

The Eco Cottage Sustainable Disaster Housing

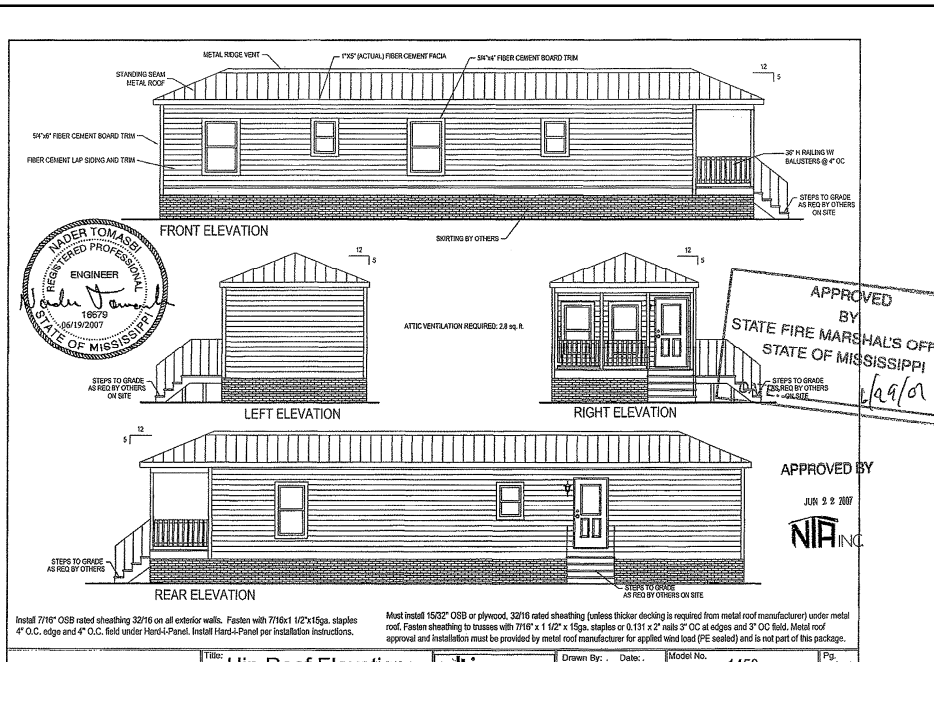
Fred Krimgold
Advanced Research Institute
Virginia Tech

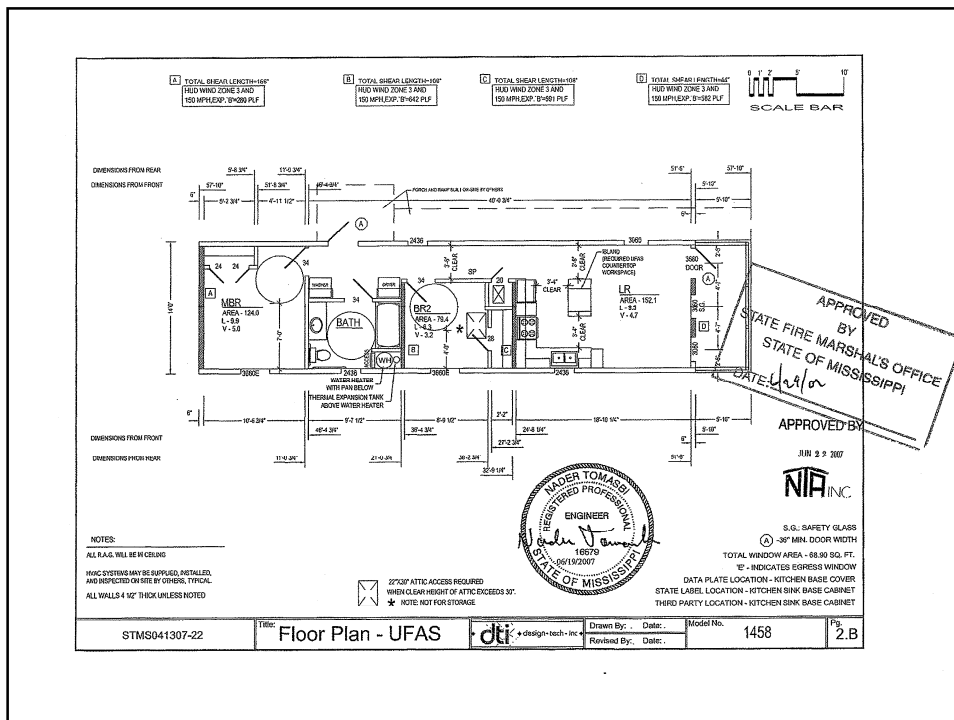
Alternative Housing Pilot Program

- FEMA funded experiment
 - Executed by States
 - Louisiana, Mississippi, Alabama, Texas
 - Potential transition from interim to permanent
 - MEMA program
- Mississippi Cottage
Eco Cottage

ECO Cottage Program Overview

The ECO Cottage Program is funded through a grant (Grant Agreement EMW-2007-GR-0935) from the Federal Emergency Management Agency (FEMA) to the Mississippi Emergency Management Agency (MEMA). MEMA created the ECO Cottage Program to support the housing of Katrina disaster victims with an innovative, eco-friendly alternative to traditional disaster housing.

