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# Historic Preservation and Sustainable Design

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The views expressed in this paper are solely those of the author.

LUCY FRYE

SENIOR INTEGRATIVE PROJECT:  
DEPENDENT STUDY, GOODWIN-NIERIN

ARCHITECTURAL STUDIES  
CONNECTICUT COLLEGE  
2012

**HISTORY & ARCHITECTURAL STUDIES**



CONNEC

# HISTORIC PRESERVATION AND SUSTAINABLE DESIGN

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GOODWIN-NIERING CENTER FOR THE ENVIRONMENT  
SENIOR INTEGRATIVE PROJECT

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Lucy Frye

WE WILL HAVE TORN DOWN AND REPLACED ONE THIRD OF THE CURRENT  
BUILDING STOCK IN THE U.S. - Brookings Institute Study 2008

POINTS:

Reduce, Reuse, Recycle

Present and future to equal standards

Historic preservation and sustainable  
development can be successfully integrated

PRESENTATION OUTLINE:

Background Information

Partnership

Historic Preservation

Historic Farms Old House

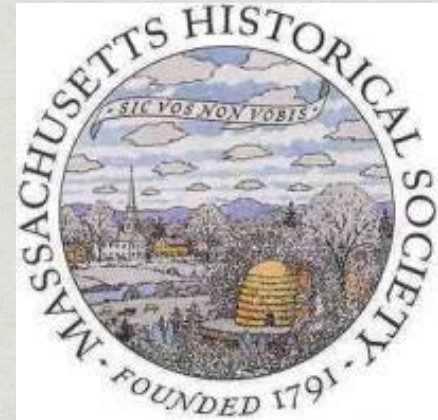
Historic Barn Renovation



# BACKGROUND INFORMATION



VS.



