

Bus Shelter and Art Installation

Project 3 – Bus Shelter and Art Installation
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528 Design Studio I, MFA1
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Project 3

Bus Shelter Design

Project Brief

Project Brief

This project focused on designing a bus shelter that also functions as a permanent art installation within Madison Square Park. The structure was required to explore the elements of light and form, creating an experience that could be appreciated from both the interior and exterior. The project encouraged the integration of architectural design and artistic expression while maintaining sensitivity to the park's existing landscape.

The design process involved research, precedent studies, conceptual sketches, and model development. The goal was to create a space that provides shelter, visual interest, and a meaningful connection between art, architecture, and the urban environment.

Materials

The models were created using pipe cleaners, artificial plants, paper, tape, clay, cellophane, pencils, AutoCAD, chipboard, acrylic, black paint, sharpie, markers, 3D pen filament, hot glue, wire, rubber cement, model lamp posts, paper, and glue sticks.

Objectives

The goal of this project is to understand how form and light can be used to create a cohesive and meaningful public space. Through exploration of proportion, transparency, and structure, the design expresses how functional architecture can also serve as art. The project encourages experimentation, creativity, and integration of design principles within a real-world context.

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Research

Research

I began by reviewing the recommended inspiration sources and selected one to incorporate into my concept board, which I clearly labeled. I then expanded my research using *Design: The Leading Hotels of the World* (Monacelli), drawing inspiration from the way hospitality spaces integrate structure, light, and atmosphere. This helped shape my approach to creating a form that feels both functional and sculptural.

Next, I explored examples of contemporary bus stops and pavilion structures to identify shapes that aligned with my concept and informed my initial sketches. Finally, I analyzed photos of Madison Square Park, focusing on the fountain and surrounding planters to understand how natural and built elements interact within the site. These references collectively guided the development of my final design.

Wind Study

Location: Manhattan (Manhattan, NY)

Prevailing winds in this region are primarily westerly / northwesterly, especially in colder months.

In warmer months there are also significant southerly / south-westerly winds.

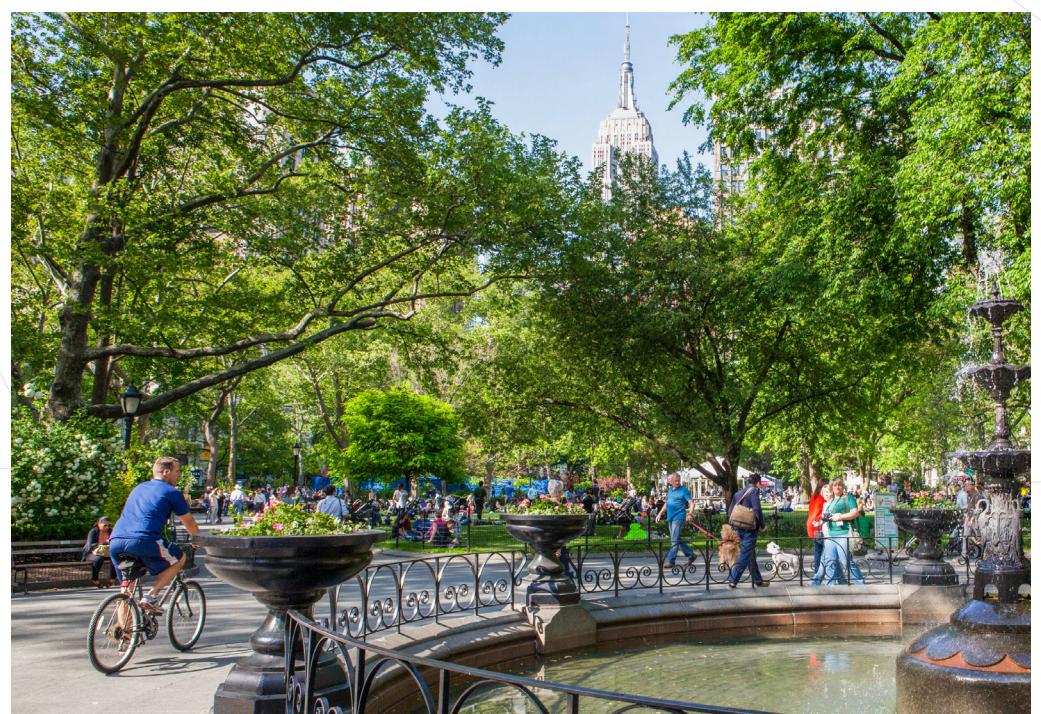
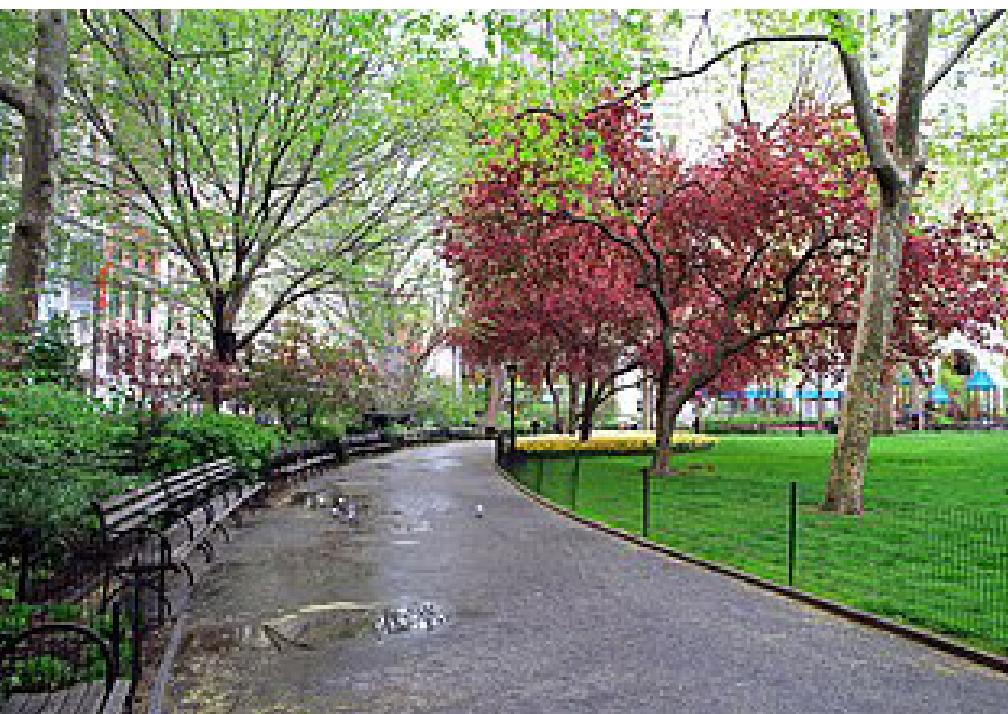
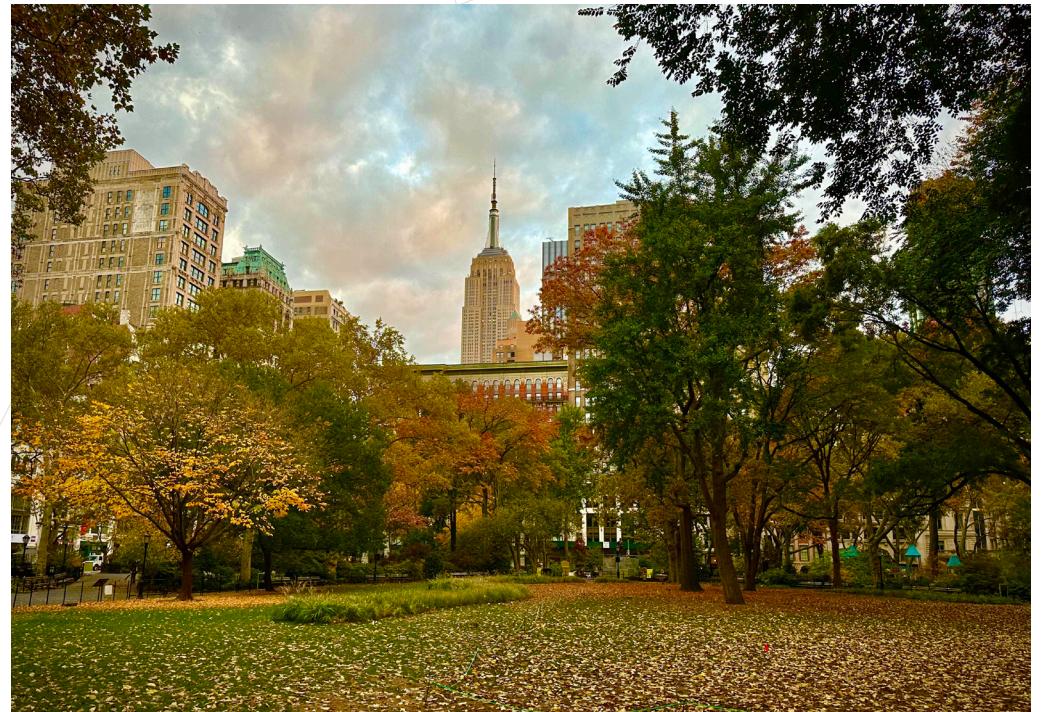
For a rectangular floorplan with open short ends, placing those short ends north and south (so the long sides face east-west) reduces the direct impact of dominant winds and snow/rain intrusion.

Outcome: Minimizes rain/wind/snow penetrating open entries, enhances user comfort and protection from elements.

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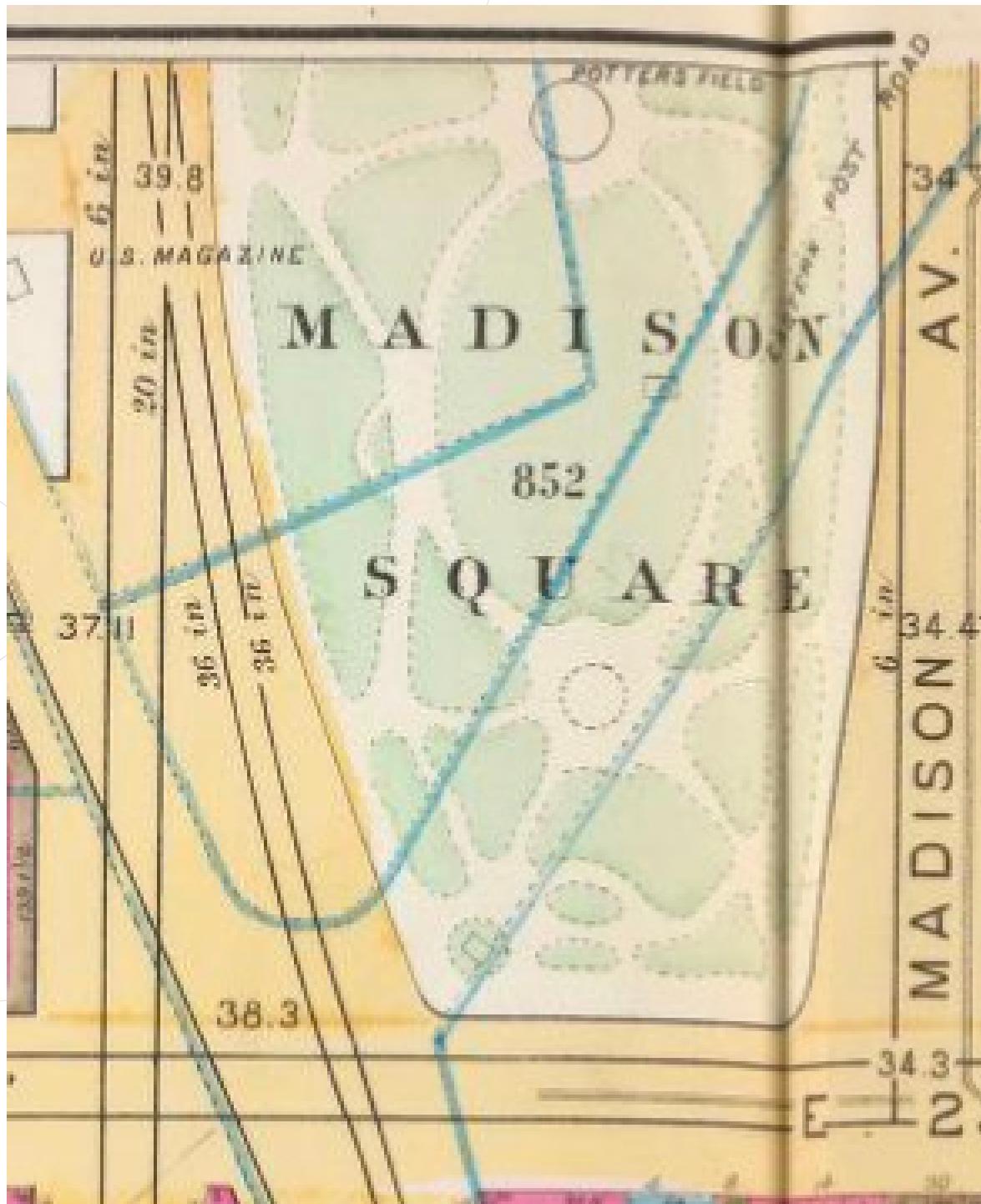
Site Photos



