

**Project Name:** Nebraska Medicine – Durham Outpatient Center Rooftop Plaza

**Project Location:** Omaha, NE

**Project Purpose:** Outside of the Nebraska Café on level three of Nebraska Medicine’s University Tower, the Rooftop Plaza had fallen into disrepair. Initially built in the early nineties, the space had closed for use due to a lack of shade opportunities, uneven pedestal paving, plugged drains, and the roof membrane needing replacement. Nebraska Medicine recognized this project as an opportunity for staff, patients, and visitors to interact with the outdoor environment, demonstrate sustainable practices, and provide an engaging, artful plaza space.

The guiding principles of the project included:

- Providing shaded, protected areas from University Tower’s southwestern exposure.
- Creating layers of intimate spaces that focus inward while still maintaining visibility
- Incorporating a variety of seating types
- Serving as an extension of the Nebraska Café eating area
- Updating the perimeter fencing and factoring safety into the design, keeping users away from the building edge
- Planting for color and variation that can be enjoyed throughout the seasons

## ***Role of the Landscape Architect***

- Develop a design vision to reinvigorate the rooftop plaza adjacent to the Nebraska Café.
- Collaborate with Owner, Architect, Structural Engineer, and MEP Engineer to replace the roof membrane system, utilize existing structure and drainage system, design lighting systems, and develop a shade canopy and retaining wall system that would limit penetrations into the roof membrane.
- Engage a green roof consultant to guide and assess appropriate soil media mix, soil depth, and planting palette incorporating native landscaping that thrives in an intensive green roof environment.
- Generate construction documentation for the roof deck pedestal paving system, planting area wall system, layered taper board insulation and depth of soil media, planting design, and custom integrated seating options.
- Observe installation process with Construction Administrator, collaborate with manufacturers and Contractor for seamless system integration.

## ***Special Factors and Project Significance***

The new plaza design functions as an intensive green roof, creating opportunities for a biodiverse demonstration of prairie environments. Further benefits include reducing overall stormwater runoff and noise, improving stormwater and air quality, urban heat island mitigation, and year-round aesthetic interest for users of the Nebraska Café.

The incorporation of ornamental trees was achieved by coordinating their location with the building's columns and utilizing tapered board insulation to create planting pits that were the proper depth. In contrast, the surrounding landscape's soil media depth and plant selection were selectively chosen for individual plant health success and to lessen the weight of the raised plantings on the building structure.

The improvements to this space will also hold research-backed wellness advantages, such as stress reduction and lessened perceived discomfort, thus reducing healing times. The variety of outdoor seating options offers users the autonomy of choice in finding a space that meets their desired needs, hopefully encouraging increased usage and engagement with nature within the hospital campus.



FRED AND PAMELA BUFFETT CANCER CENTER

DURHAM OUTPATIENT CENTER

UNIVERSITY HOSPITAL TOWER

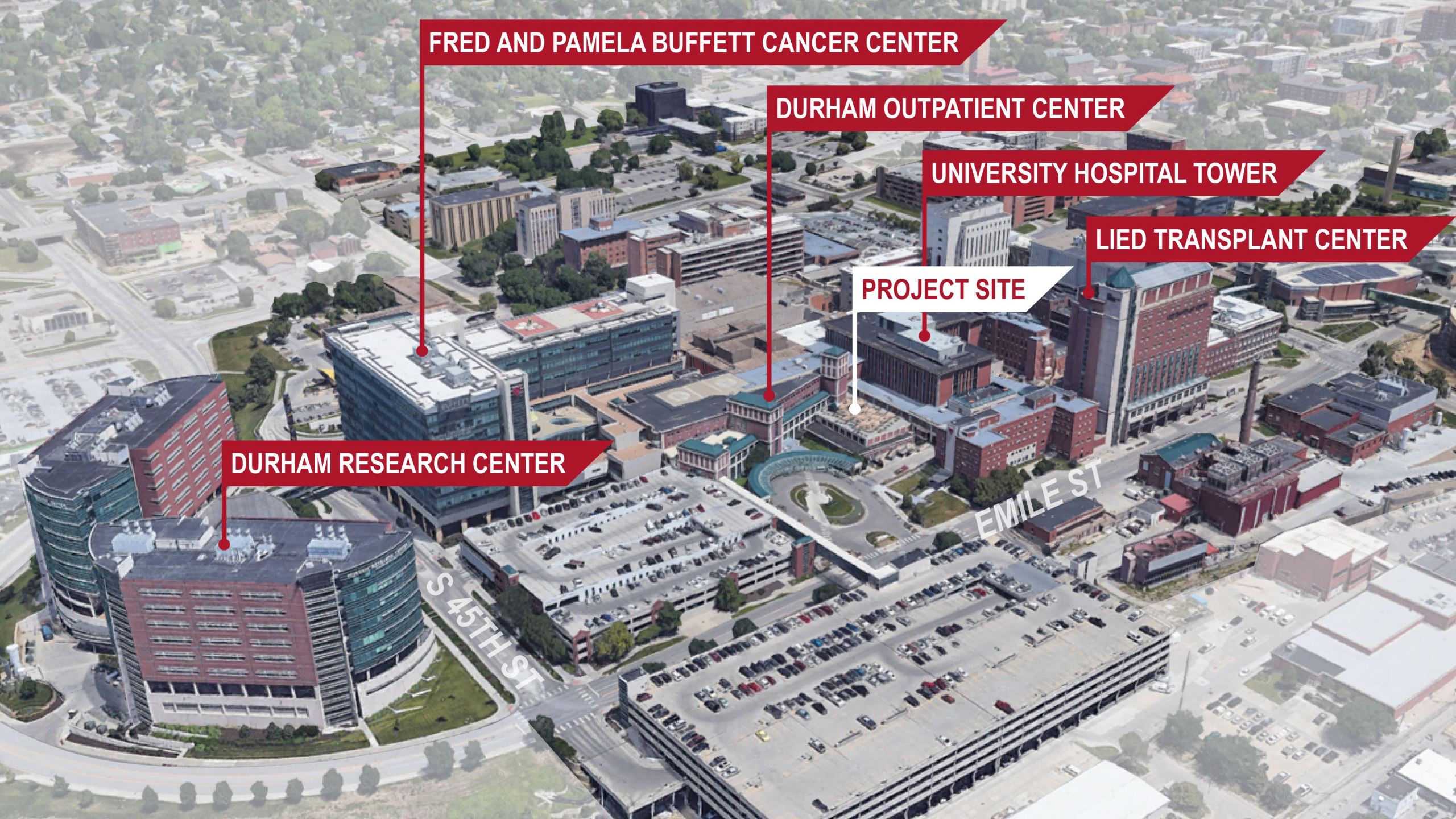
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PROJECT SITE

