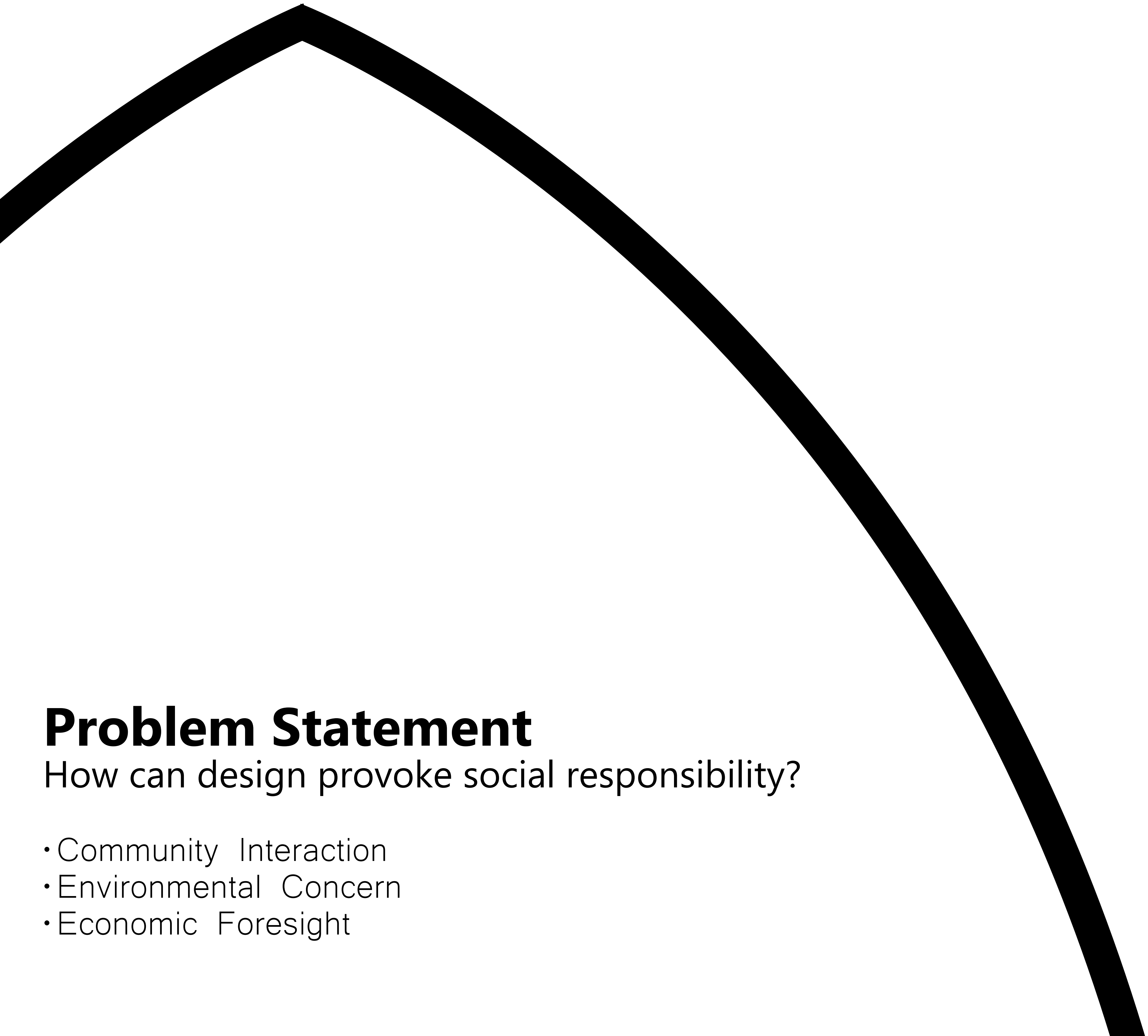




CULTIVATING CONTENT

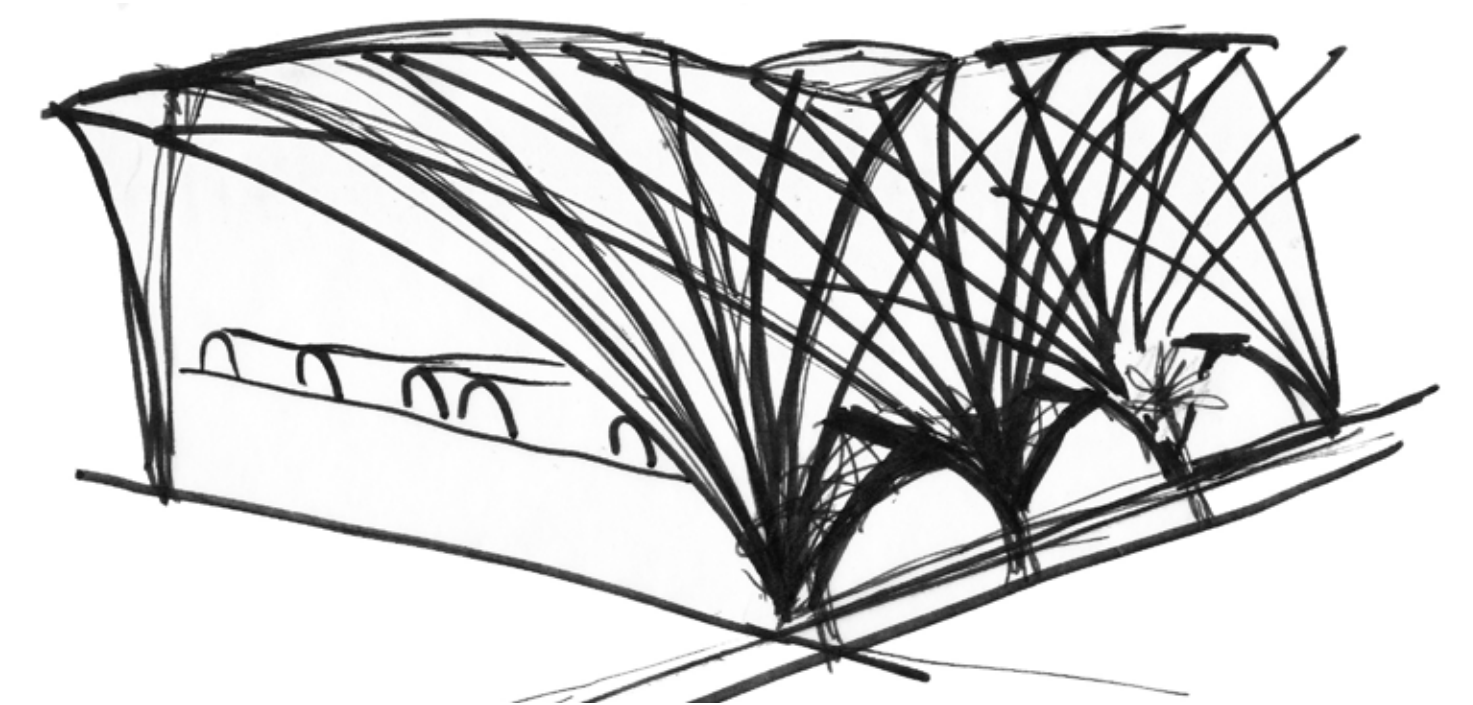
Andrew Berggren

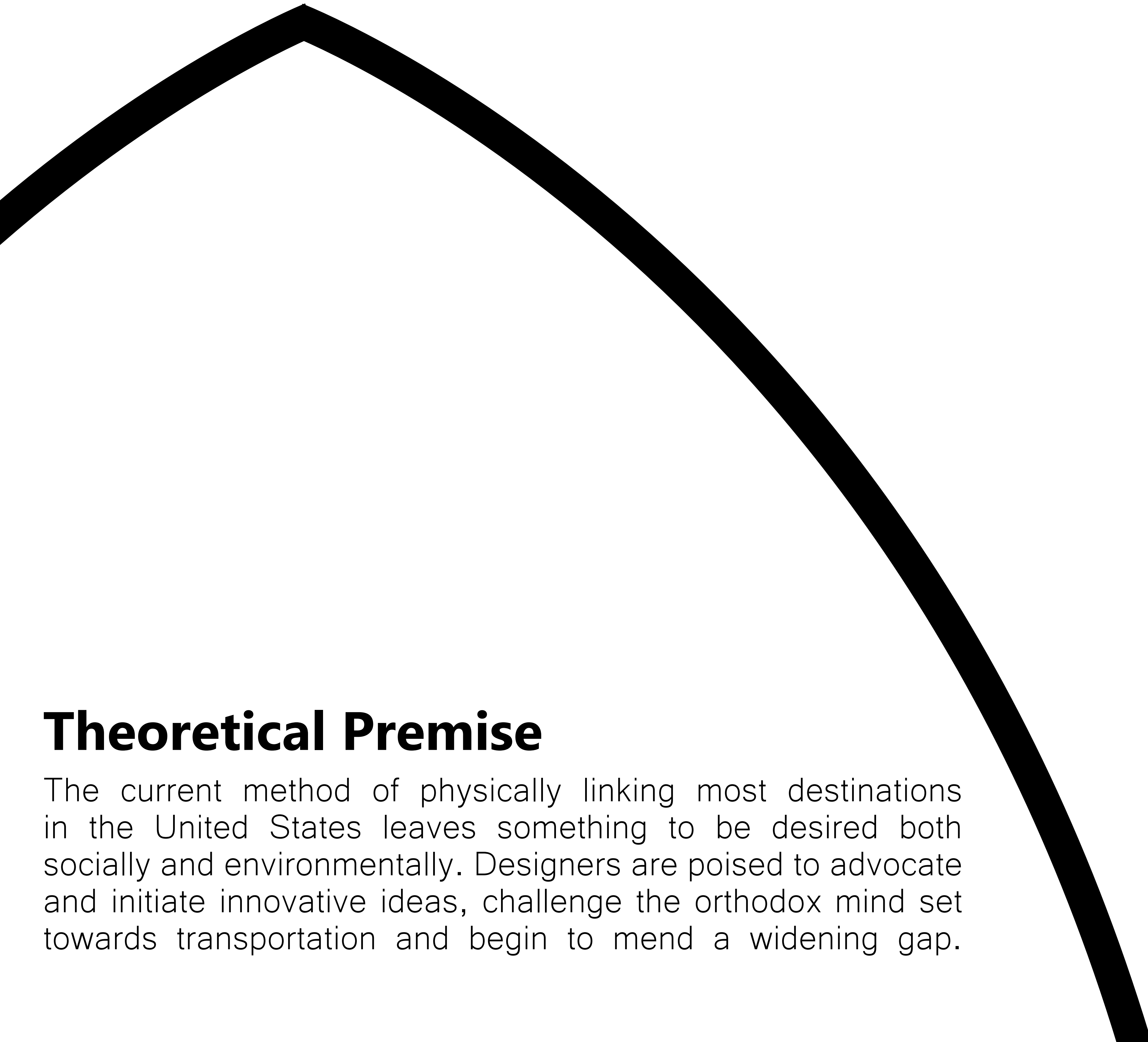


Problem Statement

How can design provoke social responsibility?

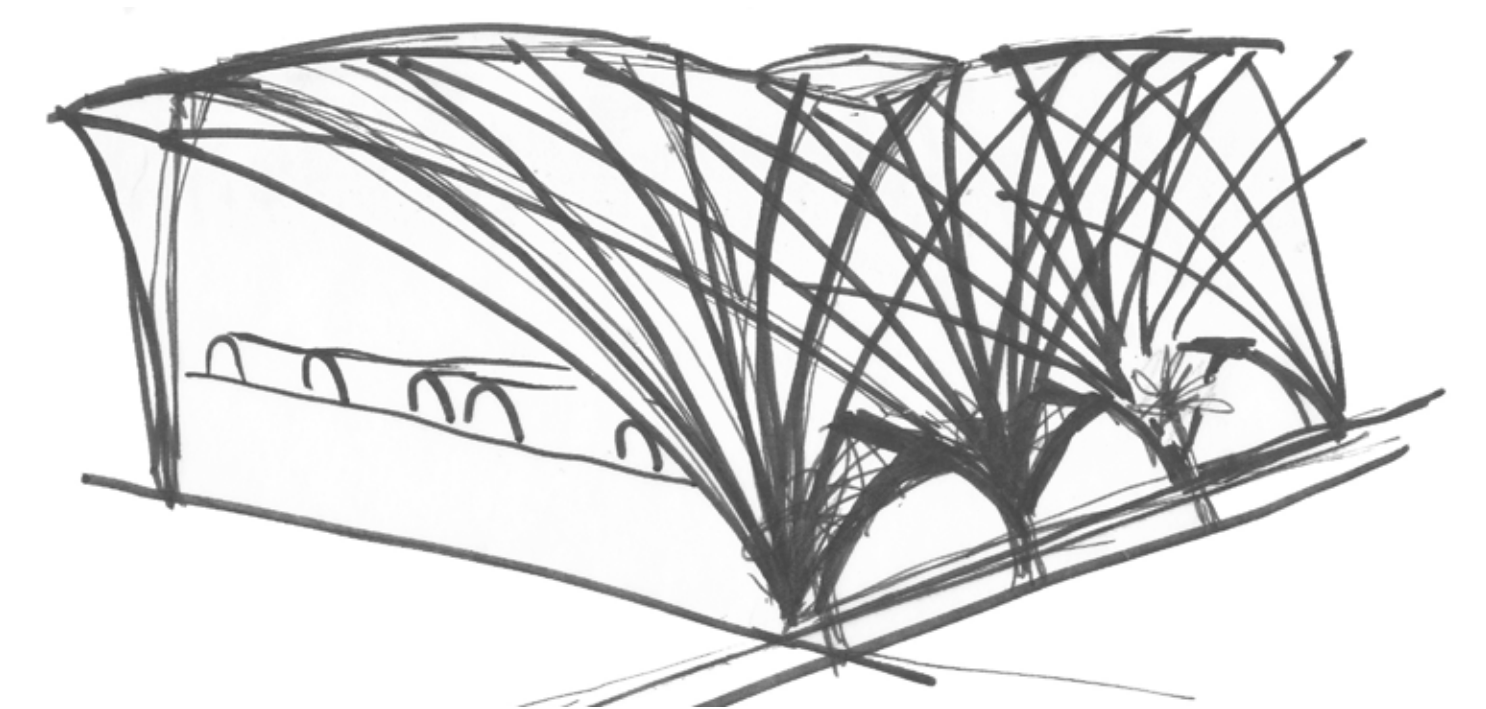
- Community Interaction
- Environmental Concern
- Economic Foresight

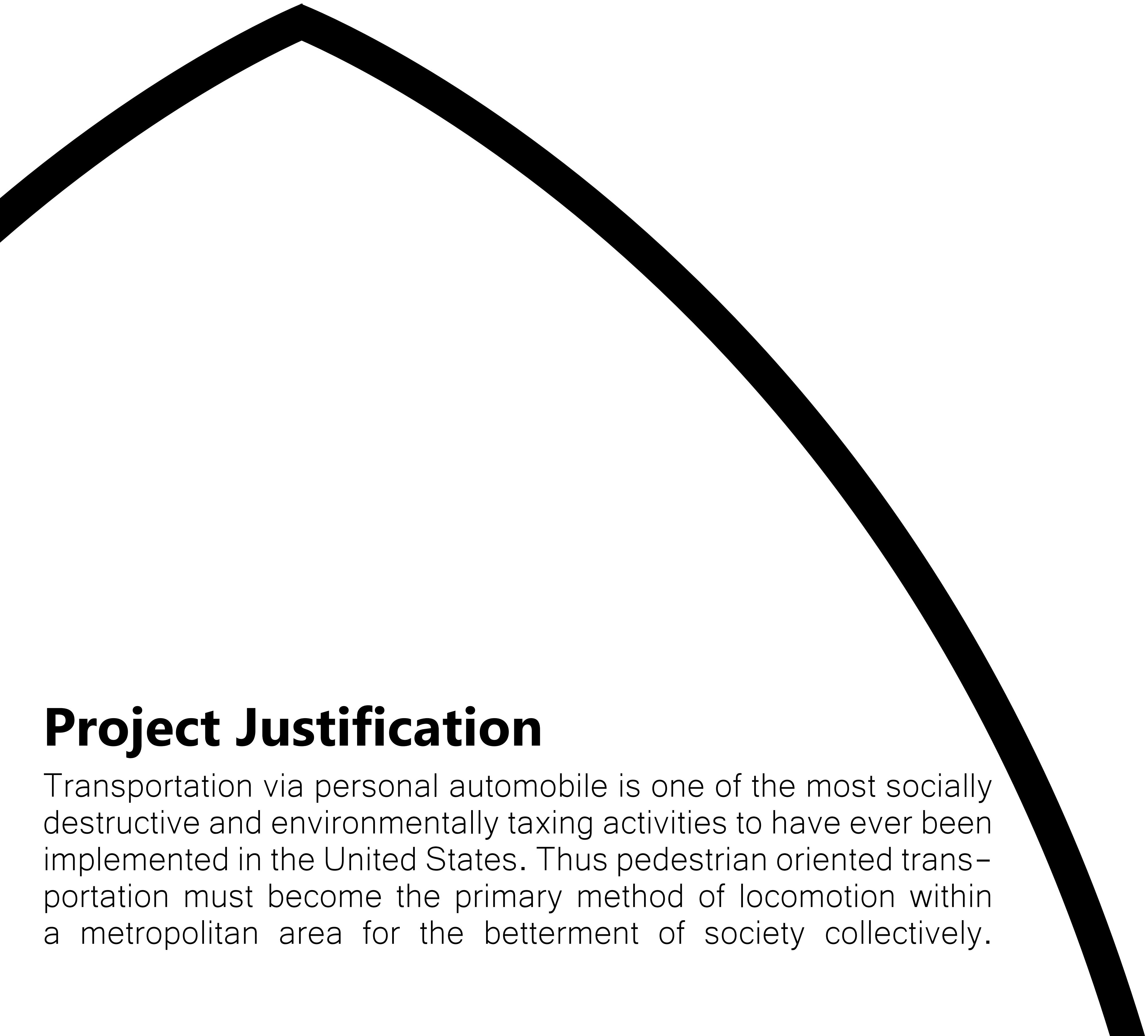




Theoretical Premise

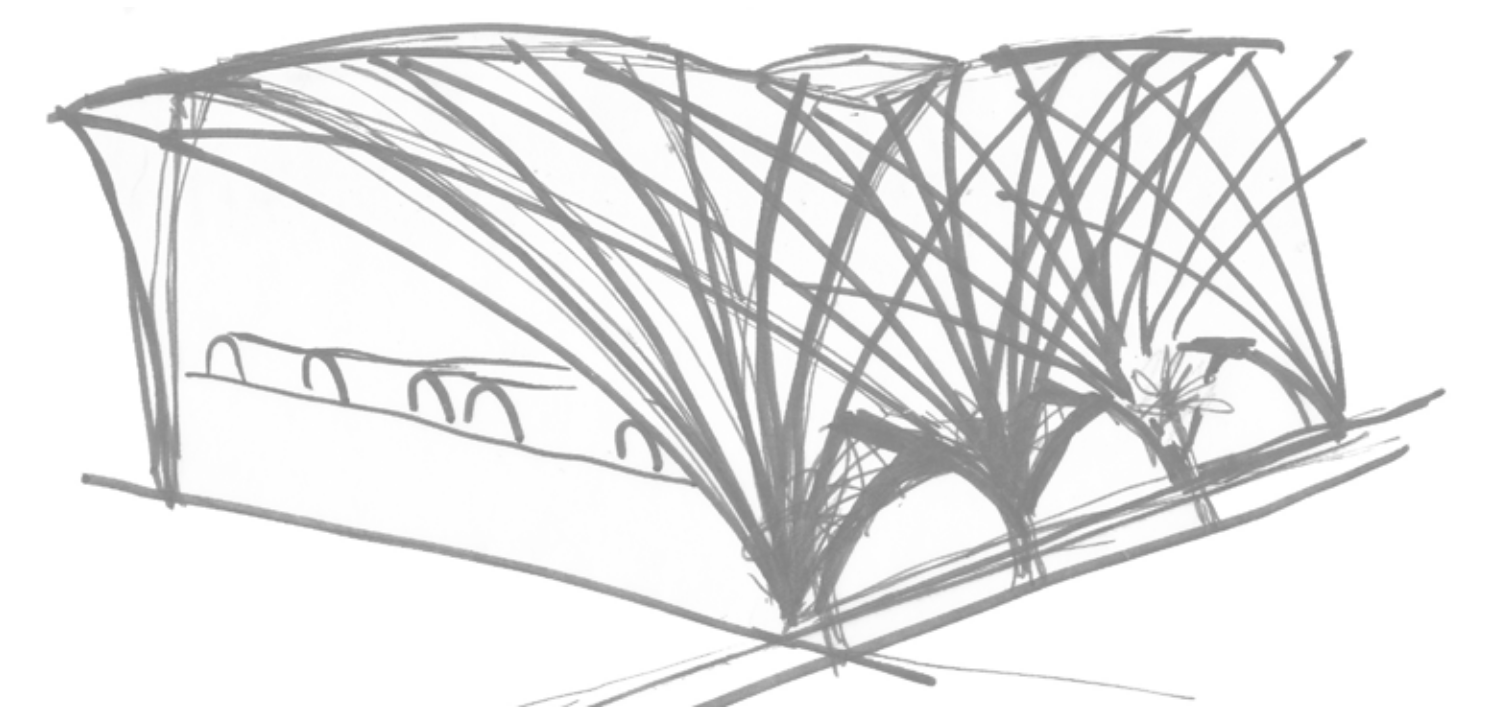
The current method of physically linking most destinations in the United States leaves something to be desired both socially and environmentally. Designers are poised to advocate and initiate innovative ideas, challenge the orthodox mind set towards transportation and begin to mend a widening gap.

