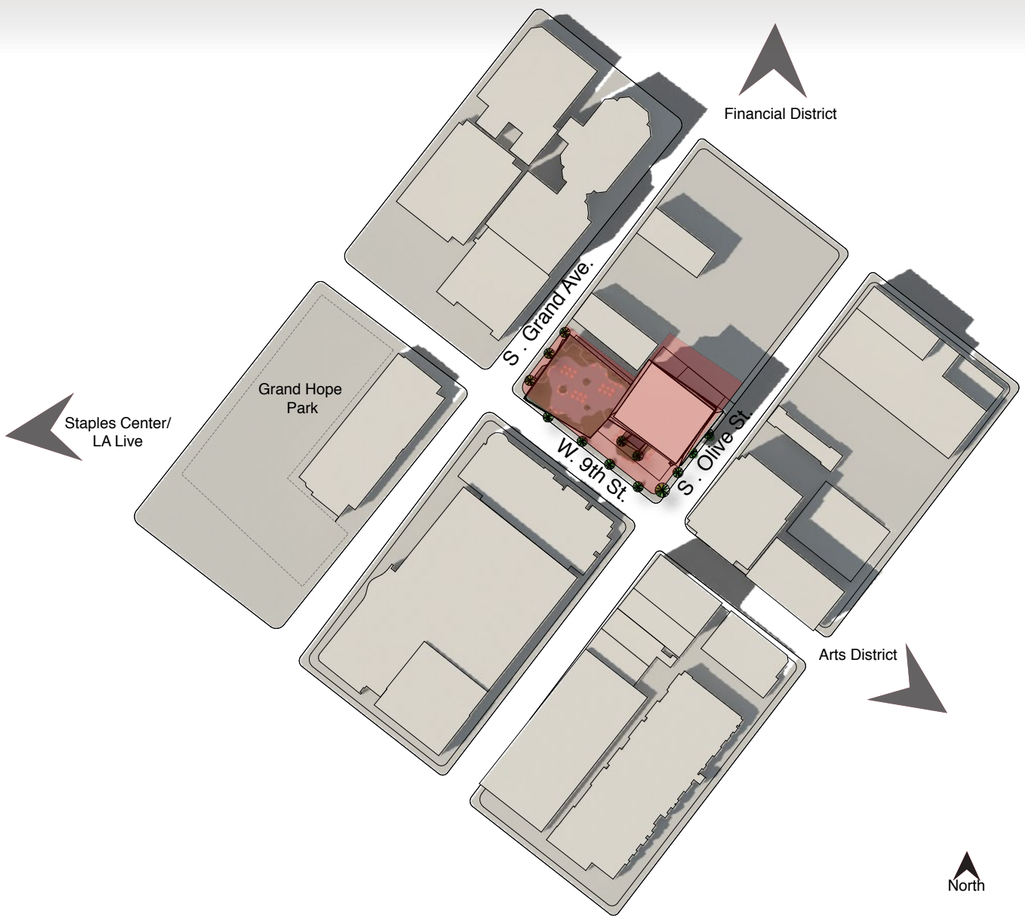
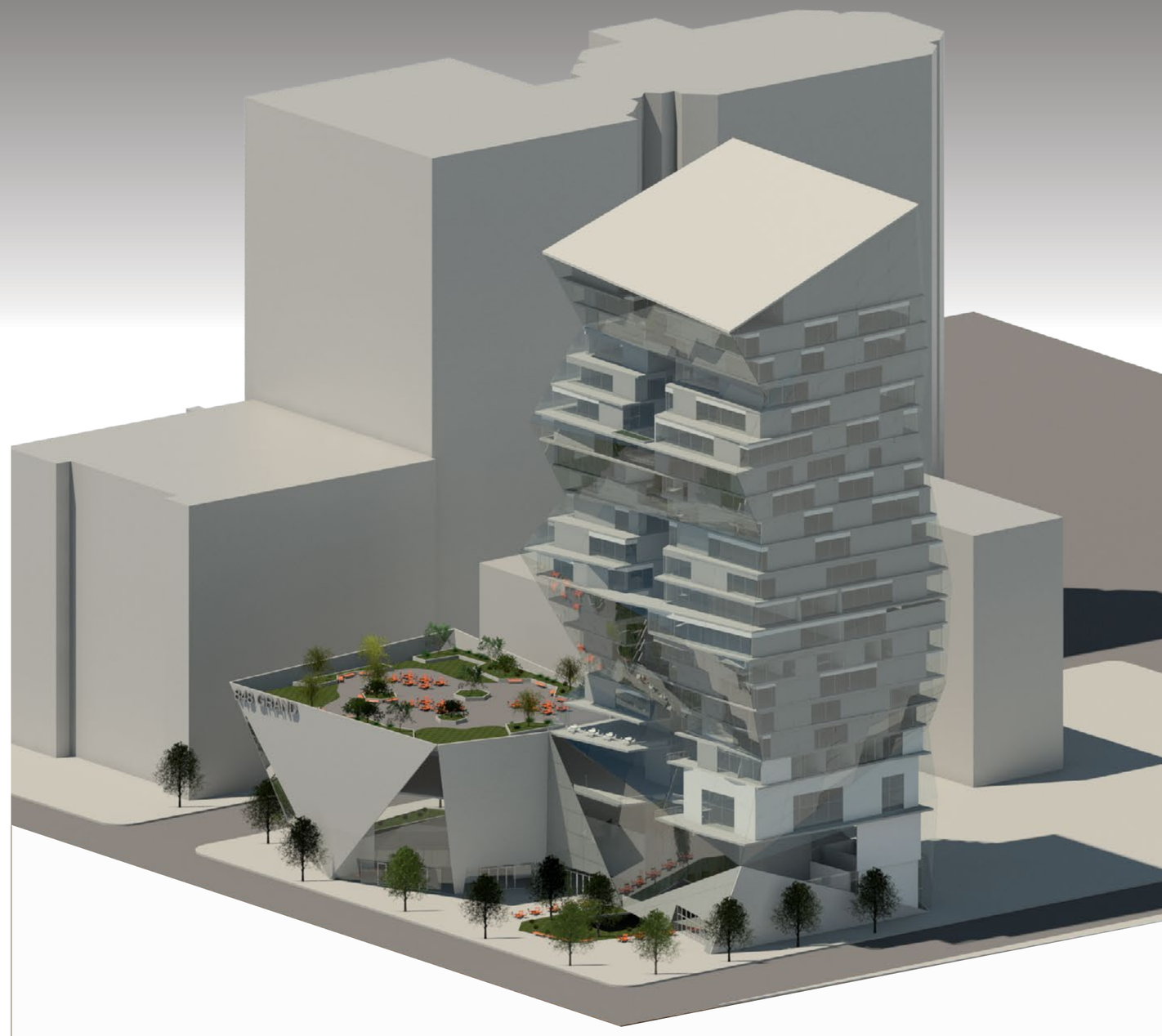
