Interior Views:
Composting Toilet: On-Site Biological Waste Treatment

Waste lines are standard 4" lines
Flushes are 3oz each, water / soap foam
Composting unit handles 14 fixtures each
Each unit has 180 visits / day capacity
Each unit has 65,000 visits / year capacity
Waste volume reduced by to <10%
Compost used to fertilize landscape areas
Liquid product used for fertilization of plants
Process time is one year
Assuming saving 15 gal / day person
Monthly savings = 450 gal / person
At 70 person occupancy = 31,500 gal savings / month
Design Tributaries:

### Sliding doors:
- Peacefulness
- Layers of experience
- As a moving screen

### Nature:
- As personal experience
- As personal connection
- As cultivation of life
- Participation in community of life

### Sliding panels:
- Variety of depth and texture
- Communication of mood and state
- Gradient of privacy and availability

### Translucency:
- Inner nature of materiality
- Luminosity
- Communication and filtration
- Tactile as visual experience
Rainwater Harvesting / Potable Water

Rainwater Collection via roof area
Prefilter and storage in cistern
Carbon filter and UV treatment into potable water
Potable water pressurized and into supply lines
Makeup water from municipal source
Due to composting toilet can use single supply line system for building

Annual Rainfall: 36 inches
Volume of Water: 449,000 gallons / year
Usage approx 1050 gallons / month per person
Cistern volume for 3 months and 70 people = 220,500 gal
Cistern size = 29,000 cubic feet = (12')(24')(100')
Greywater Recycling to Landscape

Greywater sourced from shower, sinks, laundry, etc...
Greywater is pre-treated
Greywater is not stored
Greywater is supplied to landscape via drip-irrigation
Excess is directed to landscape bioswales
Solar Domestic Hot Water / Radiant Slab

Collector is approx. 40% efficient
Hot water is stored in a tank
Water may receive temp boost from in-line heater
Potable water is distributed via plumbing normally
Radiant slabs use a mixing valve / heat exchanger
Potable and radiant slab water is separate
Both systems use same heat sources to avoid duplication
Photovoltaic Electric Power

Portland average annual insolation 3.95 kWh/m^2/day
Collectors approx. 15% efficient
DC power is inverted and supplied throughout building
Excess is sold to utility to avoid battery banks and associated hazards
Flywheel under vacuum may allow for safe storage until demand
Retractable, Width Adjustable, Sliding Stair with Tambour Safety Gate