Project 1851 - A Journey in Sustainability: A Tech-integrated and Regenerative Rental Property

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PROJECT 1851

A Journey in Sustainability: A Tech-integrated and Regenerative Rental Property
Mission

The global climate is rapidly changing, and the speed of this change is human-driven.

Project 1851’s mission is to reverse this trend and make a difference in the long-term health of the planet by educating and inspiring others to build their own carbon negative dwelling and live a more sustainable, eco-friendly life.
Background

THE OPPORTUNITY

Global warming is an undisputed fact; our planet is warming up and we are part of the problem. With a massive influx of natural disasters, warming and cooling periods, different types of weather patterns and pollution, we need to start taking steps to reverse this trend.

THE SOLUTION

Through extensive planning, the use of environmentally friendly materials, energy-efficient systems and continually incorporating cutting-edge technology, Project 1851 seeks to set a new building standard: one that helps reverse global warming and considers its long-term impact for future generations.
The Vision

A desirable off-grid property comprised of a power positive home, eco-gym, high-yield greenhouse and water management system that exists to inspire and educate others about eco-friendly living.
Think of Project 1851 as the Tesla of eco-homes - a luxurious off the grid cabin with modern amenities.
Project 1851 Overview

The Property
• 1.1 acres in Chester Springs, PA with perplexing geography: 97% in 100-year flood plane.

The Challenge
• Build a very rare carbon negative and off-grid dwelling, greenhouse and gym on stilts, elevated for flood protection, while using recycled materials.

The Future
• The site will serve as a destination for those who want to discover new ways to minimize their environmental impact.
Why 1851?

1. Site address is 1851 Art School Road, Chester Springs, PA.

2. The largest flood in American History occurred in 1851 when the Mississippi flooded across the southern states.

3. The Foucault Pendulum, the first device show the earth’s rotation was introduced in 1851.
- 1.1 acre lot
- 50’x40’ proposed building with an approximate FF (Finished Floor) elevation on stilts
- Parking shown as 2-3 spots and kept out of flood plain
Our sources of electricity production will come from rooftop solar panels and electricity-producing exercise equipment in the gym.

Our demand for electricity will be lower than a typical building due to a variety of conservation measures put in place during construction, such as:
Key Conservation Measures

• Water – Rainwater collection, purification (carry in back-up, well and pump back-up)
• Waste – Cyclone/pulverization, quick drying, bagging (pump and dump back-up)
• The icynene spray foam and recycled alpaca fur for insulation
• The use of geothermal heating + cooling
• Tankless water heater
A series of key performance indicators (KPIs) for each of the technologies being deployed will be introduced. Initial KPIs:

**Net-Negative Home**
A home that produces more energy than it consumes annually. It reduces energy consumption through airtight construction, the use of energy-efficient doors and windows, and proper insulation techniques, and more than offsets the remaining load with the energy produced by solar panels.

**LEED Platinum Certified Home**
Leadership in Energy and Environmental Design is the world’s most widely recognized green building certification, which acknowledges the highest level of sustainable building (healthy, highly efficient and cost-saving green buildings).

**Energy Star Certified New Home**
The blue Energy Star Label on a new home means it was designed and built to Energy Star’s rigorous requirements resulting in a home build better from the ground up.
Aspirations

• Be booked for one full year in advance by weekend visitors who want hands on experience living carbon negative and off the grid.

• To be written up in Architectural Digest so individuals across the country can be inspired to build their own carbon negative home and learn how to incorporate substantiable living into their everyday life.
Beneficiaries

• Visitors from far and wide – to learn about sustainability
• Boy Scouts – sustainability badges
• Builders – seeking a demonstration of what is possible, with transparency of costs and performance

Donors (initial …)

• Alliance Environmental – 56 large commercial windows, reclaimed
• Madeleine Duey – Kitchen granite countertop, bathroom cabinets, interior doors.
• Maurie Kring – Reclaimed long wood beams from Anslema Crissing building
• Peter Lumber – Exterior doors, kitchen cabinets.

Corporate Sponsors
Team

- Civil Engineering: Lisa DAndrea, P.E.
- Wireless Engineering Consultant: Julian Toneatto, Ph.D. P.E.
- Legal Council: Elizabeth Gavin, Esq.
- Social Media: Andrew Krebs-Smith, MBA, Founder, Social Fulcrum
- Surveyor: Andy Miller
- Publicity: Allister & Paine