

Highway Road Shoulder Stabilization

Saskatoon, Canada

July, 2010



Project Description: Terratech polymer technology was used for road shoulder stabilization along Highway 16 near Saskatoon, Canada. A 1.5 m wide section of road shoulder was stabilized intermittently between asphalted sections. Vehicular wear and shoving of the aggregate from the surface caused deterioration of the shoulder and a potentially hazardous condition for trucks and cars.

Project Objectives: In order to optimize strength characteristics of the road shoulder and maximize polymer dosing efficiency, sections of road were treated with concentrations of T-PRO 500 at 0.75, 1.0 and 1.25 percent polymer, by total weight of soil material treated. The levels of dosing were matched with the degree of wear each section of shoulder exhibited from vehicles pulling off the road, softening of edge from precipitation, and shoving of aggregate surface by trucks and cars drifting off-road along curved sections. The polymer stabilization was used to improve the surface wear resistance through improved soil shear strength. Once the road shoulder sections were treated with an infused application of T-PRO 500 and compacted into place, a seal coat was applied over the entire surface area. Terratech demonstrated that polymer technology is a cost effective, long term, low-maintenance, soil stabilization method of maintaining shoulder integrity and motorist safety.

Equipment Used: Milling Machine, Grader, Water Truck with Pressurized Spray Bar, Vibrating Pneumatic Roller.

Application Specifications: Infused application with polymer concentrations at 0.75%, 1.0% and 1.25%. All sections sealed with a topical seal coat at a coverage rate of 115 ft²/gal.

Maintenance Requirements: Removal of loose material from shoulder surface and topical re-application of polymer seal coat at a coverage rate of 110 ft²/gal.