

**PRACTICUM PROPOSAL**  
Sustainable Design / Build Certificate Program  
November 2011 – June 2014



***“Plan a green renovation for a structure.”***

# PRACTICUM PROPOSAL

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### Statement of Purpose

My goal for the practicum is to design the basic layout, electrical, plumbing, and HVAC systems for the green renovation of a vintage Airstream travel trailer, and to prepare a preliminary budget and construction schedule for the installation. The primary learning objectives are 1) to gain experience in executing a green systems design on a small scale, and 2) to further develop my renovation, project management & estimating skills.

By using as a template a mobile dwelling that has all of its systems and useable living space within 160 square feet, I'm seeking to learn more about modest design (e.g., appropriate to budget, skill level, and an increasingly streamlined lifestyle). I believe that a small structure like this serves as a microcosm of larger building structures that I intend to design, build & inhabit in the future, and is therefore a great place to continue my education.

It is my intention not only to identify eco-friendly materials and technologies that work for this application, but to take social factors, costs, recycling, and comparisons with mainstream products into account as well. The aim is to demonstrate a significant improvement in overall efficiency & environmental impact over comparable products & building materials, based on a holistic approach and modern technological advancements.

### Learning Objectives

- What does good / "modest" / practical design mean to me?
- Explore the benefits & challenges of choosing eco-friendly materials
- Mechanical, electrical, plumbing systems design
- Google Sketchup / Revit design

### Methodology

***"Is what we're sustaining sustainable?"***  
– question posed during Core Program (Jan. 2012)

***"Build your definition of what green building is, because a client's understanding will often be different."***  
– Peter Yost

This project explores "modest design" as appropriate to the client's lifestyle, with a focus on creating positive or curtailing negative ecological impacts in the process. As I'm building for myself (as the client), it's an opportunity to discover my own definition of what green renovation is – beyond idealism – by documenting where it's simple, practical and healthier to choose a sustainable option, as well as the instances where I have to make more challenging design decisions, or where options are limited. Using recommended reading from Yestermorrow courses, class notes & additional sources (see Resources, below), I will use templates & best practices to question, research, and develop an iterative design with feedback from my advisor.

One possibility of using recommended reading to develop this project can be to use the table of "Characteristics of Conventional & Ecological Design" and the chapter, "Ecological Accounting Informs Design," from Sim Van Der Ryn & Stewart Cowan's book, *Ecological Design* as bases to measure my options for construction.

Another can be to work with my advisor to ensure that I'm developing the project holistically and collaboratively, by following the criterion from the section called "...you know when you're participating in an integrative design process when..." from the book, *The Integrative Design Guide to Green Building* by 7Group & Bill Reed (from the core curriculum reading list), while tracking monthly progress of the deliverables.

***"Keep it simple."***  
– Andreas Stavropoulos

***"Smaller projects tend to require more design because you're doing more with less."***  
– Mac Rood

***"...use careful observation and thoughtful interaction to make more effective use of human capabilities, and reduce dependence on non-renewable energy and high technology."***  
– David Holmgren

Where applicable, I will interview potential subcontractors, determine scope of work, negotiate pricing, and prepare a preliminary cost proposal for construction. I have started the process of interviewing, and plan to work with a professional Airstream restorer to identify best approaches and costs related to renovation. Just to give an overall sense of the scope (beyond the deliverables for the practicum) I expect to sub-contract out the aspects of the renovation that require specialized tools and equipment, or skills that would otherwise take years to acquire – primarily parts of the build that I'm considering to be "automotive / structural" or plumbing-related. I'd like to do the demo, electrical wiring, finish flooring, hardware restoration & built-ins myself and sometimes with some help.

### Deliverables

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- Design references “look book” (images, concepts, “things I love”)
- Client needs assessment
- Floor plans / elevations / sections (Hand drawn, Google Sketchup and / or Revit)
- Electrical, plumbing, & HVAC schematics (Google Sketchup and / or Revit)
- Insulation / Envelope assessment, recommendations
- Comparative assessment of green vs. mainstream products (ecological design, effectiveness, & cost)
- Product specifications for desired equipment / appliances
- Proposed costs covering demo & construction up to & including installation of electrical, plumbing, and HVAC systems (Excel)
- Preliminary construction schedule (using [FastTrack Schedule](#) project management software)
- Blog following practicum progress: [www.littlegreenairstream.com](http://www.littlegreenairstream.com) (Online now! Includes photos)
- Final digital presentation of the above (most likely PowerPoint)