DURHAM RESEARCH CENTER

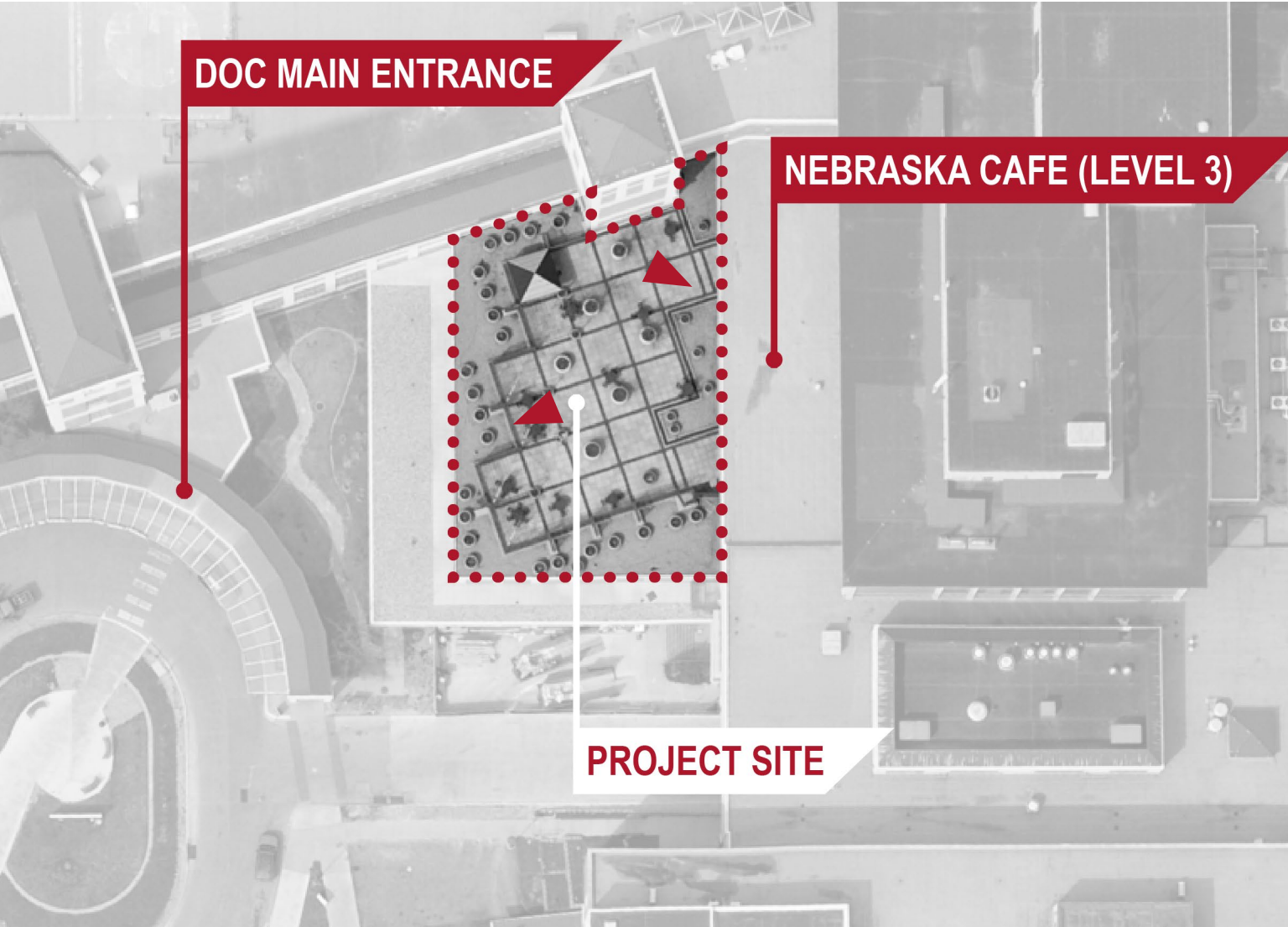
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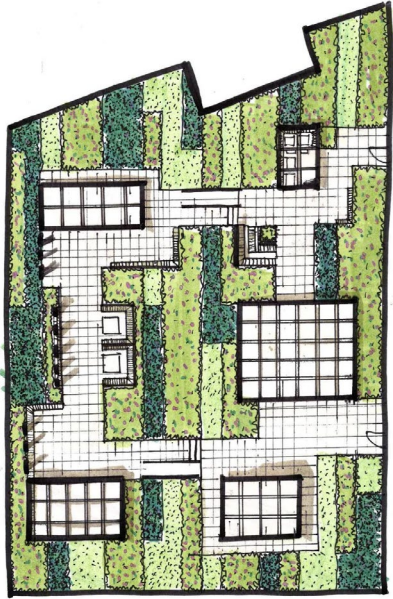
## Existing Conditions and Adjacencies



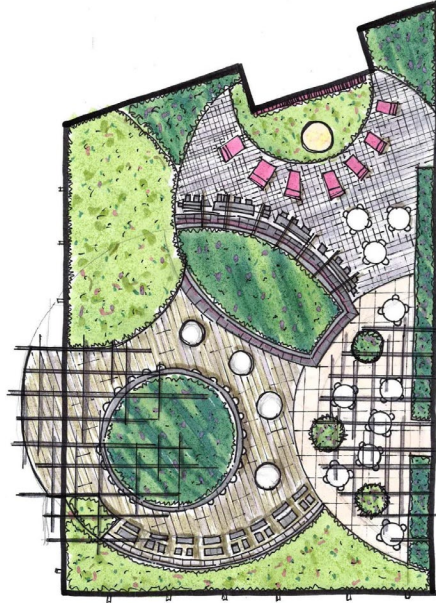
The rooftop plaza had been closed for use due to uneven paving, plugged drains, and the roof membrane needing replacement. The space lacked shade, and trees and plantings failed to thrive in pots.