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Site Plan



1891 Atlas Map by G.W. Bromley & Co.

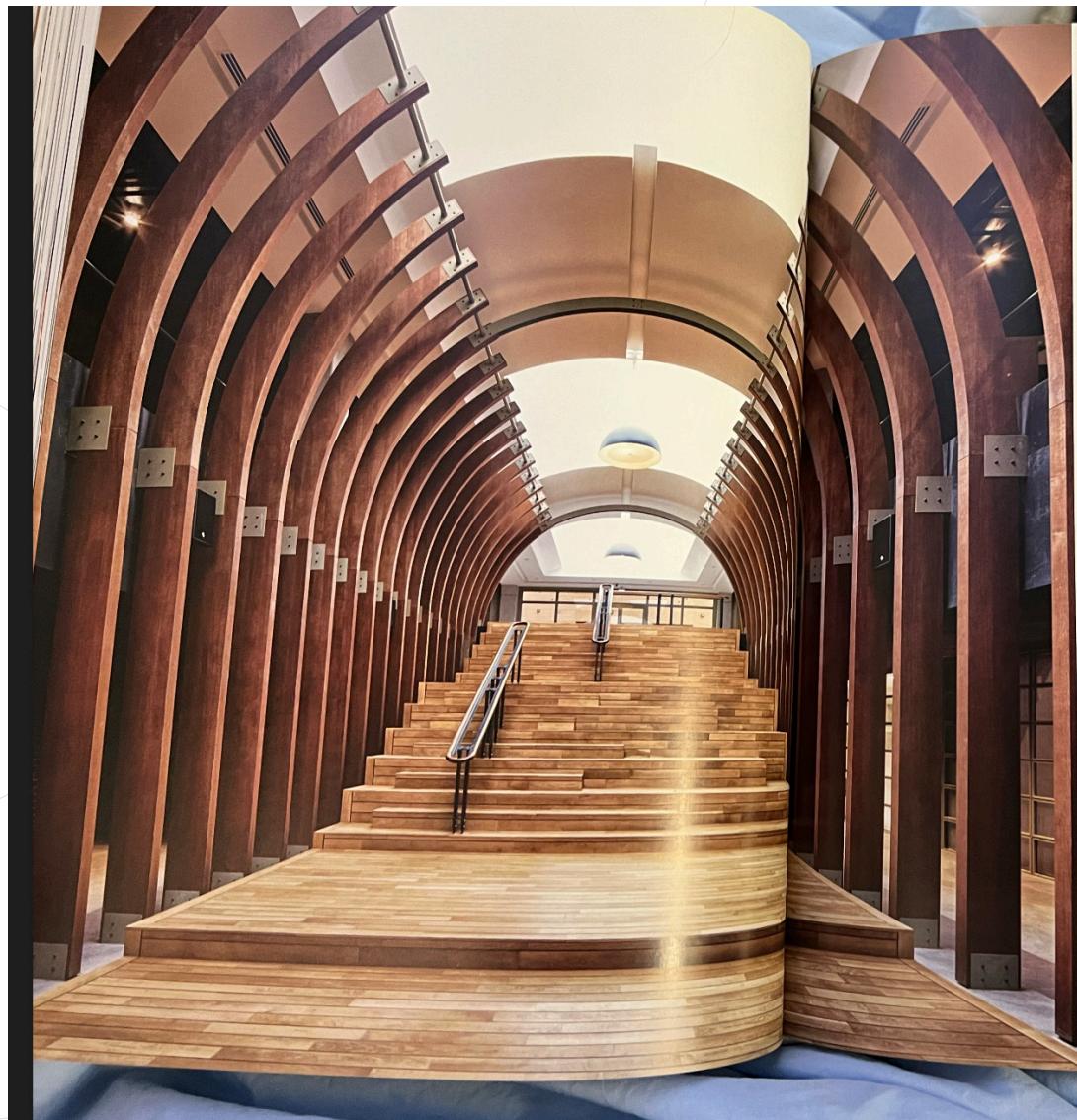


1879 Atlas Map by G.W. Bromley & Co.

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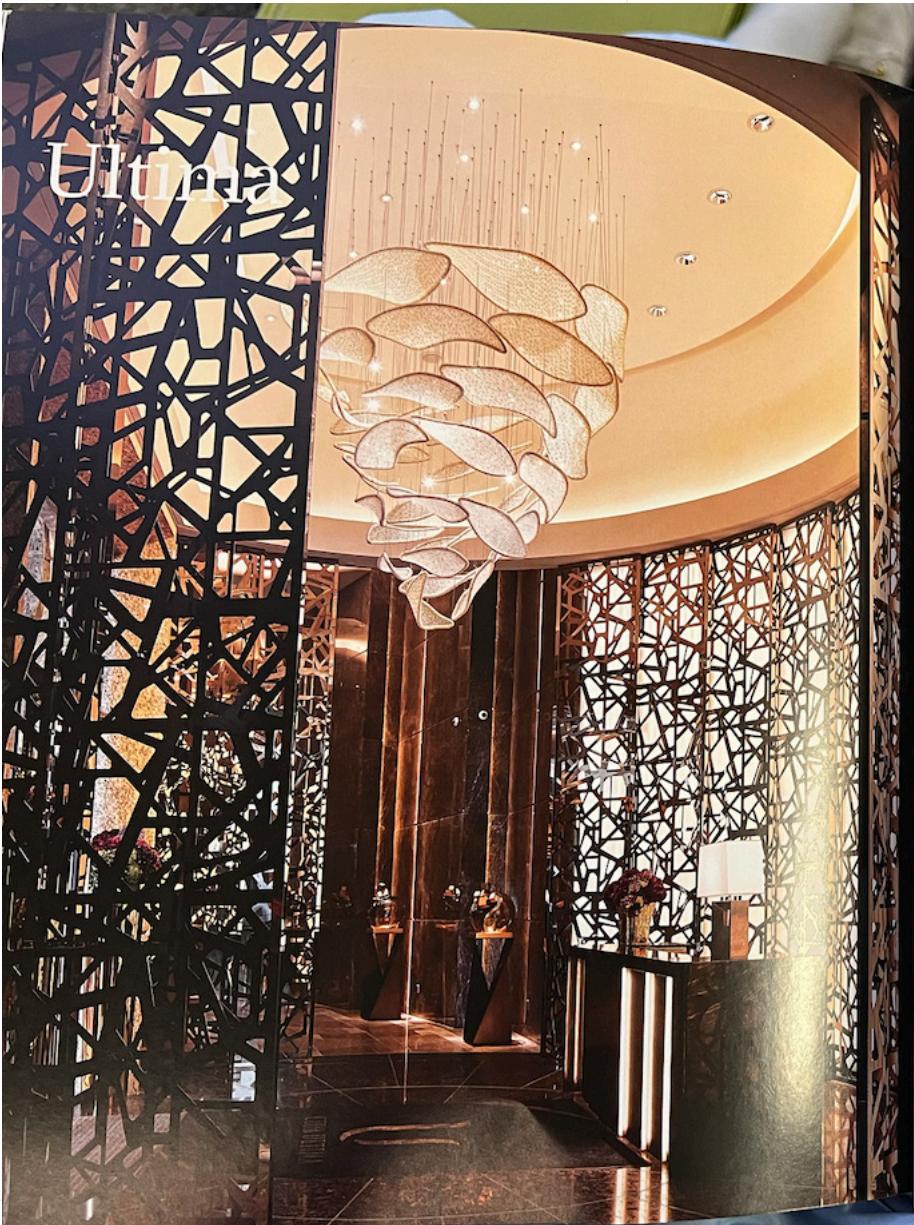
Architectural Inspirations



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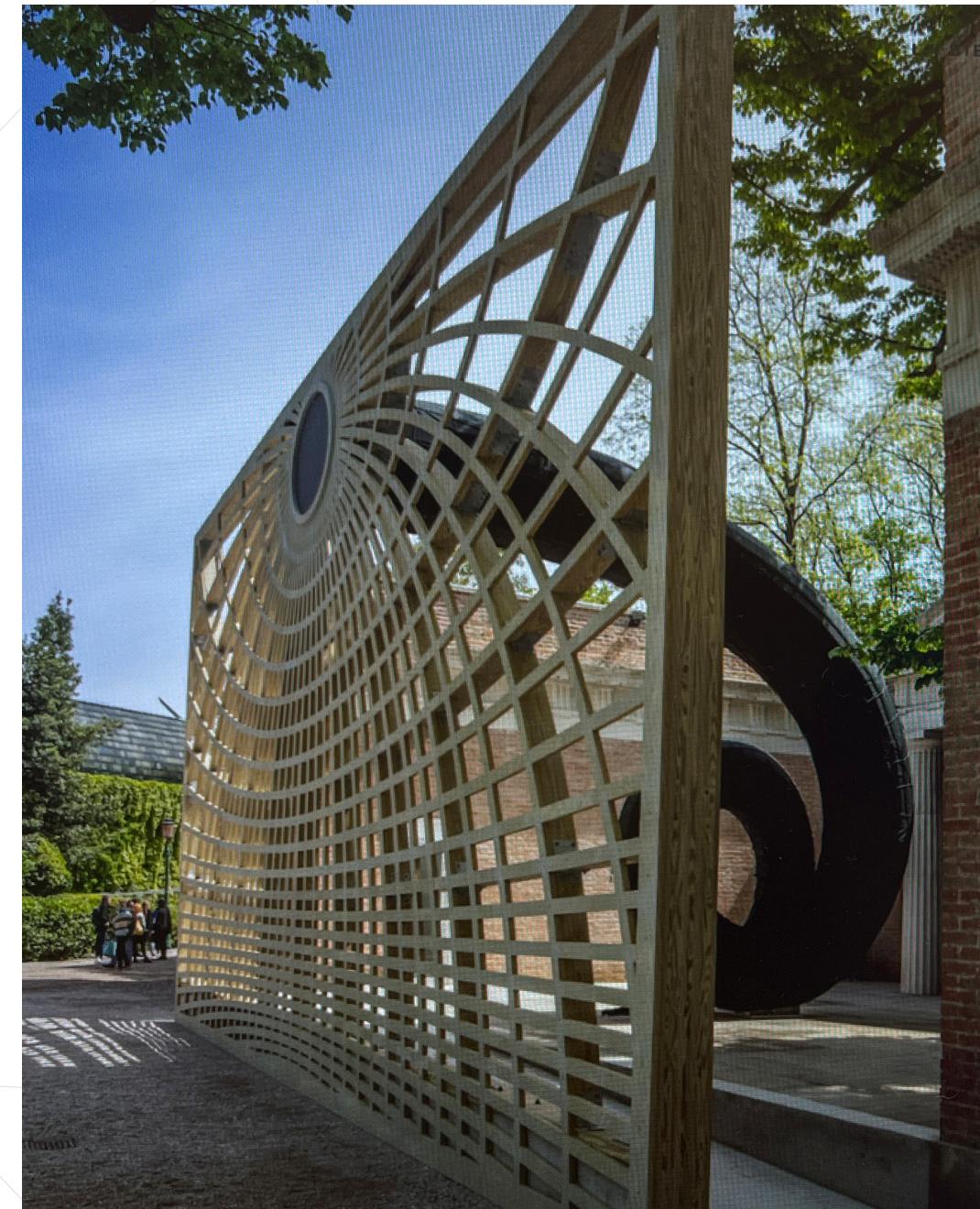
Architectural Inspirations



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Architectural Inspirations



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Bus Shelter Inspirations



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Bus Shelter Inspirations



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Idea Brainstorming Notes

- incorporate seating into the facade of the shelter (with a cover)
- make the seating look like art / incorporated seamlessly from the outside to inside
- let light shine in through gaps
- play with cool integrated lighting that blends seamlessly into design, but is also art itself
 - light up tiles like they are a cool tile like pattern, but its a light not tile
 - maybe light strips are built into metal
- ↳ play around with lighting in the ground
- standing glass elements with open/closable metal parts (maybe metal louvers have metal work with glass)
- curves, organic, waves
 - but maybe exterior is more straight edge
 - interior is more organic
 - or everything is curves, organic, natural
- stools that look like planters from the park (backs of stools are vines going all the way up to garden roof)
 - incorporate movable shelter material to be able to increase weather protection when necessary
 - with light strips incorp
- do one idea that matches traditional Metal work to Match Park aesthetic (do metal work benches incorporated into facade, (lamp posts built in?))
- one that is very wavy in nature heavy (wavy seating)
- glass that turns to shade in sun
- One in between

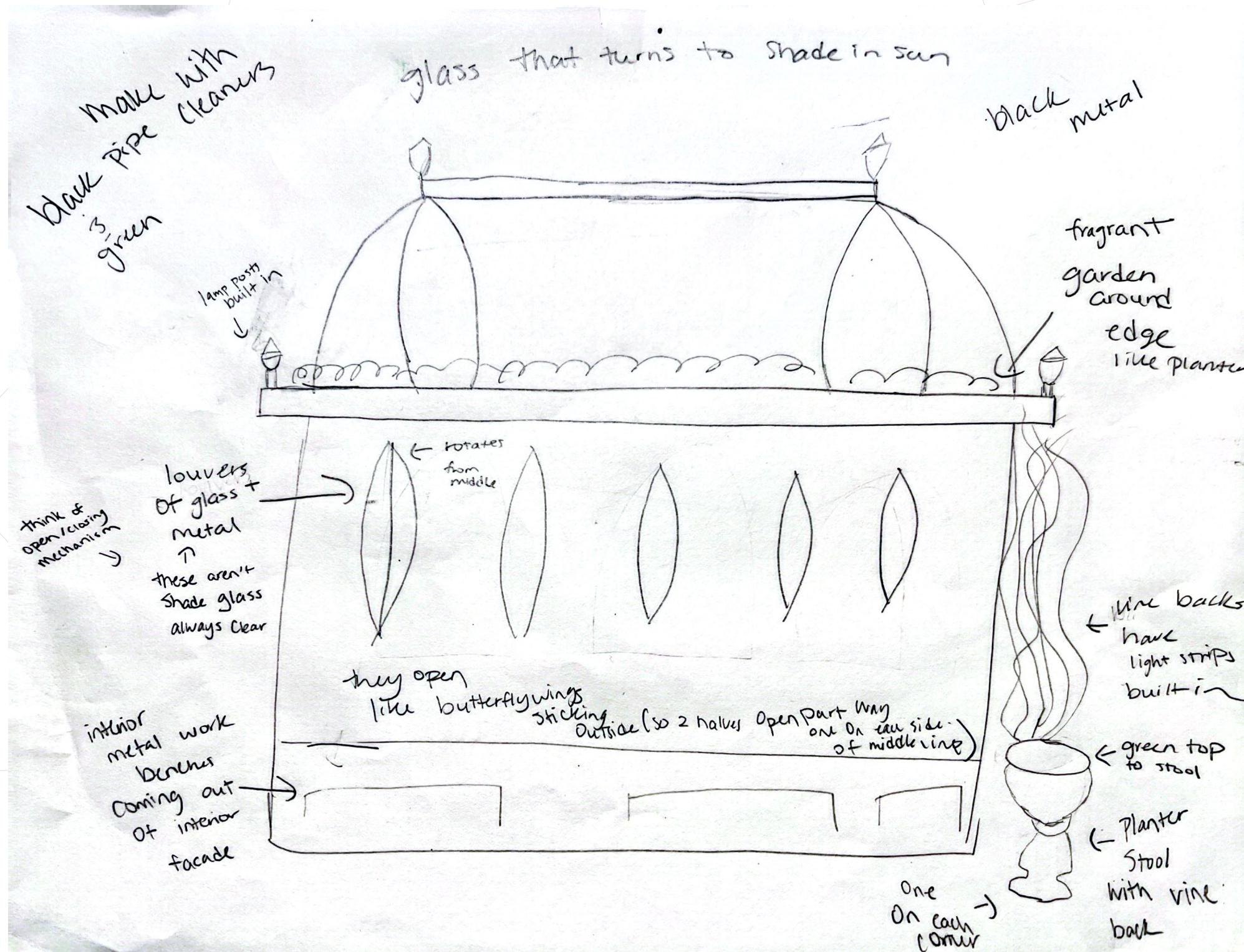
Additional Notes

- make part of the roof of the structure have clear glass too like the window glass and highlight them as apertures in the transition glass
- maybe have a leaf cover coming out of the vine over each stool. look at disney-lands bug life world for inspo

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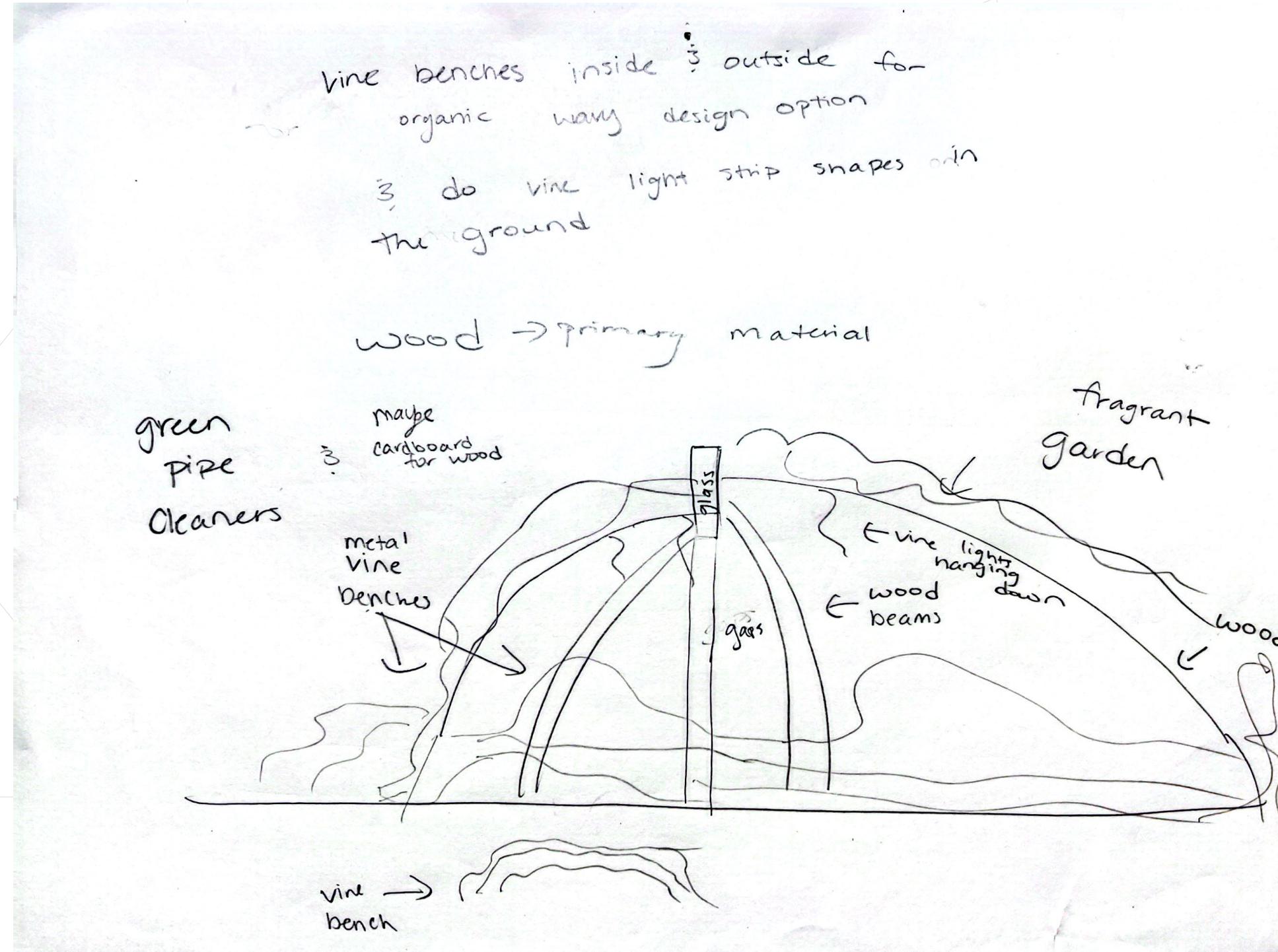
Sketches- Idea 1