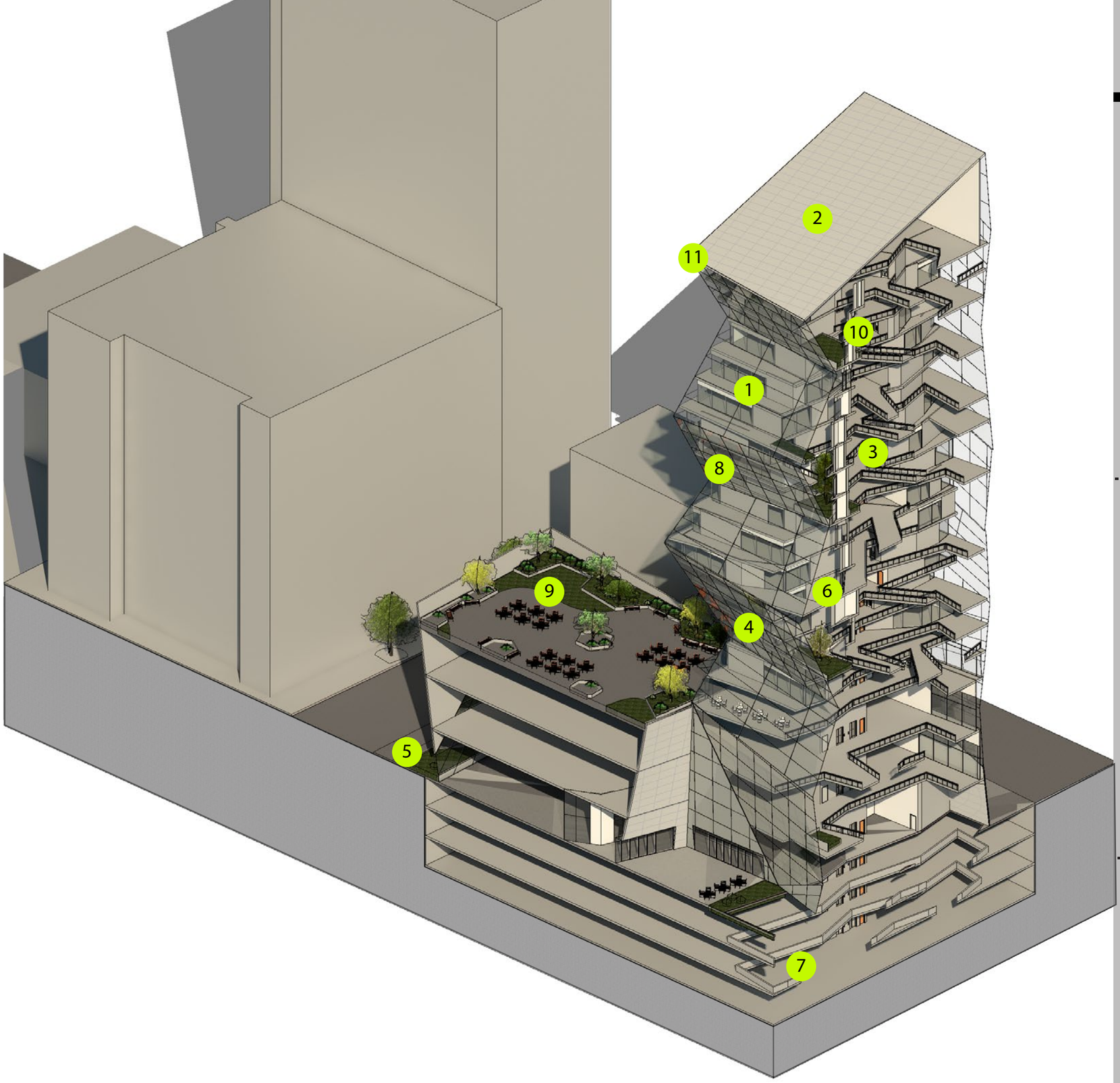
848 Grand


