ADAPTABLE DESIGN

architecture that responds to changing needs

Jacob Windschitl

Problem Statement

How can architecture adapt to change in order to keep relevant, while embracing traditions?

Typology

A performing arts center created with adaptable architecture.

How was this question generated?

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The study of what goes wrong for building to be adapted for new use.

Henry J. Klutho of Jacksonville

How was this question generated?

So why did no on want these buildings

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Expensive to replace finishes

The process of attaching material with glue in addition to nails and staple make it difficult to detach without ruining the material. On top of that the cost of removal from both the labor and tools need is an additional expense most owners are unwilling to pay for.

So why did no on want these buildings

Difficult to get to mechanical and infrastructure

In renovations many out dated systems will need to be brought up to code or to the needs of the users. Looking into the ability and cost of expanding or adding utilities such as gas, electrical and sewer are a specific question that is important to ask in order to see if a building is worth maintaining for future use (Heehan, Woodson & Culbert, 2004). On the other hand demolition is a large fee just to obtain a site for further construction. Demolition brings with it the end of an existing structure's life. Often times the materials are never reused.

Architecture has found itself in a state where changes could be made to new construction techniques to improve the lifecycle of the build. There is an opportunity to apply new technologies so future generation can continue using existing structures more efficiently.

As William Zuk wrote in Kinetic Architecture, “It is clear that the principles which contributed to past successes in architecture are inadequate for the speed, scale, and nature of change today.”

Claim

With the capacity to adapt to new uses a building will remain pertinent to its users, extending the lifecycle of the building.

Premises

Architecture shapes to the needs of the client. As these uses change architecture is in need of adjusting to remain usable to the client. If the client does not see the opportunity the building presents the life of the building is in jeopardy.

With the culture of replace anything outdated it has become expensive and unsustainable to continue replace buildings. Architecture that is capable of adapting to new needs extends the lifecycle of the building. A wide range of opportunities to use a building keeps intact the historical, cultural, and visual fabric of a community (Heehan, 2004).