THE GREENEST BUILDING IS THE ONE THAT IS ALREADY BUILT” - CARL ELEFANT

- Effects of Construction
- Value of the Past
- Cost and Upkeep of Properties

- Limited Precedence
- Cost
- Code Discrepancy

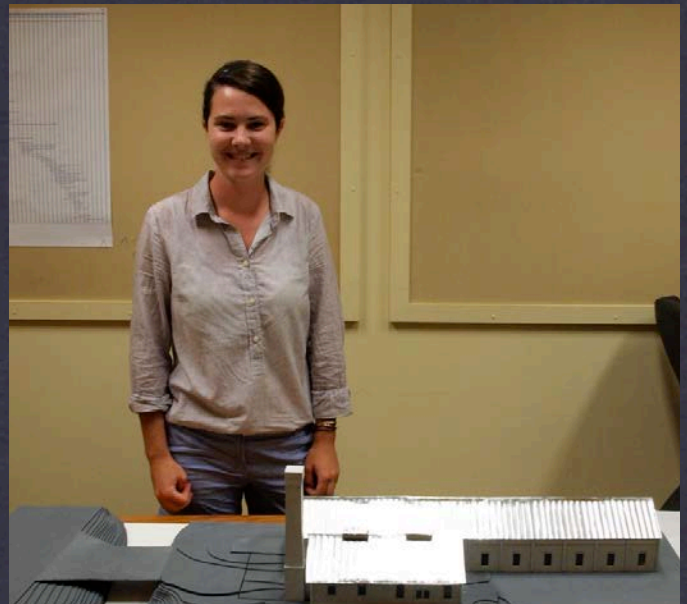


# CARPENTER & MacNEILLE ARCHITECTS AND BUILDERS



MacNeille, AIA

Terry Carpenter



## TRUSTEES OF THE RESERVATIONS



1880s



2008



2010

0,000 Project

LD Gold

uce Energy By 50% - Zero Waste Renovation

land Communities Initiative



# LETT RENOVAATION

Structural Improvements

Window Replacement

Green Space

Collection

Solar Array

Source Heat Pump

Building Materials





1840s



2009



2011

50,000 Project

LEED Gold Going For LEED Platinum

Energy Usage of 55% Below Code Standards - 90% Zero Waste

Appleton Farms Center for Agriculture and the Environment

# THE OLD HOUSE RENOVATION

General Structural Improvements

Window Restoration

Mass Boiler

60 Gallon Rain Catchment System

10kW Solar Array

Reclaimed Building Materials

Panel 60 Gallon Solar Thermal System



in 1889

renovated in 2006

Industrial Style Building

LEED Platinum Building

Pre-1900 Platinum Building



# SEX FALLS TROLLEY BARN

ESS

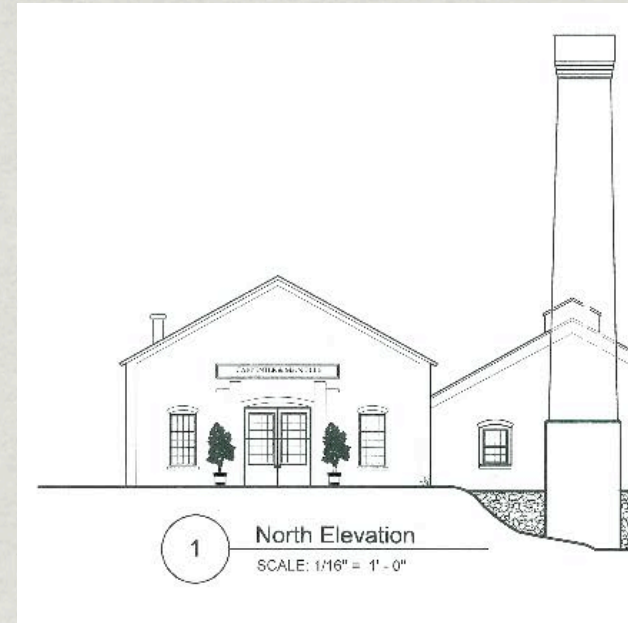
WATER & MacNEILLE Architects and Builders



