

## Affordable Housing Case Study

A Townhome at Rainier Vista in Seattle

### Rainier Vista

Rainier Vista is a planned community in southeast Seattle, built on 34 acres formerly occupied by temporary housing from the 1940s. Half of the development is low-income and subsidized housing and the rest is market-rate homes. It is located near a light rail line that connects downtown and the airport so that residents can live here without owning a car. Every home in Rainier Vista is required to have at least a three-star or higher Built Green rating out of a maximum five stars. The community offers parks and open space, public art projects, the Boys & Girls Club, an Elder community, P-patches, a neighborhood center, and more.

#### RESOURCES

- King County's Green Tools: [www.metrokc.gov/dnpr/swd/greenbuilding](http://www.metrokc.gov/dnpr/swd/greenbuilding)
- Energy Star: [www.energystar.gov](http://www.energystar.gov)
- Built Green: [www.builtgreen.net](http://www.builtgreen.net)
- LEED for Homes: [www.usgbc.org/DisplayPage.aspx?CMSPageID=147](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=147)
- Rainier Vista Website: [www.rainiervista.com/index.html](http://www.rainiervista.com/index.html)
- Martha Rose Construction: [www.martharoseconstruction.com](http://www.martharoseconstruction.com)

### About the project

The thirteen townhomes are designed to the highest level, five-star level of Built Green.

All homes have an energy-efficient design, with a passive solar atrium and a hot-water tank under the roof that homeowners can easily adapt to heat water with solar. Other eco-features include an air ventilation system for healthy indoor air quality, Energy Star appliances, dual-flush toilets, nontoxic paint and finishes, and durable materials—a cornerstone of green building because it means materials need to be replaced less often. A fringe benefit, says the builder, is that "high-quality, long-lasting materials translate into a more attractive building." They also design the homes in a way that makes it easy for the homeowner to recycle.

### How Martha Rose Construction Makes Green More Affordable

- Simple and not-so-big design
- Buy the land at the right price; don't overpay
- Eliminate unnecessary moldings and finishes inside
- Use commercial porcelain tiles instead of granite
- Use shower curtain rod instead of glass enclosure at shower
- Super-insulate to reduce utility bills for homeowner
- Use very durable goods to reduce maintenance costs
- Use water conservation techniques to save on water/sewer bill

*"Many of us donate money to our favorite environmental causes: The Nature Conservancy, PCC Farmland Trust, Audubon, Green Tags, etc. Purchasing an extreme green home is also a way to contribute to a natural cause with immediate and ongoing benefits for the environment."*

**– Martha Rose, Owner Martha Rose Construction, Seattle**

### Energy-saving Technologies

**Energy Efficiency:** 30 to 50 percent better than code requirements

**Insulation:** R-26 walls, R-38 to R-49 ceilings, R-10 under entire slab

**Windows:** U-value average is .30

**Heating:** High efficiency gas free-standing fireplace and hot water radiator system

**Heat Recovery Ventilator:** warms incoming fresh air and has an efficiency rating of 80 percent

**Sun Room:** South-facing windows provide passive solar heat

**Solar:** Homes are pre-wired for solar cells and easily adapted for solar hot water

### Interior Fixtures And Finishes

**Healthy Environment:** No OSB: Real plywood and real wood is installed instead of composites such as particle board that usually contain formaldehyde

**Flashing:** Custom thicker gage flashings over wall openings keep water and related problems out

**Fresh Air:** Central fresh air handling system increases the indoor air quality

**Insulation:** Blown-in-batts fiberglass insulation is free from formaldehyde

**Low VOC Finishes:** Paints and finishes are low toxic to reduce offgassing into the home

**No MDF:** Millwork is finger-jointed and solid pine instead of MDF that usually contains formaldehyde

**Hard Surfaces:** Allergens are reduced by eliminating soft surfaces where they reside

*"In the life cycle of a green building, even if the purchase price is a bit more, the home owner will realize a savings."*

**– Martha Rose, Owner Martha Rose Construction, Seattle**



## Custom Home Case Study

The Built Green Home at Suncadia

### Contact info for builder:

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**Sizes:** from 1,650 square feet for a three-bedroom unit to 2,000-plus square feet for a four-bedroom unit

**Selling Prices (March 2006):** from \$379,000 to \$430,000-plus.

This material will be provided in alternate formats upon request. Toll Free 1-800-325-6165, ext. 6-4466  
TTY Relay: 711



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Special thanks to Cheri Westphal of Northwest Property Imaging for providing photos.  
[www.nwpiimaging.com](http://www.nwpiimaging.com)

### Water Conservation

**Toilets:** Dual flush toilets made by Kohler feature .8 gallon flush option

**No Garbage Disposal:** Food waste can be composted rather than wasting water to process it

**Irrigation:** Add thick layer of mulch to plants so they need little or no water.

### Durable Goods:

**Siding:** Kiln-dried, pre-primed cedar siding will last virtually forever when properly maintained

**Concrete Flooring:** Heavy weight concrete floors on the lowest level are as luxurious as they are durable

**Natural Linoleum:** Marmoleum flooring and kitchen countertops have a commercial rating

**Ceramic Tiles:** Tile around tubs applied over waterproof membrane



### Site Development And Construction:

**Stormwater runoff:** Rain water is handled in a way that allows the groundwater to recharge.

**Soil Improvements:** Manure compost is worked into the soil for better plant health and water absorption

**Jobsite Recycling:** This builder recycles 90 percent of the job site waste during construction, and many components of the homes are made from recycled goods.

### Native Vegetation and Drought Resistant Plants:

The builder selected plant species such as wild blueberry and Northwest Natives that attract insects while conserving on water.

### Lessons Learned And Recommendations:

Some green features offset the builder's cost and some cost more upfront, but the homeowner should enjoy reduced operational costs. Many new homes have more polluted indoor air than standing on a busy street corner. If a homeowner were to pay a little extra money each month for a higher mortgage for a healthy home, it could actually save money in the long run on fewer visits to the doctor and fewer lost work days due to illness.

Marketing green features makes sense only if it's real. For example, Martha Rose does not put something on the company website unless it's part of her value system. She shares information with other builders because she believes that the more builders doing green, the better we all are.