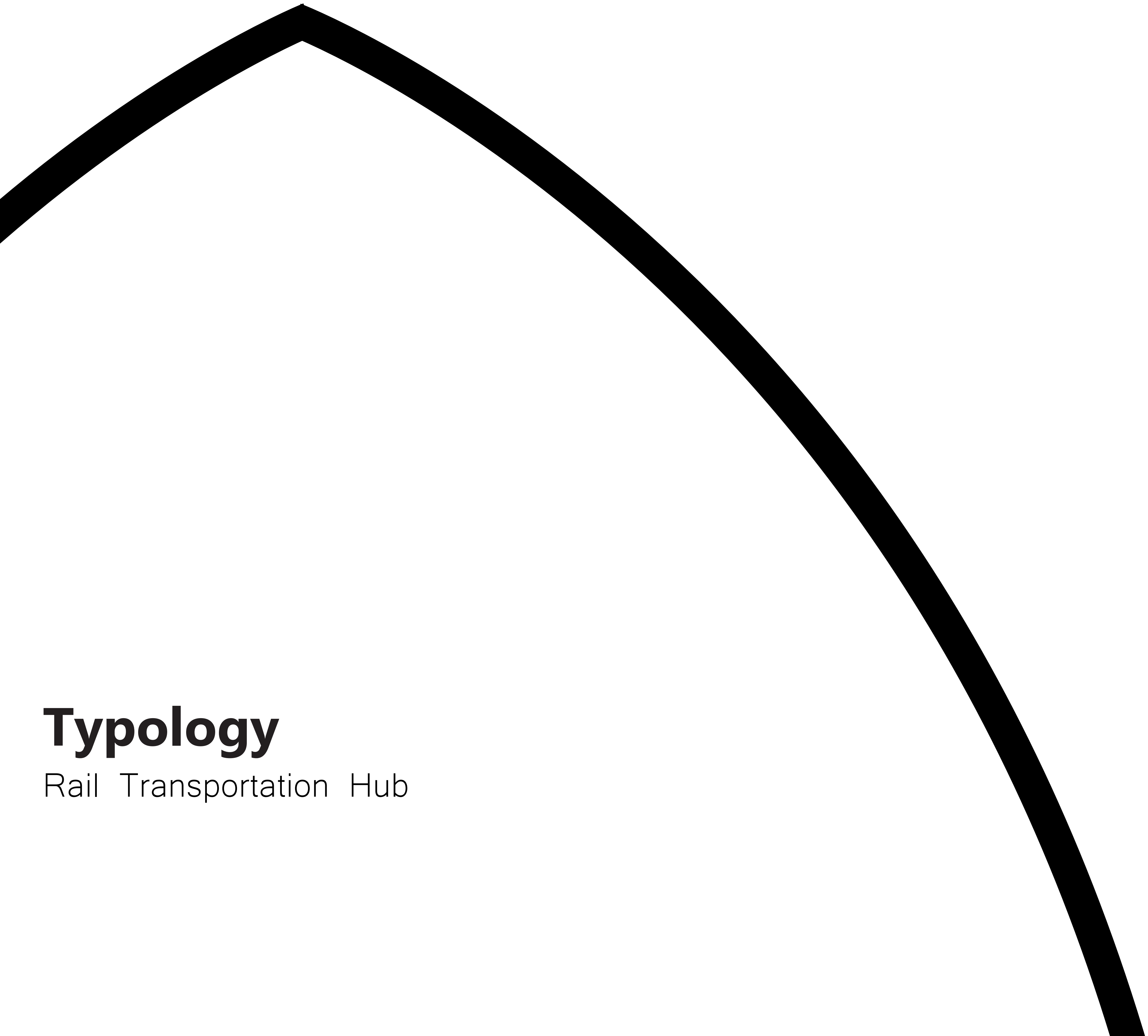




Project Justification

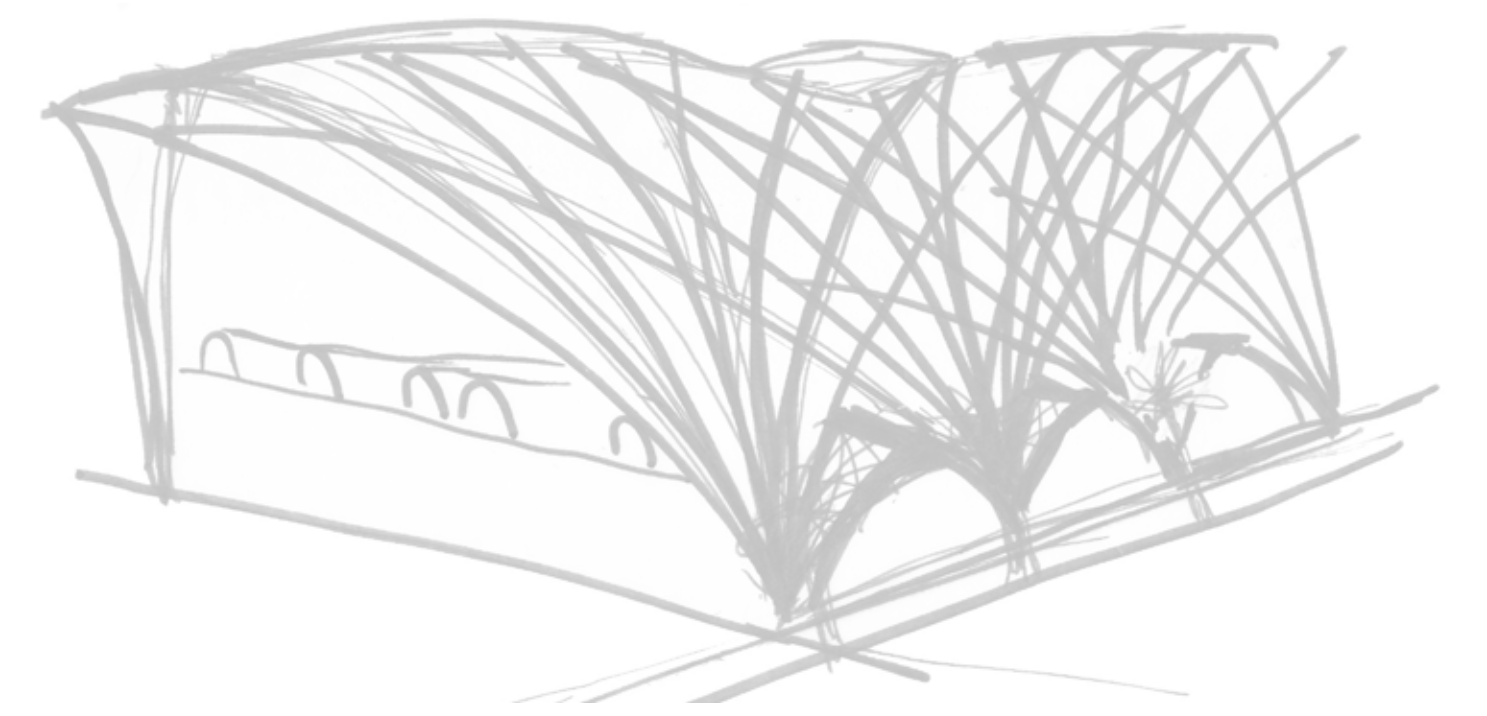
Transportation via personal automobile is one of the most socially destructive and environmentally taxing activities to have ever been implemented in the United States. Thus pedestrian oriented transportation must become the primary method of locomotion within a metropolitan area for the betterment of society collectively.





Typology

Rail Transportation Hub





Inspiration

I developed an interest in public transportation while studying abroad in France for four months last year. I experienced the greatest transportation freedom I've ever known.

The City

The city was created as a place to exchange goods and ideas.

Social Isolation

-lawyer from New York

-Pedestrian oriented transit - roadway and parking on campus

Density

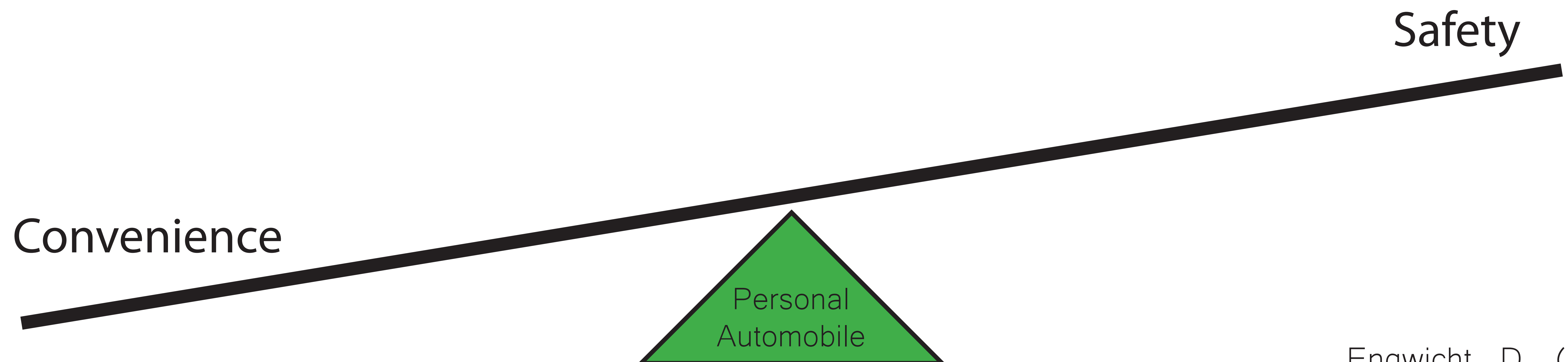
Supplementing public transportation with personal bicycles should satisfy all the needs one would have. Density is the key to placing all the basic elements in reach of a city dweller. To illustrate this, a U.C. Berkeley Masters of Urban Design professor (while riding a public bus in Italy) once offered to me that,

“the shortest distance between two points, is to move them closer together.”

Safety

In America someone is killed every 5 minutes in a automobile related accident, while Japan has not had a fatality due to their rail system in over 40 years.

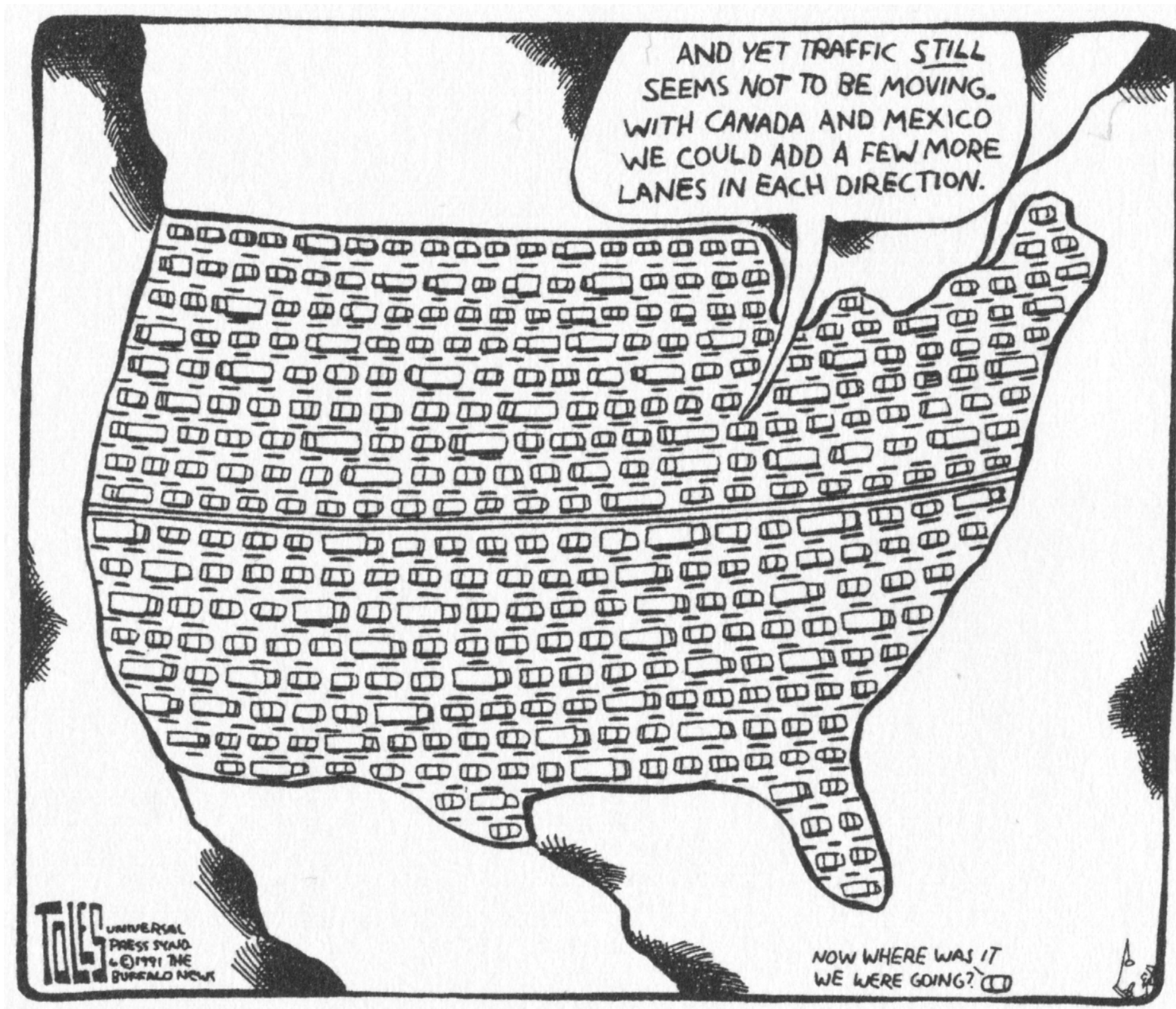
Which leaves each of us with a 72% chance that someone in our family will be killed in an automobile related accident in our lifetime.





Personal Auto Costs

- untimely mechanical failures
- parking tickets
- car insurance
- purchase of a car
- lisense and tabs fees
- loss of time



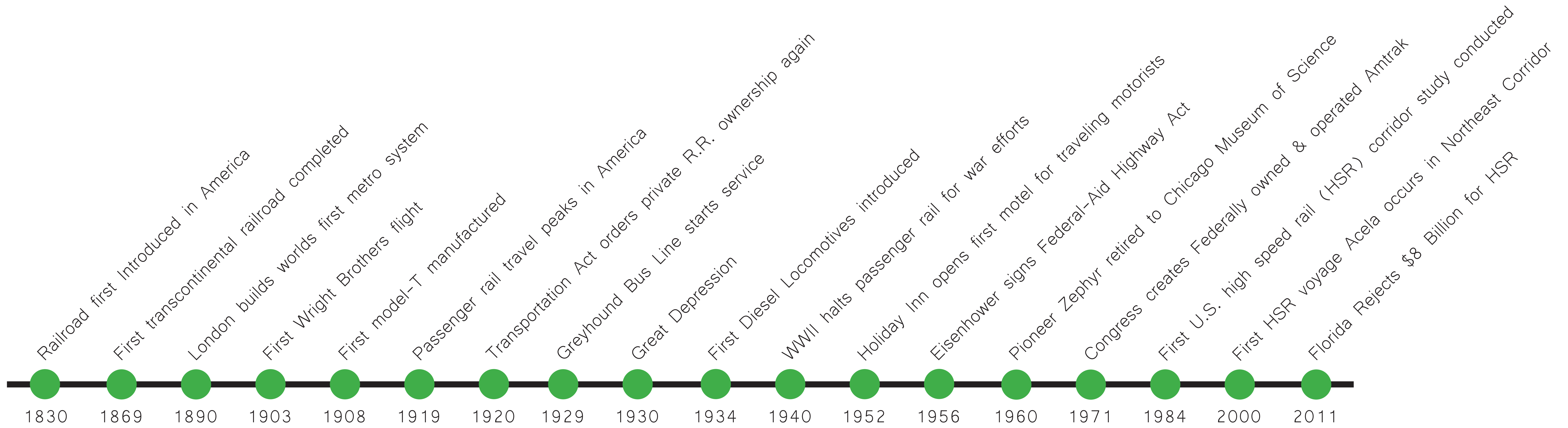
If pizza was free, would there ever be enough?

(Suburban Nation, 2000)

Transportation via personal automobile was once an exciting transition in America's transportation methodology, but times have changed. To ignore the environmental red flags and neglect our vast technological developments would be a grave injustice to American innovation. As an engineer at IBM framed it, "America is great at heart attacks but terrible with cancer." Meaning that when we have an emergency our ability to meet the need and overcome has been outstanding, but to imperceptibly dying a slow death, we've shockingly lacked haste.

Reactive or Proactive

History



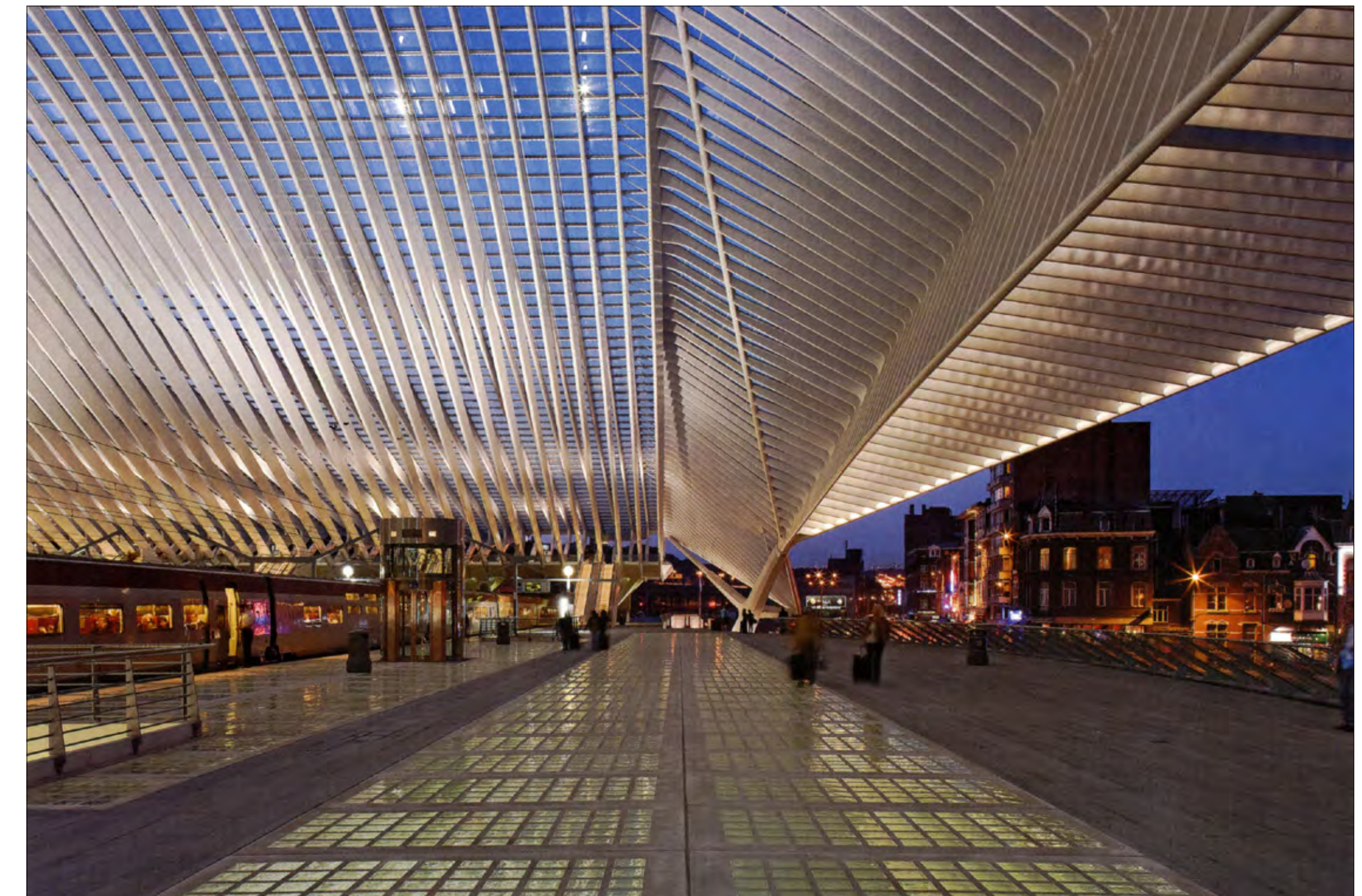
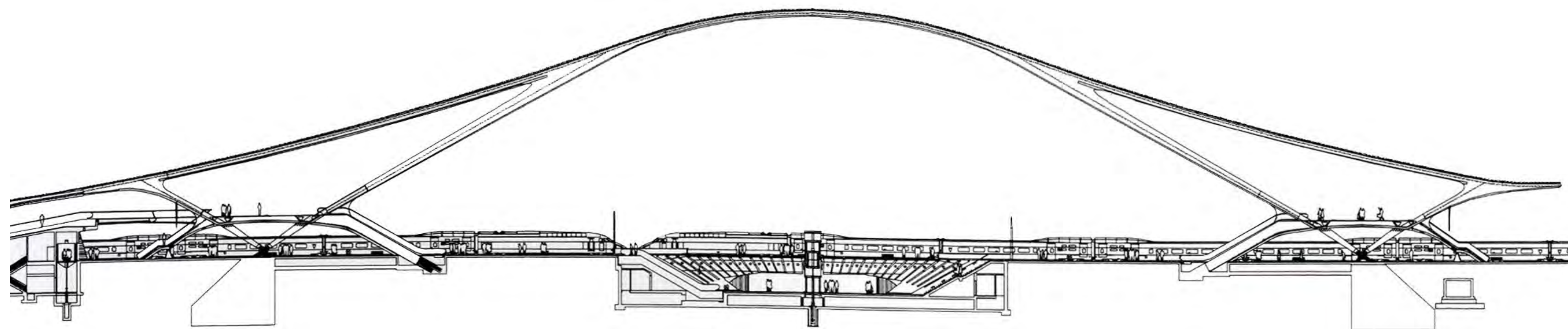