### Timeline

8 months: November 2013 – June 2014

### Resources

- 1969 Airstream Safari 23' (now located on Long Island, NY, where I live)
- Less is More: Designing the Small or Tiny House (class notes & final project)
- All other class notes (see list below), plus specific suggestions I've gotten from my instructors with this project in mind
- Suggested reading from my Yestermorrow classes
- [Colin Hyde Trailer Restorations](#) (professional vintage Airstream restorer that I have interviewed for initial pricing – his shop is 1 hour from Yestermorrow)
- [The Vintage Airstream Podcast](#) (lots of free restoration information)
- [Airstream Life](#) (magazine subscription)
- [Airstream Forums](#) (online Airstream forum with lots of renovation / best practices advice)
- Student version of Revit (free Yestermorrow student registration – need to verify computer compatibility) or Basic version of Google SketchUp
- [Lynda.com online Revit tutorials](#)

### Practicum Advisory

My intended approach in working with an advisor is to take in any insights, suggestions, and advice that they might have to offer about the project in general, and to exchange ideas for feedback as the project evolves. I'd like to start by reviewing the deliverables and then schedule regular meetings to check in and discuss progress. To my mind, it'd be ideal to schedule eight 1-hour long (or sixteen ½-hour long) meetings with my advisor over the 8 months of the practicum, so that it's possible to develop a rhythm and to mimic the meetings that take place between architect / project management / client on a construction site.

Advisors that I'm sure I could get value from working with are: Mac Rood, Robert Riversong, Andreas Stavropoulos, Carey Clouse, Peter Yost, and Rick Ames. Any further suggestions or recommendations would be appreciated!

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## EXPERIENCE

### Yestermorrow:

Course	Instructor(s)	Dates of Attendance:
<b>Core Curriculum:</b> Ecological Design in the Built Environment	Lisa DePiano, Mark Krawczyk, Buzz Ferver, Jeff Schoellkopf, Rick Ames, Nick Moons, &c.	Jan. 22 – Feb. 10, 2012
<b>One Week Elective 1:</b> Less is More: Designing a Small or Tiny House	Dave Cain & Andreas Stavropoulos	Nov. 6 – 11, 2011
<b>One Week Elective 2:</b> Solar Electric Design & Installation	Lauren Craig & Bob O'Hara	Mar. 4 – 8, 2012
<b>Workshop Elective 1:</b> The Healthy Home	Ed Lowans	Nov. 5 – 6, 2011
<b>Workshop Elective 2:</b> Solar Design	John Ringel & Hilton Dier III	Nov. 12 – 13, 2011
<b>Workshop Elective 3:</b> Urban Regeneration	Scott Kellogg, Keith Morris	Feb. 11 – 12, 2012
<b>Workshop Elective 4:</b> Green Remodeling & Deep Energy Retrofits	Peter Yost	Feb. 18 – 19, 2012
<b>Supplement:</b> Basic Carpentry	Lizabeth Moniz & Patti Garbeck	Oct. 9 – 14, 2011
<b>Supplement:</b> Foundations 101	Marvin Davidson	Oct. 22 – 23, 2011
<b>Supplement:</b> Art of Building Series (Math for Builders, Introduction to Structural Design, Codes, Costs & Contracts)	Robert Riversong, Katie Hill & Mac Rood	Nov. 14 – 18, 2011
<b>Supplement:</b> Fundamentals of Design	Dave Sellers	Feb. 19 - 23, 2012
<b>Supplement:</b> How to GC Your Home	Kenneth Friedman	Feb. 25 – 26, 2012
<b>Supplement:</b> Renovation	Paul Derkson	Apr. 22 – 26, 2012
<b>Supplement:</b> Electricity: Safe & Secure + Wire it Up!	Jan Ruta	Apr. 27 – May 4, 2012
<b>Supplement:</b> Intro to the Woodshop	Patti Garbeck	May 25 – 26, 2013

### Other Relevant Experience:

**May 2012 - Present**                      **Assistant Project Manager / Estimator** \_\_\_\_\_  
Working closely with senior project managers and trades to complete Manhattan-based, residential renovation projects.

**June 2010 – June 2011**                      **Building Superintendent's Assistant,** \_\_\_\_\_  
Assisting the apartment building superintendent with renovations & regular maintenance.