# Concept Iterations



*The Living Room*



*The Horizon*

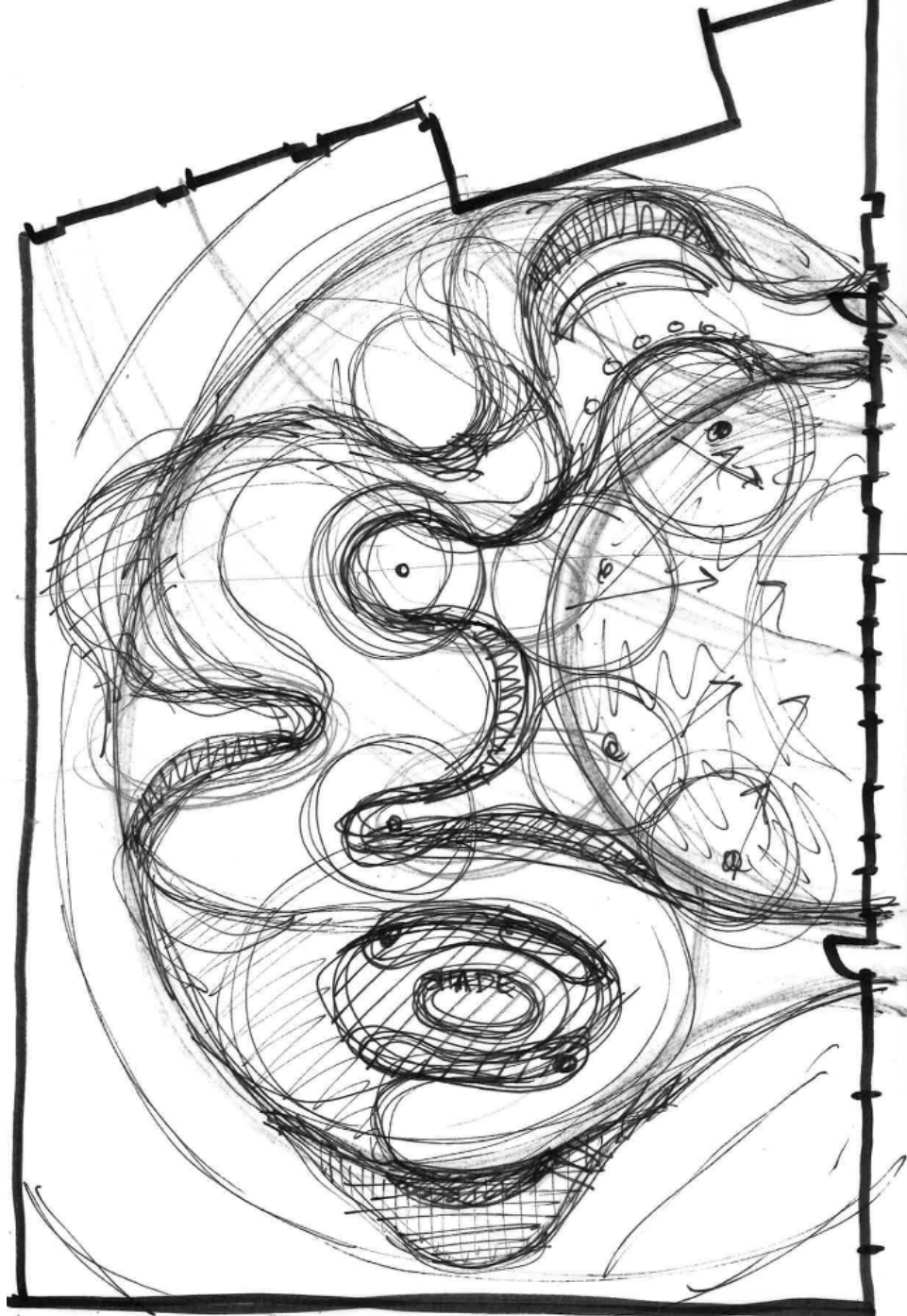


*Breath of Fresh Air*



Multiple concept iterations were developed to create intimate spaces with a variety of seating opportunities.



