



STABILIZATION OF RECYCLED ASPHALT BASE COURSE

County Road Department Project



1997

Following application of the liquid EMC SQUARED Stabilizer treatment to the asphalt millings and aggregate material, the treated aggregate mixture was processed by a tractor-drawn agricultural disk and motor graders, then shaped and compacted by vibratory smooth drum rollers.



1997

Placement of hot mix asphalt on stabilized, or "bound" base.



2010

Asphalt pavement surface above stabilized base in excellent condition after thirteen years of service.

13 YEARS

The County of Mariposa encompasses a large and varied land area in Central California, stretching from the foothill edge of the San Joaquin Valley up into the mountainous terrain of the high Sierra Nevada, including Yosemite National Park. With steep and winding roads, the demand for road maintenance constantly exceeds the capacity of crews, whom have been trimmed as the result of ever shrinking road maintenance funds available for county operations. To accomplish more within their available budget, the county found stabilization of aggregate and recycled asphalt materials to be an area where advancements in product technology were of interest. In 1997, with additional funding available from the Federal Highway Administration (FHWA), the County specified a low cost mixed-in-place base stabilization treatment. Existing asphalt was milled and blended with imported aggregate and the mixture was then treated with the EMC SQUARED® Stabilizer to construct a stiffened and stable platform for the new asphalt surface. After thirteen years in service this five mile section of pavement is in excellent condition, retaining its original alignment and providing an exceptionally smooth running surface.

County road projects constructed without the EMC SQUARED Stabilizer base course treatment show a distinct contrast. Within years of their reconstruction, pavement distress is evident in the new hot mix asphalt surfacings. Crack sealing applications by the maintenance crews visually highlight the costs associated with paving on unstabilized base course materials. Given the field performance and laboratory testing history of the EMC SQUARED Stabilizer product, the extended service life of the asphalt pavement above the stabilized base is no surprise. As indicated in laboratory testing available for review at <http://www.sspco.com/pdf/8659.082609.pdf>, EMC SQUARED treatments eliminate the moisture and frost susceptibility problems of aggregate base course materials while providing bound layers with load carrying capacity more similar to asphalt pavement. An EMC SQUARED base stabilization treatment is, in essence, an inexpensive method to "thicken" the effective pavement layer and prolong the service life of the full road structural section.

