

arch 4216 honors thesis

comprehensive design: oklahoma shakespeare theatre

emily henning

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project introduction

Oklahoma Shakespeare in the Park has been bringing Shakespearean productions to the Oklahoma City area since 1985. Their mission is “to produce bold, reimagined, entertaining and accessible interpretations of Shakespeare and the classics.” Their stated values include the following:

“We believe in originality of thought, depth of emotion, theatrical innovation, and creative risk in all our work.

We believe the inclusion of a diversity of people, ideas, and cultures enriches both our insights into the work we present on stage and our relationships with each other.

We believe in the importance of providing the best possible experience for our audience, whether they are purchasing tickets, seeking information or participating in educational activities.

We believe that the collaborative process is intrinsic to theatre and is the foundation of our working relationships.”

A new theatre facility for Oklahoma Shakespeare in the Park - OSP - is to be located at the corner of Paseo Drive and Walker Avenue in the Paseo District in Oklahoma City. The company produces about four or five shows per year, with four to twenty performers per show. OSP is dedicated to outreach and educational programs and host many events for students. The company has lost multiple stages to fire and currently performs outdoor shows at the Myriad Gardens in downtown Oklahoma City. They seek a permanent home for both indoor and outdoor theatre performances.

research 1a

The class's collective research began with the investigation of a variety of topics relating to Shakespeare, theatre in general, and design issues pertinent to the site and the Oklahoma City area. The following issues were addressed in a 110 page document:

Site Information

Site Analysis

Architectural Character

Shakespearean Works

The Globe Theatre

Marquee Design & Theatre Design

Theatre Layout & Seating

Code/ADA Compliance

Sustainability

Structure

HVAC & Environmental Issues

Equipment

Program Analysis

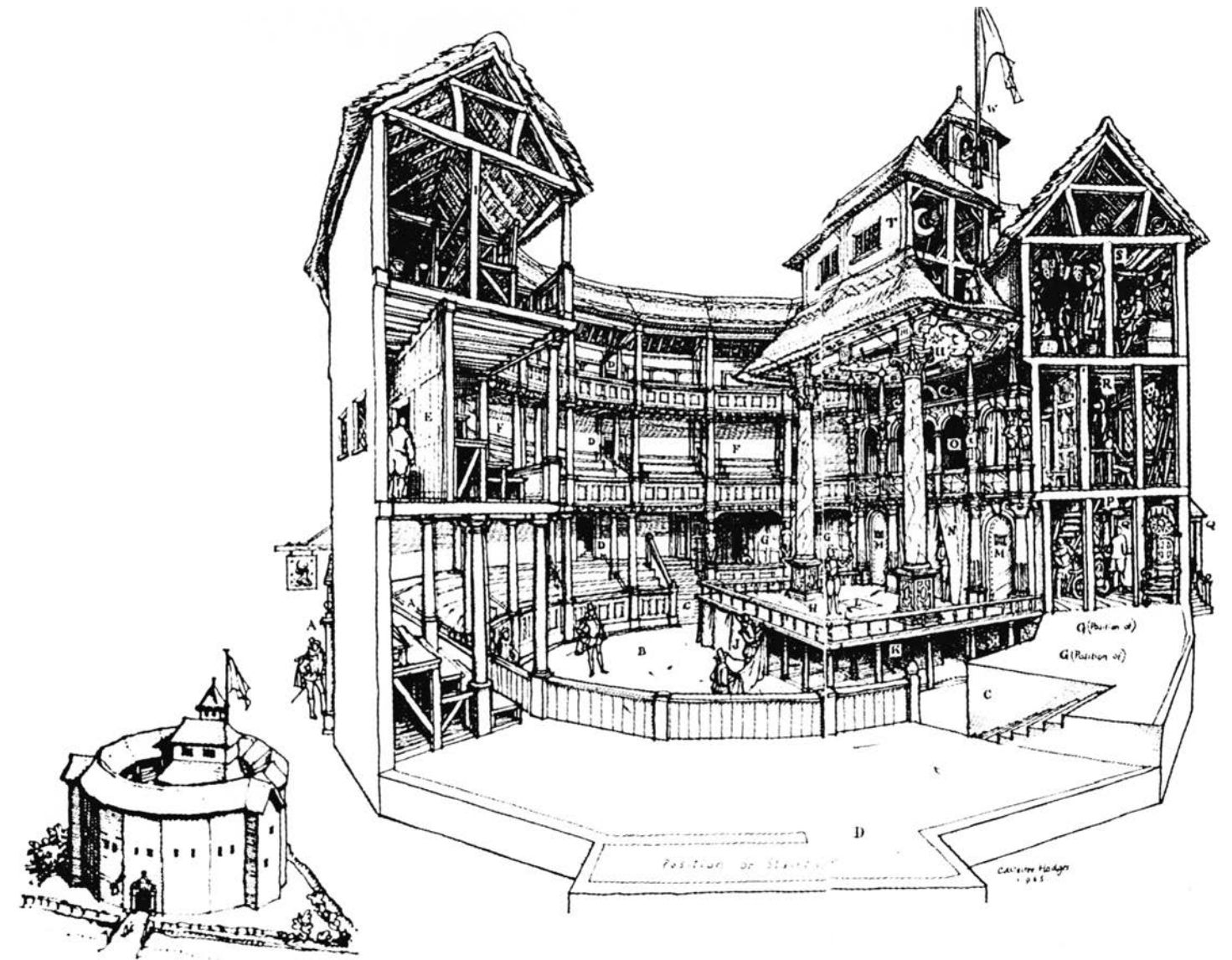
Precedent Studies & Analysis

The investigation of the history of Shakespearean performance and, specifically, the Globe Theatre was crucial to the development of my concept. The first Globe Theatre was originally built in 1599 as an outdoor playhouse, designed specifically for the performance of Shakespearean works. The Globe has since been rebuilt twice, and its history is maintained in the present day because of the way the venue allowed people to experience theatre. Though today, many students and others not intuitively inclined to appreciate centuries-old literature and drama find the writing of Shakespeare to be

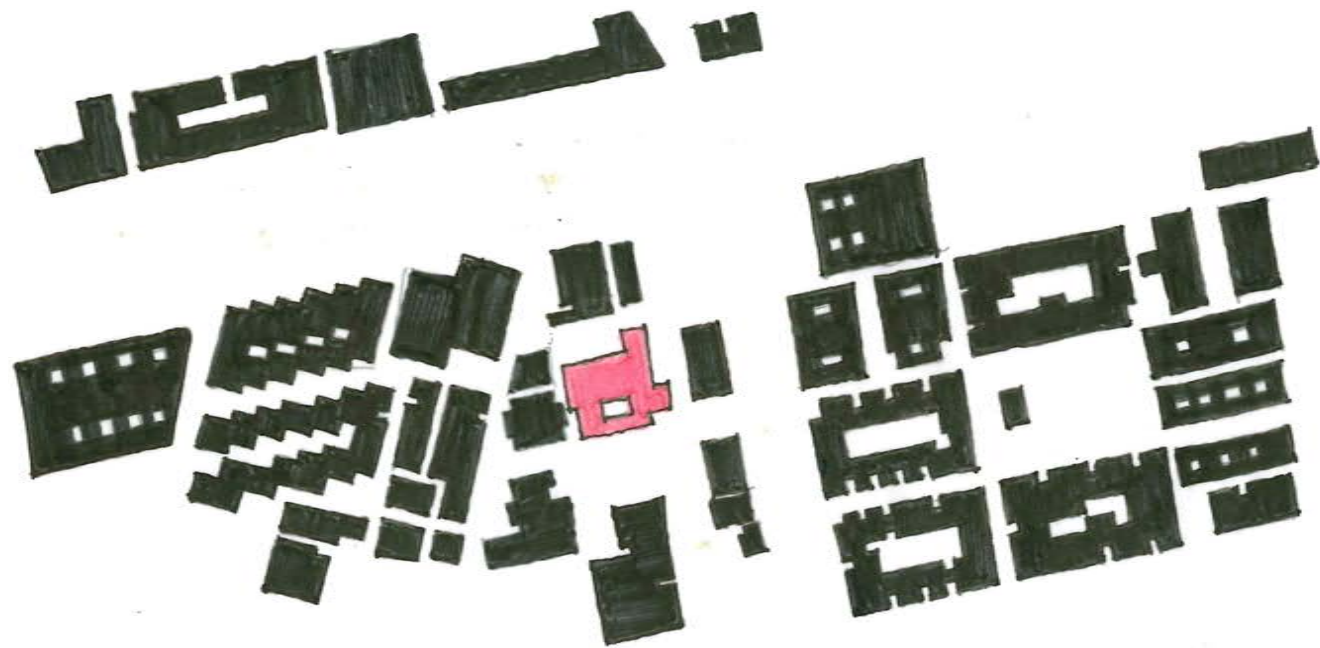
dense, difficult to understand, and even more difficult to enjoy, in its time, Shakespeare's work was considered exciting, engaging, and an interactive social event. Shakespeare is still presented in this fashion in the Globe today, and it is the aim of Oklahoma Shakespeare in the Park to create this same kind of atmosphere.

Analysis of the Globe Theatre became the foundation of creating an engaging theatre environment for a new Oklahoma Shakespeare theater. The Globe Theatre is a 100' diameter cylindrical form, leaving no spectator more than 50 feet from the front edge of the thrust stage. Circulation is forced to the edges of the circular floor plan, and seating wraps more than 180 degrees around the thrust. This configuration allows audience members not only to see the performers from a wide variety of angles, but also allows them to experience the reactions of other audience members, increasing the air of interactivity. The Globe features two gallery-style balconies that offer views of the stage that are quite vertical, giving an entirely different perspective to the audience members in this area.

The concept of my design proposal for a new theatre facility for Oklahoma Shakespeare in the Park centers around a theater space that implements these modernly-applicable physical traits of the Globe Theatre. I incorporated and even mimicked many of these experiential characteristics to create an interactive and engaging environment reminiscent of the Globe.



section diagram of original Globe Theatre

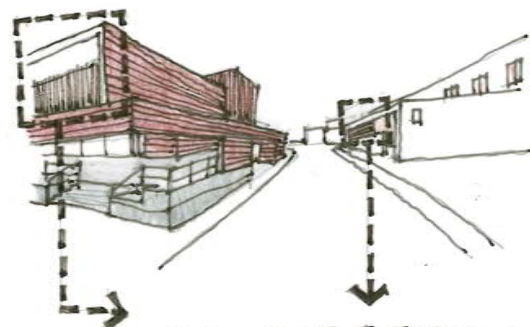


neighborhood density noll diagram

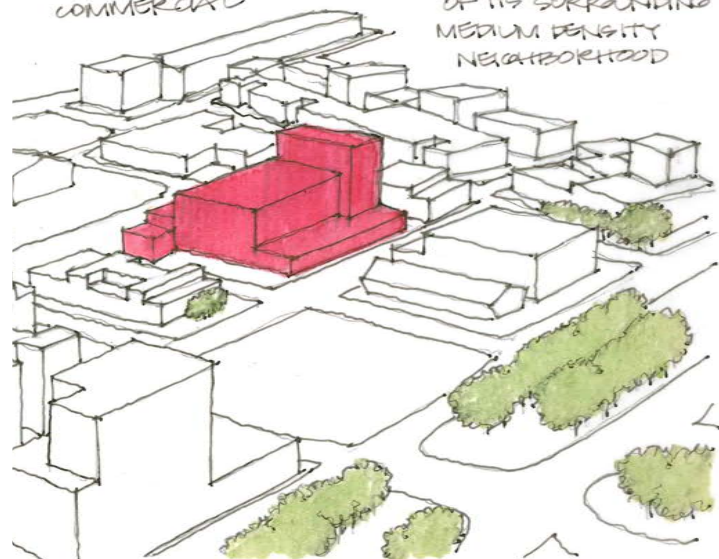
NEIGHBORHOOD TRAITS

- SPECKLED WITH OPEN GREEN AREAS
- PACKAGES ON STREET CROSS
- INTERIOR COURTYARD SPACES IN BOTH RESIDENTIAL & COMMERCIAL
- 2 STORY HOMES
- 3-4 STORY GATEWAYS, HOSPITALS, OTHER

