

SUSTAINABLE SYSTEMS



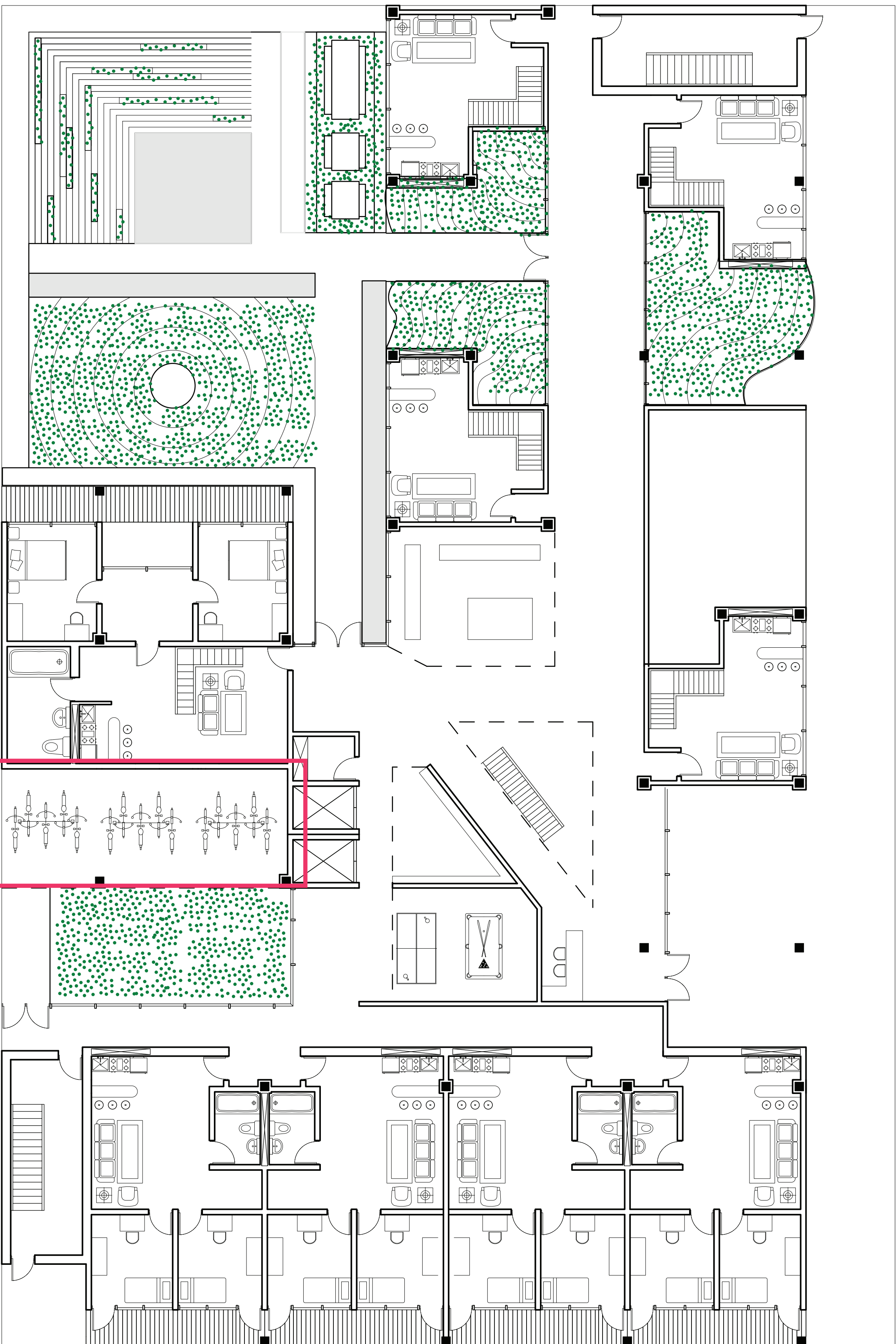
Leed v4 for BD+C: New Construction and Major Renovation

Project Checklist

LOCATION AND TRANSPORTATION POINTS	
Bicycle Facilities	1
Reduced Parking Footprint	1
SUSTAINABLE SITES	
Construction Activity Pollution Prevention	
Open Space	1
Light Pollution Prevention	1
WATER EFFICIENCY	
Indoor Water Use Reduction	6
Outdoor Water Use Reduction	
Building-Level Water Meter	
ENERGY AND ATMOSPHERE	
Green Power and Carbon Offsets	2
Fundamental Commissioning and Verification	
Minimum Energy Performance	
MATERIALS AND RESOURCES	
Storage and Collection of Recyclables	
INDOOR ENVIRONMENTAL QUALITY	
Minimum Indoor Air Quality Performance	1
Environmental Tobacco Smoke Control	
Low-Emitting Materials	3
Daylight	3
Quality Views	1

