

# NJ GREEN HOME REMODELING GUIDELINES

Please fill out and return the Case Study Submission Form and return it to us with the signed Case Study Permission Form. The materials can be emailed to [mhaus@rci.rutgers.edu](mailto:mhaus@rci.rutgers.edu)

*SUBMITTED BY:*

**[First Name]**

**[Last Name]**

*CONTACT INFO:*

**[Email]**

**[Phone]**

*ARCHITECT:*

**[Name]**

**[Company]**

*LANDSCAPE ARCHITECT:*

**[Name]**

**[Company]**

*BUILDER/REMODELER:*

**[Name]**

**[Company]**

*GREEN CONSULTANT:*

**[Name]**

**[Company]**

*INTERIOR DESIGNER:*

**[Name]**

**[Company]**

*OTHER PROFESSIONAL:*

**[Title]**

**[Name]**

**[Company]**

*AREA AFFECTED:* **[sq ft]**

*LOCATION:* **[City]**

**[State]**

*OVERVIEW AND SCOPE:*

**Describe the key characteristics of the green remodeling project.  
What does this project include?**

*DESIGN APPROACH:*

**Whom or what inspired this project to be green?**

# CASE STUDY

# NJ GREEN HOME REMODELING GUIDELINES

## *TEAM AND PROCESS:*

**How did the homeowners, designer, and/or builder contribute to making this a green project?**

## *FINANCE:*

**How did cost influence the selection of green strategies and features? How did the cost of this project compare to your experiences with similar projects? Do you expect or have you experienced cost savings from any of the green strategies or features? Please describe.**

## *LESSONS AND TRADE-OFFS:*

**What were the major surprises of this project? Would you do anything differently? What advice would you offer future homeowners interested in pursuing a similar green remodeling project?**

# CASE STUDY

# NJ GREEN HOME REMODELING GUIDELINES

QUOTE:

[Author's Name]

Please share a personal comment on any aspect of the green remodeling project. What did you learn? What surprised you most? What part of the remodeling process or element of the finished project did you like most?

LIST OF GREEN STRATEGIES:

What were the key green strategies used in this project? List green strategies or technologies by the following categories: Energy Conservation; Water Conservation; Resource Conservation; Indoor Air Quality; Sustainable Sites; Sustainable Materials]

BEFORE AND AFTER PHOTOGRAPHS:

[Title] [Photographer's Name]

[File Name] (Note: Send original high resolution photo file)

OTHER PHOTOGRAPHS (limit 4):

[Title] [Photographer's Name]

[File Name(s)] (Note: Send original high resolution photo file)

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**RUTGERS**  
Center for  
**GREENBUILDING**

# CASE STUDY

[www.greenbuilding.rutgers.edu](http://www.greenbuilding.rutgers.edu)

## Case Study



**Location of Project:** Montclair, New Jersey

**Homeowners:** Jeff and Amy Plaut

**Architect:** John Thomas Collins

**Interior Designer:** Eco-Interiors by Patricia Gaylor

**General Contractor:** Woodhaus Construction

**Area affected:** 1000 square feet

### Overview and Scope

This house is an 1801 Federal-style farmhouse, one of the oldest continually-occupied homes in Montclair, and is on both the New Jersey and the National Registers of Historic Places. The current owners worked to achieve a balance between preservation of the historic character and fabric with green environmental standards and the everyday needs of an active family lifestyle. The renovation focused on opening up rooms and repurposing space. This included updates to the existing kitchen, family room, laundry room, and the addition of a breakfast room.

### Design Approach

Designer Patricia Gaylor and the homeowners, Jeff and Amy Plaut, both desired to do as green a renovation as possible. The designer worked with the Plauts to develop an environmentally-conscious, practical design that also preserves the historic quality.

### Team and Process

Patricia worked with the Plauts on the general look and plan for the renovation, and Patricia specified all the products being used to be as green as possible. All plywood used on the renovation by the contractor contained no added **formaldehyde**, energy-efficient lighting and appliances were specified, and the cabinets used were no added **formaldehyde** plywood boxes with a low-VOC paint finish.

### Finance

The cost of the renovation was considerably high to begin with due to the age of the home. Special consideration had to be taken at every turn to keep costs to a minimum. But for the most part, selections were made on the basis of their sustainability and green quality, not over high price. The construction and materials costs were fair. There will be a huge return on investment in energy savings. Before the renovation, the house was leaky, and the homeowner's heating bills were very high. Good insulation, the addition of radiant heat flooring in the kitchen, and energy-efficient windows contribute to the new tighter building envelope.

### Lessons and Trade-offs

The major surprise was how much work was required to fix old renovations and get the home up to current code. While this was expected for such an old house, the costs were higher than anticipated. Although the project was completed on time, the team ended up substantially over budget due to the poor condition of the home's infrastructure. However, both Patricia and the Plauts were very satisfied with the results.

*"I thoroughly enjoyed working on a period renovation, and melding new technologies with the old house...Green remodeling is the only way to go, as far as I'm concerned. As a designer, it's my job to show the homeowner that a remodel of her home should be as healthy to the family as possible, leave as low a carbon footprint as possible, and make it as energy-efficient as possible. I think these things can be accomplished in a 'green' fashion with very little in the way of extra cash output...What surprised me the most? Nothing! Being in the remodeling business for so many years, green or not, it's always a challenge."*

*- Patricia Gaylor*



Breakfast room

## List of Green Strategies

### Energy Conservation

- Selected **Energy Star**® appliances, including the refrigerator, dishwasher, television, and clothes washer and dryer
- Purchased a stove and refrigerator made domestically
- Installed hydronic radiant heat under the kitchen floor
- Installed highly efficient **low-E** glass and argon filled windows
- Chose borate-treated blown-in **cellulose insulation** for the space between the interior and exterior walls for significantly increased energy efficiency
- Used **CFLs** in the majority of light fixtures, including the outside fixtures

### Water Conservation

- Installed water filtration systems at sinks to eliminate use of bottled water
- Installed low flow faucets and faucet aerators

### Indoor Air Quality

- Built cabinets from wood with no added **formaldehyde**, and painted them with **low-VOC** paint
- Painted interior walls with environmentally-friendly **low-VOC** paint
- Purchased laundry room cabinets made of medium-density fiberboard (MDF) with no added urea **formaldehyde**
- Coated soapstone countertops are coated with food-grade mineral oil once a month

### Sustainable Materials

- Stripped and repaired the original brick hearth to restore it as the focus of the kitchen
- Constructed porches using local bluestone and flooring made from **recycled content**
- Installed eastern white pine floors, harvested from family-owned, responsibly-managed New Hampshire forests
- Used domestic clay for the butler's pantry wall tile made by an environmentally responsible New Hampshire firm that reuses clay waste, water for processing, and shipping boxes
- Installed white Danby marble countertop from Vermont in baking area
- Installed Marmoleum linoleum flooring, made from **jute**, flax, and linseed oil



Gas range and oven



Mud room