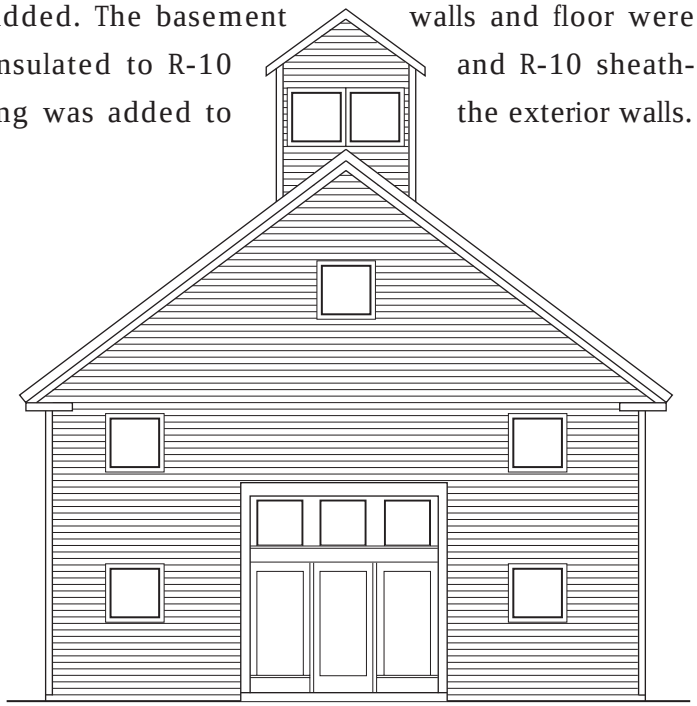
The house and barn in Westford were redesigned and constructed to demonstrate the ability to reuse sensitive historic structures for modern uses through advanced technologies which provide for energy efficiency, durability, good indoor air quality, reduce costs, and improve comfort.

The 1850's house interior was redesigned to allow for a modern kitchen and small rooms were opened to each other. The attic was insulated to R-38 and converted into a finished space with two additional bedrooms and a full bath. Mechanical ventilation was also added. The basement walls and floor were insulated to R-10 and R-10 sheathing was added to the exterior walls.



The barn was redesigned to retain its **original character** as a barn while providing comfort and power for a modern office setting. The interior is the original board sheathing.

The exterior is covered with 8-inches of rigid EPS insulation on the walls and 10-inches on the roof. As in the basement, the crawlspace walls and floors were insulated to R-10. A **high efficiency combo system** provides heat and hot water and a controlled supply mechanical ventilation system provides for good indoor air quality.

The house and barn renovation exceed **Energy Star** requirements, receiving a score of 91.3 out of 100 points.

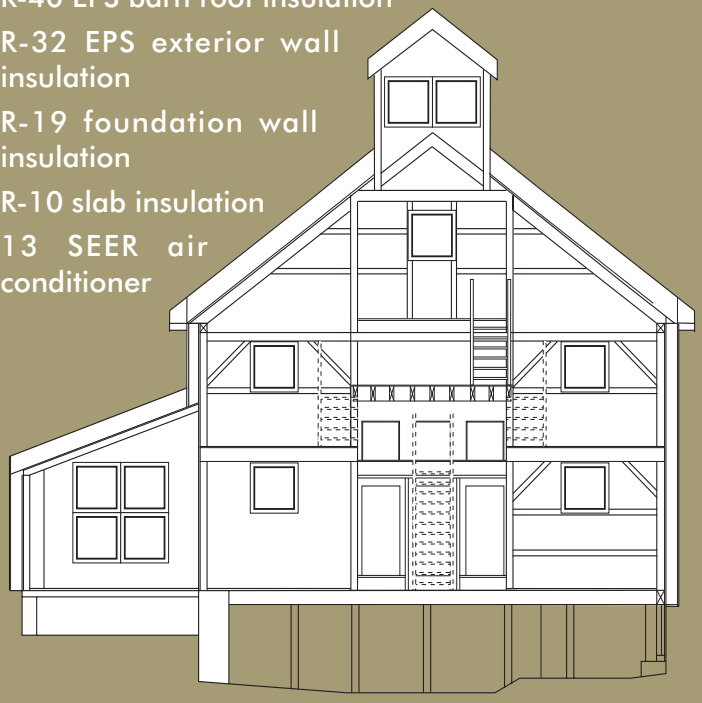
House and Barn Renovation

Westford, Massachusetts
1998

House renovation and barn-to-office conversion

Specifications

- R-40 EPS barn roof insulation
- R-32 EPS exterior wall insulation
- R-19 foundation wall insulation
- R-10 slab insulation
- 13 SEER air conditioner



- High performance low-E windows
- High efficiency combination heat and hot water system
- Controlled supply mechanical ventilation