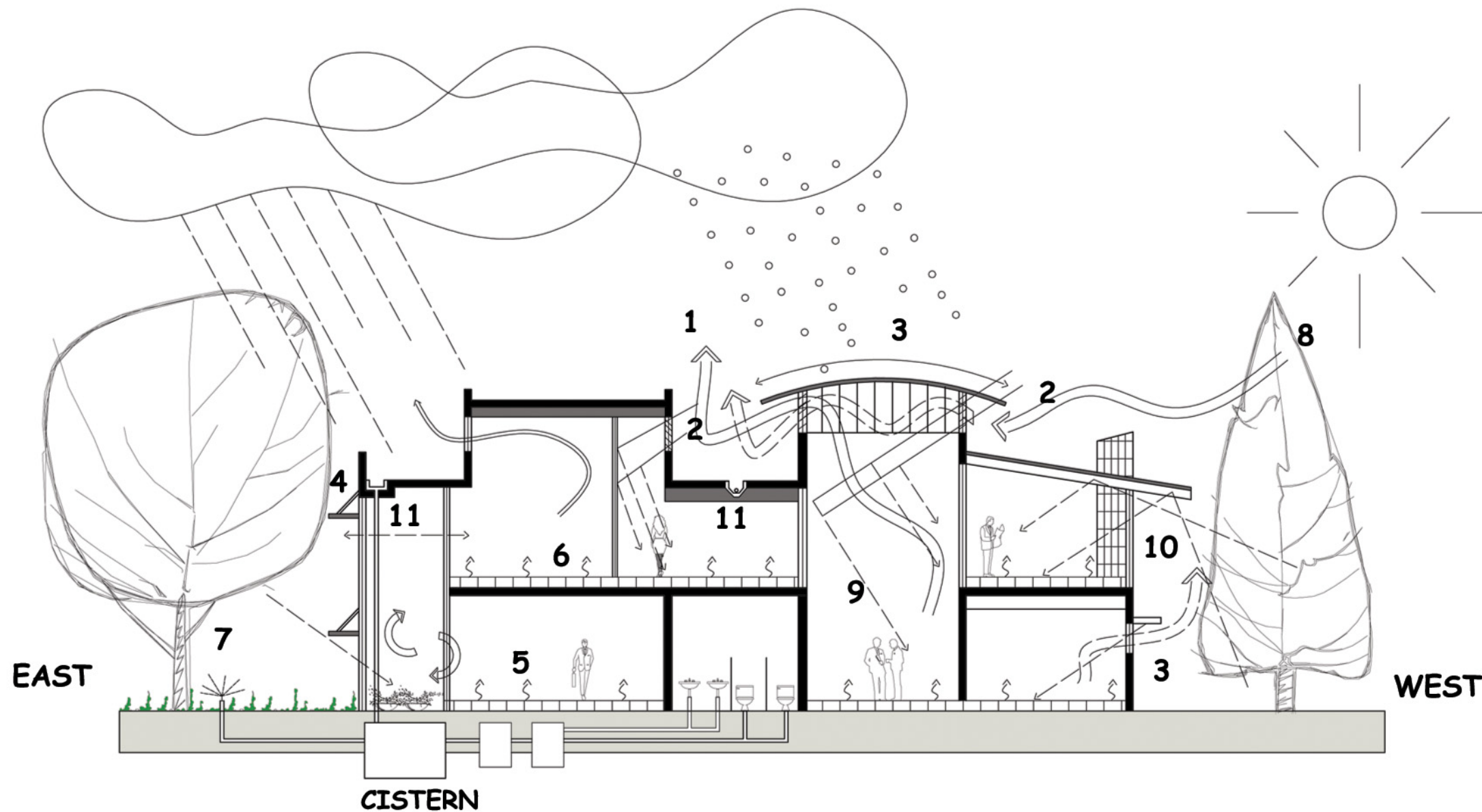


**ELECTRICAL LOADS:**

Appliance	kWh CONVENTIONAL PRODUCTS	kWh ENERGY SAVING PRODUCTS	POTENTIAL ENERGY SAVINGS
DESKTOP PC	1 hr/y = 50 5 hr/y = 250 8 hr/y = 400	1 hr/y = 25 5 hr/y = 125 8 hr/y = 200	50%
FAX MACHINES	1 hr/y = 30 5 hr/y = 150 8 hr/y = 240	1 hr/y = 13 5 hr/y = 65 8 hr/y = 104	55%
LASER PRINTERS	1 hr/y = 75 5 hr/y = 375 8 hr/y = 600	1 hr/y = 27 5 hr/y = 135 8 hr/y = 216	65%
COPIER (MEDIUM)	1 hr/y = 120 5 hr/y = 600 8 hr/y = 960	1 hr/y = 54 5 hr/y = 270 8 hr/y = 432	55%
COPIER (LARGE)	1 hr/y = 280 5 hr/y = 1400 8 hr/y = 2240	1 hr/y = 120 5 hr/y = 600 8 hr/y = 960	55%
TOTAL			
kWh/unit			
1 Hrs	555 kwh	239 kwh	
5 Hrs	2775 kwh	1195 kwh	
8 Hrs	4440 kwh	1912 kwh	



1. Vents exhaust air through skylight and utilize cooling westerly breezes

2. Maximizing controlled daylight (window and skylights) will minimize the use of artificial light

3. Roof that reflects radiant heat and prevent snow and rainfall accumulation

4. Smaller windows and window shades on south and west façade reduces heat gain

5. Underfloor air supply that reduce energy consumption and improve indoor air quality

6. Raised access floor provides technology flexibility

7. Water efficient landscaping

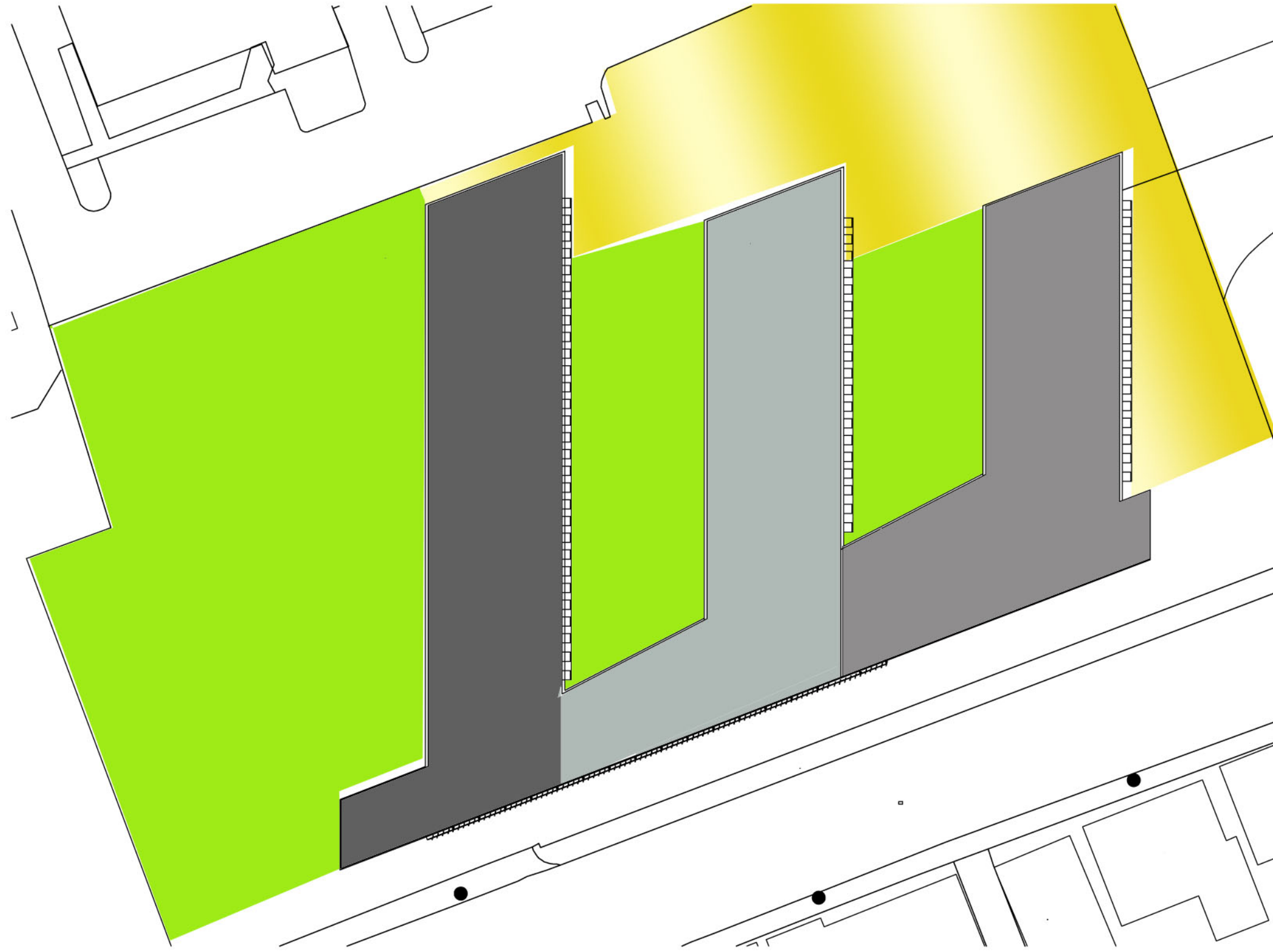
8. Local vegetation. Trees block hot western sun and reduce heat gain.

