



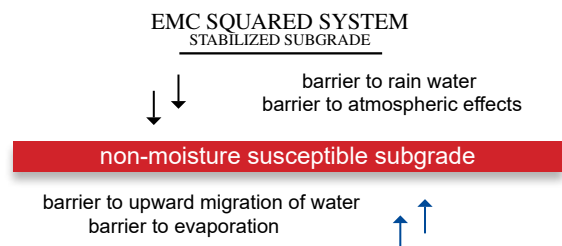
## The Product Technology

The EMC SQUARED® System (EMC<sup>2</sup>) Stabilizer Technology — Clean. Green. Low Cost. Concentrated power to improve stability of aggregates and soils. Applied with pre-established engineering controls and construction procedures during the moisture conditioning and compaction process. Preconditioning silts to behave more like siltstone, aggregates to become more like conglomerates, and clays to become more like clay stone, making them more stable in moisture content and more naturally cemented. Supported by the staff of Stabilization Products LLC, who have participated in problem solving for thousands of projects and interacted with designers on stabilization challenges on every continent, from arctic to desert and tropical climates, working on every sort of application from containment of hazardous and radioactive wastes to projects accessing nature preserves, and from remote oilfield access roads to airport and freeway projects.

When cement and lime are utilized for soil stabilization treatment, they typically create rigid soil layers that provide strength without necessarily reducing moisture flow through the layer. Rigid layers are subject to cracking, similar to concrete pavements, which must be constructed with expansion joints to compensate for natural shrinkage phenomenon that otherwise propagate random cracking. In soil and base course stabilization there is no way to provide expansion joints, so cracking is an expected side effect of cement and lime treatment. This reduces their overall effectiveness and often subjects pavements above to reflective cracking generated from below.

EMC SQUARED System treatments, on the other hand, typically create layers with improved flexural stiffness and retained elasticity. The EMC SQUARED System layer supports loads without a tendency to cracking. Equally important, it ordinarily reduces the rate of moisture flow through the layer, shedding water off the surface and impeding the upward capillary flow of moisture from

groundwater sources below. This ability to function in this manner as a moisture barrier is a revolutionary and fundamental advance in stabilization technology. The stabilized layer itself is not only stiffened, but it also impacts the stability of native soils below the constructed layers by promoting a more consistent and stable moisture distribution. Stabilization in this manner is largely achieved by stabilizing moisture content in the constructed layers and soils below, rather than by constructing a single rigid layer with cement and lime treatment that remains susceptible to moisture flow moving through the layer. As evidenced in field monitoring of freeway projects, this ability of EMC SQUARED System treatments to beneficially influence stability at a deeper level is resulting in smoother running roads and highways with extended service life. This is the multiplier effect, the exponential power of the EMC SQUARED System (EMC<sup>2</sup>) Stabilizer Technology. It promotes greater stability in soils below as well as within the treated layer.



EMC SQUARED System products are unique and uniquely effective. The moisture barrier aspect separates them from cement and lime. Their ability to beneficially improve soils with organic and high sulfate contents, and their capacity to stabilize gravel-surfaced roads discriminates the EMC SQUARED System products apart from cement and lime. The facility to more cost-effectively treat such a broad spectrum of aggregate and soil materials differentiates the EMC SQUARED System from any other form of soil stabilization treatment.

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