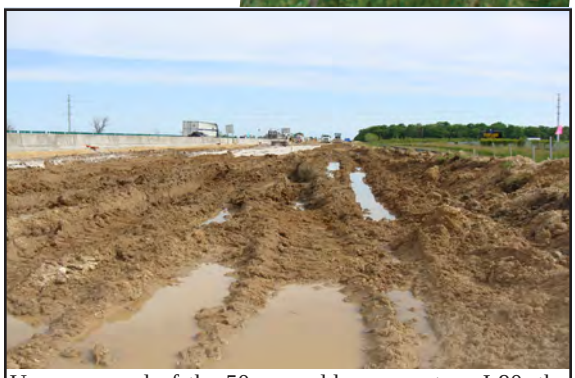
ILLINOIS TOLLWAY FAST TRACK PROJECT CALLS ON MT. CARMEL TO SAVE TIME AND MONEY

HIGH TRAFFIC AND HIGH PROFILE PROJECT DEMANDS TOP QUALITY WORK

(Rockford, IL; May, 2009)



Upon removal of the 50 year old pavement on I-90, the subgrade soil conditions were holding up construction.

In any given year, Mt. Carmel Stabilization Group will perform soil stabilization applications on hundreds of projects ranging from highway reconstruction, airport runways, subdivision roads, commercial building pads, drying operations on mass grading projects and many other miscellaneous project types. These projects can range in size from 1,500 to several million square yards. Each project presents a unique situation and subsequent challenges to success. This particular project is a reconstruction of seven miles of Interstate 90 in northern Illinois near Rockford. The $40,000,000 project is schedule driven to minimize traffic disruptions and is to be completed in under seven months.

Case Study

Eliminating Undercuts For Pavement Construction

Mt. Carmel Stabilization Group is the leading soil stabilization company in North America with over 60 years of experience in providing expert soil stabilization services to our customers across the country. Our technical reports and case studies are an effort to educate our contractor partners, consultants and agencies on the merits of design, construction, and the environmental benefits of soil stabilization.

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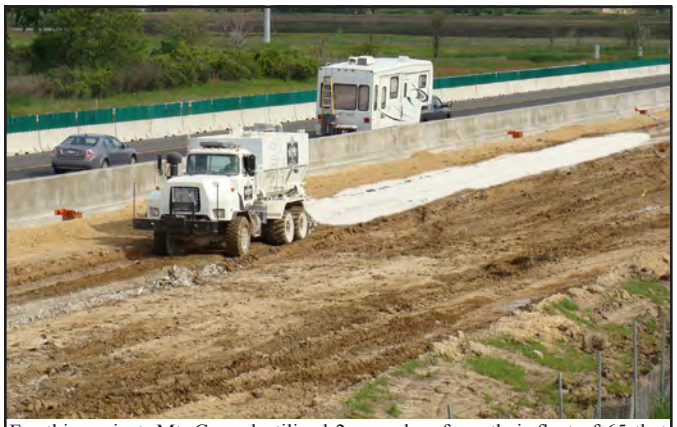
The Situation - Undercut or Lime Modification

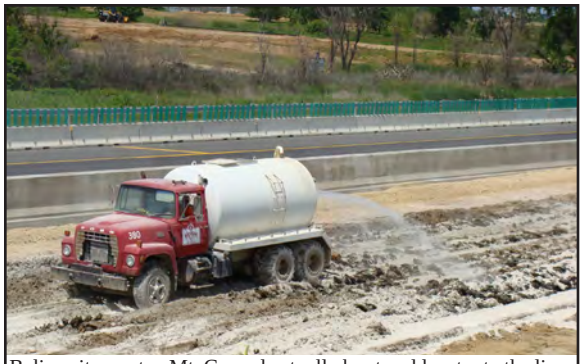
During a major reconstruction in Northern Illinois, it is not uncommon to encounter such poor subgrade conditions once the old pavement has been removed. Over time, water works it's way down and is absorbed by the subgrade layer. During the wet spring and fall seasons, in-situ moisture conditions can be over 30% which is well above a typical optimum moisture content of 13-18%. High moisture reveals the true colors of poor subgrade soils. On this project, the sandy, lean clay was extremely unstable and would have taken weeks or months to dry out conventionally. To complicate things, the problem was deeper than just the top 12". Field testing revealed that 2' to 4' undercuts would be necessary to get to the bottom. All undercut soil would have to be removed and hauled off site and coarse aggregate would be brought in for backfill. On this project the total undercut volume would have amounted to over 50,000 cubic yards

