



FOUNDATION

# CASE STUDY

2009 AWARDS OF EXCELLENCE

AFFORDABLE HOUSING BUILT RESPONSIBLY

## PROJECT AT A GLANCE

*Location:* La Quinta, California  
*Project Type:* New Construction  
*Ownership/Rental:* Rental Housing  
*Project Completion Date:* May 2008

### Size:

80 units  
9.4 acres  
8.5 units/acre

### Affordability:

< 30% of AMI: 9 units  
31-50% of AMI: 70 units  
51-80% of AMI: 0 units  
>80% of AMI: 1 manager's unit  
*Retention of Affordability:* 55 yrs.

### Project Team:

*Developer:* National CORE  
*Architect:* Robyn Vettraino & Jon McMillen  
*Contractor:* Jarod Walker  
*Landscape Design:* Rob Smith  
*Key Partners:* City of La Quinta

### Development Cost (per unit):

*Land cost:* 12,500  
*Hard costs:* \$65,000  
*Soft costs:* 72,900  
*Total:* \$150,400

### Cost of Greening (per unit):

*Total Cost of Greening:* \$33,000  
*Rebates/Incentives:* \$33,000  
*Net Cost of Greening:* \$0

### Standards Used:

LEED for Homes – Platinum  
California Green Builder – Certified

## Vista Dunes Courtyard Homes National Community Renaissance (National CORE)



Vista Dunes is a model for a city's involvement in designing infill workforce housing that meets the needs of the residents as well as the larger community. The project team created an outstanding design for this desert environment – homes that blend in architecturally with surrounding landscape, have passive strategies to reduce cooling loads, and make use of the intense sun with photovoltaic panels. This project also fulfills the city's vision of transitioning away from the development of greenfields and towards the redevelopment of existing sites.

The project team not only met the needs of project residents, but they were heavily involved in relocating the existing residents. They also addressed the concerns of the surrounding community. To ensure that the site's many green features will be used effectively, the project team provided excellent resident education and on-going resident support.

### Primary Goals

- Provide affordable housing for families
- Create desert-friendly (energy and water efficient), healthy homes
- Create durable homes that would remain a community asset long-term
- Serve existing residents, surrounding community, and new residents
- As an organization, shift towards developing previously developed sites

### Measurable Performance Achievements (relative to code)

Energy savings:	67%
Water savings:	60%
Construction waste reduction:	82%
On-site surface water capture:	100%



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## Green Features

### Integrated Design Process:

The project team held 2 charrettes to establish goals, create a design, and assign responsibility to team members. Weekly meetings were held to re-emphasize goals, and to better clarify issues amongst team members.

### Location and Linkages:

This infill site is close to bus stops, and the transit agency located a new bus stop near the project. It is also close to schools, daycare, a church, and other resources. Vista Dunes provides on-site facilities for residents and the surrounding community, including a pool, play area, basketball court, and a community center for resources like tutoring.

Site Design / Landscape Planning. Shaded paseos run through the project, which promote resident interaction and pedestrian and bicycle use. Bicycle racks are located at the entrance of the development, and each unit has a storage space that can accommodate a bicycle.

The landscaping includes drought-tolerant plants and water-efficient irrigation. All surface water is captured and managed with a stormwater retention pond. Homes are clustered together, creating a dense community, and allowing units to shade one another.

### Architectural Design and Materials:

The overall design strategy was to create durable homes that respected the desert environment. Many of the energy efficient and water efficient features also contribute architecturally. Built in the "Palm Spring modern" style, the desert-rock colored homes help reflect heat and complement their surroundings. The project team also chose high quality materials, some with a higher upfront cost, to reduce long-term operational costs.

To reduce construction waste, the project team used pre-cut framing packages, separated out recyclable materials, and emphasized waste minimization at every project team meeting.

### Energy Efficiency:

Several features reduce cooling loads: Each unit is oriented to minimize solar gain and uses shading from trees, trellises, and other units on its south and west facades. The roof and paved surfaces are heat-reflective materials. Concrete floors provide thermal mass to help moderate temperatures. The units were also designed to take advantage of a prevailing cross wind, and whole house fans further reduce air conditioning use. Homes include ENERGY STAR lights, fans, dishwashers, and other appliances. For the photovoltaic panels, the team ran computer analysis on each unit to determine the best angle and location on the roof.

Water Conservation. Besides water-efficient landscaping, the homes have low-flow faucets, shower heads and toilets. Each unit also has a water efficient ENERGY STAR clothes washer.

### Indoor Air Quality:

All units have low VOC paints, and formaldehyde-free materials. To help reduce indoor particles, units have walk-off mats at their entrance, high efficiency (MERV 13) air filters, and hard floors. Although residents initially complained about the concrete floors, many have gained an appreciation for how well they cool the home and facilitate cleaning. Vista Dunes is also a smoke-free community.

## GREEN HIGHLIGHTS

- Previously developed infill site
- Insulation: R-19 walls, R-26 roof
- ENERGY STAR windows
- Light colored, reflective roof
- 3 kW photovoltaic for each unit
- Drip irrigation with weather based controllers
- Tankless hot water heaters
- Recycled-content gypsum board and insulation





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## Project Significance

Prior to Vista Dunes, the site operated as a mobile home park. Originally constructed for temporary use, the park eventually housed residents year-round, and had become overcrowded and dilapidated. In contrast, Vista Dunes is a source of pride for the community. It is also helping the city meet its goal of building 2000 affordable units by 2033.

