

CASE STUDY

Quebec City Mall Controls Parking Lot Stormwater Runoff

Quebec City, QC

OWNER

Trudel, Quebec City, QC

ENGINEER

Tetra Tech, Quebec City, QC
EMS Engineering, Quebec City, QC

CONTRACTOR

Charles-Auguste Fortier, Inc., Quebec City, QC

INSTALLATION DATE

September 2024

PRODUCTS

201 StormTech® MC-7200 chambers
260 StormTech MC-3500 chambers
112 StormTech SC-740 chambers

DESCRIPTION

During phase one of the redevelopment of Quebec City's Fleur de Lys, part of the mall was torn down to create ground floor commercial space and residential space on the building's remaining stories.

In addition to the building's redevelopment, the parking area needed to meet Quebec City's new standards for green space. For stormwater runoff from the parking lot and surrounding roadways, it was determined that a system would be needed to retain water until the storm sewer system could handle the flow.

Since each of the engineering firms were familiar with StormTech, they utilized the StormTech Design Tool to develop the plans for the retention system. Five different beds were created to retain 3,500 cubic meters (123,601 cubic feet) of stormwater.



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One main inlet was installed to handle the stormwater intake and then multiple 600 mm (24") connections were made to the various beds. By pushing the stormwater to the various StormTech chamber beds, the stormwater's flow was slowed and spread among all of the beds. This allowed for the detention until the stormwater was fed into the city's storm sewer system.

StormTech chambers are designed to meet the most stringent industry performance standards for superior structural integrity. Utilizing the chambers under parking lots, roadways and heavy earth loads saves valuable land space and protects water resources for commercial, municipal and residential applications.

StormTech chambers come in a variety of sizes to meet each site's needs. The elliptical arch design transfers loads to the surrounding backfill, and considers long-term & short-term safety factors defined by AASHTO. The chambers are injection molded for uniform wall thickness.

The StormTech Isolator® Row Plus is a row of chambers that inexpensively enhances Total Suspended Solids (TSS) and Total Phosphorous (TP) removal with easy access for inspection and maintenance.



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