THE SCALE OF THE VICAR IS JUST SLIGHTLY LARGER THAN THAT OF ITS SURROUNDING MEDIUM DENSITY NEIGHBORHOOD



THE VICAR THEATRE PICKS UP ON THE VOCABULARIES & MATERIALITY OF THE MUNICIPAL GOVERNMENT BUILDING ACROSS CALLE HORACIO TO THE NORTH



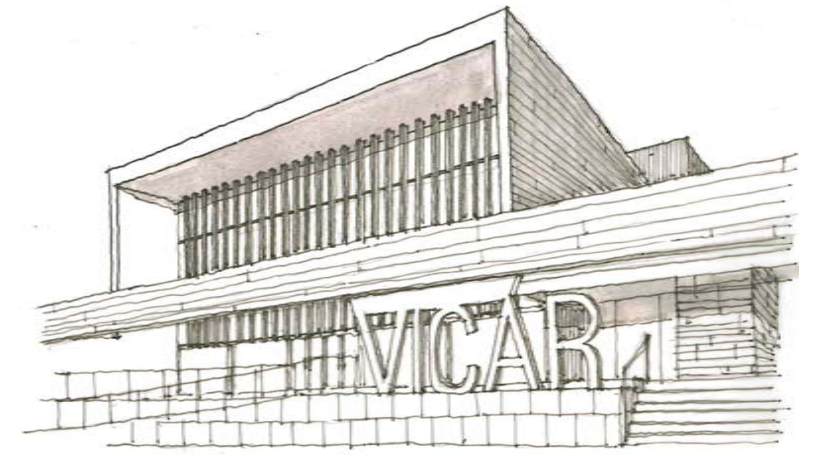
context aerial perspective

material vocabulary study

research 1b

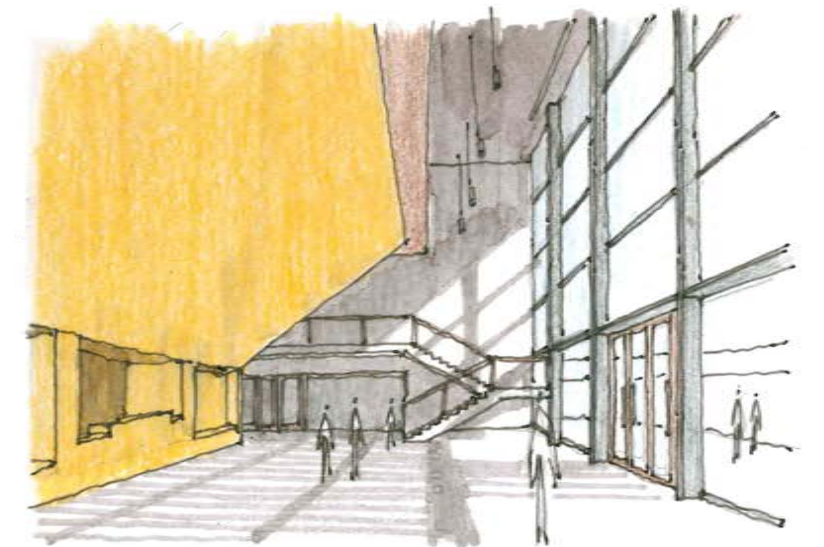
Precedent analysis of the Vicar Theatre was also highly instrumental in my understanding of how a dramatic theatre facility can fit into lower-scale urban fabric. The Vicar, located in Almería, Spain, sits in the middle of many low- to medium-rise residential neighborhoods. Similar to the Paseo District in Oklahoma City, the Vicar's neighborhood is just a few city blocks away from highly-trafficked commercial and retail areas, while the immediate context is more colloquial. There is limited vehicular traffic, and the expectation is that most audience members would arrive on foot, similar to our given site in the Paseo.

The path of entry and lobby of the Vicar are some of its most important experiential features, and the study of these spaces contributed greatly to the development of a procession and welcome space in a theater for Oklahoma Shakespeare. I found the Vicar's entwining exterior plaza to be an easily applicable feature in my own project and implemented similar wrapping elements in the development of the exterior theater space. The Vicar's lobby capitalizes on a large, uninterrupted volume to create a successful transitional space, allowing patrons to mingle freely or allowing the theater to host events or arrange any desired displays in this flexible area. The lobby also uses bold color, applied on a massive scale, to give a feeling of anticipatory excitement that gives a hint at the atmosphere that will be discovered inside the theater, but the theater space itself takes on an entirely different architectural vocabulary and material palette. I did not create such a stark contrast in materiality from the lobby to the theater space in my own project, but I did incorporate many aspects of the use of bold color and surprising transition.



vicar theatre

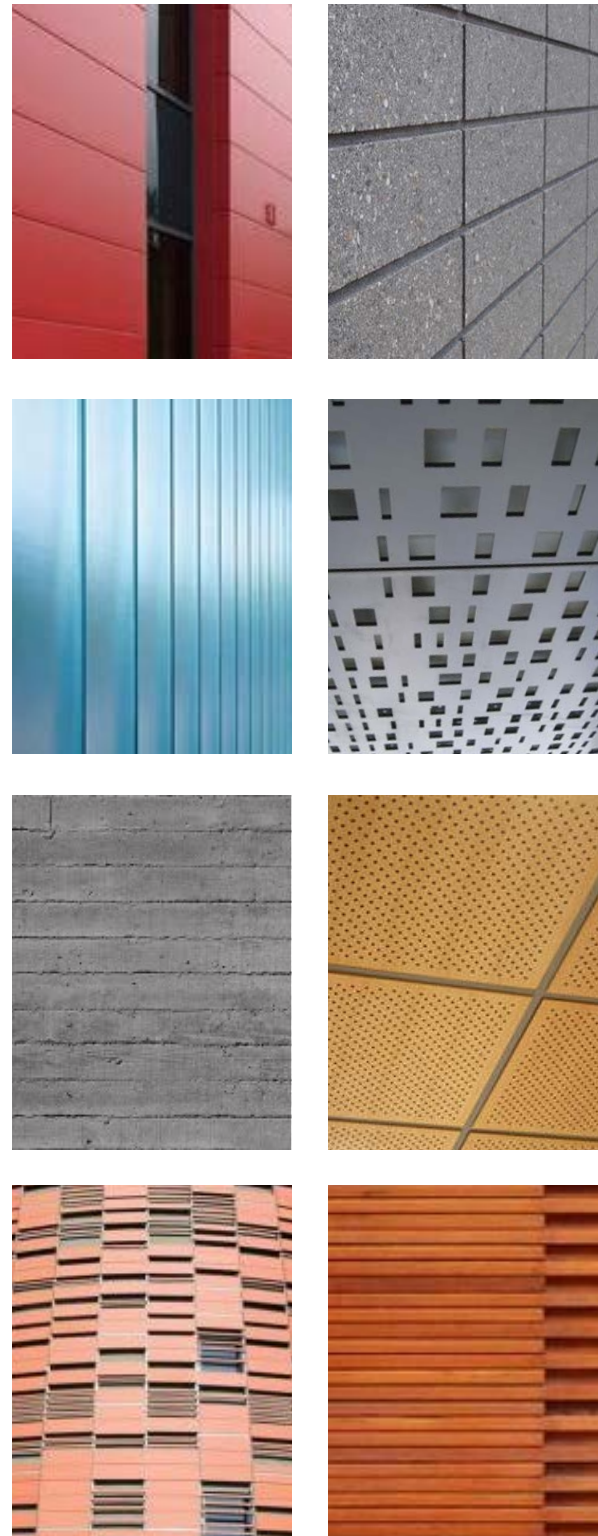
In addition to approach and contextual influence, this research component also included study of environmental forces, structural systems, heating and cooling strategies, functional zoning, circulation paths, and experiences in a wider variety of functional spaces.



research 2

The second phase of research entailed developing multiple material palette options for both the interior focus space and the overall building exterior. This research included the compilation of detailed product data sheets, specifications, and analysis of how each material would impact the project in terms of aesthetics, contextuality, constructability, sustainability, durability, and cost.

One proposed exterior palette related more strongly to the context, incorporating terra cotta seen in the roofing of neighboring buildings and warm, wood tones, while the other—the palette ultimately chosen—lent itself to a more iconic image, featuring modern materials such as channel glass and aluminum panels. Ultimately, some contextuality was sacrificed in favor of iconicism and a scheme that was easily implemented in both exterior and interior applications.



design questions

Exploration of the overall project, study of a comparable precedent, investigation of material options, and understanding of the client through research and personal interactions and interviews led to the formulation of a series of design questions, the answers to which would drive the project from beginning to end:

How can physical features of the Globe Theatre be incorporated in a modern theatre facility to create a comparable environment?

How is a comparable environment adapted to cater and relate to 21st century patrons?

How do the other functions required of a modern theatre facility relate to an idealized theater space?

How does the massing of these functions relate both to each other and to the context?

How do the materials selected impact the project image and user experience?

What is the balance between contextuality and iconicism?

How do the other systems necessary to construct and operate a modern building integrate with the proposed concept and form?

premise

The premise is seen as a preliminary answer to the design questions that encapsulates the conceptual and begins to describe the physical. The premise grants varying levels of importance to the design questions relative to each other. The concept then develops as a more detailed application of the premise.

Identifying and taking advantage of the Globe Theatre's most valuable qualities brings Oklahoma Shakespeare's vision of connecting people to Shakespeare to life. The theatre is the center of the project, both figuratively and physically, and it offers the seating from almost all sides, the visual connections across the audience, the variety of levels of balconies, and the informal seating area reminiscent of the groundling area that made the Globe

the best place to experience Shakespearean theatre. The theatre box emerges from the lower masses of the supporting spaces that are recognizable as subservient in their rectilinear geometries relative to the cylindrical theater box. The circular parti of the outdoor theatre space intersects with the theatre box as a cylindrical void. The exterior curtain walls obscure to a certain degree the activity that occurs inside, creating an air of mystery and intrigue, while allowing light to radiate outwards in the evening, creating an attractive glow. Masses build up away from the street, connecting to the context in scale, while familiar, yet modern, materials break away from the context to create a contrasting iconic image.

