PROJECT SPOTLIGHT:
UTILITY INFRASTRUCTURE

Transforming Native Clay Soils into Reliable Roadways: Eco-Friendly Solution Delivers Unprecedented Strength and All-Weather Access

500%	All Weather	100%
Increase in CBR Value versus Untreated	Friction and Accessibility	Compliance with All Environmental Requirements

CHALLENGES

- Stabilize the native material (comprised of A-4(4) soil) - which provide little structural support without modification.
- Construct a surface that can support extreme weights (up to 50 ton trucks and equipment) during the transport and assembly of the utility towers.
- Ensure all-weather friction and accessibility on flat and sloped areas, even during or after rainfall.
- Minimize environmental impact and support sustainable construction.

SOLUTION

- Cleared the existing vegetation and performed earthwork to cut and shape the roads and pads.
- Applied and incorporated Midwest's Soil Sement Engineered Formula® into the native clay soils to a depth of 6".
- Placed and compacted a 1" layer of #57 stone for an embedded aggregate wear course, topped with Soil Sement Engineered Formula® for surface durability.

RESULTS

- **Increased CBR Value by 500%:** Lab testing demonstrated the addition of Soil Sement Engineered Formula® increased the CBR value from 3 to 18 after stabilizing.
- **All-Weather Accessibility:** The embedded aggregate wear course provided critical friction for the stabilized clay soils, ensuring reliable access in any weather.
- **Environmentally Friendly Solution:** Soil Sement Engineered Formula® demonstrated no negative environmental impacts and complied with all the project's environmental requirements.

PROJECT SUMMARY

Location: Ohio
Industry: Utility Infrastructure
Customer: Utility Provider

A major utility company sought and environmentally responsible solution for constructing roads and pads on weak clay soils to support the installation and maintenance of new utility towers. The installed infrastructure needed to withstand 50-ton trucks and equipment throughout the construction phase and deliver all-weather friction and accessibility – which is challenging with clay soils, particularly on slopes.

To address these requirements, the project implemented Midwest's Soil Sement Engineered Formula® to stabilize the clay soils and increase the CBR value from 3 to 18. Additionally, an embedded aggregate surface was installed on top of the stabilized clay to provide dependable year-round access.

This innovative method demonstrates how utility companies can effectively balance robust infrastructure needs with environmental stewardship for future projects.

LOOKING FORWARD

Soil Sement Engineered Formula® provides the utility company with an environmentally responsible method for improving existing infrastructure and supporting the development of new projects. By prioritizing environmentally friendly solutions while delivering strong and reliable roadways, utility companies now have a proven solution that balances operation needs with environmental stewardship.