TOTAL : 20

BICYCLE FACILITIES

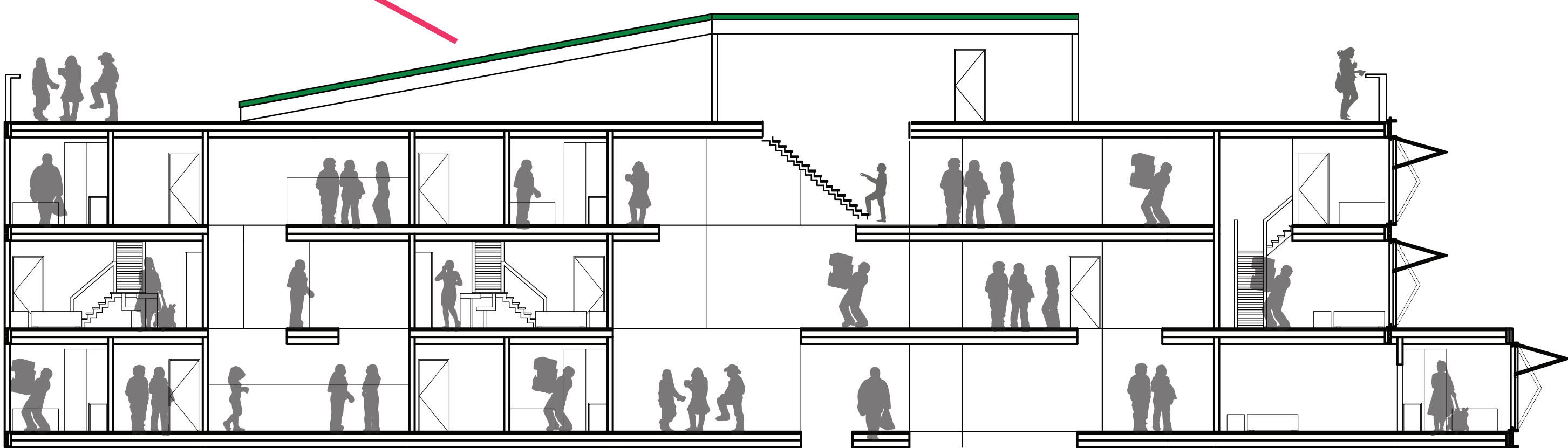


GROUND FLOOR

RECUPERATE HEAT



GREEN ROOF



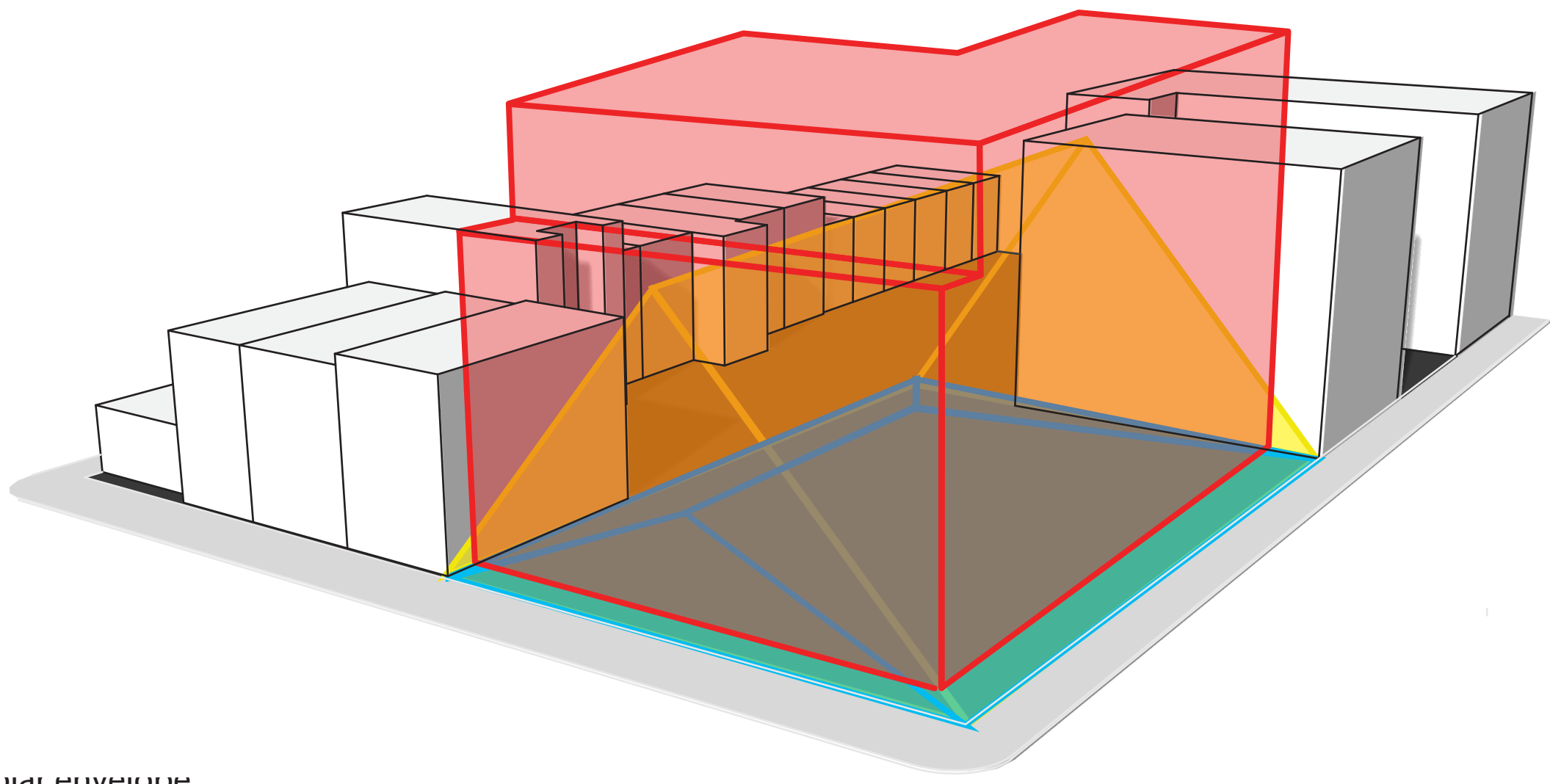
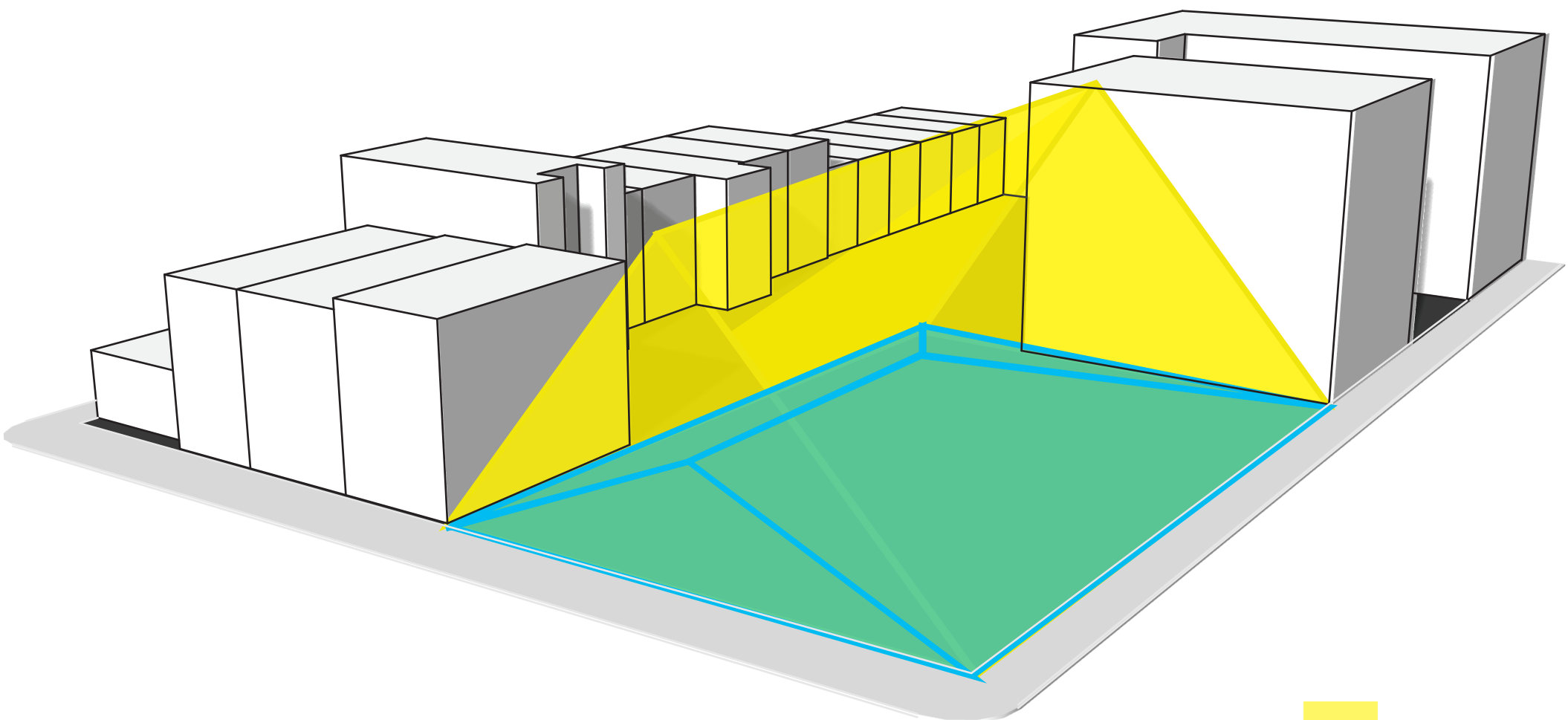
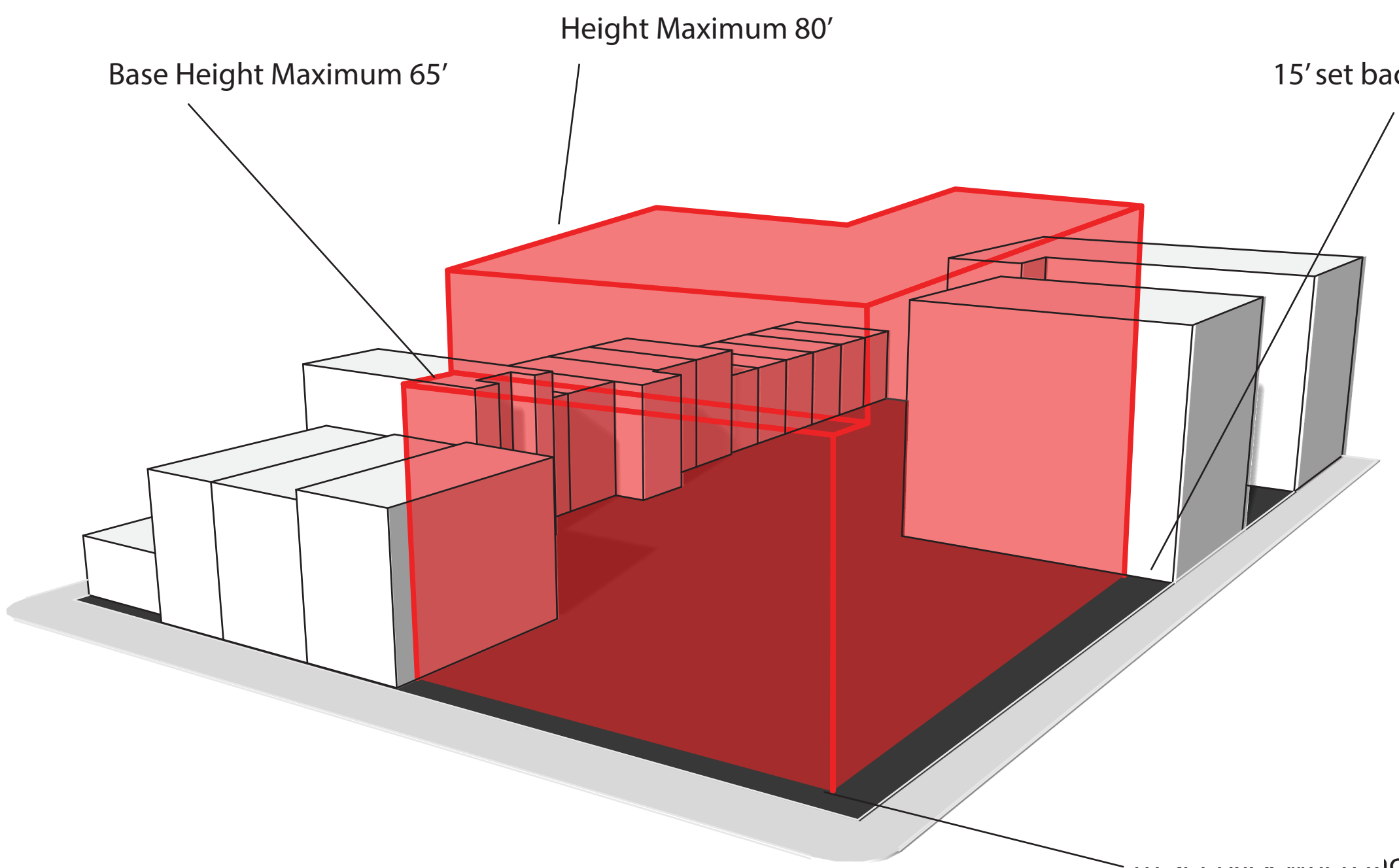
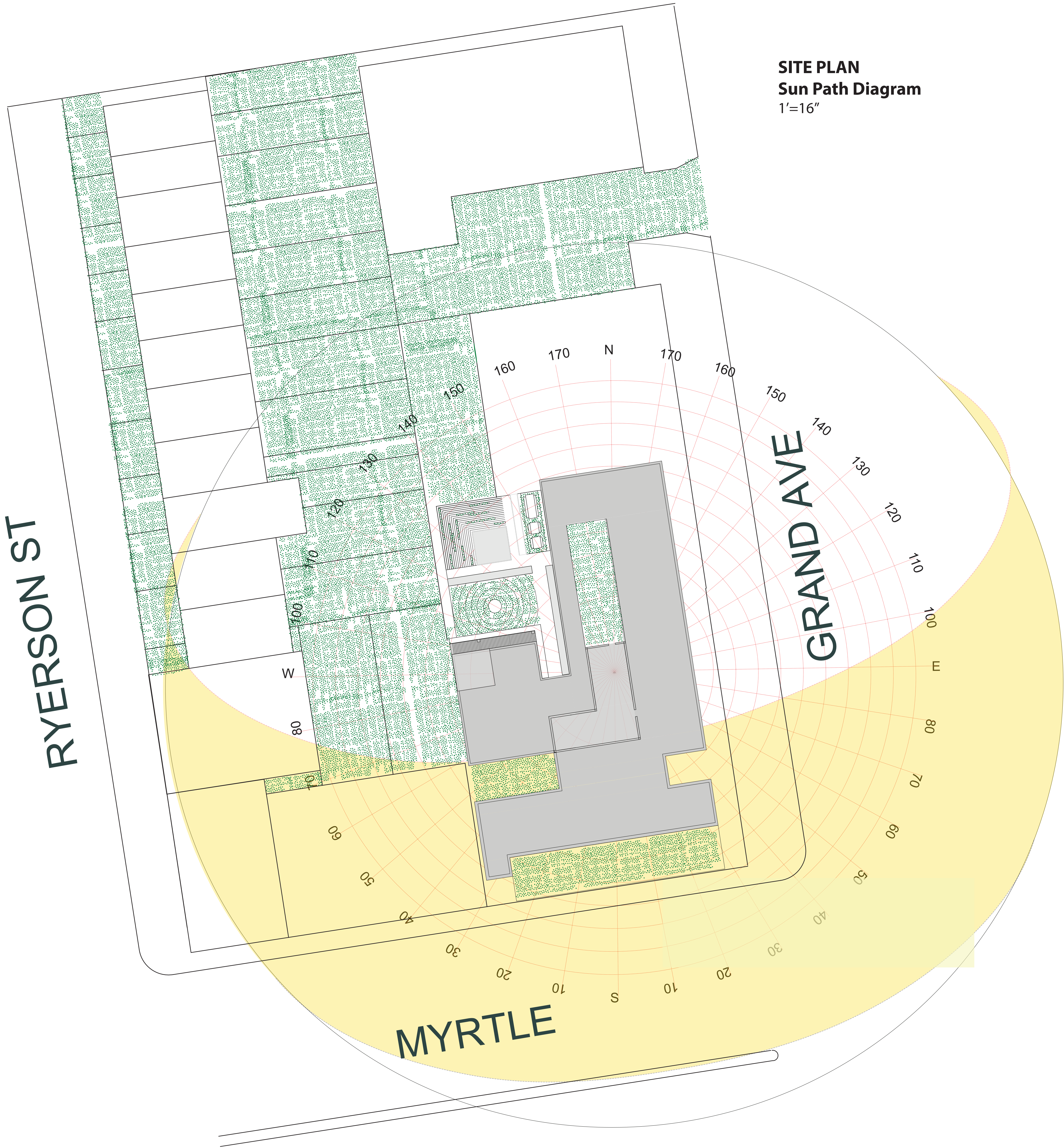
FOR OUR PROJECT, WE USED SEVERAL SUSTAINABLE SYSTEMS TO REDUCE THE FOOTPRINT OF THE BUILDING, INCLUDING SOME ITEMS FROM THE LEED CHECKLIST FOR ACCREDITATION LIKE BICYCLE FACILITIES AND STORAGE AND COLLECTIBLE OF RECYCLABLES, BUT WE ALSO USED OTHER METHODS.

