THE MONTAGE

A 1,925 Square Foot Single Family Home:

- 2 Stories, 3 Bedrooms, 2.5 Baths
- Est. Construction Cost: $243,082
- HERS Index Score: -5
- Estimated Monthly Energy Cost: $2

**Location**: Syracuse, NY - IECC Climate Zone 5

**Design Strategy**: Inspired by American Craftsman style architecture to fit the pattern language of the neighborhood. Optimized solar exposure for PV, Solar Thermal, and passive lighting/heat gain.

**Enclosure**: Applied Building Science Corporation’s 5-10-20-40-60 insulation principle, Passive House infiltration rates, and Building America’s durability strategies.

**Space Conditioning**: Integrative air-source to water heat pump tied to Solar Thermal array to provide heat (radiant distribution), and DHW.

**IAQ**: Eliminated/minimized pollutants at source when possible and provided a high-efficiency decentralized whole house HRV system with merv 10 filters.

**CONSTRUCTION COST STRATEGY:**

Invested first in 100-plus year components to ensure longevity and reduce the load while optimizing rapidly evolving “plug and play” mechanical systems and renewables.

**TECHNICAL SPECIFICATIONS:**

- Wall R-Value: **R-45**
- Ceiling R-Value: **R-60**
- Foundation R-Value: **R-25**
- Window R-Value/SHGC: R-3.3 SHGC: **.3**
- Air-Source to Water Heat Pump COP: **3.7**
- Water Heater EF: **2.5**
- 8 kW PV System
- 96 SF Evacuated Tube Solar Thermal Array

**KEY STATISTICS:**

- **Visitable** – universal features make 1st floor accessible to all.
- **Constructable** – within the skill set of local contractors, shovel ready.
- **Local** – climatically relevant design.
- **Beautiful** – fits local vernacular, and incorporates biophilic design.
- **Timeless** – designed to last.
- **Efficient** – optimal use of resources.
- **Healthy** – for people and the environment.
- **Resilient** – IBHS Fortified certification ready.
- **Affordable** – based on Syracuse MFI
- **Adaptability** – promotes aging in place with space for future residential elevator.