



FOUNDATION

CASE STUDY

2008 AWARDS OF EXCELLENCE

AFFORDABLE HOUSING BUILT RESPONSIBLY

PROJECT AT A GLANCE

Location: San Jose, CA
Project Type: Multi-family
Award Category: Rental
Project Completion Date: March 2009

Project Size:

Number of Homes: 60 Units
Lot Size: 0.34 Acre
Density: 176 Units/Acre

Affordability:

(Relative to Area Median Income)

20% of AMI: 21 Units
30% of AMI: 31 Units
35% of AMI: 7 Units
Retention of Affordability: All units are restricted to low income families (<35%AMI) for 55 years.

Project Team:

Developer: First Community Housing
Architect: Rob Wellington Quigley, FAIA
Contractor: Branagh, Inc.

Development Cost (per unit):

Land cost: \$21,000
Hard costs: \$178,000
Soft costs: \$74,000
Total Costs: \$273,000
Grants/Incentives: \$261,000
Net Cost: \$12,500

Cost of Green (per unit):

Total Cost of Greening: \$3,000
Rebates/Incentives: \$3,000
Net Cost of Greening: \$0

Standards Used

LEED for New Construction - Gold

Casa Feliz Studios

First Community Housing



Casa Feliz Studios provides developmentally disabled and low-income residents with a healthy, safe, affordable option in the heart of downtown San Jose, California. Partnering with the city and the local community, First Community Housing sought to meet a dire need in the city by constructing maximum density SRO units in a central location, with amenities designed to help residents connect to the community.

The building earned Gold certification through the LEED for New Construction program, incorporating energy-efficient design, photovoltaic panels, a green roof, and low-emissions materials to meet the energy and indoor air quality goals.

First Community Housing was able to do more with less by relying on proven technologies and strategies, lessons learned from earlier projects, and a philosophy of integrating green building practices into the entire design and construction process.

Primary Goals

- Provide 60 units with individual kitchens and bathrooms.
- To serve the developmentally disabled community of San Jose.
- Maintain a safe, healthy, comfortable living environment.
- Enable independent living through universal design principles, free transit passes, bicycle storage, and a downtown location.
- Document and verify sustainability features by earning LEED Gold.

Measurable Performance Achievements (relative to code)

<i>Energy Savings:</i>	25%
<i>Water Savings, interior:</i>	36%
<i>Water Savings, exterior:</i>	64%
<i>Construction waste recycling:</i>	90%



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Green Features

Integrated Design Process:

Seven different design charrettes were held, incorporating the architect, landscape professional, sustainability experts, engineers, and the rest of the project team. Over nearly 25 years, First Community Housing has maintained continuity from project to project, making incremental improvements and learning from mistakes to help make each project more sustainable and successful.

Location and Linkages:

Casa Feliz is located in downtown San Jose, two blocks from major bus routes and within walking distance of museums, restaurants, schools, shopping, and offices. Tenants receive free annual transit passes for use on various systems throughout the Bay Area and the building is fitted with a secure, covered, easily accessible bicycle storage area.

Site Design and Landscaping:

The building is designed for high-density, with 60 units on just 1/3rd of an acre, including an underground parking area. A vegetated roof helps to manage stormwater as well as provide insulation and offset urban heat island effects.

The exterior of the building is decorated with a variety of different native, drought-tolerant tallgrasses, shrubs, and trees.

Architectural Design and Materials:

The design balanced the goals of maximum density and improved accessibility for residents. Materials and designs were chosen with occupant health in mind, including no-VOC paints and adhesives, limited carpeting, and continuous ventilation to each unit. Large in-unit windows were included to provide natural light to residents.

Material efficiency was achieved through the use of precut framing materials and engineered lumber, and nearly 90% of construction waste was recycled.

Energy Efficiency:

Using energy models, Casa Feliz is estimated to save 24.5% compared to the standard building code. This savings is the result of a whole-building approach suited to the mild climate of San Jose, with an emphasis on high-performance water heating and high-efficiency lighting. A 16-kW photovoltaic system provides electricity to all common areas.

Water Efficiency:

The exterior of the building was designed with native vegetation and no turfgrass to limit the need for irrigation. The irrigation that was installed is highly efficient drip irrigation that provides water only when and where it's needed, limiting water lost to evaporation. Interior water savings was achieved through the use of efficient dual-flush toilets and low-flow showers and faucets in every bathroom. The combined savings from these fixtures is estimated at 325,000 gallons per year.

Indoor Air Quality:

The project team chose paints, adhesives, and finishes that contain no VOCs and no added urea-formaldehyde. There is a no smoking policy, and fresh air is brought into each unit and the common spaces throughout the day. Bathroom exhaust is tied to the light switch to limit moisture and mold concerns.

