A HOUSE ≠ HOUSING: A Systemic Approach to Housing Design

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Levittown, NY, 1947-1951
THE IOWA HOUSE, Corning, IA

GOALS:

• NSP Funding (stabilization)
• Sell to 80%-100% AMI household
• Meet state green building standards – reduce utility costs
• Local contractor training
• Construction cost $100/s.f.
• Return on Investment for city

The Iowa House, Corning, Iowa
Iowa State University Bridge Studio, Spring 2010. Construction complete Fall 2011.

Partners: City of Corning, Iowa Finance Authority, Iowa Department of Economic Development, Iowa Center on Sustainable Communities
Design Principles:
- Site Selection
- Contextual Character
- Programming
- Passive Design
- Systems and Materials
- Site Design
- Cost

Site Selection:
- Walking distance (1/2 mile) to historic downtown amenities.
- South-facing site orientation.

Passive Design + Contextual Character:
- Maximize solar orientation.
- Use vernacular features e.g. overhanging eaves, sloped roof.
- Invest in large, good windows.

Programming:
- At-grade entry, single-floor living, accessible bathroom.
- Expandable to basement.
- Outdoor living space expands indoor spaces.
- Large windows expand space, increase ventilation, winter sun.
THE IOWA HOUSE, Corning, IA

RESULTS:
• 15 local contractors trained
• 98% efficiency HVAC test = 80% reduced utility costs
• Construction cost: $115/s.f.
• Initial sale price $120,000
• On market for 2 years
• Final sale price $95,000
• City ROI = $0

LESSONS LEARNED:
• Green systems reduce overall housing costs for residents
• Cost of new construction in rural areas exceeds potential sale price
• $ need to be invested in existing in-town housing before invest in new construction
1622 FOREST AVENUE, Des Moines, IA

RESULTS:

- Construction cost: $150,000
- Housing Trust Gap Funding: $35,000
- Final sale price $119,000
- Precedent for future non-profit development
- Utility costs reduced 60-80%
**Cedar Rapids, Iowa**

**2008 - 2016**

2008 FLOOD STATISTICS

- 10 square miles (14% total area) inundated
- 18,623 people living in flood-affected area
- 10,000 residents displaced
- 7749 parcels affected
- 5900 residential parcels affected

City of Cedar Rapids Flood of 2008 Facts & Statistics.

Left: Figure Ground study of pre-flood and post-flood conditions in Time Check, Cedar Rapids, IA. Drawing by Amanda Havel and Melissa Goodwin.
ENGAGEMENT

The mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

_Carnegie Foundation_

Left: Students meeting with the Northwest Neighborhood Association, Fall 2011.
Above: Students partnered with art classes at Harrison Elementary School for the Draw On Time Check project, spring 2013.
Top: Studies of housing density impact on business types. Study by Megan Schneider. Bottom: Neighborhood map locating range of housing density images of housing models. Drawings by Erin Broadrick, Adam Ninnemann, and Megan Schneider.
Proposal connecting Ellis Boulevard to the river through “green ribbons” that manage storm water and create recreation and transportation options. Drawings by Amanda Havel and Melissa Goodwin.
SMALL PROJECTS as CATALYSTS

Ellis Boulevard Urban Farm planting intensity diagram, pavilion, and composite planter/bench. Drawings by Jamie Cunningham and Michael Thole.

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IMPACTS

RESULTS:
- Overlay district created on Ellis Blvd.
- Allows higher density housing, new retail
- Cultivate Hope urban farm expanded to 2 school gardens, processing center
- CSA shares provide healthy food at reduced cost for up to 200 households

Top: Multi-Family Affordable Housing on Ellis Boulevard
Bottom: Volunteers harvesting at Ellis Boulevard Urban Farm, summer 2012.

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