



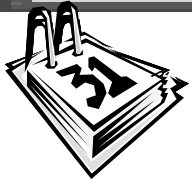
CAPITAL AREA WOODWORKERS

WOODSHOP ADVISOR



Volume 26 Issue 3

March, 2013



Upcoming Meetings

Wednesday, March 6th, 2013
Social Time 5:15 to 6:30
Meeting starts promptly at 6:30
MCL Cafeteria
2151 Wabash Ave

Program

Ric Thompson-- Japanese Cultural Exchange with wood workers in Japan, as part of the sister city program

CAW Officers 2013

| | | |
|----------------|------------------------------|----------|
| President | Dennis Gross | 487-7479 |
| Pres. Elect | Ric Thompson | 415-5568 |
| Past President | Bob Wire | 529-4436 |
| Treasurer | John Forneris | 529-8928 |
| Editor | Open | |
| E mail: | Caw.woodworker@sbcglobal.net | |
| Web Master | Open | |
| Video Libr. | Frank Tureskis | 483-3669 |



February Meeting Notes

Bob Wire opened the meeting at 6:30

Announcements:

- President Dennis Gross is out of town so past President Bob Wire conducted the meeting
- Bob made a introductory of Ashley Stannagel and Mike Wiest from New Berlin High School. Ashley took suggestions from the members towards re-activation of a wood shop at the school
- 2013 dues are due - membership dues are payable to Treasurer John Forneris, 1417 Summershade Dr., Springfield, IL. 62712. You can print the Application/ Renewable form from cawspi.org
- The CAW needs officers for Web Master, Newsletter Editor and Librarian. Please contact Dennis Gross if you are interested in any of these three positions
- Norm Koerner made a suggestions for two field trips to Trenton and Highland, IL. and another one to the West side of Decatur
- Bob introduced Walter Black who gave the following program—A NEW ZEALAND STRAWBALE HOUSE

February's Program

A New Zealand Strawbale House

Introduction

CAW member Walter Black provided a detailed slideshow description of the construction of a hybrid strawbale house being built in New Zealand by his daughter, Darci Westergard, and her partner, Andrew Trist. Walter and his wife have traveled twice from Sherman, Illinois to New Zealand to help out on the construction of Darci's and Andrew's unique house. In doing so, Walter has a slideshow of over 75 comprehensive pictures selected from over 1,000 pictures of the green technology house construction. The construction was accomplished while Darci and Andrew were living in a camping trailer and later a workshop they built located adjacent to the house. Darci, who has a BS in civil engineering and a MS in environmental sciences, and Andrew, a computer engineer with the Christchurch police department, undertook an endeavor to build a home designed to be built and to operate at a minimum cost by using recycled materials, local onsite materials and solar power.

Location

The site for Darci's and Andrew's home is on the South Island of New Zealand. The nearby town of Christchurch is at 43.5 degrees Latitude South, equivalent to Toronto, Canada, only Toronto is 43.5 degrees North Latitude. Christchurch is known for parks, gardens, earthquakes and is a staging area for U.S. Antarctic expeditions.

Design

The architectural style resembles a one-story house on a concrete slab with a second story A-frame. The north exposure to the sun is used to maximize the solar benefit. The design prepared by a local design professional was required in order to gain regional review for compliance to strict building codes and gain approval. The first floor consists of a kitchen, pantry, great room, dining room, bedroom and a bathroom. The second floor contains the master bedroom, another bedroom and a second bathroom. The house is approximately 2,500 square feet. Since this is an earthquake zone, structural members are connected

to the concrete foundation with angle bracing re-bars to steel connection plates. This is done on both the interior and exterior walls.



Materials

The combination of materials used makes the house a hybrid. The exterior first floor walls are strawbales in a timber frame, making the walls the thickness of the strawbales. The straw is plastered with clay from a local construction site. The finish coat is a lime-based material and gives a stucco appearance. Recycled materials include utility poles for structural support and recycled slate roof tiles from China. Most other items are conventional, such as steel re-bars, roof trusses, fiberglass roof insulation, wood ceilings, doors and windows.



Water System

Fresh water is pumped from a deep well by a solar energy pump to a very large storage tank and transferred to the house from the tank.

Waste Water System

A conventional concrete septic tank discharges waste water into a plastic-lined pit filled with sand and gravel and planted with *Phragmites communis* (common reed). The water seeps through the reed bed and then the filtered water is collected into a second concrete tank. The water is used for meadow and orchard irrigation.



Electrical System

The array of solar panels presently being used will be placed on the workshop roof. They will charge batteries in the workshop. The low voltage, high current from the batteries will pass through an inverter which will convert the voltage to the 220 volt house circuits. Towards the end of construction, a public power connection was made which enables the sale of excess electricity to be sold to the public power utility.



Heating System

A wood-burning stove with a water jacket adds heat to the solar heated brick thermal wall and hot water is circulated within the concrete floor. Air-conditioning is not required or needed in this climate.

Problem

A design error related to the proper north orientation was caught after the second level construction was underway. A second design professional was retained to correct the error and the second level work had to be removed and rebuilt, using some of the wood from the previous construction. This caused a construction delay and added expense. Litigation was found in favor of the house owners and provided some compensation.

Conclusion

While construction is in the final phase of several years, Walter believes the home will serve the owners for at least 50 years. This undertaking is labor intensive and not likely to be done again by the owners. A big thank you goes to Walter for a most informative program.