9. Double height spaces (for transitional spaces) open and bright

10. High performance, low emissivity glazing reduces heat gain

11. Rainwater collectors

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Victor Uribe  
Refilwe Mompe  
Romelia Hernandez

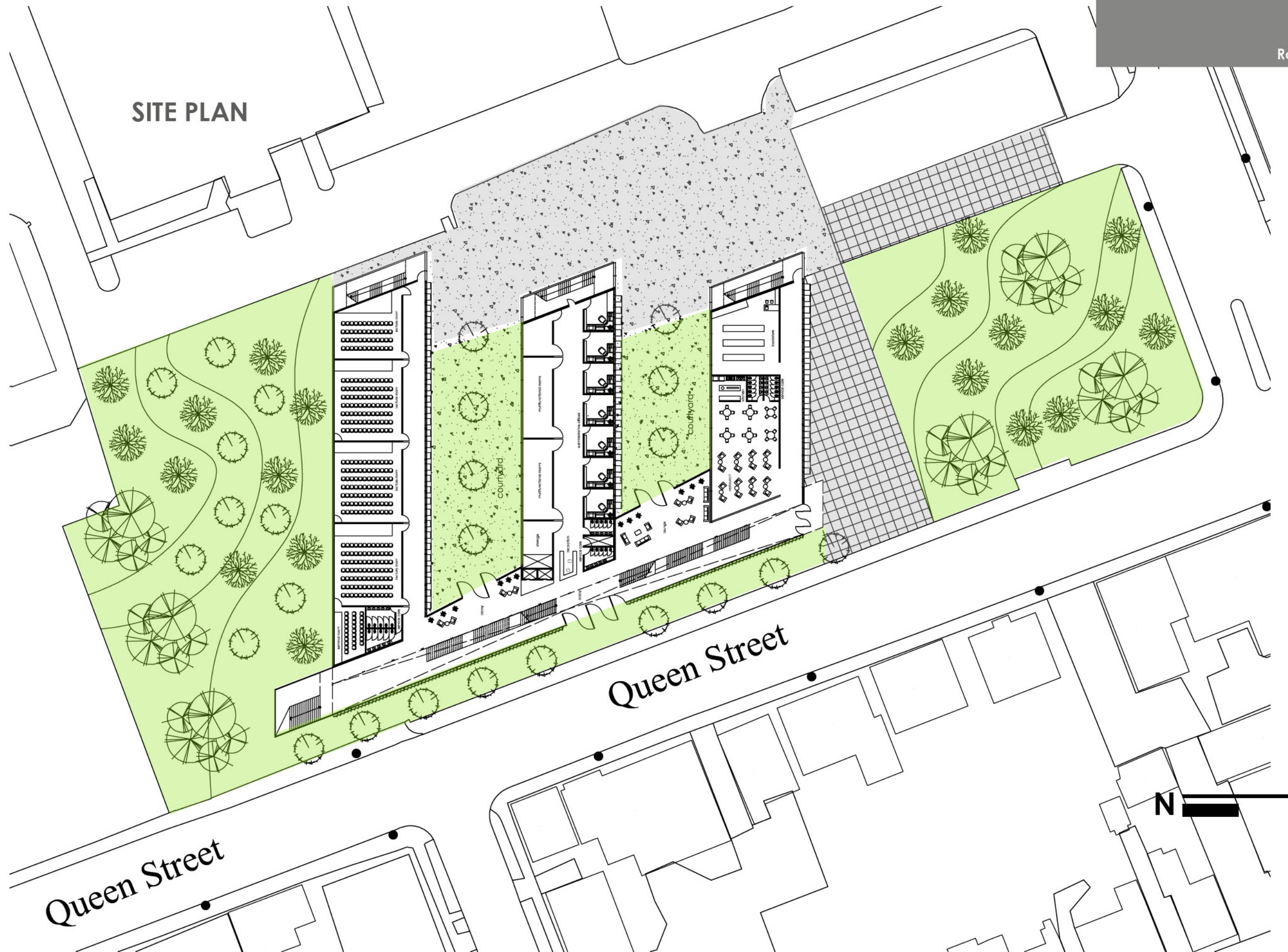


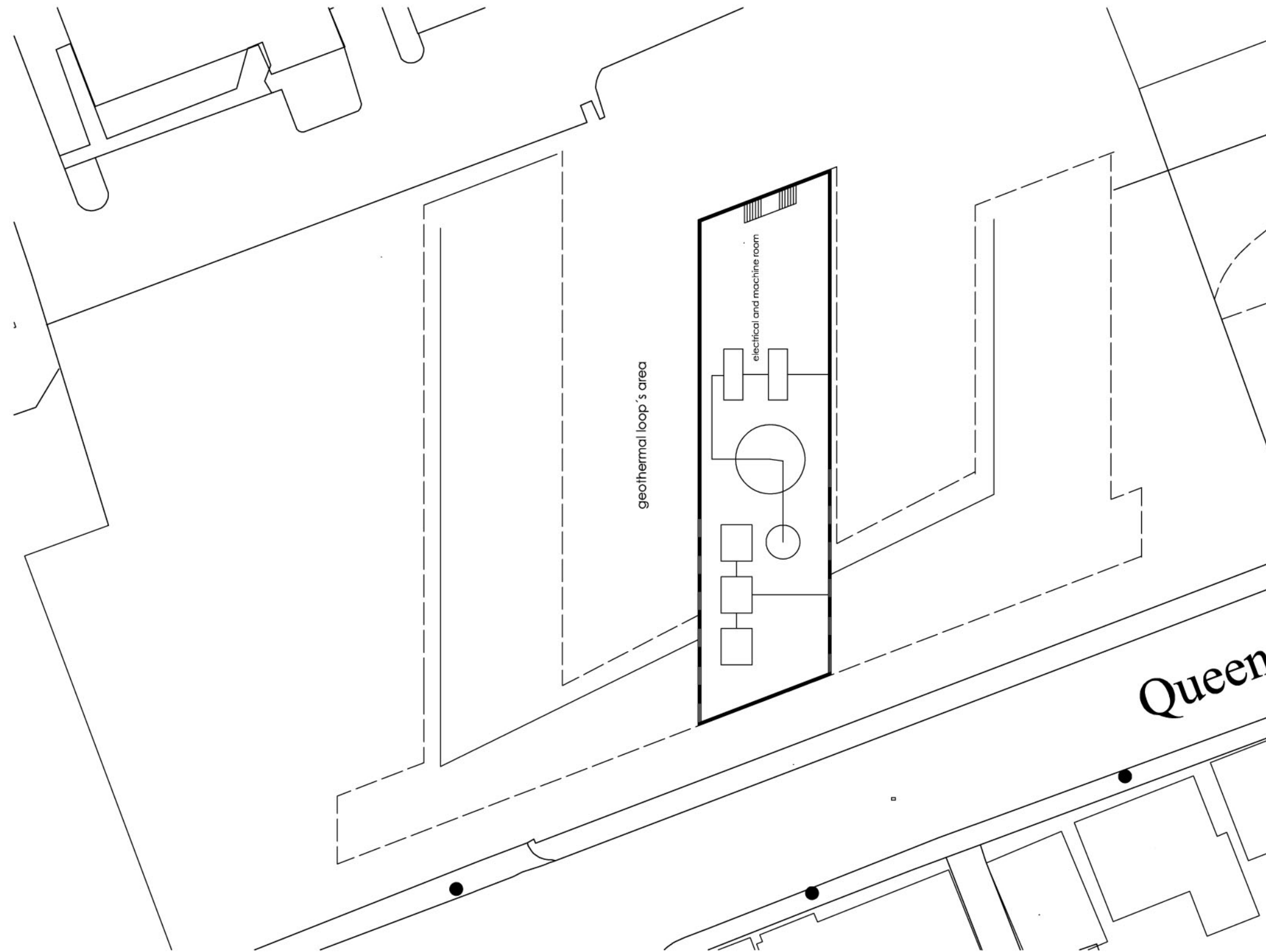
- EDUCATIONAL BUILDING
- ADMINISTRATIVE BUILDING
- PUBLIC SPACES
- GREEN AREAS
- PLAZA



