



House II

Team: Emergence



Contest Category: Single Family, Detached, Suburban

Project Summary:

HOUSE II creates a new paradigm for suburban residential architecture by responding to the needs of a new generation of homebuyers and a new culture of building. Combining the holistic integration of sustainable practices with an improved understanding of building science and advances in manufacturing, HOUSE II outperforms the status quo of residential architecture while staying within reach of first time homebuyers.

The purpose of this project is to craft a sustainable and logical progression of residential architecture. The single family, detached suburban house is, as it has always been, the creative muse of architects. This project aims to redefine the house and is inspired by the innovation which John Entenza's Case Study House Program fostered over 50 years ago.

The incorporation of prefabricated elements furthers this goal by reducing waste and construction time while simultaneously increasing the precision of assembly; key elements of a net zero design strategy.



Relevance of Project to the Goals of the Competition:

HOUSE II meets the DOE Zero Energy Ready Home criteria (per competition guidelines) and uses net zero practices as a launching point for all design decisions. The integration of sustainable practices and methods from the onset brings the project inherently closer to truly "Zero" while highlighting the ability of architectural innovation to co-exist with net zero design.

Design Strategy and Key Points:

Building from a standard three bedroom core, the flexible form allows for the addition and subtraction of modules based on the needs of each family. Based on the fundamental idea that occupants needs will change over time the project incorporates a bedroom on the first floor and is easily adapted to become ADA compliant. While HOUSE II stands on its own, the clustering of individual units allows for the formation of public courtyards and a reduced impact on the environment. The use of prefabricated elements creates an easily reproducible model.

- Lower cost of ownership and operation with superior performance
- Longer lifespan due to adaptability and age-in-place principles
- Reduced construction time
- Elimination of on-site waste
- Affordable architectural innovation

Project Data:

- Location: 422 Walden Rd Cheltenham Township, PA 19012
- Climate Zone: 4 & 5
- Square Footage: 2,300 SF
- 3 Bedroom, 2 Bath, 2 Stories
- HERS Score: 40-50 w/o PV, 0 w/ PV
- Estimated Monthly Energy Bill: \$40-50 / month



ground floor plan