

Design-Build Construction Support for Vermont Forests, Parks and Recreation's Bundled Roads Projects

STONE
ENVIRONMENTAL
100% EMPLOYEE-OWNED

Services / Expertise

Stormwater BMPs
ArcGIS Online
ArcGIS Field Maps
ArcGIS Notebooks

Market

State Government

Project Location

Vermont

Duration

2024-Present

Project Owner

All Terrain Excavating

Point of Contact / Reference

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Project ID#

20241160

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Project Team

Jared Ardman



Staff from Stone and Forest, Parks, and Recreation examine a new bridge on Compartment 1 Road in Little River State Park in Waterbury during a field study in November 2024.

STONE worked with All Terrain Excavating to support the design-build process for upgrading approximately 33.4 miles of forest roads on State lands managed by the Vermont Department of Forests, Parks, and Recreation. The goal was to bring roads up to sustainable standards that minimize sedimentation and pollution runoff into nearby streams.

Stone attended training with the Vermont Department of Environmental Conservation (VT DEC) to align with the Road Erosion Inventory (REI) protocols. Using existing REI data provided by the State, the team developed preliminary design documents for each road project segment, incorporating best practices from the VT AMP and Standard Specifications. Field teams conducted on-site assessments using ArcGIS Field Maps to identify and document infrastructure improvement features, such as water bars, culverts, and other erosion control measures. The Field Maps data workflow also utilized custom Arcade calculated expressions to automate the collection of geospatial data, such as indicating when the field team is in an environmentally sensitive area or pre-populating fields based on proximity to existing features or road segments.

The Stone team also leveraged ArcGIS Notebooks to automate material calculations, converting field measurements into required quantities of materials for repairs and improvements, such as clean stone and waste blocks. Design documents and permit coordination efforts were based on minimizing environmental impacts, especially within sensitive wetland and stream areas. All collected data was integrated and managed in ArcGIS Online to support planning, reporting, and implementation.