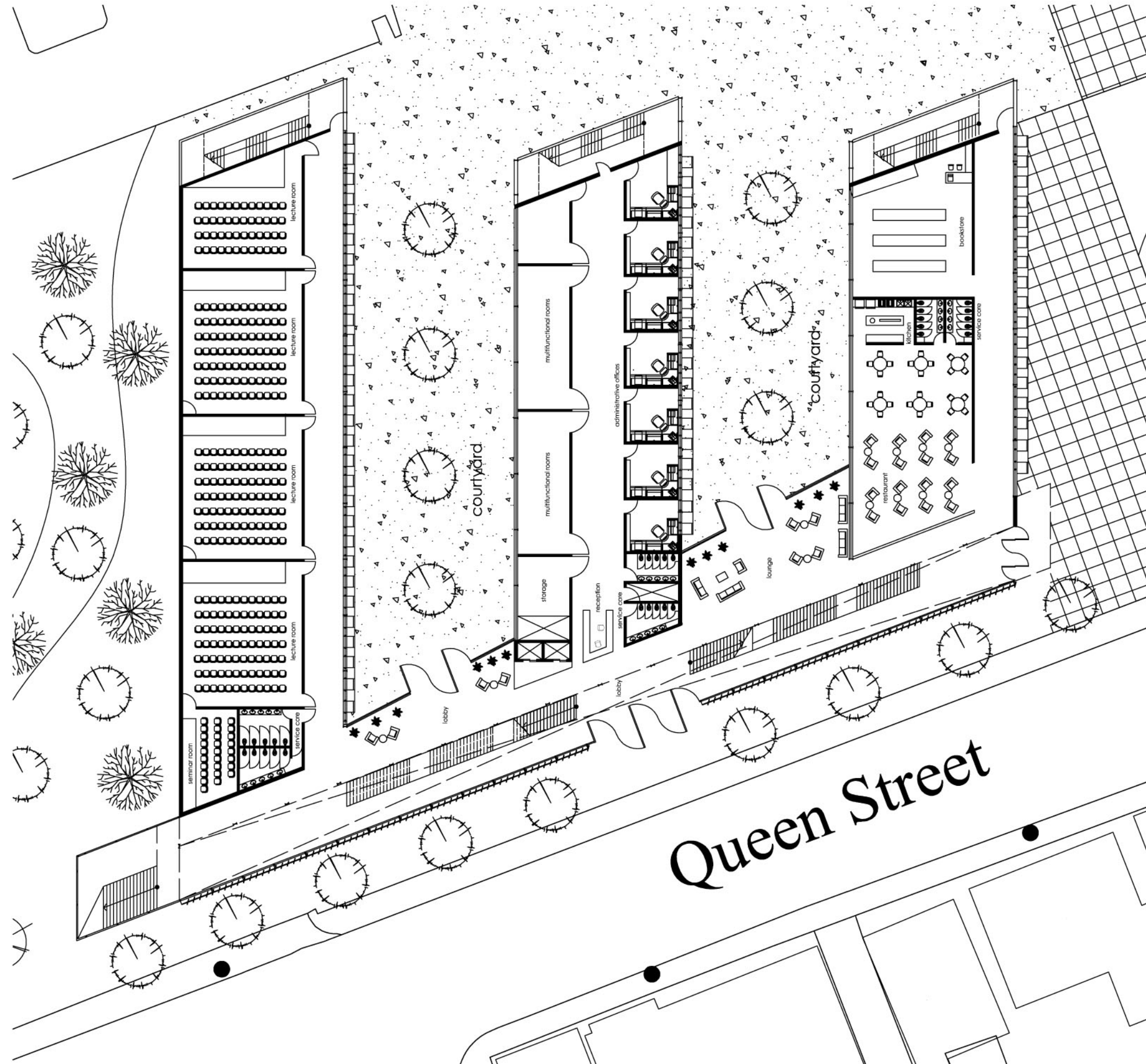
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Avril Galindo  
Victor Uribe  
Refilwe Mompe  
Romelia Hernandez

SITE PLAN

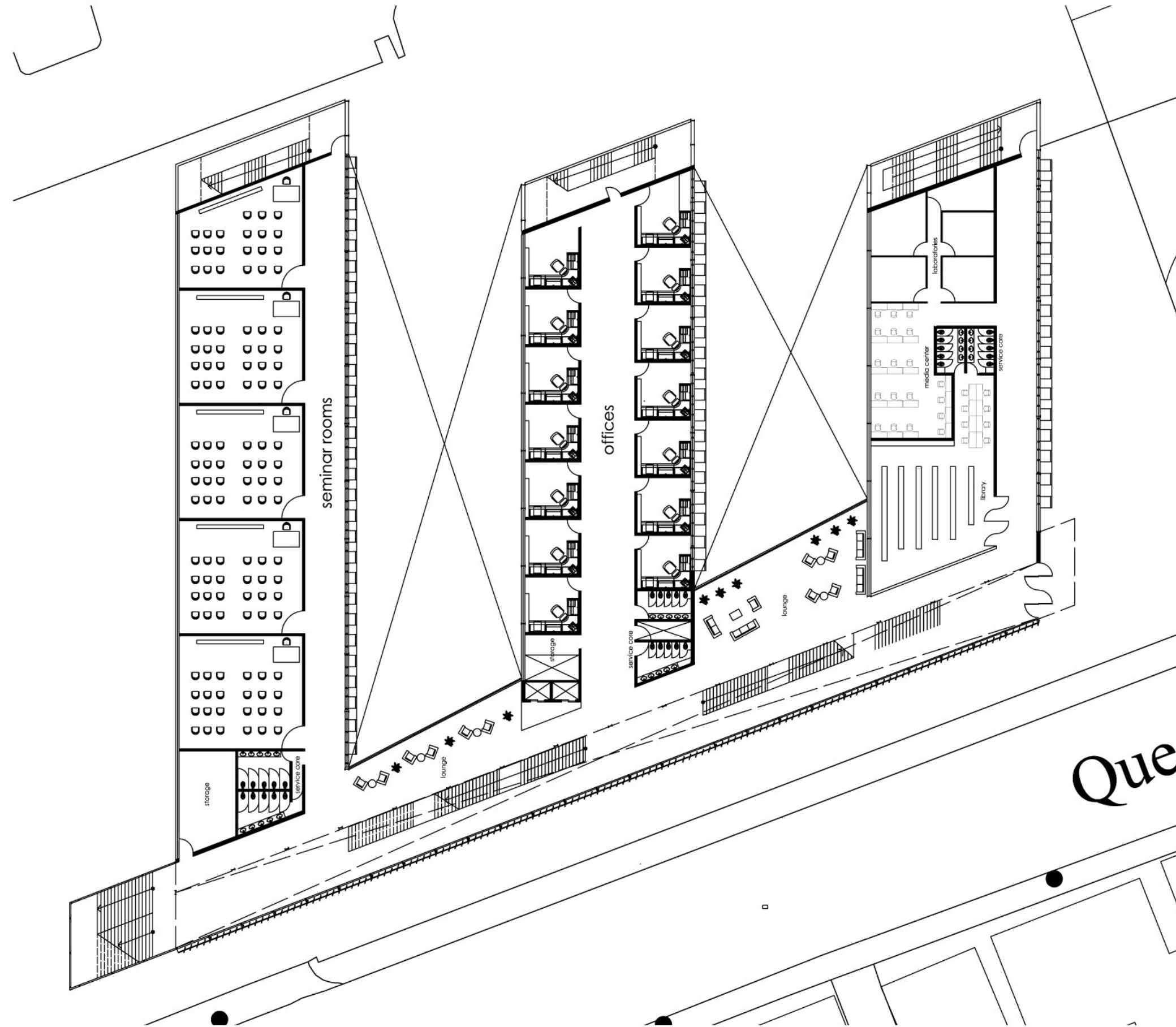




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Victor Uribe  
Refilwe Mompe  
Romelia Hernandez

