



**Project Title:** Site Development, Best Western Motel, Fredericton, NB

**Client:** Saulnier Management

## Project Description:

This project demonstrates the strength of the GEMTEC team in providing; geotechnical; municipal and civil engineering services; and our ability to adapt to developmental changes during the implementation of a project.

Prior to the construction phase, GEMTEC carried out a geotechnical investigation on several sites and provided recommendations so as to minimize earthwork costs. Once a site was selected we worked with the developer to optimize site grades and thereby establish a finished floor slab grade.

During construction our geotechnical and materials expertise was a benefit in terms of approving and testing borrow materials. Here a nearby rock fill material was utilized up to subgrade levels providing a significant reduction in trucking costs. Plate load bearing tests were carried out during placement using our in-house equipment to ensure that the material was placed to a suitable density.

Planning regulations tend to vary by location, on this project it was necessary to liaison with a number of municipal officials in terms of servicing requirements; setbacks; parking regulations; green space / landscaping requirements; and storm water management.

With regard to the latter point; in recent years each parking lot design have required hydraulic calculations and design elements to limit discharge to meet the particular municipalities requirements (i.e. 1:5; 1:10 year flows). A stormceptor<sup>®</sup> was designed for this site. One common theme with all of



GEMTEC's parking lot designs is to maintain grades between 2 to 3 percent. We believe that grades of less than 2% will lead to premature failure as a result of ponding water. Grades greater than 3% present safety issues. We have also found it important to undertake a detailed design of the pavement structure as a function not only of loading (i.e. vehicular traffic) but also of the underlying soil conditions. Our geotechnical and materials expertise have proved to be an asset with these considerations.

In order to meet project deadlines it was necessary to commence excavation and backfilling while some project details were still being finalized. We are accustomed to working in a dynamic environment and are dedicated to keeping projects on schedule.