

Carbon Challenge

FLORIDA DESIGN COMPETITION

APA is challenging Florida designers to design a house with the lowest carbon footprint (least CO₂ emissions) in the *Carbon Challenge Florida Design Competition*. \$15,000 in cash prizes will be awarded to the winning entries, determined by global warming potential score (based on a scientific life-cycle assessment), cost-effectiveness and adherence to the architectural standards of a typical Florida development. For additional competition details or to enter, visit www.apawood.org/CarbonChallenge.

Fossil fuel use and climate change are widely regarded today as critical environmental issues. The common denominator for both concerns are greenhouse gases (CO₂e) that are emitted into the atmosphere when fossil fuels such as oil and coal are burned for energy, or when organic materials decay. It is widely held that emitted greenhouse gasses trap heat in the atmosphere and in sufficient quantities can contribute to climate change. APA is encouraging home designers to meet this environmental challenge by designing homes that have lower carbon footprints.

DESIGN REQUIREMENTS & RULES

All designs submitted will be reviewed by a panel of judges and cash prizes will be awarded for first, second, and third place. There will additionally be awards in three honorable mention categories (Honorable mention winners will not also be one of the three finalists):

- Best use of wood products
- Best curb-appeal
- Most cost-effective design

PRIZES

1. APA will pay \$10,000 to the Grand Prize Winner. The second place winner will receive \$2,500 and the third place winner will receive \$1,000.
2. The three honorable mention recipients will each receive \$500 from APA.
3. The winning design will be promoted to multiple trade publications, including *Southern Building and Design* magazine. Articles and press releases will be submitted to other media, with inclusion or exclusion to be determined by the media entities. The designer will also be highlighted at www.apawood.org/CarbonChallenge.
4. The three finalists and the three honorable mention winners will each receive a wall plaque to honor their accomplishment.

DESIGN CRITERIA

1. The home must be designed to meet the architectural requirements of the RiverTown Development (39 Riverwalk Blvd, St. Johns, FL 32259), a typical Florida housing development. A simplified version of the architectural requirements for this community is available as exhibit A (see below). Any discrepancy will be reviewed by the judges as to whether it is cause for disqualification. The site plan, photos of the lot, and photos of existing homes in the development are available as exhibit B (see below).
2. The design is for a home to be lived in by four persons (two working parents and two children). It shall be between 2,000 and 2,500 square feet of living area and include porches and/or decks as extended living space.
3. For carbon calculation purposes, end-of-life treatment may be assumed to include combustion with energy recovery, where applicable.
4. Of the major structural systems in the home, including floors/foundation, walls, and roof, at least two must be constructed with wood as the primary structural component.

EXHIBIT A: ARCHITECTURAL REQUIREMENTS

- Home shall be designed with consideration of the *Summary of Architectural Pattern Book for RiverTown*, a St. Joe Development located in St. Johns County, Florida.

HISTORY – RiverTown, a new southern town nestled along the banks of the St. Johns River and Scenic Highway 13, was influenced by history and landscape. Composed of neighborhoods connected by a series of open spaces and park systems relating back to the river’s edge, it represents the traditions and patterns that have made memorable great river towns of the south such as Wilmington, NC; Beaufort, SC; Savannah, GA, and many others.

The visual identity of these river towns evolved from the use of architectural styles and materials that reflected the diversity of the residents and their ways of life. Traditional forms and elements such as porches, arcades and deep roof overhangs responded to the climate and offered protection from the weather. The composition and textures of these forms created the streetscapes that delivered a sense of authenticity, making these places memorable.

In addition to the authentic built form of the great river towns of the South, the landscape and regional plant materials define their character and texture. In the late 19th century, the travels of American naturalist William Bartram documented the natural landscape and environment of the Southeast, including Northeast Florida. Known as the William Bartram Scenic and Historic Trail, this route of travel has been marked throughout the area.

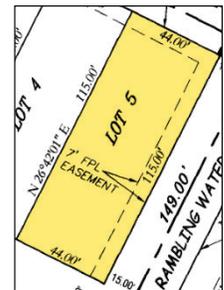
INTERPRETATION - The architectural language of RiverTown reflecting an interpretation of the dialect: acknowledging its traditional origins but responding to modern sensibilities. The town’s composition of neighborhoods with open space connection along lakes, parks and streetscapes allows for the creation of authentic neighborhoods of eclectic architectural styles similar to Riverside and Avondale in Jacksonville, Florida.

ARCHITECTURAL STYLES - A collection of architectural styles was chosen by the founders and their design team to create authentic streetscapes with appropriate architectural scale, massing and fenestration. The architectural styles approved for construction in RiverTown include, the Arts and Crafts Movement, Southern Vernacular, Mediterranean, American Farm House, and Classical and Colonial Revival.

ARCHITECTURAL GUIDELINES - The RiverTown Architectural Pattern Book is intended to be utilized as an interpretive by Architects and Designers to clearly identify acceptable architectural styles. This document is available from the developer. However, there are basic guidelines relevant to all styles which are required to insure a streetscape’s fundamental dimensional integrity. These basic guidelines include; a minimum front entry porch /stoop height of 24” above adjacent finished grade, a minimum

first floor ceiling height of 9', a minimum second floor ceiling height of 8', roof design and roof pitch(s) which are stylistically appropriate, window muntin patterns consistent with the particular style being emulated, use of exterior building materials that are historically appropriate, exterior detailing that is stylistically and contextually appropriate, and strict attention to the architectural fundamentals of scale, massing and fenestration.