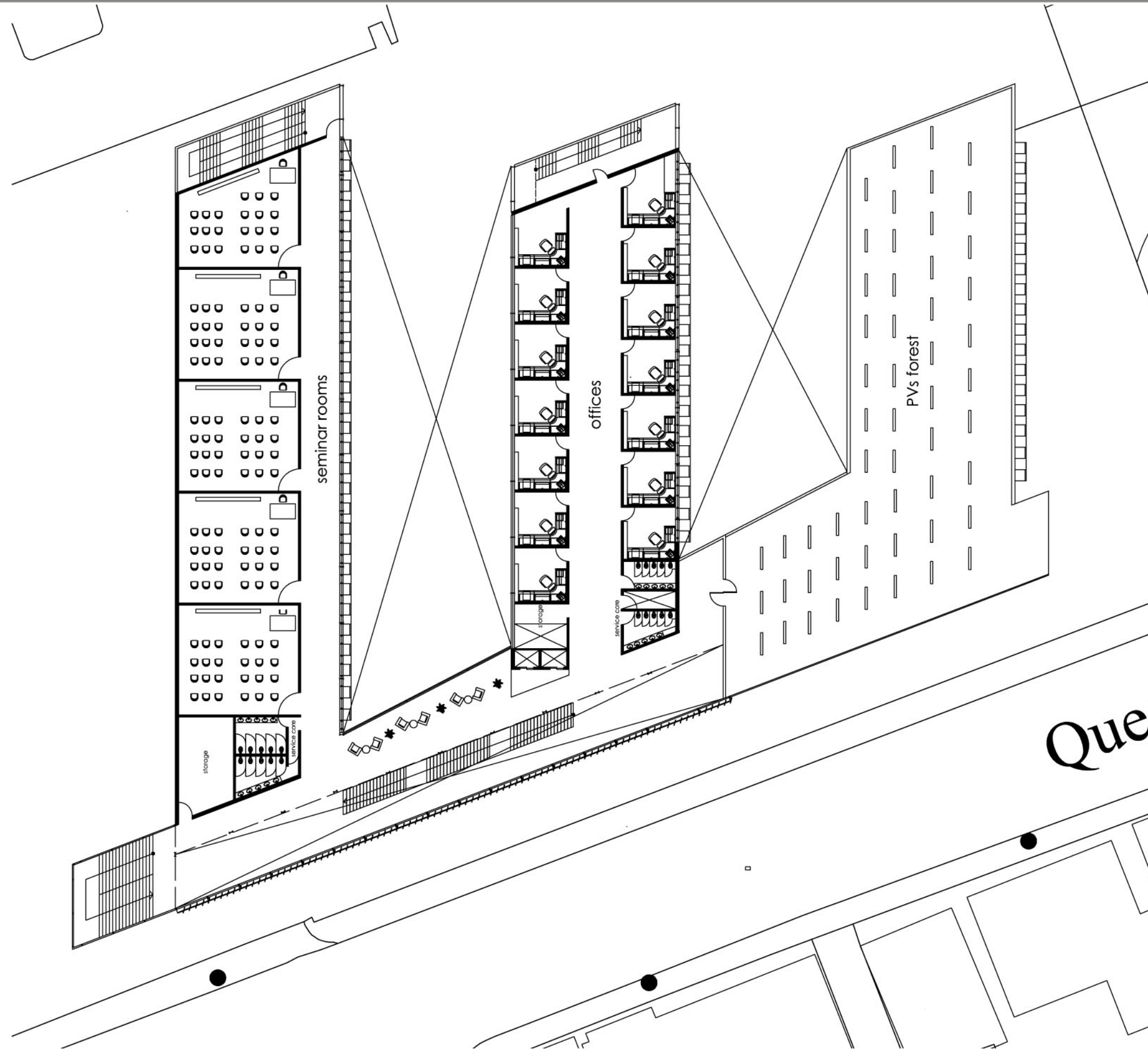


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Victor Uribe  
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FIRST FLOOR

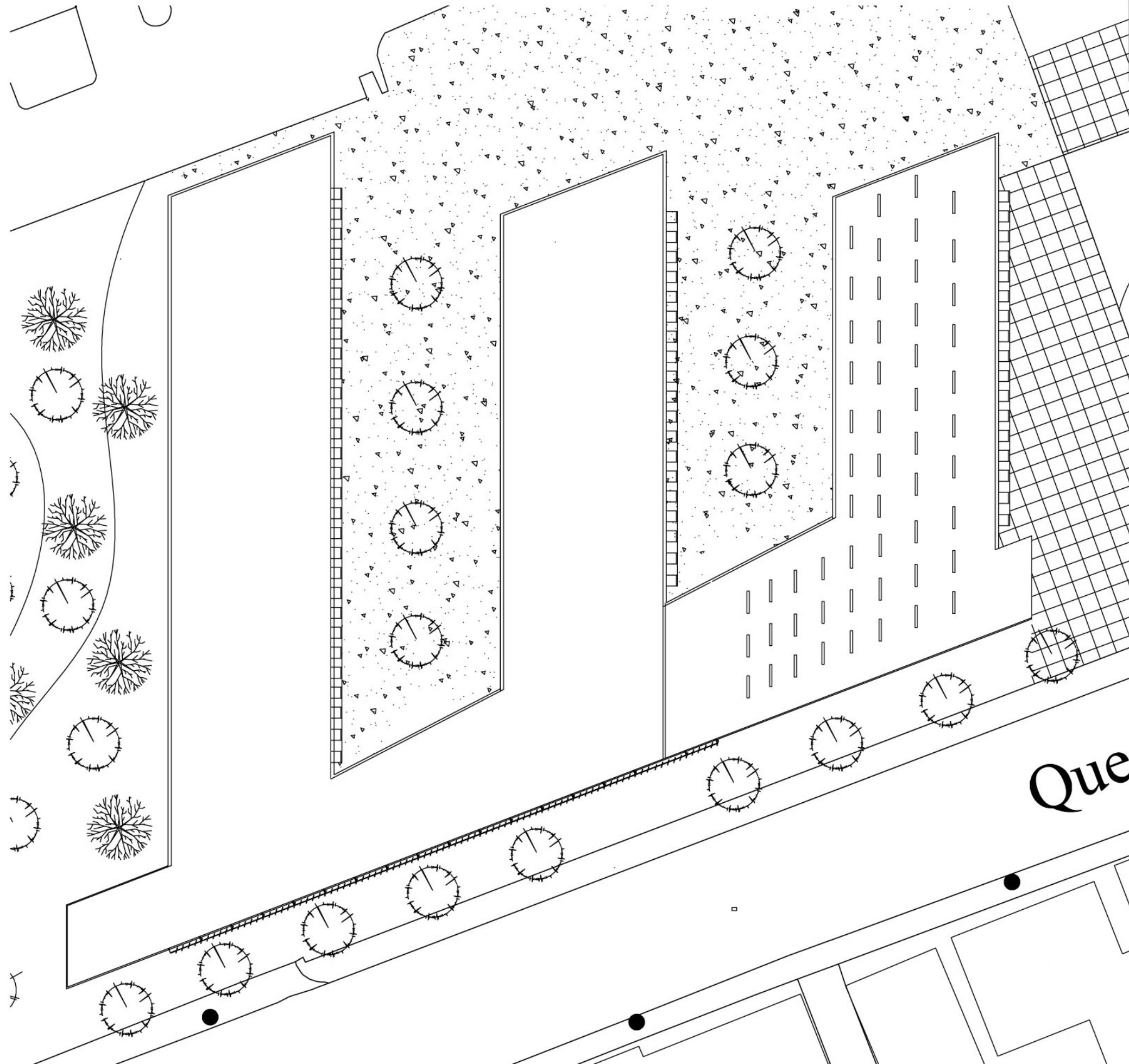
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SECOND FLOOR

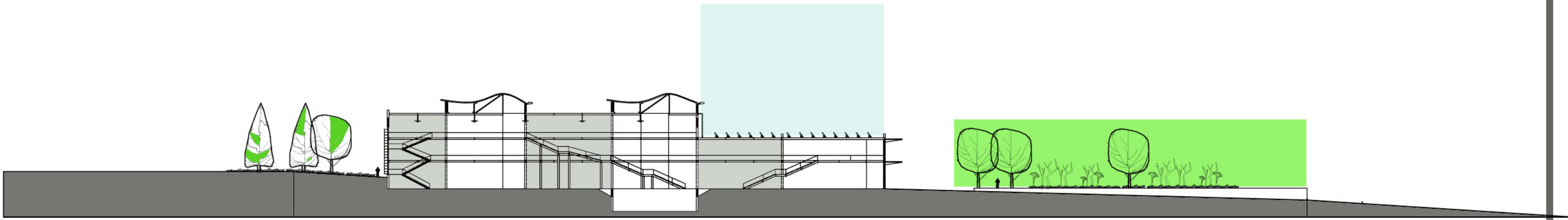


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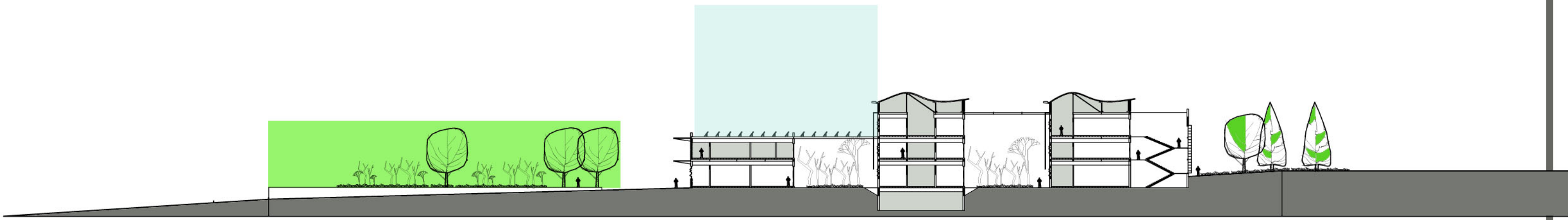


ROOF PLAN

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Victor Uribe  
Refilwe Mompe  
Romelia Hernandez



