

Courtyard Housing: HOUSING IN RESPONSE TO THE HUMAN LIFE CYCLE

Category: East Portland Infill Site

Our vision is to provide courtyard housing for children and families that fosters a sense of community, wholeness and well-being. We wish to provide children with the opportunity to witness the diversity of family composition, the connectedness of multiple generations, the wisdom of a transformable environment, and the values of sustainable living.

Our built environment should reflect our attitude as a society to learn from the past, understand the present and challenge the future. Therefore, our housing and communities must be dynamic, flexible and able to fulfill a multitude of purpose and function for all abilities. It is imperative that our environment educates by example, building affordable, healthy, stable and sustainable communities.

Data

Square Footage
Unit A 1861 ft²
Unit B 1331 ft²
Gatehouse 706 ft²
Cycle/Recycle 256 ft²

Total lot coverage 7,046 ft² / 17,100 ft² = 41.2% building coverage
Maximum height 27 feet
Total # of units: 8 primary units, which can each be subdivided for a total of 16

A Sustainable Community for

- Human Sustainability:** Support multi-generational living and opportunities for meaningful interaction.
- Economical Sustainability:** A home's layout is easily modified when the need arises, reducing remodeling costs and increasing marketability.
- Social Sustainability:** By designing flexibility into homes, one home remains appropriate for multiple life transitions. This promotes aging-in-place and contributes to more stable and sustainable communities.
- Cultural Sustainability:** Flexibility of housing enables continuity of cultural values, family structures and social fabric.
- Environmental Sustainability:** The built community should be an example, an educational tool and a means of shared dialogue with the neighborhood.
- Ecological Sustainability:** Strive to reflect balance, wholeness and connectivity in our community environment.

All Ages and Households,

Design should promote compatibility between people and their housing. The average household composition is becoming increasingly varied as our society becomes more diverse. The traditional household makeup has expanded to include:

- Nuclear families with children
- Elderly relatives and extended families
- Unrelated adults
- Caregivers
- Home businesses

All Changes,

- Human Life Cycle:** The amount of space that a household requires changes over time.
- Economic:** By allowing the dwelling to be divided in a number of ways, space can be rezoned as needs evolve and/or serve to generate income.
- Social:** The dwelling accommodates the diverse needs of a variety of family units, as well as allowances for disabilities, transitions or creative living solutions.

And All Abilities.

- Universal Design/Human Centered Design:** The rapidly aging American population and longer life expectancies are leading to a greater number of people with physical disabilities.
- By embracing the full spectrum of the Human Life Cycle, we can expand upon the traditional scope of Universal Design. This approach to designing environments results in homes that can better accommodate people's changing situations, varying spatial requirements and varying abilities.



Street Frontage Elevation
Street frontage features a sliding gate and screen fence with low wood panels (to 3' ht.) with taller steel frame, presenting a porous, pedestrian-scale screen for neighbors. Cars stopping to open gate before entering makes for a safer pedestrian zone.