INSTEAD OF HAVING A CONVENTIONAL MEP SYSTEM, WE USED GEOEXCHANGE SYSTEM, GIVING EACH ZONE OF THE BUILDING A CONTROL OF THE ENVIRONMENT, BESIDES THE PASSIVE ENVIRONMENT CONTROL OF THE SKIN FACADE, AND WE PRODUCE HEAT COLLECTED FROM THE EXHAUST VENTS ON THE ROOF.

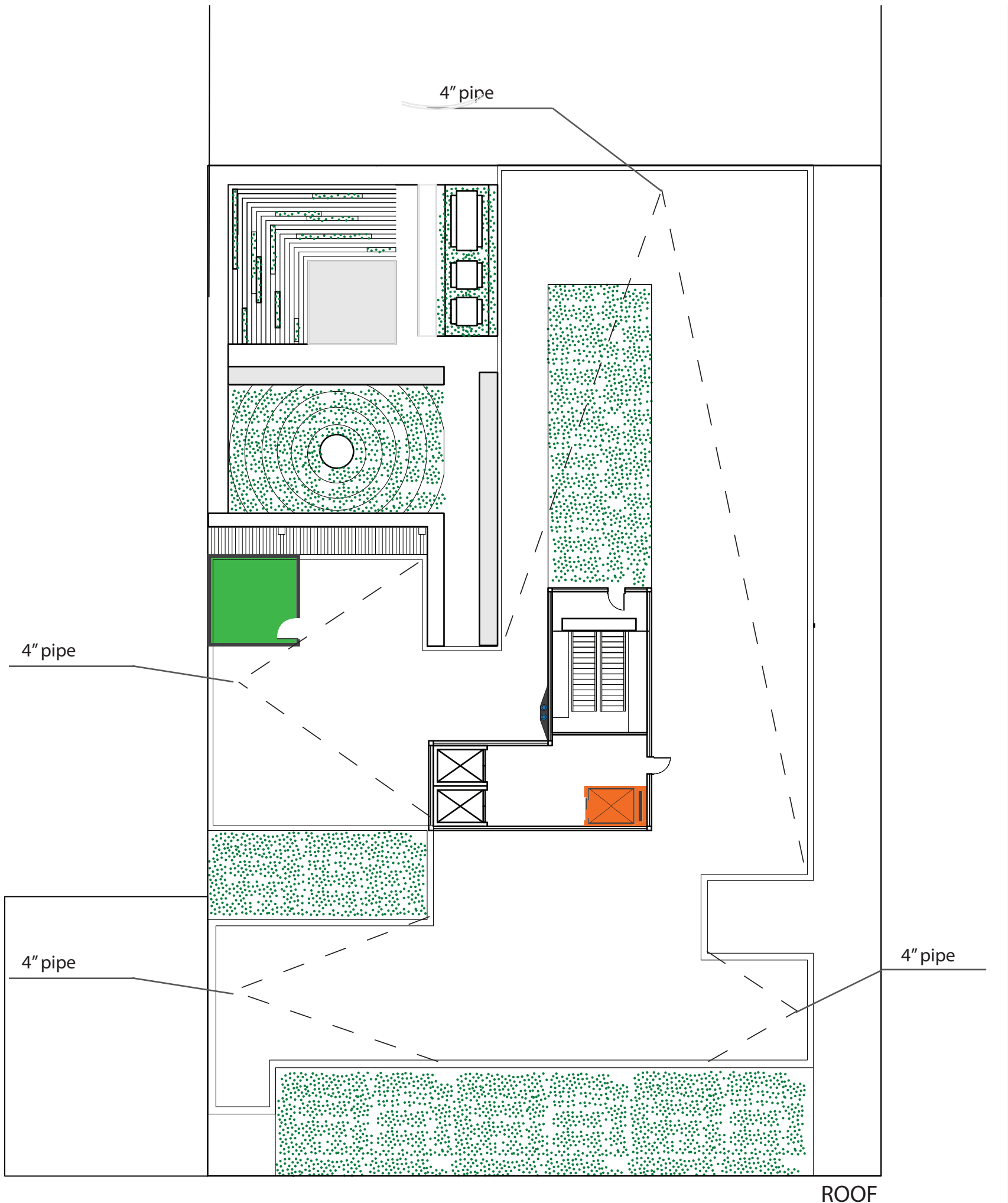
MOREOVER, WE HAVE A GREEN ROOF WHICH NOT ONLY REDUCES THE HEAT ISLAND EFFECT, BUT ALSO BECOMES A HABITABLE SPACE FOR RECREATION OF THE INHABITANTS OF THE BUILDING. THE WATER COLLECTED FROM THE RAIN IS USED TO IRRIGATE THE GREEN ROOF AS WELL AS THE INSIDE GARDENSAND THE BACKYARD.