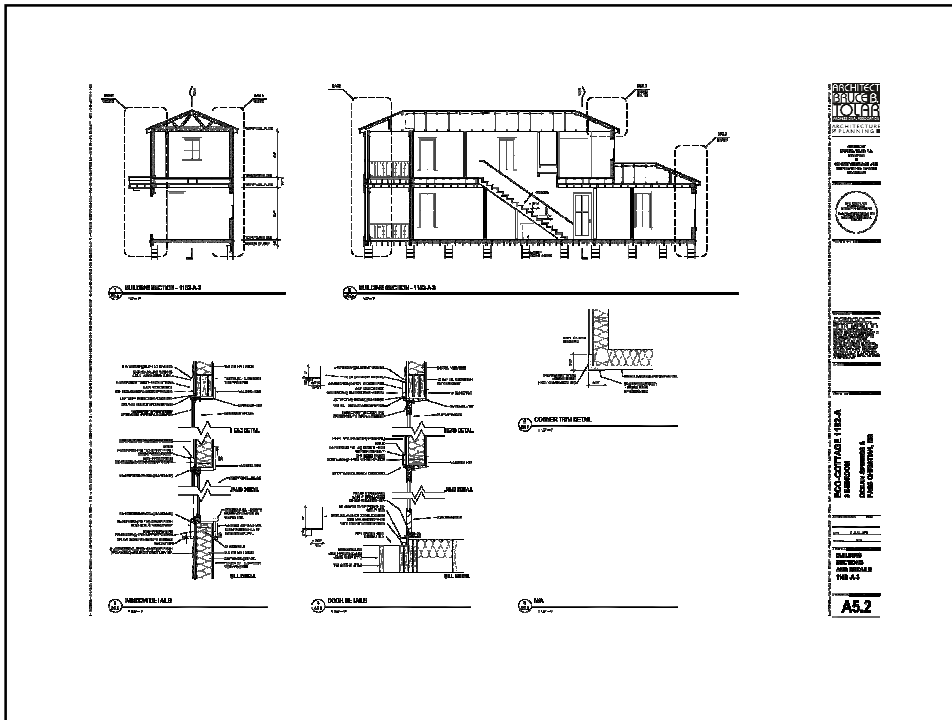




The current ECO Cottages are designed for

1. LEED level silver certified and
2. Enhanced air quality
3. Energy efficiency,
4. Sustainability
5. Sensitivity to the environment
6. Moisture, mold and rot resistance.

The existing architectural design is for a two-bedroom unit of 892 square feet..





Comparative Summary FEMA Emergency Housing Specifications				
Highlighted specifications are FMHC&SS requirements.				
Feature	FEMA 2-Bedroom Park Model 2009	Rugged M/H Northern Unit 2009	Rugged M/H Southern Unit 2009	Comments
Construction Zone Requirements				
Code Requirement	Standard for Park Trailers (ANSI A119.5)	FMHC&SS	FMHC&SS	
Roof Load	Middle to HUD M/H	Middle	South	There is no mechanism or approval process to determine whether manufactured home requirements (designs) are being met for park models.
Thermal	Zone 3 to HUD M/H	Zone 3	Zone 2	There is no mechanism or approval process to determine whether manufactured home requirements (designs) are being met for park models.
Wind	Zone III to HUD M/H	Zone II	Zone III	There is no mechanism or approval process to determine whether manufactured home requirements (designs) are being met for park models.
States	CONUS	AZ, AR, CA, CO, CT, DE, DC, ID, IL, IN, IA, KS, KY, MD, MA, MI, MN, MO, MT, NE, NV, NH, NJ, NM, NY, ND, OH, OK, OR, PA, RI, SD, TN, UT, VT, WA, WV, WI, WY.	TX, LA, MS, GA, AL, SC, NC	
Quality of Construction	No luan, MDF, Vinyl / Paper gypsum (Except American Commercial grade quality dry wall). No product containing urea-formaldehyde to be used	No luan, MDF, Vinyl / Paper gypsum (Except American Commercial grade quality dry wall). No product containing urea-formaldehyde to be used	No luan, MDF, Vinyl / Paper gypsum (Except American Commercial grade quality dry wall). No product containing urea-formaldehyde to be used	

Housing Assessment Tool

- For data collection on existing offers
- Notation of relevant standards
- 182 categories of data collection

Climate & Hazards

Ventilation & Air Quality

Special Needs (UFAS)

Market Influence

- Stockpile of 4,000 units
- Key Role of Travel Trailers
- Uncertain Demand