



STABILIZATION - UNPAVED COUNTY ROADS

BaseBind-X: Extending the Life of Unpaved County Roads



THE CHALLENGE

Counties maintain thousands of miles of unpaved roads essential for residents, agriculture, and emergency access. Traffic and weather gradually remove the fine materials that bind aggregate together, causing roads to lose cohesion and deteriorate.

As fines are lost, roads develop dust, washboarding, and rutting, leading to frequent grading, regravelling, and increasing maintenance costs.

THE SOLUTION

Stronger-Over-Time Road Base Stabilization

BaseBind-X is a non-silicated, non-enzymatic, non-polymeric stabilization technology that strengthens road bases from within. Its traffic-driven compaction mechanism progressively densifies the road structure, preserving fines and increasing strength over time, without brittle curing.

BaseBind-X is applied using standard maintenance equipment and integrates easily into existing county programs.

BENEFITS AT A GLANCE

- Extends service life of unpaved roads
- Reduces grading and material replacement
- Preserves existing road materials
- Improves budget predictability
- Compatible with chlorides, chip seals, RAP, and existing programs

PERFORMANCE RESULTS

- BaseBind-X treated roads demonstrated:
- Improved base stiffness and load resistance
- Reduced washboarding and rutting
- Slower rates of fines loss
- Longer performance intervals between maintenance

Measured field data showed increased strength indices compared to untreated sections, supporting long-term durability.



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

Contact EnviroTech Services to evaluate BaseBind-X® for your next project.

WHY STRONGER-OVER-TIME MATTERS

Fast-curing stabilizers often create rigid, brittle structures that crack under traffic or degrade during moisture cycling. Once damaged, they are difficult and costly to repair.



BaseBind-X remains **flexible and reworkable**. Roads can be bladed, reshaped, and maintained without catastrophic performance loss, allowing roads to adapt to real-world conditions while continuing to strengthen over time.



PROGRAM OVERVIEW

Under conventional maintenance, gradation failure began after approximately 80 tons of fines loss.

County evaluations focused on:

- Reducing fines loss
- Improving structural integrity under traffic
- Lowering long-term maintenance demand

Typical road segment evaluated:

- 1 mile × 24 feet
- 1.75" replacement aggregate depth
- ~958 tons of replacement material per mile under traditional cycles



CASE STUDY -Local Colorado County

BaseBind-X delivers stronger pad foundations that perform better over time, supporting safer operations and smarter budgets.

Field evaluations showed significant reductions in material use and maintenance activity.

Economic Impact



- **\$8,450 average savings per mile**
- **18.78% total cost reduction per mile**
- **\$6.89 per ton reduction** in material and maintenance cost



Operational Benefits

- ~50% reduction in total materials and maintenance
- Fewer grading cycles
- Reduced loss of fine aggregate
- Lower replacement volumes
- More consistent road conditions between maintenance events

Additional county projects have demonstrated materials and maintenance reductions of up to 90%, depending on traffic and base conditions.

THE BOTTOM LINE FOR COUNTY DECISION-MAKERS

Unpaved roads represent one of the largest recurring maintenance expenses for rural counties. Much of this cost is driven by repetitive grading and material replacement, not true structural improvement.

BaseBind-X reduces total lifecycle cost by strengthening the road base, allowing roads to last longer between maintenance cycles. Field data shows reductions in materials, equipment hours, fuel use, and labor, while delivering more predictable budgeting and improved stewardship of public funds. A practical, defensible approach to stronger roads, without locking counties into brittle or irreversible systems.

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