



East Monitor Barn Renovation

Location: Richmond, Vermont
Application: Subslab insulation
Market: Commercial
Volume: 285 cubic yards
Scope Completion: November 2023



Overview

Vermont Youth Conservation Corps (VYCC) transformed a 120 year old cattle barn into an office and dormitory space, which required insulation and renovations to a historic Vermont barn.

Design Challenges

The East Monitor Barn presented unique constraints, combining modern performance requirements and historic preservation. The barn was originally built in 1901 as a cattle barn and maintained its original agricultural purpose for over a century before being adapted for VYCC's office use. Key challenges included:

- Uninsulated foundation: The existing foundation was designed for livestock, which did not require foundation insulation or a thermal barrier between interior spaces and the ground.
- Energy performance goals: As VYCC's primary office space, the renovated barn needed to meet contemporary insulation standards while supporting the organization's environmental education mission.
- Historic character preservation: The renovation required balancing modern building performance with preservation of the barn's architectural integrity.



Placement and compaction



Post-compaction

Glavel as a Solution

Foamed glass aggregate was specified as subslab insulation to provide the needed thermal performance and environmental credentials needed. The 12 inch compacted layer of foamed glass aggregate used achieved R20 insulation value, which created a conditioned interior space between the first floor offices and the ground below. The project team also removed and recycled the pre-existing concrete slabs at a nearby facility, using them as subbase material below the foamed glass aggregate. The two person installation team installed the 285 cubic yards of foamed glass aggregate in two days, keeping the project on schedule. By transforming a historic Vermont building into a modern, energy efficient space, the project demonstrated how historic preservation, retrofits, and environmental performance can work together.