



SOLENO

Mastering Storm Water

THE MOST
POWERFUL

APPROACH FOR STORM WATER MANAGEMENT



IN SAINT JOHN, NEW BRUNSWICK, THE FIRST STORM SEWER SYSTEM IS INSTALLED

A simple and economical solution provided by Soleno

The installation of high-density polyethylene products (HDPE) was a first for the Public Works Department of the city of Saint John, New Brunswick. The benefits of this economical system, with fast and simple installation, convinced Mr. Jeff Hussey, the municipality's Project Engineer, that he could trust Soleno's products.

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THE CONTEXT

Located in a residential area on Farry Cove Lane, the storm sewer system included the addition of a manhole and a catch basin interconnected by a 200 mm (8 in) pipe and a connection to an existing concrete culvert 600 mm (24 in) in diameter. This underground system had to carry rainwater while meeting critical aspects, including **lifespan**, **ease of installation** and **speed of discharge** during strong rain events. Also, the narrowness of the site made it difficult to work and restricted free access to heavy machinery. In addition, the tree-lined lane only allowed excavation on a 2 m (6.5 ft) width, on a length of 60 m (196.8 ft).

THE SOLUTION

Mr. Hussey chose the HDPE collecting and conveying solutions from Soleno. A manhole with smooth exterior wall, 900 mm (36 in) in diameter and a corrugated catch basin 600 mm (24 in) in diameter were installed, connected by a Solflo Max pipe 200 mm (8 in) in diameter placed in a trench 2 m (6.5 ft) wide by 1.6 m (5.2 ft) deep. A Solflo Max pipe 600 mm (24 in) in diameter and 6 m (19.6 ft) in length was used to connect the new system to a concrete culvert of the same diameter already in place.

THE BENEFITS

According to Mr. John McLaughlin, Municipal Engineering Technologist at Saint John, the HDPE products have greatly streamlined installation and speed of execution, on account of their lightness and manoeuvrability. Indeed, the Solflo Max pipes were positioned manually by Public Works employees while the catch basin and the manhole were handled using a single power shovel. Lightness was revealed to be a significant advantage given the limited work space.

Unlike a conventional concrete manhole, an HDPE manhole does not require any oversizing, which reduces the diameter of the manhole. This results in substantial savings at acquisition, excavation and installation. The HDPE manhole with smooth exterior wall adapts perfectly to all types of pipes. Its design in welded HDPE allowed the assembly of the 200 mm (8 in) and 600 mm (24 in) inlets and outlets, which streamlined the insertion of new pipes on site and their fitting with the concrete culvert already in place.



To effectively meet the specific needs of the city, the corrugated catch basin was punctured on the first top 12 rings to allow a second infiltration into the outlet and thus lower the water table. A custom frame was also installed to allow the installation of a pyramid grate, the standard used in the city's specifications.

Mr. McLaughlin mentions that "thanks to the bells with integrated gasket and clips (BIGC) installed on the pipes, installation was done very quickly. They are easy to cut, which allowed us to quickly adjust the length of the last section connected to the outlet of the already welded catch basin".

He also highlighted the involvement of the Soleno team in their project; "Philippe Losier, Engineer and Matthew Davis, Sales Representative, were excellent in solving our design problems. They came on site to better understand our expectations before the start of the project and visited the site at different times to ensure that everything was in order".

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