Financial District
S . Grand Ave.
Grand Hope
Park
Staples Center/
LA Live
W. 9th St.
S . Olive St.
Arts District
North


848 GRAND



848 GRAND

848 Grand is a 21 floor, high-rise mixed use building located at 848 S. Grand Ave. The first four floors are dedicated to retail space, a museum gallery, a cafe and an outdoor social space/park. Above the fourth floor, the building contains four 2 or 3 bedroom units on either side of the central atrium space. The tower is focused on a sustainable future and producing as much energy as the building requires.

Passive features include a double skin glazing system which performs in a variety of ways. First, the glazing system allows natural daylight to enter each of the floor plates. This will allow the occupants to use less artificial lighting in the units and rely more on natural daylight. The central atrium also allows for natural daylighting to the subterranean parking levels. Next, the double facade system within the residential units works as heating device in the winter months. The section of the facade through the atrium features operable windows which allow air to enter the atrium and cross ventilate the units.

Active sustainable features include a transparent photovoltaic glazing system which transforms the entire East, South and West facades into a PV facade to continually capture solar energy.Along with a traditional photovoltaic system on the angled roof, the PV system will generate more energy than the building uses. Next, a water sewage treatment system designed to mimic the cleansing functions of wetlands will cleanse the building's blackwater for use in flushing toilets and irrigation.

Together the passive and active systems create a residential tower that is not only provoking to look at but performs at nearly carbon neutral.

1. Transparent Photo-voltaic Glazing
2. Photo-voltaic Roof Panels
3. Central Atrium
4. Double Skin Facade
5. Living Macine Black Water Treatment
6. Operable Atrium Glazing for Cross Ventilation
7. Natural Daylighting for Sub-Terranian Parking
8. Mass Shading
9. Social Spaces
10. Low-Flow Plumbing Fixtures
11. Rainwater Harvesting Gutter System

Energy Use Intensity

-2
kBtus/ft²

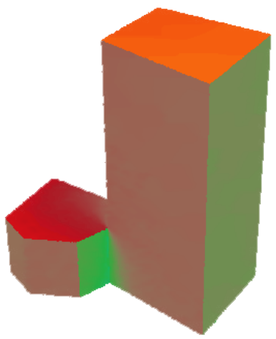
Carbon Use Intensity

1.5
lbs CO2/ft² yr

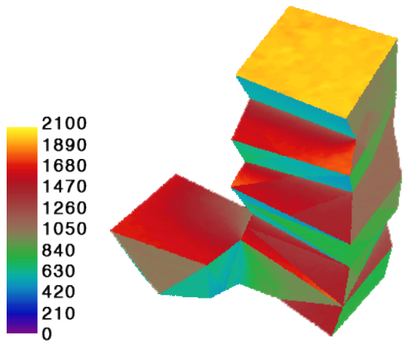
Internal Atrium to provide
Daylighting and cross ventilation