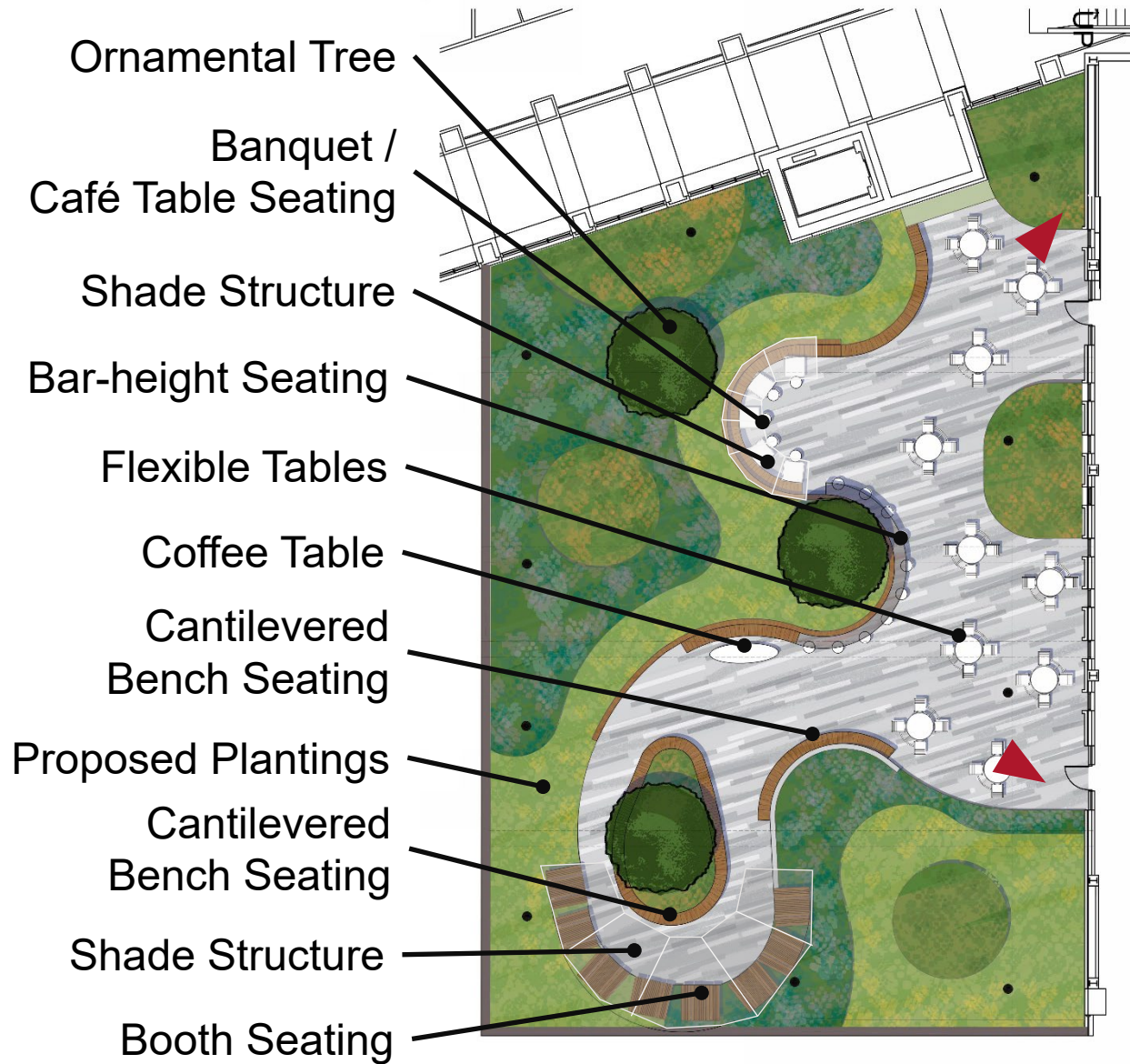


## *Inspiration* | **Breath of Fresh Air**

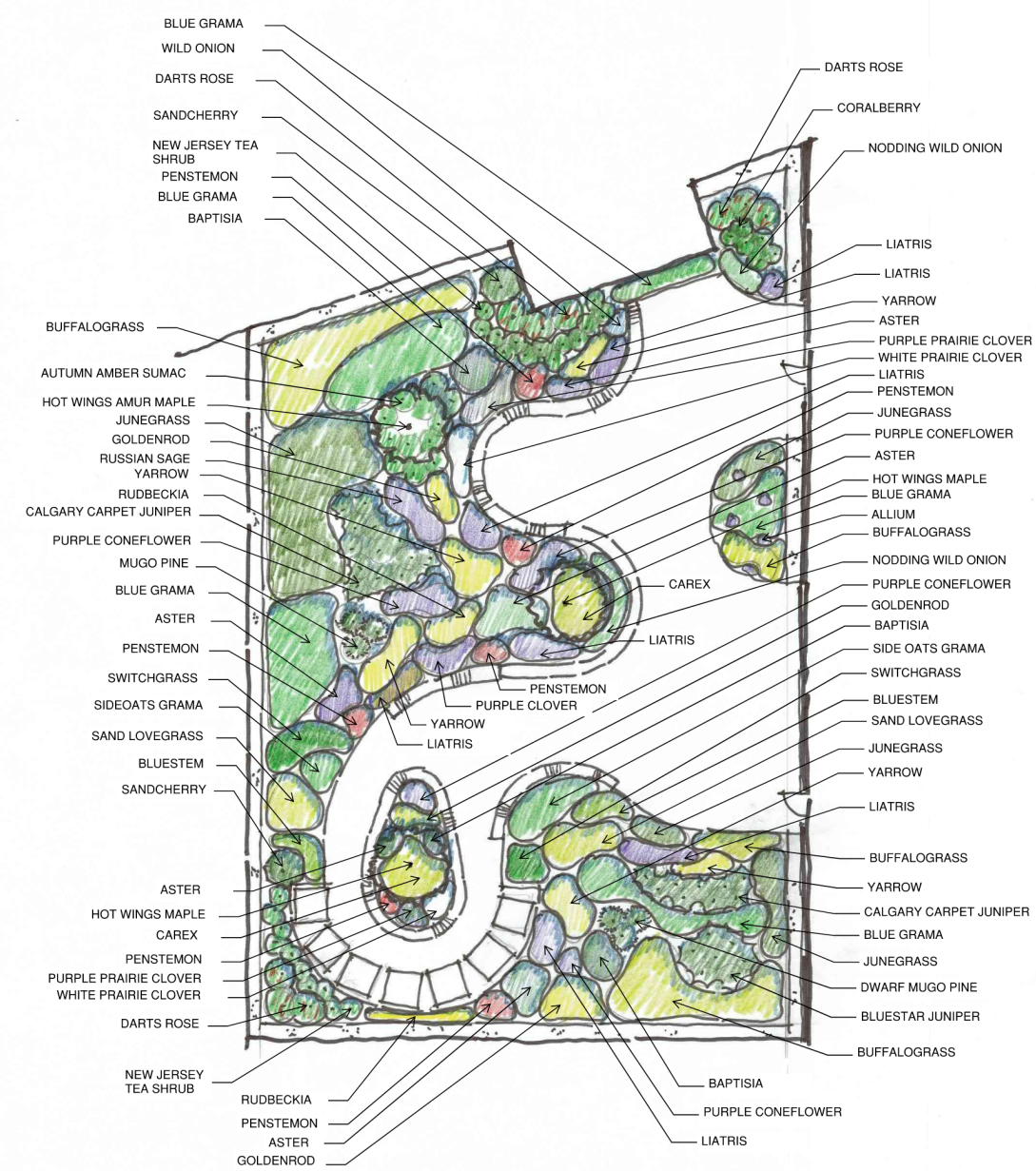
Engaging with this rooftop plaza, whether in-person or from views above, should be a **breath of fresh air** for hospital staff, patients, and visitors. The rooftop's design abstracts the microscopic journey of oxygen through a cell. Mimicking the process of cellular respiration, the courtyard's organic design takes the visitor on a journey, providing vistas over Nebraska Medicine's campus to the neighborhood's tree canopy beyond and pit stops for rest and reflection in a variety of intimate, seating areas.



