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Design Cost Data™

November-December 2012

The #1 Industry Source for Actual Square Foot Cost Data

***Deep Energy Retrofit Profile:
Castle Square Apartments on Track
to Reduce Energy by 73%***

**The DCD LEED® & Sustainable
Square Foot Cost Guide**

**From PDFs to IPD to BIM:
Lessons on Today's Technology-Driven
Construction Project**

CCCSB Collection System Operations Facility
Walnut Creek, California
Calpo Hom & Dong Architects

Stones River Manor Apartment Complex

Murfreesboro, Tennessee

General Contractor

J&S Construction Company, Inc.

Architect

Randolph Architecture

J&S Construction recently completed work on the Stones River Manor Independent Living Facility located in Murfreesboro, Tenn. This \$1.2 million addition to the faith-based, not-for-profit senior living organization was designed and built to be energy efficient and environmentally friendly. The project is the first LEED certified independent care facility in Tennessee.

J&S Construction designed and built the project to meet LEED for Homes requirements and received LEED Gold Certification June 2012. The 7,500 square-foot, nine-unit addition includes energy efficiencies such as spray foam insulation, Energy Star® windows, Energy Star® appliances, compact fluorescent lighting, reduced envelope leakage rates and insulated duct in unconditioned spaces. In addition to being LEED certified, all nine units are Energy Star® Certified.

"Stones River Manor is committed to excellence in the services we provide, a commitment that J&S shares, which is reflected in the quality of their work," said Kirkland Mason, CEO of Stones River Manor.

In addition to the energy savings, the project focused on water efficiency, indoor air quality, types of materials used, as well as thoughtful land use and landscaping. Other environmentally friendly features of the project include:

- 40% of the Construction Waste being diverted from landfill and was recycled;
- The utilization of drought-resistant plants for landscaping;
- The project being designed so that at least 70% of the buildable land, not including area under the roof, is permeable;
- The framing waste factor for this project being limited to less than 10;
- This project being located within ½ mile of 14 community resources.

As part of the LEED for Homes program, each unit was inspected and tested by independent third parties to ensure all requirements were met. The building committee for Stones River Manor originally requested LEED Silver Certification, but J&S Construction used its expertise in energy-efficient design and construction to build and certify the project as LEED Gold Certified with no additional costs to the owners.

"Energy savings was important to Stones River Manor," said Brad Leimer, project manager and LEED AP for J&S Construction. "This project was designed to be 29% more efficient than the current code requirements."

The project was also built with durability by focusing on reducing the effects of water and moisture, reducing air infiltration, reducing the



Photos Courtesy of J & S Construction Company, Inc.



risks from pests, reducing heat loss and ultraviolet radiation and reducing the effects of natural disasters. Some of these strategies included vapor retarder under the slab, exhausting fans in all bathrooms and kitchen to the exterior, foam being filled around exterior windows, exterior doors and other exterior building penetrations, separating all wood to concrete connections, and installing rafter tie hurricane clips at all wall to rafter connections.

J&S Construction has obtained five "firsts" in LEED certifications through the USGBC:

- First LEED Certification for an independent care facility in Tennessee
- First LEED Gold Certification for the U.S. Army Corps of Engineers' Ft. Campbell base
- First LEED Gold Certification for the U.S. Army Corps of Engineers' Louisville District
- First LEED Platinum Certification for Tennessee
- First LEED Gold Certified Class "A" Office Space for Tennessee
- First LEED Silver Certified Retail Center in Tennessee
- First General Contractor in Tennessee to

receive top three certifications through the USGBC: LEED Silver, LEED Gold and LEED Platinum.

J&S Construction specializes in energy efficient and environmentally friendly design and construction and has designed/constructed over 131,000 square feet of LEED certified facilities.

LEED® Points Achieved	49 Total
Sustainable Sites	12
Water Efficiency	7
Energy & Atmosphere	4
Material & Resources	6
Indoor Environmental Quality	10
Innovative Design	6
Regional Priority	4

Product Information
Roofing: GAF
Window, Entrances & Storefronts: YKK
Flooring: Crossville, Armstrong, Mohawk
Lighting: Lithonia

LEED® GOLD

General Contractor & Cost Estimator

J&S Construction Company, Inc.
1843 Foreman Drive, Cookeville, TN 38501
www.jsconstruction.com

Architect

Randolph Architecture
9724 Kingston Pike, #305B, Knoxville, TN 37922

Construction Team

Mechanical & Electrical Engineer:

Maffett Loftis Engineering
213 East Broad Street, #102, Cookeville, TN 38501

Civil Engineer & Landscape Architect:

Huddleston Steele Engineering, Inc.
2115 N.W. Broad Street, Murfreesboro, TN 37129

Project General Description

Location: Murfreesboro, Tennessee

Date Bid: Apr 2011 **Construction Period:** May 2011 to Mar 2012

Total Square Feet: 7,548 **Site:** 1.5 acres.

Number of Buildings: One; 9-unit apartment building.

Building Size: First floor, 7,548; total, 7,548.

