



SOLENO

Mastering Storm Water

1ST
DEVELOPER
OF SUSTAINABLE SOLUTIONS
FOR MASTERING STORM WATER



AN OVERSIZED HDPE STORM WATER SEWER FOR THE CITY OF SAINT-BASILE-LE-GRAND

Storm water storage: A custom-made solution under the extension of a residential street.

As part of the extension of the Îlot-du-Coteau street in Saint-Basile-le-Grand, the contractor CBC 2010 Inc. had to install a storm water sewer and a treatment system. Standardized in the city's specifications for several years, and throughout the territory of Saint-Basile-le-Grand, the high-density polyethylene (HDPE) products offered by Soleno have been selected by the FNX-INNOV engineering firm (formerly known as Consultants firm S.M. Inc.) for the realization of this project.

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THE CONTEXT

The prestigious housing development of Îlot-du-Coteau, located at the limit of the city of Saint-Bruno-de-Montarville and Saint-Basile-le-Grand, continued with the construction of a new residential complex of four single-family homes. The continuity of this project resulted in the extension of the Îlot-du-Coteau street, at the end of the already existing roundabout, and required the installation of a new storm water sewer for the retention of stormwater, prior to discharge to the existing network. The installation of a treatment system that meets the requirements of municipal and provincial governments in matters of stormwater management was also needed. Due to the narrowness of the site allocated under the municipal roadway, the choice of options for the construction of a storm water sewer with retention were limited.



THE SOLUTION

Mandated by the real estate developer, the FNX-INNOV firm opted for oversized HDPE Solflo Max pipes offered by Soleno for the realization of this project. The contractor CBC 2010 Inc. therefore installed 66 linear meters of non-perforated 1200 mm (48 in) Solflo Max pipes, spread over 2 rows and which will store 90 m³ (3178 ft³). Welded directly to the pipes, the 600 mm and 900 mm (24 in and 36 in) diameter access chimneys (and other accessories) allowed the basin to be built just within the limits of the allocated area. In addition, in order to treat the stored stormwater, a 1200 mm (48 in) diameter CDS continuous deflection hydrodynamic separator (model CDS-4) was incorporated at the end of the network, prior to the connection to the existing municipal network.



THE BENEFITS

The use of oversized HDPE Solflo Max pipes and their direct welded access chimneys are a solution regularly recommended by Soleno engineers. This powerful and custom-made solution provides substantial savings, such as reducing the amount of required pipes and limiting the excavation due to the use of existing trenches. The technique developed by Soleno allows for the direct installation of access chimneys on the pipes whose diameter can be the same as the connection. This know-how thus avoids the oversizing of manholes, as well as lowers the cost of the entire system. In anticipation of a possible expansion, its welded HDPE design has made it possible to assemble an outlet with an end cap at the extremity.



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THE BENEFITS (CONT'D)

This solution not only enables the collecting of stormwater, but also its storage, eliminating the need for an additional retention system. Lightweight and easy to handle, HDPE pipes do not require the use of specialized equipment, such as a crane, thus making the installation easier and the execution of the work quicker, key factors greatly appreciated by the contractor CBC 2010 Inc. Resistant to corrosion, abrasion, de-icing salts and vibration, HDPE ensures the durability of infrastructures. This material stands out from concrete due to its cost and small environmental footprint. The development of an oversized storm water sewer system made in HDPE, an efficient and sustainable material, thus makes it possible to ensure the viability of the new network of the Îlot-du-Coteau street.



Installed at the output of the storm water sewer, the CDS continuous deflection hydrodynamic separator ensures the durability of the system. In fact, it effectively controls and processes more than 60% of the suspended solids (SS), oils and floating debris contained in the runoff water, before its discharge to the outlet. In addition to recovering oils, it provides an effective way to eliminate 100% of floating debris larger than 2.4 mm in diameter. The unique design of its separation grid prevents any risk of clogging and facilitates maintenance. Its direct access from the surface eliminates work in confined spaces and facilitates periodic maintenance. According to the MELCC's evaluation criteria, the CDS continuous deflection hydrodynamic separator is the most efficient.



The realization of this project was made possible thanks to: the contractor [CBC 2010 Inc.](#) and the distributor [Huot](#).

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