and it would have likely taken weeks to complete.

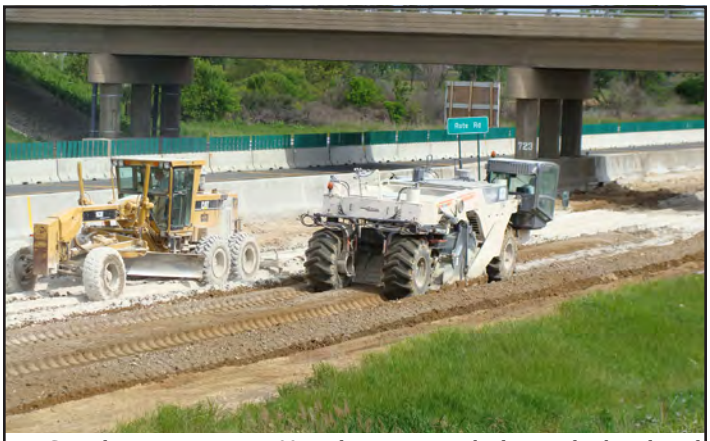
In 2008 William Charles completed the north bound section adjacent to this project. On that project, the Illinois Tollway paid for the removal and replacement of over 40,000 cubic yards of similar poor subgrade soil. On this project, the Tollway had only 17,000 cubic yards of removal on the contract, far below the estimated 50,000 needed to solve this problem. Change order costs and time lost were well beyond acceptable. William Charles had worked with Mt. Carmel Stabilization Group before and they proposed hiring them to perform Lime Modification with Lime Kiln Dust on the entire mainline pavement. Though Mt. Carmel has done a few Illinois Tollway projects in the past; the Tollway and the project consultant, V3 of Woodridge, IL were skeptical, but the time and significant cost savings made the option appealing. The roadway is directly adjacent to the high speed, high traffic volumes of a major interstate so dust control would be as important as the finished product.



For this project, Mt. Carmel utilized 2 spreaders from their fleet of 65 that contain a patented dust collection system designed to minimize fugitive dust during spreading. Mt. Carmel builds all of their spreading equipment in house to ensure they are built to the highest standards.



Believe it or not... Mt. Carmel actually has to add water to the lime kiln dust due to the tremendous drying effects of lime products.



Mt. Carmel uses a Wirtgen 2400 Reclaimer to mix the lime and subgrade soil thoroughly to a depth of 16" before compaction. This mixing equipment is built for soil stabilization applications and is critical to the performance of the operation and the end product.

Following initial compaction with a vibratory pad-foot roller, Mt. Carmel uses a smooth drum roller to seal the area. After sealing, the treated layer is virtually impervious to water.

Project Success - Time and Money Saved

Mt. Carmel completed over 60,000 square yards of lime modification on this project in just six days to get the project back on track. Due to the accelerated timetable, William Charles fine graded and placed the stone layer for the pavement right behind Mt. Carmel's operation. Weeks after Mt. Carmel was finished, the project consultant proclaimed, "I learned a lesson; the lime worked great and is holding up perfectly."

On this project, over 50,000 cubic yards of unsuitable subgrade soil that would have otherwise been removed and replaced with aggregate; was treated with 5% Lime Kiln Dust and mixed to a depth of 16" to build a solid working platform for pavement construction. Lime Modification saved time, money, materials as well as thousands of loads of soil and stone that would have traveled on and off this project site.