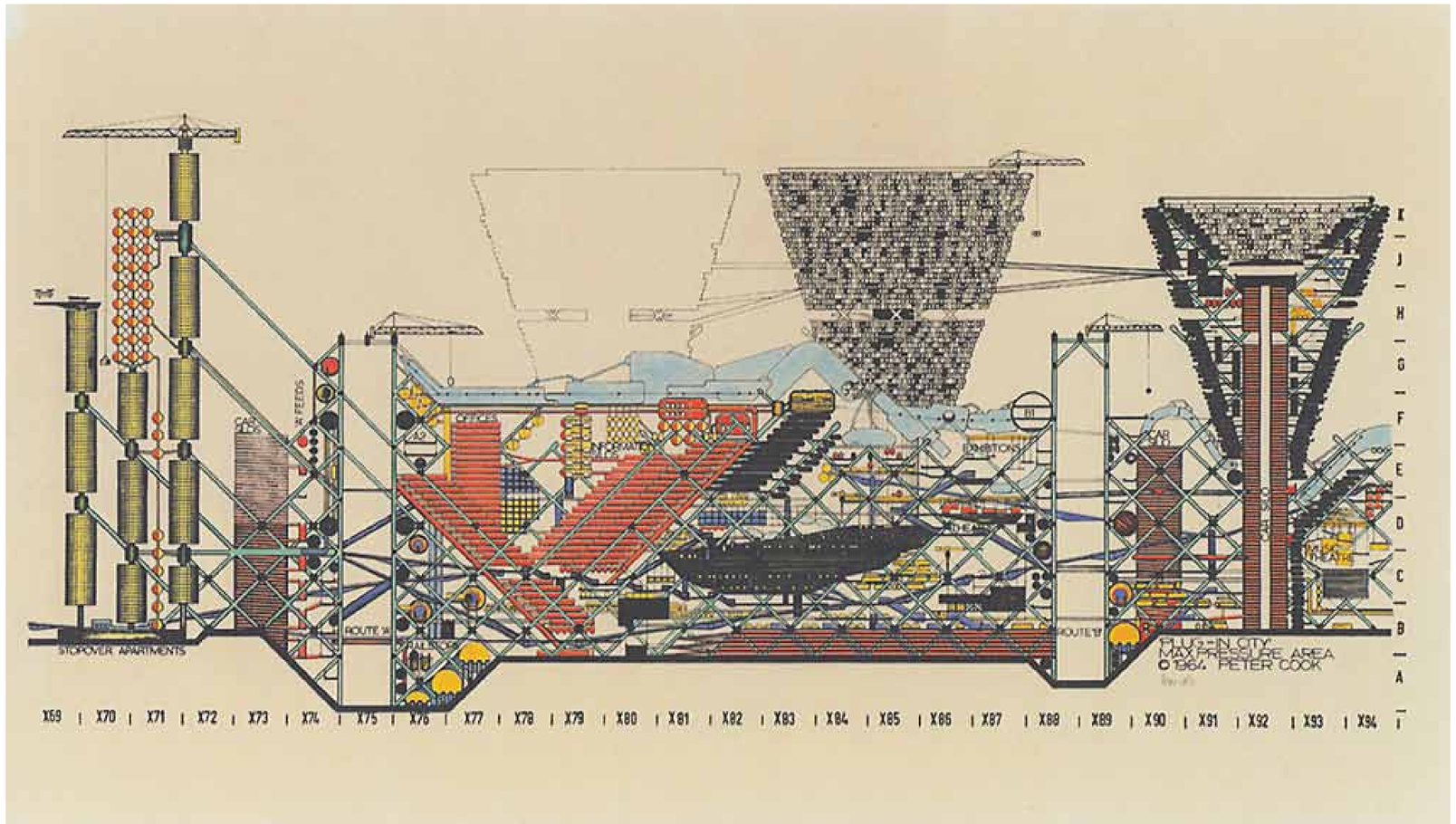
Flexibility of architecture allows for adjustments to the program for a variety of uses and users. Performing art centers has varying programmatic needs that can change from day to day. With the ability to provide for a larger variety of users, it can create a larger appeal to the community.

Client

The project is sponsored the Performing Art Center of Duluth. The building will function as a place to put on performances, provide rehearsal space, and hold classes to teach new generations the arts.

The public usage will be attending performances in the evening. There will need to be parking for the public at the time of performances and designated faculty parking. The theater must accommodate any disabilities. There will be classes and rehearsals that take part throughout the day and evening. The building has to provide space for the performers to store their materials and prepare for performances and rehearsals.

As Walter Gropius state architects need to learn to view the design as a collection of parts as well as a whole. The technology is providing the opportunity for architecture to progress. Kinetic architecture that can affect light, temperature, spatial arrangements, and many other options give clients a building that transforms to their needs. With Flexibility and kinetics architecture has the potential to progress for the client needs.



"It is clear that the principles which contributed to past successes in architecture are inadequate for the speed, scale, and nature of change today."

William Zuk 1970

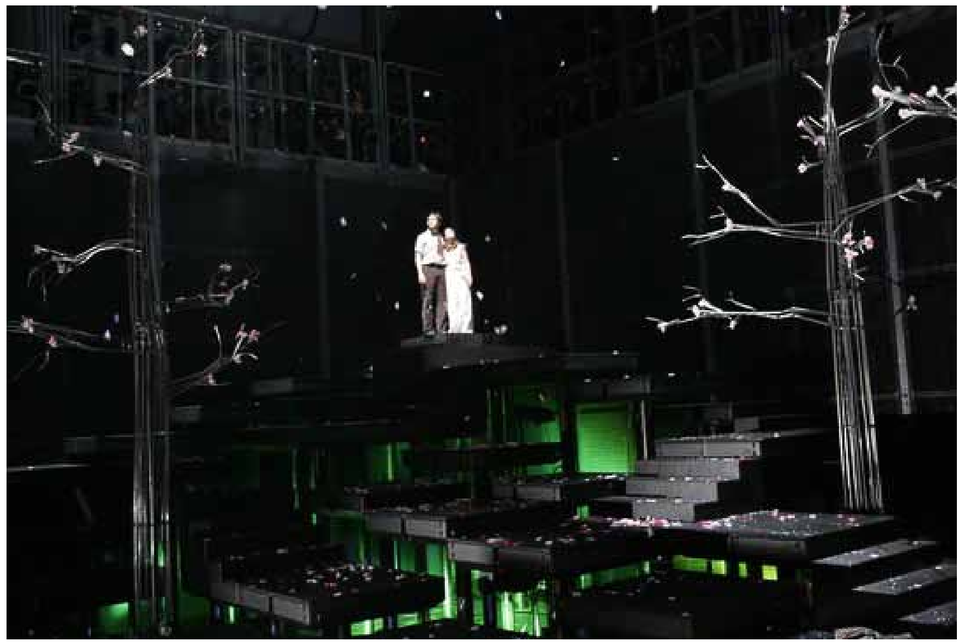
Modular Theatre
California Institute of Art