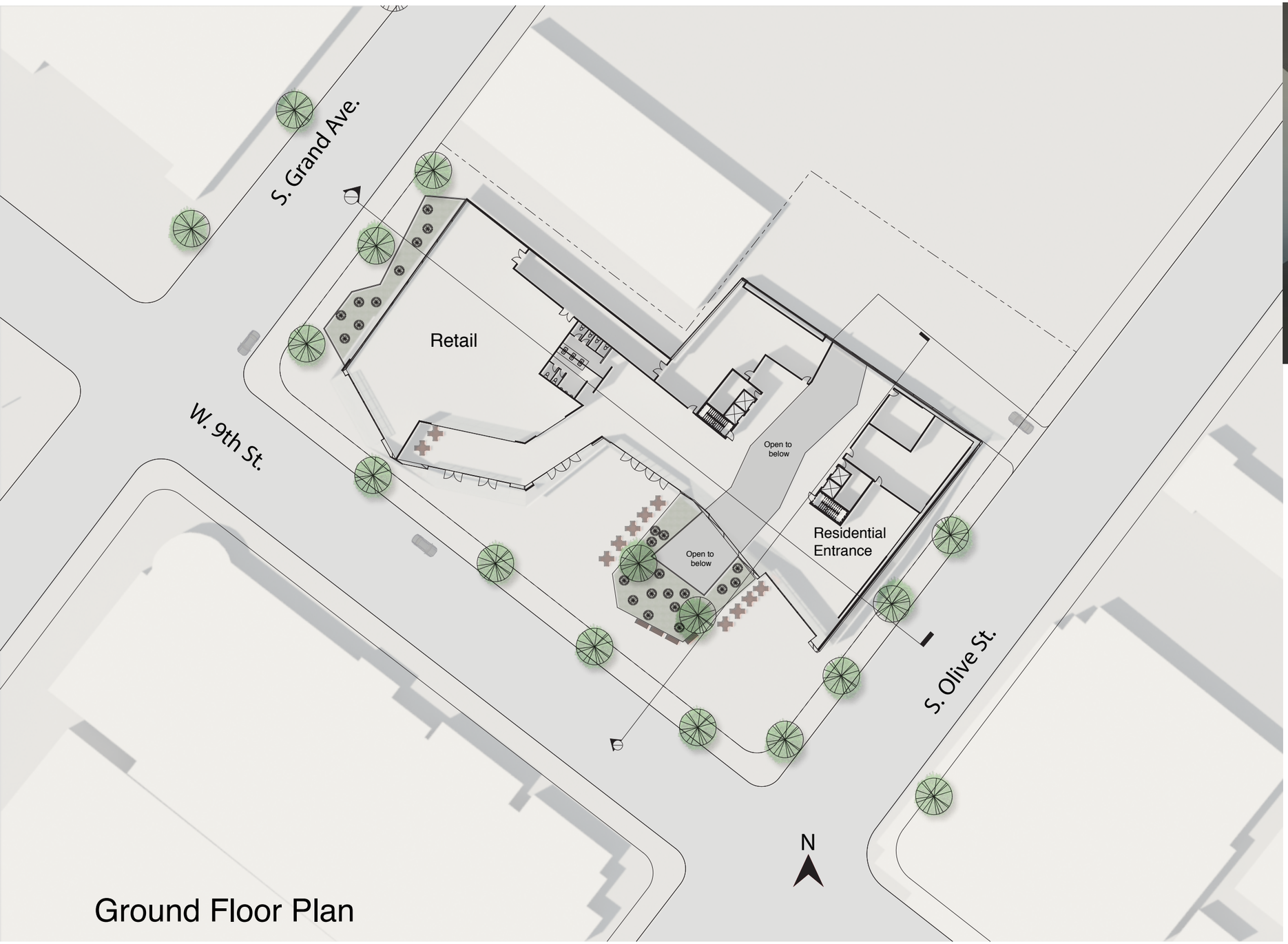
Solar Energy Generated:

1,181 mWh/yr



1,238 mWh/yr



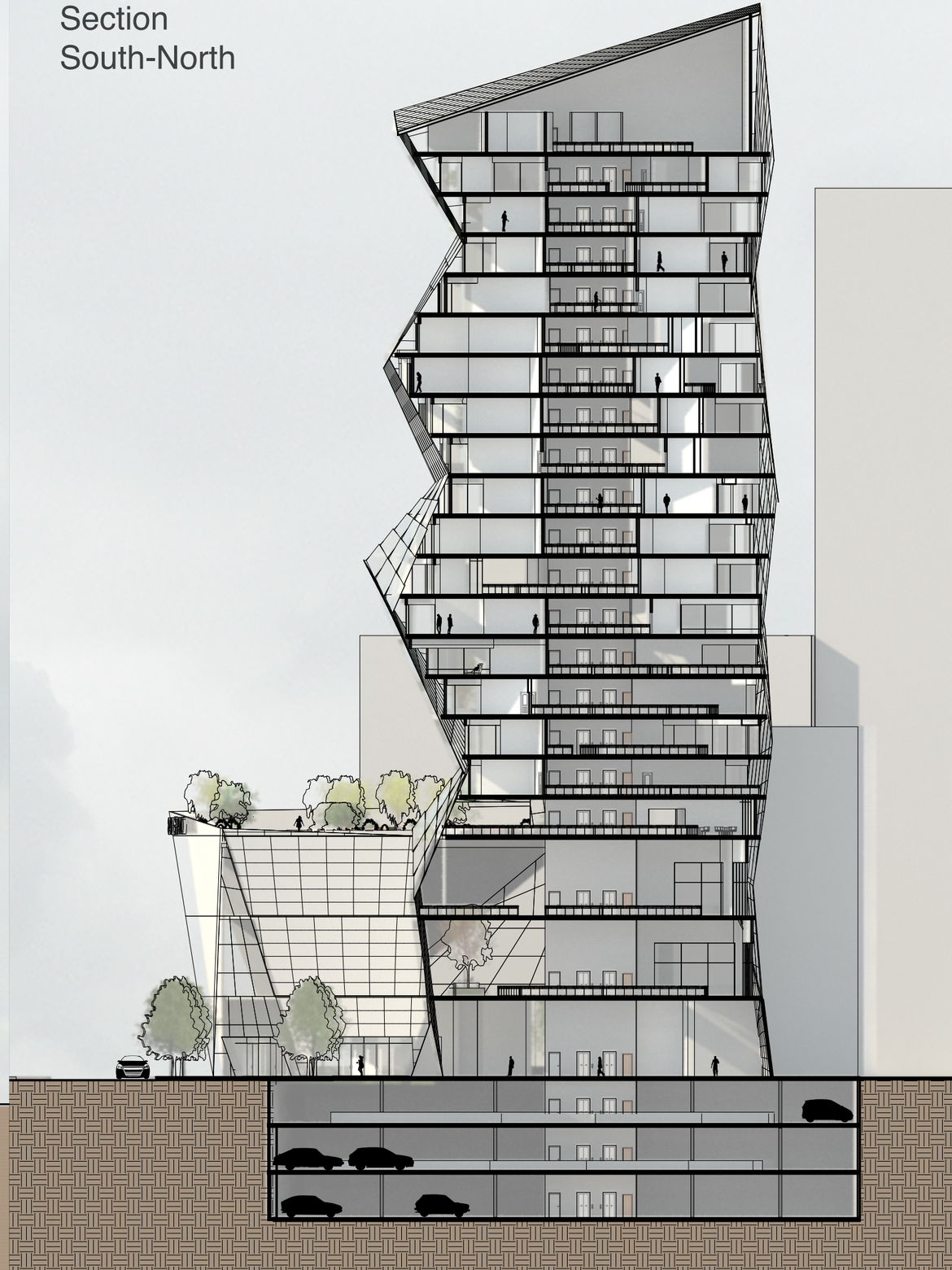


Ground Floor Plan

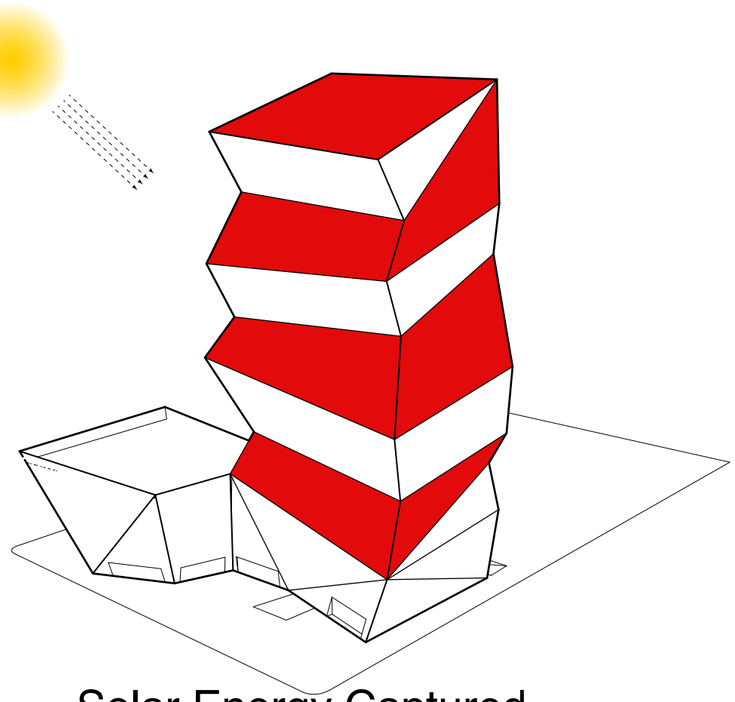
Typical Residential Floor Plan
(8th Floor shown)