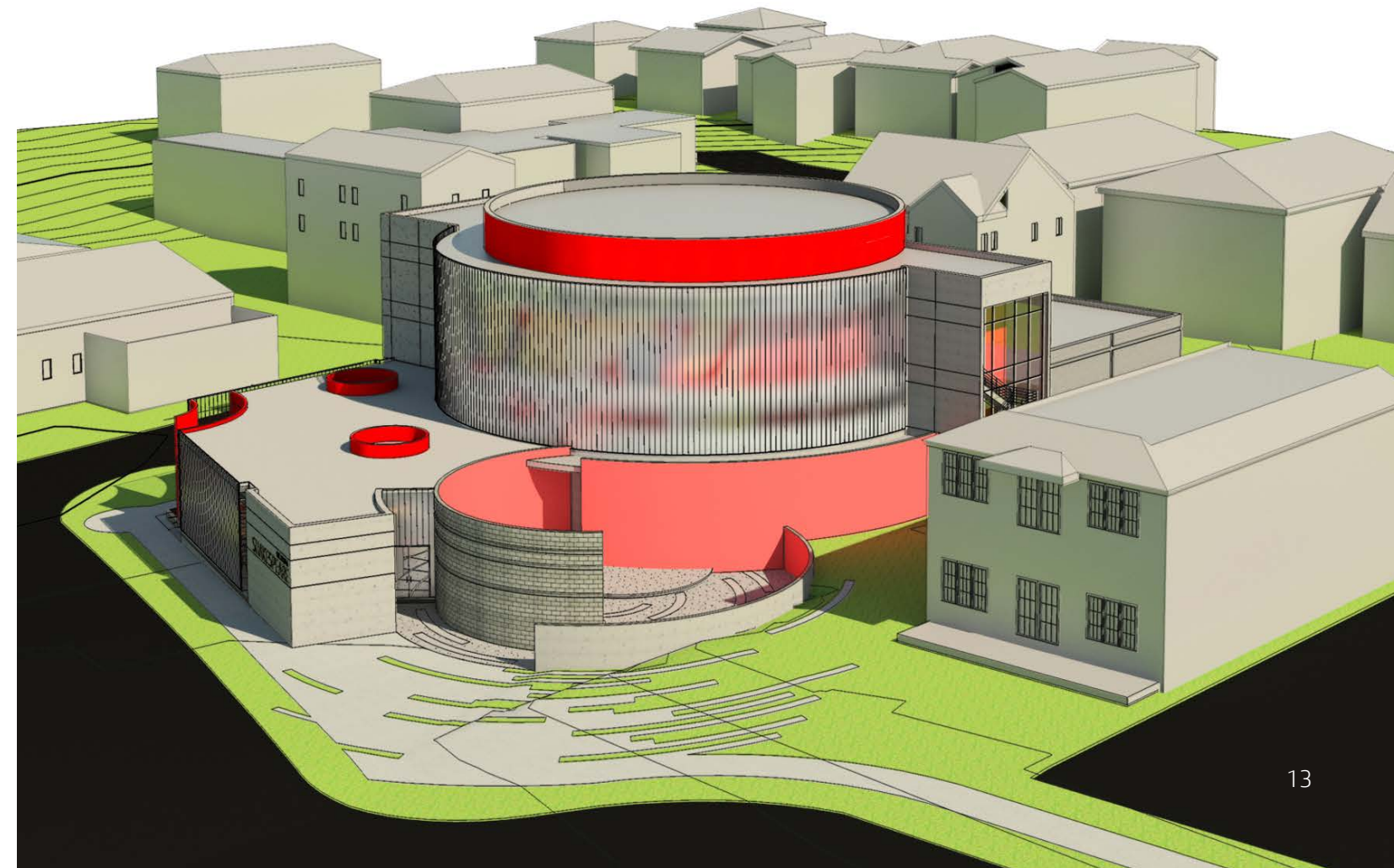
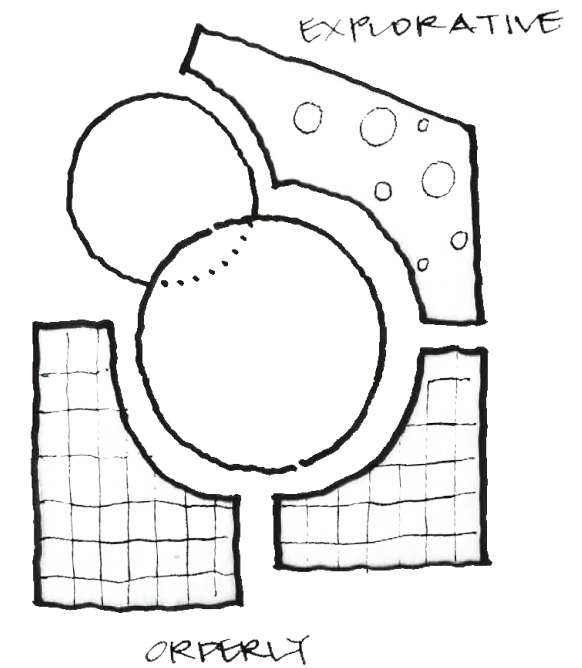
massing

Beginning with a Globe-reminiscent central theater space, the massing of other functions is based on the relationship of the other programmatic functions to the theater space and to the larger context. The theater space is maintained as a pure cylindrical form, seen as circular in plan. This non-rectilinear geometry gives hierarchy to the most important space. The exterior theater space reflects the hierarchical geometry of the interior theater, giving a secondary level of importance to this secondary performance space. These two forms generate a parti of intersecting rings.

The purity of cylindrical forms is maintained throughout the project. Rather than penetrating these hierarchical forms at perpendicular angles, circulation wraps around their perimeters, and passage between concentric walls allows access around the edges of these important spaces. This forced circumnavigation occurs again at other points of entry, such as the main entry at the corner of Paseo and Walker, and again at smaller, secondary entrances, such as the entrances to the theater space itself.

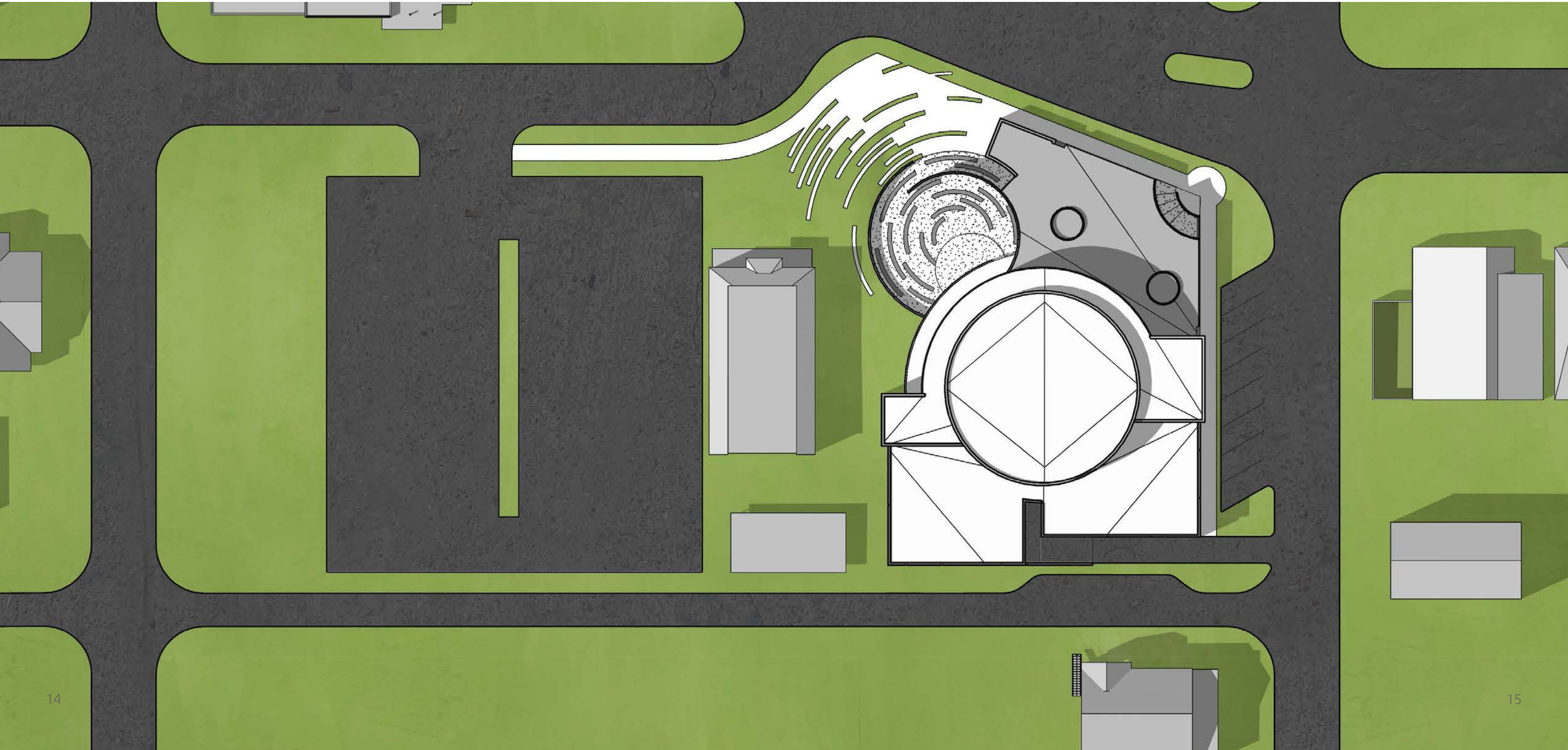
Public circulation wraps around the theater drum and is exposed to Paseo Street to the north. Patron paths are exposed and articulated from the exterior and directly respond to the geometry of the central theater space. Back of house circulation paths follow the same geometry, but are not expressed on the exterior except for where breaks in the masses occur to allow for entry. The orientation of the theater space responds to the location of the egress towers, which convey—again—the circulation paths of the patron to the exterior in both volume and materiality.

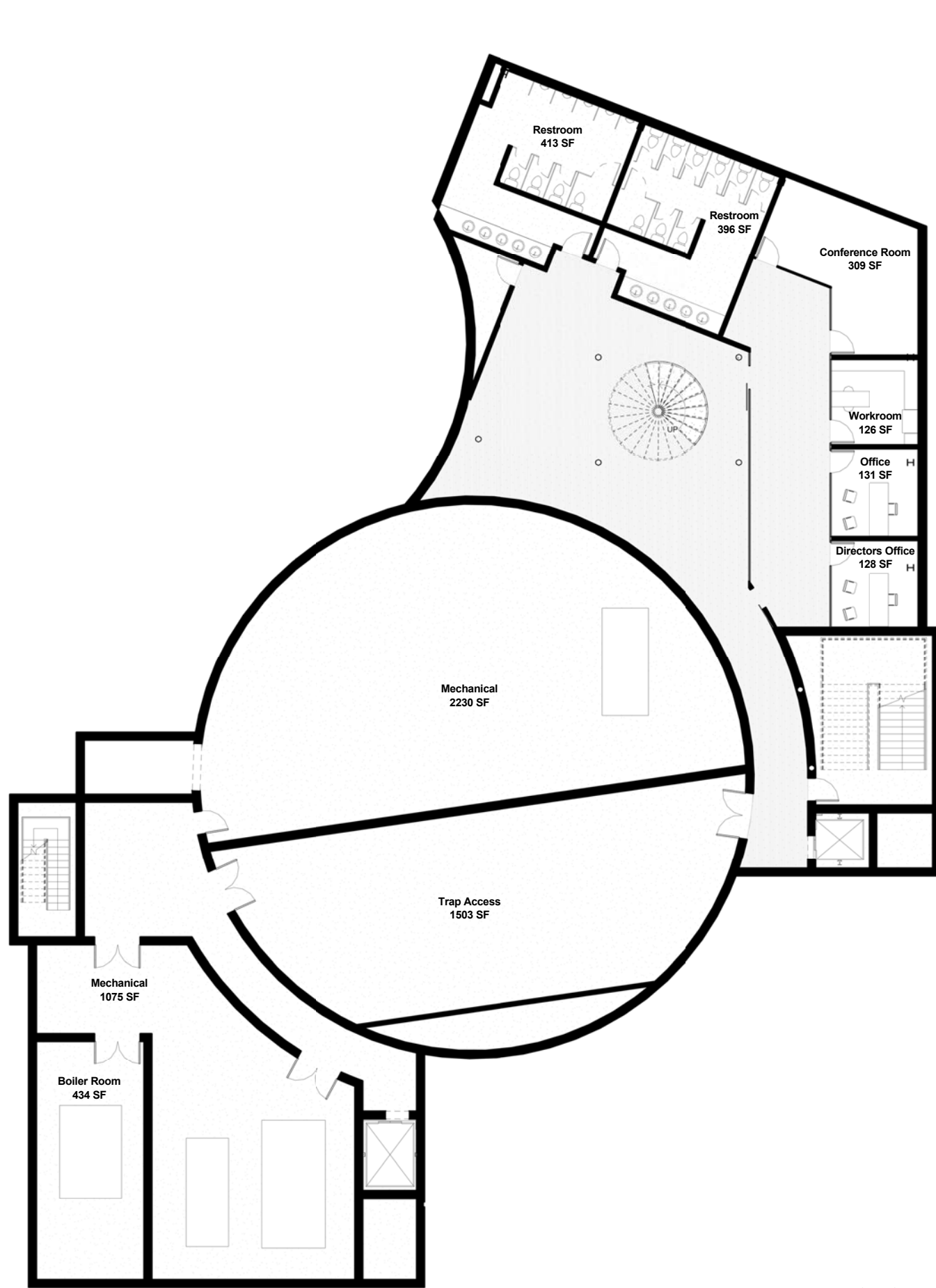
The subservient spaces, such as the back of house and lobby functions, take on rectilinear forms that fill the site around the performance spaces. The contrasting geometry maintains the hierarchy of the performance spaces, and this hierarchy is emphasized in the application of materials. The support spaces relate to the context by responding to the edges of the site that are more conducive to their functions. The lobby space abuts the main pedestrian corner of Paseo and Walker, leaving the outdoor theater space to spill out into an introductory plaza on the northwest corner of the site. The dressing rooms, production spaces, and rehearsal spaces are pushed to the south side of the site nearest the alley to allow for ease of access by performers and support staff and a degree of seclusion from the public street.