# Design Process



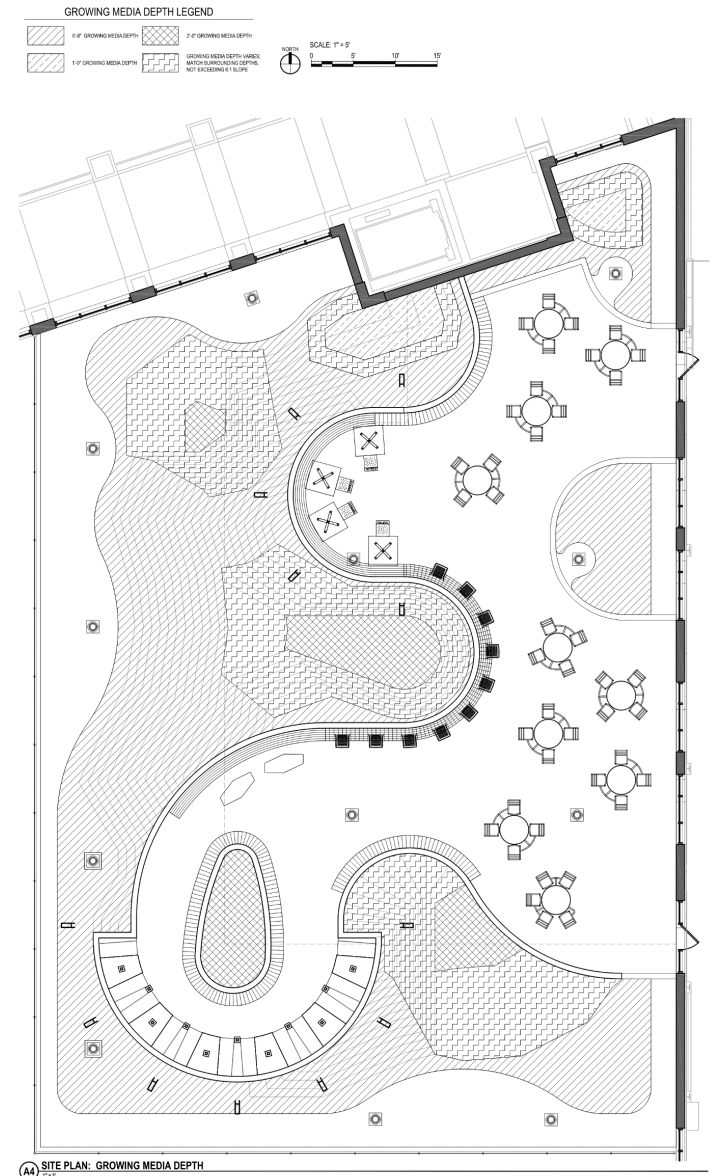
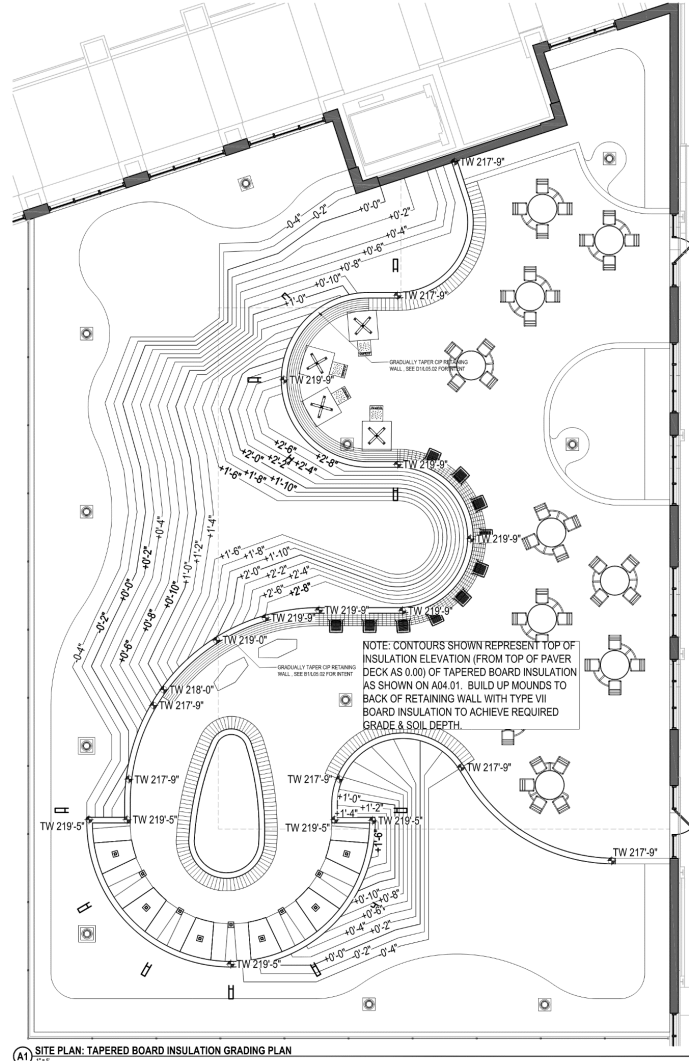
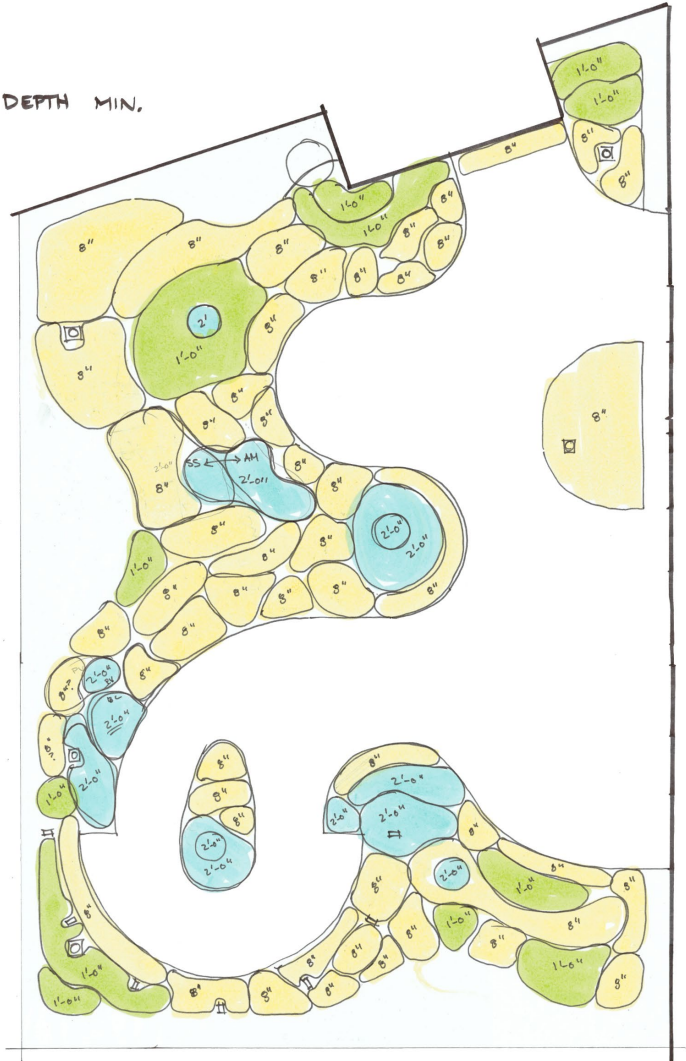