SOLAR ENVELOPE

SITE PLAN
Sun Path Diagram
1'=16"



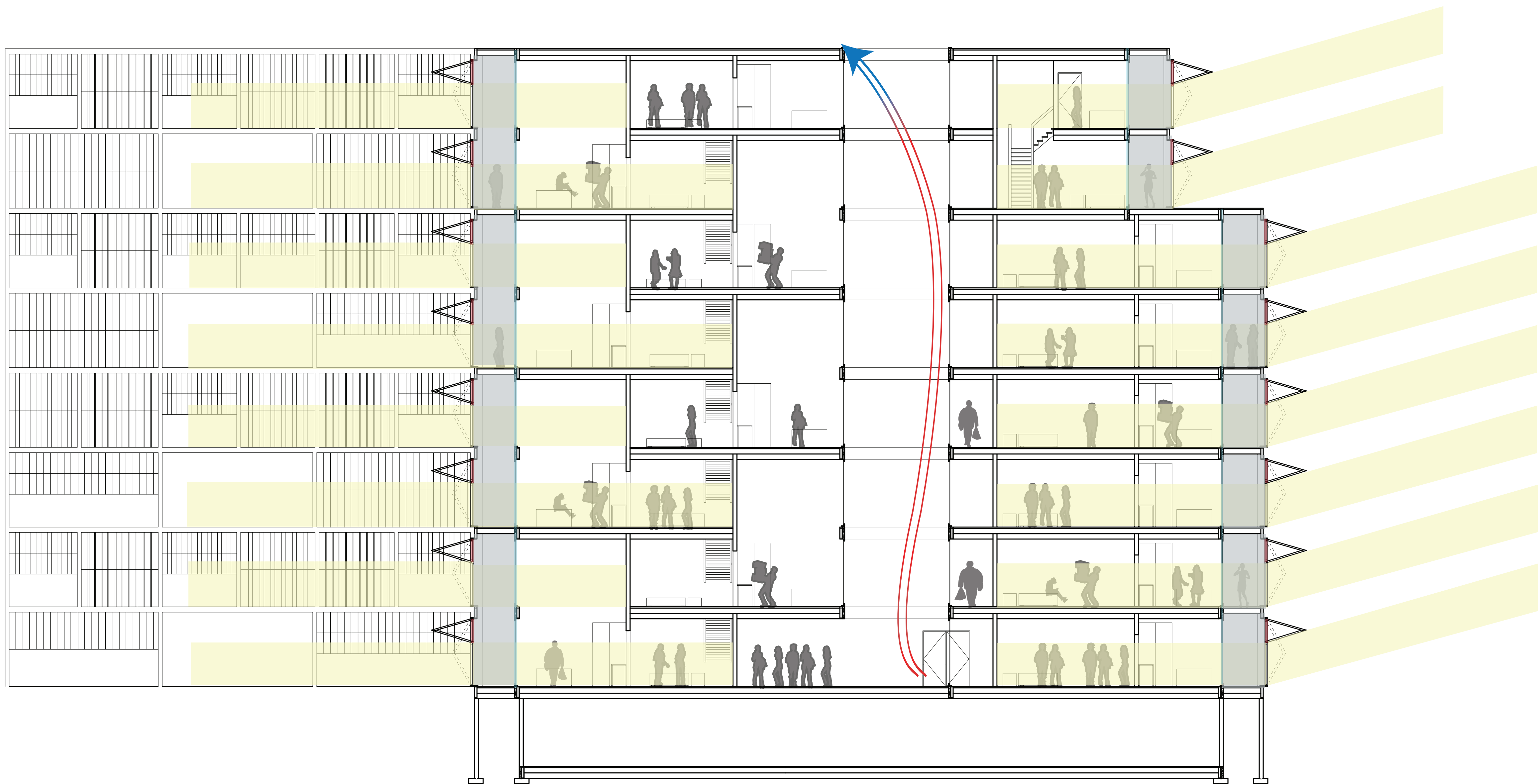
summer solstice solar envelope
winter solstice solar envelope



- HVAC Vertical Ventilation
- Chiller for Geothermal Energy
- Machine Room

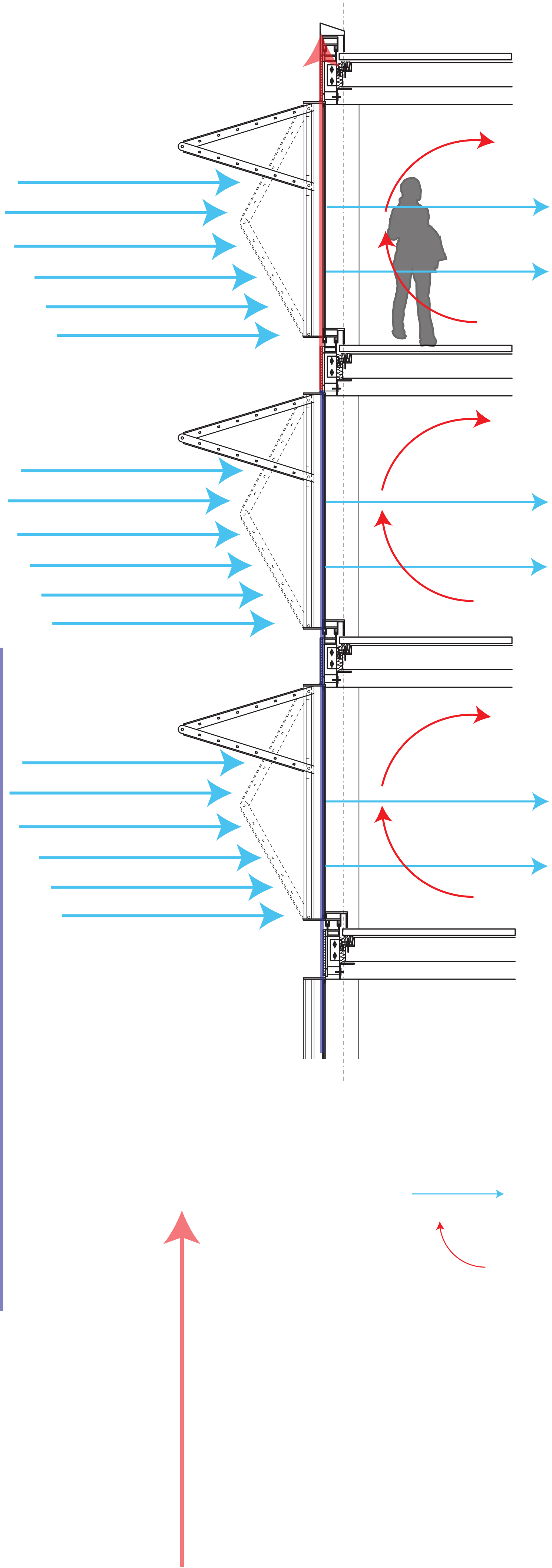
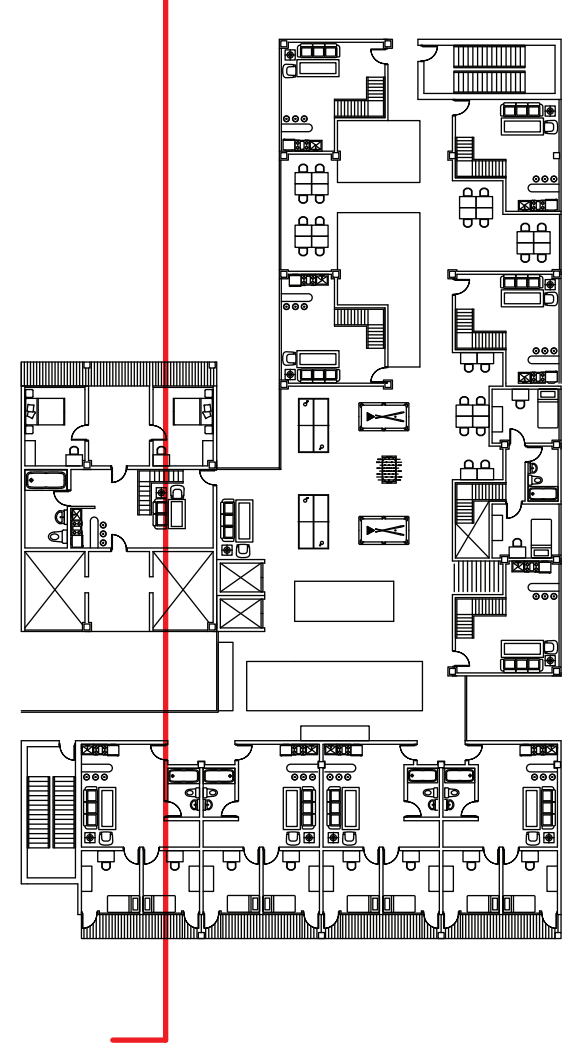
ROOF PLAN
1'=16"