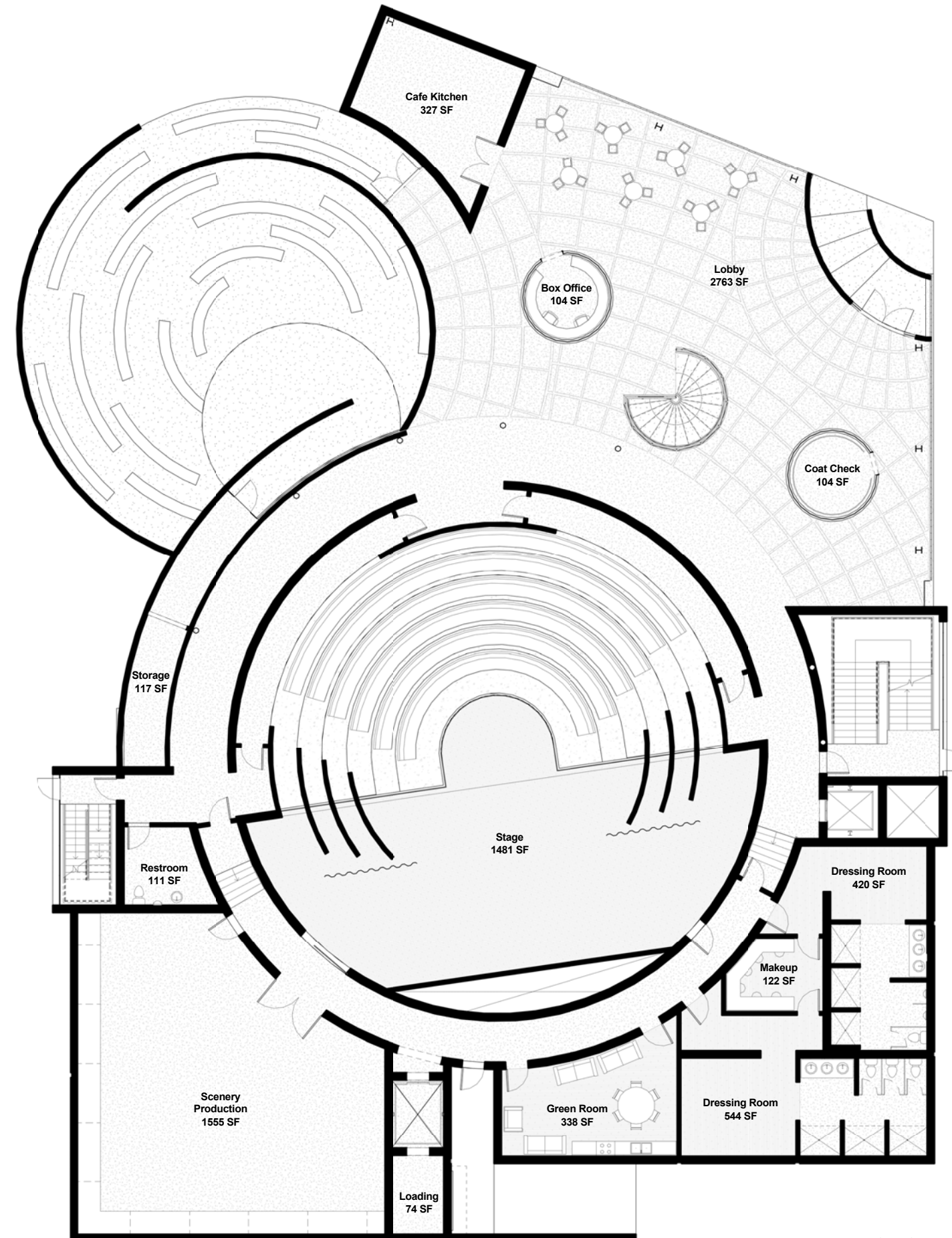
Masses are broken apart at the places where entry or exit occur: the egress stair towers, the loading dock on the south façade, and the secondary entry to the lobby from the exterior theater space. The lobby takes on the lowest vertical height and meets the sidewalk directly, responding in scale and pedestrian relationship to the Paseo District. Cylindrical forms containing functions that respond directly to the theatre experience puncture through the roof of the lobby's rectilinear

mass. The main entrance at the corner of Walker and Paseo also takes on the circular geometry and wrapping of walls to reiterate the entrance's importance. The materiality of each mass responds to its function and conceptual purpose, creating a varied palette that expresses meaning from the exterior.