Case Studies

Liege, Belgium - Santiago Calatrava

Berlin, Germany - Gerkan, Marg and Partners

Melbourne, Australia - Nicholas Grimshaw Partners

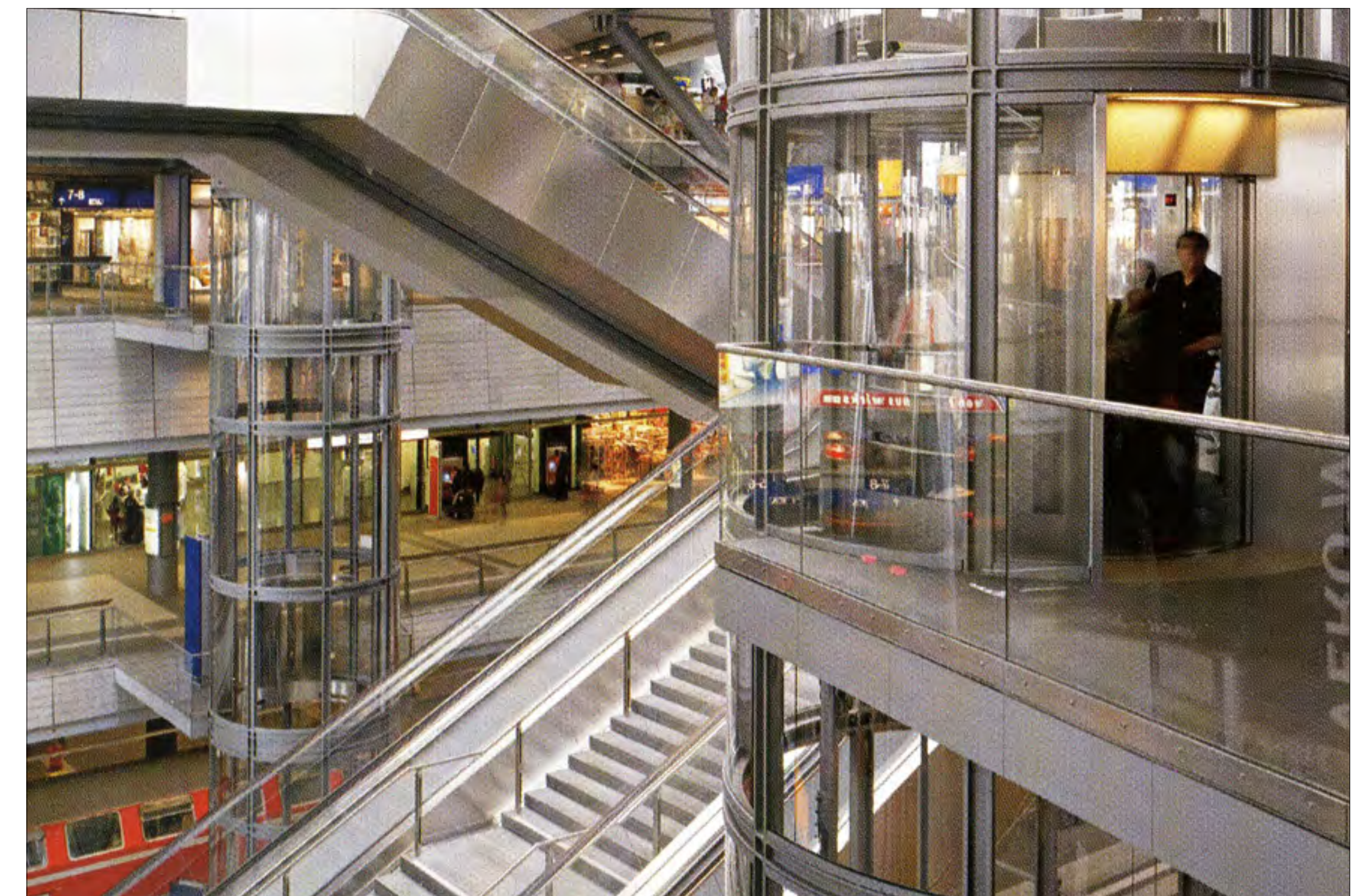
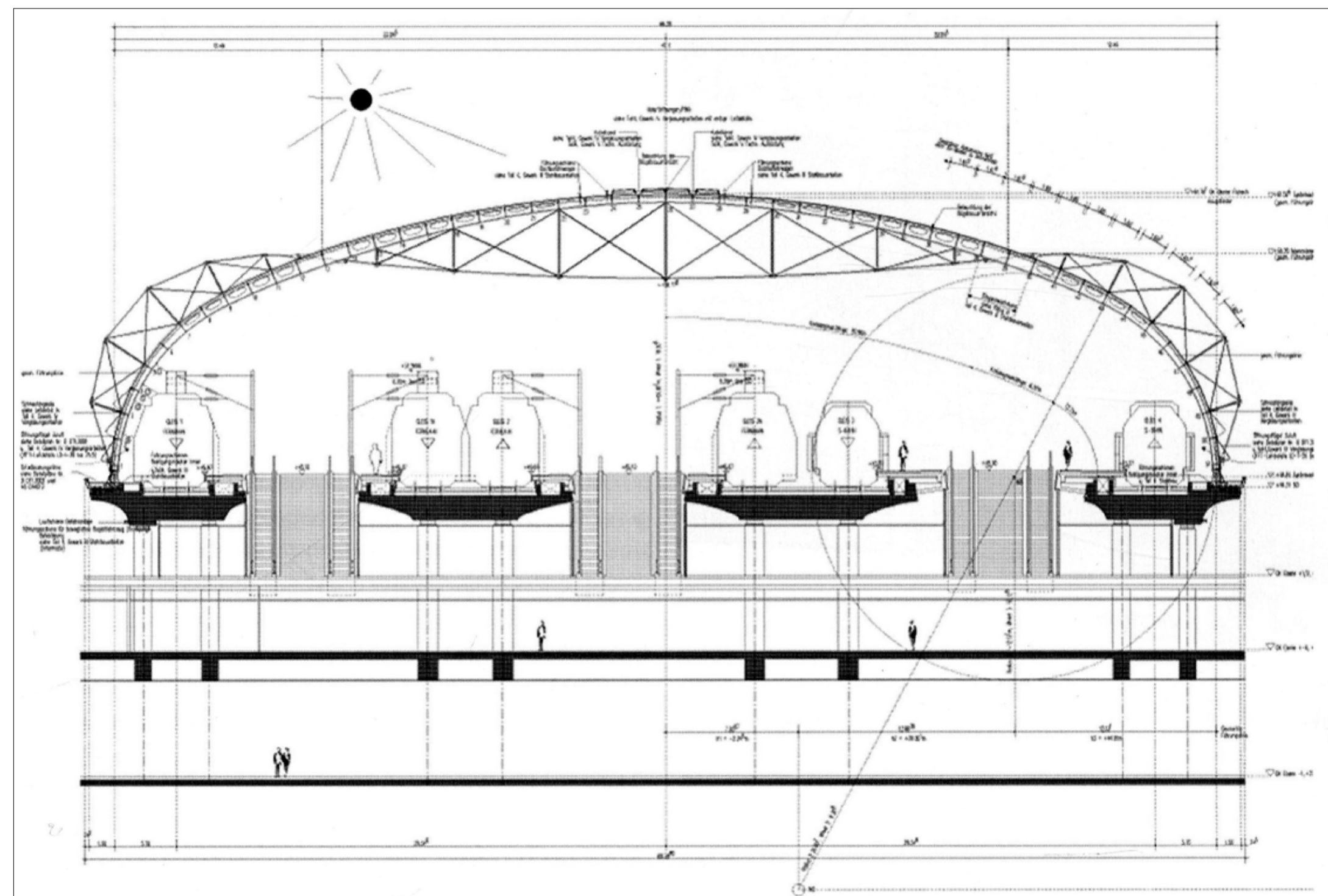


Case Studies

Liege - Grand Spaces, Large Spans

Berlin - Intimate Curved Roof, Glazing

Melbourne - Undulating Steel Structure

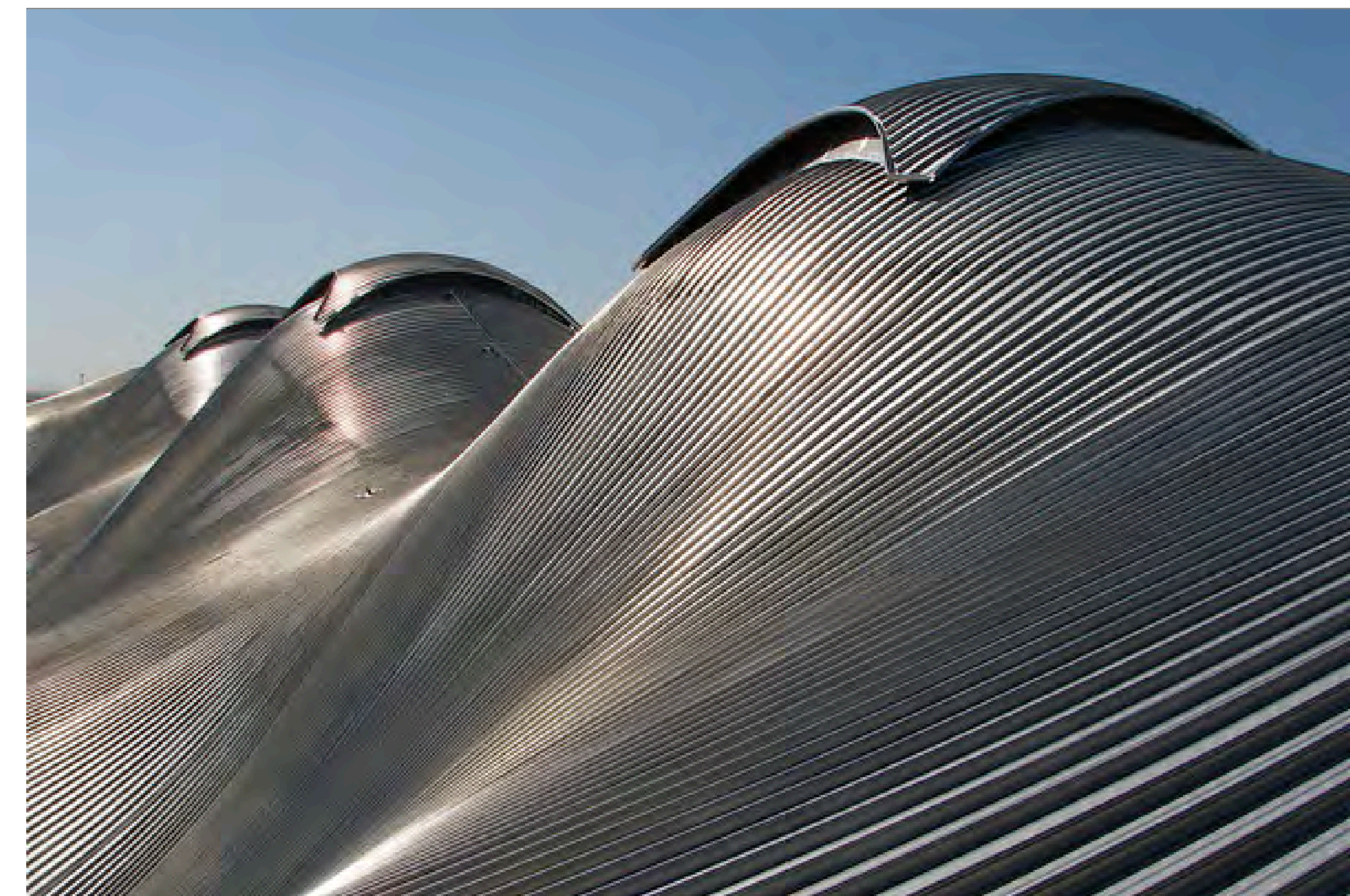
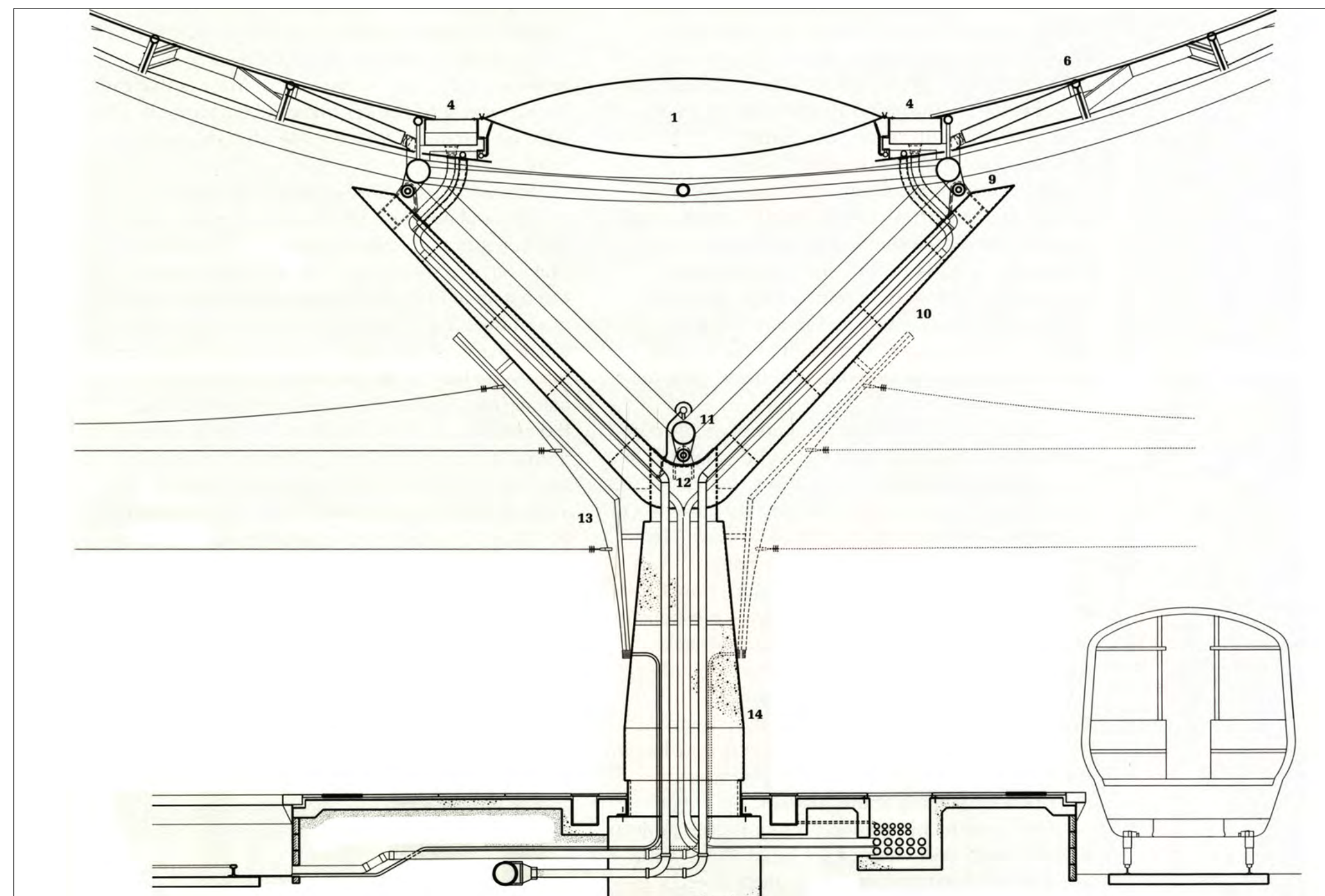


Case Studies

Liege - Grand Spaces, Large Spans

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Case Studies

- Liege - Grand Spaces, Large Spans
- Berlin - Intimate Curved Roof, Glazing
- Melbourne - Undulating Steel Structure



Location

Tampa, Florida - North of Downtown

PARKING AND CAR RENTAL
(UNDER ELEVATED INTERSTATE)

BIKE SHARE
LOCATION

PARKING UNDER
TRACKS

PROPOSED
OUTDOOR
SPACE

BUS TERMINAL

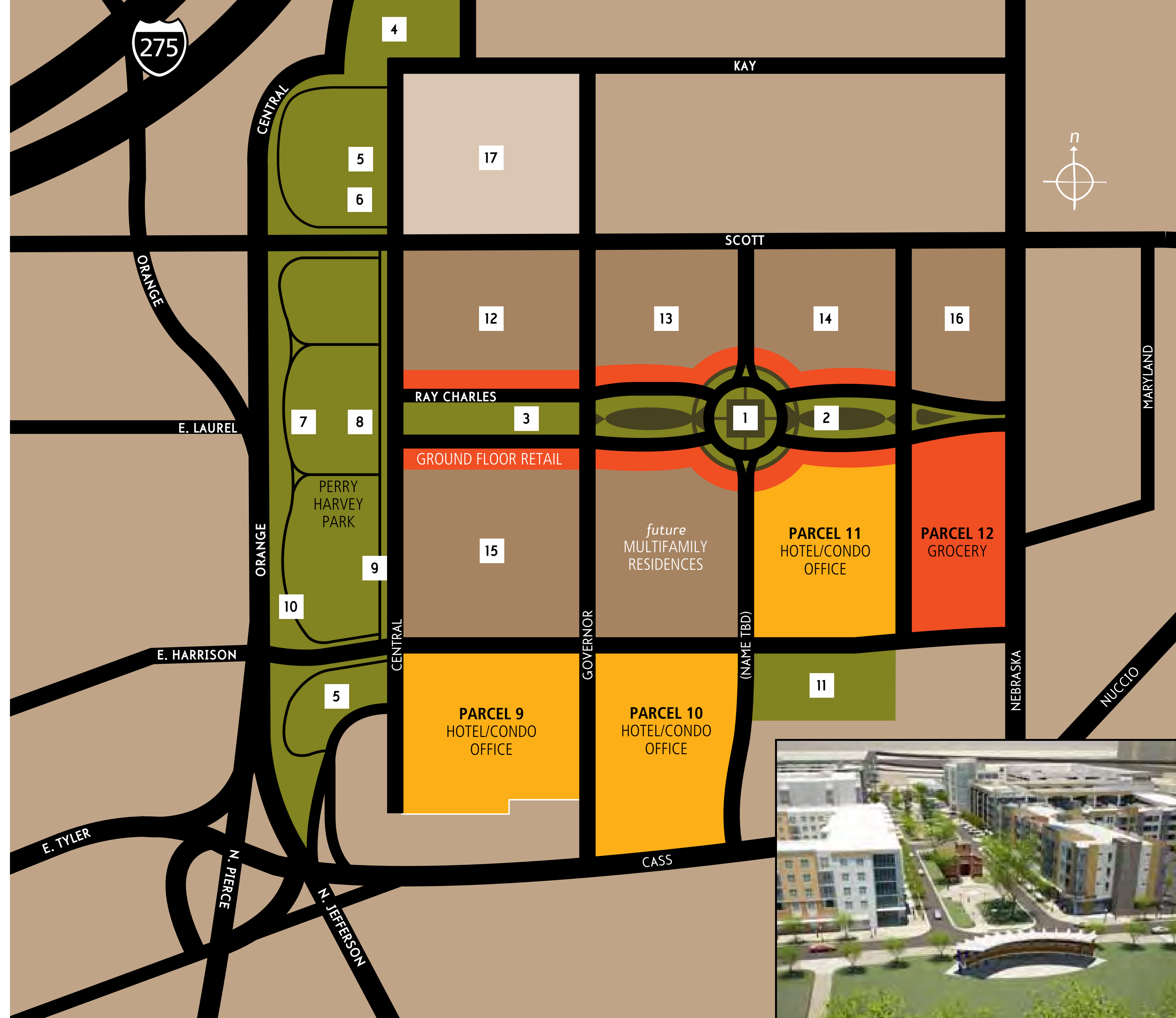
CEMETERY

TRAM TO
DOWNTOWN

Why Tampa?

- Of the top 25 largest U.S. metro areas, Tampa is the only one lacking a fixed rail system
- Interstate corridor zoned for high speed rail
- Site owned by the Federal Government





Encore

Mixed-Use development



The walkable 40+ acre design blends commerce with community to form a *city within a city*. A formal town square with pathways, history museum, public artwork and relaxation niches is center stage to vibrant hotels, offices, apartments, retailers and restaurants.

- 1 TOWN GREEN
- 2 CENTER STAGE
- 3 HISTORY MUSEUM
- 4 SKATE PARK
- 5 PLAYGROUNDS
- 6 COMMUNITY CENTER
- 7 AMPHITHEATER
- 8 PERFORMANCE STAGE
- 9 HISTORY WALK
- 10 PATHWAYS
- 11 SOLAR PARK
- 12 TEMPO APARTMENT HOMES
- 13 THE ELLA SENIOR APARTMENT HOMES
- 14 REED APARTMENT HOMES
- 15 TRIO APARTMENT HOMES
- 16 RETAIL
- 17 MIDDLE SCHOOL

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VISION *for* HIGH-SPEED RAIL *in* AMERICA



HSR Vision

Federal Transportation Administrations proposed map of future rail development








Documentation

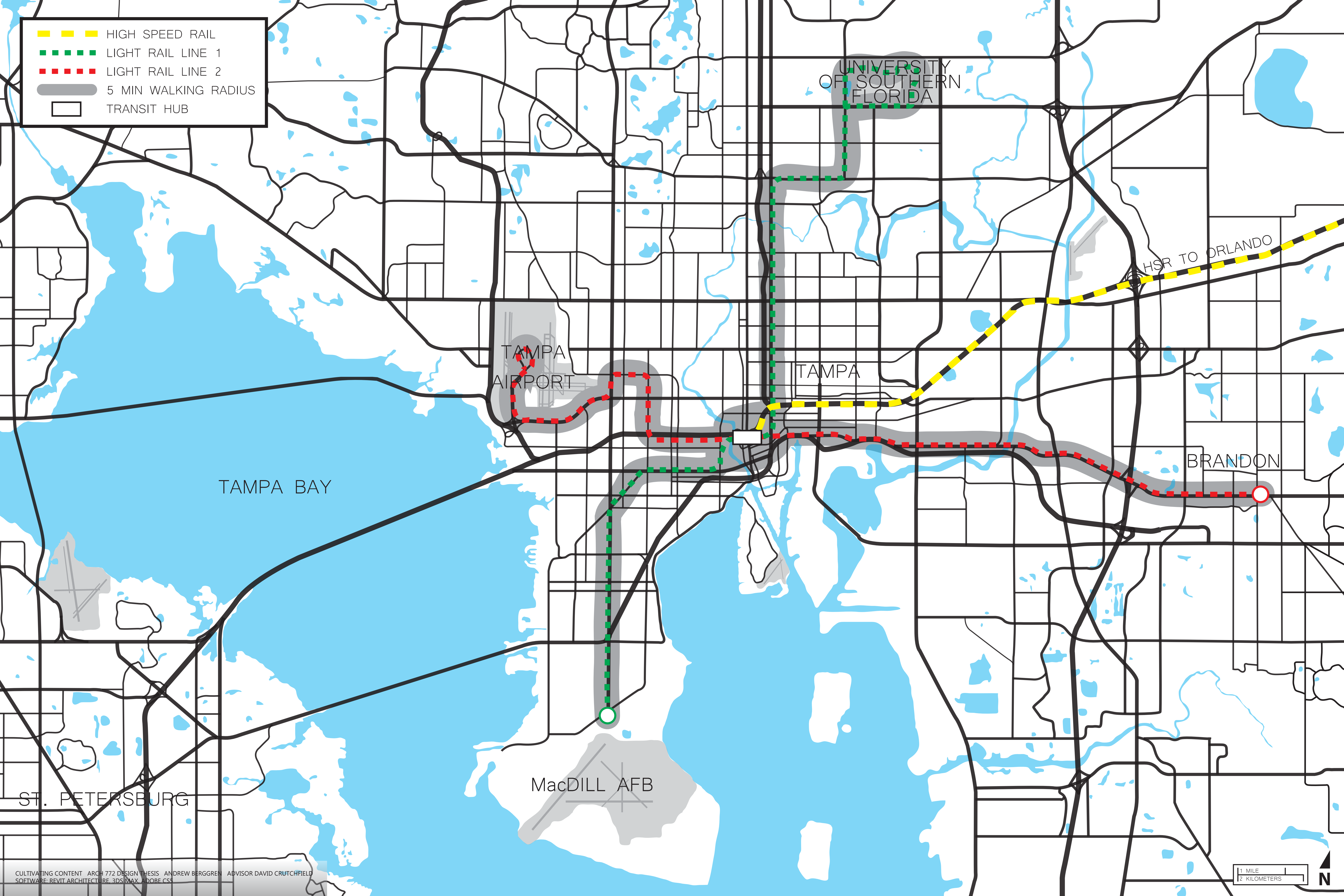
Elevated Interstate, Vacant Lot



Documentation

Underside of Interstate, New Housing Complex, Bus Station

-  HIGH SPEED RAIL
-  LIGHT RAIL LINE 1
-  LIGHT RAIL LINE 2
-  5 MIN WALKING RADIUS
-  TRANSIT HUB



PROGRAMMATIC REQUIREMENTS

Total = 200,000 Sq. Ft.