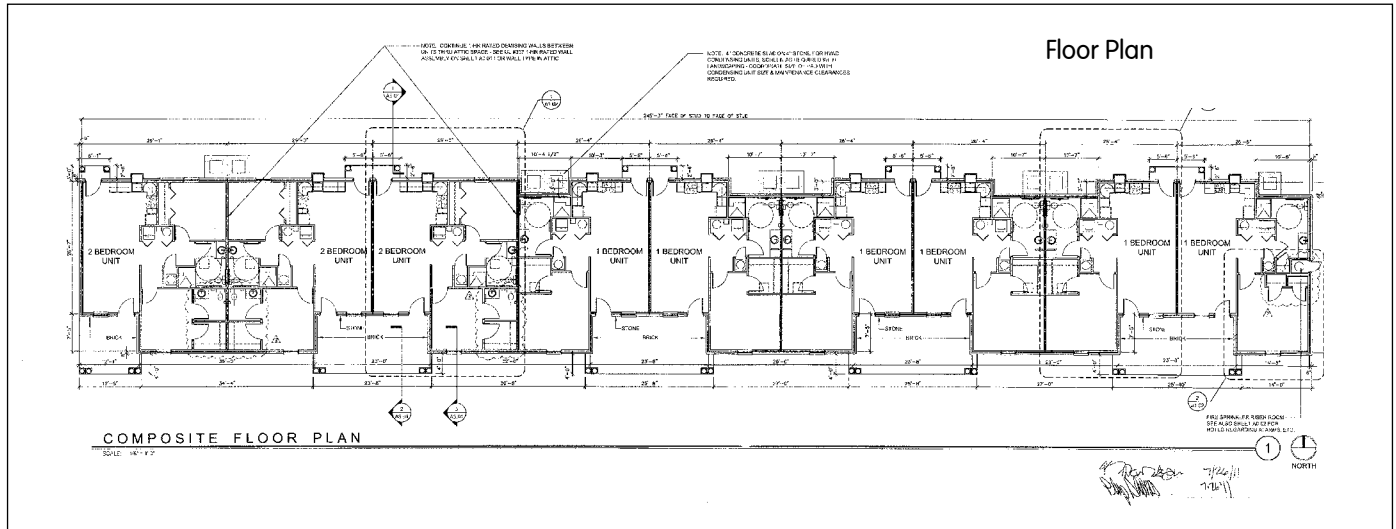
Building Height: First floor, 9' total, 9'.

Basic Construction Type: New.

Foundation: Reinforced concrete, slab-on-grade.

Exterior Walls: Brick. **Roof:** Asphalt shingle. **Floors:** Concrete.

Interior Walls: Wood stud drywall.



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
GENERAL REQUIREMENTS	122,006	12.03	16.16	Price & payment procedures, administrative requirements, quality requirements, temporary facilities & controls, product requirements, execution & closeout, performance, life cycle activities.
CONCRETE	101,928	10.05	13.50	Forming & accessories, reinforcing, cast-in-place, grouting (concrete breakdown, cubic yards foundation, 66; cubic yards floors, 87).
MASONRY	86,005	8.48	11.39	Unit, manufactured.
WOOD, PLASTICS & COMPOSITES	73,533	7.25	9.74	Rough carpentry, finish carpentry, architectural woodwork, plastic fabrications.
THERMAL & MOISTURE PROTECTION	122,717	12.10	16.26	Dampproofing & waterproofing, thermal protection, flashing & sheet metal, roof & wall specialties & accessories, joint protection.
OPENINGS	49,310	4.86	6.53	Doors & frames, windows, hardware, glazing.
FINISHES	166,048	16.37	22.00	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	8,375	0.83	1.11	Interior, exterior, other.
EQUIPMENT	25,303	2.49	3.35	Residential.
FIRE SUPPRESSION	34,462	3.40	4.57	Water-based fire-suppression systems.
PLUMBING	98,276	9.68	13.02	Piping & pumps, fixtures.
HVAC	62,719	6.18	8.31	Central heating, central cooling, central HVAC equipment.
ELECTRICAL	63,651	6.28	8.44	Medium-voltage distribution, low-voltage transmission.
TOTAL BUILDING COSTS	1,014,333	100%	\$134.38	
EARTHWORK	61,781			Site clearing, earth moving, earthwork methods.
EXTERIOR IMPROVEMENTS	89,317			Bases, bollards, & paving, planting.
TOTAL PROJECT COST	1,165,431			(Excluding architectural and engineering fees)

UPDATED ESTIMATE TO DECEMBER 2012: \$138.95 PER SQUARE FOOT

Regional Cost Trends								
This project, updated to December 2012 in the selected cities of the United States.								
EASTERN U.S.	Sq.Ft. Cost	Total Cost	CENTRAL U.S.	Sq.Ft. Cost	Total Cost	WESTERN U.S.	Sq.Ft. Cost	Total Cost
Atlanta GA	\$154.02	\$1,162,514	Dallas TX	\$148.99	\$1,124,606	Los Angeles CA	\$199.22	\$1,503,687
Pittsburgh PA	\$194.19	\$1,465,779	Kansas City KS	\$200.89	\$1,516,323	Las Vegas NV	\$182.48	\$1,377,327
New York NY	\$247.77	\$1,870,132	Chicago IL	\$209.26	\$1,579,503	Seattle WA	\$199.22	\$1,503,687

For more information on this project and similar projects visit www.dcdarchives.com