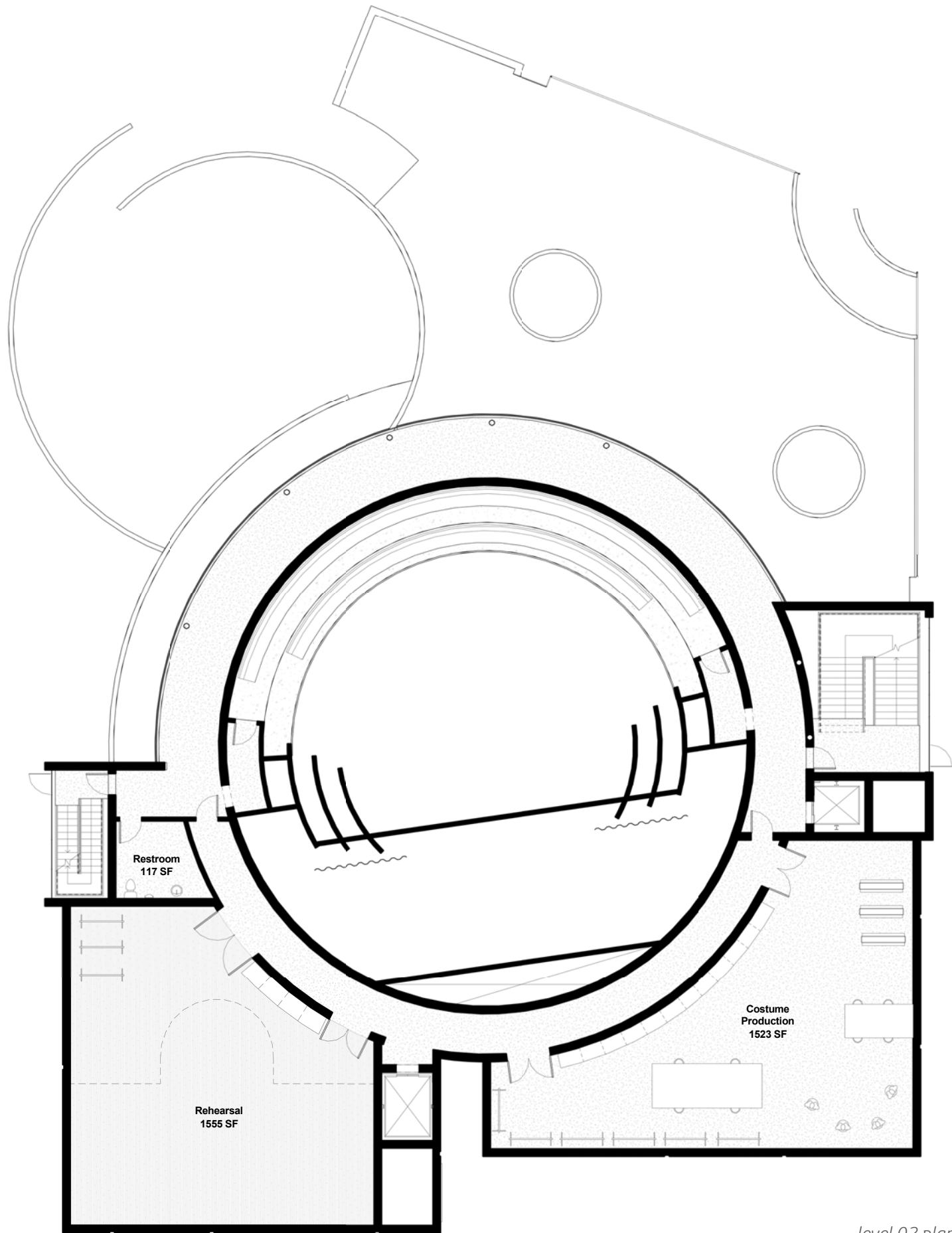




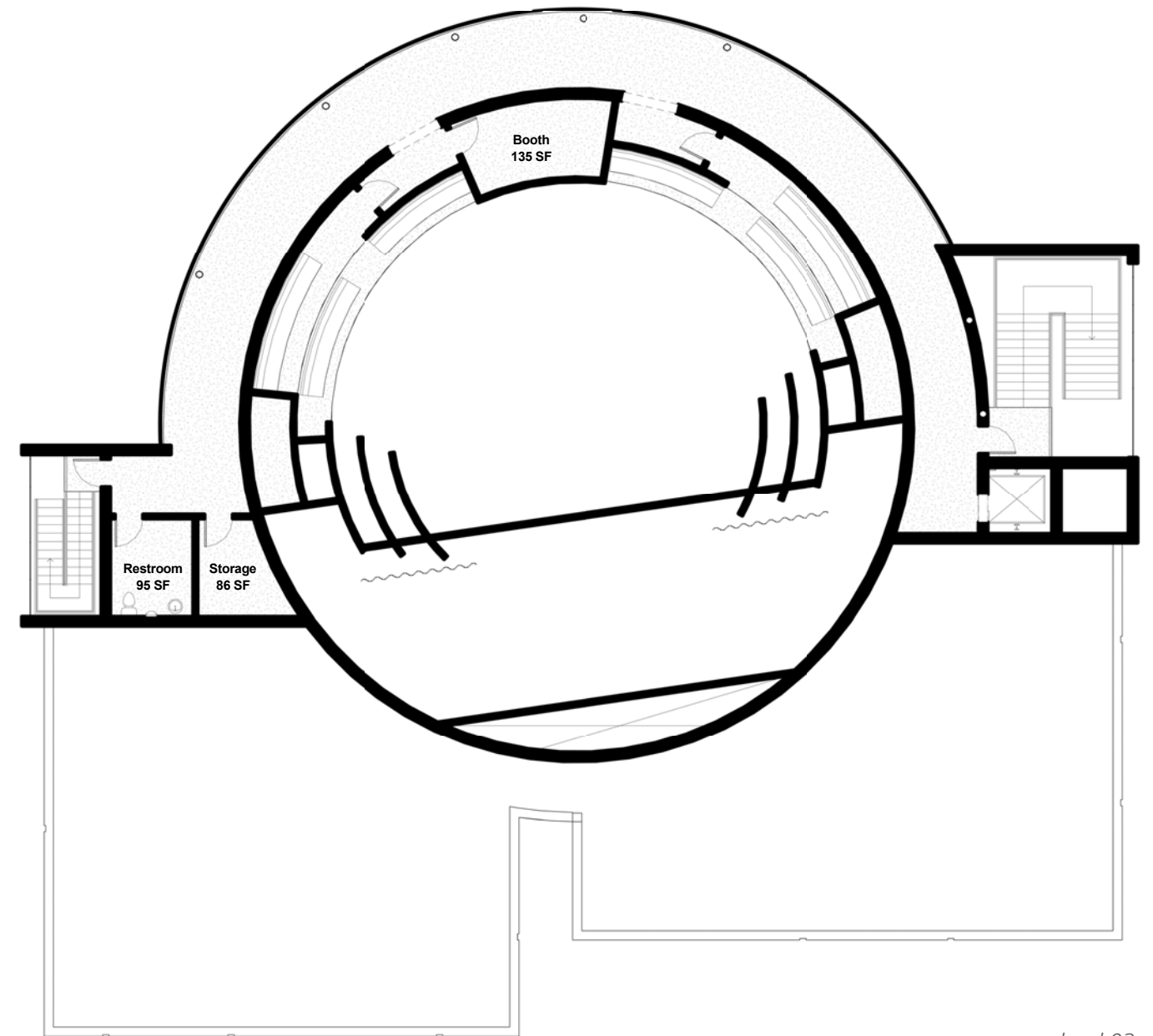
level 00 plan



level 01 plan



level 02 plan



level 03 plan

organization

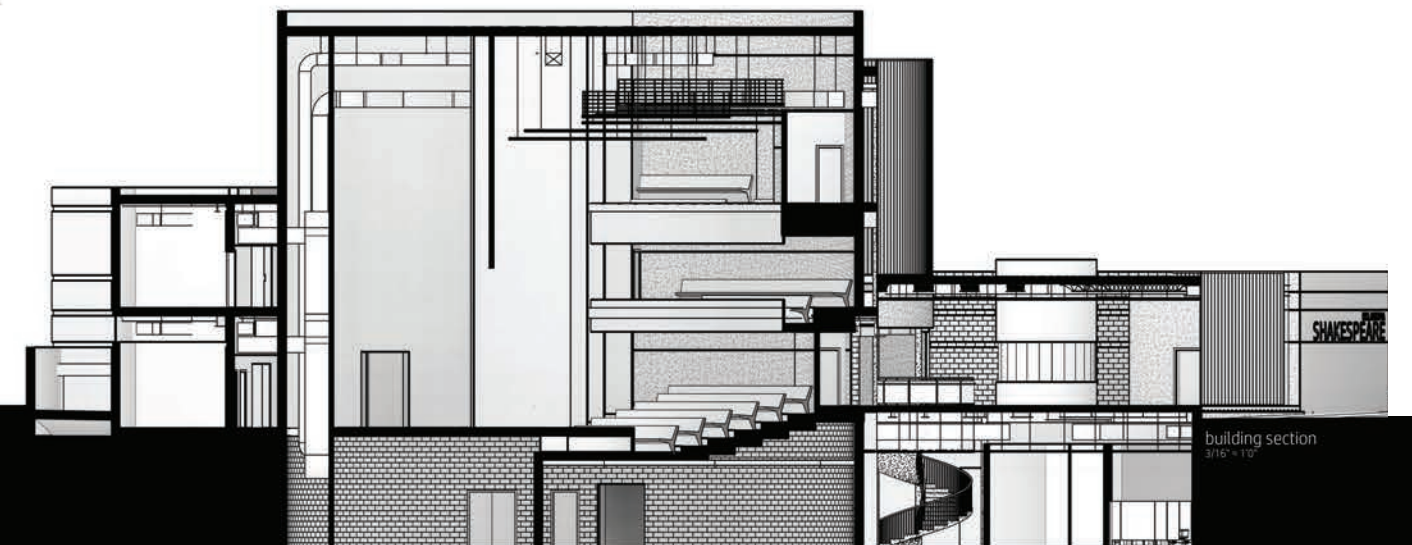
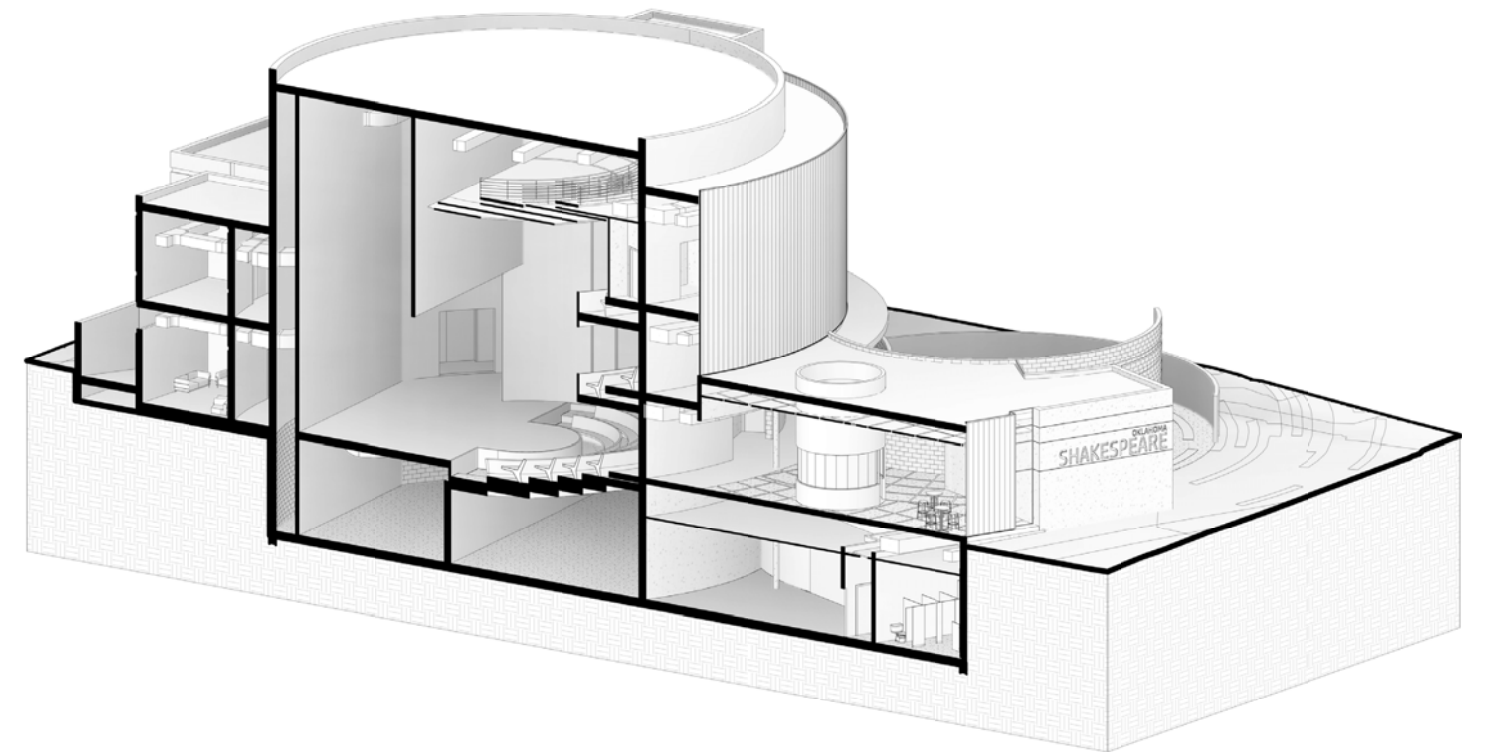
On the first level, the lobby space flows freely and is populated by pods that house the box office and coat check program spaces. The lobby's volume spans just more than a single story, creating a welcoming but not overwhelming height. Access to the secondary lobby below is granted by a central grand spiral staircase. Like the Vicar Theater, this lobby space allows for great amounts of freedom and flexibility. From the lobby, public circulation is extended to the egress stairs but is cut off for security in the back of house spaces.

The secondary lobby below houses the restrooms and office spaces, creating a secondary waiting area, again freeing the main lobby of unattractive queue lines, while keeping these pertinent spaces easily accessible. The private offices are separated from the public waiting area by a securable collaborative glass work area. Offices receive daylight from penetrations in the lobby floor above. The two spaces—restrooms and offices—see little conflict because of their opposite times of peak usage. The rest of the basement level is home to mechanical and service spaces such as fan rooms, the boiler room, and the electrical room, as well as a large space to provide access to the trap doors in the stage, as well as additional storage if needed.

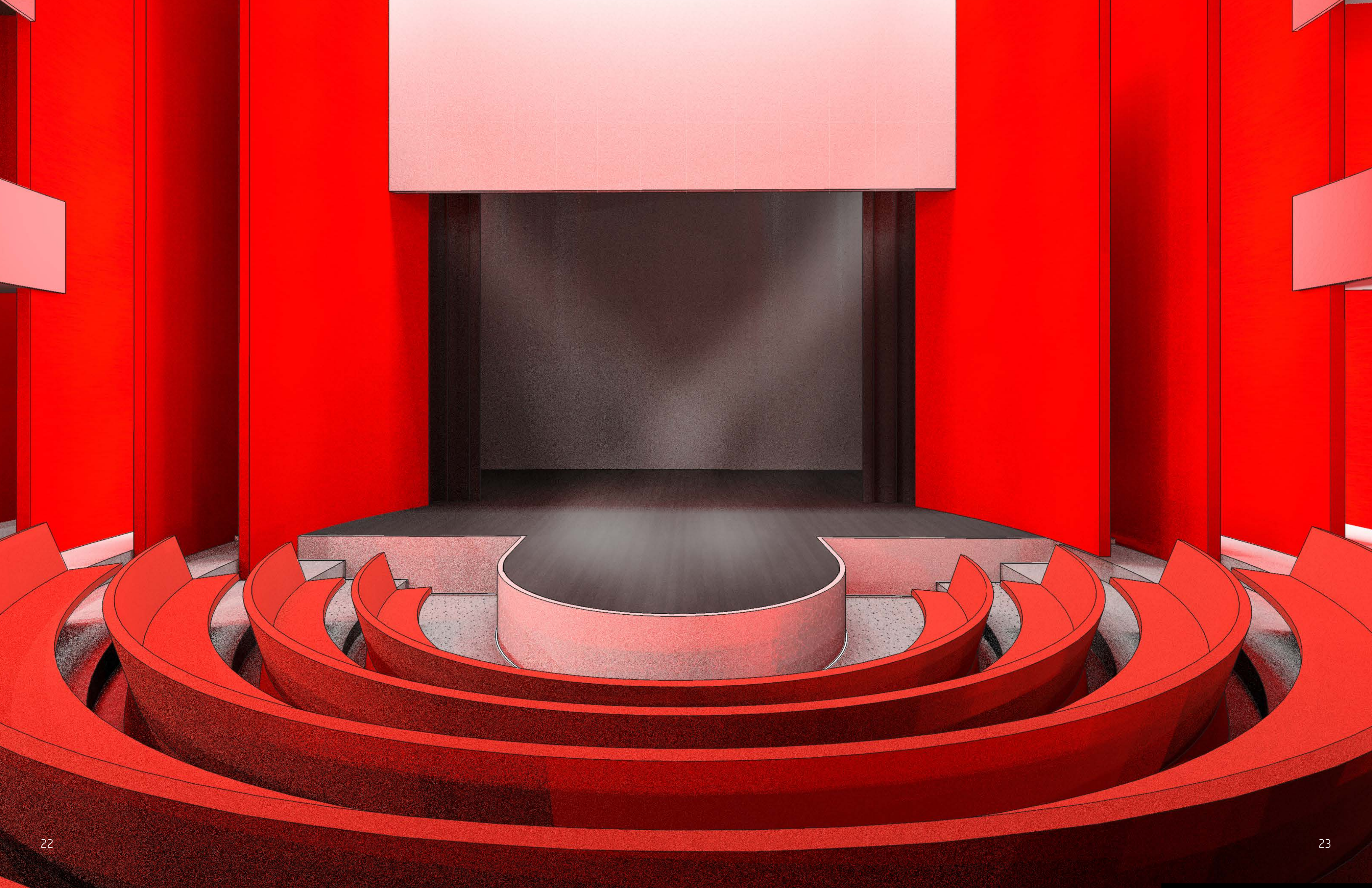
The back of house spaces can be accessed from the south private entrance or from the egress stair towers and are completely secured