DAYLIGHTING / PASSIVE HEATING / VENTILATION

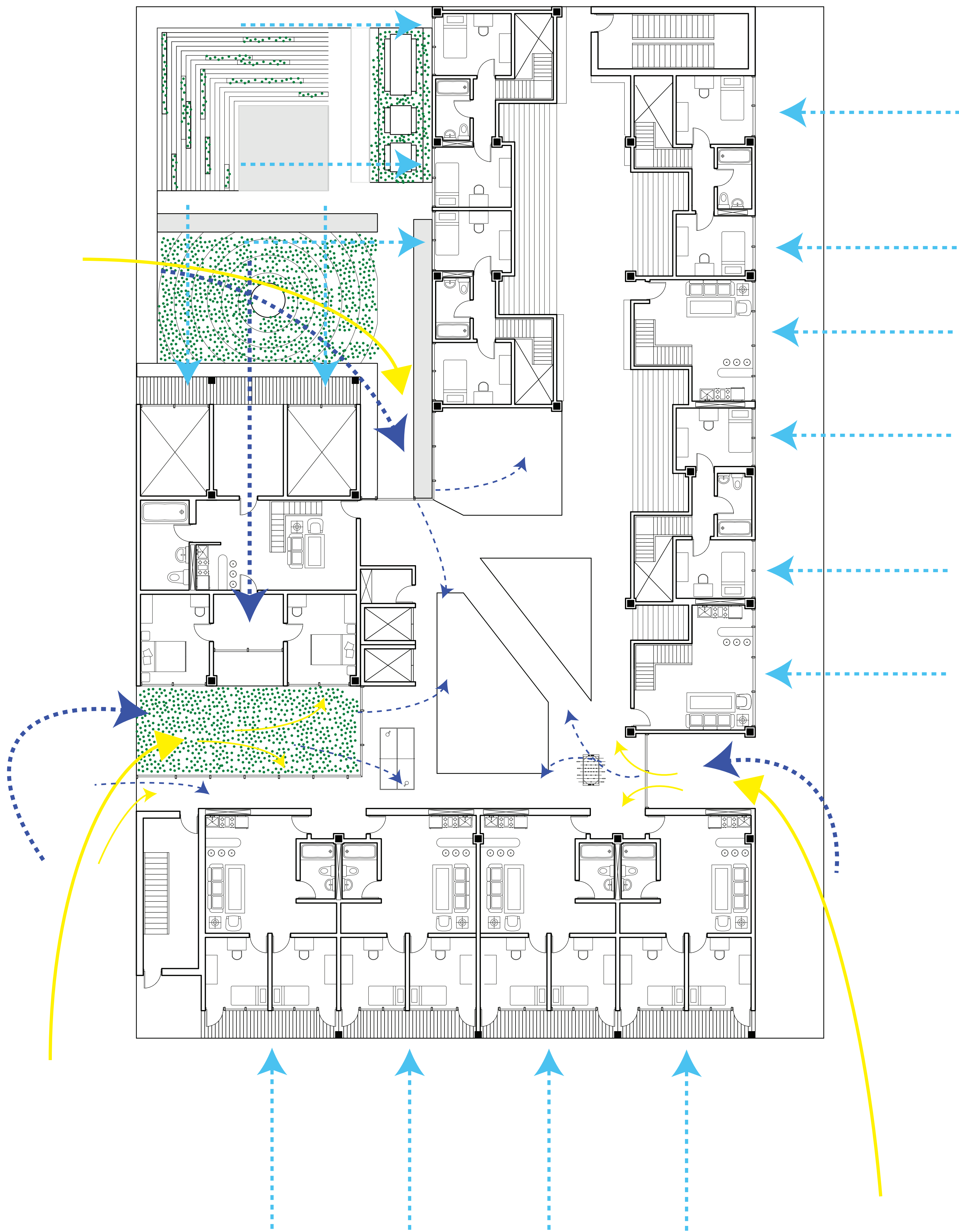


SECTION
1'=8"