Main Concourse - 75,000 Sq. Ft.
entry, concourse

Lobby - 30,000 Sq. Ft.
lobby, waiting area, tech lounge
*primary area for social interaction

Information - 10,000 Sq. Ft.
general information, tourism information, directions,
translation services
*Introductory guides to Tampa and Florida available
along with linguistic services

Ticket Office - 6,000 Sq. Ft.
ticket sales

Currency Exchange/ATM - 3,000 Sq. Ft.

Art Gallery - 2,000 Sq. Ft.
*an art gallery will give local artist an opportunity for
waiting passengers to browse their work

Chapel - 1,000 Sq. Ft.
*a quiet place for patrons to reflect and pray

Restaurants - 20,000 Sq. Ft.
restaurants, coffee shop
*will provide a space for customers to interact, people
watch or take food to go

Retail - 30,000 Sq. Ft.
electronic shop, florist, newspaper stand, book store,
clothing/rain wear shop, bicycle repair shop
*picking up a gift or grabbing a needed power cord

Business Offices - 35,000 Sq. Ft.
facilities management, operations and billing
*potentially a central office for the transportation de-
partment of Hillsborough County

Storage/Mailroom - 18,000 Sq. Ft.
facility storage, maintenance, mail, lockers

Custodial - 5,000 Sq. Ft.

Police Department - 10,000 Sq. Ft.
*the local PD will occupy a space in this bustling
facility to ensure order and safety

Rail Platforms - 200,000 Sq. Ft.
light rail and a high speed rail lines
*enhanced with digital screens and real time train info

Building Mechanical - 20,000 Sq. Ft.
HVAC, plumbing, electrical, utilities, storage

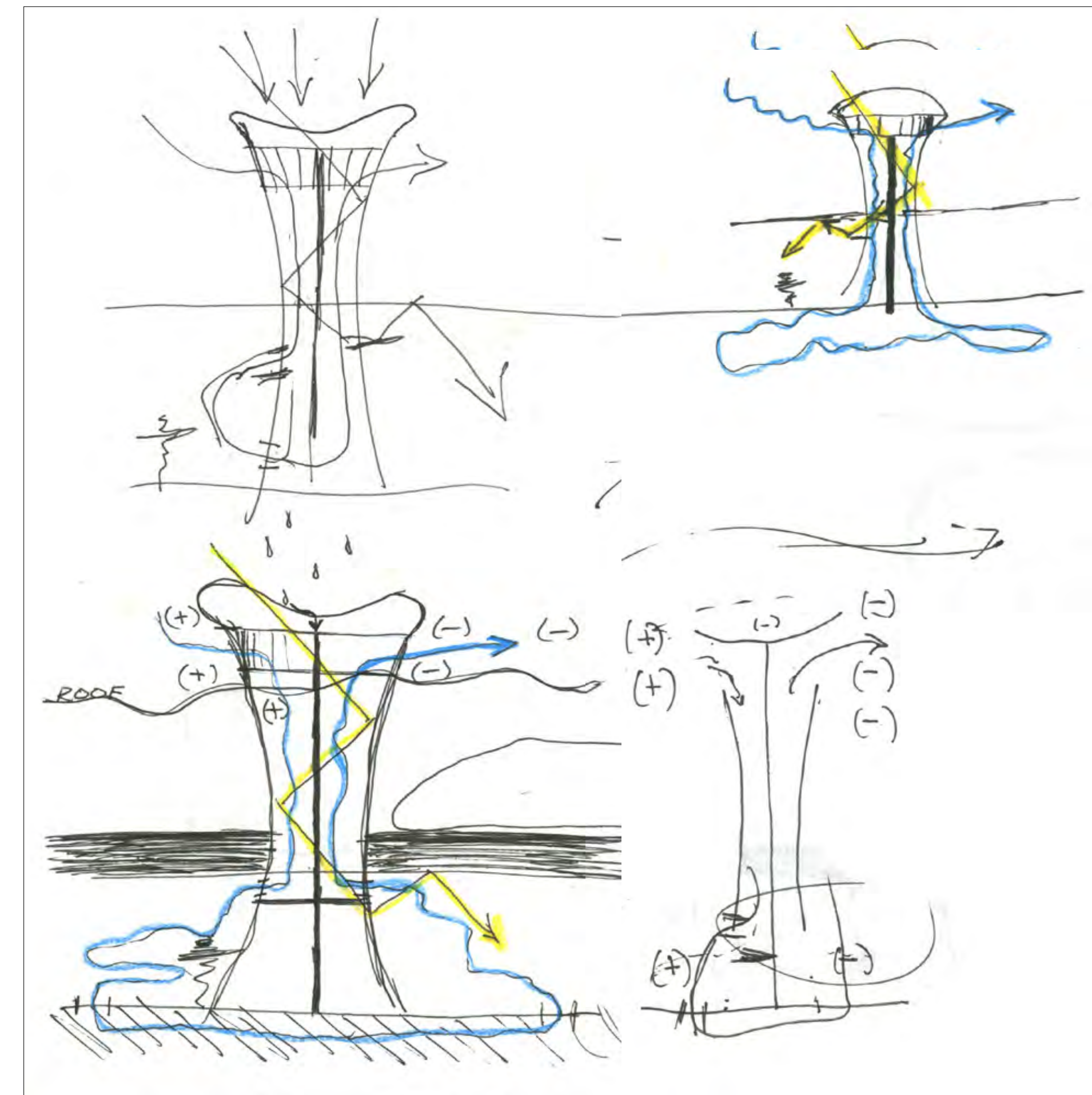
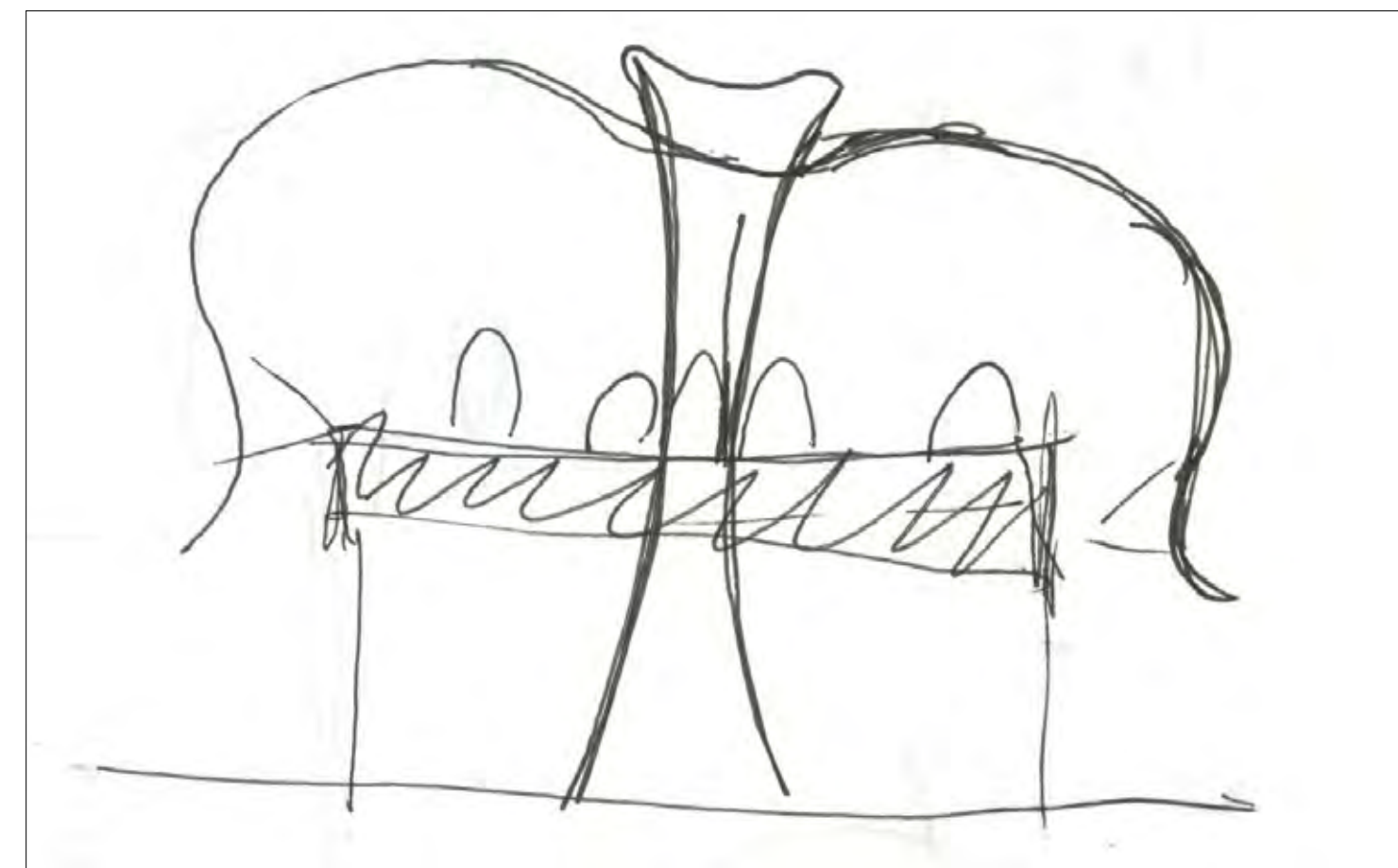
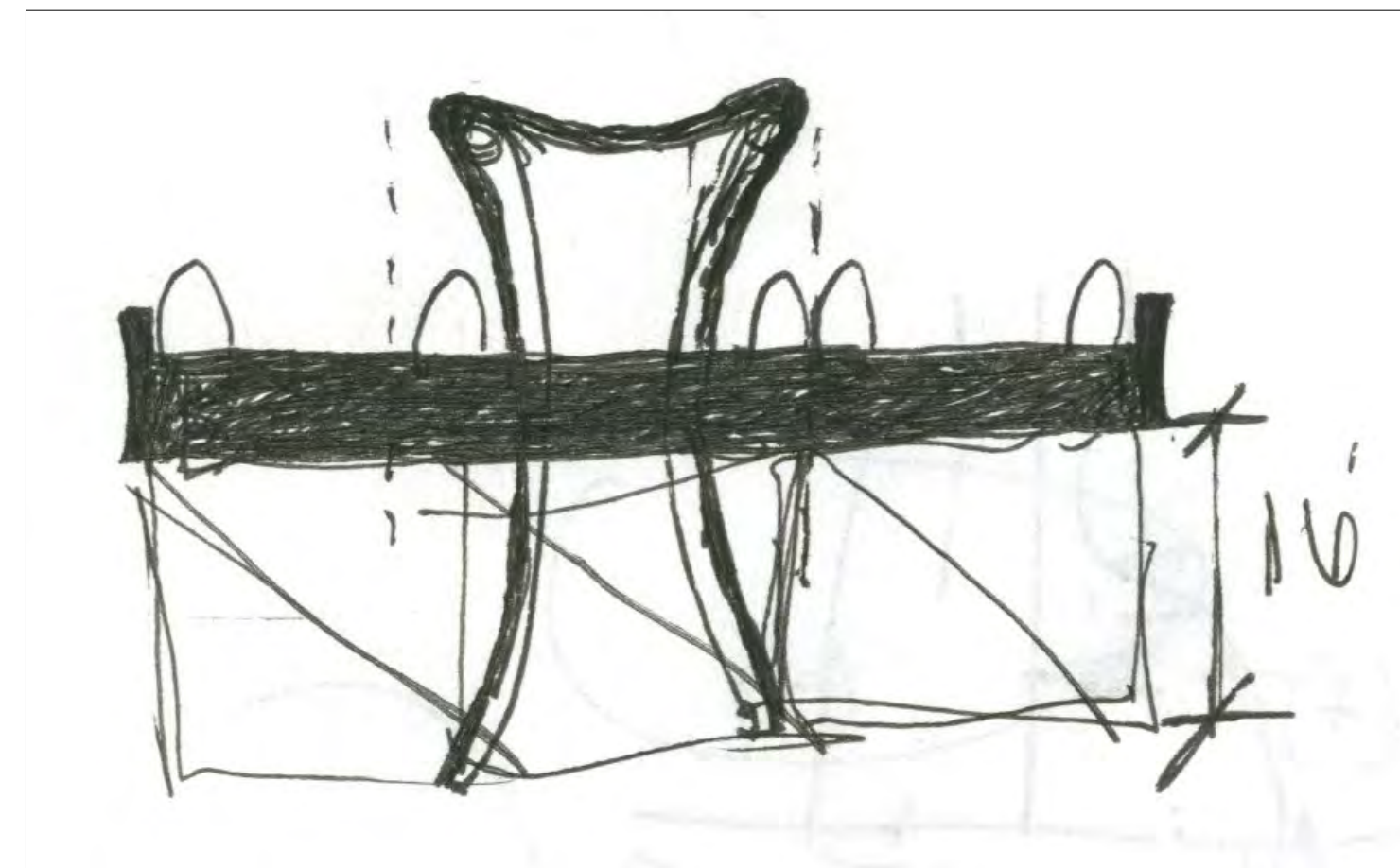
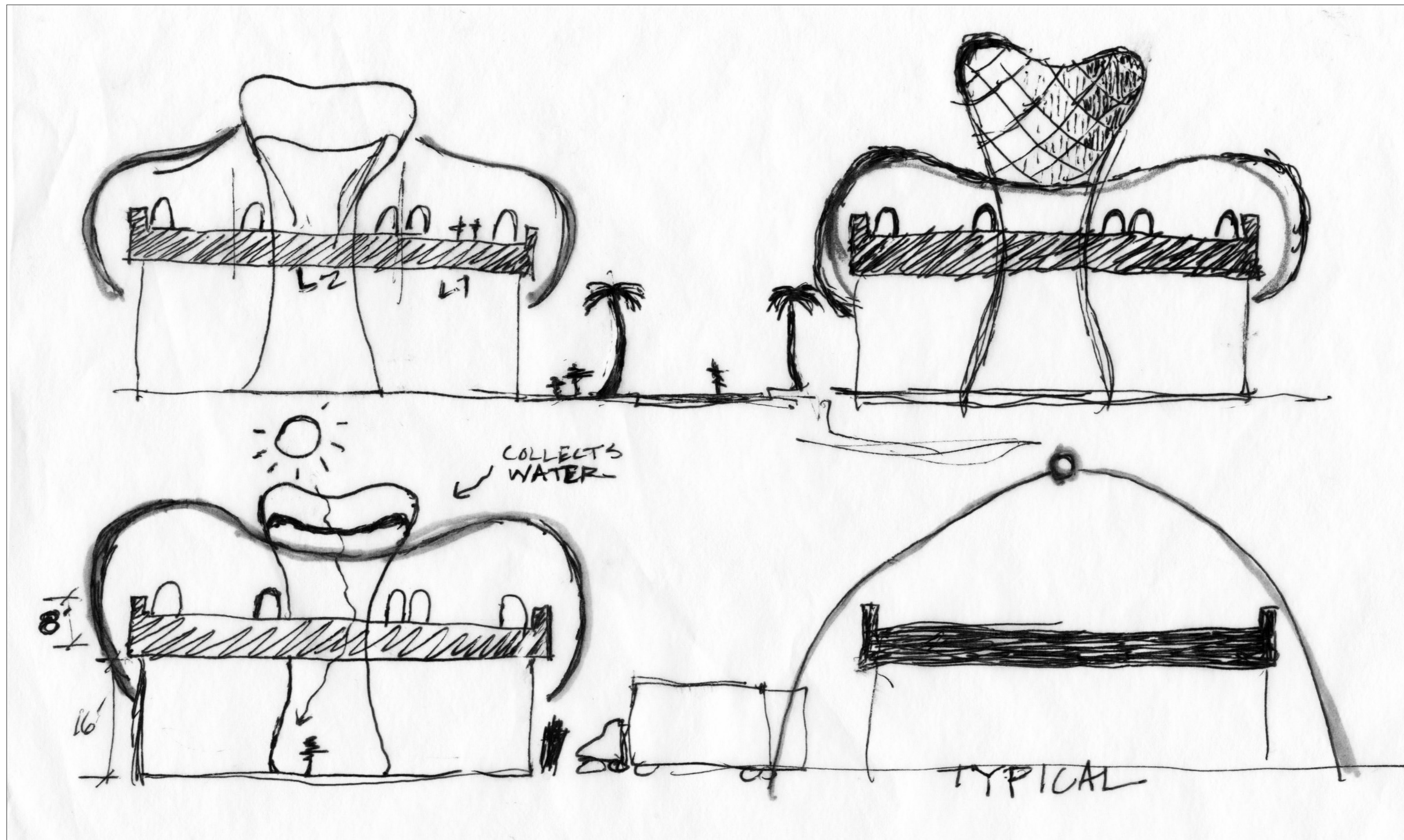
Rail Mechanical - 16,000 Sq. Ft.
electrical power, maintenance equipment

Restrooms - 18,000 Sq. Ft.
multiple locations, single sex bathrooms, exterior rest
rooms and private employee rest rooms

Bicycle Housing - undefined
*exterior accessed bicycle housing will encourage a
healthy method arriving and departing from the station

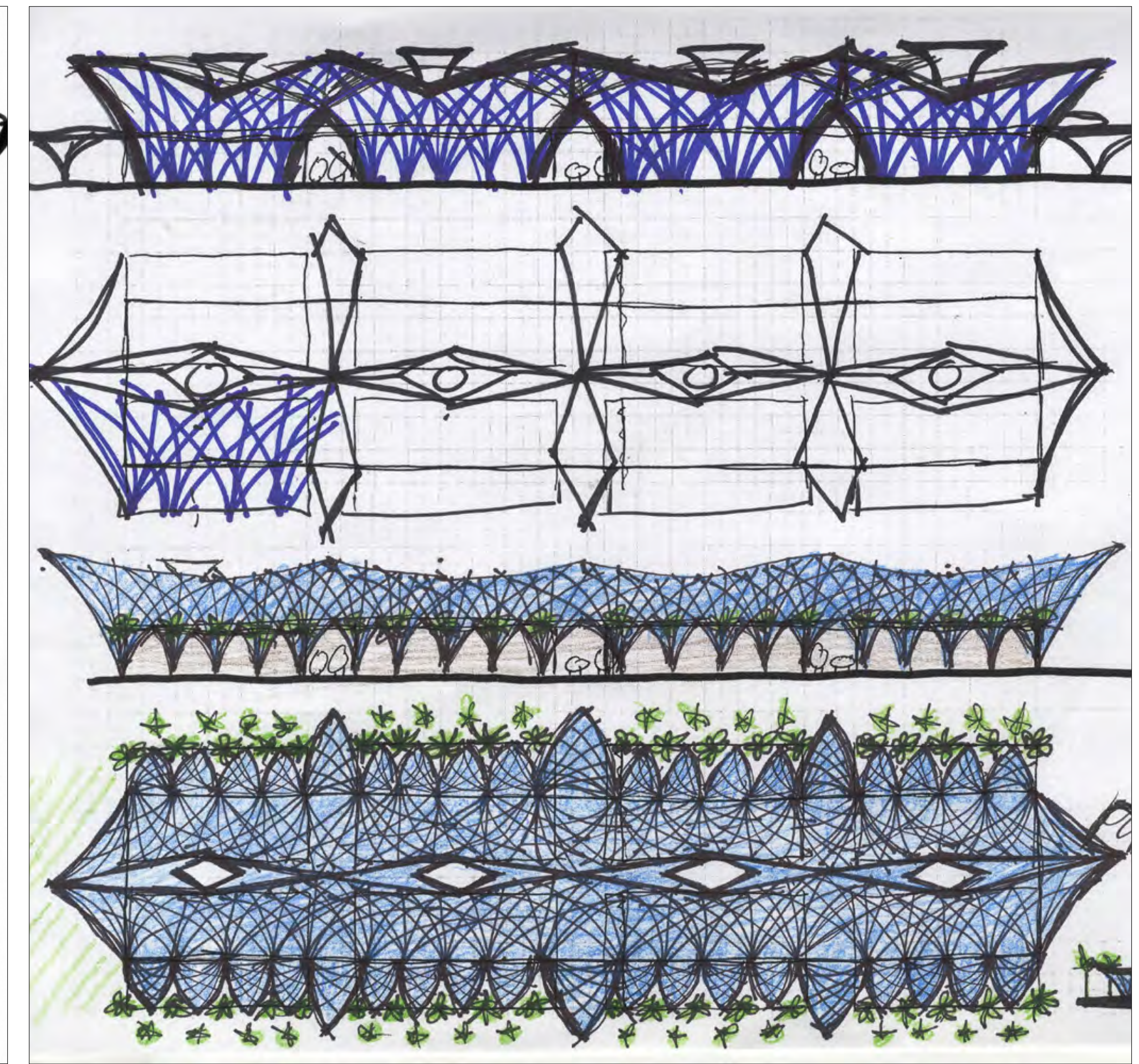
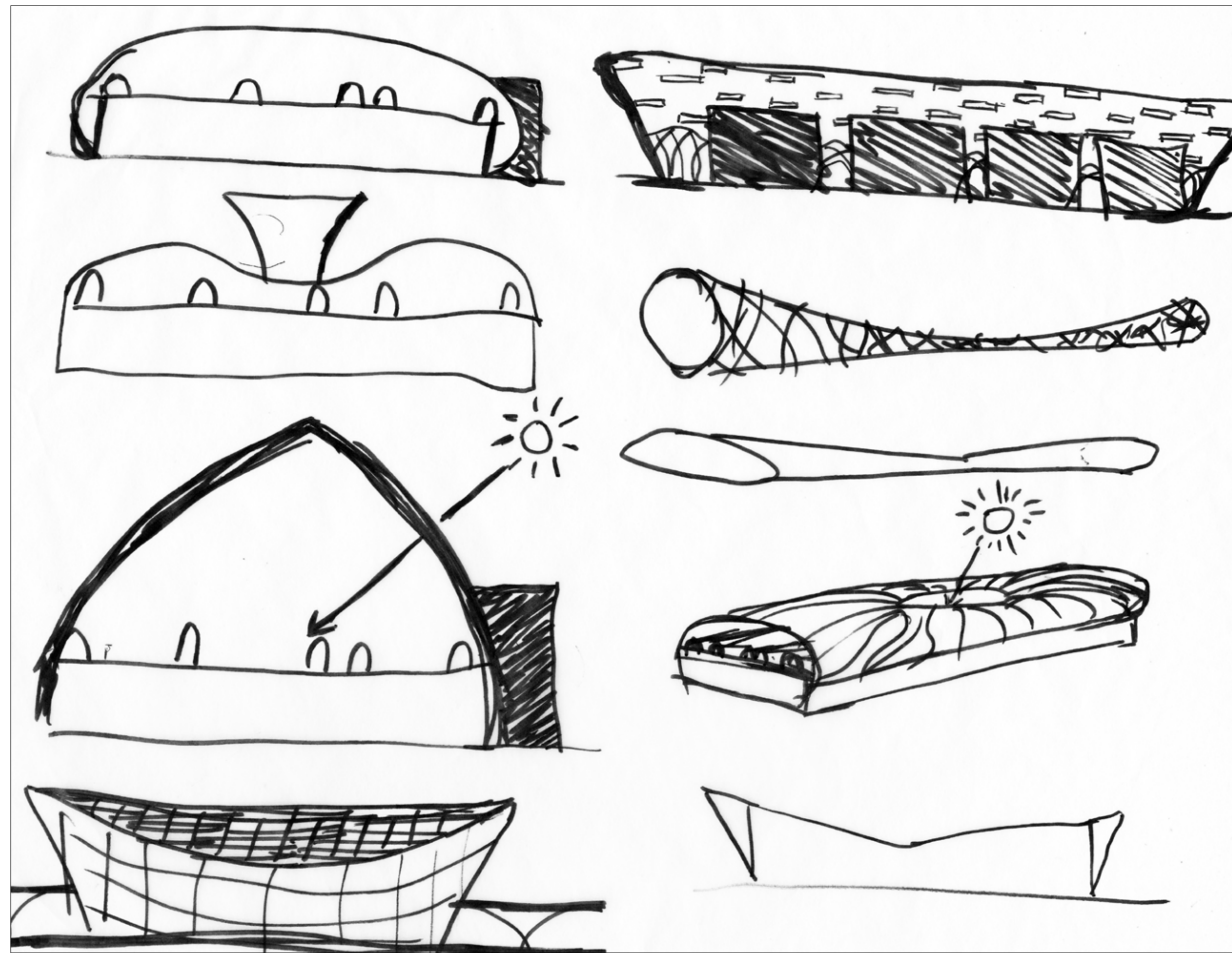
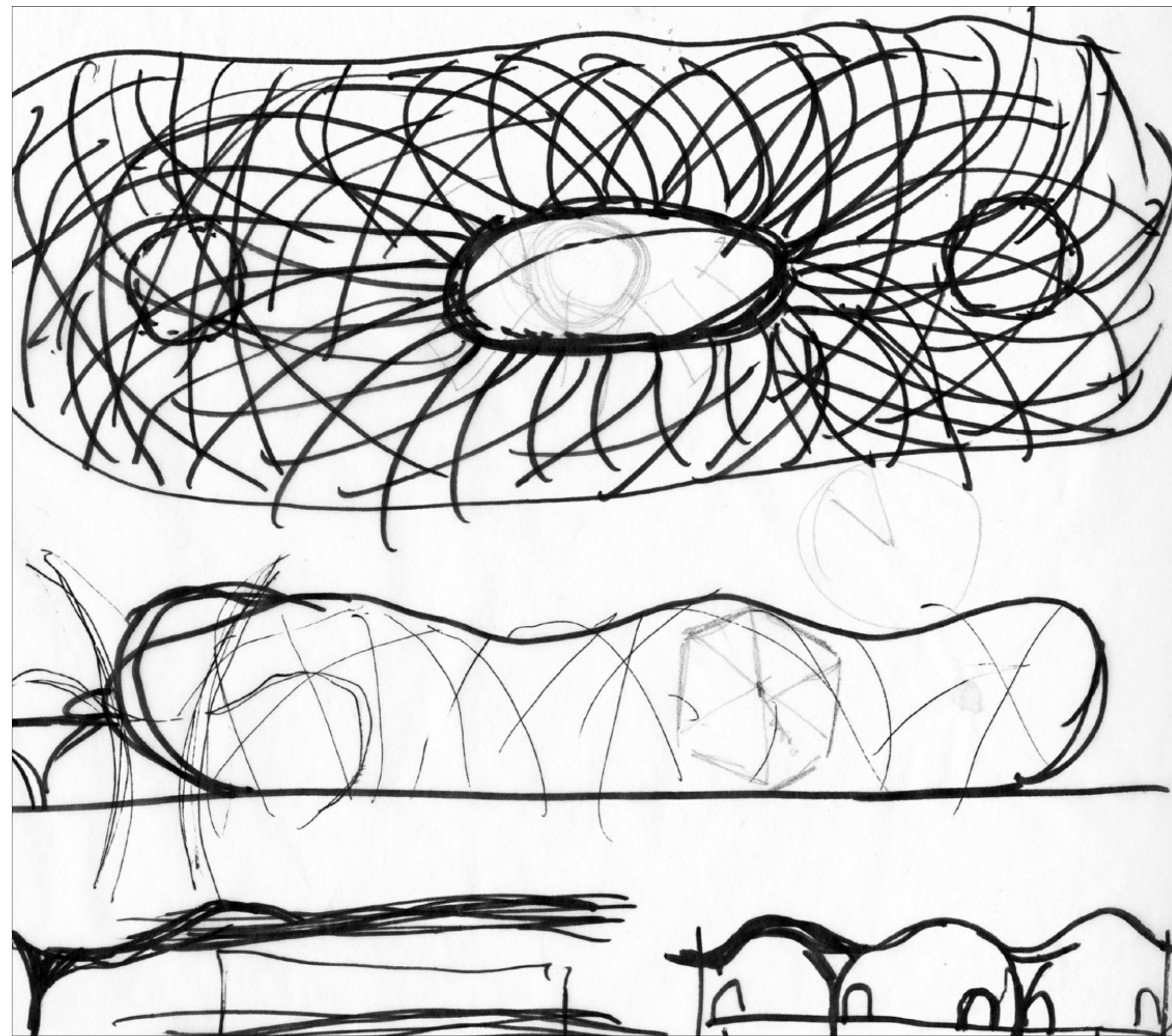
Green Spaces - undefined
*green spaces both indoors and outdoors will be es-
sential to establishing a healthy connection to nature