Section
East-West

Section
South-North



Solar Energy



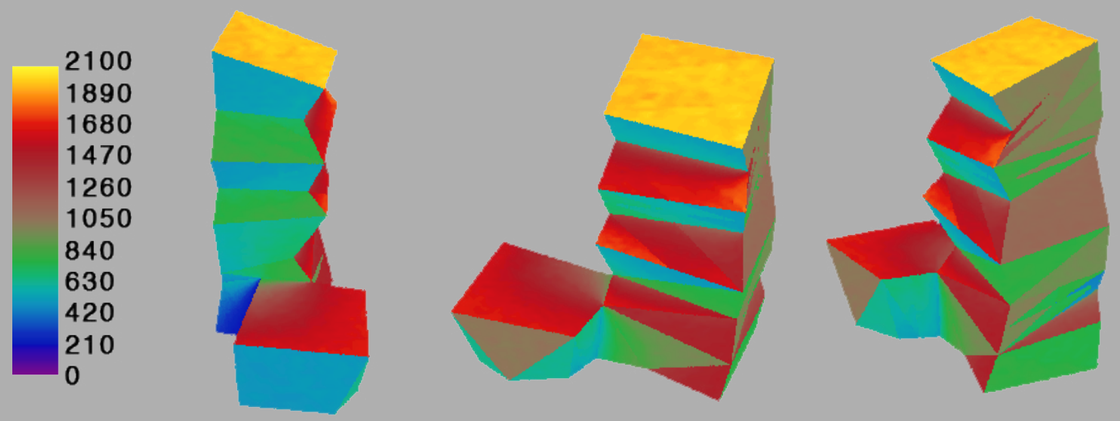
Solar Energy Captured
1,238 mWhr/r

West
135 mWhr/yr

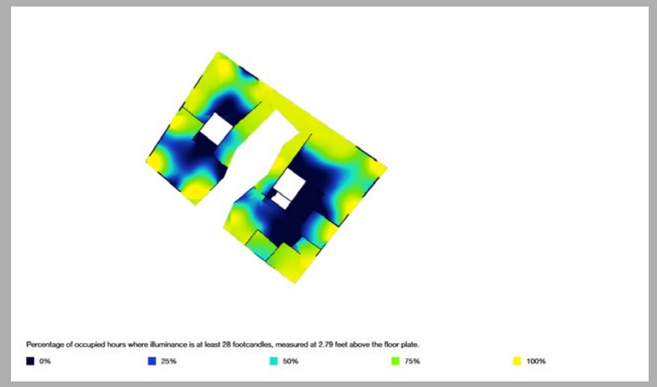
Roof
544.2 mWhr/yr

South
437.7 mWhr/yr

East
120.7 mWhr/yr

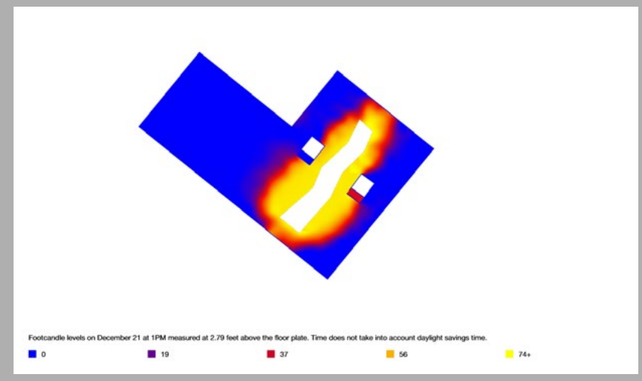


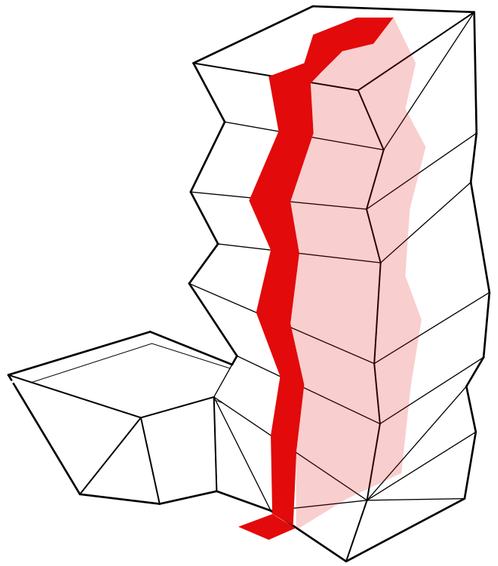
Daylighting

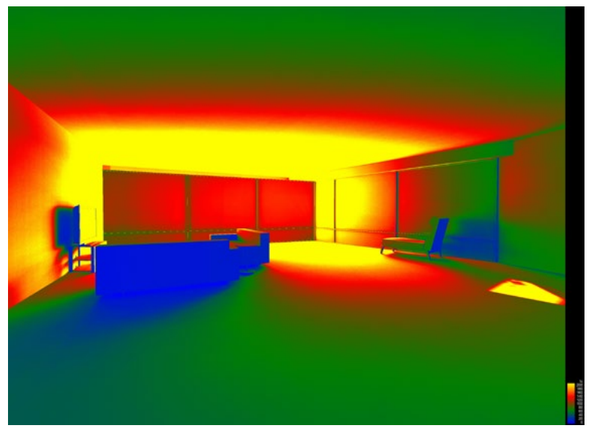


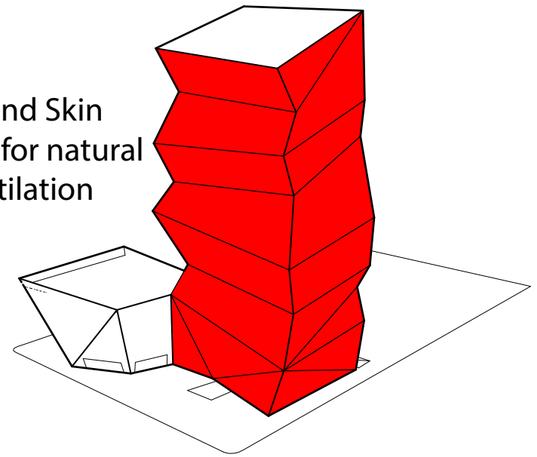
Typical floor plate daylighting analysis