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Bus Shelter Design

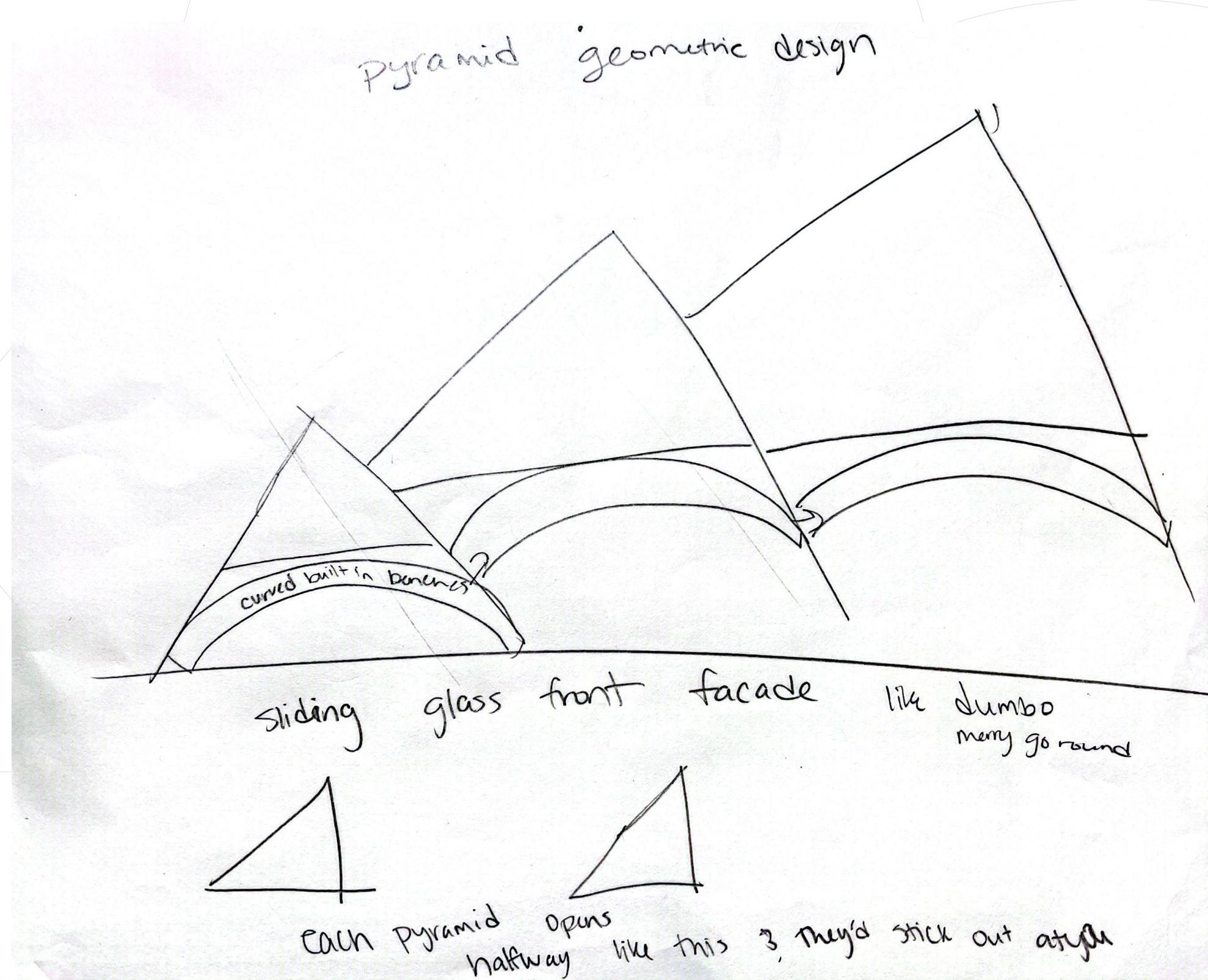
Sketches- Idea 2



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Bus Shelter Design

Sketches- Idea 3



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Bus Shelter Design

Sketch Model 1

Concept

The concept was inspired by our discussion about design adding to the quality of a city while blending into its character at the same time. I chose wrought iron as the main material to reflect the historical qualities of Madison Square Park and to make the structure feel like it belongs. The goal was to add beauty and purpose to the space without competing with its surroundings. The design embraces subtlety and craftsmanship, enhancing the park through structure, form, and integration with nature.

Materials

The model represents a wrought iron frame with transitional glass. The windows and apertures would use clear glass to maintain transparency. The stools would be made of durable exterior metal. The vines would be steel with integrated outdoor LED light strips. A fragrant garden of flowers would wrap around the top during spring and summer, replaced with evergreen vines and seasonal decorations in the winter.

Historical Ornate Natural



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Sketch Model 1



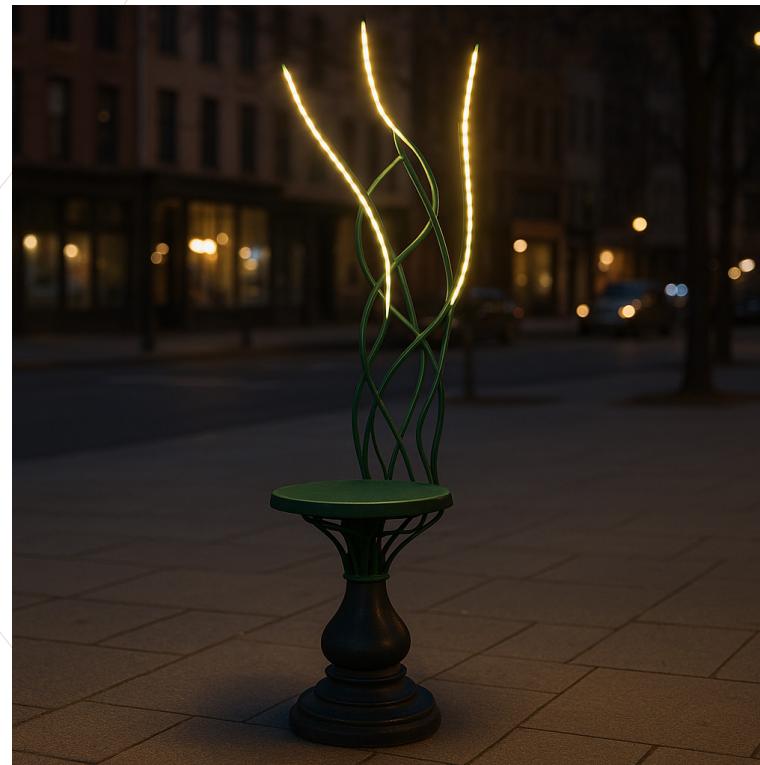
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Bus Shelter Design

Sketch Concept 1 AI Images



Planter in Madison Square Park



AI semi-accurate rendering of my stool design concept

Stool Concept

The stool design features a black metal base paired with a green metal top, echoing the form and proportion of the planters surrounding the fountain at Madison Square Park. Vertical steel vines, coated in green, extend from the stool structure into the integrated planter of the bus shelter, visually connecting the seating to the surrounding landscape. Select vines include embedded LED light strips that activate at dusk, creating a subtle glow that enhances both safety and ambiance.

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Bus Shelter Design

Sketch Concept 1 AI Images



Ceiling inside of St. Regis, Macao



AI semi-accurate rendering of bus shelter

Shelter Concept

The shelter is constructed of wrought iron metalwork with transition glass panels set between the structural elements. The benches extend seamlessly from the metal framework of the walls, creating a cohesive and continuous design language. A planter runs along the roofline, softening the edges of the structure and visually connecting it to the surrounding landscape. Four stools are positioned at each corner, accompanied by lamp post heads that rise from the corners of the roof planter. The shelter features clear glass windows to maintain transparency and openness. The dome roof includes a central section of clear glass surrounded by transitional glass at the base, highlighting the decorative patterns incorporated into the dome's design.

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Bus Shelter Design

Sketch Model 2

Concept

My second concept focused more on natural and organic forms. I was inspired by bus shelters with softer, curved shapes and by more nature-based inspiration images. The design explores a fuller sense of growth and movement, blending structure with natural texture.

Materials

This model would be made primarily of wood and concrete with a mossy, floral exterior. The benches would be formed from steel vines, and subtle light strips would run between the curved wooden columns to highlight the form and create a soft glow at night.

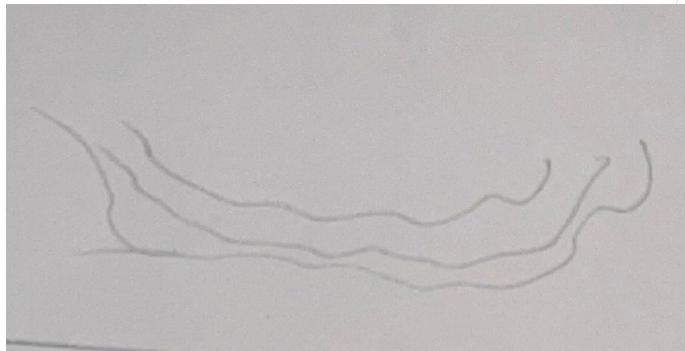
Organic Wavy Open



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Bus Shelter Design

Sketch Concept 2 AI Images



Sketch of metal vine benches



AI semi-accurate rendering of bus shelter

Shelter Concept

In contrast to the reference image, the wooden columns extend perpendicularly from the curved concrete base, creating a stronger structural rhythm. Vines weave in and out of the roof structure, cascading downward to form integrated seating elements, as illustrated in my sketch. Each wooden beam incorporates an embedded light strip along one side, providing subtle illumination that enhances both the sculptural quality and functionality of the design.

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Bus Shelter Design

Sketch Model 3

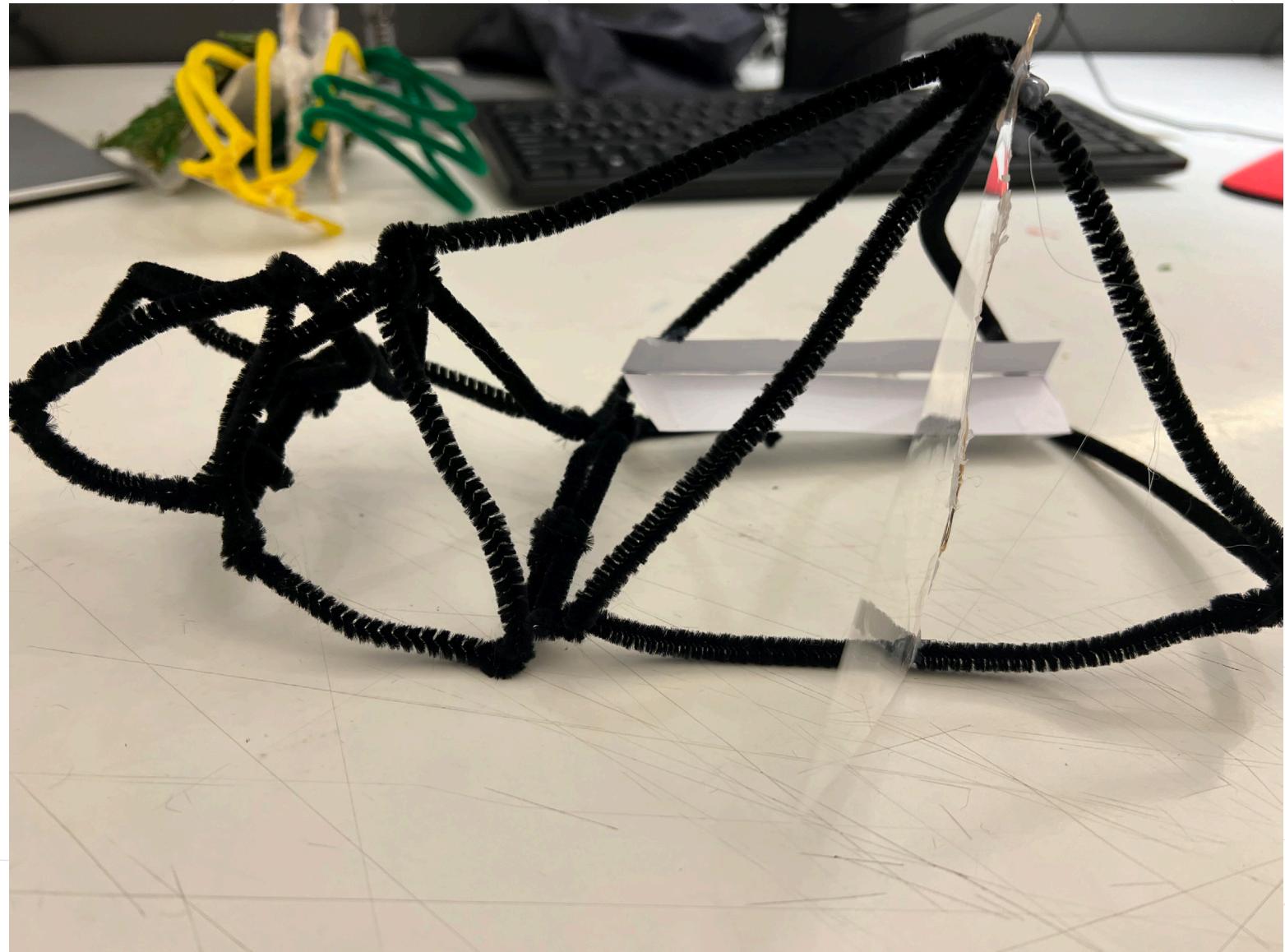
Concept

This concept was inspired by the Louvre, the Pyramids of Giza, and the carousel in DUMBO. It explores a more geometric and structured direction while still keeping a connection to nature. The form combines sharp lines and triangular framing to contrast with the softer, organic qualities of the earlier models. The glass doors would hinge open perpendicularly from the main structure, creating dynamic divisions and movement within the space.

Materials

The model would be made of metal similar to the Louvre's glass and steel structure. The design includes hinged glass panels that open outward from the frame like dividers, allowing light to pass through while emphasizing the geometry of the form.

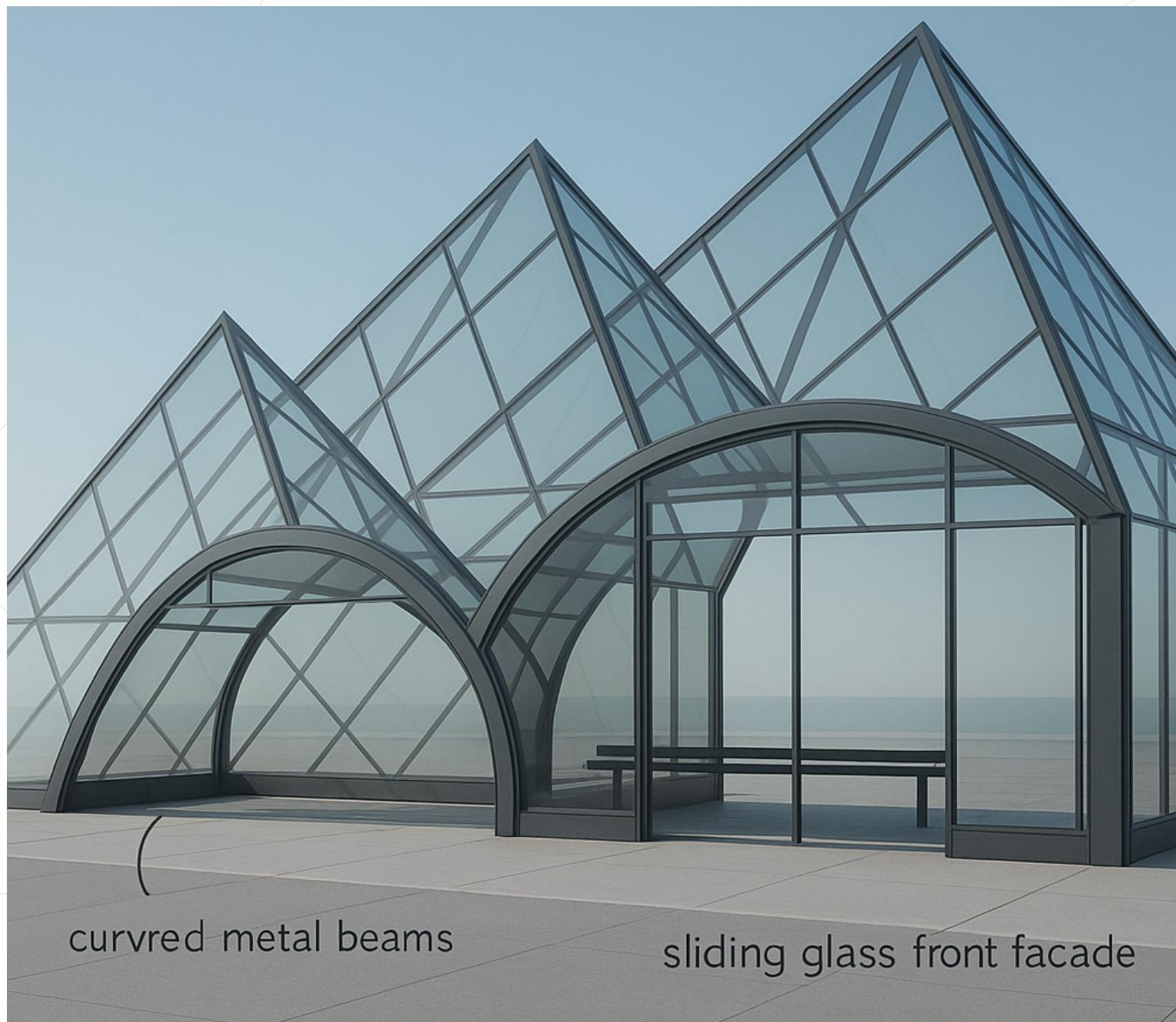
Geometric Minimalist Airy



Project 3

Bus Shelter Design

Sketch Concept 3 AI Images



AI semi-accurate rendering of bus shelter

Shelter Concept

In contrast to the reference image, the benches are curved to create banquette-style seating within each pyramid form. The front façades are designed as triangles rather than rounded arches, emphasizing geometric clarity and structural precision. Half-triangular glass divider doors extend outward when open, functioning as both spatial separators and visual connectors through their horizontal and vertical alignment.