Planting selections were chosen to celebrate the biodiversity of native prairie environments, such as low and tall prairie grasses, deciduous and evergreen shrubs, and flowering pollinators.

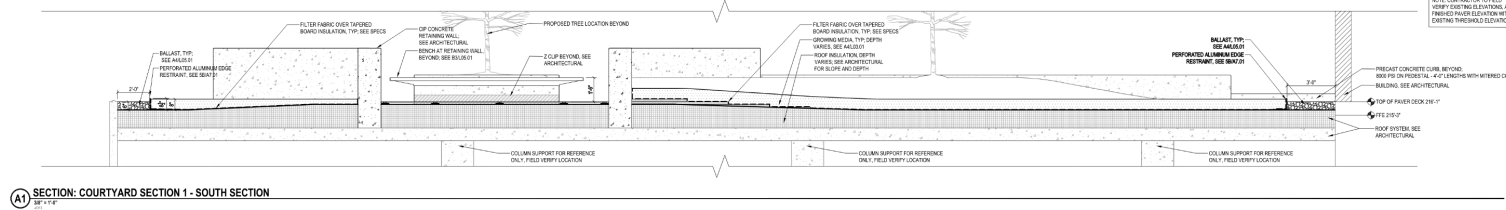
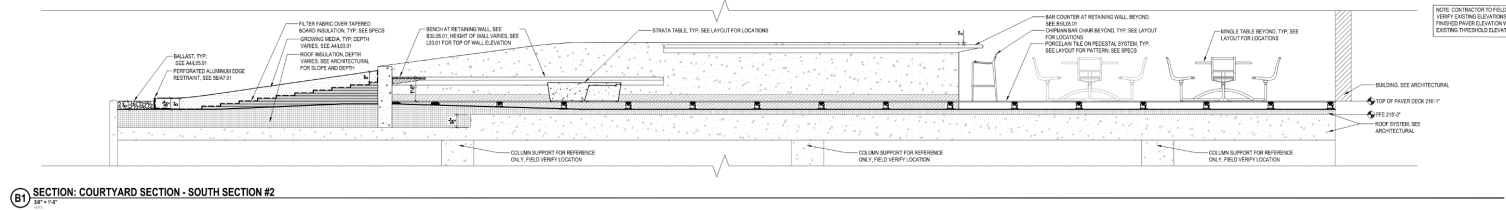
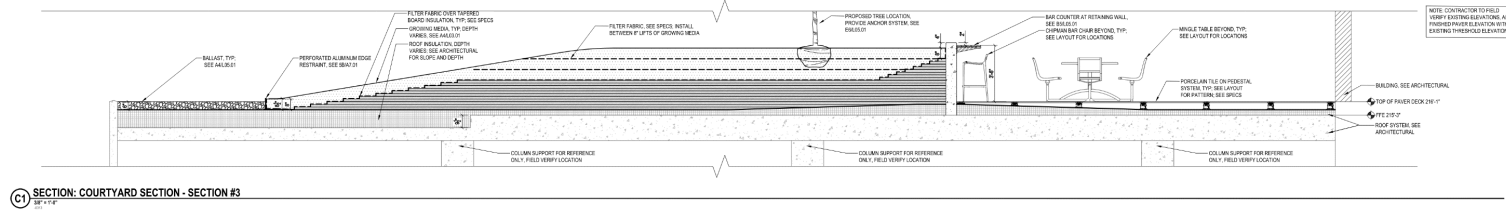
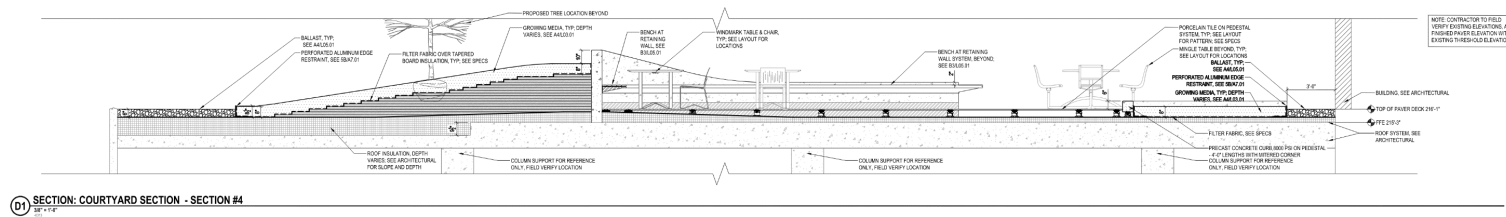
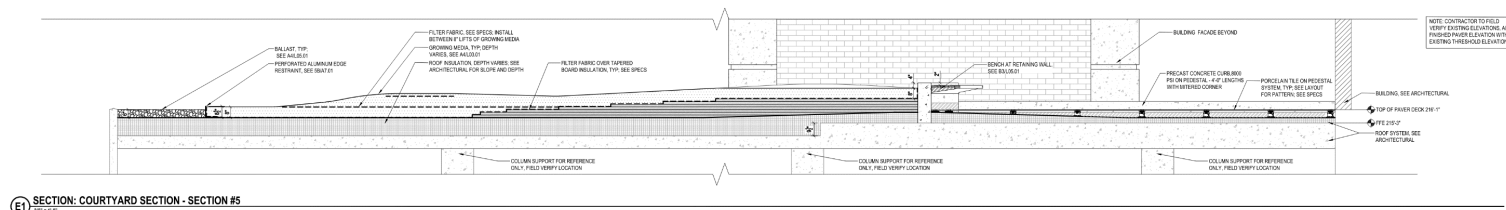


