures (garage and tunnel), a prefabricated drainage system was required between the rock or shotcrete and the cast-in-place concrete walls.

RETAINED DESIGN

Geosynthetic drainage was chosen by the designers. The waterproofing is ensured by cement concrete or geomembranes.

ALVEODRAIN EV geocomposite allows the efficient drainage of infiltrated water. It has been installed in full surface in the maintenance garage and in strips in the tunnel and connected at the toe of the tunnel to the Soldrain 4000.

ADVANTAGES

ALVEODRAIN EV is a drainage and filtration geocomposite composed of a thermoformed embossed structure associated with a non-woven thermobonded filter layer.

ALVEODRAIN EV offers the following advantages:

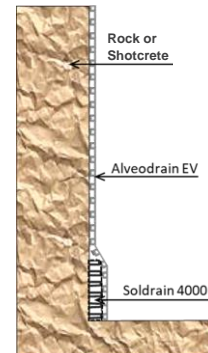
- Intercept and direct infiltration water from the walls to the outlets (Soldrain 4000 strip drain at the bottom of the wall).
- Soft, flexible, robust material. It can adapt to the irregularities of the walls and withstand high stresses.
- Easy to install, does not require specialized labor or equipment.
- Improve the durability of the structure and reduce maintenance costs.



Strips of ALVEODRAIN EV mechanically fixed on the tunnel walls for vertical drainage.



T-connector connected to the Soldrain 4000 to evacuate the water drained by the ALVEODRAIN EV to the outlets.



Typical section of the vertical drainage in the tunnel.

PROJECT SUMMARY

| | | | |
|--------------------|---|---------------------|---|
| Products | ALVEODRAIN EV | | |
| Quantity | 20,000 m² (220,000 sq ft) | Design | STM |
| Application | Tunnel garage walls drainage | Installation | EDT GCV Civil s.e.p (EBC, Dragados, TNT) |
| Owner | STM (Société de Transport de Montréal) | Years | 2018-2019 |



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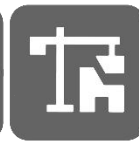
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AFITEX-TEXEL GEOSYNTHETICS ADDED VALUE

The expertise of the AFITEX-TEXEL team provided the designers with all the necessary information and technical support to choose the most suitable solution based on the project's parameters.

« What AFITEX-TEXEL has to offer »

AFITEX-TEXEL will be pleased to assist you in the evaluation and design of your next projects, because our approach has always been and always will be the same: the right product, in the right place, well installed with rigorous quality control.

In case you need technical support? Feel free to refer to the AFITEX-TEXEL team. Expert services will be provided free of charge:

- Technical Assistance
- Assistance during Design
- Technical Training
- Technical Documentation
- Calculation Tools
- Specification & Tender documents
- Installation Guidelines



Vertical drainage of the Côte-Vertu garage walls - 2018



YOU NEED MORE INFO?

Never hesitate to contact one of our specialists in order to know more about the benefits you can get from your projects

1-800-463-0088

Available documentation

- Technical data sheets
- Installation guidelines
- Standards & Studies
- List of projects
- Design Software

www.afitextexel.com

Important notice - The information contained in this document is provided for promotional purposes only. Thus, not all the characteristics of the project have been mentioned. No guarantee is offered by AFITEX-TEXEL or its partners with regard to the information contained in this document.

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