6153 Pershing: Owner Directed Deep Green
Historic Neighborhood Infill = LEED for Homes Platinum

LEED Platinum Showcase: 5/14/2013
Jay Swoboda, EcoUrban
Project Information:

The Carlsson Residence
6153 Pershing Avenue, 63112
(Skinker-Debaliviere Neighborhood)

Project Team Information:

EcoUrban – LEED for Homes Team Leader & Sustainable Solutions Consultant
Blue Brick Renovation & Construction: On-Site General Contractor
E+A Architects – Paul Hohmann (LEED AP) & Matt Shaver, (LEED Green Associate)
Homeway Homes – Modular Factory Partner
Hoffman Geothermal – Geothermal & HVAC
Microgrid Energy – Solar PV
Superior Walls – Precast Foundation Partner
LandWorkshop, LLC – John Hager, Landscaping & Sustainable Site Planning

Project Verification Team:

ASERusa – Gary Fries & Elana Brewer – LEED Raters
Guaranteed Watt Saver – LEED for Homes Provider
Owner’s Program & Direction

• Urban infill lot close to public transit and parks
• Modern/Clean design that met neighborhood historic guidelines
• Less than 2,400 square feet with open floor plan
• 3 beds / 1 flex room for an office or guest room / 2.5 bath
• Interested in prefab & modular construction
• LEED for Homes Certified (Goal of Platinum)
• Common Sense Sustainable Design
• Local products & vendors whenever possible
• Long-term ROI in mind when considering geothermal & solar
6153 Pershing
St. Louis, MO

2,166 sq. ft. above ground with 3,249 total conditioned space including basement.

4 beds / 2.5 bath

Certified: 1/17/13

- 99 Points (96 required for Platinum)
- 96% waste diversion
- 3.6 kWh/yr PV array
- 24.0 SEER / 4.8 AFUE Ground Source Heat Pump
- $60/month average energy cost
- HERS Index of 31
- Short walk to MetroLink, Forest Park & Delmar Loop
Here is a hit list of the features:

- Reused existing lot where former multi-family structure had burned down.

- 2,176 square feet with 3 bed / 2.5 bath and first floor den/office/bedroom flex room.

- LEED for Homes Platinum designation / HERS score of 31 with PV.

- 3 ton geothermal heating / cooling with (3) 200' vertical loops from with ERV.

- Solar prewire conduit from for install of 3 kw solar off-grid power producing 3,873 kWh annually or roughly 50% of the home's power!

- Modular 2x6 construction with hybrid foam/batt R24 wall insulation / Low-E Energy Plus windows with a white "cool" rubber roof.

- Modeled by Energy Rater to use 15,207 kWh/yr. Actual energy use with PV for 2012: 9,693 kWh
Site Acquisition & Challenges:

• Finding a buildable lot.
• Two old underground cisterns were hit during excavation requiring extensive rock backfill.
Factory Construction to On-site Finish
Benefits of Modular Construction

• Modular units can be delivered **80% complete** to a construction site for **$60** per square foot. With pre-modular site work and finish costs, it is possible to have a LEED certified home under **$120 per square foot**.

• Much less construction waste than traditional building sites: Approximately .25 lbs / sq. ft. on this project.

• Building time less affected by adverse weather conditions, meaning projects can be completed on time with minimal disruption to the neighborhood.

• Excavation began on 9/12. Modules set on 10/4. Owners moved in on 12/19 with interior complete and exterior work near completion.
Increasing Degrees on Pre-fabrication

Mobile Home
Manufactured off-site, transported to the site in a largely completed state. Minimal on-site labor.

Modular / Panelized Home
Building designed using pre-existing modular products/systems. Built on-site using modular/prefab components and "standard" materials.

Kit Home
Kit manufactured and packaged off-site, assembled on-site.

Site-Built Home

Increasing Degrees on On-Site Labor
Smart Modern
Urban Living
THANK YOU!

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