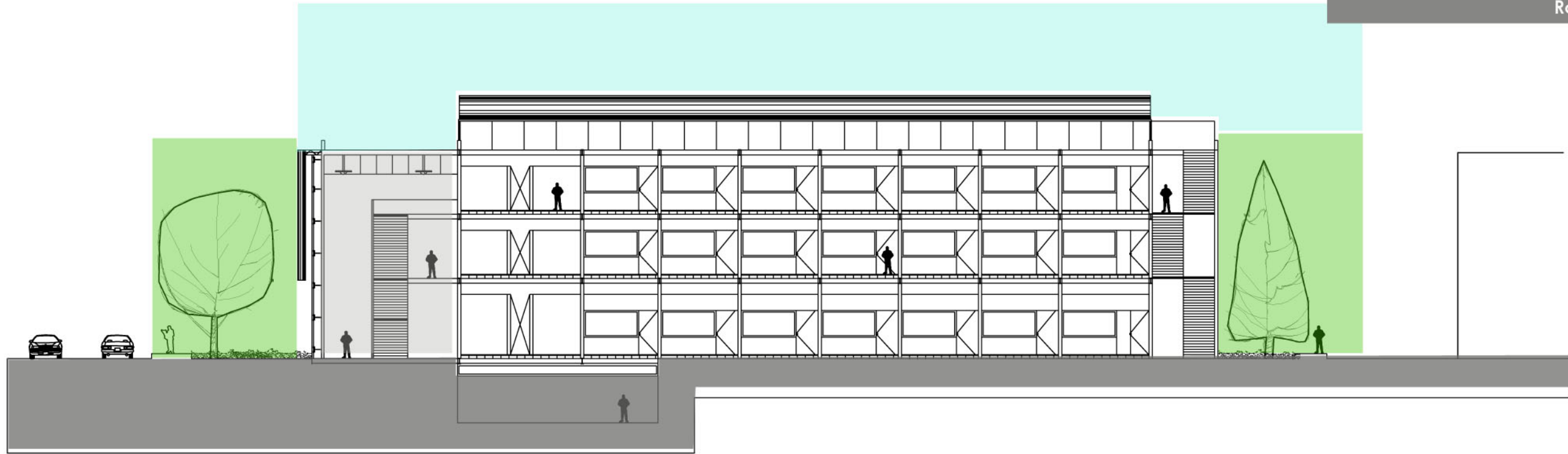
WEST SECTION



EAST SECTION

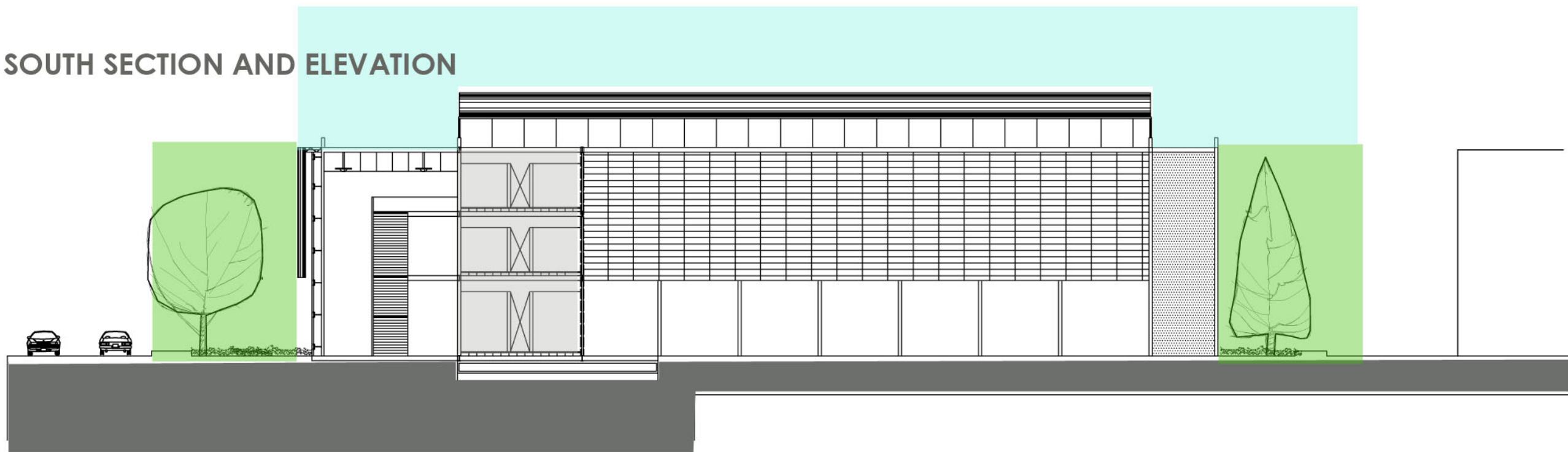
LONGITUDINAL SECTION

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Victor Uribe  
Refilwe Mompe  
Romelia Hernandez



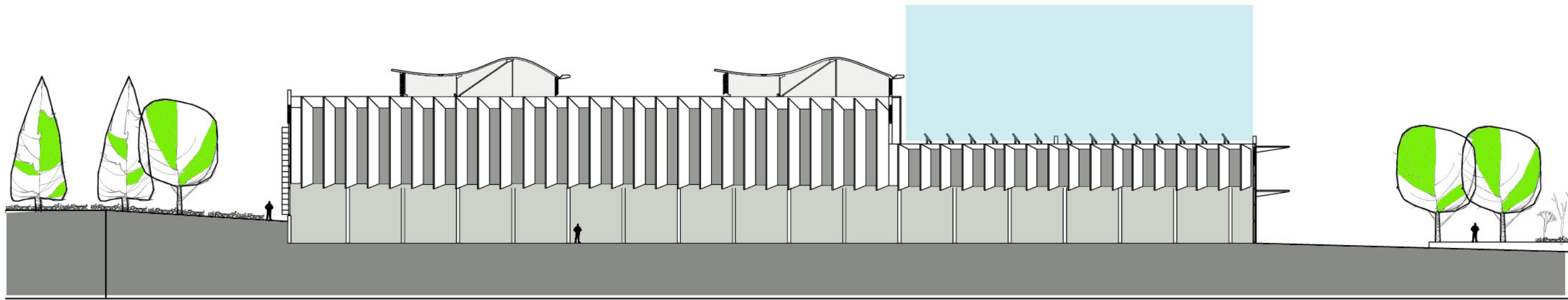
SOUTH SECTION

SOUTH SECTION AND ELEVATION

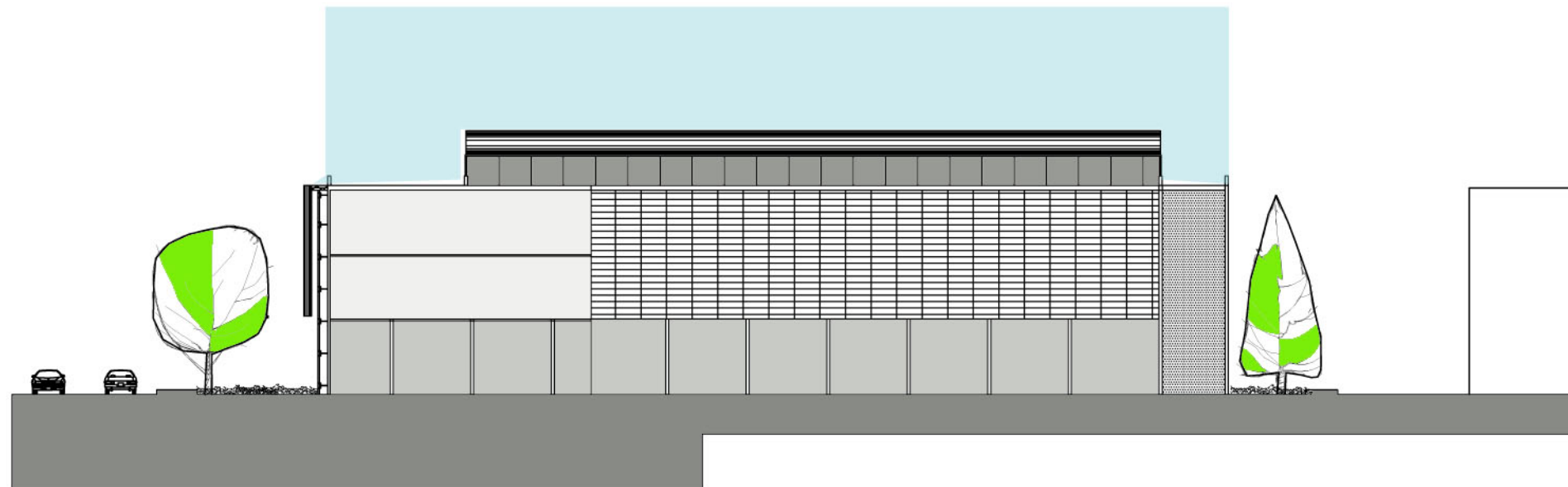


CROSS SECTION

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Avril Galindo  
Victor Uribe  
Refilwe Mompe  
Romelia Hernandez



