



OnLogic Headquarters

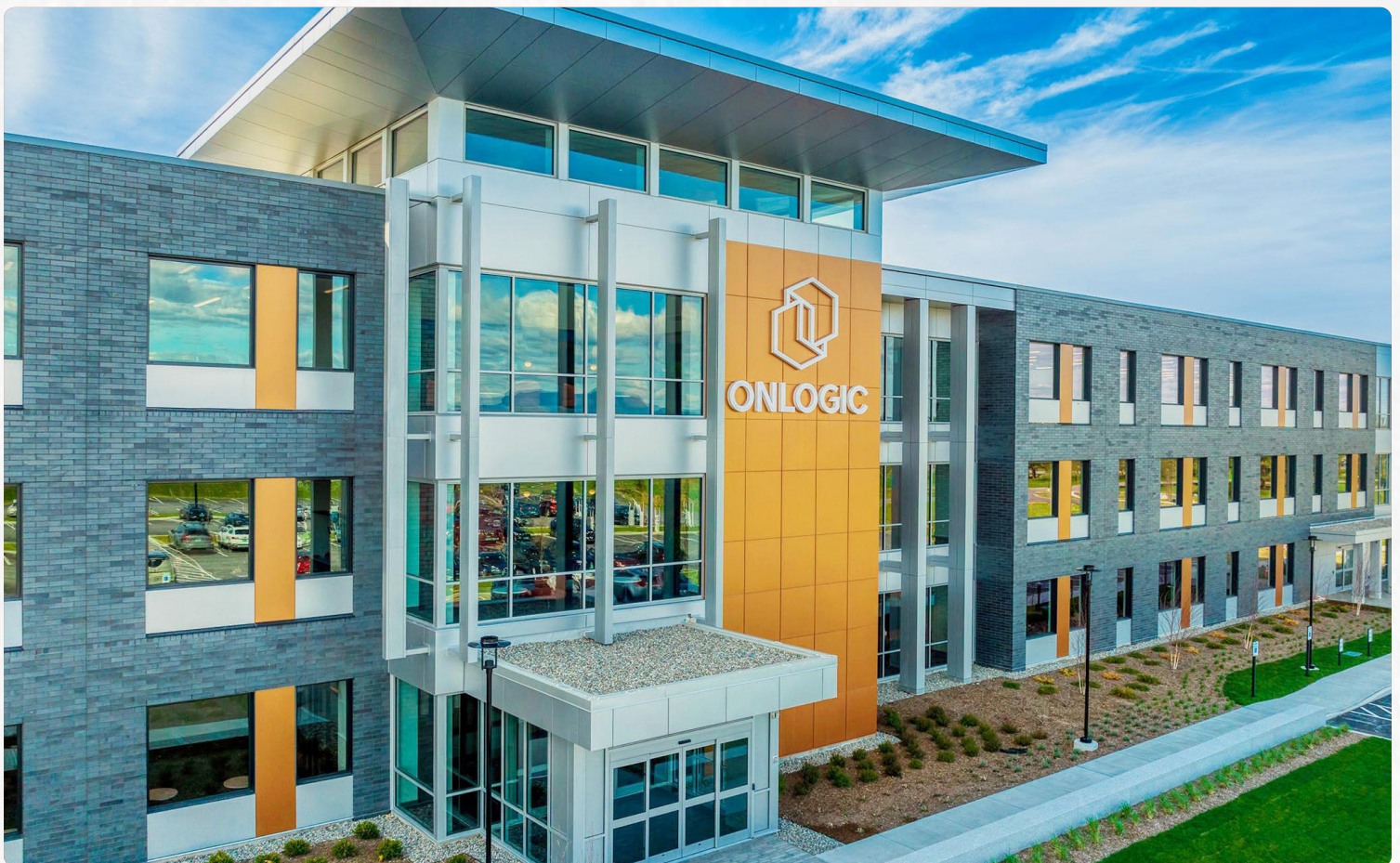
Location: South Burlington, Vermont

Application: Subslab Insulation

Market: Commercial

Volume: 2,500 cubic yards

Scope Completion: September 2023



Overview

OnLogic is an industrial computer manufacturer located in northern Vermont, where temperatures fluctuate significantly between summer and winter. Their 150,000 square foot corporate headquarters and manufacturing facility achieved an 87% reduction in scope-related embodied carbon by using foamed glass aggregate when compared to using traditional foam-based insulation in their subslab insulation assembly.

Design Challenges

The OnLogic team prioritized the use of sustainable, locally-sourced materials for their new headquarters to align with climate responsibility goals. They needed a well-conditioned, energy-efficient space for employees while maintaining stable temperatures for precision manufacturing. To minimize heating and cooling costs, the building required a high performance envelope that met both thermal performance and environmental goals.

Project goals included:

- Consistent and stable temperatures for quality control
- High R-value to minimize heating and cooling loads
- Minimized embodied carbon without performance sacrifices
- Locally sourced materials

Rigid foam insulation could meet the thermal requirements needed but risked thermal drift over time and the high carbon impact also conflicted with OnLogic's sustainability commitments. The design team needed an alternative that delivered performance and environmental impact.



Placement and compaction of foamed glass aggregate

Glavel as a Solution

Foamed glass aggregate was specified at R15 for subslab insulation throughout the 150,000 square foot facility. It replaced rigid foam insulation and crushed stone throughout the slab areas as insulation and drainage, ensuring energy efficiency in the fully electrified building. According to ReArch Construction, the use of foamed glass aggregate resulted in 87% carbon emissions reduction when compared to a traditional insulation assembly.