from the public. On the first level, back of house spaces are lowered from the lobby floor level to meet the level of the stage. This allows pieces to be moved easily from the scenery production space to the stage through large sets of doors. The scenery production space is pushed to the west edge of the site where many of the service functions—such as trash collection and the electrical transformer—are located. Performers' dressing rooms and the green room are directly adjacent to one another, with the dressing rooms sharing a common makeup space.

The second level houses the programmatic rehearsal space and costume production space. The rehearsal space is large enough to fit the entire stage with thrust configuration, but is also open and flexible to be used for educational programs or other events. The costume production space, again, is highly flexible with an open floor plan and movable furniture. These two spaces are easily accessed by a freight elevator that reaches to the loading area and the trap access in the basement. The north side of the second floor provides patron circulation to the lower balcony level, and the third level functions only as patron circulation to the upper balcony.



building section
3/16" = 1'-0"



materiality

The material palette selected responds more strongly to Oklahoma Shakespeare's desire for an iconic facility than to the materials found in the context of the Paseo District. This palette incorporates bold, contrasting, and modern materials that relate conceptually to the masses on which they are found.

The central theater drum is clad in red aluminum panels from the chosen material palette, the red referencing the historical and typical hue of theater spaces and simultaneously representing the excitement and energy that Oklahoma Shakespeare intends to convey. Aluminum panels provide an air of familiarity, in that they are a fairly common building material, while offering a low-maintenance solution to the desire for bold color on a large scale. The panels chosen also have strong opportunities for insulation where needed.

The back of house spaces, to represent their private nature and recent history as the backbone of theatrical production, are built of precast concrete panels. This solidity is punctured in horizontal linear openings that allow varying amounts of light into the spaces based on need. For instance, the dressing rooms have only a clerestory application, to

maintain full privacy while allowing daylight into the space. The articulation of the back of house masses, shown in thin reveals in the concrete panels, is highly horizontal.

The egress towers—again—to express their need for solidity and security, are built of cast-in-place concrete shear walls, punctured on their exterior faces by large expanses of glass to reveal the vertical circulation patterns they house. These masses are articulated by a more modulated grid system, acting as the transitional element between the horizontality of the back of house's articulation and the verticality of the lobby's facades.

The lobby and circulation path around the theater drum on the second and third floors are clad in channel glass, revealing enough to convey movement and excitement to passersby, but still concealing the full activities within. This creates an element of mystery that is so central to theatre performance. These spaces, at nighttime, glow from within, creating an attractive and iconic beacon at the end of Paseo Drive.

Red aluminum panels appear again in the cylindrical pods that puncture through the

lobby and in the arcing walls that conceal the main entrance at the northeast corner of the site. This further emphasizes the hierarchy created by the contrasting circular geometries. The metaphorical implications associated with the color red are utilized again in the interior of the theater space and in the interior of the walls of the exterior theater.

In the interior theater, the audience faces an opaque plastic proscenium that starkly contrasts the brightly colored arcing surfaces and hearkens back to the translucence of the lobby and circulation spaces. All of the arcing surfaces in the theater space are clad in differing red materials—from fabric to textured metal to perforated panels—to keep the focus of the audience on the contrasting proscenium and darkened stage. Continuous bench seats, rather than individual chairs, relate back to the Globe's groundling area by forcing audience members to sit closely and experience a performance more interactively. Bold color, continuity of fluid forms, and close seating proximity all relate back to and strengthen the engaging and exciting environment Oklahoma Shakespeare strives to create.