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Design Process

Design Process

The concept for this project was rooted in a quote our instructor shared at the beginning of the project: "In public spaces, you are directly present. You can interact with other people and experience the environment through your own senses, rather than seeing it on a screen." This idea emphasized the importance of enhancing the quality of urban life by creating spaces that invite participation while harmonizing with their surroundings.

I chose to use wrought iron for the structure to reflect the historical context of Madison Square Park and allow the shelter to feel like an authentic part of the city. My goal was to blend tradition with modernity so the design would complement the existing architecture while introducing a fresh, functional interpretation. I was also inspired by the ornamental metalwork found throughout the city and wanted the seating to emerge seamlessly from that framework, integrating both structure and comfort.

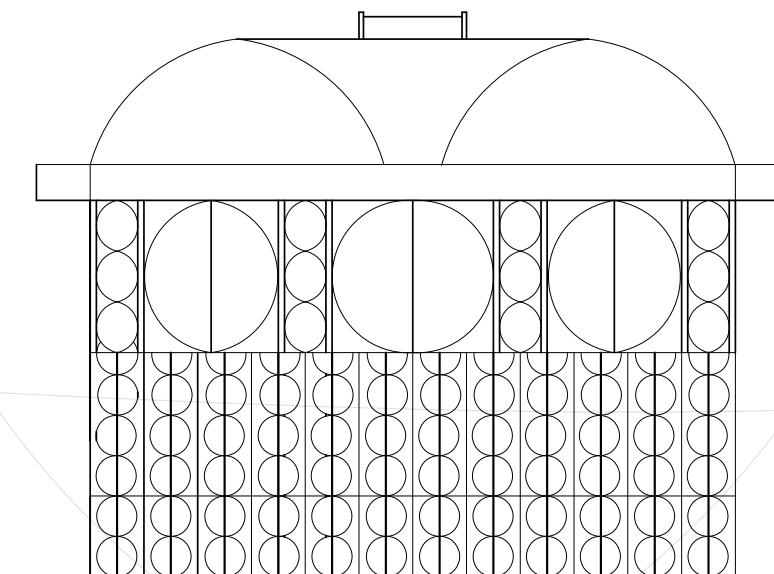
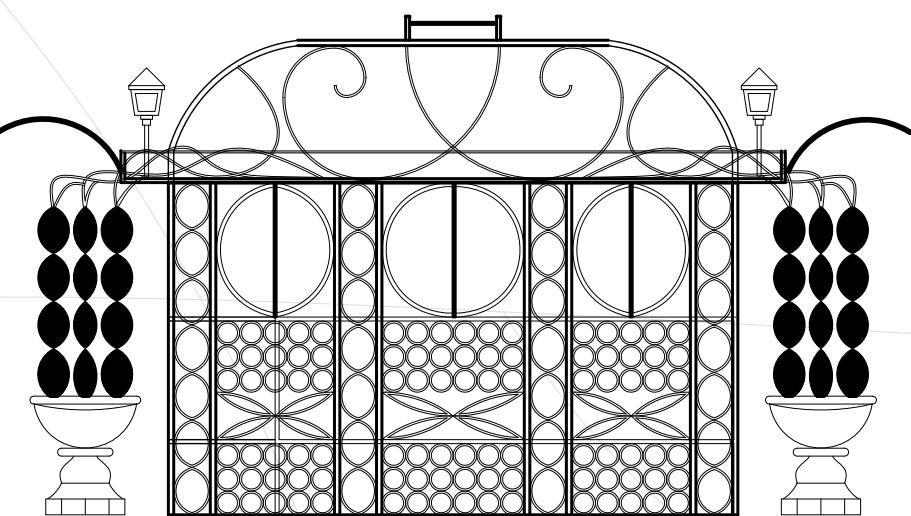
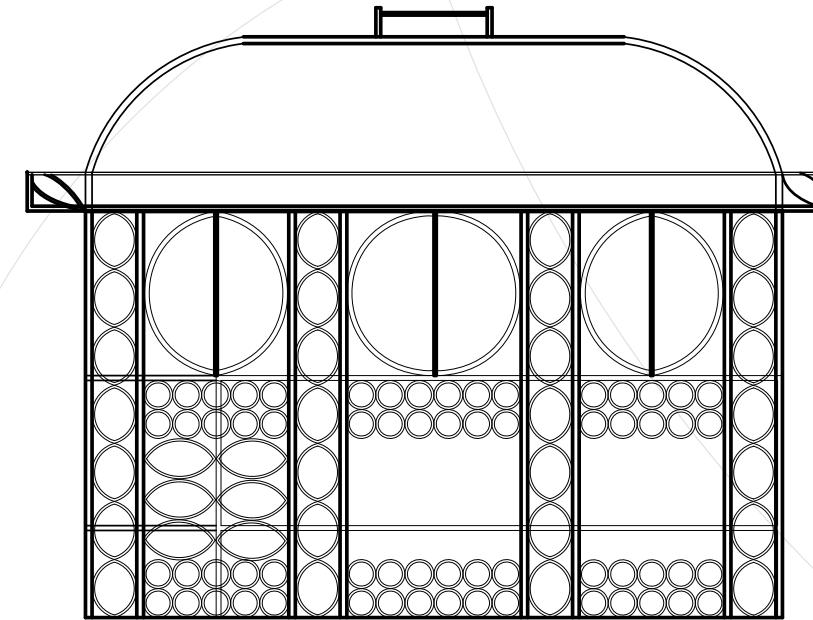
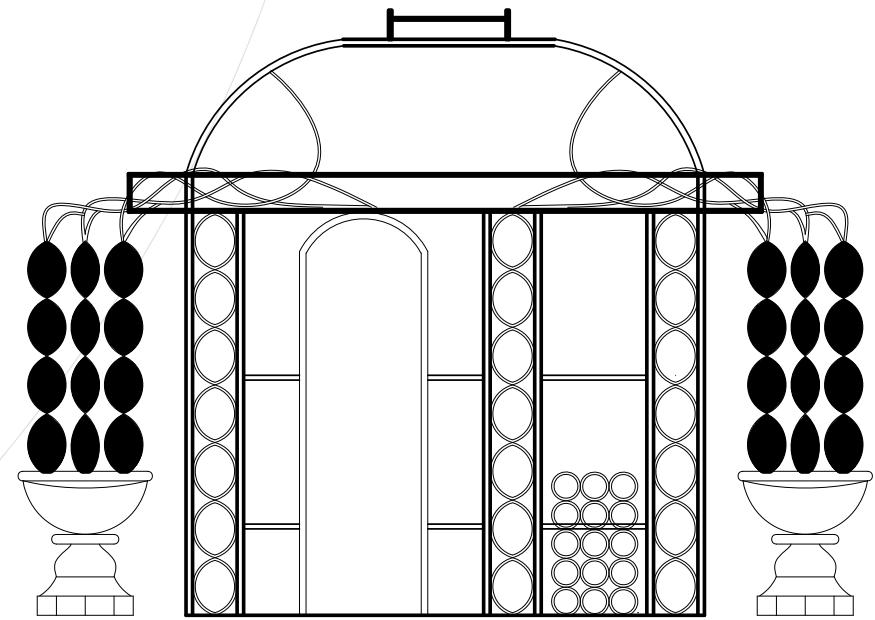
When developing the concept, I focused on creating a design that feels timeless yet engaging up close, a reinterpretation of classic forms grounded in geometry, proportion, and historical reference. My research included pavilion and gazebo designs featuring metalwork, as well as my recreational research from *Design: The Leading Hotels of the World* (Monacelli). Through this study, I drew inspiration from how hospitality environments balance light, texture, and atmosphere, translating those qualities into a public context.

I explored many sketches to refine the metalwork and develop patterns that balanced decoration with structural integrity. Transitional and clear glass were chosen to maintain openness, while seasonal plantings and integrated lighting reinforce the sense of continuity between nature and structure throughout the year.

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Bus Shelter Design

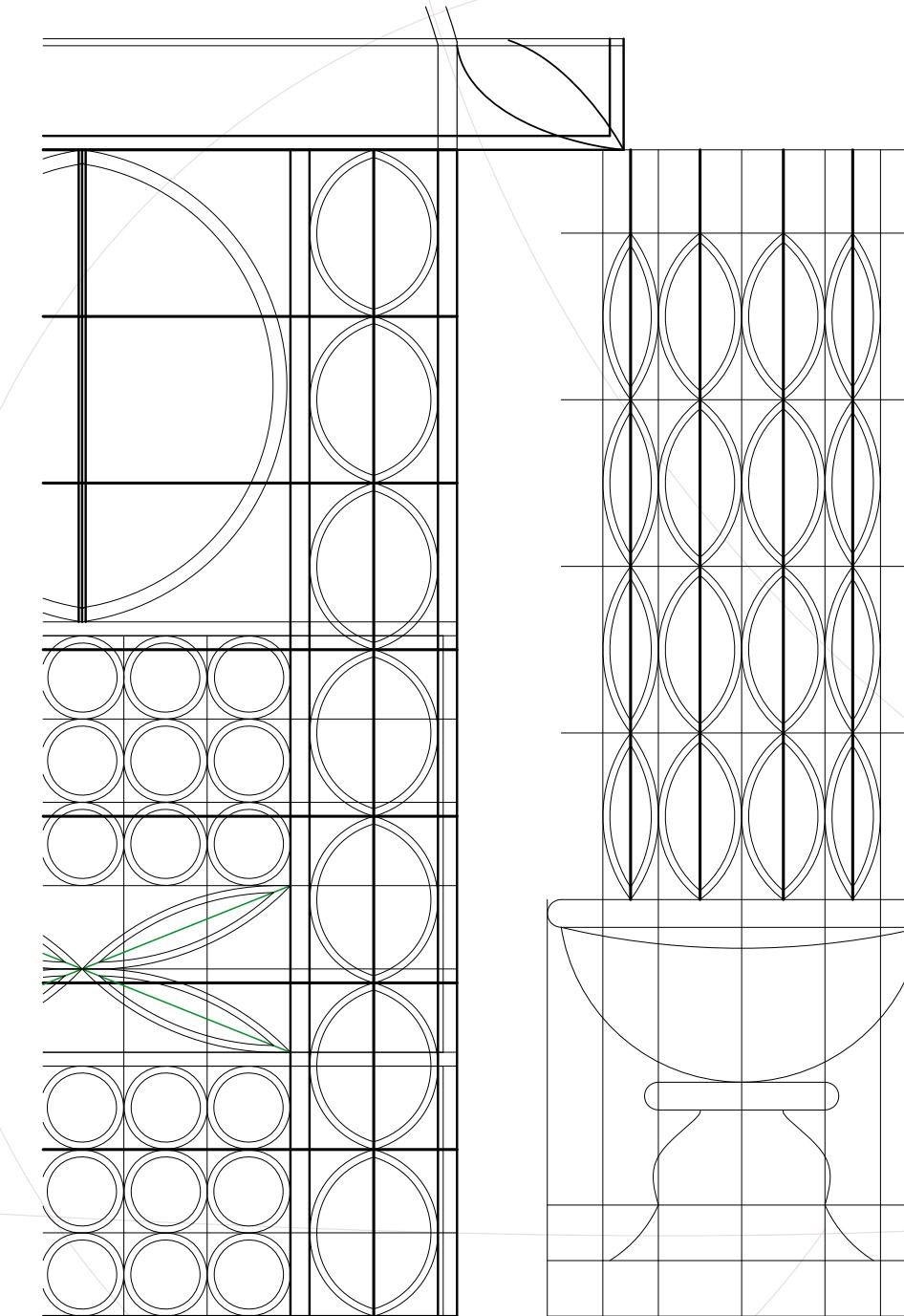
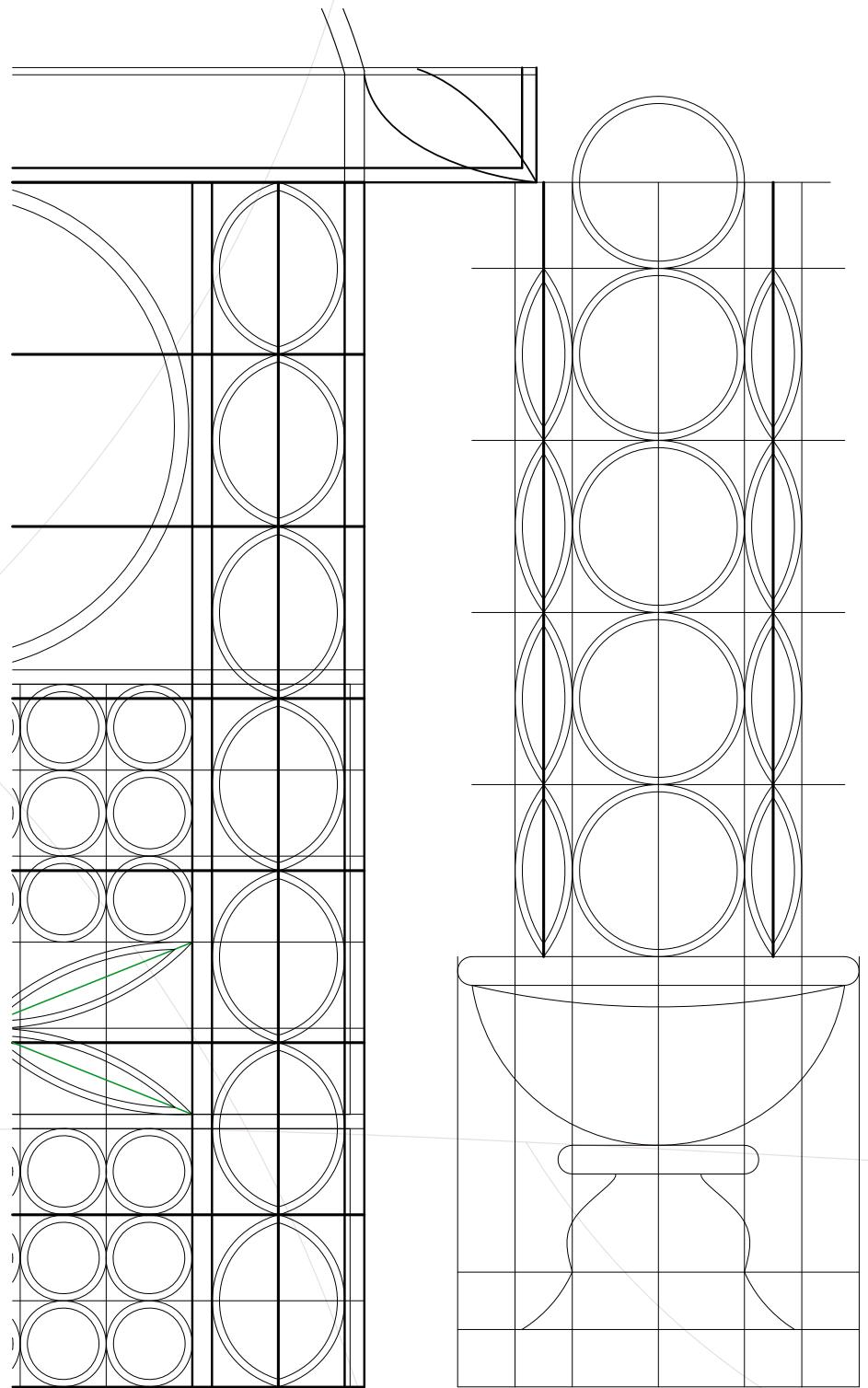
AutoCAD- Metal Work Sketches