- DIRECT SUNLIGHT
- BALCONIES
- AIR FLOW

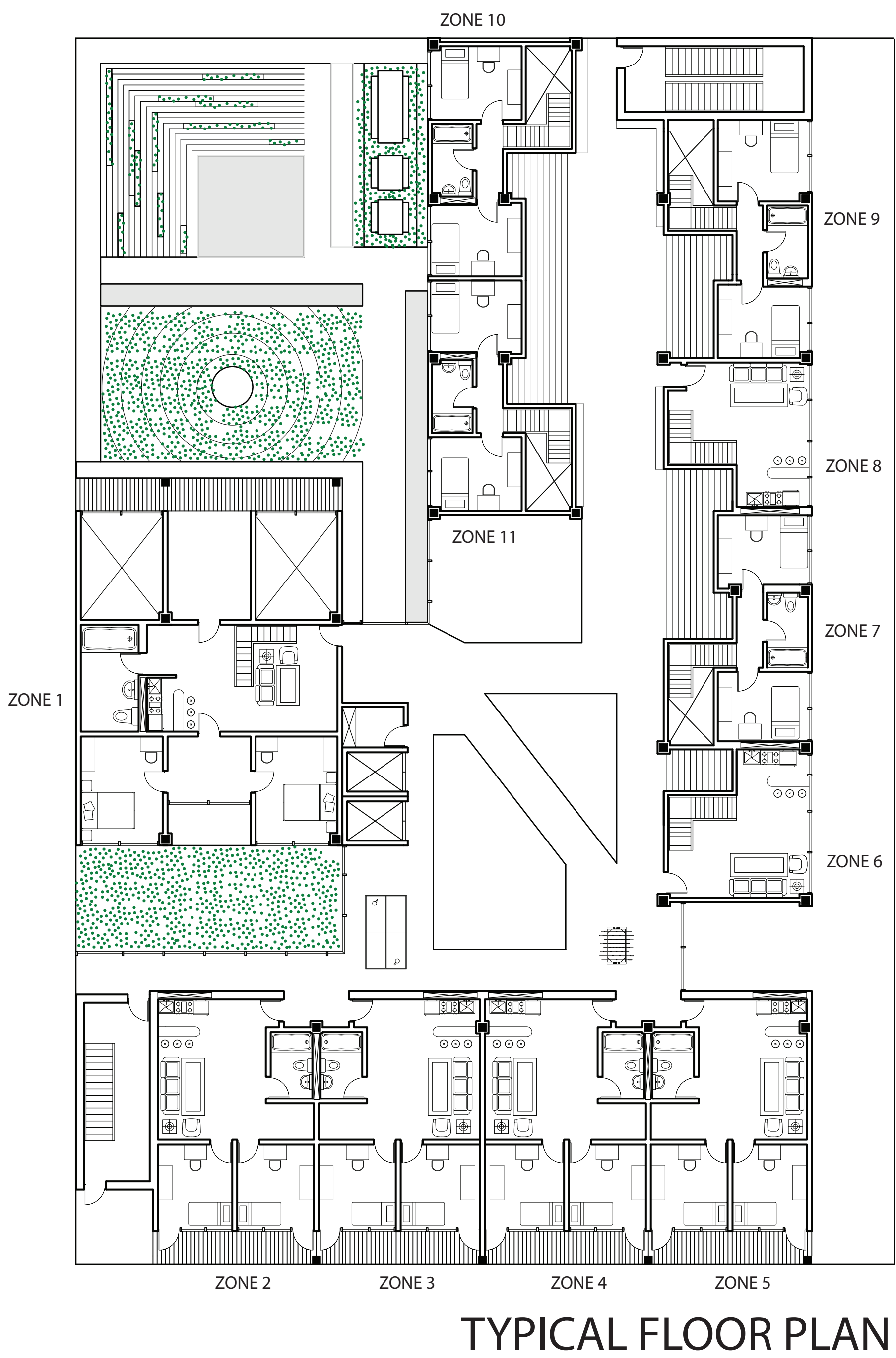
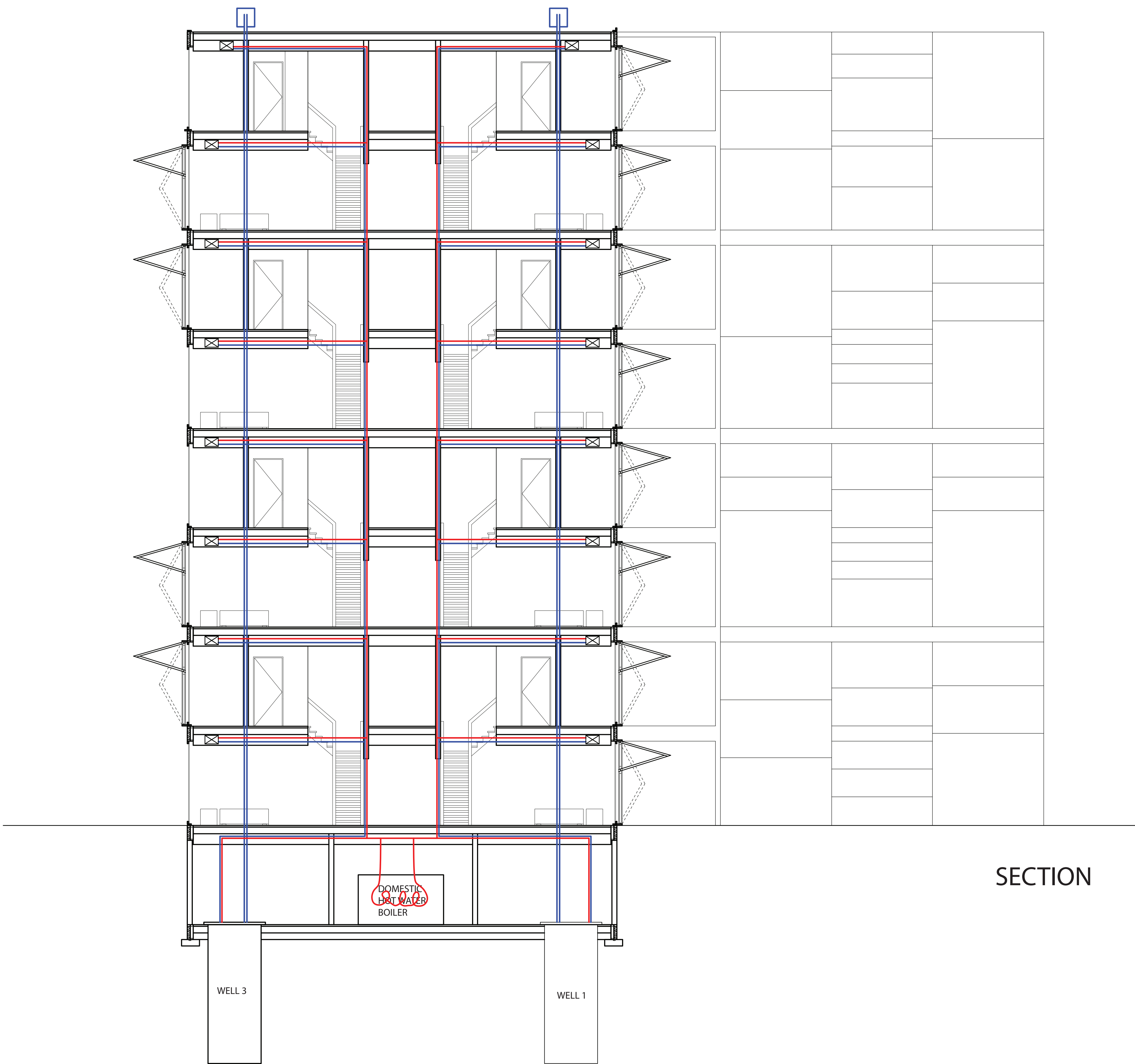
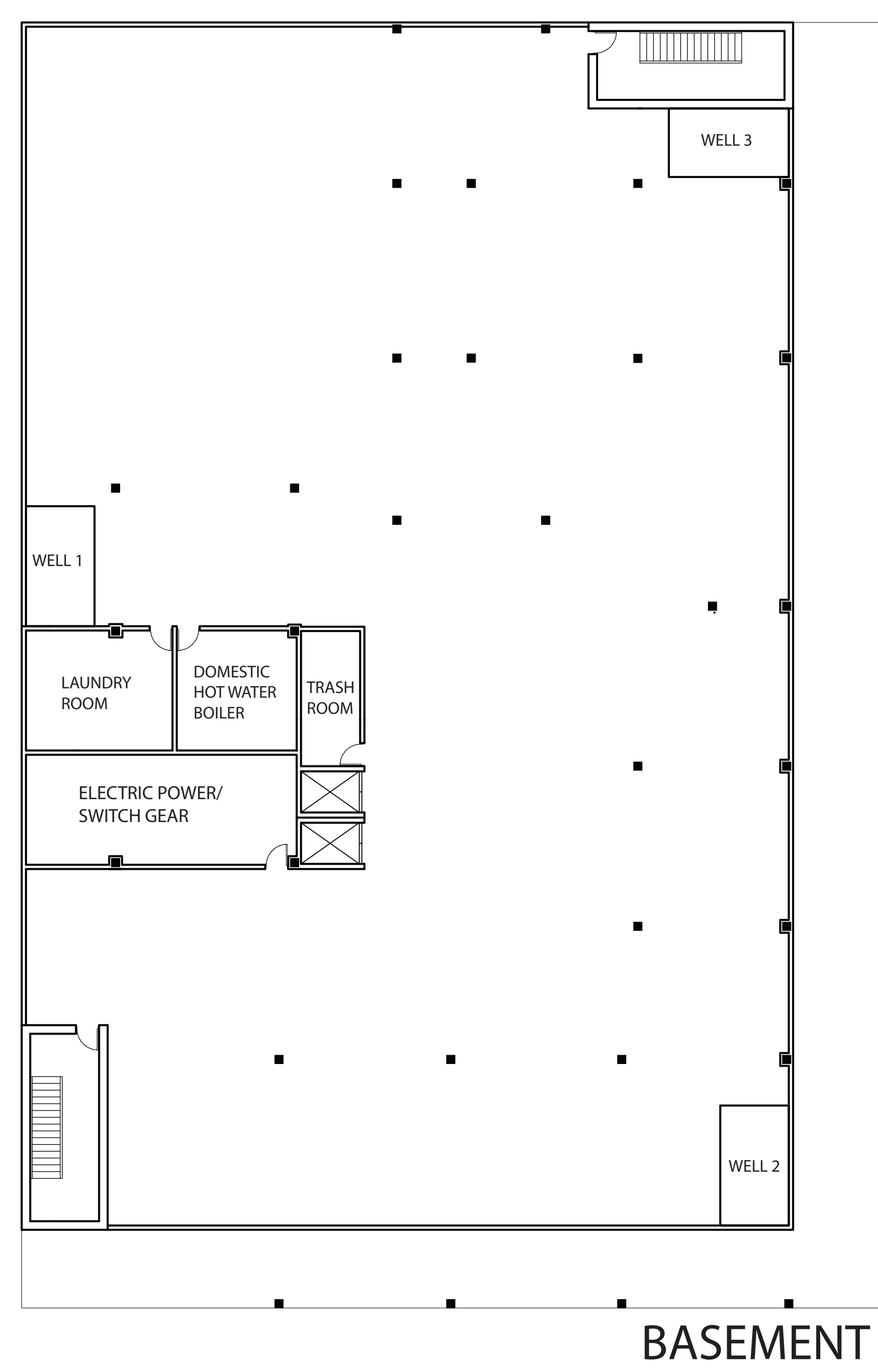


SECOND FLOOR PLAN
1'=8"

