

## BERNIE LITTLE DISTRIBUTORS OFFICE BUILDING PROVES THAT EVEN SMALL BUILDINGS CAN BE “GREEN”

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Many business owners are interested in “greening” the buildings that they own or are planning to build. They see “sustain-ability” as the socially responsible way to operate their business and they also seek the long-term benefits for their company that “green” construction can provide. However, many small to medium size businesses are finding that actually going through the process of having a small building certified by one of the green building organizations like the United States Green Building Council (USGBC) or the Florida Green Building Coalition (FGBC) can be fairly costly relative to the overall project budget. Most commercial building projects that seek LEED certification through the USGBC are over 30,000 square feet and those that have achieved certification from the FGBC have averaged over 20,000 square feet. However, owners of smaller buildings can still do the right thing and reap the benefits of having a “green” building without the official designation.

Bernie Little Distributors, Inc. (BLD) recently retained Chastain-Skillman, Inc. (CSI) to design a small office building for their Sebring, Florida location. In the design phase, they expressed a desire to incorporate “green” building principles into the project. During the process, CSI investigated the possibility of seeking certification for the project from the FGBC. However, after looking at the associated costs, BLD decided to invest in additional “green” building features rather than seek certification.

CSI used the FGBC “Green Commercial Buildings Designation Standard” as a guideline in designing the 5,500 square foot facility and the associated site work. The Standard is subdivided into several categories, including Energy, Water, Site, Health, Materials, and Disaster Mitigation. Within each category are a number of strategies for achieving energy efficiency and reducing environmental impact. All of the design professionals on the project worked together to incorporate as many of these strategies as technically and economically feasible.

In the Energy category, CSI used several different strategies to increase the energy efficiency of the building beyond what is required by the Florida Building Code. The exterior walls and roof are being constructed using insulated metal panels with additional standard batt insulation, yielding a building envelope that has twice the required “R-value.” The windows have insulated, Low-E type glazing with a Solar Heat Gain Coefficient 30% lower than required. The general interior lighting fixtures utilize high-efficiency T5 fluorescent lamps, and the exterior building lighting is provided by compact fluorescent lamps that provide the same lighting level as standard fluorescent or incandescent lamps, but at a much lower level of energy consumption. Interior lighting is controlled by occupancy sensors in each room. The air conditioning system is also designed to reduce energy consumption with equipment that has an energy efficiency rating almost 40% higher than is required.

The Water category of the Standard focuses on reducing water consumption both inside and outside of buildings. On the BLD Office site, over 75% of the landscaping plants and trees will be drought-tolerant species, requiring significantly less irrigation than other types. Inside the building, low-flow plumbing fixtures will use from 30% to 50% less water than required by code.

Several different strategies are addressed in the Site category of the Standard. One of those is to reduce what is called the “heat island effect,” which is a micro-climate temperature



Insulated wall panels with tongue & groove joints

increase caused by the use of dark colored roof and pavement materials. For the BLD Office, CSI has specified white roof panels with a Solar Reflectance Index of 85. This will not only reduce the heat island effect, but will also decrease the cooling load, and therefore the energy consumption. Another site related strategy is the reduction of “light pollution,” which CSI has addressed through the use of full cut-off type site lighting fixtures. Stormwater management is also a site related strategy that CSI incorporated into the BLD project design, controlling erosion and sedimentation during construction and providing on-site treatment in excess of the requirements of the FGBC Standard.

The Health category focuses on measures to enhance the well-being of building occupants, such as the use of low-emitting materials and the provision of day-lighting and views for regularly occupied spaces. To accomplish this, CSI specified low-emitting sealers and paints, carpet having the Carpet and Rug Institute (CRI) Green Label Plus rating, and composite wood products with 50% lower emissions than industry standards. The floor plan has been laid out such that over 80% of the regularly occupied spaces have windows providing day-lighting and views to the exterior.

Materials with a significant recycled content, that are able to be recycled at the end of their useful life, or that are locally produced, and durable, low maintenance finishes are all addressed in the Materials category of the FGBC Standard. CSI has incorporated these principles in the BLD Office by specifying carpet, floor tile, and ceiling tile with significant recycled content. The specified carpet and ceiling tile are also products with a documented recycling program provided by the manufacturer, assuring they can be reclaimed and recycled at the end of their useful life. The exterior metal wall panels discussed earlier provide the added benefit of being locally produced (in Deland, Florida) and provide a durable, low maintenance finish.

In the Disaster Mitigation category, the Standard addresses such issues as hurricanes, flooding, and wildfires. CSI has incorporated hurricane protection into the BLD Office design through the use of impact-resistant doors and windows. Flood hazards have been mitigated by designing the floor slab elevation to be a minimum of two feet above the existing grade, and wildfire protection has been achieved by using non-combustible exterior finish materials, exclusively.

By using the FGBC “Green Commercial Buildings Designation Standard” as a checklist, CSI has designed the BLD Sebring Office with recognized strategies for construction of a “green” building project. Although the project will not be officially certified as such, BLD will reap the benefits of having a “green” building for years to come.



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