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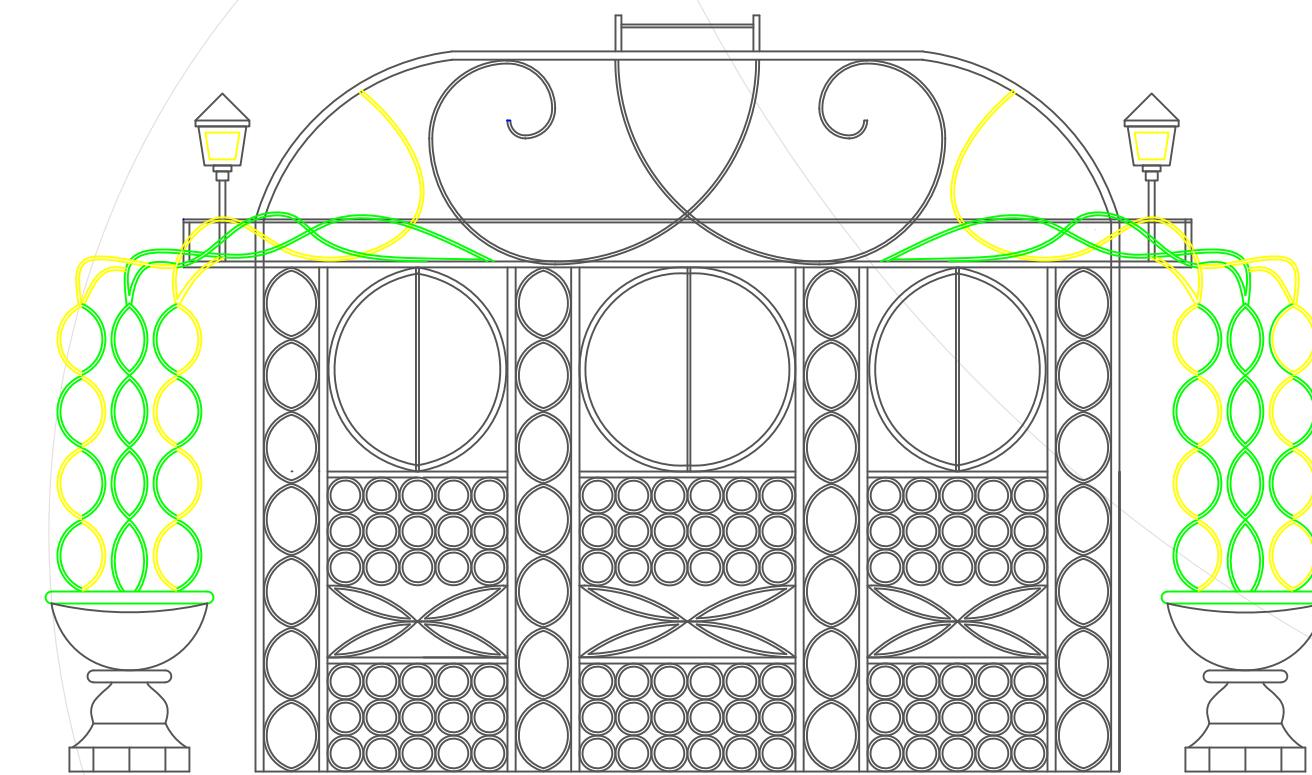
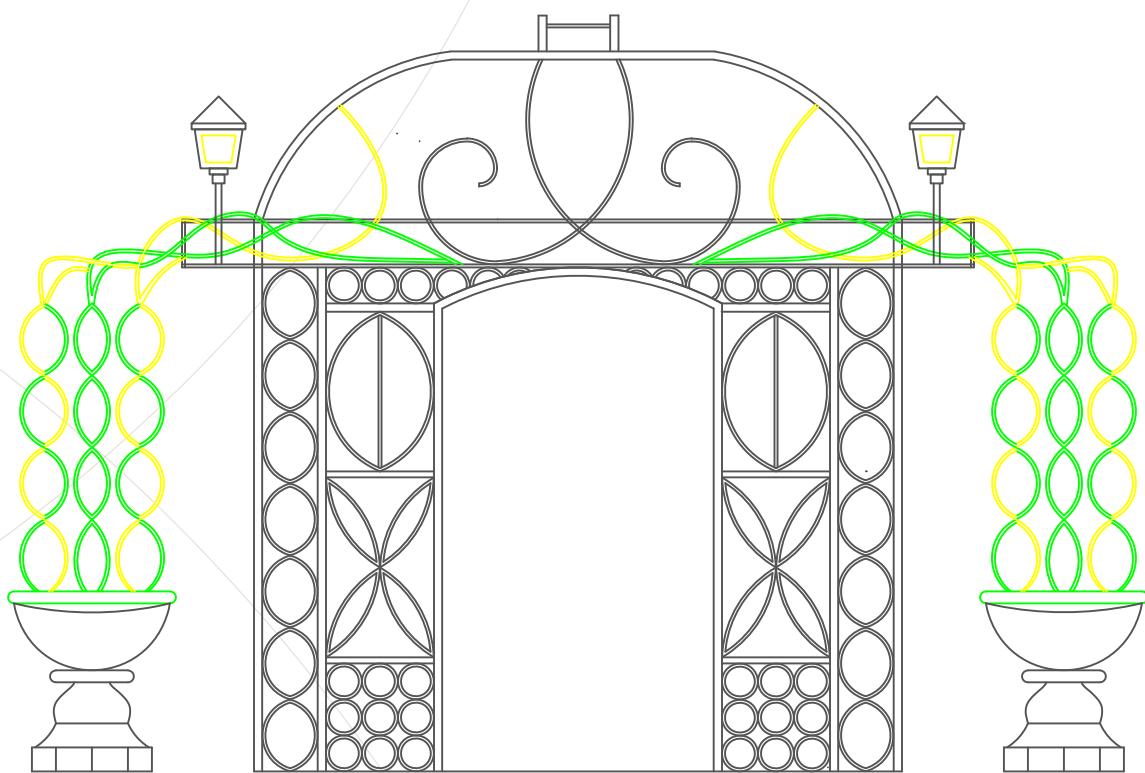
AutoCAD- Stool Sketches



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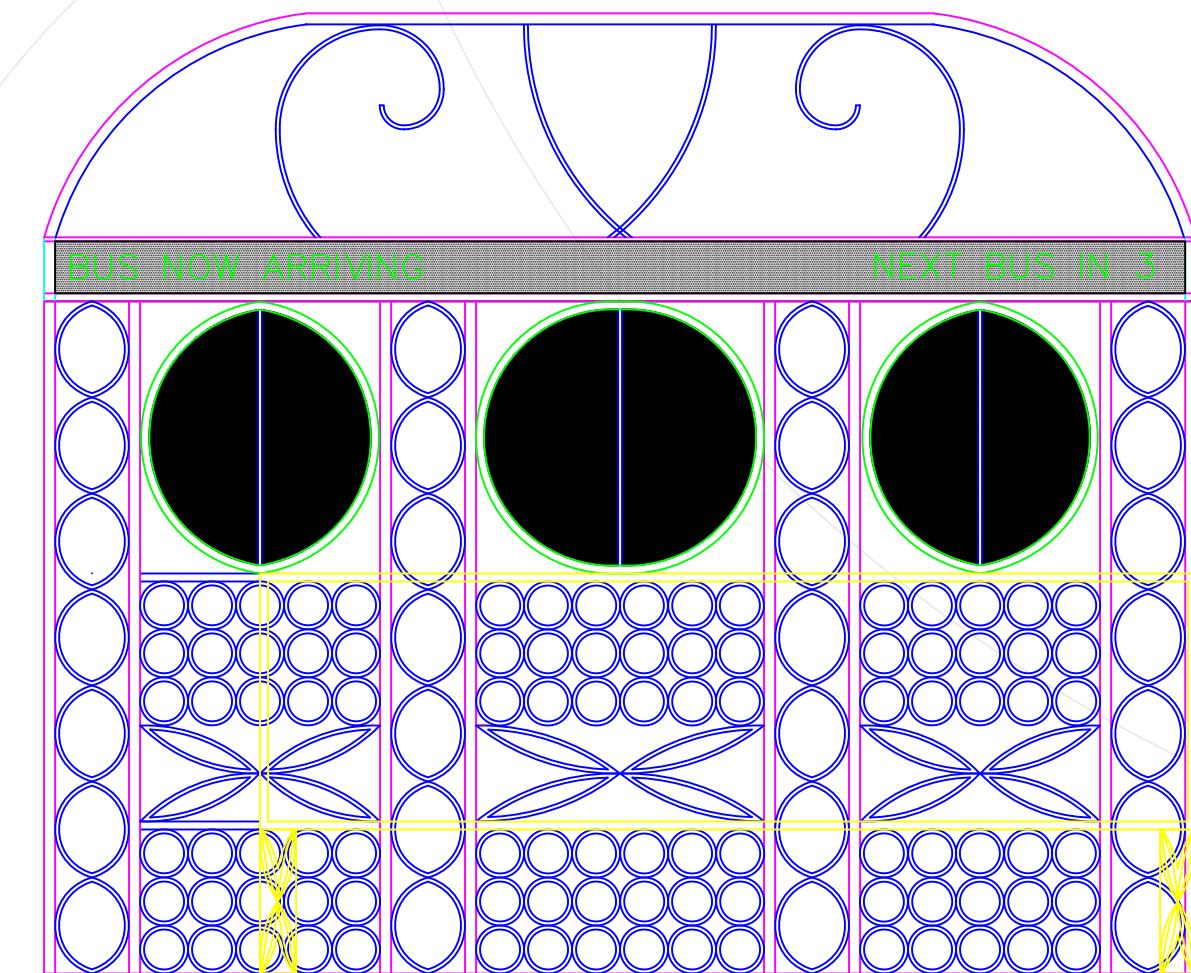
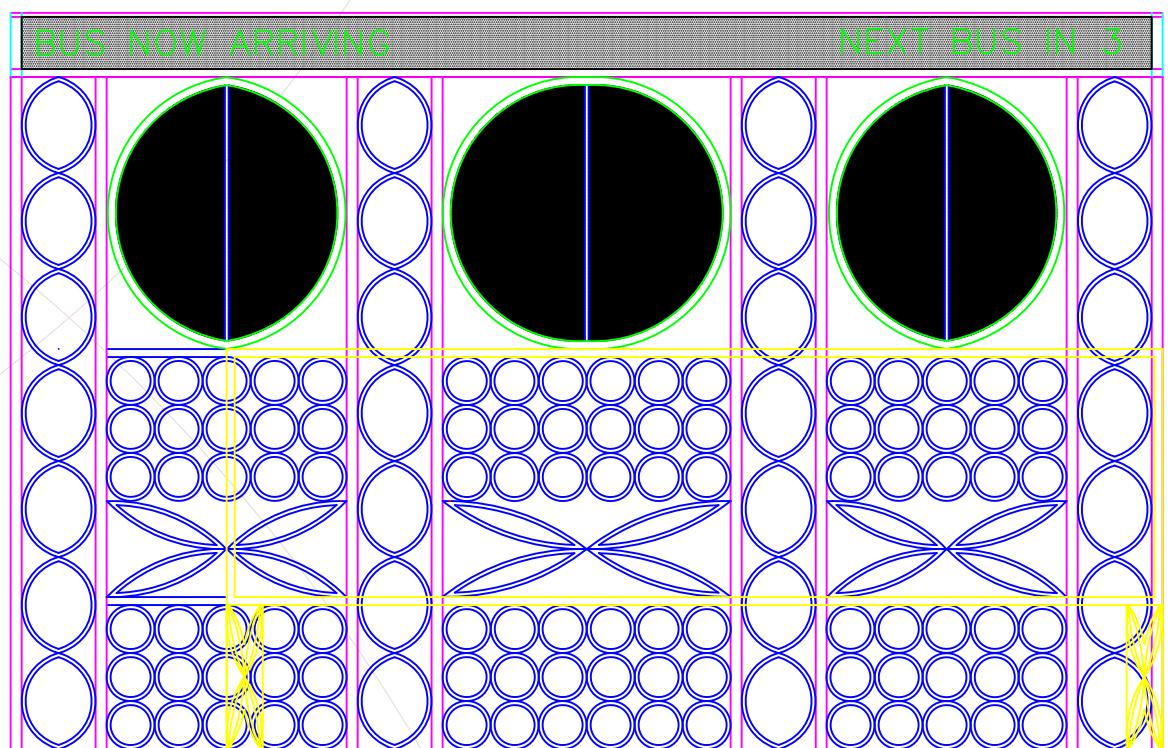
AutoCAD- Colored Sketches



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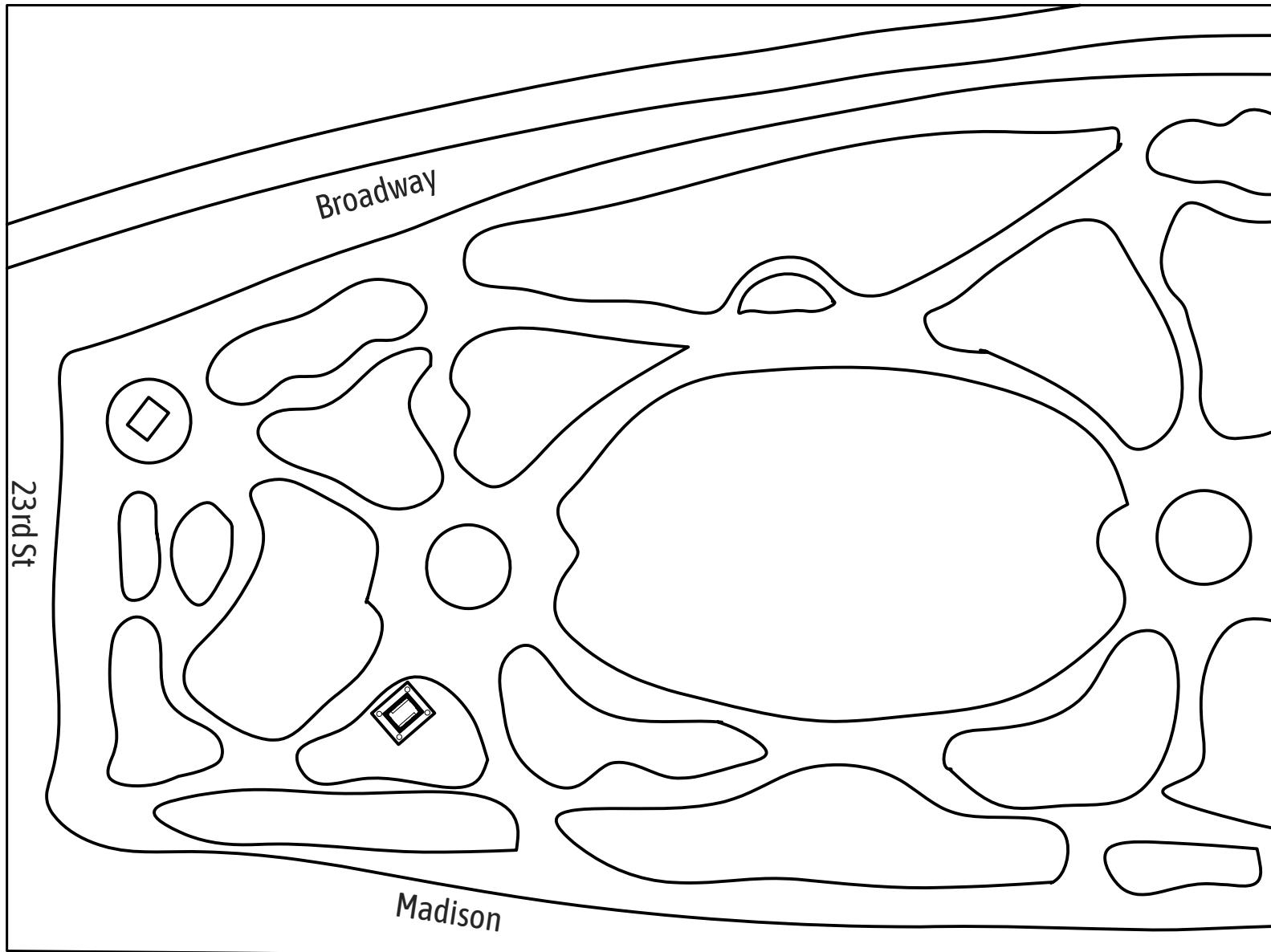
AutoCAD-Bus Schedule Sketches