Parking level -2 daylighting analysis

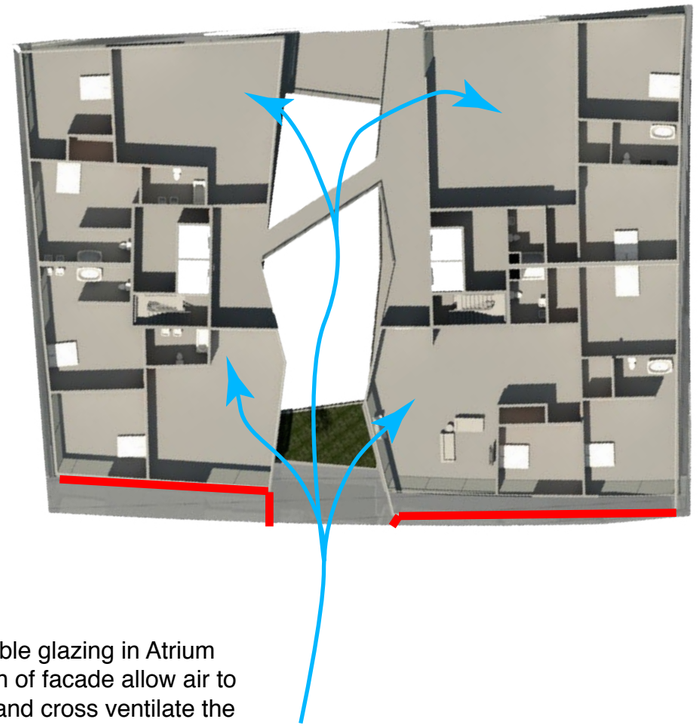




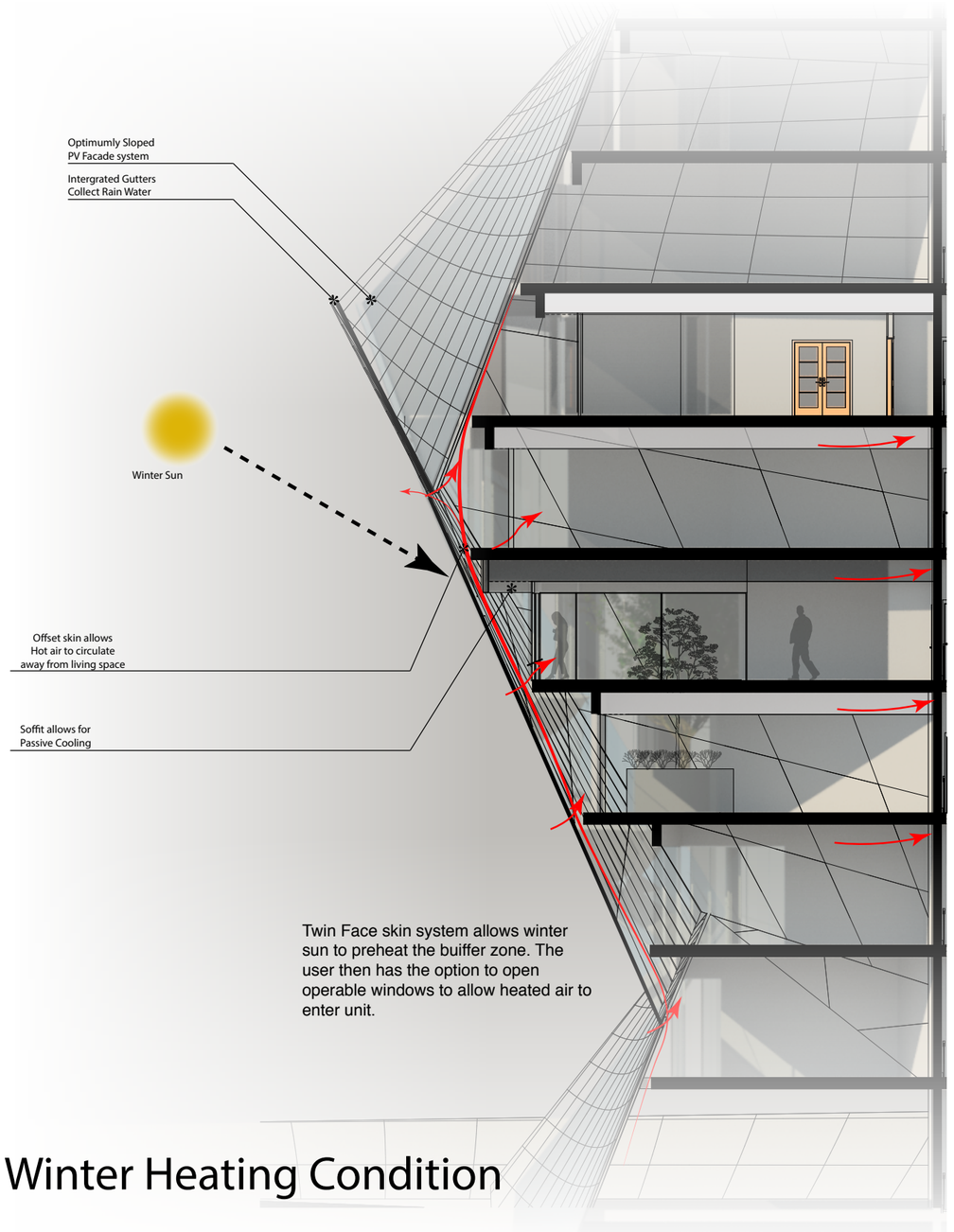




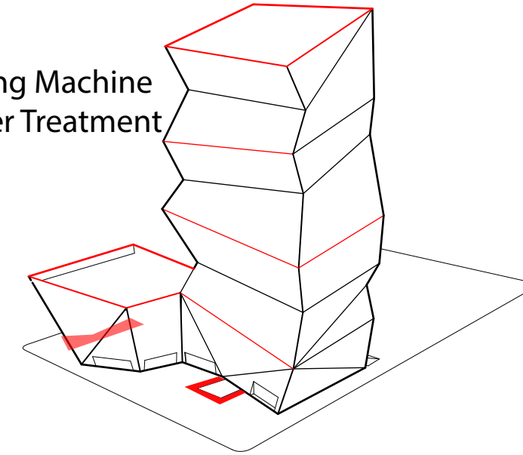
Summer Cooling Condition

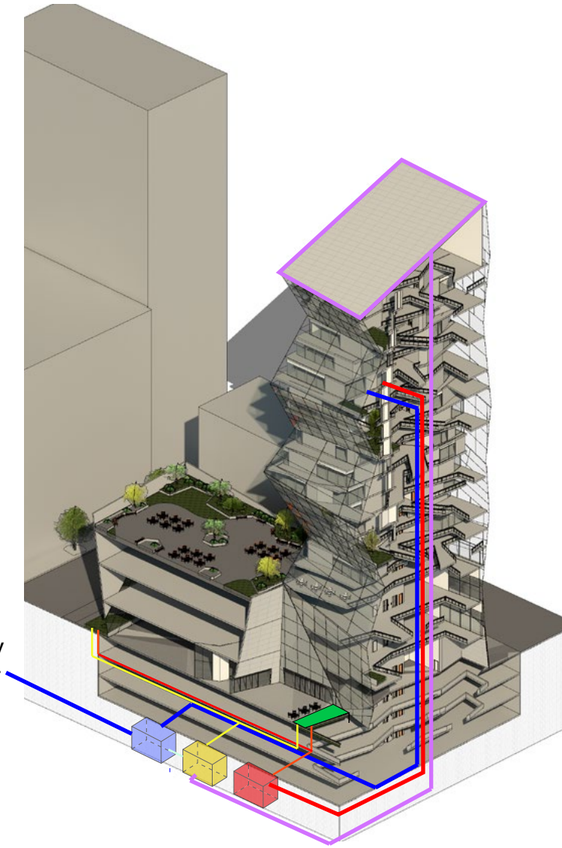


Operable glazing in Atrium section of facade allow air to enter and cross ventilate the units



Winter Heating Condition





Building water use	286,890 gal
Annual Rain fall collected	140,175 gal
Water use from Utility	146,715 gal