

# 502 COLORADO AVENUE

## 44-UNIT AFFORDABLE/SUSTAINABLE HOUSING PROJECT

### ON-SITE ELECTRICITY GENERATION

- produced by a combination of solar panels and a microturbine [fueled by natural gas]; these 2 on-site electricity generating systems will meet about 92% of the project's demand for electricity; the remaining electricity demand [8%] will be from the grid [i.e. utility company].

### HOT WATER, UNIT HEATING AND COOLING

- 'waste heat' resulting from the operation of microturbine is used to produce hot water for all the units; the hot water is in turn used to 'power' a radiant-type heater in each of the units and to provide hot water for sinks/shower.
- the units are kept cool with a combination of window placement [i.e. minimizes direct sun, yet allows for breezes to pass-thru units], window type [i.e. double-paned, 'high-efficiency' windows that minimize heat pass-thru from sun], and 'blown-in' insulation that increases the thermal value of the wall 75% above a traditional wall. [made from recycled material, by the way].

### OTHER GREEN MATERIALS AND SUSTAINABLE PRACTICES

- carpets made from recycled content
- 'real' linoleum flooring in kitchens [i.e. cork flour, wood flour, jute, and linseed oil = linoleum]
- cabinets made from formaldehyde-free MDF [medium density fiberboard]
- fluorescent lighting in units and exterior; motion sensors activate lighting in common areas and a portion of garage area; (fluorescent tubes have low-mercury content)
- building insulation made from recycled newsprint and installed in a way to deflect exterior heat and cold yet maintain interior warmth/coolness;
- all water runoff from site is directed away from street and to dry wells for return to groundwater aquifers; (jim- 95% of the water goes to alley, about 5% goes through curb to street)
- drought-tolerant landscaping with drip irrigation and seasonal adjustment.
- ANGIE – WHAT ELSE DID I MISS HERE?

- Approx. 75% of construction waste has been diverted from landfill and recycled.
- Refrigerators are high-efficiency, low energy use.
- Stoves are electric rather than gas.
- The building was designed around the existing trees as much as possible. All existing palm trees were kept (Pepper tree was relocated).
- We have incorporated a bike storage room and a recycling trash room for tenant recycling and city pick up.
- Heat pump in community room has 'ozone-friendly' refrigerant.
- Also- in California, the price of natural gas is discounted for customers who use cogeneration systems.
- The solar panels also shade the building (south balcony and west facing stairs).

Green Items cost  
material plus installation  
(above traditional cost for item)

Micro-turbine                      \$42,070.00  
(includes \$15,000 rebate from Gas Company)

Solar Panels                      \$140,000.00  
(includes \$70,000 rebate from State of California)

High efficiency windows              \$167,108.00  
(3.7% or \$3798/unit)

Recycled blown-in cellulose insulation \$34,760.00  
(.8% or \$790/unit)

Recycled carpet/linoleum  
flooring  
\$43,317.00  
(.9% or \$984/unit)

Recycled MDF cabinets  
(with counters) \$74,529.00 (1.6% or \$1694/unit)