Interior Courtyard Looking West



View into Common Green



Sliding wood panels provide options for more privacy at unit decks



Birdseye View from South

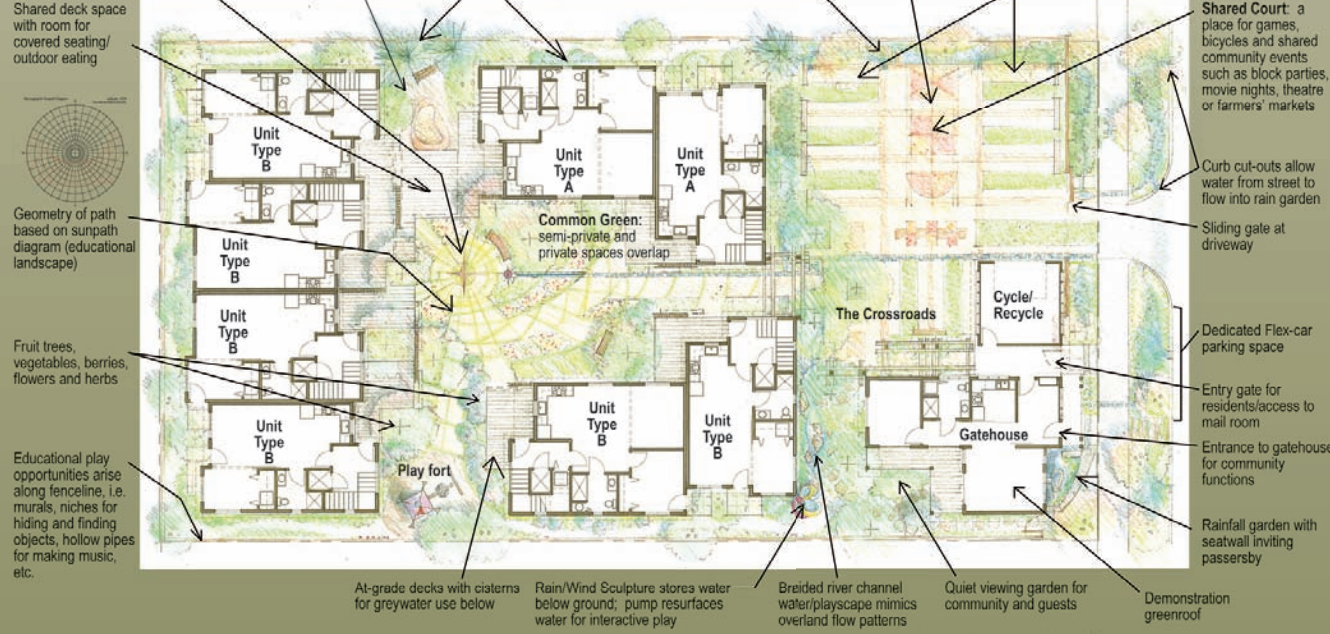
Rainwater Re-use and Stormwater Treatment Train



Rainwater from roofs used for laundry, toilets

Cleansed water contributed back to Willamette watershed

- Central 'well':** solar pump irrigates gardens with collected rainwater; overflow goes to central channel and helps cleanse parking runoff
- Quiet seating/play area with sandbox or other soft play surface
- Evergreens tie site in with neighborhood context and break down scale of denser development
- Bioswale planted with sedges and rushes cleanses pollutants from parked cars; tool for teaching watershed health
- Colored patterns in paving indicate priority of play space over vehicles
- Parking Bays:** Hardy groundcover and permeable paving with gravel joints allow storm water infiltration



SITE PLAN
1/16" = 1 foot

Concept images: From "In the Hands of Wisdom," by Penny Bauer, in *Angles Arrien. The Second Half of Life: opening the eight gates of wisdom.* Boulder: Sounds True, 2005. / Herbert Dreiseitl, Dieter Grau and Karl H.C. Ludwig, eds. *New Waterscapes: planning, building and designing with water.* Berlin: Birkhauser, 2011. / and Lara Jade.

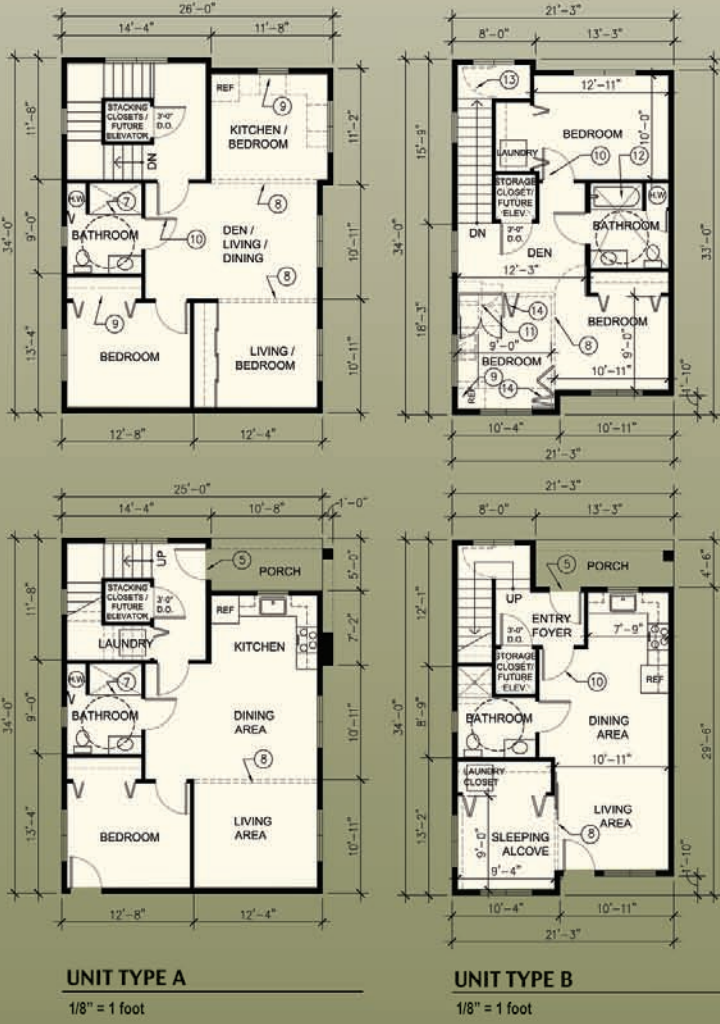
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FLEXIBLE DWELLING UNITS