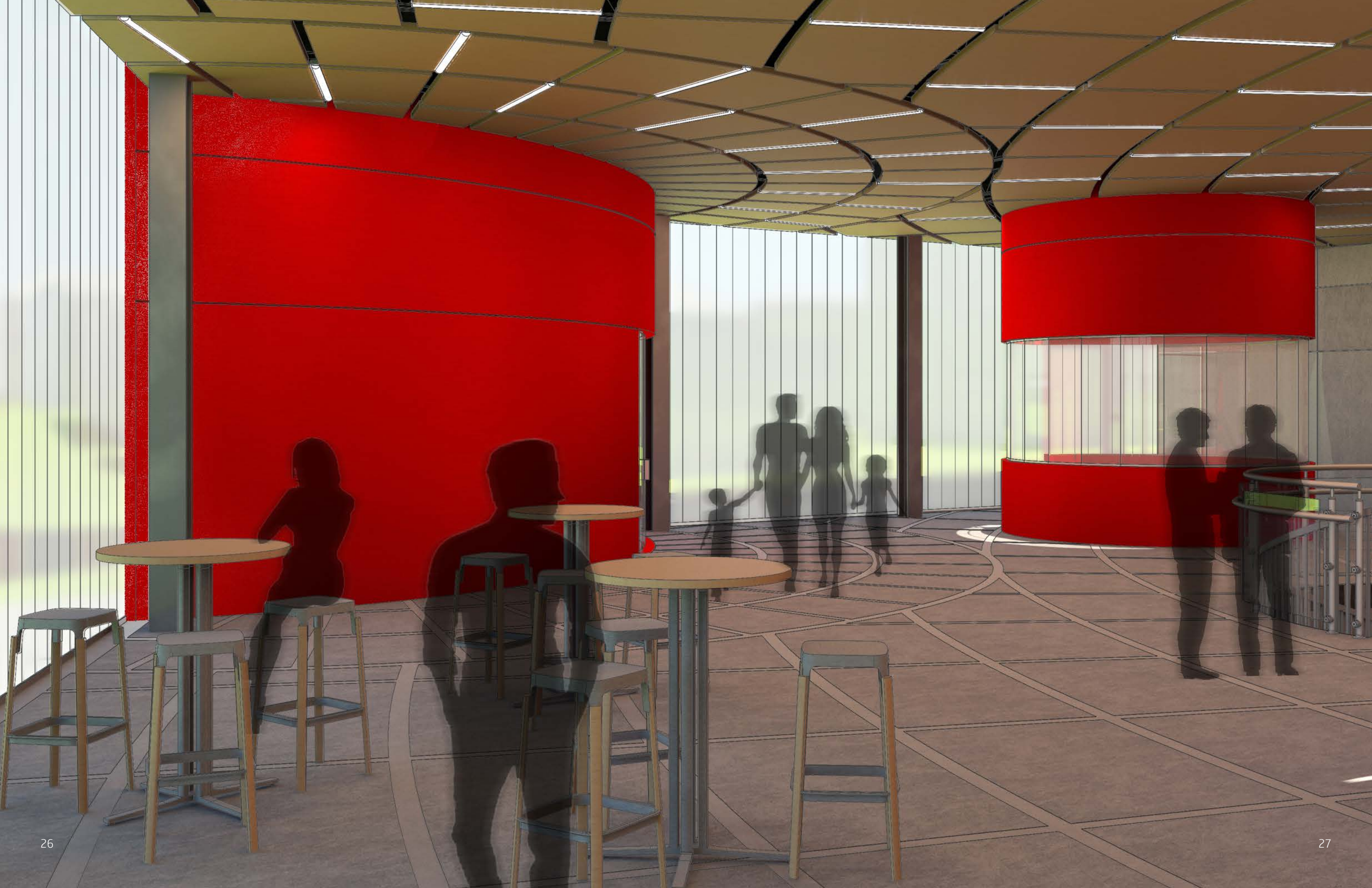


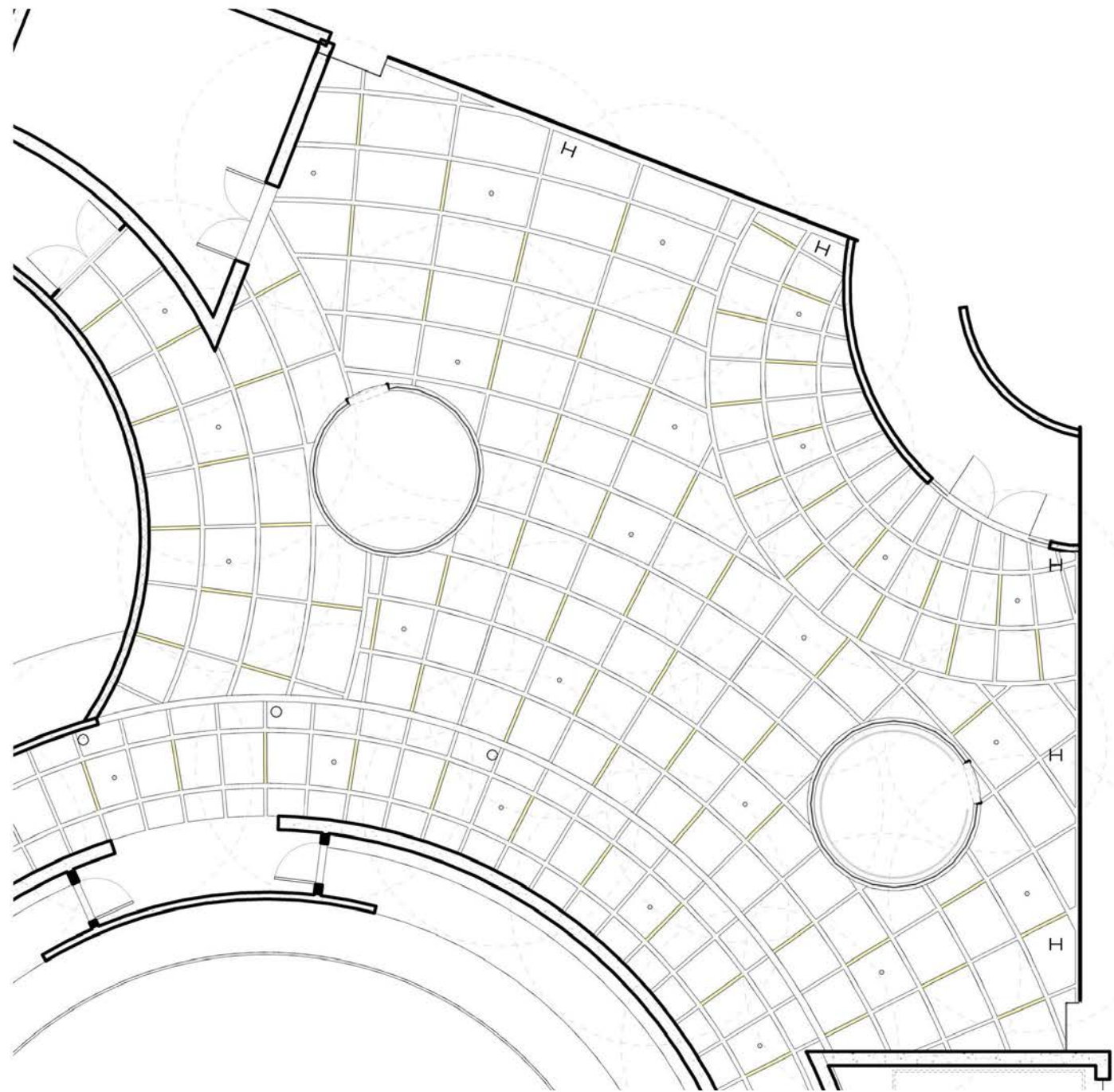
lobby interior materials palette



walker elevation

paseo elevation





lobby reflected ceiling plan

design development

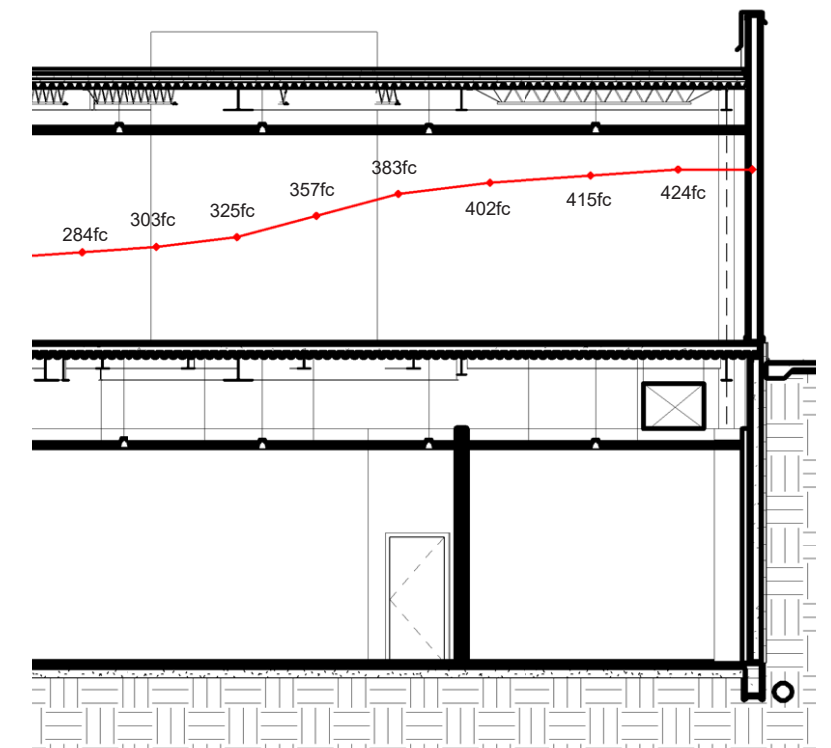
I chose the lobby as my focus space for design development because of its important relationship to the street and the theater. The lobby must act as a precursor to the theatre experience, whether by inclining preparation or by stark contrast. Entering the Globe Theatre from the outside world definitely aired on the side of stark contrast, so I chose a material palette that incorporated exterior materials such as cast-in-place concrete and red aluminum panels to continue the feeling of the outside world, while softening in the ceiling with warmer wood tones to provide a hint of subtlety.

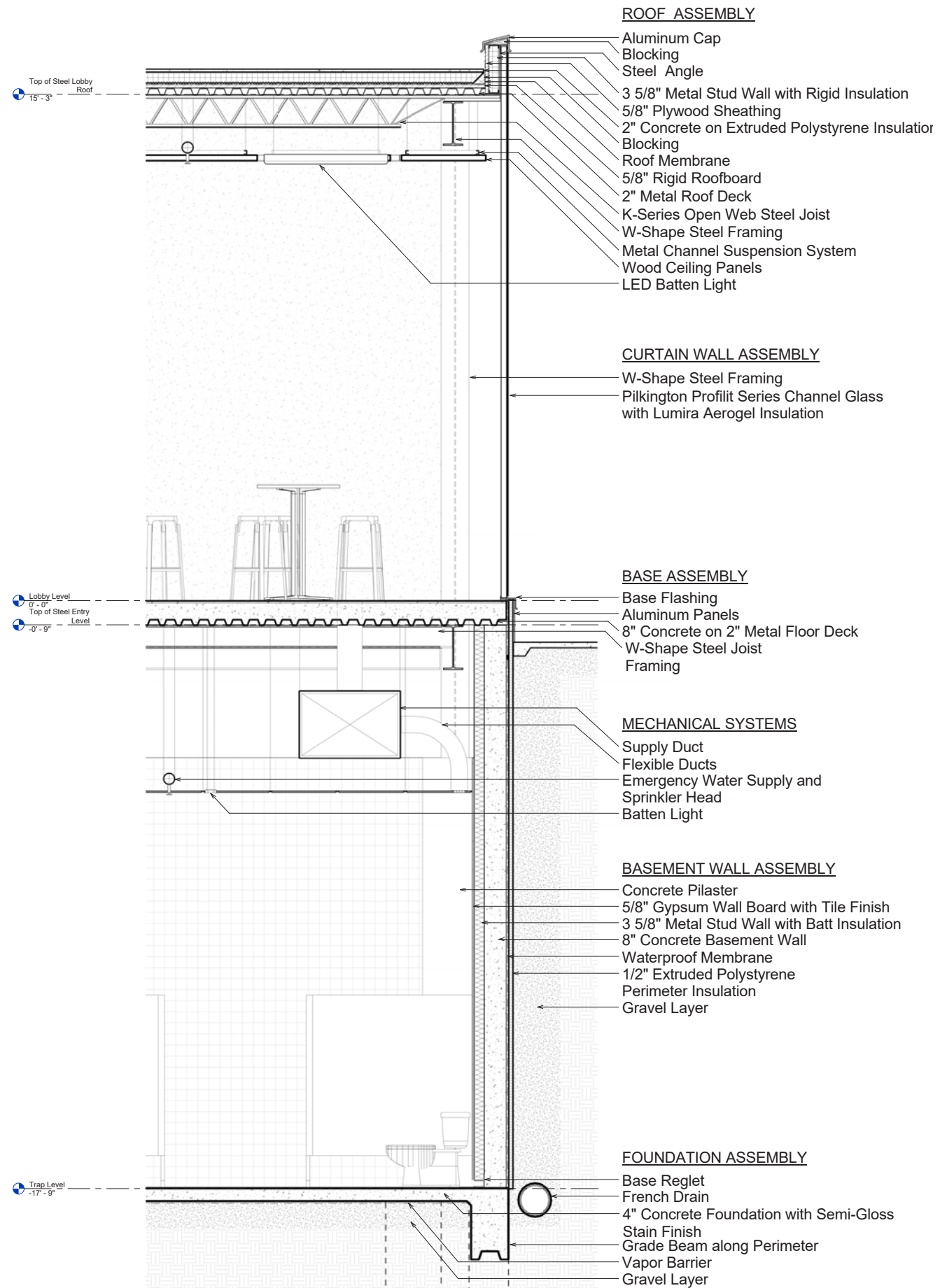
The selection of channel glass is also extremely beneficial in daylighting the lobby, as it strongly diffuses light but allows a great amount to enter the space. The translucence of this material creates a softened and manageable sunlight that requires no external or internal shading systems. Daylight is well distributed deep into the space, and in the pod areas you would see a jump in this distribution due to the circular skylights inside of them.

The circular nature of the plan is further emphasized in the articulation of the materials in the lobby space, as large-scale surfaces are articulated and broken down in radial patterns. The stained concrete floor is broken by control joints that fall along radii that extend out from the centerpoint of the theater space and along concentric circles that emanate from the same point. Radial grids originate from the centerpoint of the theater space, the centerpoint of the outdoor theater,

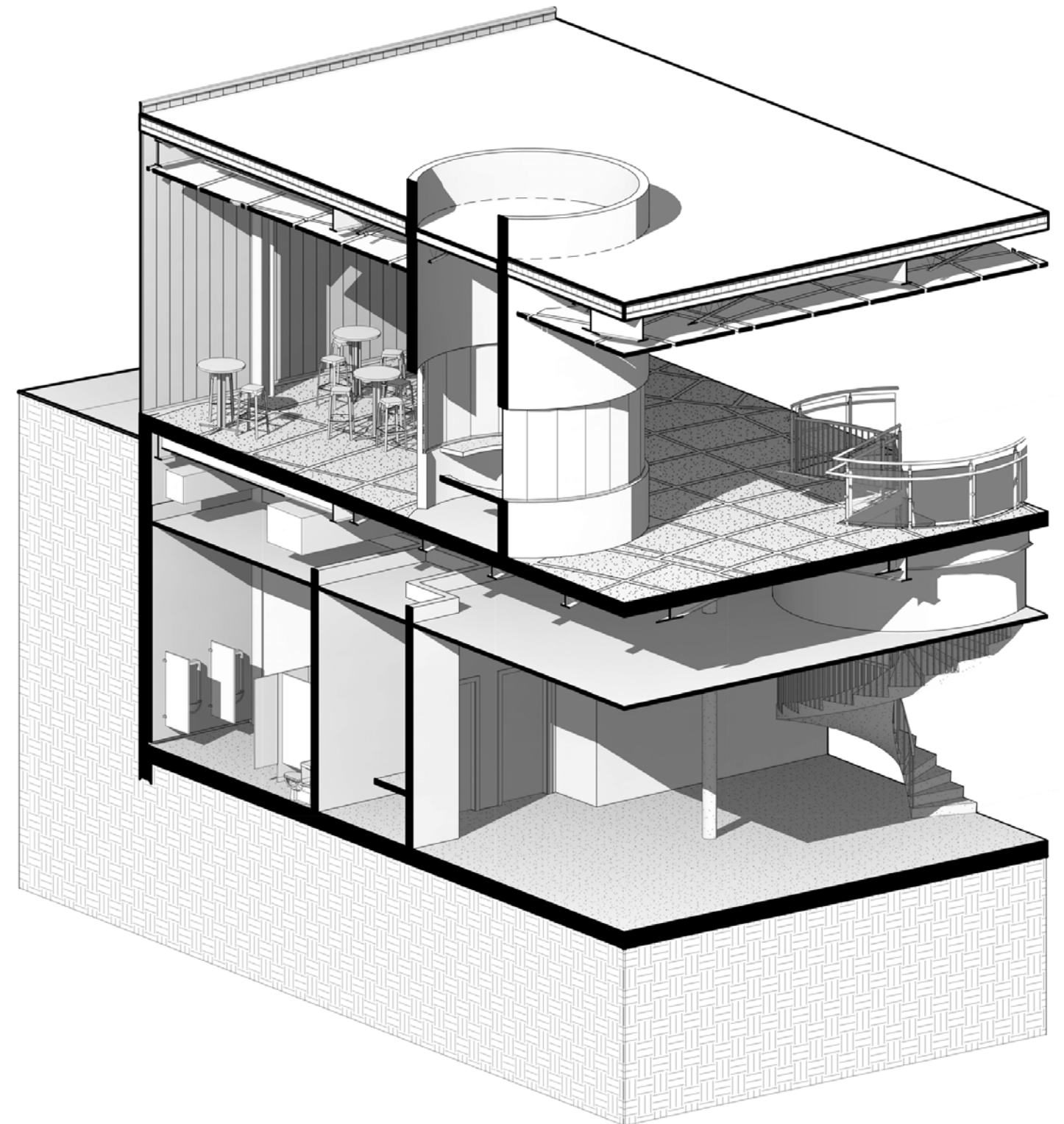
and the centerpoint of the arcing walls of the main entrance. These radial grids collide in the lobby, opening up to a free and flexible space. The ceiling panels in the lobby fall along the same grid seen in the floor.