Vista Dunes is part of the city's larger vision to build urban infill projects, a departure from earlier greenfield projects. Besides promoting sustainability, this enables residents to more easily integrate into the community.

## Partnerships & Collaboration

Vista Dunes is a great example of the successful partnership between the city of La Quinta and National CORE. The city's goals of building green dovetailed with the developer's goal of creating a high quality, durable project with low-operating costs. City representatives, including its housing development advisor Rosenow Spevacek Group (RSG), were very active in the project, so that lessons could be learned and applied to La Quinta's future affordable projects.

While the community at large was supportive of redeveloping the blighted site, this would dislocate the 400 mobile home park residents. The project team spent 18 months working with each household and providing financial assistance to help with relocation. Half of the households bought homes in the area. Two former residents moved back into Vista Dunes.

Neighboring residents also voiced concerns about the proposed development. The project team held several meetings with the community and worked with them to address site plans and security issues. The creation of a sewer system that would serve a nearby church also created community support.

At the city's final permitting meeting, no one voiced opposition. Many former residents returned to Vista Dunes at the ribbon cutting and added memories of the mobile home park to a time capsule.

## Financial Strategies

- The City of LaQuinta acted as primary funder.
- The cost of the photovoltaic systems was offset by substantial financial incentives, including a \$520,486 cash rebate offered by the local utility.
- A \$33,244 cash rebate was awarded by the California Green Builder program for meeting their program requirements.

## Project Financing

### Funding Sources

#### Lenders

<i>US Bank Loan:</i>	\$1.1 M
<i>Secondary Loan:</i>	\$5.1 M
<i>Total:</i>	\$6.2 M

#### Grants / Incentives

<i>LIHTC Equity:</i>	\$3.2 M
<i>City of La Quinta RDA:</i>	\$2.1 M
<i>Utility Rebates:</i>	\$0.5 M
<i>Total:</i>	\$5.8 M

#### Development Costs

<i>Land Cost:</i>	\$1.0 M
<i>Building Costs:</i>	\$5.2 M
<i>Soft Costs:</i>	\$5.8 M
<i>Total Cost:</i>	\$12 M
<i>Grants/Incentives:</i>	\$5.8 M
<i>Net Costs:</i>	\$6.2 M

#### Cost of Greening Project

<i>Total Costs:</i>	\$2.6 M
<i>Rebates/Incentives:</i>	\$2.6 M
<i>Net Cost:</i>	\$0.0 M



*Each unit has a 3 KW photovoltaic system that delivers an average of \$730 per year of energy savings.*



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**“The fact that your bills are so low, ridiculously low, is really something else.”**

- Rodolfo Cortez, resident

**“I have really bad allergies. I used to get [an allergy] shot maybe once every 6 months. And since I moved in I haven't had a shot. I used to get my nose plugged up, rings around my eyes, headache, because of allergies - I haven't had it.”**

- Jose Hull, resident

**“[The project team] took a blighted component of La Quinta and was able to...convert it into this wonderful development. And at the same time do it in a respectful manner to the immediate community around and a respectful manner to the people who were here.”**

- National CORE Vice President  
Alfredo Izmajtovich

**“This project is superlative in every category.”**

- Awards of Excellence Committee member

## Looking Ahead

### Challenges and Lessons Learned

Shortly after breaking ground, the project team discovered that its planned sewer system violated a city easement. The team eventually solved the problem by redesigning the sewer system, which included a tie-in for a neighboring church. This enabled the church to discontinue use of its septic system. The team also made use of the 2-month delay by looking into LEED for Homes certification. With a few modifications to the original design, the project was able to qualify for LEED for Homes platinum certification, which increased support for the project in the city council.

The city is currently building several other affordable developments, including a multi-family project that is pursuing LEED. These projects will benefit from several lessons learned in Vista Dunes, including working with existing residents. The project team is also holding more meetings earlier, and communicating goals further down the command chain (i.e., not just to managers). The city hopes to capture performance data from Vista Dunes to better justify the cost of green in future projects. For National CORE, many of Vista Dunes' green features (e.g., drought tolerant plants, high performing window) are now part of the organization's standard building practices.

### Education and Outreach

One goal was for this project to act as a stepping stone for future home ownership for residents. To that end, each unit has its own waste and recycling bins, and each is individually metered with its own PV panels. Families often involve their children in their energy monitoring.

The project team developed outstanding resident education resources, including a homeowner's manual and a DVD describing how to maintain green features. New residents receive a walk-through from the property maintenance manager, a National CORE employee. He also reviews utility bills for each unit every month; if bills are high, he looks for a maintenance problem (such as air filters that need to be replaced), or works with the residents on strategies to further reduce energy use.

At the community scale, Vista Dunes serves to educate children in the surrounding areas as they participate in on-site activities. The project team has also conducted workshops on the lessons learned from Vista Dunes.

## Contacts

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