

# Carter Woods II



62 + senior housing

31-60% Area Median Income (AMI)

Henrico County

4 miles from Downtown Richmond



Better Housing Coalition

Non-profit Community Development Corporation (CDC)

Joshua Galloway

Project Designer, Rose Fellow















# Rose Fellowship



Building a Straw Bale House  
The Red Feather Construction Handbook

Building A Straw Bale House  
The Red Feather Construction Handbook

Princeton Architectural Press, 2005  
Nathaniel Corum, Rose Architectural Fellow 2003-2006



Hopi Elder Housing  
Community Design/Build Process with Hopi Family Members and Red Feather Development Group

Hopi Nation, Arizona  
Nathaniel Corum, Rose Architectural Fellow 2003-2006

# Rose Fellowship

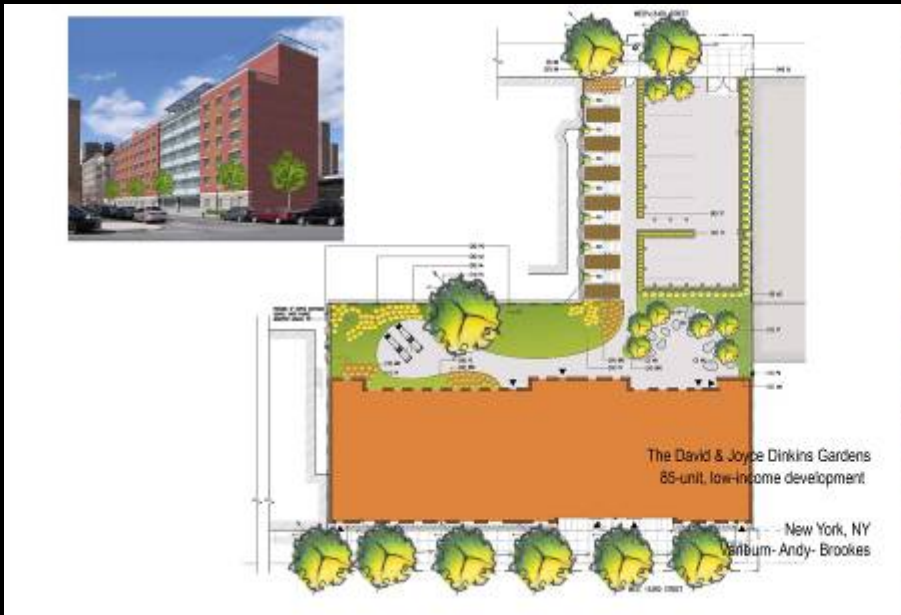


Marion Job-Training Center  
study section model  
Marion, Alabama  
Victoria Ballard Bell



Marion Job-Training Center  
downtown Marion  
Marion, Alabama  
Victoria Ballard Bell

# Rose Fellowship





## Carter Woods II

Transit, landscape and affordability



## Carter Woods

### Phase I-80 homes

- Blown cellulose
- Low-e windows
- HVAC in cond. space

### Phase II-72 homes

- EarthCraft House
- Green Communities

# Entrance



# Kitchen



Energy Star Appliances and light fixtures  
Low-VOC sealant on exposed fiber board  
Linoleum floor

# Living Room



## Resident Comfort

low-e window

caulk and seal exterior walls

duct blaster and blower door tests

< 6% duct leakage

< .30 ACH Natural unit tightness



# Bathroom



# Bedroom



## Resident Health

ducted fresh air-35 cfm  
low VOC carpet, paint  
outside space

High Performance/ Affordability is measured in years.

How do you measure progress?

monitor utility costs

occupant comfort

maintenance costs



Reap the benefits of building a high performance bldg?

building check-ups

staff training

resident education and surveys

# Green Components and Costs

## Requirements

ducted fresh air	\$15,000
improved window flashing	4,500
EarthCraft testing and certification	8,000
Energy Star Light fixtures	18,000
seal underside of counter w/ low-VOC sealer	6,000
bath fan timers	9,000
HVAC Contractor test & balance	25,000
Low-e windows	BHC standard
Blown cellulose insulation	BHC standard
Variable speed blowers/ 13 SEER	BHC standard
Low-VOC paints	BHC standard
Low-VOC carpet	BHC standard
Low-flow water fixtures	BHC standard



# Green Components and Costs

## Options

Puron coolant (non-CFC, HCFC)	\$27,000
recycled/ recyclable carpet	22,000 (cost savings)
linoleum in kitchens and bathrooms	46,500 (cost savings)
rubber flooring in stairways	5,500 (cost savings)
Native, low water landscape	(8,000)

Total cost increase      \$178,500

Construction budget      \$5,200,000

Percent cost increase      3.4%

## Increase from what?



# How was it possible?

## BHC Mission-Sustainable Principles

board and staff

## EarthCraft Multi-Family VA Pilot Project

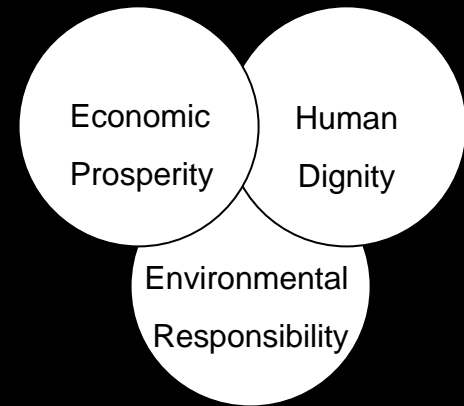
experienced consultant

## Green Communities Grant- Enterprise Community Partners

charette, design, construction

## Willing Contractor and Architect

experience



# What is next?



## Randolph Place Apartments

School built in 1895

Converted into affordable, senior apartments in 1980's

Light renovation

EarthCraft House and

Green Communities