1890s



2011



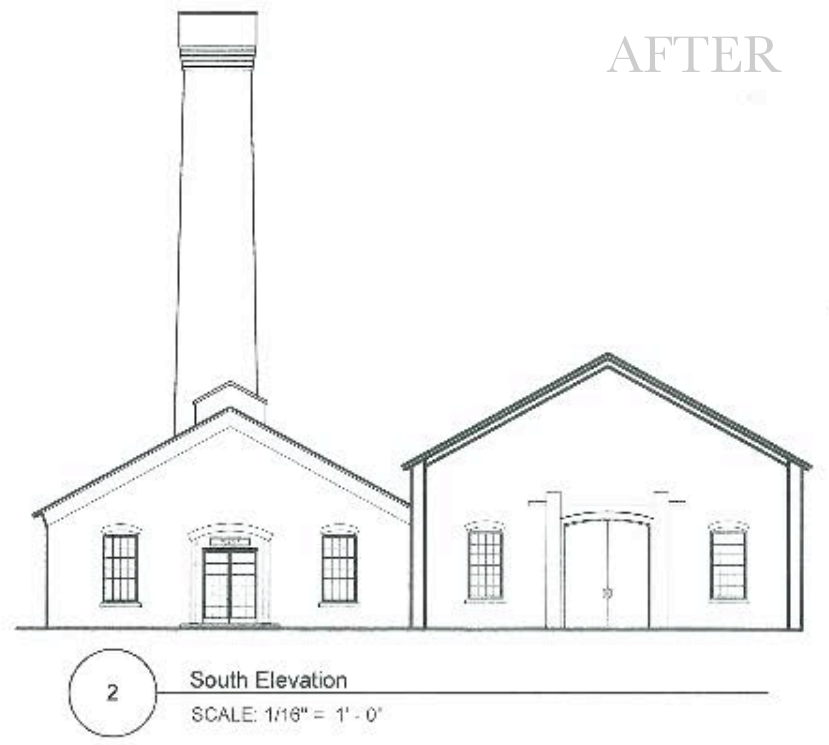
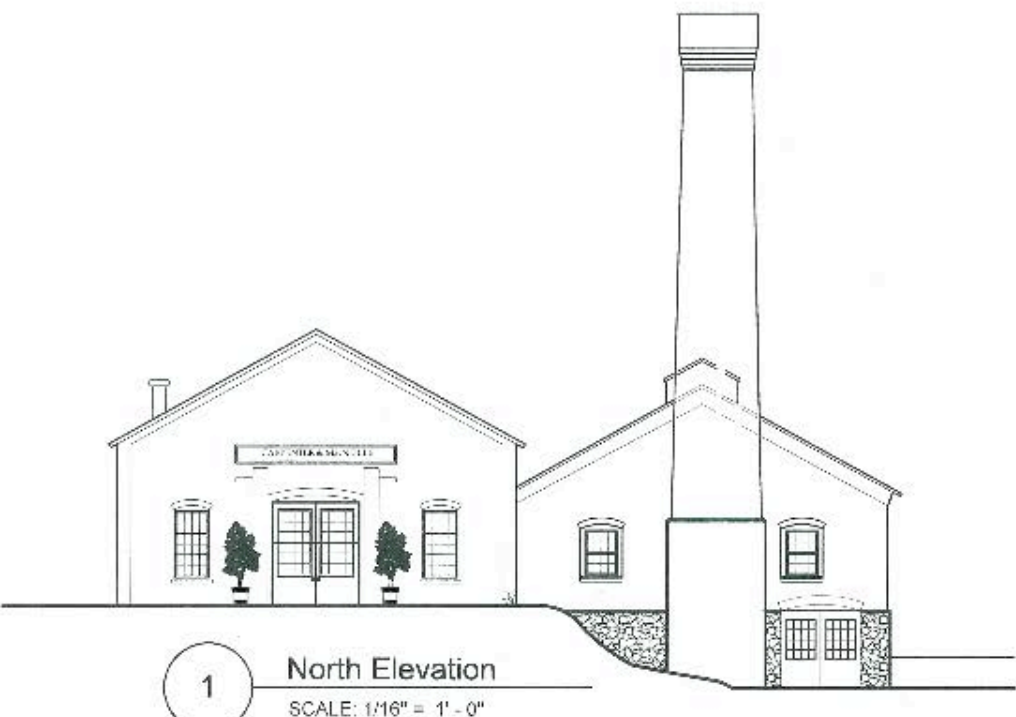