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Drawings-Site Plan



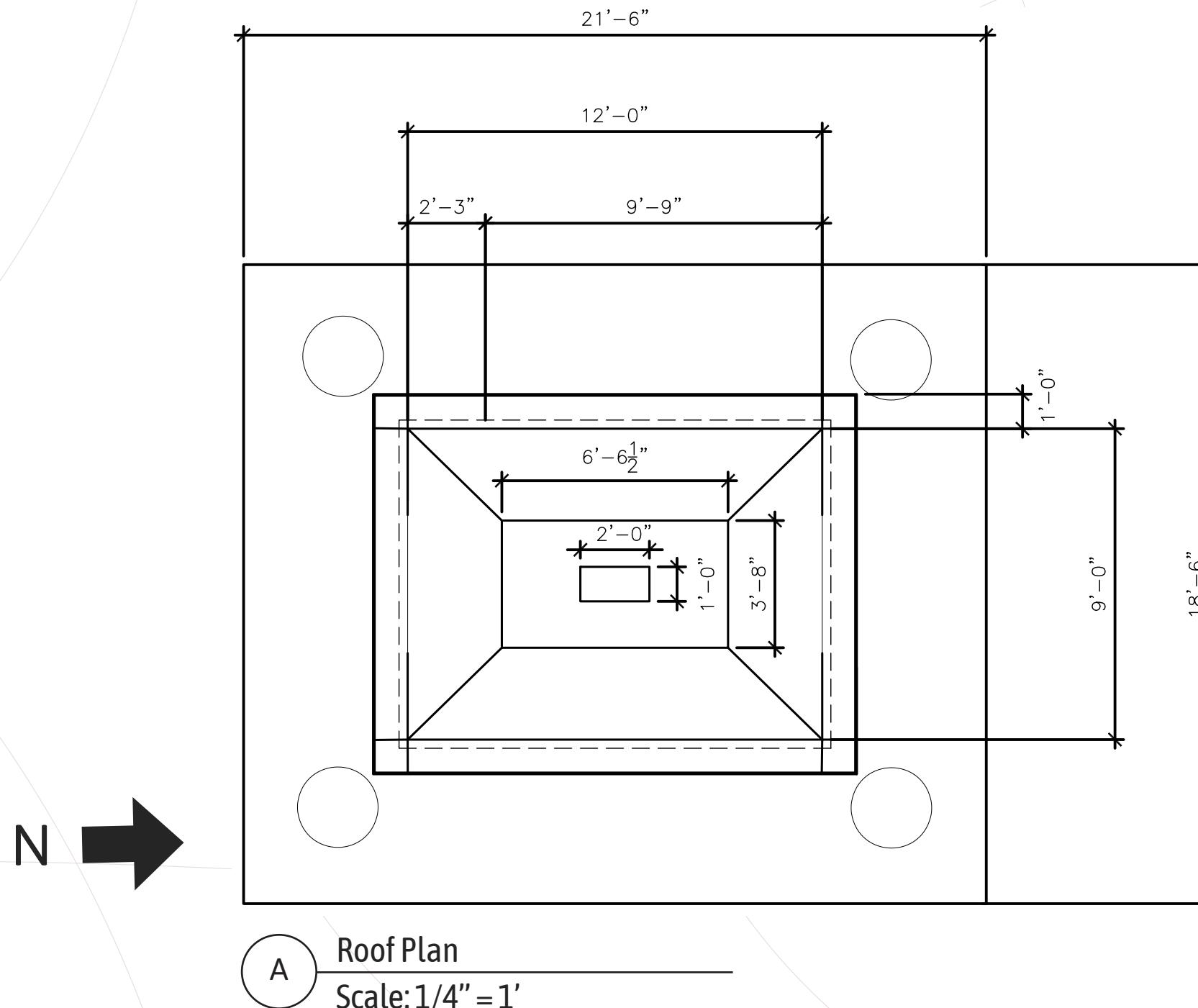
N

A Site Plan
Scale: 1/4" = 16'

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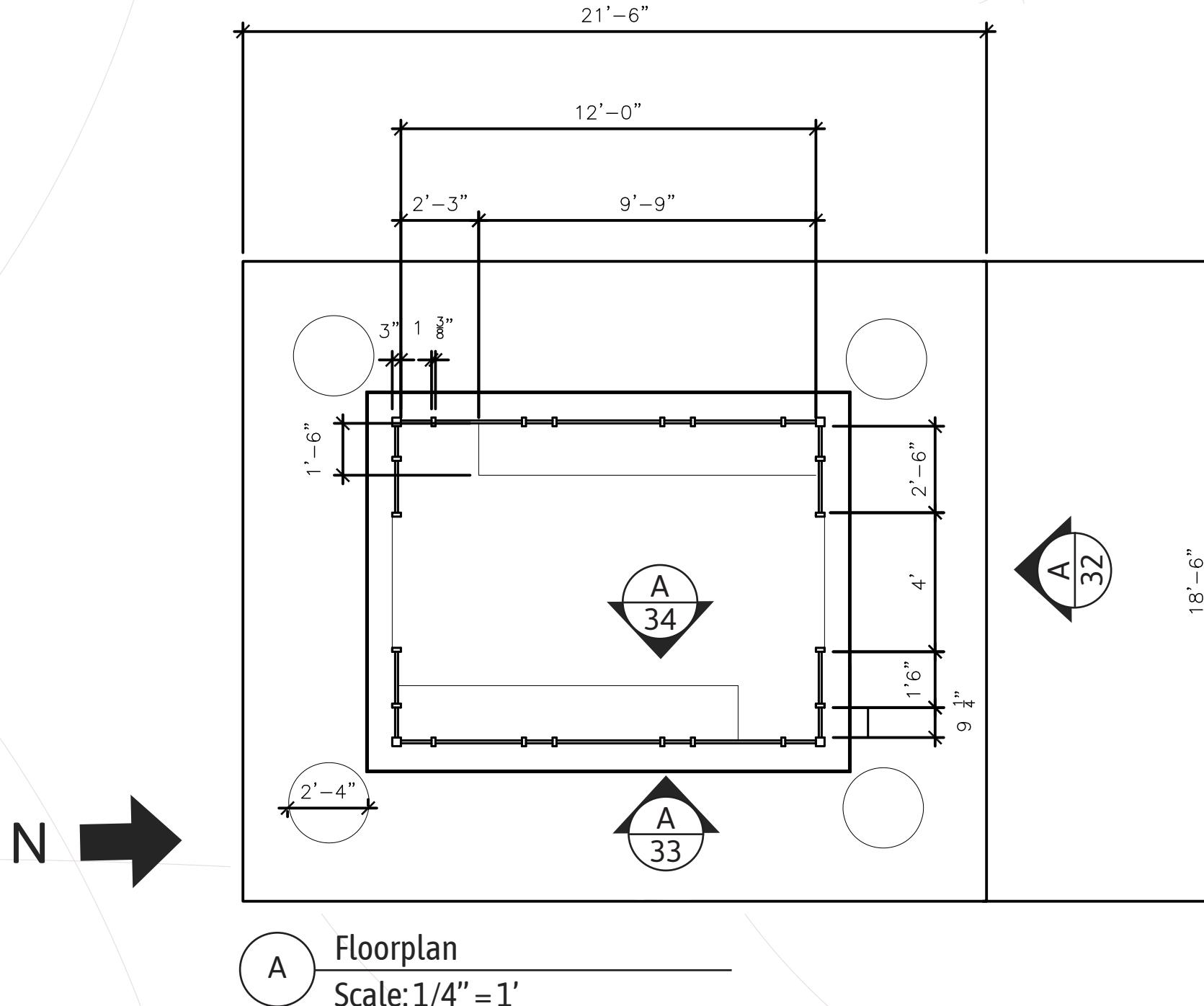
Drawings-Roof Plan



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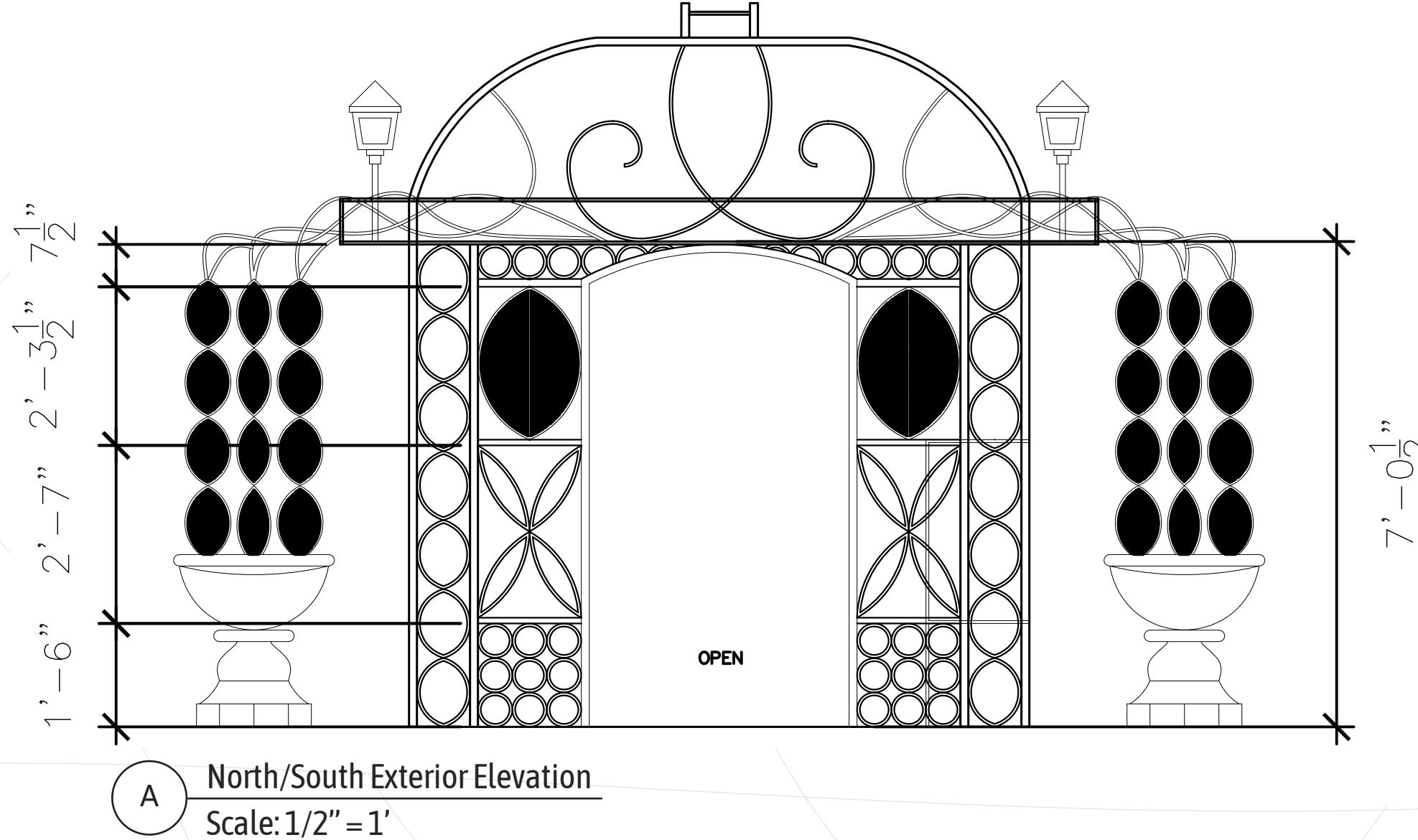
Drawings- Floorplan



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Bus Shelter Design

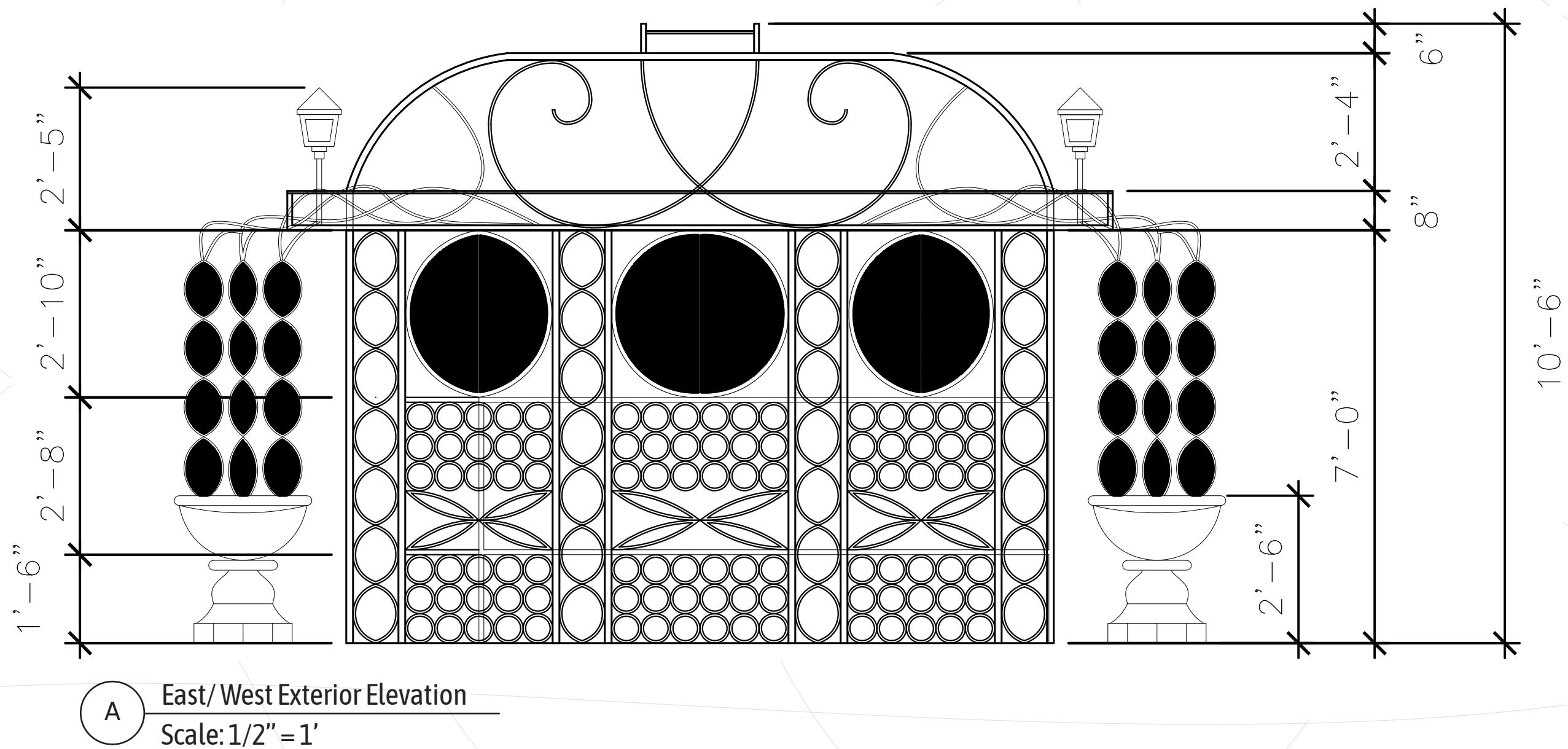
Drawings- Exterior Elevations



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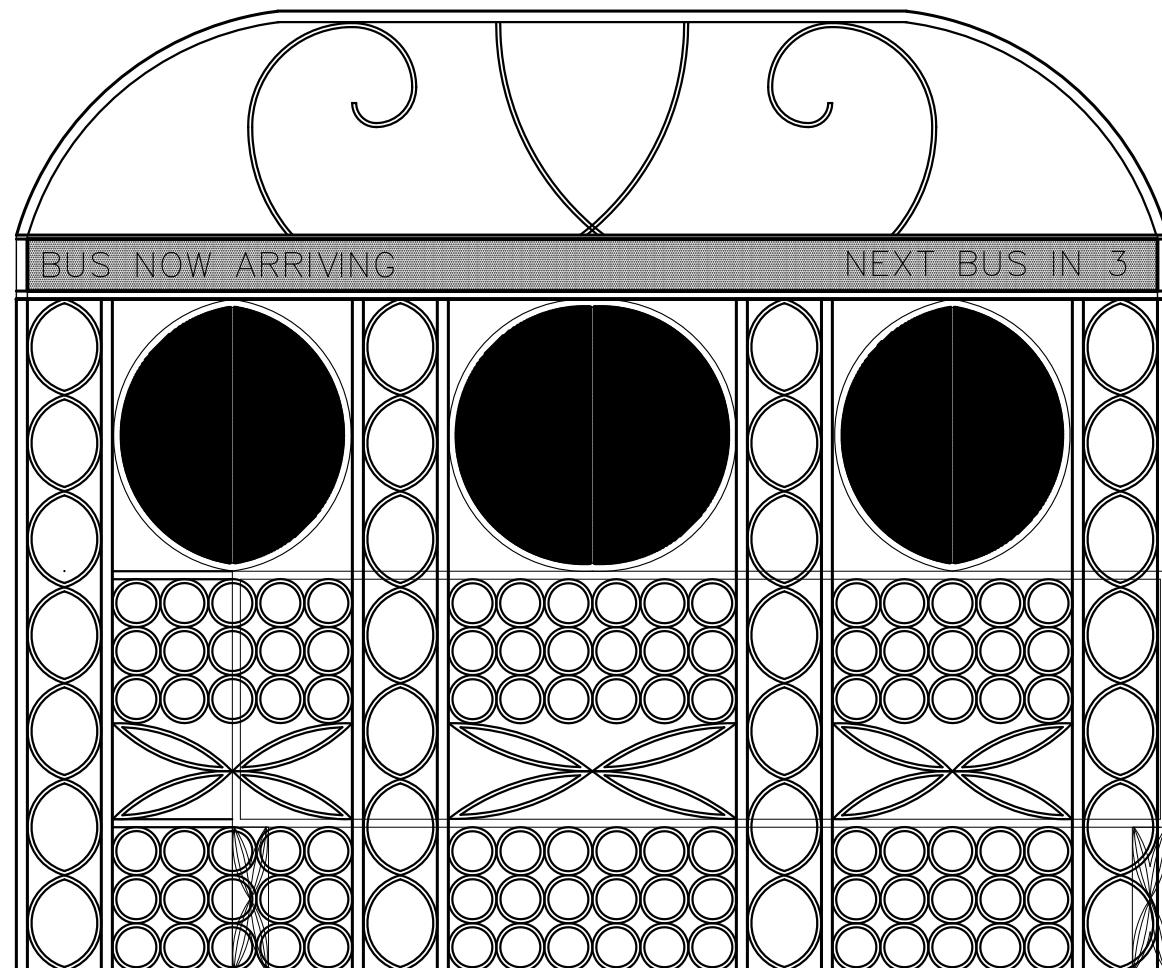
Drawings- Exterior Elevations