1973

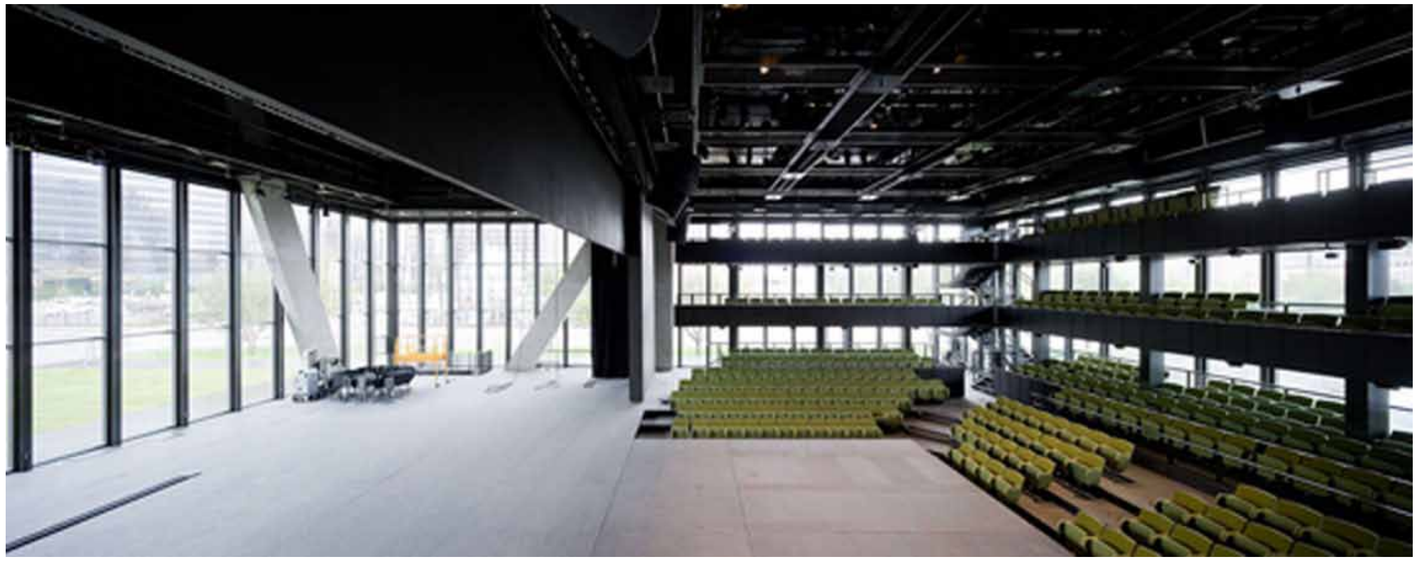
Use of Pneumatic Lift Panels

Wall Partitions

Rearrangeable Seating



Wyly Theater
Dallas Performing Arts Center