CONCEPTUAL DESIGN



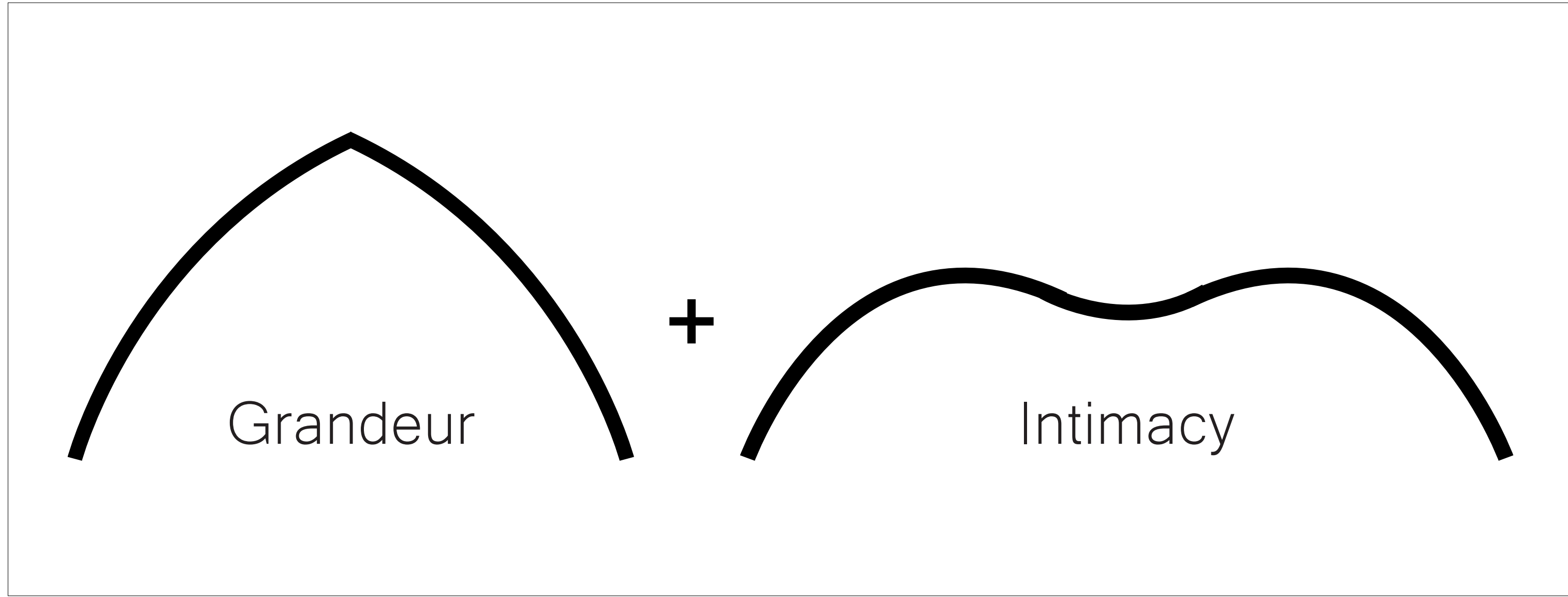
Concepts

Tropical, Energetic, Grand, Welcoming, Intimate, Dynamic

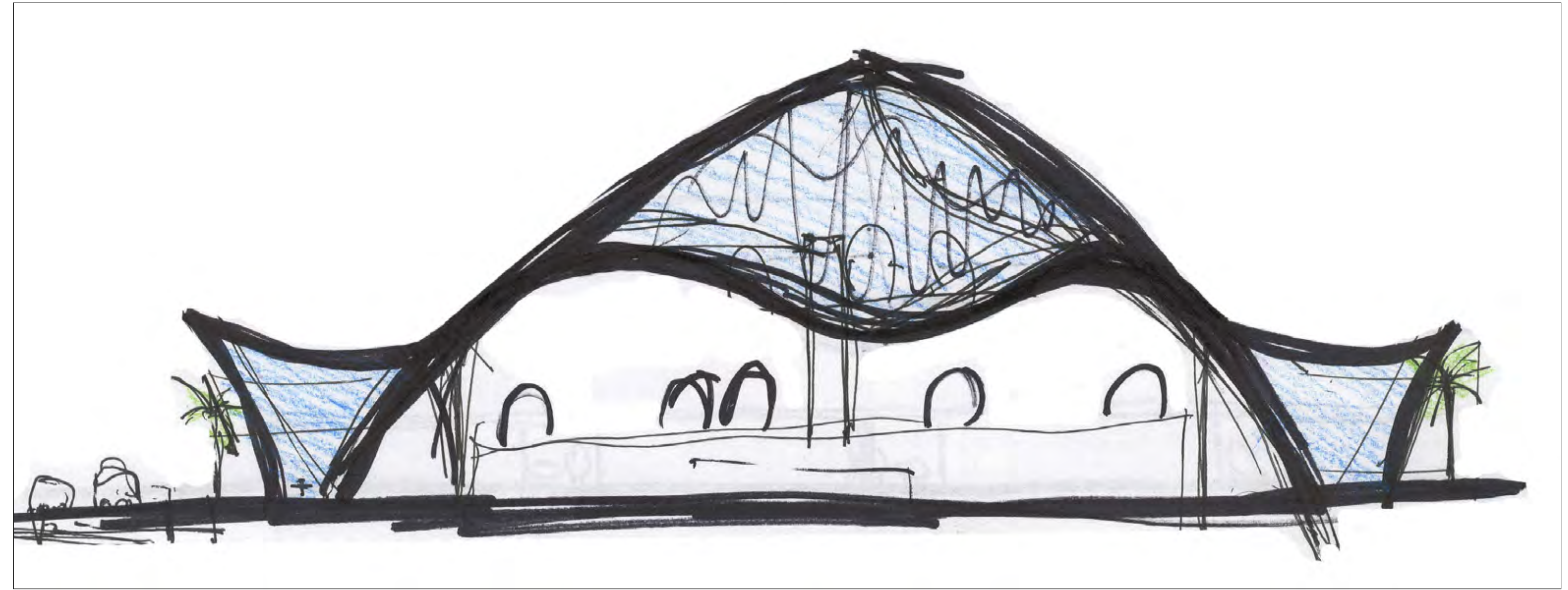


Concepts

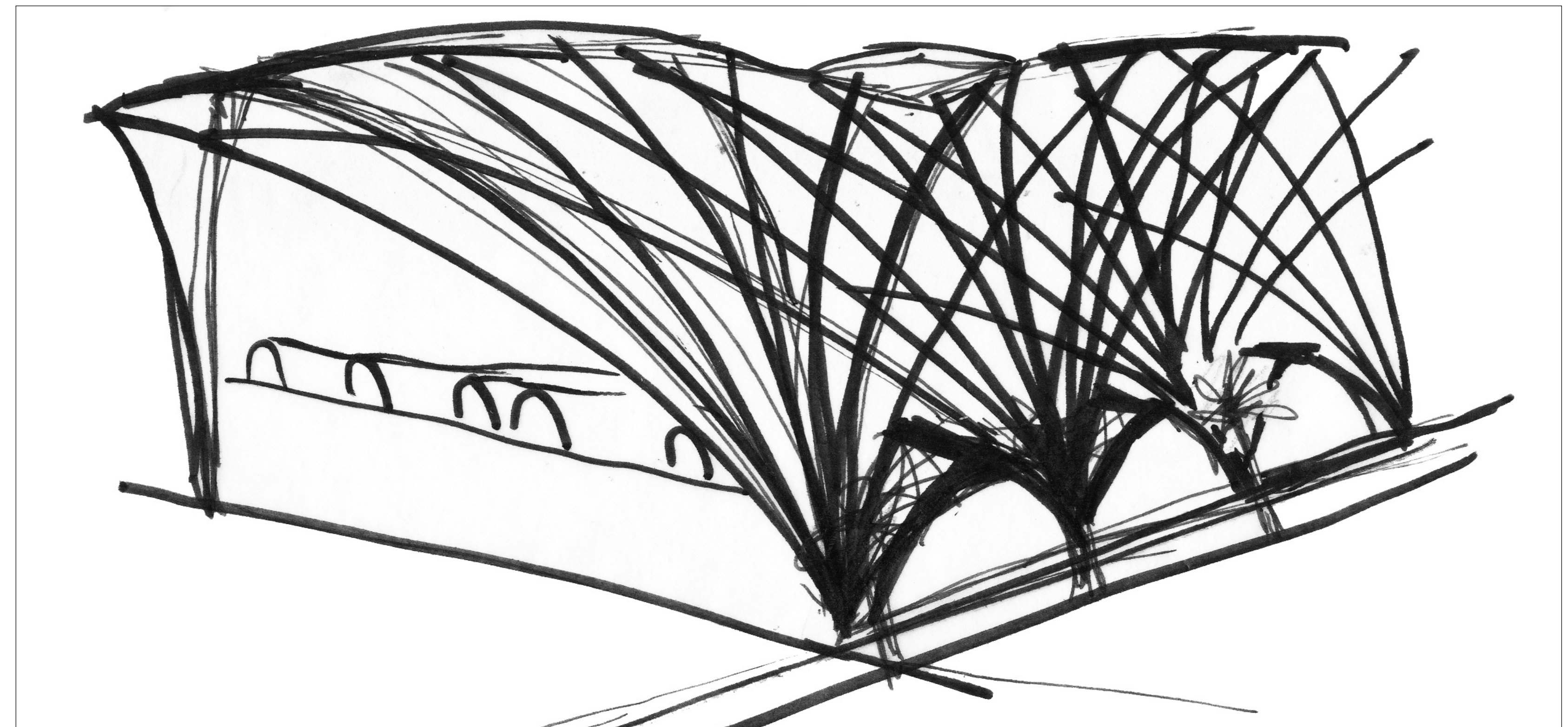
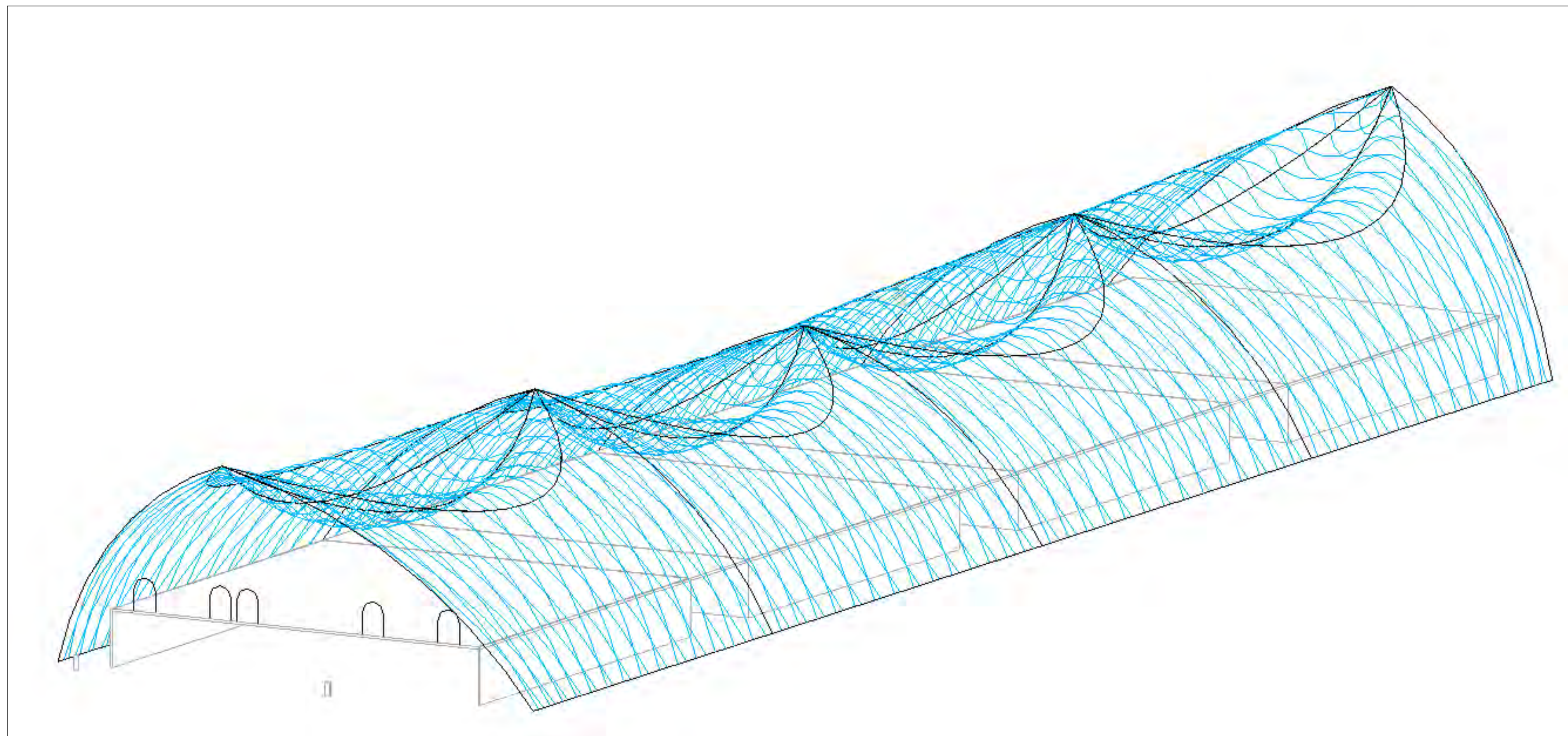
Elevated platform would eliminate dangerous at-grade crossings



