public courtyard from 72nd street

private courtyard

north across courtyard
Site

- Zone: R1a
- Acres: 0.7
- Required Density: 30
- Provided Density: 32

Future Growth

Visible Edge

Dominant Corner

Retail Exposure
fabric
- underlying structure-
- the arrangement of physical components in relation to each other-

interconnect
- to connect with one another-

borders
- an ornamental design at the edge-
Portland’s Climate:
Portland’s mild climate allows buildings to take advantage of several natural ventilation strategies. For the summer months the average daily temperature does not exceed 70 degrees, and the average high temperature does not exceed 80 degrees. In the swing seasons, outdoor air temperature is often close to room temperature. During these mild conditions, natural ventilation is feasible.

Operable Windows:
Throughout the year Portland experiences many nice days where a room can be made comfortable by opening a window. Unfortunately, many of our buildings do not provide this option. Incorporating operable windows is the simplest natural ventilation strategy, although the design of the building and mechanical system consider this variable.

Hot Air Rises:
More sophisticated strategies can involve the use of the stack effect to induce airflow. When warm air rises and leaks out at the top of a building, cooler air is drawn in at the bottom. Openings and spaces, such as atriums, can be designed to encourage this type of flow. A heat chimney is a device that uses the sun to heat air to create convection. An example of such a device is a cupola on top of a house.

People’s Food Co-op in Portland installed a chimney stack to help cool their building using natural ventilation. The stack was installed as one component of an well-integrated heating and cooling system that eliminated the need for mechanical cooling. See the People’s Food Co-op case study for more details on the project and this system.

Another Portland project, Ode to Roses, designed the building to take advantage of heat rising and consequently avoided the need to mechanically cool the building. The owner strategically installed a multi-purpose clerestory (or monitor) on the second floor that drastically increases daylight penetration and serves as a hot air outlet when perimeter outlets are opened. See the Ode to Roses case study for more information on this project.
nighttime flushing

breezeway

breezeway
operable clerestory windows

breezeway
common house

entry from 72nd street

foyer looking into private courtyard
(2) studio 440 s.f.
(6) 1 bedroom flat 650 s.f.
(2) 2 bedroom townhouse (A) 950 s.f.
(4) 2 bedroom townhouse (B) 1050 s.f.
(6) 3 bedroom townhouse 1350 s.f.
2 bedroom & 3 bedroom townhouses

2 bedroom townhouse

2/f plan

1/f plan

scale 1/4" = 1' 0"
common house

g/f plan

entry from 72nd street

foyer looking into private courtyard
(2) studio 440 s.f.
(6) 1 bedroom flat 650 s.f.
(2) 2 bedroom townhouse (A) 950 s.f.
(4) 2 bedroom townhouse (B) 1050 s.f.
(6) 3 bedroom townhouse 1350 s.f.
2 bedroom (l) & 3 bedroom (r) townhouses

1/f plan

2/f plan

2 bedroom townhouse (bldg d)