KEY
Primary Unit (Green)
Shared area (Yellow)
Accessory Unit (Orange)

Primary units can further be divided into a primary and accessory unit. Four such scenarios are shown here.



UNIT TYPE A and **UNIT TYPE B**
1/8" = 1 foot

CONDOMINIUM OWNERSHIP STRUCTURE - details:

- Each household owns title to their individual housing unit
- Condominium association manages and maintains shared courtyard, pathways, community buildings

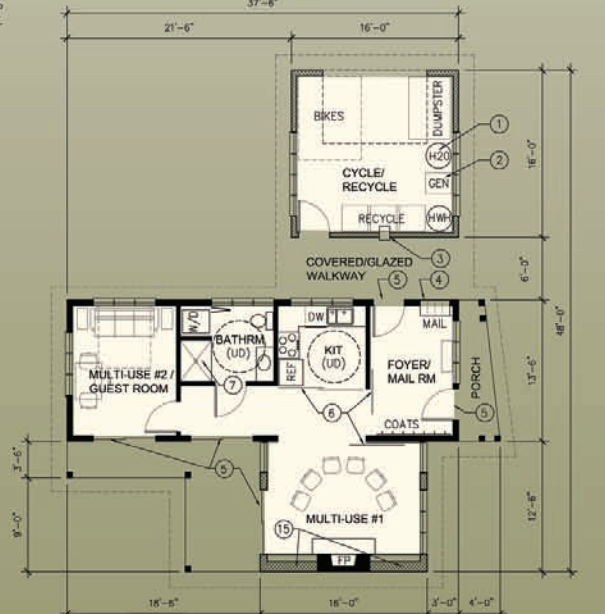
CONDOMINIUM RATIONALE:

- Quicker development period without lengthy subdivision process compared to fee simple development
- Greater flexibility for design and lifespan changes
- Provides governance structure for community amenities such as shared garden, barbeque, bicycle storage, and tool shed

GATEHOUSE / DEMONSTRATION HOUSE / SAFE HOUSE:

The Gatehouse is a place of welcome for both residents and neighbors. It is the front face to the neighborhood and therefore is low profile and residential in scale. It incorporates Universal Design throughout, and if the need arises, it can be:

- Income-generating by means of rentable meeting spaces for the community HOA
- A caretaker's residence
- A daycare or after school drop-in center
- Shared home-office center
- A Demonstration House for sustainable practices such as green building materials, passive solar, green roof and greywater recycling systems
- A place of social interaction and education
- Flexible, multi-functional
- A Safe House, providing the community and neighborhood with a place of emergency shelter.



GATEHOUSE
1/8" = 1 foot

- Key Notes:**
- Emergency water supply
 - Emergency generator
 - Paper recycle slot
 - Two-way access
 - Zero threshold
 - Surface mounting sliding doors
 - Curbless shower
 - Optional flexible wall
 - Roughed-in future kitchen
 - Three-ft. doors, typ.
 - Moveable closet
 - Removable tub on curbless shower
 - Optional secured door
 - Folding partition
 - Tromb wall

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