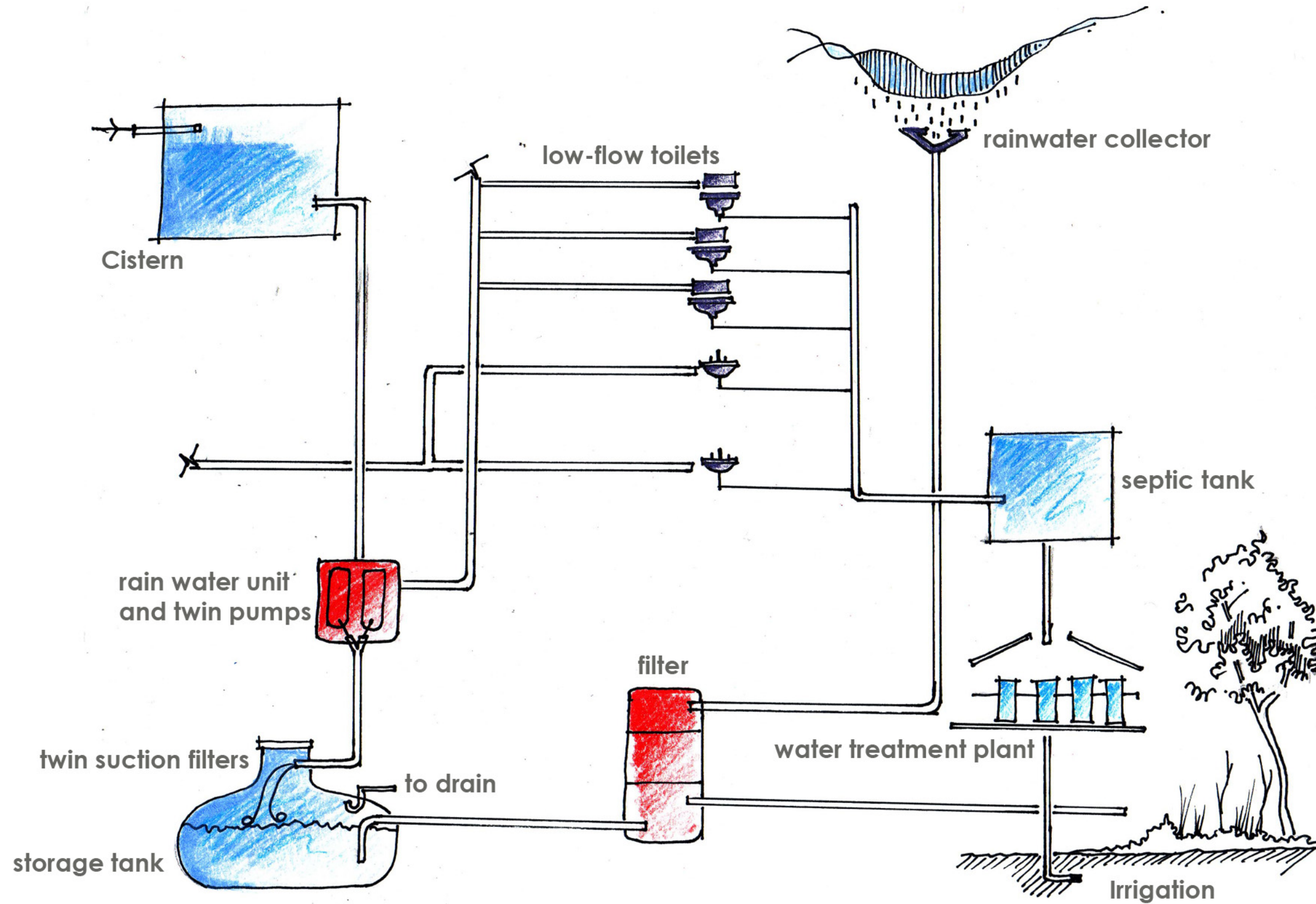
WEST FACADE



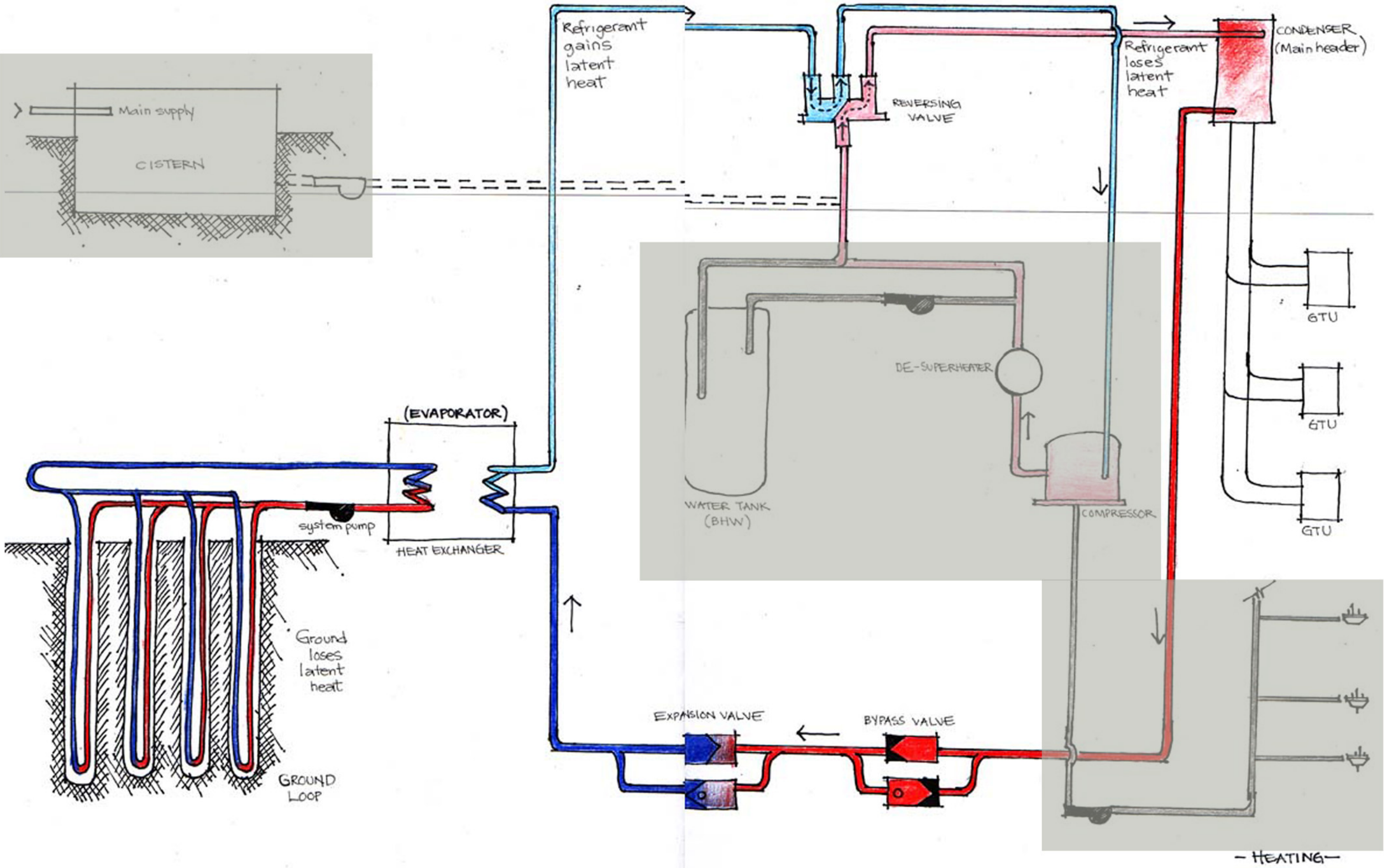
SOUTH FACADE

ELEVATIONS

### RAIN WATER COLLECTION SYSTEM

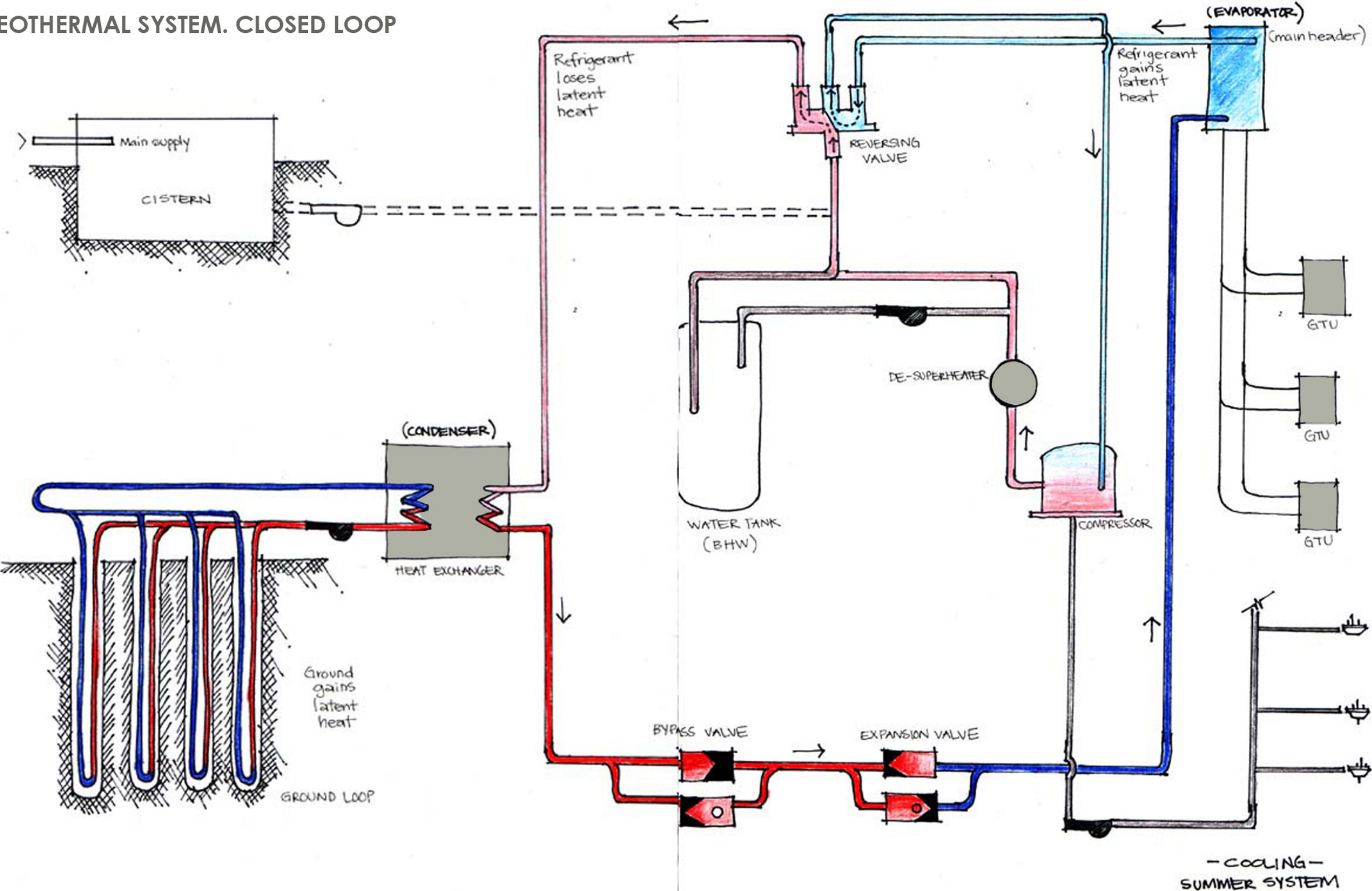


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Romelia Hernandez



