



## G. W. Robinson Builders, Inc.

## Gainesville, FL

## **Energy Efficiency Features**

- Home Energy Index (HERS) Ranging From 68 To 63 (or lower) (significantly better than Energy Star which is 85 or below)
- Double Pane, Low-e Vinyl Frame Windows
- R-13 Cellulose Wall Insulation
- R-30 Ceiling Insulation With Radiant Barrier
- ENERGY STAR® Certified
  - Including Thermal Bypass Checklist Compliance
- Extensive Use of Compact Fluorescent Bulbs
- ½" Foam Insulation On All Hot Water Pipes
- High Efficiency (83%) Tankless Gas Water Heater
- · Manual J Sized Heating and Cooling System
- High Efficiency (95%) Sealed Combustion Gas Furnace
- SEER 14 Air Conditioner (transitioning to SEER 15 in 2007)
- Manual D Sized Duct System, Sealed With Mastic at Joints
- · Advanced framing to improve insulation coverage and reduce waste

## **Indoor Air Quality Features**

- Outside Air "Run-time" Ventilation System
  - •When furnace or air conditioner is running, creating beneficial positive pressure in the house to minimize intrusion of outside humidity and dust
  - •Filtered outside air is mixed with house air in return plenum
  - •Passive System no moving parts to maintain
  - •Can be disabled if necessary (such as when there's a fire in the area)
- Ducted exhaust fans in kitchen and bath rooms to remove humid air
- · Duct System Air Tightness Tested
- Air Handler in Conditioned Space (away from auto exhaust fumes in garage)
- Air Sealing to Reduce Infiltration (outside air, pollen, dust, soil gases, etc)

## Systems Engineering Protocol by Florida H.E.R.O

- Simulation analysis to identify cost effective energy efficiency package
- Each design evaluated to identify opportunities for improvements in indoor air quality, durability, and comfort & to ensure specifications are correctly indicated
- · ACCA Manual J load calculation to determine heating/cooling equipment size
- ACCA Manual D calculations to determine duct system sizes
- · Scope of work developed for the mechanical contractor
- · Each home performance tested and rated using the Home Energy Rating System

## G. W. Robinson Builders, Inc.

6208 NW 43rd Street, Gainesville, FL 32653 (352) 373-1724

www.gwrobinson.com

## Technical assistance:

Building America Industrialized Housing Partnership  $\underline{\text{www.baihp.org}}$  at the Florida Solar Energy Center/UCF  $\underline{\text{www.fsec.ucf.edu}}$ 



## Florida H.E.R.O.

15220 N.W. 5th Avenue, Newberry, FL 32669 352-472-5661, 888-711-2060 Toll Free <a href="http://www.floridahero.com/">http://www.floridahero.com/</a>



## **G. W. Robinson Communities**

CobbleField
Build out 265 homes
262 completed

Turnberry Lake
Build out 186 homes
76 completed

Garison Way
Build out 110 homes
32 completed





# A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

## Research and Development of Buildings

Our nation's buildings consume more energy than any other sector of the U.S. economy, including transportation and industry. Fortunately, the opportunities to reduce building energy use—and the associated environmental impacts—are significant.

DOE's Building Technologies Program works to improve the energy efficiency of our nation's buildings through innovative new technologies and better building practices. The program focuses on two key areas:

#### • Emerging Technologies

Research and development of the next generation of energy-efficient components, materials, and equipment

## • Technology Integration

Integration of new technologies with innovative building methods to optimize building performance and savings

For more information contact EERE Information Center 1-877-EERE-INF (1-877-337-3463) www.eere.energy.gov



U.S. Department of Energy
Energy Efficiency
and Renewable Energy

An electronic copy of this publication is available on the Building America Web site at **www.buildingamerica.gov** 

## Visit our Web sites at:

www.buildingamerica.gov

www.pathnet.org

www.energystar.gov







#### **Building America Program**

George S. James • New Construction • 202-586-9472 • fax: 202-586-8134 • e-mail: George.James@ee.doe.gov
Terry Logee • Existing Homes • 202-586-1689 • fax: 202-586-4617 • e-mail: terry.logee@ee.doe.gov
Lew Pratsch • Integrated Onsite Power • 202-586-1512 • fax: 202-586-8185 • e-mail: Lew.Pratsch@hq.doe.gov
Building America Program • Office of Building Technologies, EE-2J • U.S. Department of Energy • 1000 Independence Avenue, S.W. •
Washington, D.C. 20585-0121 • www.buildingamerica.gov

#### **Building Industry Research Alliance (BIRA)**

Robert Hammon • ConSol • 7407 Tam O'Shanter Drive #200 • Stockton, CA 95210-3370 • 209-473-5000 • fax: 209-474-0817 • e-mail: Rob@consol.ws • www.bira.ws

## **Building Science Consortium (BSC)**

Betsy Pettit • Building Science Consortium (BSC) • 70 Main Street • Westford, MA 01886 • 978-589-5100 • fax: 978-589-5103 • e-mail: Betsy@buildingscience.com • www.buildingscience.com

## **Consortium for Advanced Residential Buildings (CARB)**

Steven Winter • Steven Winter Associates, Inc. • 50 Washington Street • Norwalk, CT 06854 • 203-857-0200 • fax: 203-852-0741 • e-mail: swinter@swinter.com • www.carb-swa.com

## **Davis Energy Group**

David Springer • Davis Energy Group • 123 C Street • Davis, CA 95616 • 530-753-1100 • fax: 530-753-4125 • e-mail: springer@davisenergy.com • deg@davisenergy.com • www.davisenergy.com/index.html

## **IBACOS Consortium**

Brad Oberg • IBACOS Consortium • 2214 Liberty Avenue • Pittsburgh, PA 15222 • 412-765-3664 • fax: 412-765-3738 • e-mail: boberg@ibacos.com • www.ibacos.com

## **Industrialized Housing Partnership (IHP)**

Subrato Chandra • Florida Solar Energy Center • 1679 Clearlake Road • Cocoa, FL 32922 • 321-638-1412 • fax: 321-638-1439 • e-mail: subrato@fsec.ucf.edu • www.baihp.org • IHP and team member Florida H.E.R.O. provided technical and on-site support for G. W. Robinson Builders. Inc.

## **National Renewable Energy Laboratory**

Ren Anderson • 1617 Cole Boulevard, MS-2722 • Golden, CO 80401 • 303-384-7433 • fax: 303-384-7540 • e-mail: ren\_anderson@nrel.gov • www.nrel.gov

Tim Merrigan • 1617 Cole Boulevard, MS-2722 • Golden, CO 80401 • 303-384-7349 • fax: 303-384-7540 • e-mail: tim\_merrigan@nrel.gov • www.nrel.gov

### **Oak Ridge National Laboratory**

Pat M. Love • P.O. Box 2008 • One Bethel Valley Road • Oak Ridge, TN 37831 • 865-574-4346 • fax: 865-574-9331 • e-mail: lovepm@ornl.gov • www.ornl.gov

#### **Pacific Northwest National Laboratory**

Michael C. Baechler • 620 Southwest 5th, Suite 810 • Portland, OR 97204 • 503-417-7553 • fax: 503-417-2175 • e-mail: michael.baechler@pnl.gov • www.pnl.gov

#### G. W. Robinson Builders (GWR)

Bill Howard • 6208 NW 43rd Street • Gainesville, FL 32653 • 352-373-1724 • fax: 352-373-2097 • e-mail: bhoward@gwrobinson.com • www.gwrobinson.com

Produced for the U.S. Department of Energy (DOE) by Florida Solar Energy Center and the National Renewable Energy Laboratory. April 2007