SOIL DEPTH MIN.




Tapered board insulation was used to build up the landscape against the curvilinear concrete retaining walls and lessen the load on the roof structure. The planting design and finish grades had to ensure that there was necessary roof media soil depth for the establishment and survival of the landscape.





A curvilinear concrete retaining wall creates a variety of seating opportunities and provides the necessary soil media depth to incorporate trees and shrubs into the green roof planting palette.





Cantilevered shade canopies provide both privacy and shade. A variety of seating choices includes booths, cantilevered benches, banquettes, and bar-height seating.

Porcelain tiles on a roof pedestal system allow for seamless transitions between stepped roof elevations, lessen the structural load, and provide a durable, high-quality finish.





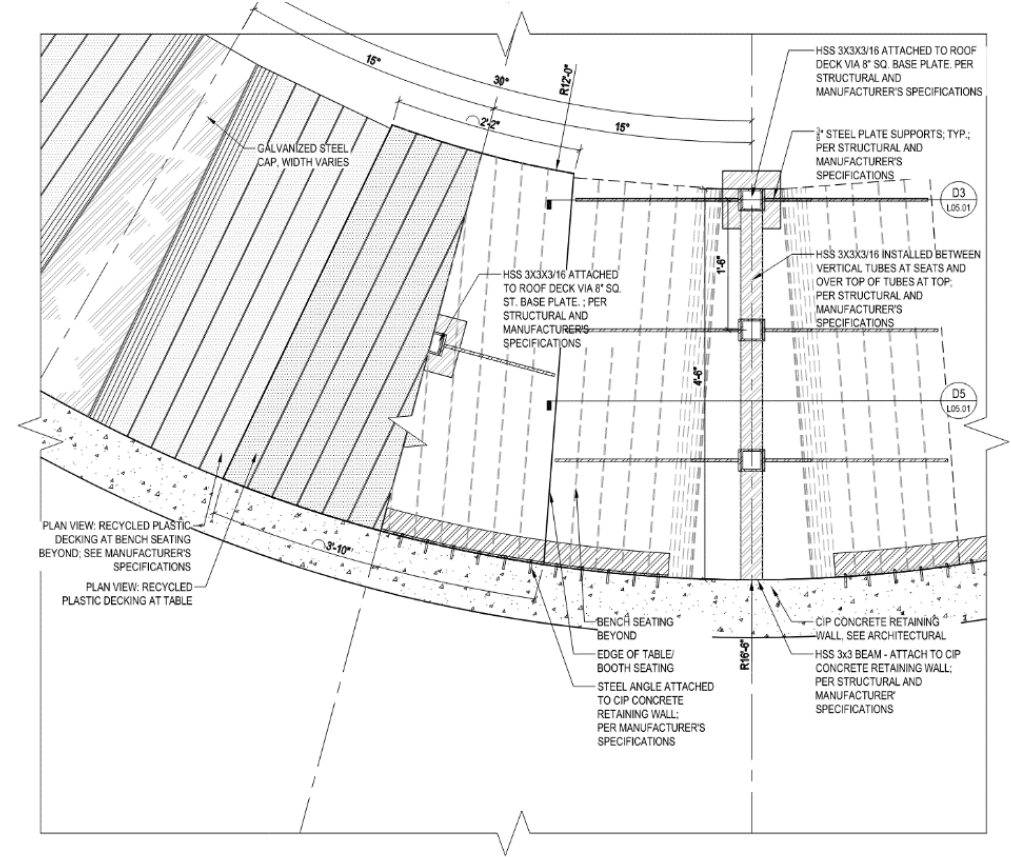
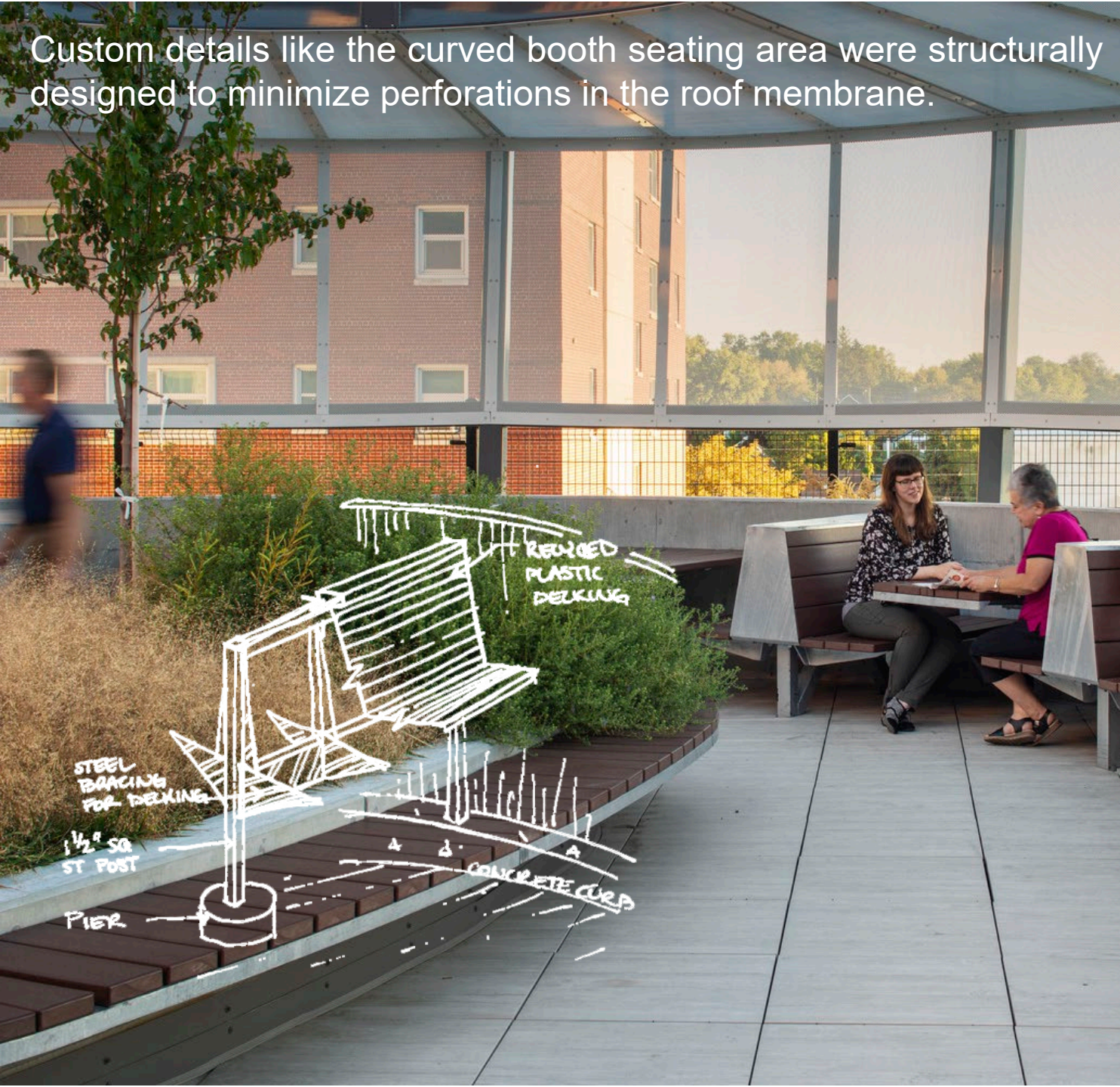


The curvilinear retaining wall delineates a series of gathering spaces. The sloping height of the wall seamlessly transitions from bar-height seating to banquettes to cantilevered benches.

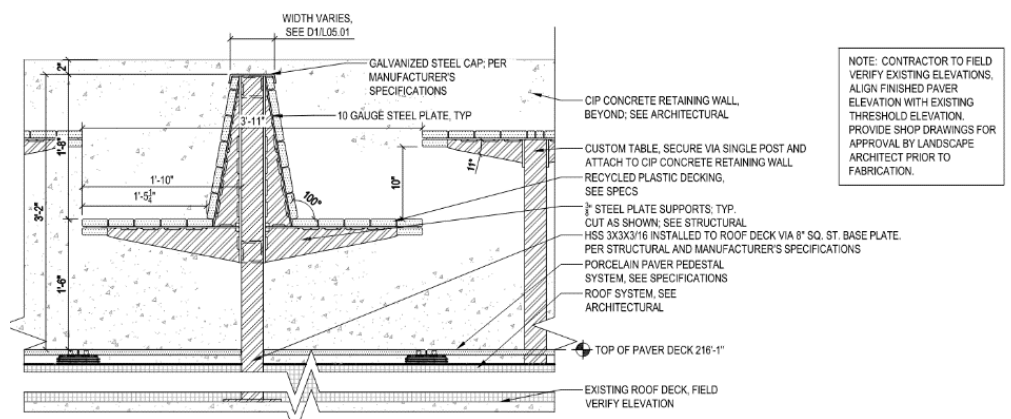




Custom details like the curved booth seating area were structurally designed to minimize perforations in the roof membrane.



**D1 PLAN: TYPICAL BOOTH SEATING**  
1" = 1'-0"



NOTE: CONTRACTOR TO FIELD VERIFY EXISTING ELEVATIONS, ALIGN FINISHED PAVER ELEVATION WITH EXISTING THRESHOLD ELEVATION. PROVIDE SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.

**D3 TYPICAL SECTION: BOOTH SEATING**  
1" = 1'-0"











The cantilevered bar counter and bench seating are illuminated with strip lighting to activate the space at night and create a warm glow in the evening.