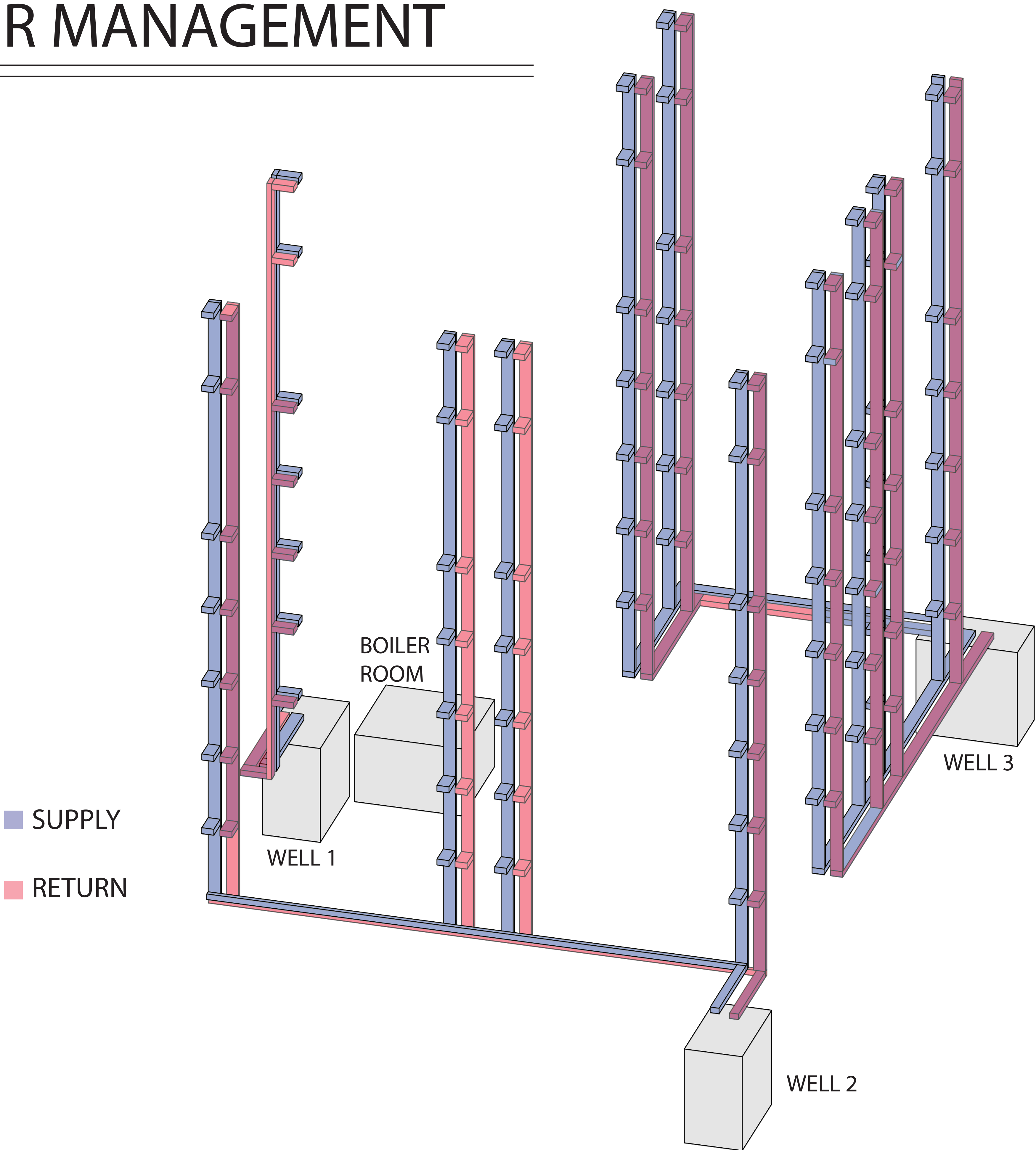


- OUTDOOR AIR PENETRATION
- ROOMS
- CORRIDORS
- DIRECT SUNLIGHT

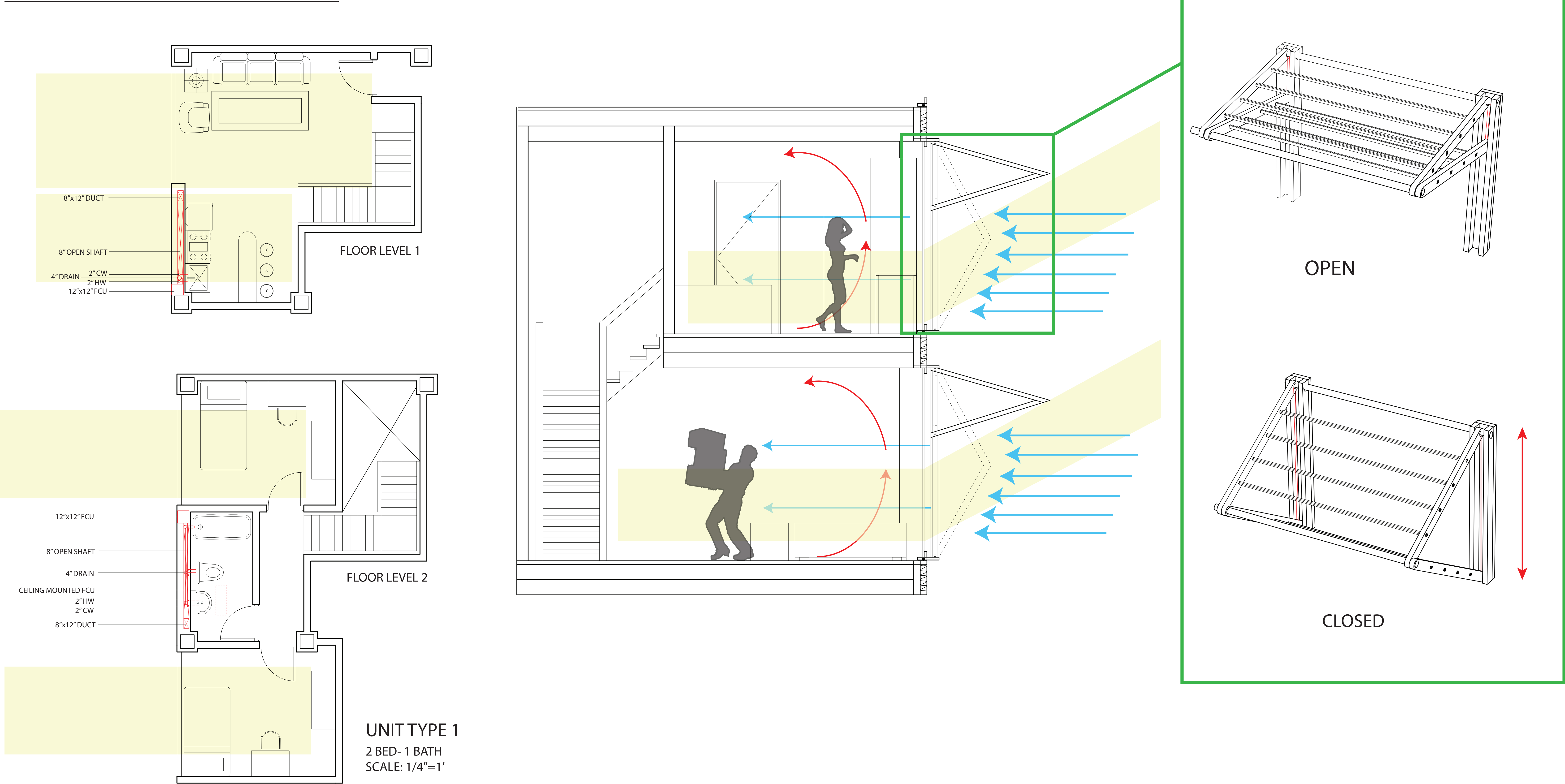
GEOEXCHANGE SYSTEM



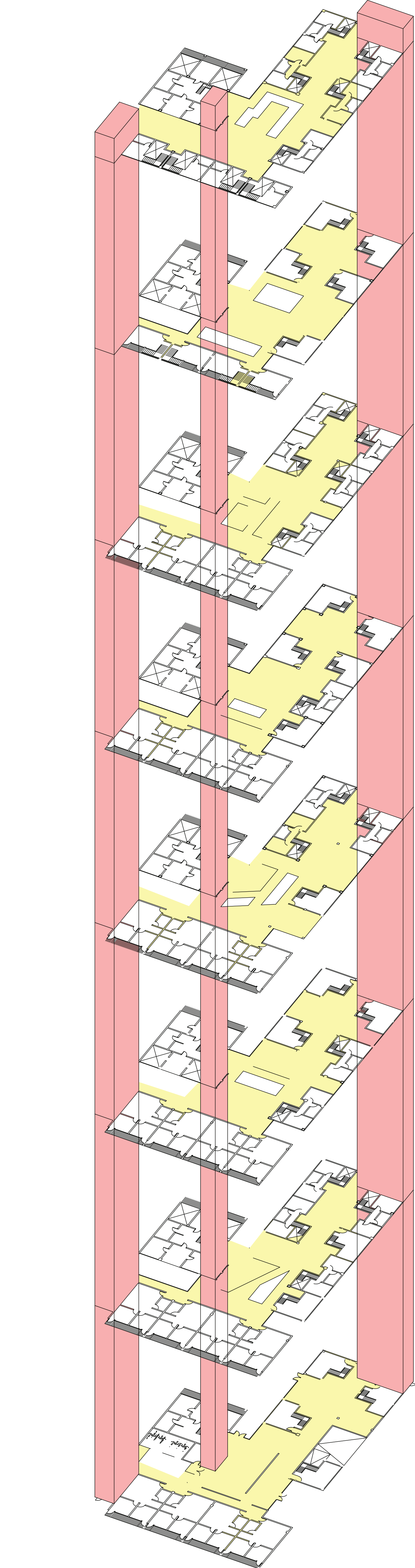
WATER MANAGEMENT



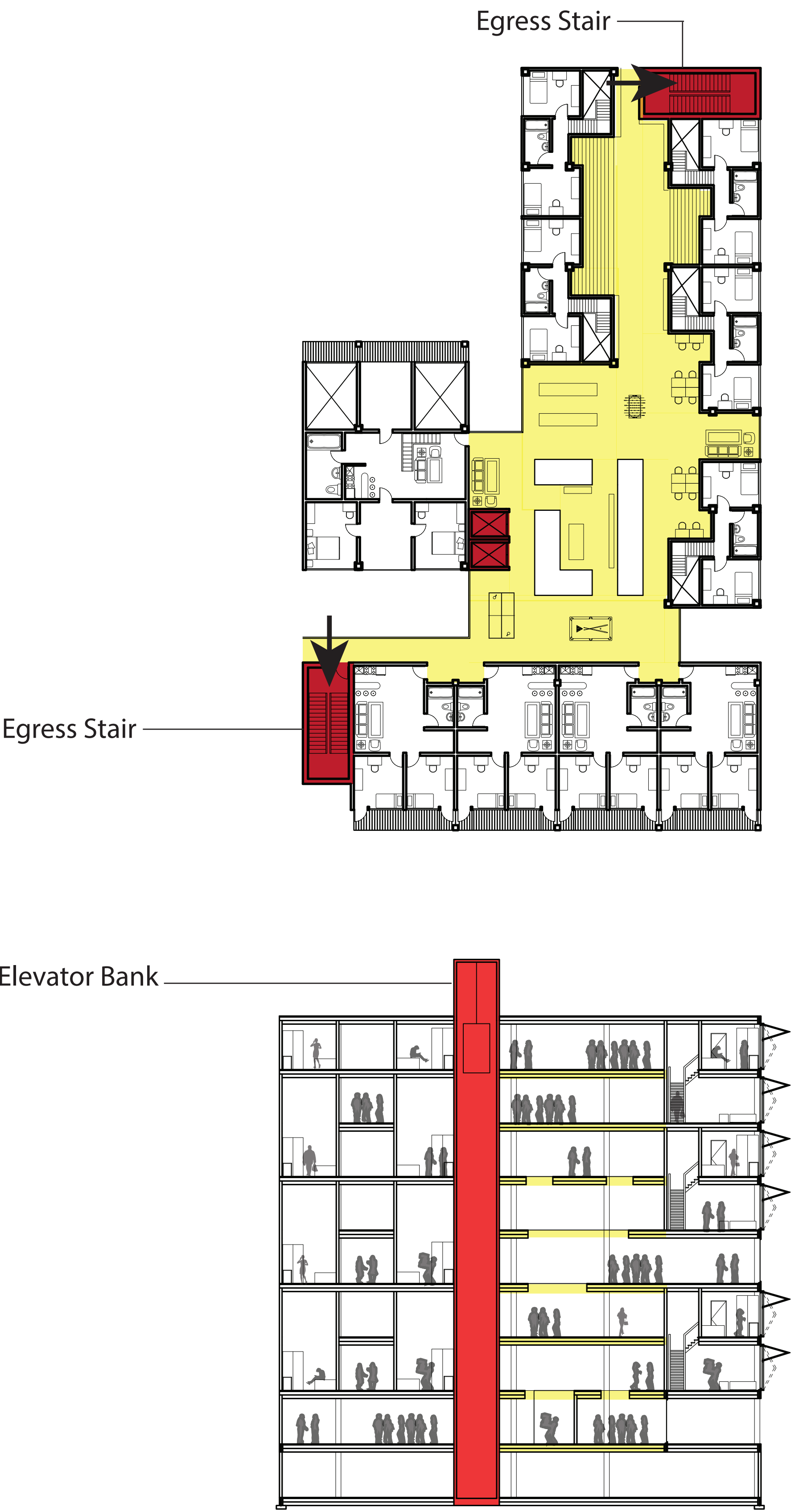
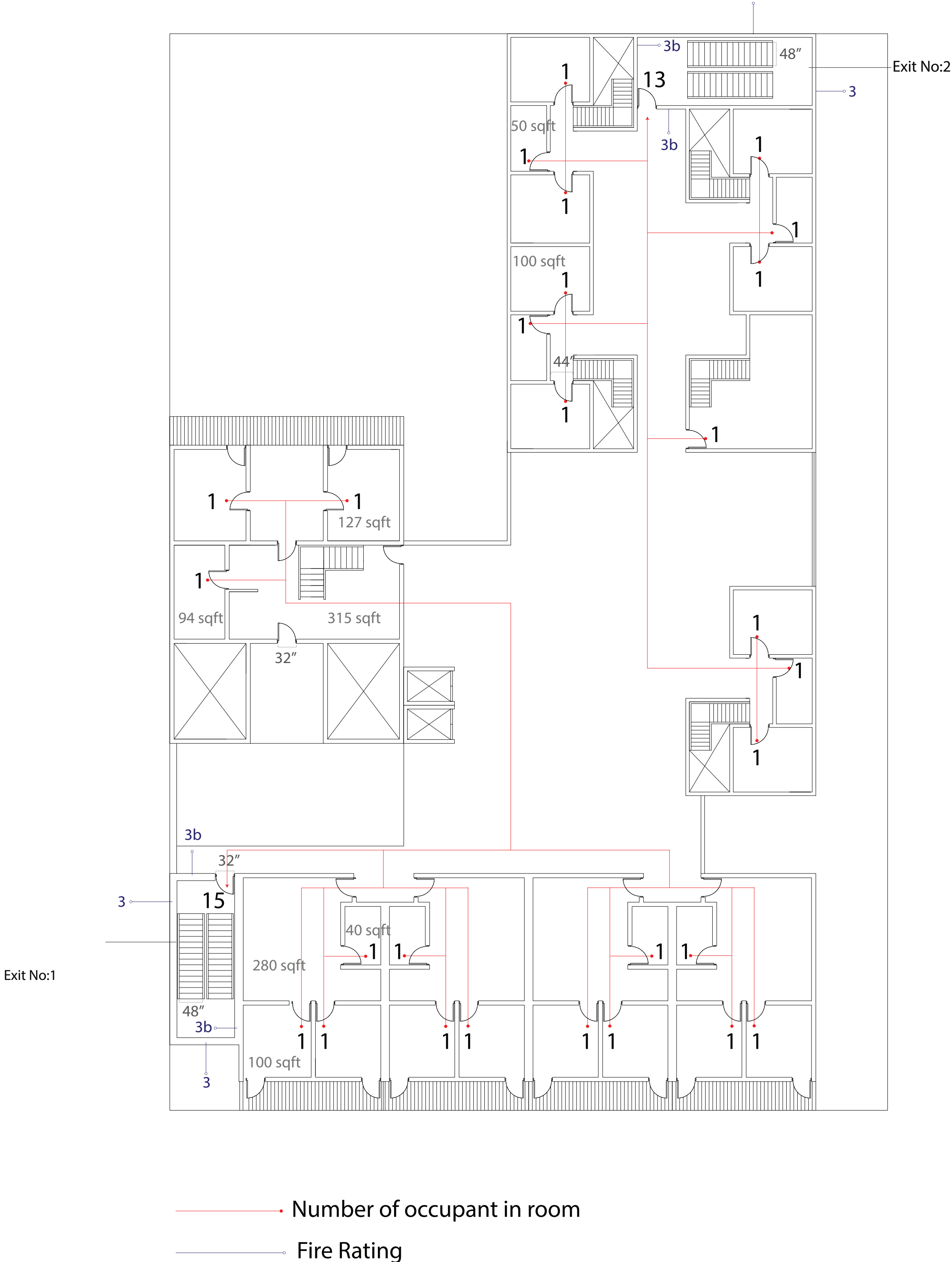
UNIT CLUSTER



MEANS OF EGRESS



- Number of occupants per room (1) and total occupants for the floor (28).
- Minimum corridor width should be no less than 44".
- Minimum stairway width should be no less than 48".
- Minimum corridor doors width should be no less than 32".
- The exit access travel distance with sprinkler system is 200'.
- For an occupant number of 1-500, the minimum number of exits is 2.



- VERTICAL CIRCULATION
- EXIT ACCESS CORRIDORS
- EXIT DISCHARGE