2009



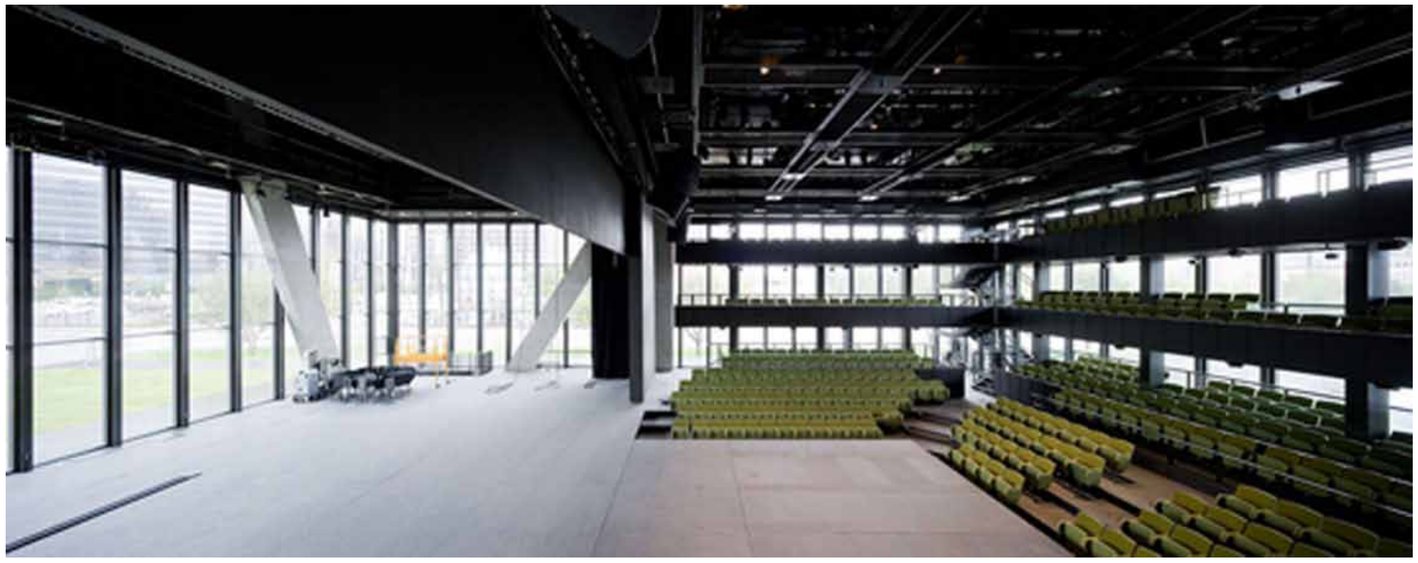
Rearrangeable Seating

Replaceable Finishes

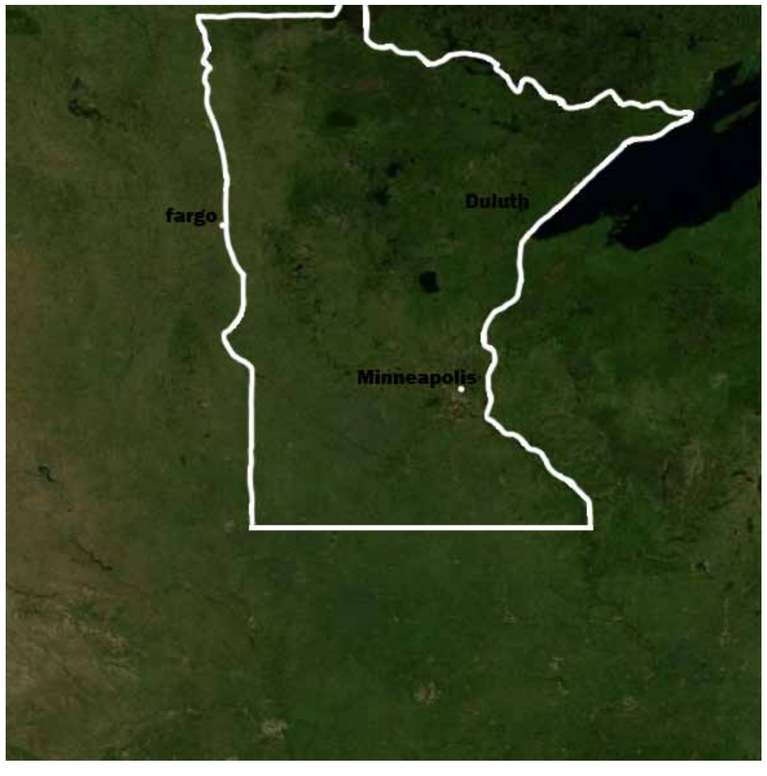