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Bus Shelter Design

Drawings- Interior Elevation



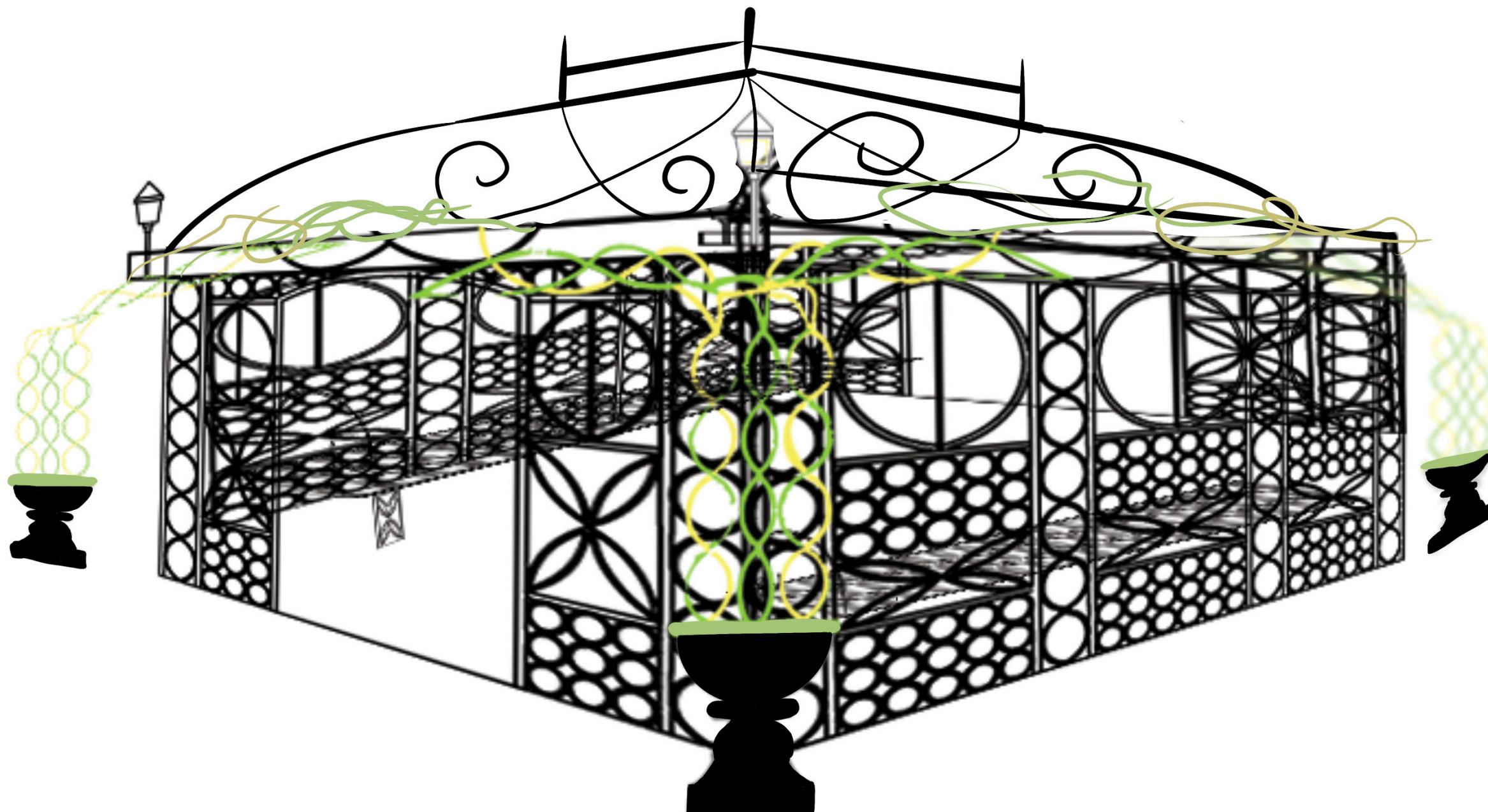
A

East/West Interior Elevation
Scale: $1/2'' = 1'$

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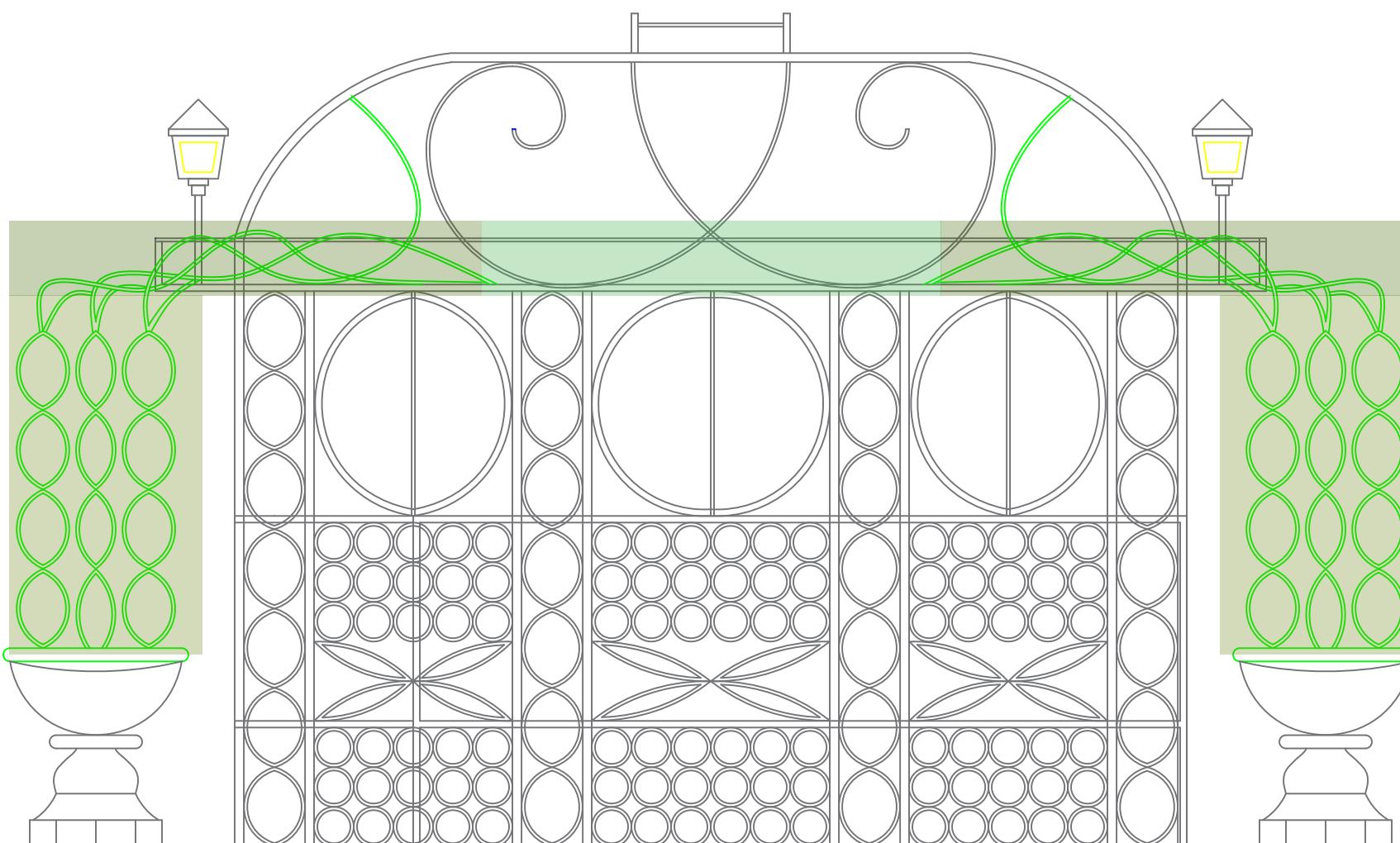
Drawings- Perspective Sketch



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Diagrams- Parti



East/West Exterior Elevation

This parti represents trabeated nature with a modern twist that combines artificial and real natural elements. The metal vine stool backs and the seasonal garden at the top connect nature with structure. In spring and summer the top becomes a fragrant flower garden, while in fall and winter it transforms with pine vines, pinecones, and festive accents.

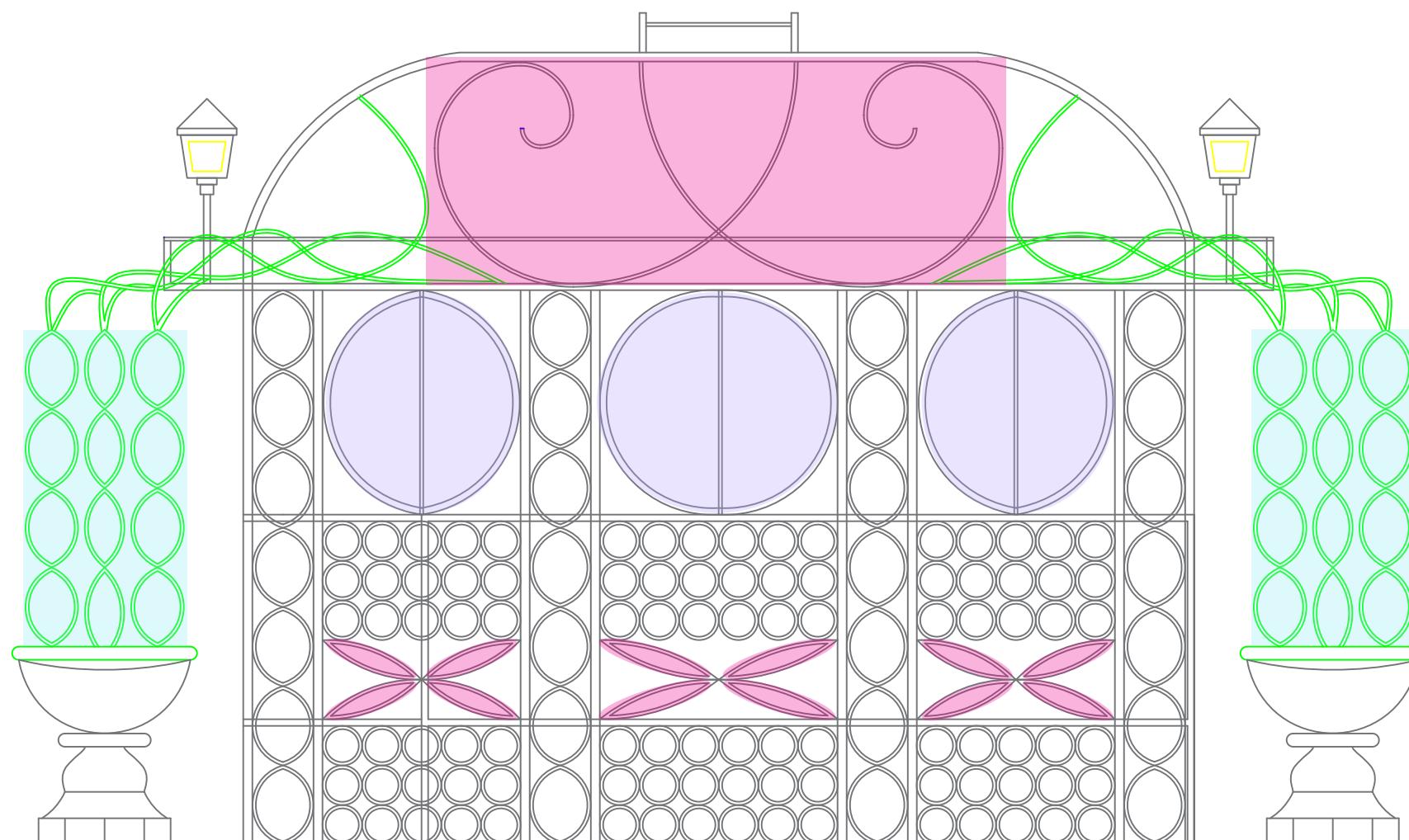
Key:

- = Artificial and Real Nature overlap
- = Artificial Nature
- = Real Nature

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Diagrams- Fenestrations & Apertures



East/ West Exterior Elevation

This diagram emphasizes the unique operable windows as a defining fenestration element. Each window opens outward in paired panels, resembling butterfly wings, which introduces movement, ventilation, and an interactive quality to the design. Made of clear glass, these windows stand out within the broader structure of transition glass that defines most of the shelter.