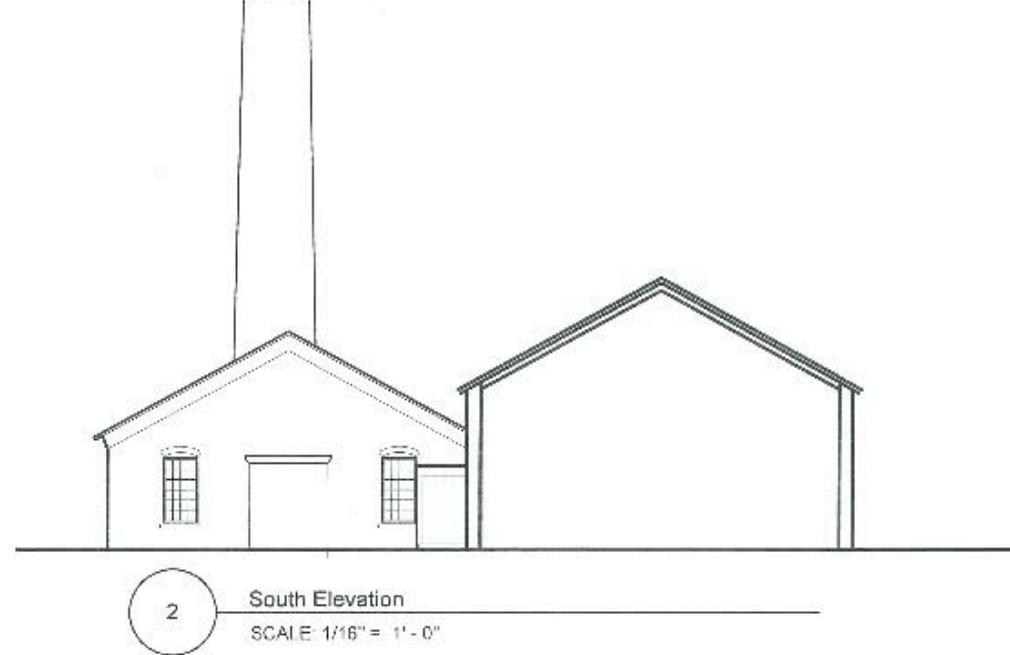
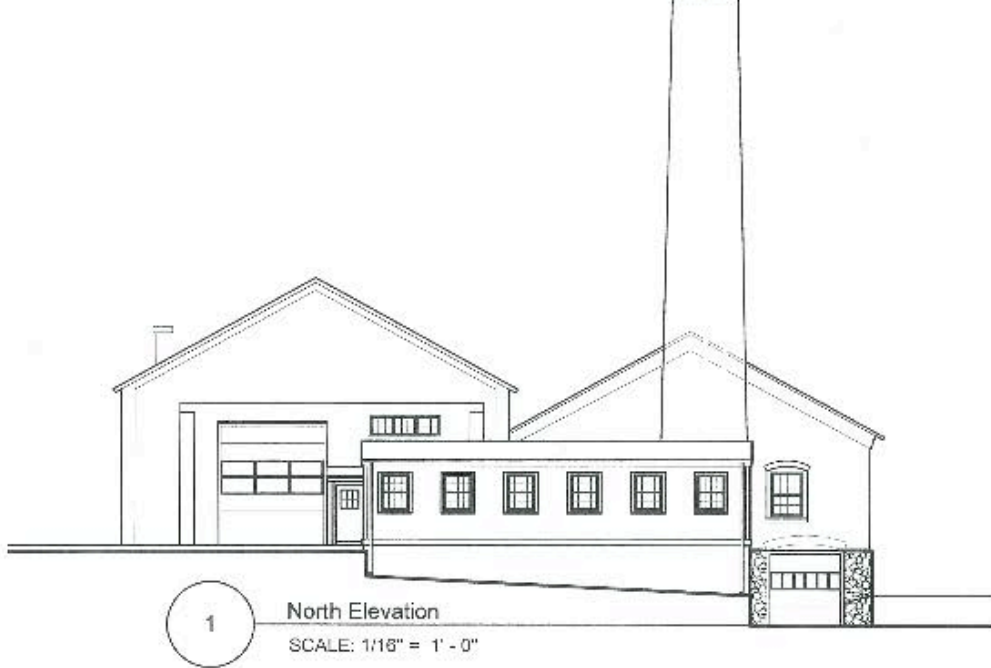
PROPOSED