GREEN HIGHLIGHTS

- Exceptional accessibility, including prime location and free annual transit passes.
- 25% estimated energy savings, including a 16kW PV system for common areas.
- Low-flow faucets and showerheads, dual-flush toilets in every bathroom.
- Regionally appropriate landscaping with a high-efficiency irrigation system.
- Vegetated, living roof to manage storm water and reduce urban heat island.
- Reduced construction material, recycled 90% of total construction waste.





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Project Significance

Casa Feliz Studios is a national model for high quality green design to serve the developmentally disabled and low-income community. The project serves a critical need for the City of San Jose by providing healthy and safe housing to residents at or below 35% AMI.

With support from the City and input and involvement from the community, First Community Housing was able to transform the site from an aging 3-story sorority house to a new, LEED certified 4-story building with 60 units and various on-site amenities.

Casa Feliz is the latest in a broad portfolio of sustainable, affordable multi-family buildings for this Bay Area developer. First Community Housing continues to try new green strategies, and Casa Feliz was the first to incorporate a vegetated roof.

Partnerships & Collaboration

Casa Feliz is the result of partnerships and coordination with various other organizations including:

- The State of California, City of San Jose, US Bank, Federal Home Loan Bank of San Francisco, and Enterprise Community Investment which all provided financial assistance.
- The John Stewart Company, which provides ongoing property management.
- The Housing Choices Coalition and the local neighborhood association, which provided valuable feedback and support.
- A broad project team, with Rob Quigley providing architectural and design support, Simon & Associates providing LEED consultancy, and Guttman and Blaevoet providing energy modeling and consultancy.

Financial Strategies

First Community Housing has achieved significant cost efficiencies by maintaining continuity in the design, construction, and overall development process. By integrating green design features from the start and relying on a tested process, very little money was spent on redesigns or contingencies. Long-term relationships with suppliers enabled the project to get discounts and favorable rates.

The more prominent (more expensive) green features were the photovoltaic system and the vegetated roof system. The PV system hard costs were covered by a Workforce Grant from the city of San Jose.

Any additional cost for the vegetated roof was offset by savings achieved in the storm drain system design. Without the vegetated roof, the storm drain system would have needed to be replaced, at a cost of roughly \$300,000.

A key strategy for all First Community Housing projects is to conduct lifecycle financing. Up-front investments in energy-efficiency, water-efficiency, and durability are easily justified because they keep long-term management costs down – a critical element for a building projected to serve 55 years.

Project Financing Funding Sources

Grants / Incentives

Tax Credit Equity: \$ 6.2 M

Development Costs

Land Cost: \$ 1.4 M

Building Cost: \$ 10.5 M

Soft Cost: \$ 4.5 M

Total: \$ 16.4 M

Grants / Incentives: \$ 6.2 M

Net Costs: \$ 10.2 M

Cost of Greening Project

Total Costs: \$ 0.2 M

Rebates / Incentives: \$ 0.2 M

Net Cost: \$ 0.0 M





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“We don’t really think of sustainability as an add-on. It’s an integral part of the building.”

- Jeff Oberdorfer, FAIA, executive director, First Community Housing

“It’s easy to find developers who want to build market rate or high-end housing... it’s hard to find developers focused on good low-income housing.”

- Jacky Morales-Ferrand, assistant director for the department of Housing, City of San Jose

“...here’s a place where the idea of daylighting and the idea of energy savings and the idea of a more emotional space all come together.”

- Rob Quigley, FAIA, architect

“..Casa Feliz is a really great place to live... you meet great people. Every person has a different story...”

- Jill King, resident

Primary Contact

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Looking Ahead

Education and Outreach

During design, the project team engaged the local community in various meetings and focus groups to get feedback on how Casa Feliz could best integrate with the style and feel of the neighborhood.

A bilingual resident manual is provided to all tenants, informing them of the energy-efficient features of their home, as well as recycling, green cleaning supplies, indoor air, pesticides and other topics.

The developer has an innovative approach to long-term sustainable management: a Sustainable Facilities Manager is available full-time, and short videos were created showing how different green aspects of the building are managed and maintained. The Sustainable Facilities Manager provides ongoing feedback and training for maintenance staff.

Challenges and Lessons Learned

Casa Feliz needed to earn the City of San Jose’s approval for the green roof assembly as a replacement for the required storm drainage upgrade. In retrospect, engaging the city earlier and more directly could have saved time and trouble.

The landscape professional chose native plants for the vegetated roof, hoping to avoid the need for irrigation. However, wind and solar exposure has made some irrigation necessary. First Community Housing has since integrated vegetated roofs into all of their projects, and has adopted drip irrigation to keep the vegetated roofs healthy while minimizing water needs.



All photos courtesy of Bernard Andre