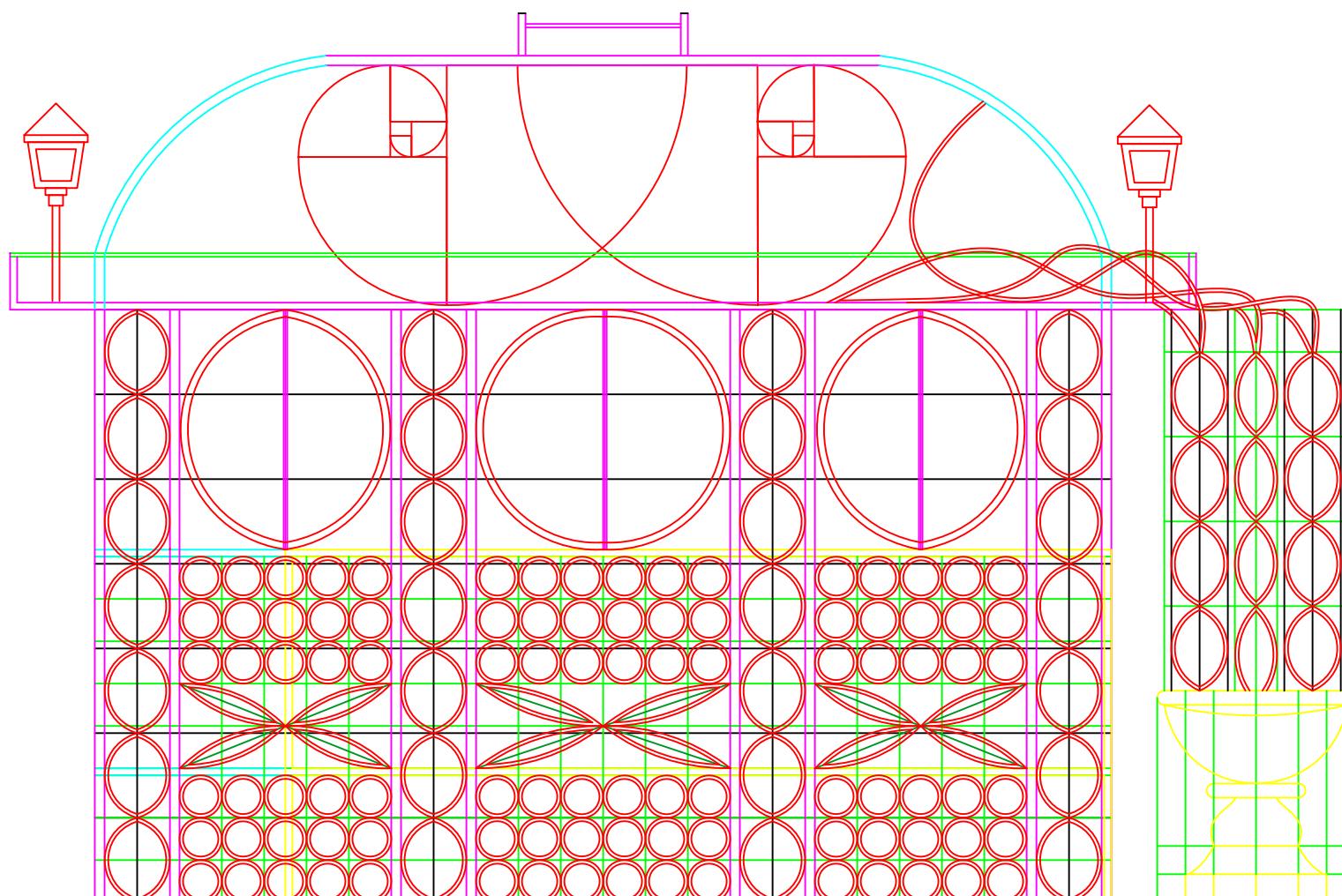
Key:

- = Clear glass apertures
- = Clear glass fenestration
- = Apertures

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Diagrams- Geometry & Massing



East/West Exterior Elevation

This diagram highlights the geometric structure of the design and its focus on proportion and symmetry. The roof was developed using a golden spiral to guide its curvature and create a balanced focal point. The rest of the design was kept symmetrical and evenly spaced to maintain visual order and consistency throughout the structure.

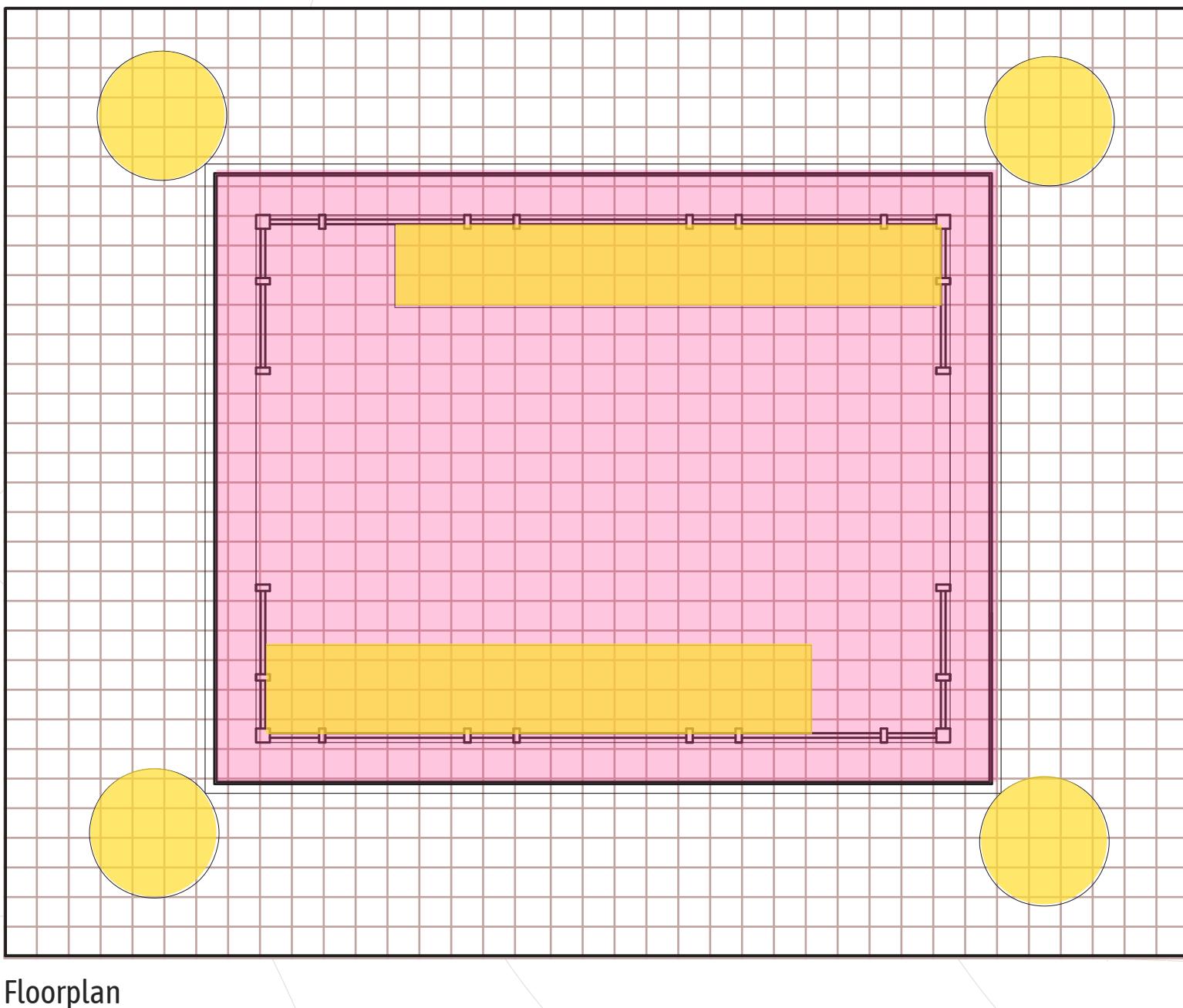
Key:

- = Center
- = Furniture
- = Metal design constraints

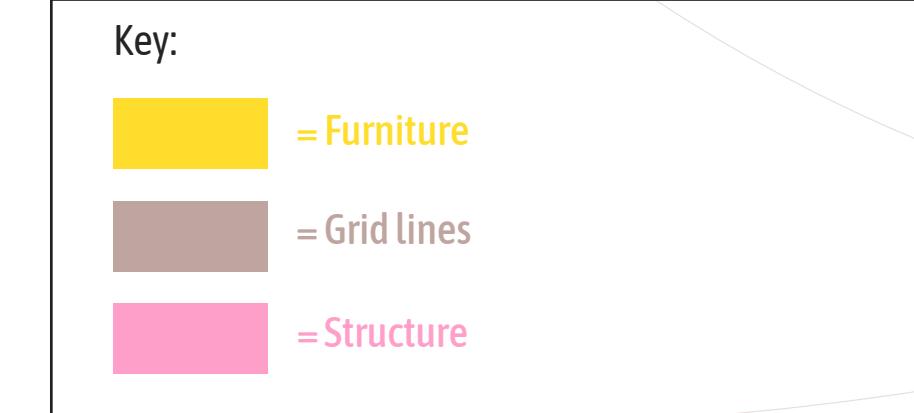
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Diagrams- Spatial Organization



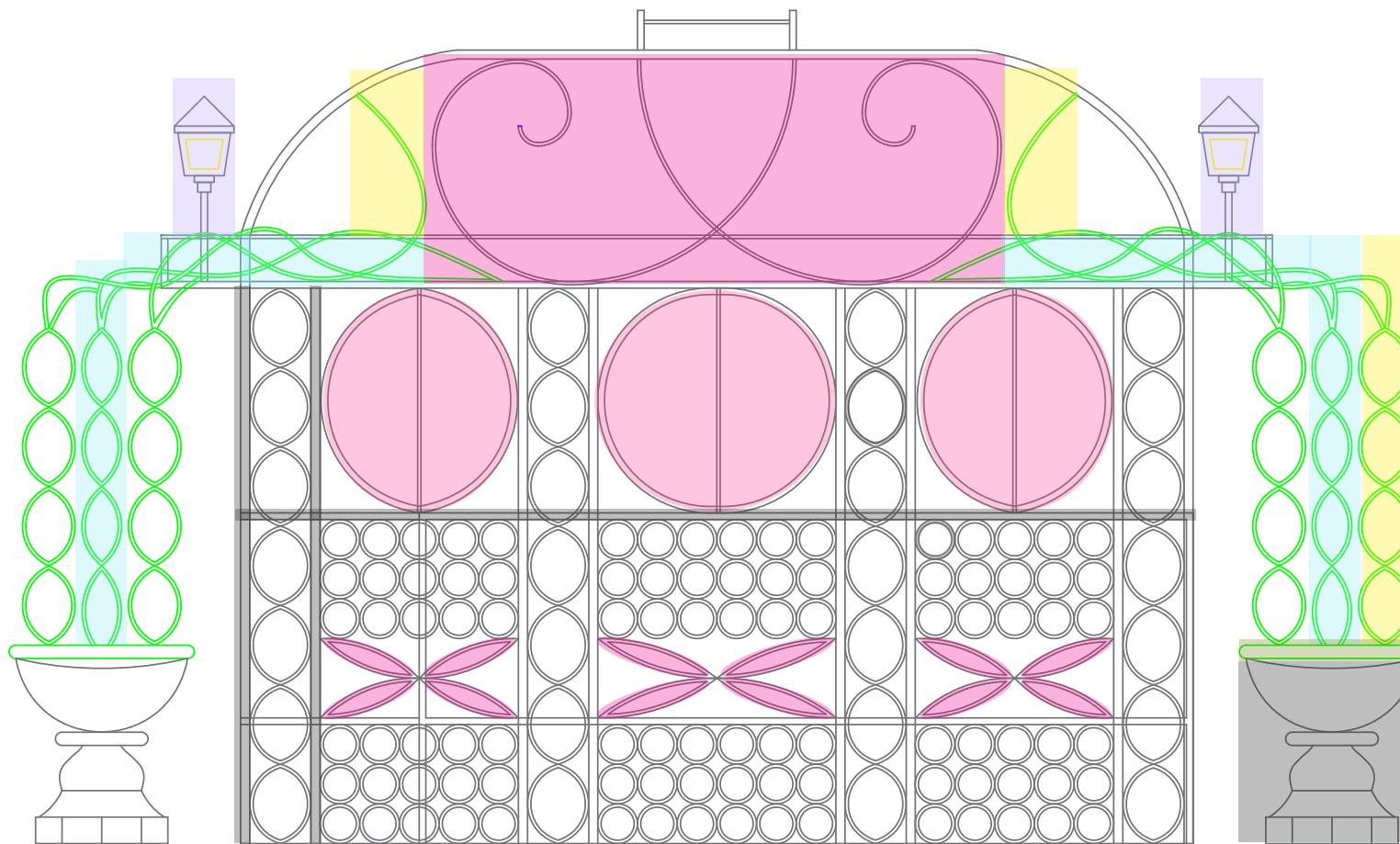
This diagram shows how the bus shelter follows a strict grid system. Every element aligns to the grid to create structure and clarity. The benches and stools fit within rectangular modules that keep the layout orderly, balanced, and cohesive.



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Diagrams- Materials



East/West Exterior Elevation



Materials	Descriptions
	= Crystal Illusions, Antique Glass for apertures and windows- examples below
	= Wrought iron for structure frame and stool bases
	= Green powder coated steel tubes for vines
	= LED Strips for steel vines
	= Lamp posts
	= Green powder coated steel for planter stools seats
	= Transition glass for between all the wrought iron

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Final AI Models

Timeless Ornate Nature



AI semi-accurate rendering of bus shelter with dome roof in the park



AI semi-accurate rendering of bus shelter in the winter

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Bus Shelter Design

Final Model

Timeless Ornate Nature



Scale: 1/2" = 1'

Shelter Concept

This model represents a sectional perspective to clearly show the rotating bus schedule, integrated bench metalwork, and the overall spatial layout within the shelter. The dome roof begins just behind the planters, although in this perspective view it begins before them. When viewed head-on, this creates the illusion that the garden is projecting outward toward the viewer. This was intentional to maintain the visual cohesion of the model's proportions and materials while allowing key elements to remain visible. The stool design was updated so that the vine backs now extend from the center of each stool, creating two seating sides. This also allows for both partially covered and uncovered outdoor seating.

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Final Model

Timeless Ornate Nature



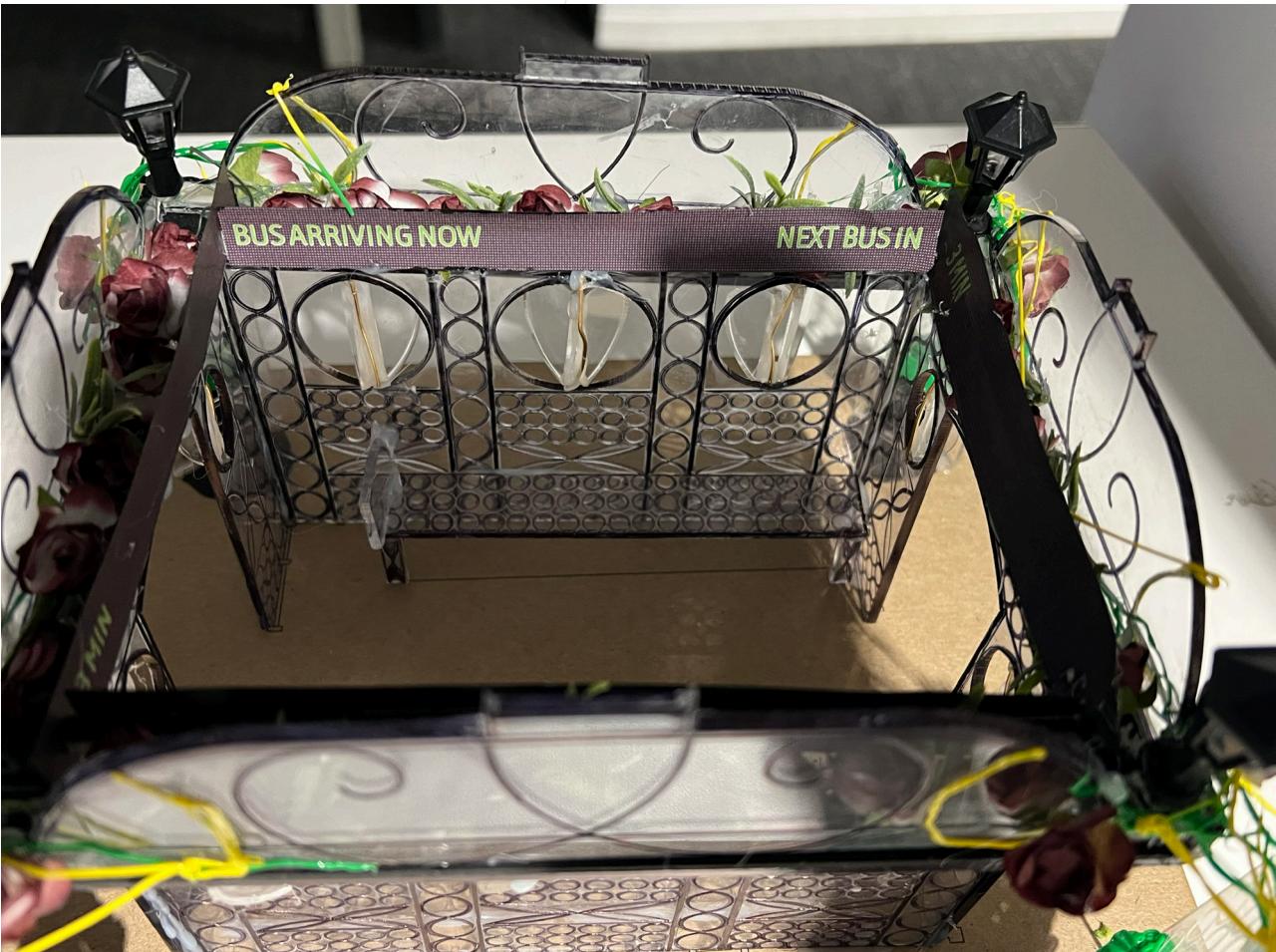
Scale: 1/2" = 1'

Project 3

Bus Shelter Design

Final Model

Timeless Ornate Nature



Scale: 1/2" = 1'

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Bus Shelter Design

Final Model

Timeless Ornate Nature



Scale: 1/2" = 1'



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Bus Shelter

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