10,000 +/- Project

Maximize Space and add Green Space

Improve Historic Aesthetics and add Sustainable Features

Year Renovation Plan

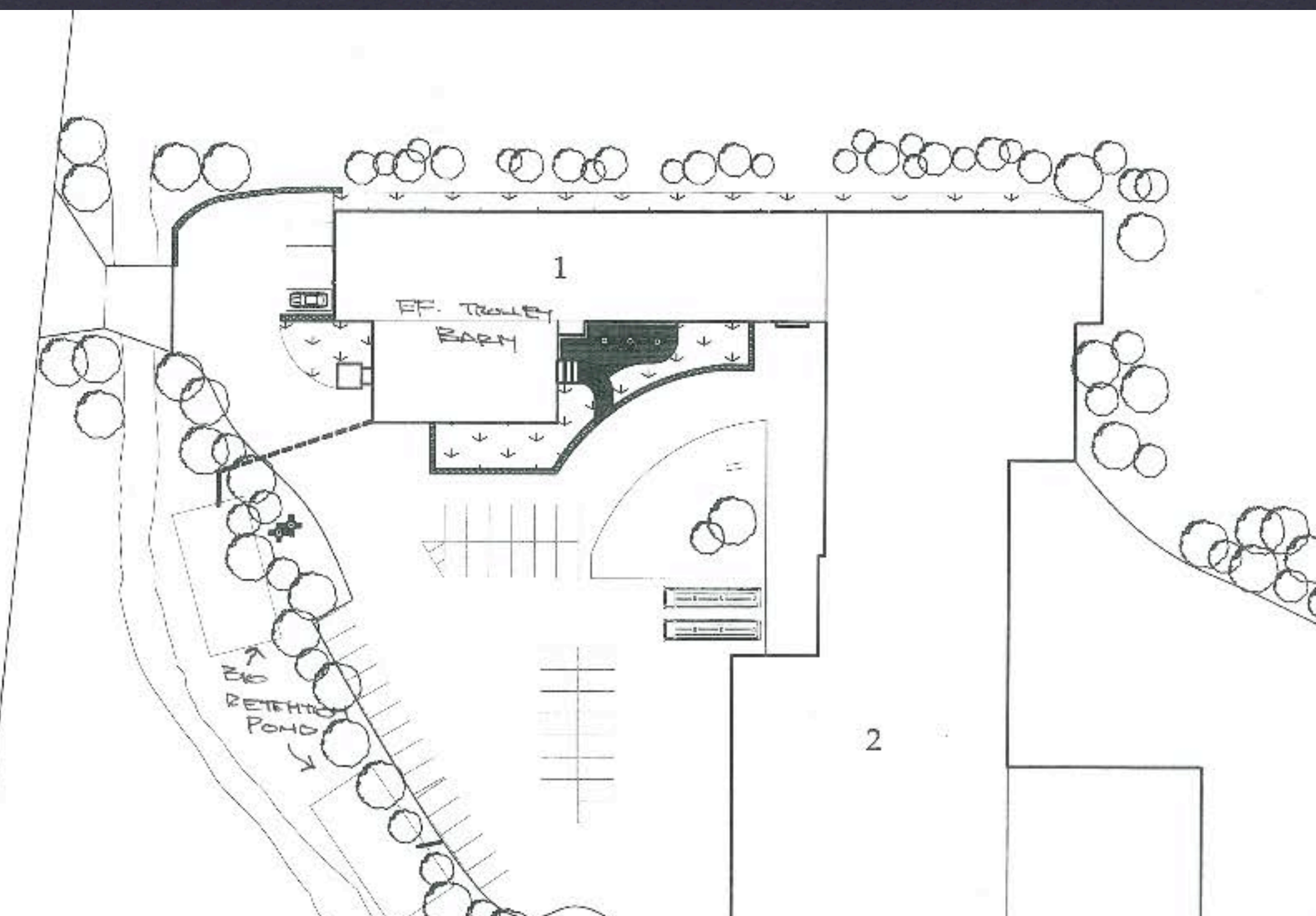




BEFORE  
Scenario 2 First Floor



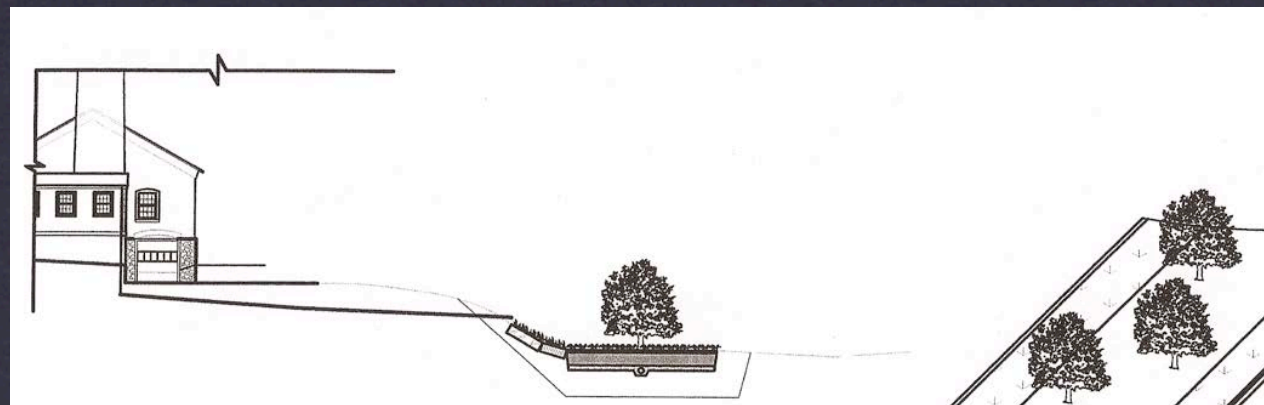
AFTER  
Scenario 1 First Floor







- General Structural Improvements
- Masonry/Drainage/Roofing
- Restore Windows (Replace If Needed)
- 53,226 KWH Photovoltaic
- Bio Retention Pond
- Biomass Boiler
- Improved Exterior Space
- Green Building Materials
- Complete Wind Study



able Examples of Sustainable Historic Preservation

east Sustainable Energy Association's Open House

ncentives and Residential Motivation

*ONLINE.ORG* and *DSIREUSA.ORG*



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Questions?