



## Dealership Expansion Made Possible with Underground Stormwater System

### The Situation

Luther Brookdale Chevrolet in Brooklyn Center, Minnesota was an older dealership in need of a facelift. "An entire renovation was taking place to improve both the inside and out," explains Lance Hoff, water resource engineer, Royal Environmental, a division of Royal Enterprises. New storm water chambers were necessary to meet regulatory requirements for the city and watershed district.

"We had to meet the 2 year, 10 year and 100 year storm events for rate control, and watershed requirements required us to use best management practice in infiltration," explains Nathan Wallerstedt, design engineer, LandForm, who engineered the project. "In order to make our best effort we decided to use a bottomless system to achieve both of those objectives."

As a car dealership, the parking lot was prime real estate. "We knew we needed an underground storm water system because every parking spot at a dealership is worth money," explains Wallerstedt, "The dealership needs every stall they can get to park vehicles for sale." A detention pond would take up too much vital space, especially with the new dealership building almost doubling in size.

### The Solution

Through its association with Royal Environmental, a Triton Stormwater Solutions retention system was selected for its rate control and infiltration features.

"The city really liked the Triton system over the others because it had the solid floor in the first few chambers and sump dumpster," says Wallerstedt. "They liked that header row for its easy maintenance."



Phase one of Luther Brookdale Chevrolet underground storm water management system will have a storage volume of 11,000 cubic feet.

### The Installation

The Triton storm water system was split into two sections and placed in opposite corners of the parking lot. This design most effectively utilizes the site's drainage patterns in order to collect all storm water runoff from the large site. Phase one of the system in the southeast corner is 4,000 square feet, with a storage volume of 11,000 cubic feet. At 2,760 square feet, Phase 2 of the system will be placed in the southwest corner with a storage volume of 7,100 cubic feet.



The Triton Main Header Row featured solid floors and an easily maintained sump dumpster.

First, the crew dug down to elevation and put down a six inch base layer of stone. Next, the chambers were put in and the walls of the trench were lined with a class 2 non woven geo fabric. The site was backfilled with stone up to six inches

past the crown of the chambers and the geo fabric was folded back and backfilled with material to the desired elevation, with Triton needing to be placed under only 16" of cover.

The installation went very smoothly and was finished within two days. "Even though it was his first time using a Triton system, the contractor did the best installation job that I have seen yet," says Hoff. "One benefit they had was that the system was strong enough that they could backfill from the side of the footprint. As a result, they were able to get the subgrade prepared and have the entire Triton system laid out in the parking lot ready to go prior to backfill. The chambers were all spaced perfectly and went together really smoothly. The contractors were very methodical."



The lightweight and superior engineering of Triton Chambers made installation fast and easy.

Joe Miskovich, President of Triton Stormwater Solutions, in Brighton, Michigan, was also impressed with the contractor. "It was clear that they had done a lot of prep work, such as reading the installation manual. I was blown away with the efficiency, knowledge and due diligence that the contractor had put in."

Jeff Scherer, of Metro Utilities, who installed the system, agrees it went very smoothly. "This was the first one we have ever done and everything went really well. It was real easy to install and everything just fastened together."

An added benefit is that because the Triton System is strong enough not to require a pavement layer to distribute the load, construction equipment as well as customer traffic was able to move on and off the site during installation. "It was a huge benefit not to have to impede ingress on or around the building," says Hoff. "Can you imagine if they could only have a one way road to and from the dealership during the entire construction?"



The Triton system is strong enough not to require a pavement layer allowing for construction equipment and customer traffic to move on and off the site during installation.

## Summary

"I will definitely use the Triton product on future projects," says Wallerstedt. "I like the fact that it has the hard bottom header row in the first couple of chambers for maintenance. Cities like not worrying about sediment settling at the bottom of the system. It's a good practice."

Scherer would also use the Triton system again. "It installs easily and everything is nice and light."

Triton Stormwater Solutions is the proven, comprehensive solution to stormwater management challenges. On your next project, turn to Triton Stormwater Solutions, the stronger, lighter, larger, greener, easier-to-install, cost-effective stormwater solution. Triton gives you Power Over Water.



9864 E. Grand River • Suite 110 -176  
Brighton, Michigan 48116  
Phone: 810-222-7652 • [www.tritonsws.com](http://www.tritonsws.com)

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