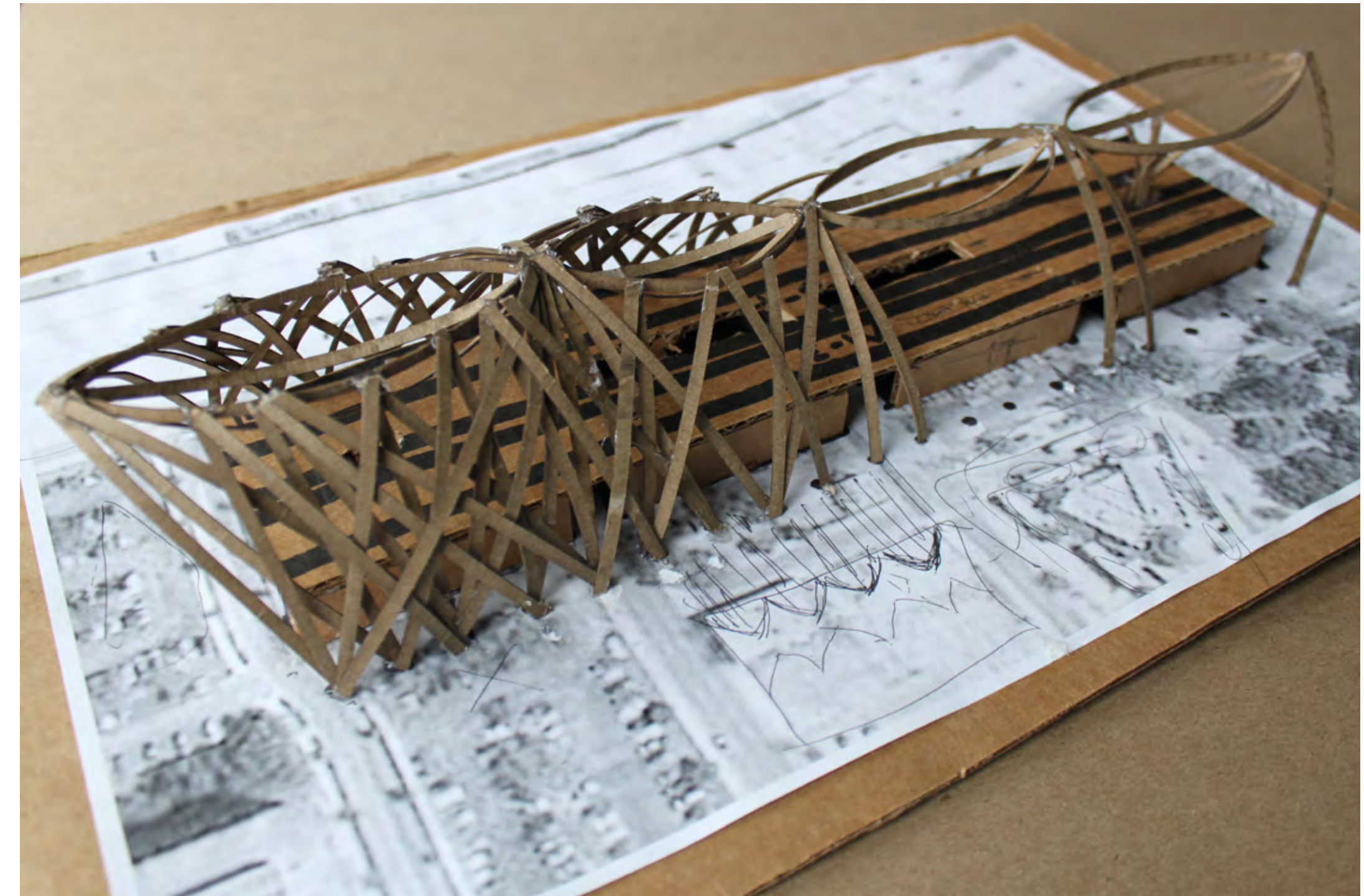
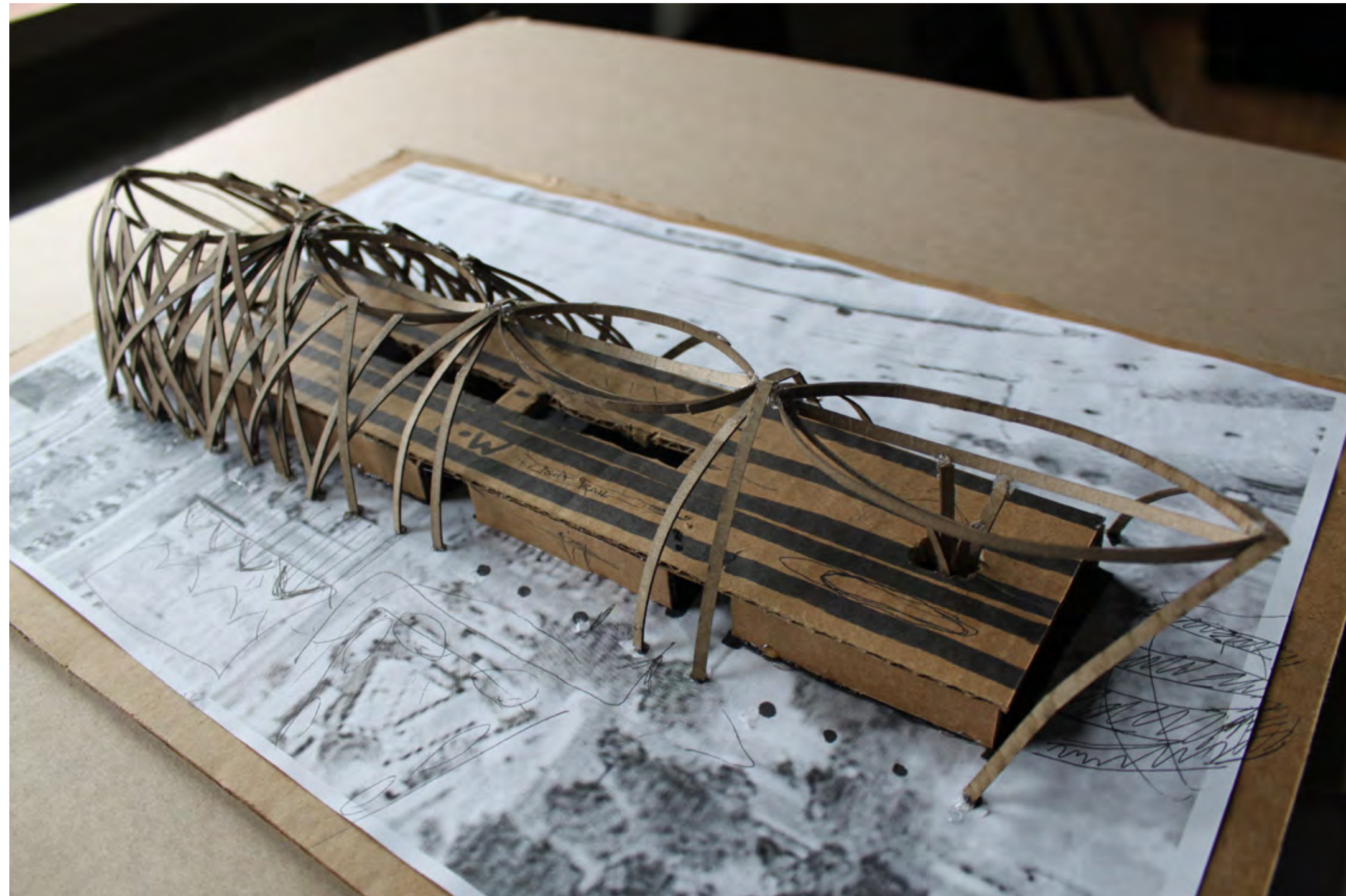
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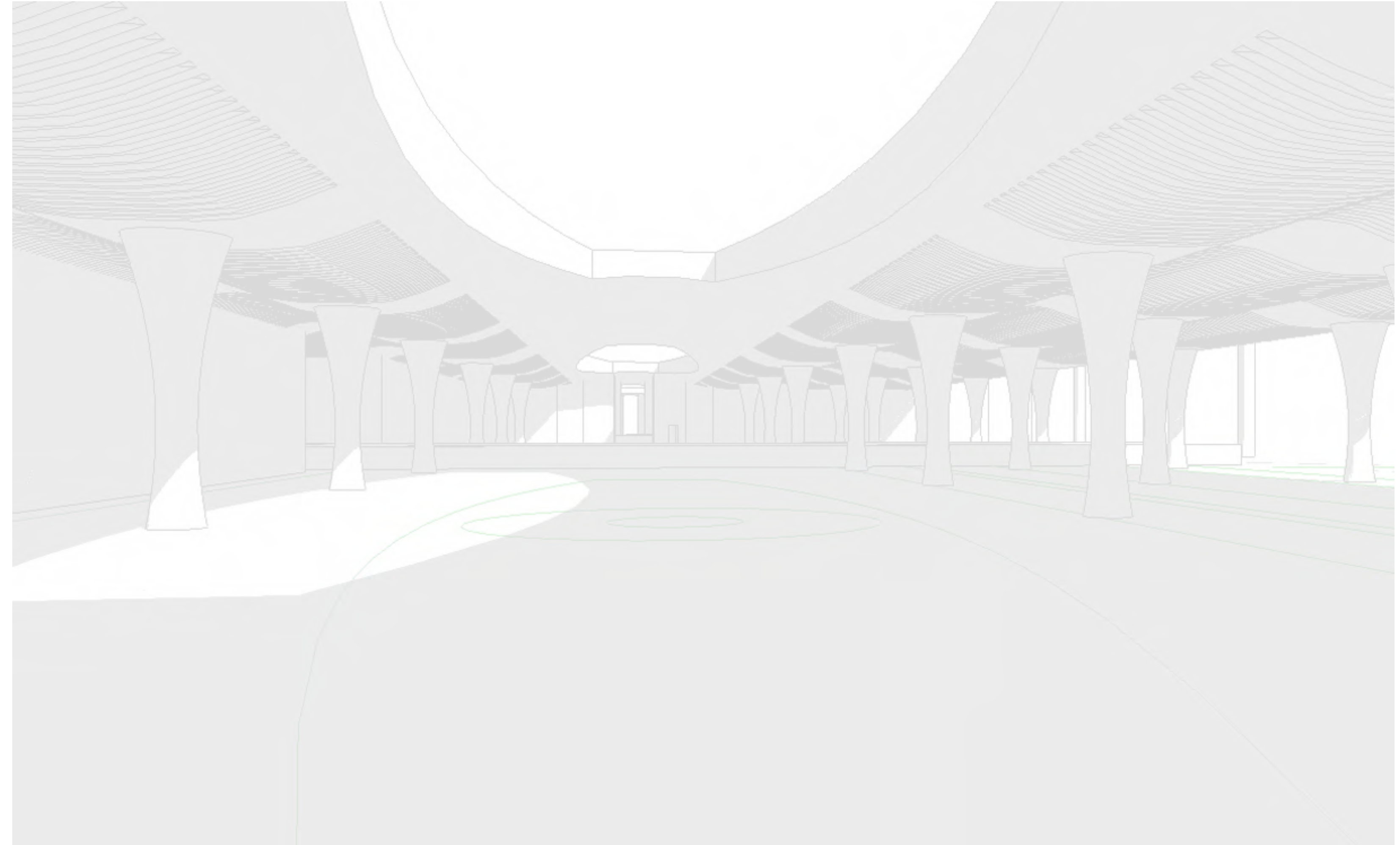
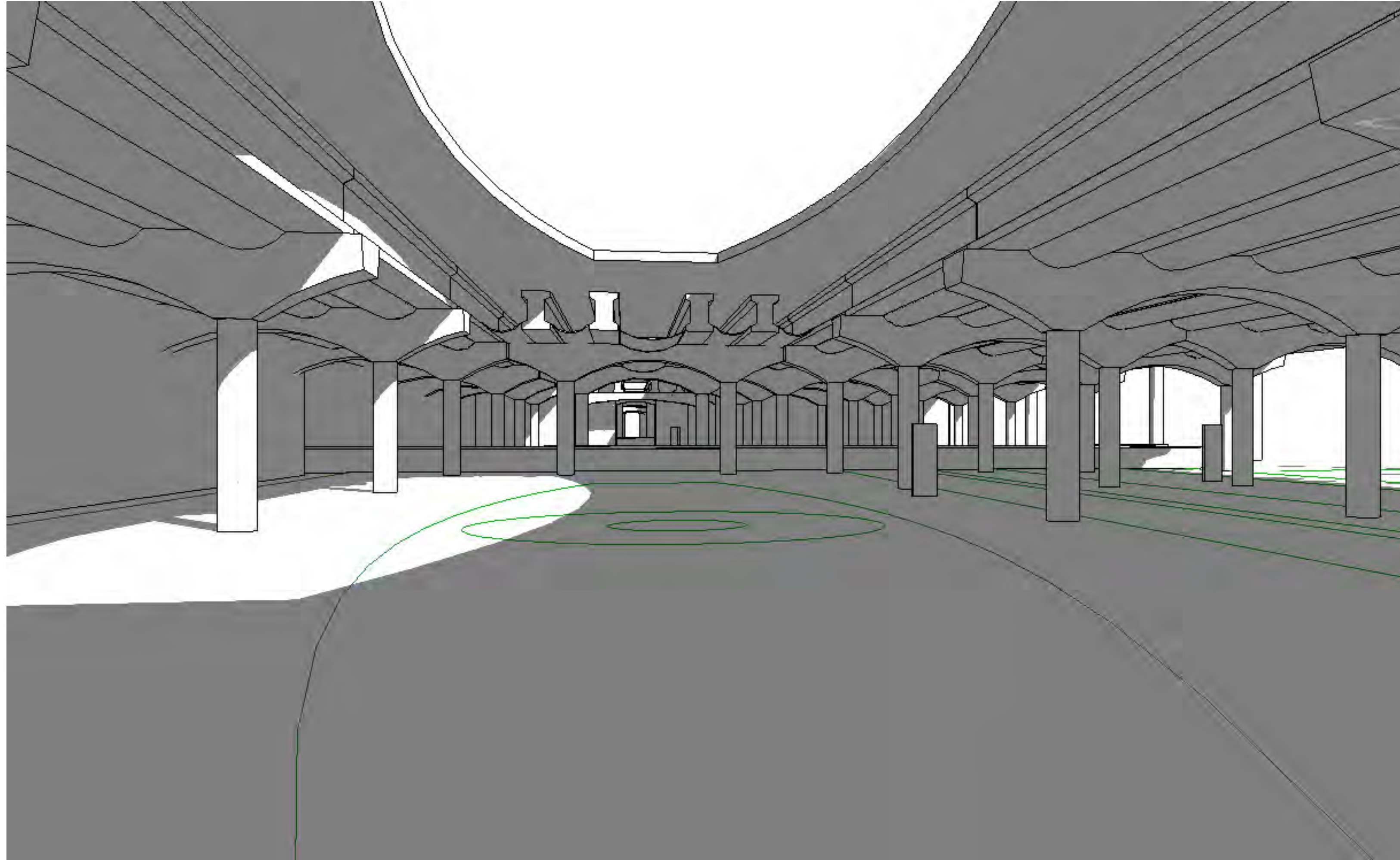
Form



Form

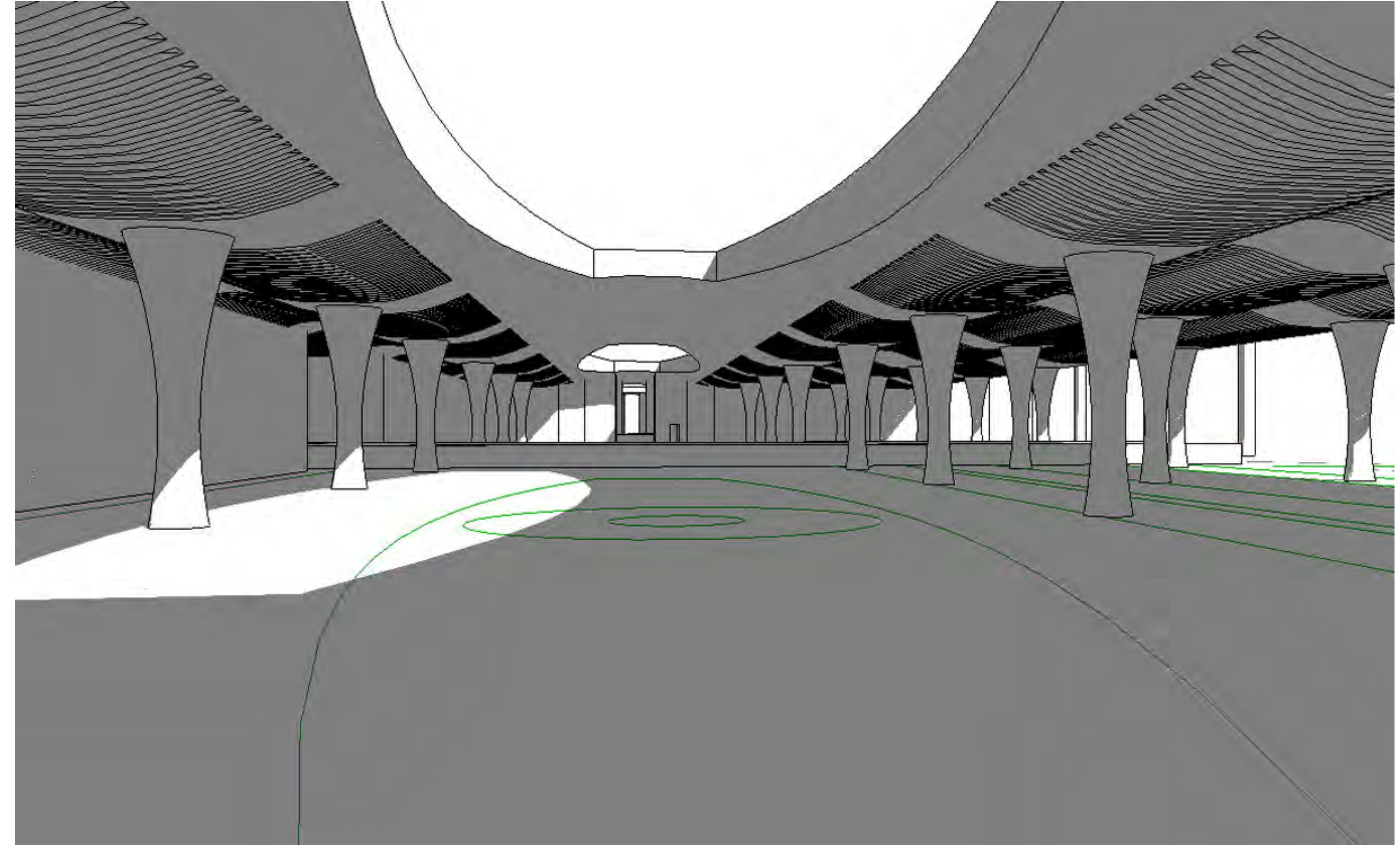


Model



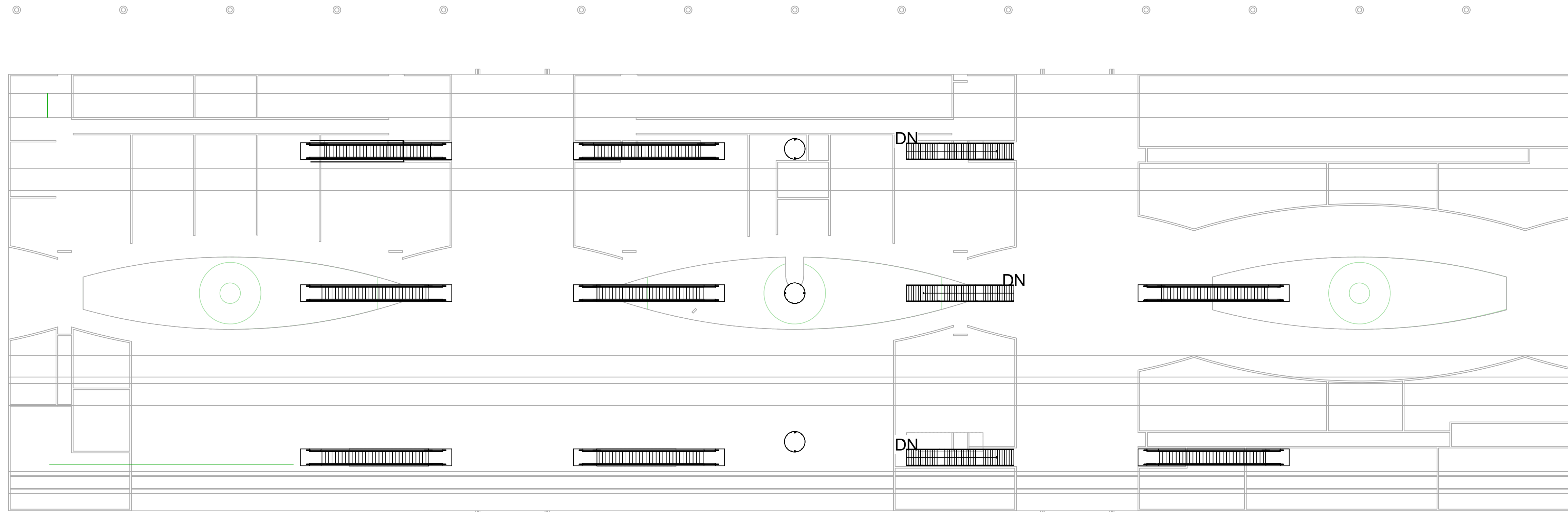
Structure

Support or Sense of Place?

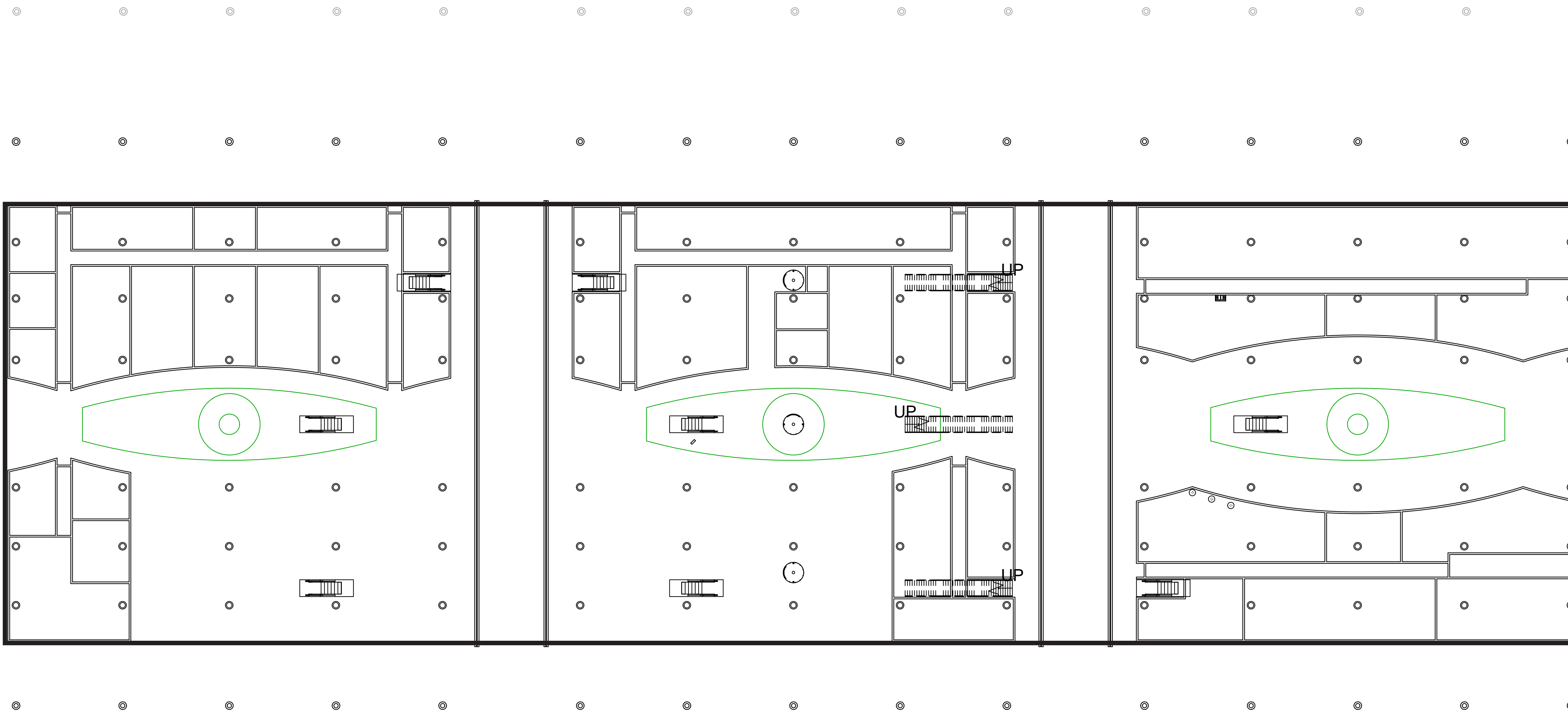


Structure

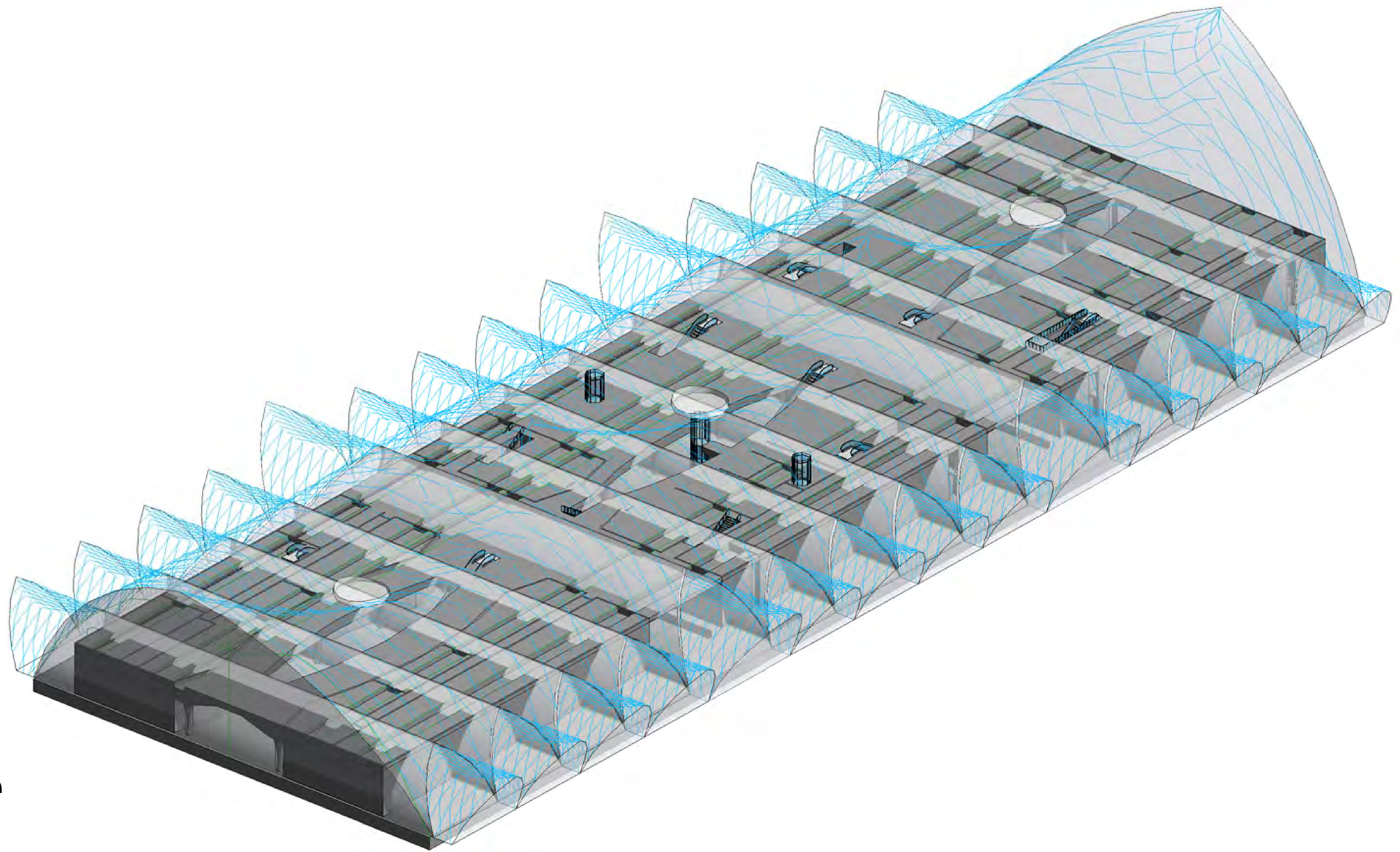
Sense of Place.