The design development of the focus space also included full design of the artificial lighting systems. I chose to integrate a simple and efficient LED batten lighting fixture with the pre-manufactured ceiling panels, but in a custom way along the radial ceiling grid. This utilitarian fixture is repeated and recessed into voids between ceiling panels. This detail was further developed in the construction documentation phase.





lobby wall section



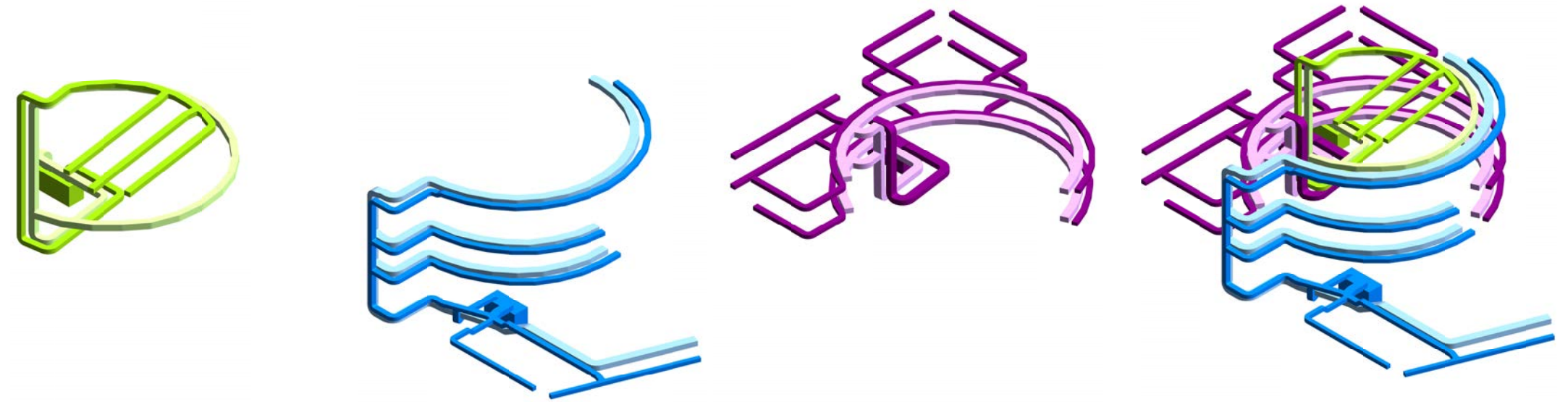
bay model

systems integration

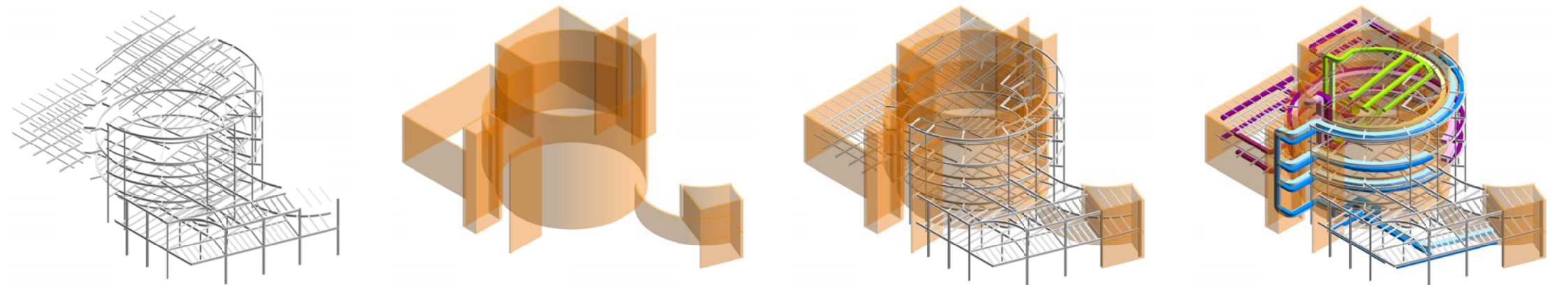
HVAC and structural systems were fully designed as part of the design development phase, including the sizing of major structural members, air handling units, supply ductwork, return ductwork, and fan room louvers.

The building is serviced by three closed HVAC systems that relate to the three main separate functions: theater, back of house, and front of house. The circulation paths of supply and return air easily followed the human circulation paths, so the three systems respond very directly to the geometry of the theatre. Major supply and return ductwork pass through the hallways that run around the theater drum and are distributed vertically through chases at the back of the stage and in the egress tower on the east side of the building. The front and back of house spaces are served by variable air volume systems to maximize comfort in the many spaces they serve and the theatre is served by a separate controlled air volume system.

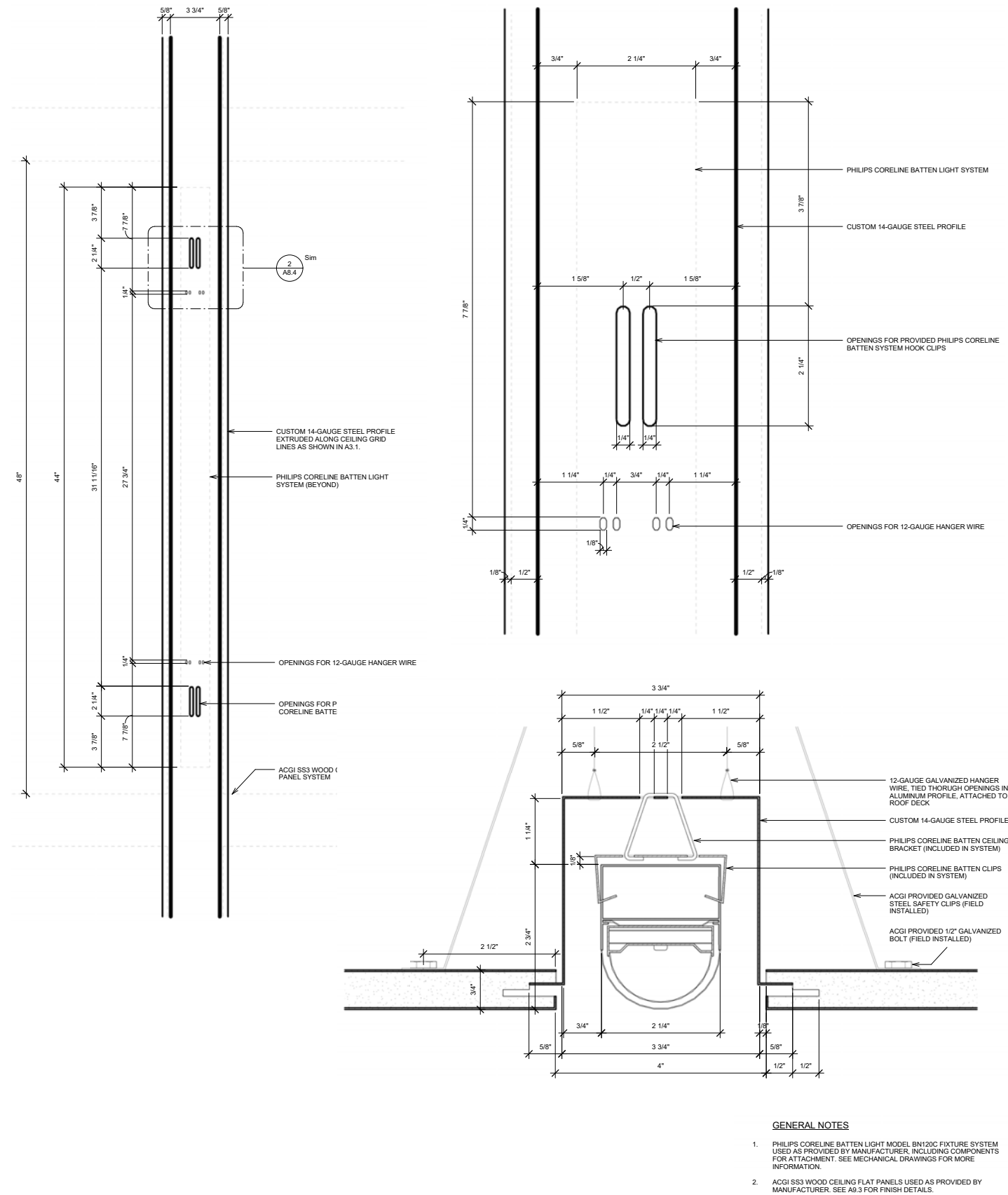
The structural systems chosen relate very closely to the functions that each space serves. Shear walls, either in precast concrete panels or cast-in-place concrete, encase the more private areas, such as the back of house spaces and the theatre drum, and steel framing is used in the areas that are intended to be more exposed, such as the public circulation and lobby spaces. All floors and roofs are supported by steel shapes or steel joist framing. The horizontal members also relate to the circular geometry, radiating from the centerpoint of the theatre to the edge of the circulation paths. Horizontal members follow more standardized rectilinear grids in the rectilinear front and back of house masses.



hvac systems



integration of structure and hvac systems



design detail

construction documentation

Creating construction documents for a building composed of rectilinear masses colliding with a cylindrical mass arbitrarily placed relative to the site proved to be a challenge. Many other circular forms appear in plan, seemingly without points of reference. To resolve this arbitrary series of centerpoints, I created a site-specific coordinate grid system with its origin at the centerpoint of the arcing walls at the main entrance. This point lies near the corner of Paseo and Walker on the northeast corner of the site. From this origin, I mapped the centerpoints of each cylindrical form relative to the site-specific grid and dimensioned the radius of each circle. The rectilinear masses were also anchored with coordinated points at certain corners to provide a theoretical contractor with a starting point for measurement when a site is completely void of any referenceable points.

I explored the connection between the standard batten light fixture and standard ceiling panels in further detail during the construction documentation phase, creating a series of drawings to allow for the creation of a custom light-gauge steel profile that would be extruded along the radial ceiling grid in the lobby space. This profile would allow the light fixture and ceiling panels to be used as-is, without any modifications, directly as they come from the manufacturer, minimizing cost and labor while still achieving the goals of the concept. The lobby ceiling grid that emphasizes the importance of theater space is then proven to be practical and constructable. Even in the detail of an attachment between a light fixture and a ceiling panel, the concept is emphasized.

conclusion

The comprehensive design studio required the exploration of every aspect of a large-scale building project. This 27,000 SF project estimated at nearly \$7 million challenged me to integrate each wall, beam, column, duct, air handling unit, material, opening, window, and even light fixture into a conceptually unified product. This proposal for a new facility for Oklahoma Shakespeare in the Park places the theater at the metaphorical and literal center, and allows all other spaces to support the reason the company exists.