HOT WATER SCHEMATIC

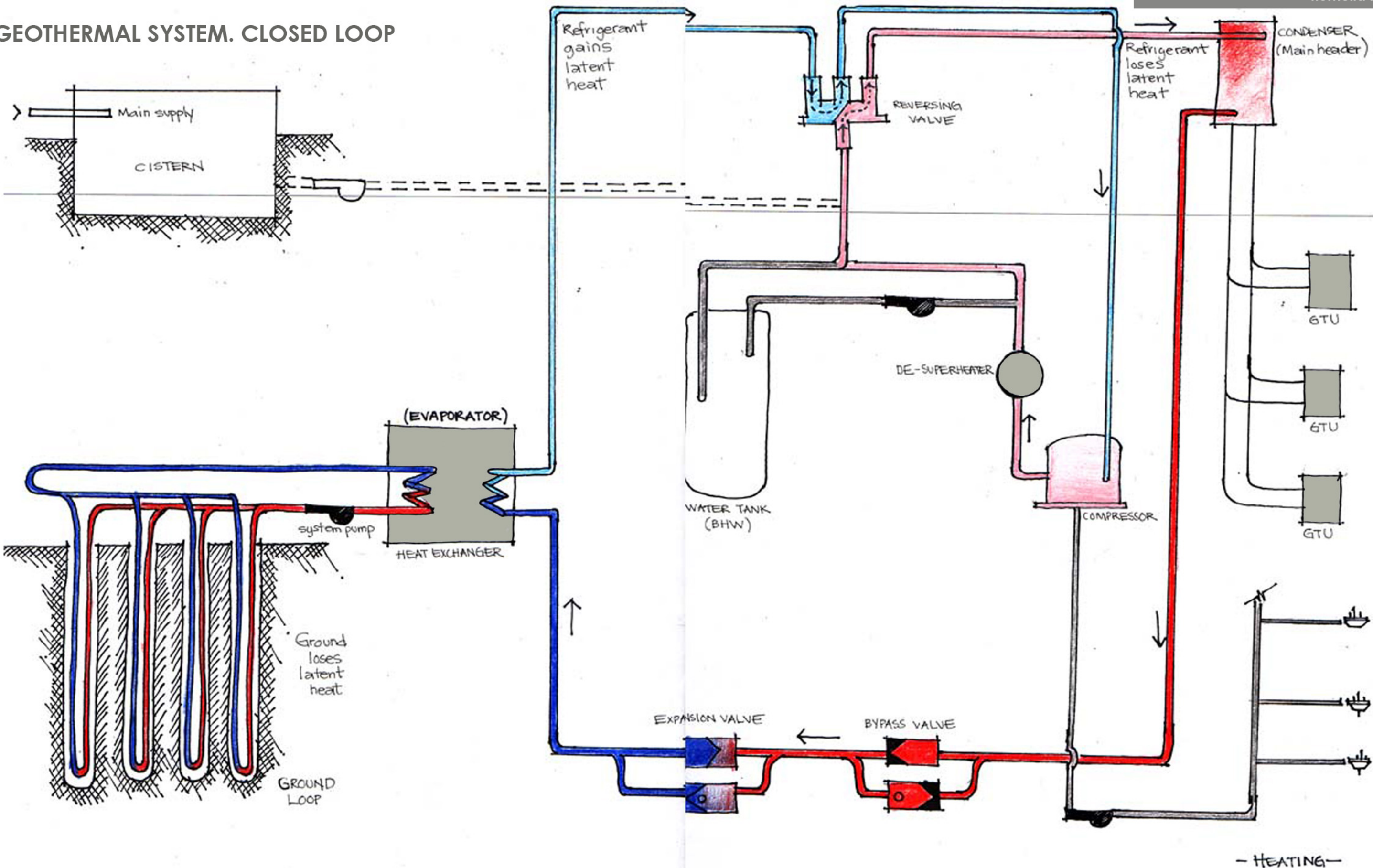
GEOTHERMAL SYSTEM. CLOSED LOOP



THERMAL SCHEMATIC

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Avril Galindo  
Victor Uribe  
Refilwe Mompe  
Romelia Hernandez

