



STABILIZATION - UNDER ASPHALT

Load Responsive Stabilization Mechanism
That Develops Under Traffic



STRONGER OVER TIME

Reducing Asphalt Cost by Strengthening the Road From the Bottom Up

Counties invest significant capital in asphalt road construction and rehabilitation. While asphalt is often viewed as the primary structural component, long-term pavement performance is governed just as much by the condition and strength of the underlying road base.

When base layers lack stiffness, uniformity, or moisture resistance, pavement designs are forced to compensate with thicker asphalt sections. This results in higher construction costs and increased risk of premature pavement distress.

BENEFITS AT A GLANCE

BaseBind-X improves base performance through a load responsive stabilization mechanism. Unlike brittle chemical curing, this approach promotes higher tensile strength and long-term flexibility.

Performance Benefits

- Improves load distribution and base stiffness
- Reduces asphalt strain and fatigue cracking
- Enhances moisture resistance
- Enables thinner asphalt sections
- Lowers material and placement costs
- Integrates seamlessly with standard paving practices



1-800-369-3878 | www.envirotechservices.com

The Challenge

Asphalt pavements are flexible systems. Their durability depends on how well the underlying layers distribute load, limit deflection, and resist moisture-related weakening. Weak or inconsistent base layers increase tensile strain in the asphalt, accelerating fatigue cracking and surface failure. Traditional designs often rely on conservative over-design of asphalt thickness to compensate for base uncertainty, driving up material and placement costs.



The Solution: Base Stabilization Beneath Asphalt

By stabilizing the road base prior to paving, agencies can shift from conservative over-design to engineered efficiency.

BaseBind-X® is a non-silicated, non-enzymatic, non-polymeric stabilization technology designed to improve base stiffness, load distribution, and moisture resistance beneath asphalt pavements.



CASE STUDY

-Douglas Co, CO

Measured Results From a Representative County Road

PROJECT PARAMETERS

- Road Segment Evaluated:
1 mile × 24 feet
- Typical Asphalt Thickness:
5 inches
- Stabilized Design Thickness:
3 inches
- Asphalt Type:
S-75
- In-Place Asphalt Cost:
\$293.95 per cubic yard

MATERIAL COMPARISON

- Typical 5-inch Section:
1,596 cubic yards of asphalt
- Stabilized 3-inch Section:
Reduced material
volume without
performance loss

ECONOMIC IMPACT

Results Achieved

- **40% reduction in asphalt thickness**
- **37.05% total cost reduction per mile**
- **\$173,890 saved per mile**



By strengthening the road base prior to paving, Douglas County reduced asphalt thickness by 2 inches while maintaining pavement performance expectations.

Bottom Line for Decision-Makers

Asphalt paving represents one of the largest capital expenses in county road budgets. BaseBind-X offers a fiscally responsible approach by strengthening the foundation rather than over-building the surface. In Douglas County, **stabilizing the road base reduced asphalt thickness by 2 inches and delivered nearly \$174,000 in savings per mile**, without increasing construction risk.