

Strategic Approach:

- Type of Project: **Single Family**
- Location: **Minnesota**
- Partners: **Mega Homes & RSR**
- Design Strategy: A contemporary farmhouse with a simple design, efficient form, good solar orientation, and streamlined mechanicals.
- Technical Strategy
 - Enclosure: 2x4 wall w/ 3" of exterior insulation; vented attic with cellulose and spray foam air barrier; R-5 windows with SHGC tuned to orientation; foundation with R-15 exterior insulation
 - HVAC: Integrated space and water heating with ducted ERV
 - IAQ: MERV 11 filtration, low VOC materials, garage separation; ASD
- Construction Cost Strategy: Use cost savings from the streamlined design and systems to improve the enclosure and upgrade system efficiency.

Technical Specifications:

Wall R-Value: **R-30**

Ceiling R-Value: **R-60**

Foundation R-Value: **R-15**

Window R-Value: **R-5**

Window SHGC: **0.38 (south); 0.17 (rest)**

Space & Water Heater CAE: **94%**

Air-conditioning SEER: **21.0**

Key Statistics:

Location: **Minneapolis, MN**

2009 IECC Climate Zone: **6**

Square Feet: **3456**

Number of Stories: **2**

Number of Bedrooms: **4**

Number of Bathrooms: **3.5**

Estimated Construction Cost: **\$360,000**

HERS Index Score: **33**

Estimated Monthly Energy Cost: **\$99**

