

# Volunteer Assisted Weatherization

VECAN Conference 2014



Upper Valley

**Habitat**  
**for Humanity**<sup>®</sup>

Upper Valley Habitat  
founded in  
1989

# Habitat's Mission:

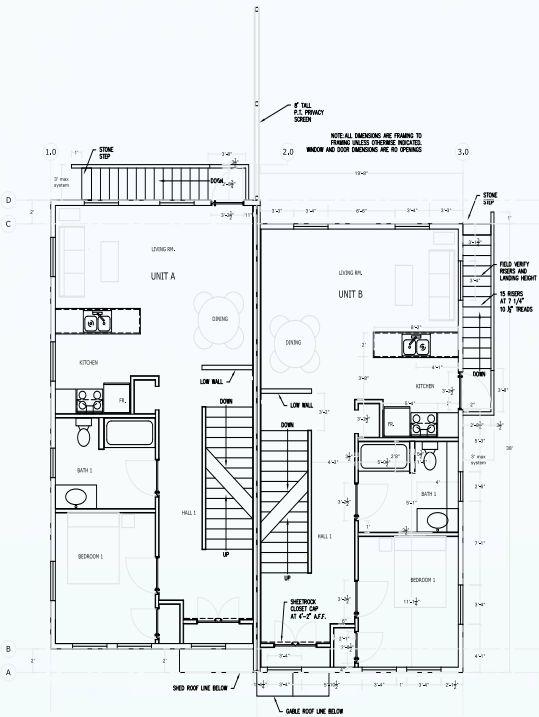
- Build durable, healthy, affordable homes.
- For families in our community who could not otherwise afford to buy a home.

UV Habitat's work from  
1989 to Sept 2011

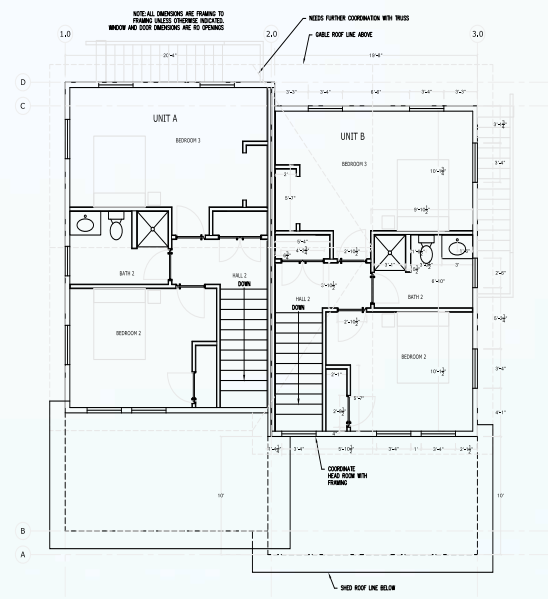
28 New Homes



Single family Home



1 Second Floor Plan  
SCALE: 1/4" = 1'-0"



2 Third Floor Plan  
SCALE: 1/4" = 1'-0"

Project: <b>Habitat</b> West Lebanon, New Hampshire	Sheet Title: <b>Schematic Floor Plans</b>	Graphic Scale: 	SCALE: 1/4" = 1'-0" DATE: 04/02/09	Dwg. #: <b>A3</b>
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# Duplex

Sept 2011  
UV Habitat expanded  
its work to include

**Renovations**





# Irene “weatherization” project

# Who are the volunteers on our projects?

- The family (a Habitat requirement) and relatives
- Community members from the UV and beyond



# Bradford Home



# Bradford Project

Weatherization or Gut Rehab?

# Home Performance with Energy Star

# Habitat's Rehab philosophy:

very significant

long term

energy efficient Rehabs

# Energy Audit

- Tim O'Dell Of Salsaa Building and Energy Solutions

test in ✓

test out ✓

**Progress Testing** ↩

# Energy Audit Test in

House so leaky that the blower door could only run at **CFM45** to get readings



# Air Leakage Results

Adjusted Air change :

**5731 CFM 50**

# Air leakage reduction goal

Ambitious reduction goal was  
set at **60%**

Starting point









19/06/2013





# Volunteers











# Improvements





















# Energy Audit Test Out

## Air Leakage

- Prior to renovation CFM50: **5731**
- Post Renovation CFM50: **1718**
- Reduction of **70%**

# Energy Audit Test Out

## Heating Savings

- 167 MMBTUS
- 15 Tons of CO<sub>2</sub>
- Energy use reduced by over **48%**

# Energy Retrofit Costs

- **\$22,435.**
- Eff. Vt. Rebate **\$2000**
- Costs after Rebate **\$20,435**

# Payback

- After rebate costs \$20,425
- Estimated Annual Savings **\$3,217**
- Payback in years **< 6.5** ; Less as energy prices rise

# Next Steps

Habitat will continue to partner with families in need.



# Questions?

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