Rail Platform

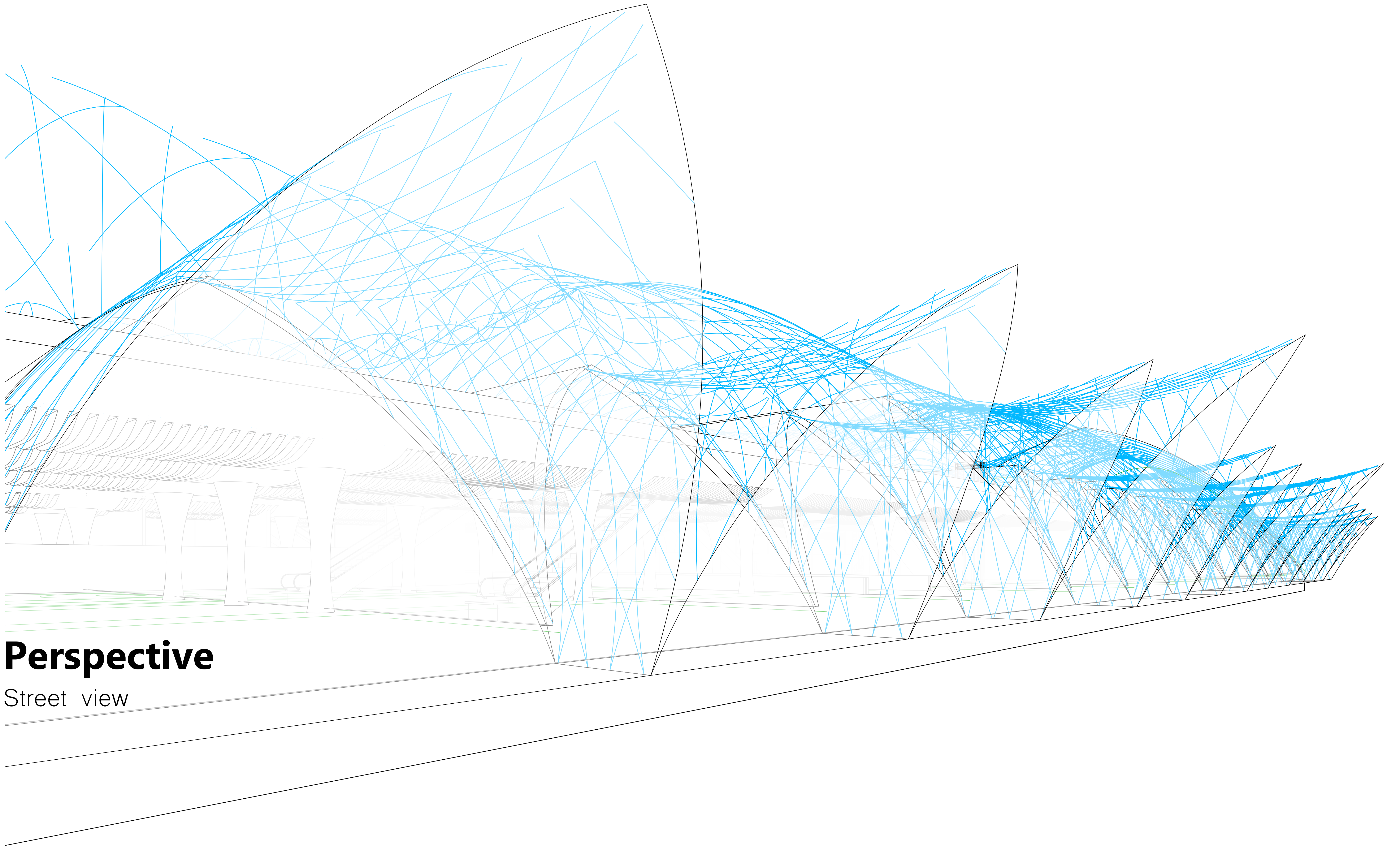


Ground Level



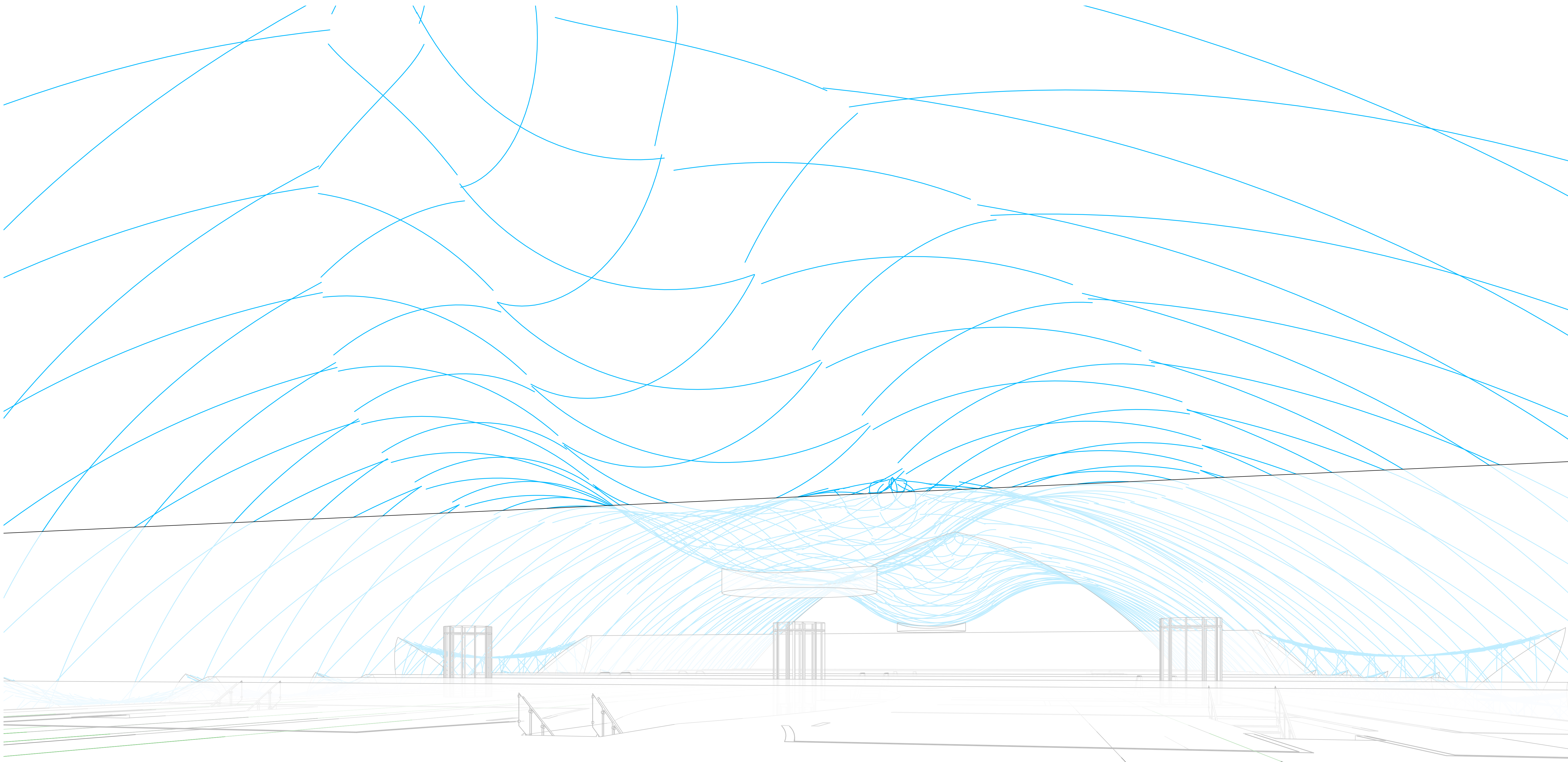
Perspective

Aerial



Perspective

Street view



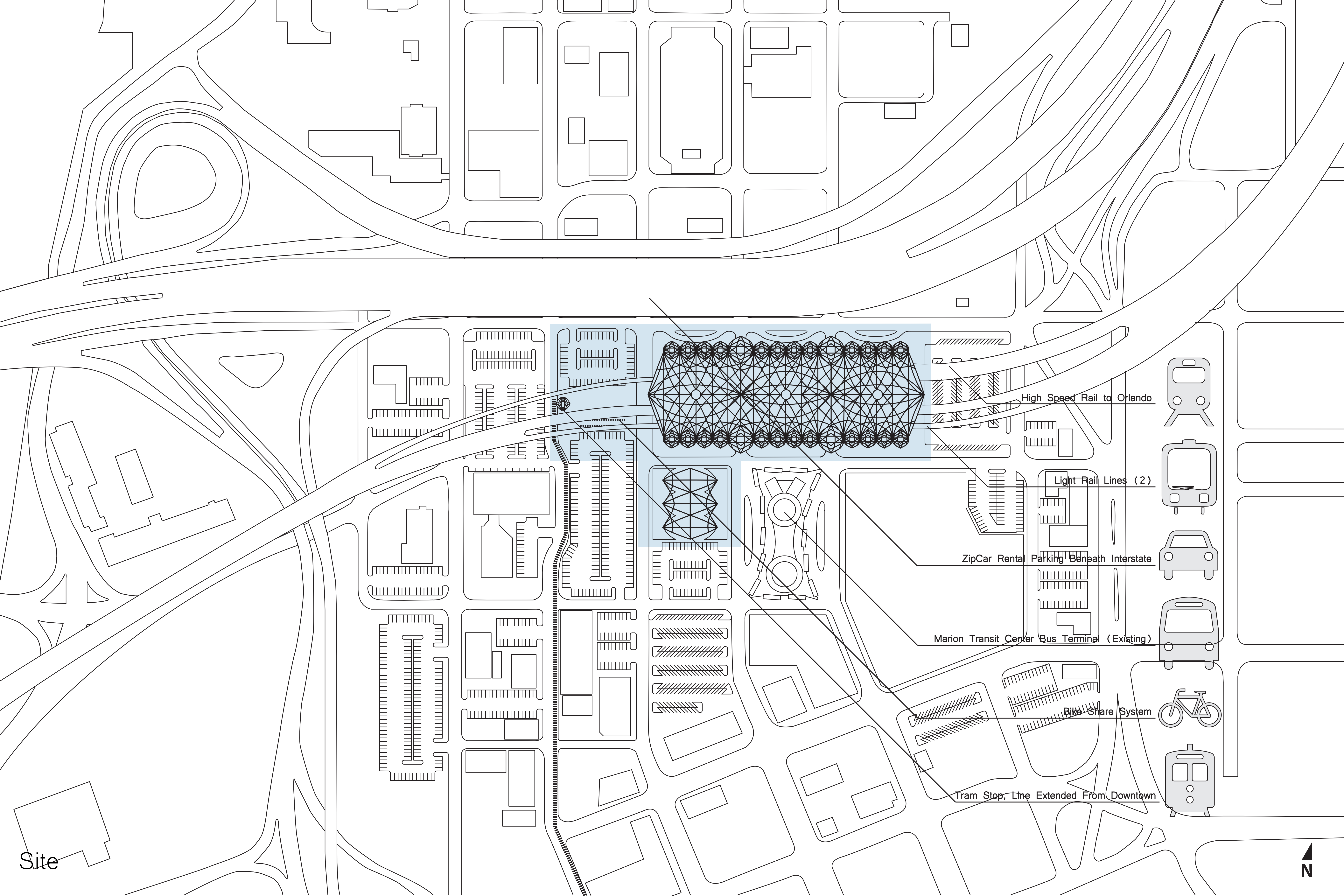
Experience

Upper Platform

Midterm Feedback

- Emphasize the sustainable strategies
- Develop material pallet
- Define site interaction around station

FINAL DESIGN



High Speed Rail to Orlando

Light Rail Lines (2)

ZipCar Rental Parking Beneath Interstate

Marion Transit Center Bus Terminal (Existing)

Bike Share System

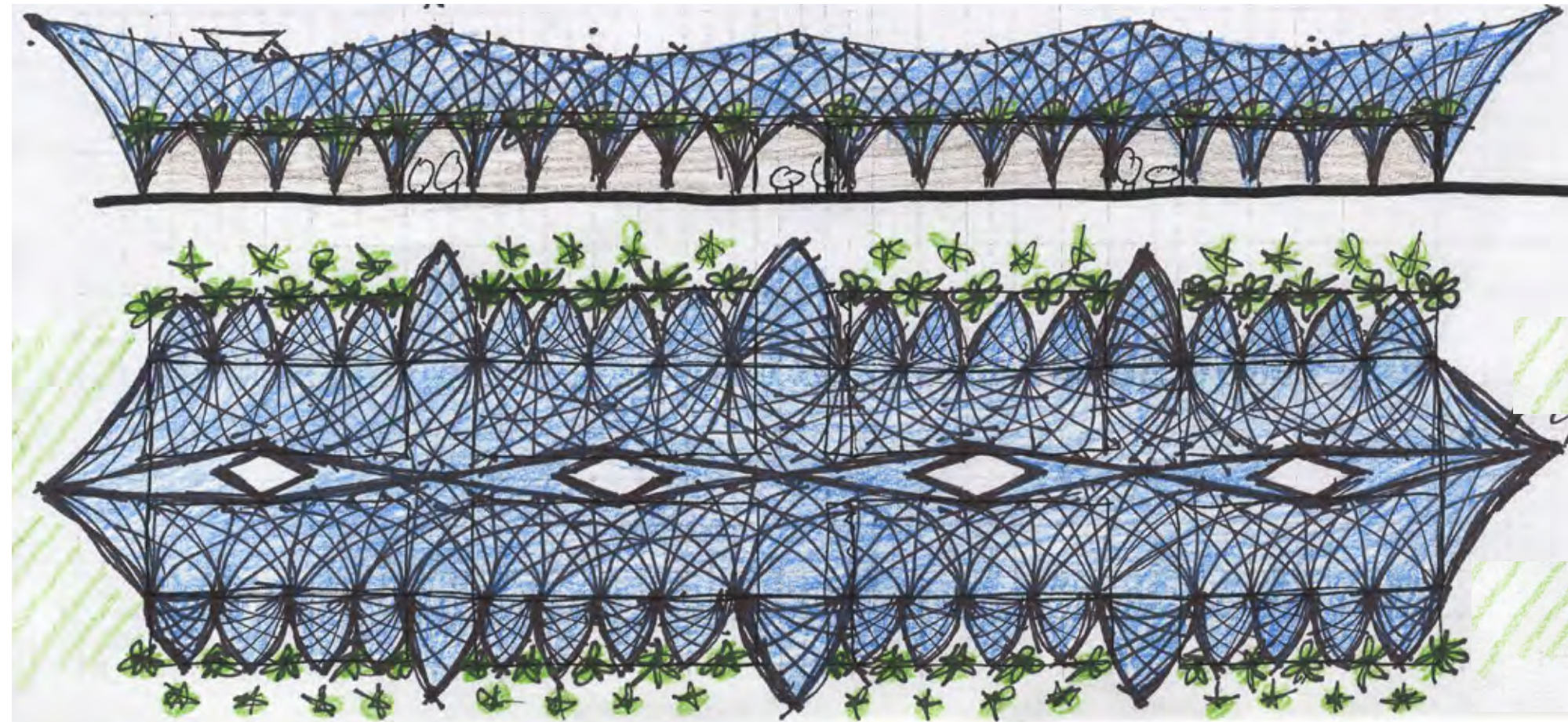
Tram Stop, Line Extended From Downtown

Site





Aerial



Elevation



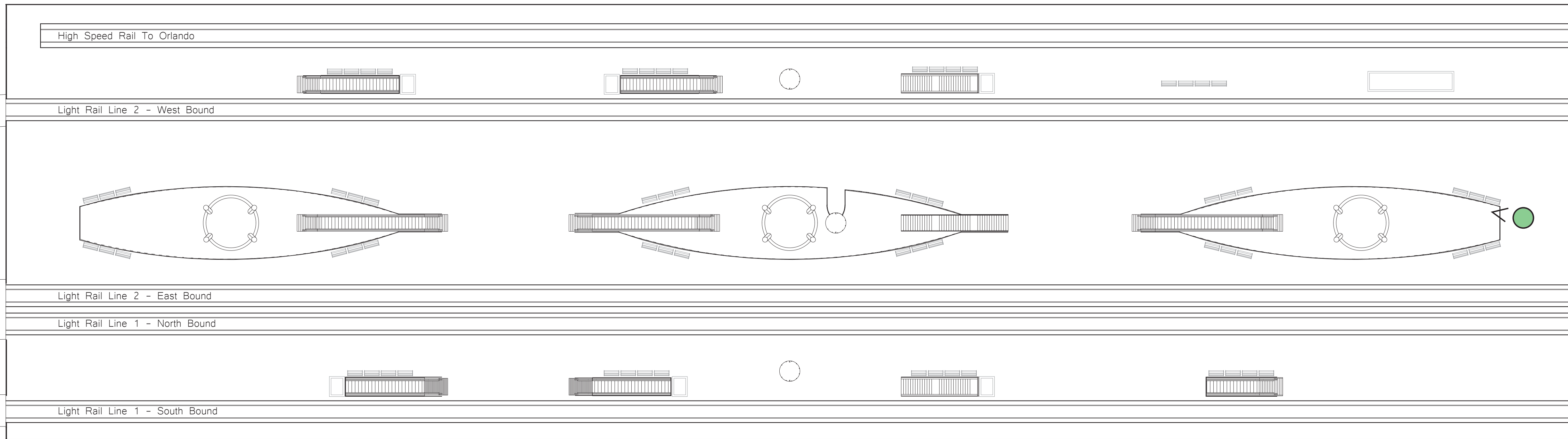
Flexible Plaza – Farmers Market



Flexible Plaza – Social Space



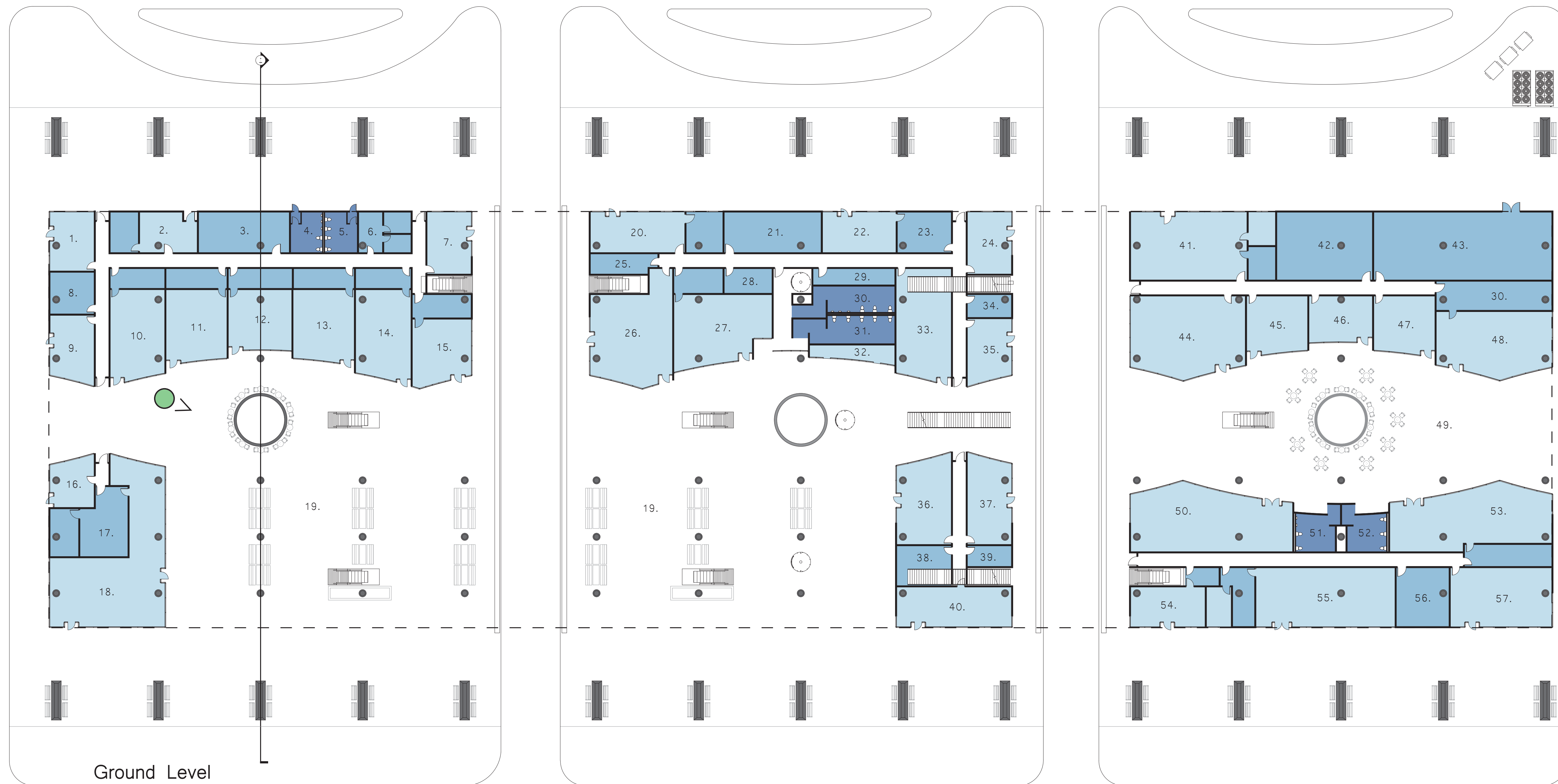
Flexible Plaza – Outdoor Concert



Rail Platform Level

Station Spaces:

1. Parking Office
2. Receiving/Storage
3. Mechanical
4. Mens Restroom
5. Womens Restroom
6. Rail Office
7. Rail Business Office
8. Storage
9. Bike Share Office
10. Business Incubator #1
11. Business Incubator #2
12. Business Incubator #3
13. Business Incubator #4
14. Business Incubator #5
15. Restaurant
16. Tram Ticket Office
17. Storage/Mechanical
18. Convenience Store
19. Agora/Market Space
20. Zip Car Rental Office
21. Mechanical
22. UPS Shipping Office
23. Package Shipment
24. Book Store
25. Storage
26. Internet Cafe
27. Train Tickets/Information
28. Mechanical
29. Mechanical
30. Mens Restroom
31. Womens Restroom
32. ATM/Currency Exchange
33. Bank
34. Mechanical
35. Electronics Shop
36. Clothing Retail
37. Travel Agency
38. Mechanical
39. Storage
40. Ice Cream Shop
41. Police Department
42. Mechanical
43. Rail Hydraulics
44. Restaurant
45. Retail
46. Souvenir Shop
47. Luggage Shop
48. Cuban Restaurant
49. Dining Plaza
50. Art Gallery
51. Mens Restroom
52. Womens Restroom
53. Cafe/Restaurant
54. Cell Phone Shop
55. Clothing Retail
56. Storage
57. Chapel

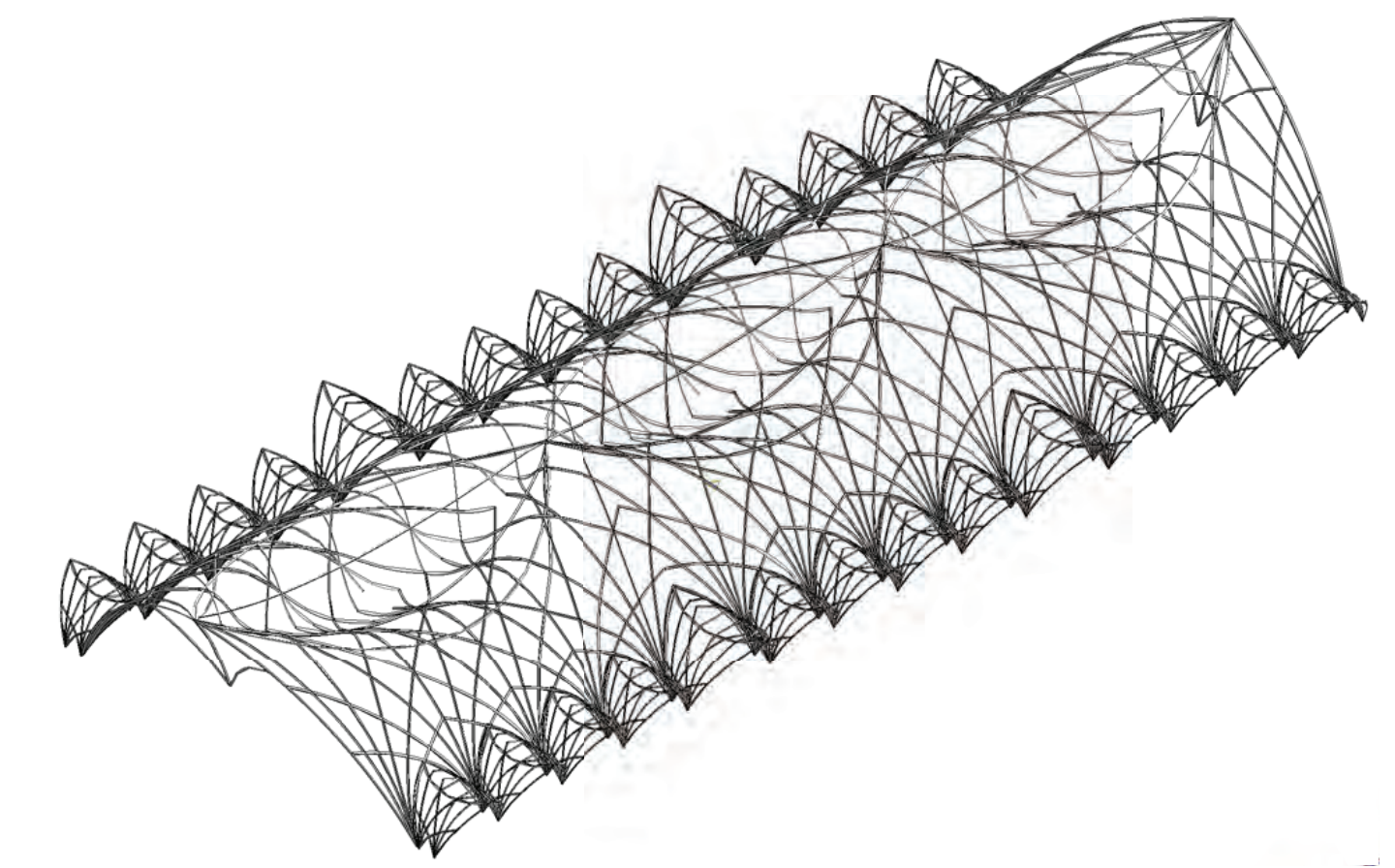




Chilled Water Piping for Air Conditioning



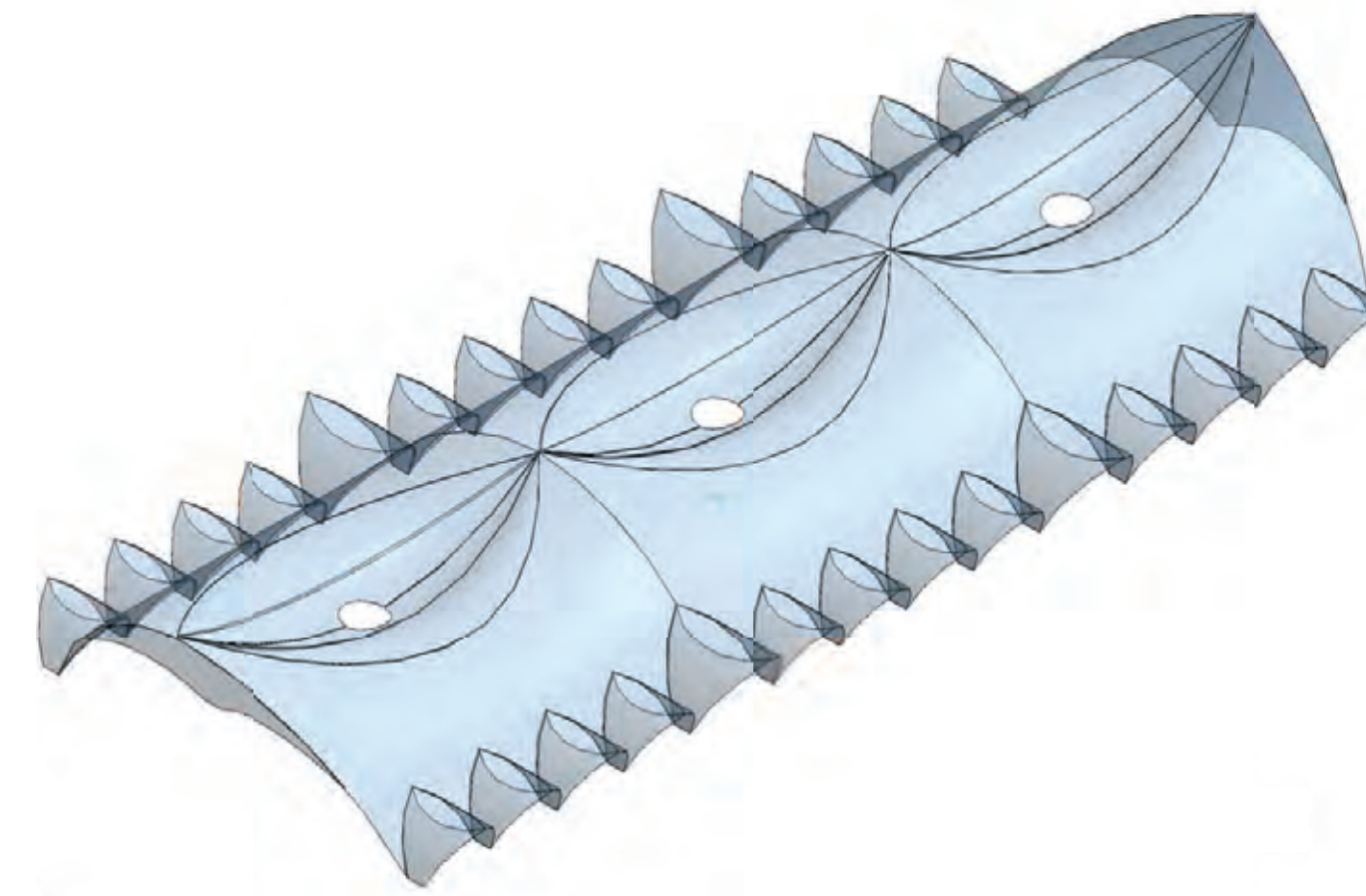
Primary Structural Steel Members



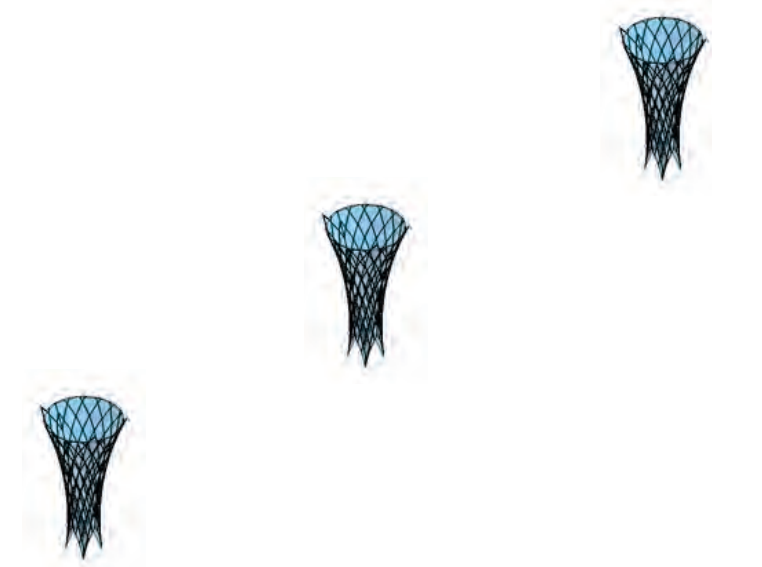
Secondary Structural Mullion System



Concrete Rail Platform

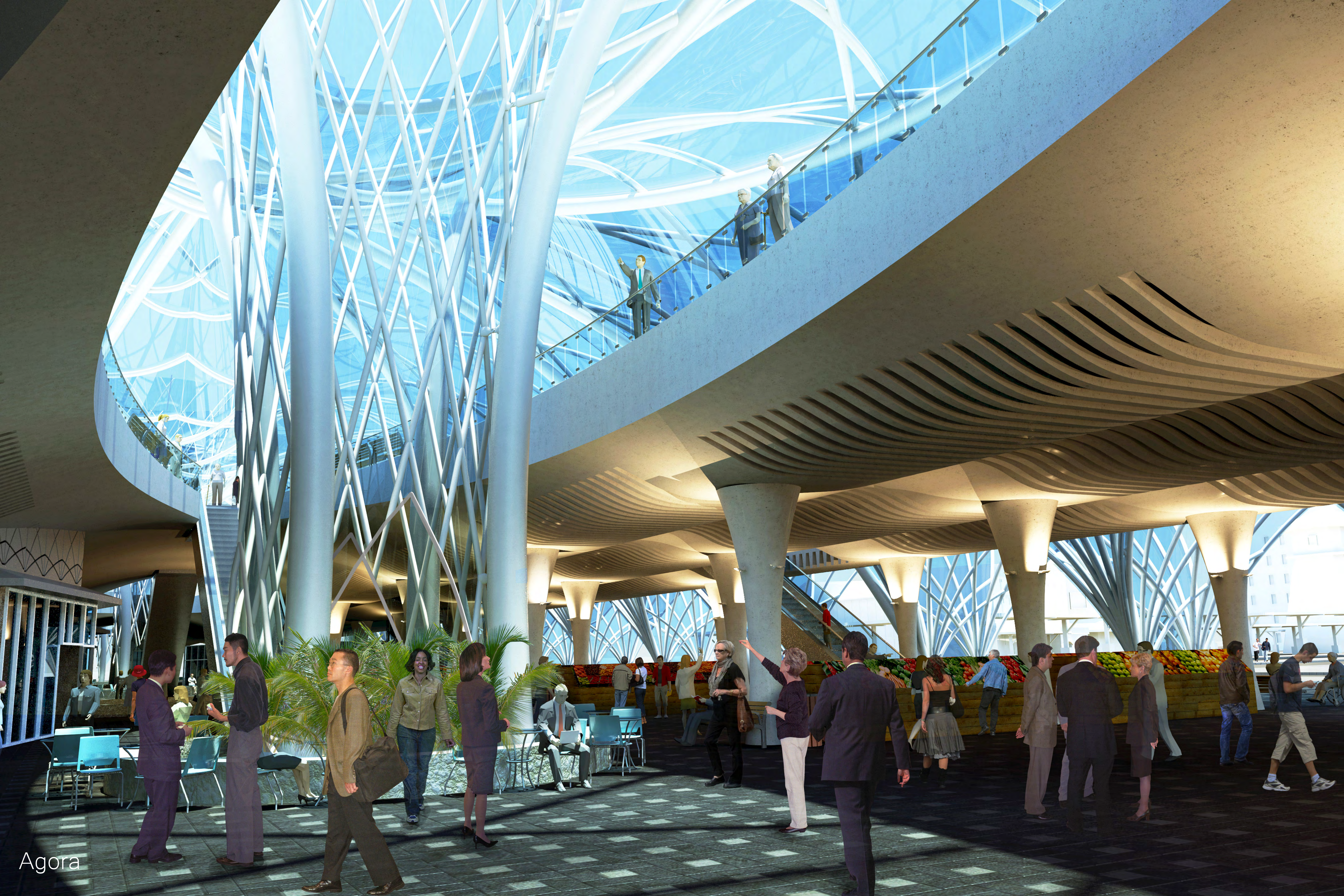


Photovoltaic Integrated Glazing



Water Collecting Passive Cooling Chimneys



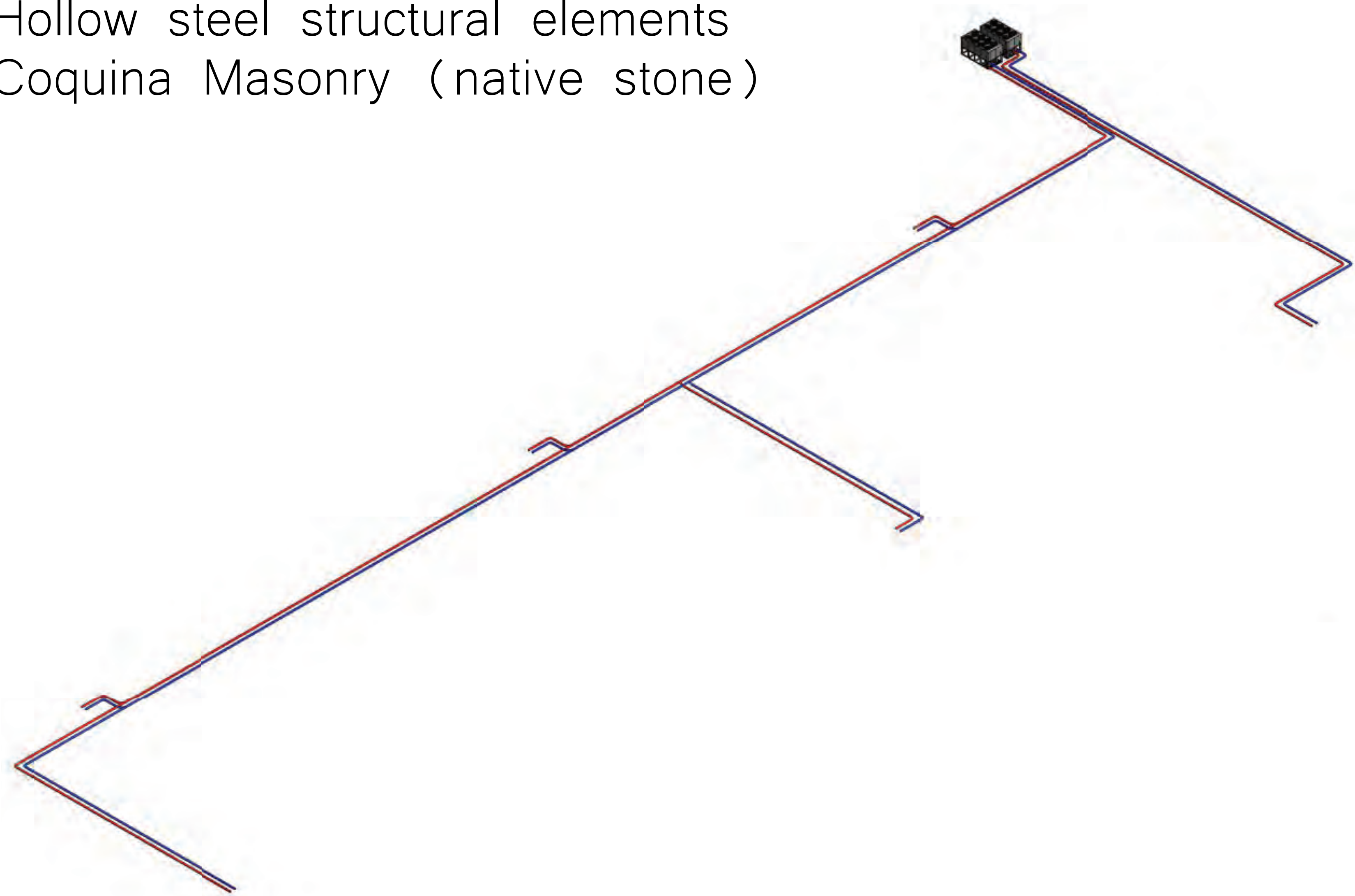




Rail Deck

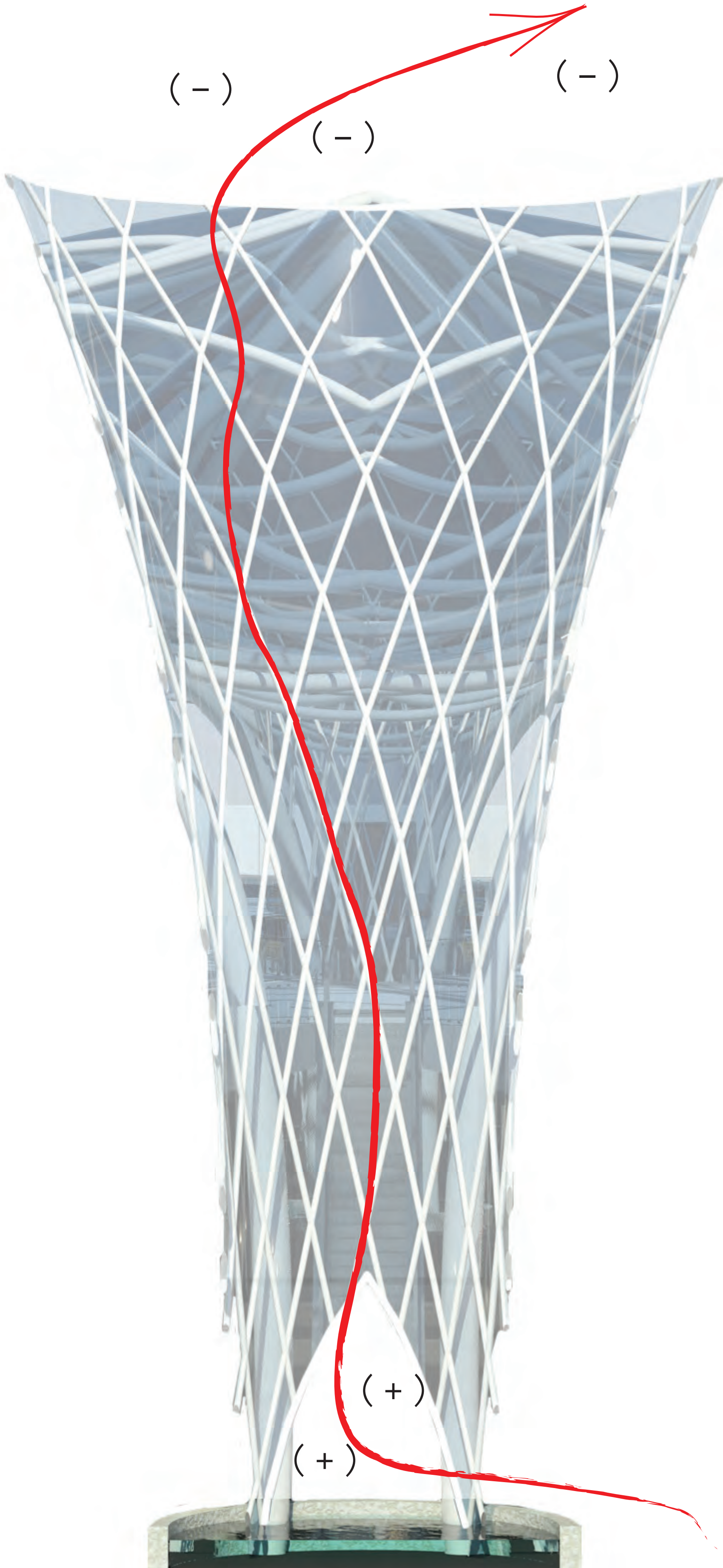
Materials:

- Fiberglass reinforced concrete
- Photovoltaic glazing
- Hollow steel structural elements
- Coquina Masonry (native stone)



Chilled Water Piping for Air Conditioning

Cooling Chimney Detail



Evaporative Cooling

Outcome

- One car households
- Bicycling and walking to become primary modes of transportation, supported by light rail when needed
- For a sense of community, a strong sense of place to be established. Social Equity
- Dignity and opportunity to be restored to the people unable to drive or own personal vehicles

What I learned

- Automobile transportation is rather dangerous, and requires more patience than I originally allotted it
- Driving a personal automobile is a privilege and not a right
- I strive to walk and bicycle everywhere I go, living in proximity to where I conduct life
- Major changes to peoples way of life take time and must be implemented incrementally

As far as cultivating content through rail implementation goes; an ancient Chinese proverb offers that the best time to plant a tree was twenty years ago, but the second best time is today.