- The five architectural styles are American farm house, arts and crafts movement, classic colonial revival, Mediterranean, and southern vernacular. Examples of the architectural styles are provided at www.apawood.org/CarbonChallenge.
- In addition to the minimum porch/stoop height of 24" as specified, minimum first floor elevation shall be 28" above finish grade.
- RiverTown Lot #5 has been selected as the location of the home to be designed. A home site development map and a lot survey, including exact lot dimensions, are available at www.apawood.org/CarbonChallenge. Note that it is a corner lot. Minimum setbacks for this lot are as follows:
 - o Front: 10' to porch and 20' to house with a maximum of 25' to house
 - o Rear: 7' minimum or 16' minimum for off alley parking
 - o Side: 5' adjacent to lot, 7' adjacent to street (unique to this lot)



The home design shall include a minimum 2-car garage with access from the rear alley.

EXHIBIT B: HOMESITE

The following materials are provided at www.apawood.org/CarbonChallenge:

- RiverTown home site development map, featuring the location of the Carbon Challenge home design lot , and the lot survey, including exact lot dimensions
- Photos of the Carbon Challenge home design lot
- Photos of completed homes in the RiverTown development

JUDGING CRITERIA

Category	Percentage
1. Each participant of the Florida Carbon Challenge will be provided with a free version of the ATHENA EcoCalculator for Residential Assemblies to determine their LCA (life cycle assessment) global warming potential score. That score is based on cradle-to-grave life-cycle (from extraction of raw materials, to product manufacture, to completion of structure, to structure demolition) and includes fossil fuel energy use. Visit www.apawood.org/CarbonChallenge for instructions on accessing the free residential version of the EcoCalculator. A printout of the global warming potential impact measure from the ATHENA EcoCalculator for Residential Assemblies is required with each submission and will be reviewed for accuracy by the Athena Institute prior to final judging*.	60%
2. Operational energy use, including heating and cooling and hot water	15%
3. Aesthetics and livability	15%
4. Affordability and constructability	10%
Total	100%

* **Note:** Any design provisions which you feel positively affect the global warming potential of your design and are not recognized by the EcoCalculator software may be independently reviewed by The Athena Institute and the judges for consideration in the competition. If you think that your design has a significant positive feature(s) that are outside the scope of the EcoCalculator, please provide a written statement of why you believe those specific aspects of your design positively affect global warming potential.

RULES

1. Entries shall be an original single-family home design by the submitting designer.
2. The winning entrants shall indemnify and hold APA harmless from any proceedings or claims asserted against APA resulting from materials solely furnished by the Winning Entrant involving copyright infringement, violations of personal rights of privacy, misappropriation of ideas or rights and literary piracy or plagiarism, excepting claims arising from materials or information furnished by APA or from matters with respect to which the Winning Entrant has advised APA, in writing, of the legal risks involved and APA, by its specific approval, has assumed the risks thereof, in which cases APA shall so indemnify the Winning Entrant.
3. Entries shall be designed to meet the requirements of the 2007 Florida Building Code, Residential, including Chapter 11 Energy Efficiency.
4. The design criteria for the competition are listed separately and must be met to be eligible for cash prizes.
5. Competitors are required to register for the competition prior to submitting their entries. Registration will close at 5:00 p.m. EDT on November 22, 2010. There is no fee to register. Registration will be made through:

ARB Meetings & Events, LLC

8131 Oak Street, Suite 300

New Orleans, LA 70118

Contact: Laurie Pierce

(504) 309-8965

lpierce@arbmeetings.com

6. To maintain anonymity, registered competitors will be given a registration number. Entry submittals shall only be identified by the registration number, and not with any name or company name.
7. Entry submittals are due no later than 5:00 p.m. EST on December 20, 2010. Entries shall be sent electronically via e-mail to lpierce@arbmeetings.com, contact: Laurie Pierce.
8. Entries shall be sent in PDF format for electronic viewing by the judges. Each entry must be wholly contained within a single PDF. There is no limit to the number of pages in the PDF to be submitted. Each entry shall include the following minimum views: all four elevations, floor plan(s), at least two sections, site plan, and a 3D view of some sort (perspective, axonometric, 3D model, or a photograph of a model). No actual models will be accepted. Entrants are encouraged to offer as many explanatory drawings as possible. The global warming potential impact measure report from the *Residential* version (NOT the *Commercial* version) of the ATHENA EcoCalculator must also be included within the submitted PDF.
9. Those eligible to enter include architects, building designers, and engineers who have designed at least one building in Florida during the past five years. APA employees and judges are not eligible to enter.
10. Individual entrants may submit only one design for consideration. There is no limit to the number of individual entrants that may be associated with any specific design firm.
11. APA shall possess unrestricted rights to publicize the designs of the three finalists and honorable mention winners, including reproduction on websites, publications, and trade magazines. The designer shall retain all common law, statutory and other reserved rights for the design, including the copyright. In the event that an individual or company wishes to construct the house featured, they will be directed to contact the winning designer.
12. Winners may not be granted if, in the opinion of the judges, there are no entries which meet the standards and criteria of the competition.