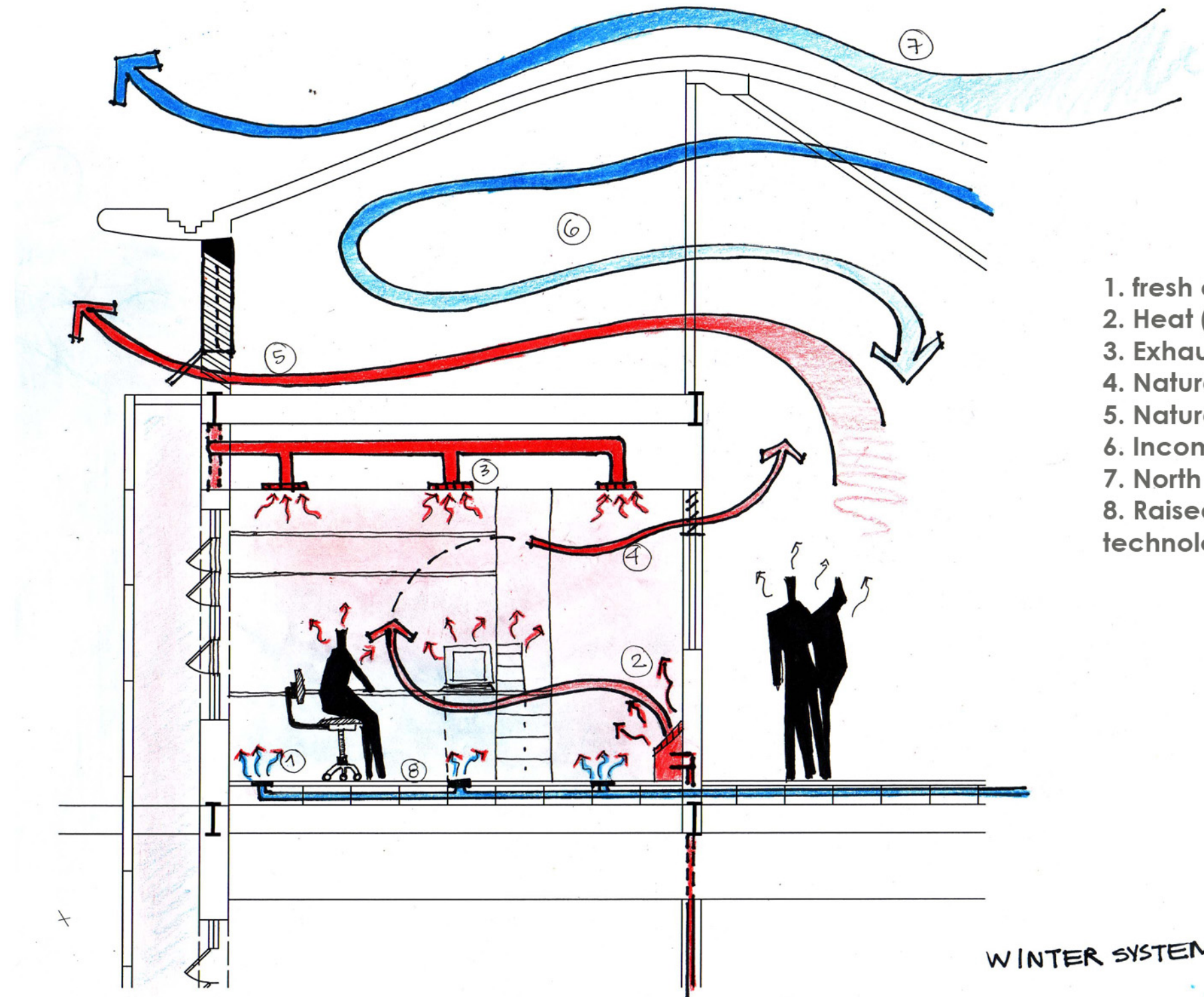
GEOTHERMAL SYSTEM. CLOSED LOOP



THERMAL SCHEMATIC



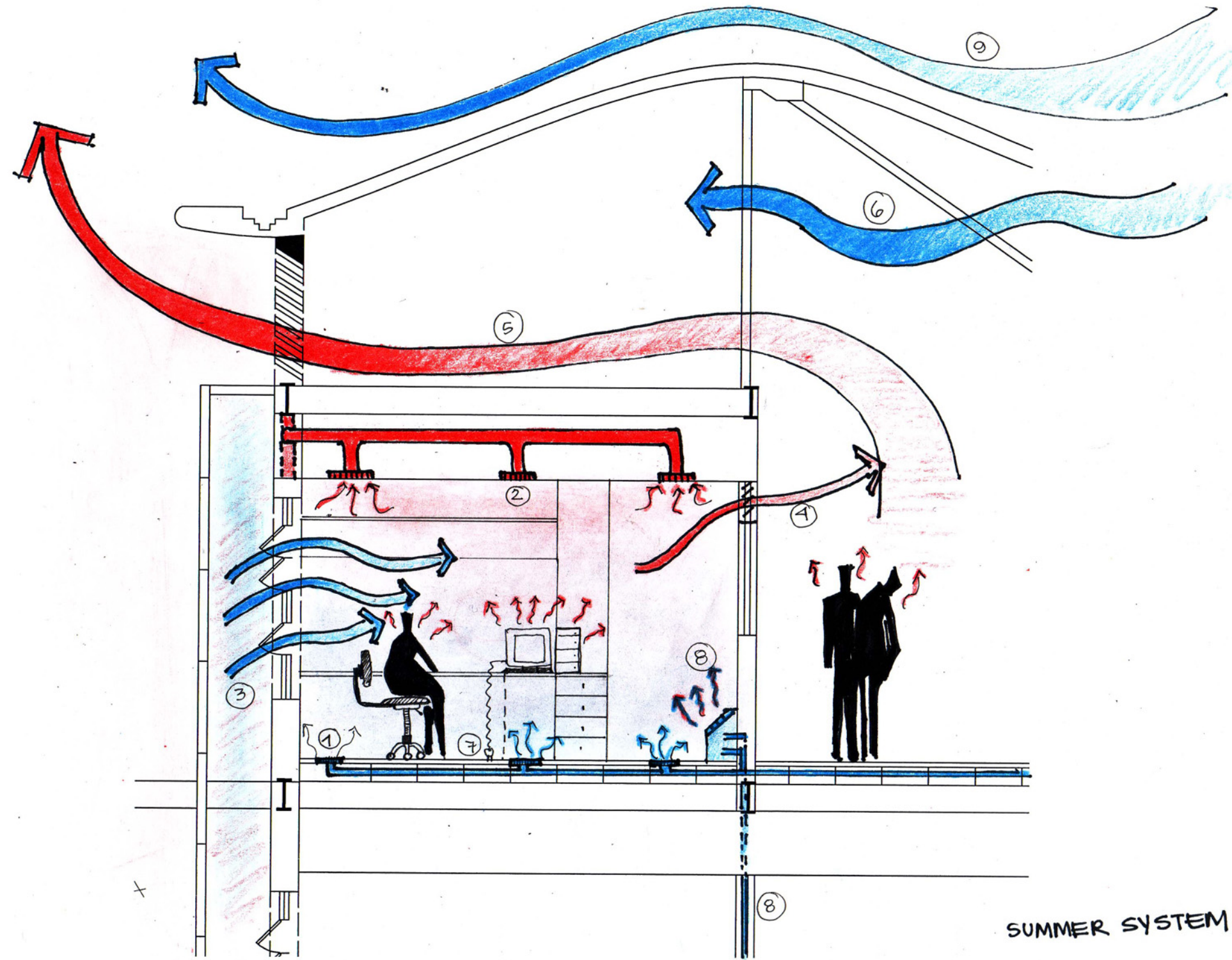
OFFICE SECTION



- 1. fresh air supply
- 2. Heat (Geothermal system)
- 3. Exhaust air (HRV)
- 4. Natural ventilation
- 5. Natural ventilation through atrium
- 6. Incoming natural fresh air
- 7. North wind
- 8. Raised access floor provides technology flexibility

WINTER SYSTEM

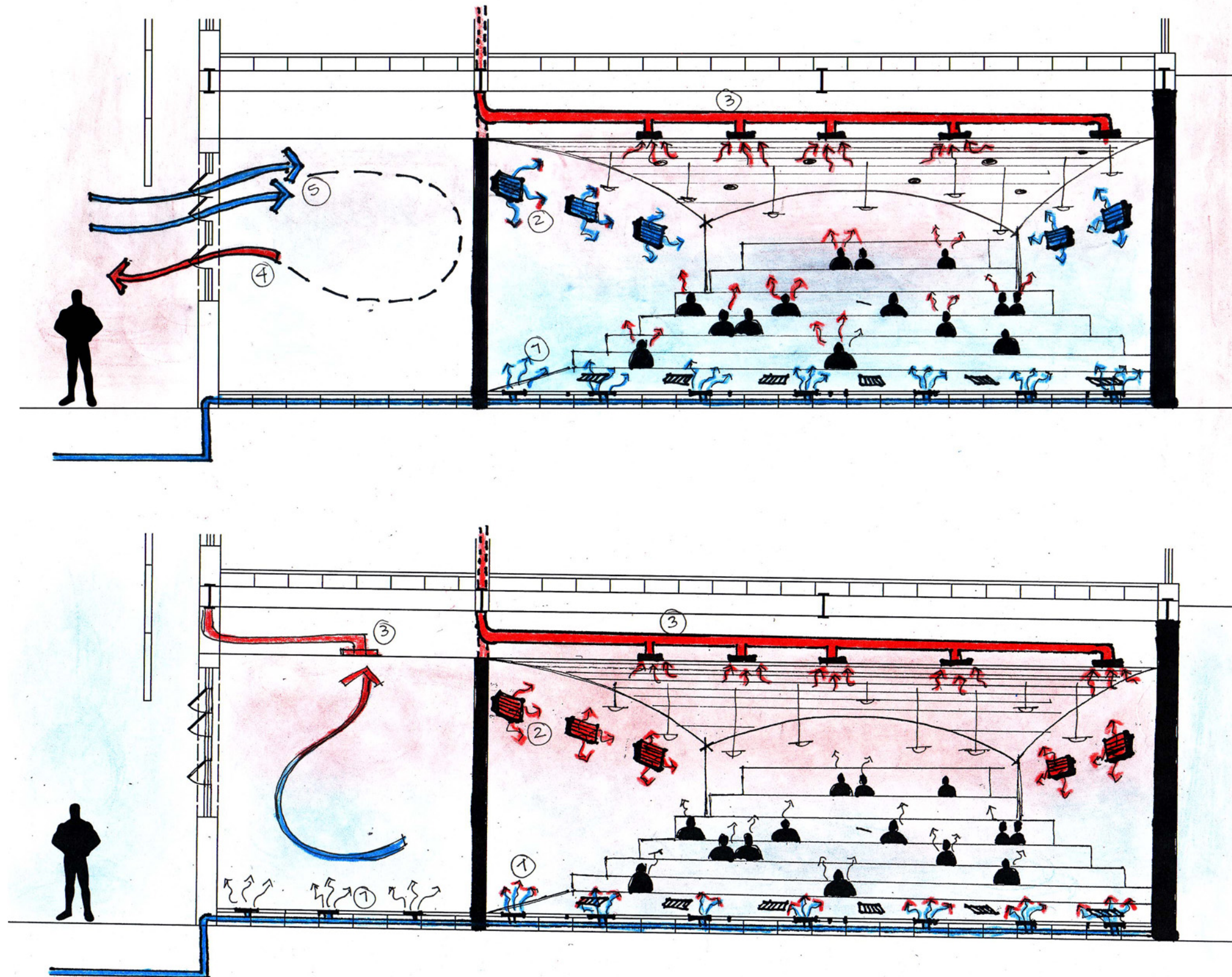
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Romelia Hernandez



- 1. Fresh air supply
- 2. Exhaust air (HRV)
- 3 & 4. Vents exhaust air through atrium and utilize cooling breezes
- 5. Exhaust air through atrium
- 6. Cooling northern breezes
- 7. Raised access floor provides technology flexibility
- 8. Cooling (geothermal system)
- 9. Roof drives northern wind

SUMMER SYSTEM

### LECTURE ROOM SECTION



- 1. Fresh air supply
- 2. Cooling/Heating (geothermal units)
- 3. Exhaust air (HRV)
- 4. Vents exhaust air
- 5. Cooling breezes and natural fresh air

# PHOTOVOLTAIC SYSTEM

