

# PROJECT SPOTLIGHT: AGRICULTURAL COUNTY ROAD

*Midwest Sets New Standard for Heavy-Use Rural Roads with Innovative Nanotechnology Stabilization—140% Stronger, 90% Less Maintenance*

<b>140%</b> Improvement in Initial CBR	<b>115%</b> CBR Improvement Maintained After Freeze-Thaw Cycles	<b>&gt;90%</b> Reduction in Required Maintenance
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## CHALLENGES

- Heavy agricultural traffic (100–250 trucks/day during peak season) generated high dust levels, accelerated surface degradation and substantial aggregate loss.
- The existing road material (comprised of A-4(1) soil) and profile, with adjacent farmland at higher elevations, created drainage and ponding issues, leading to rutting and soft spots.
- Limited county resources made frequent grading and repairs unsustainable.

## SOLUTION

- Placed a 2" layer of base course aggregate on top of the existing road surface to improve the in-place material's engineering characteristics.
- Stabilized the upper 4" of the road with Midwest's Soil Sement Engineered Formula®.
- Contracted a third-party engineering firm to conduct independent assessments and testing to validate the performance of the stabilized road.

## RESULTS

- **140% Increase in Initial Load-Bearing Capacity:** Increased the average CBR from 38 to over 90 in the first month- delivering reliable support for heavy agricultural vehicles year-round.
- **Maintained Strength Through Freeze/Thaw Cycles:** Maintained a 115% increase in bearing strength through multiple freeze-thaw cycles, planting seasons, and harvest operations.
- **Improved Durability and Safety:** Substantial decrease in fugitive dust emissions, surface degradation, and aggregate loss.
- **>90% Reduction in Maintenance Activities:** Minimal maintenance work has been required on the stabilized road – allowing the PWD staff and resources to address other maintenance needs.



## PROJECT SUMMARY

**Location:** Oregon

**Industry:** County Roads

**Customer:** Public Works Department

The Public Works Department partnered with Midwest to develop a solution for improving and maintaining their unpaved county roads that are impacted by heavy agricultural traffic and limited resources.

Midwest's advanced polymer technology was used to stabilize the county road, enabling it to reliably support heavy agricultural traffic year-round while cutting maintenance requirements by over 90%. Independent engineering evaluations confirmed that the project resulted in a 140% improvement in load-bearing capacity and maintained its enhanced strength through freeze-thaw cycles.

The success of this project demonstrates how innovative stabilization can deliver durable, low-maintenance infrastructure, optimize limited resources, and improve safety and sustainability for rural communities.

## LOOKING FORWARD

The success of this county road stabilization, using Soil Sement Engineered Formula®, provides the foundation and sound engineering data for expansion to other unpaved roads within the County and similar regions. Continued collaboration between Midwest Industrial Supply, county engineers, and independent engineering firms will ultimately help increase sustainability, reduce costs, and improve performance.