Opening Glass Façade

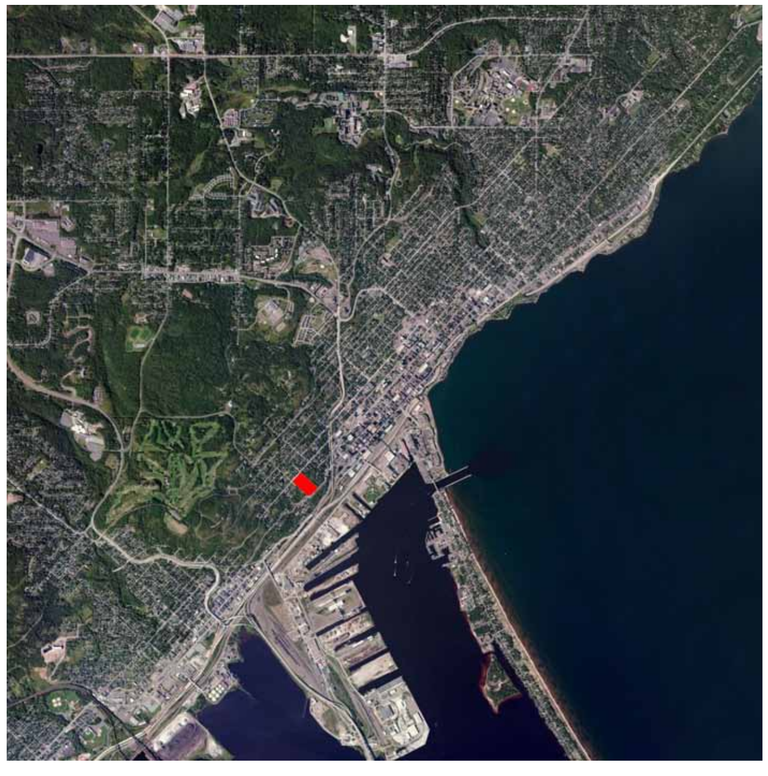
Mechanical Lifts Systems

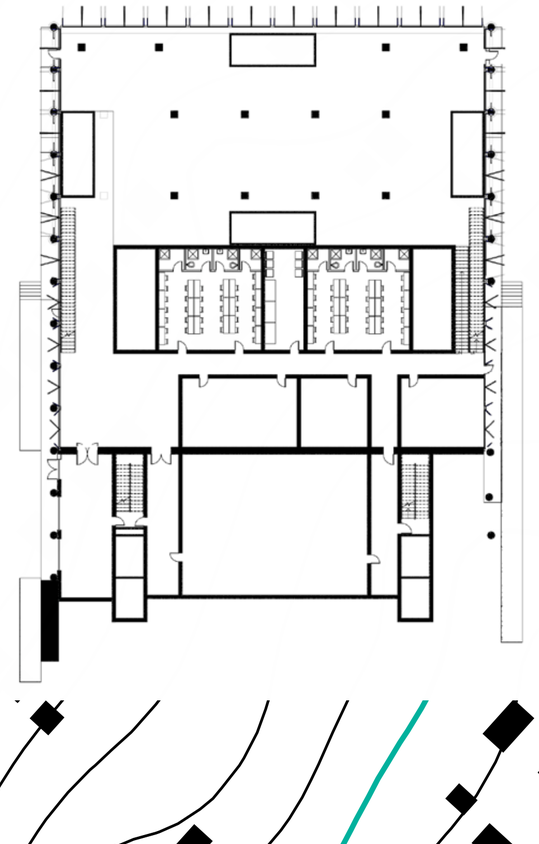
Above/Below Stage
Arrangement

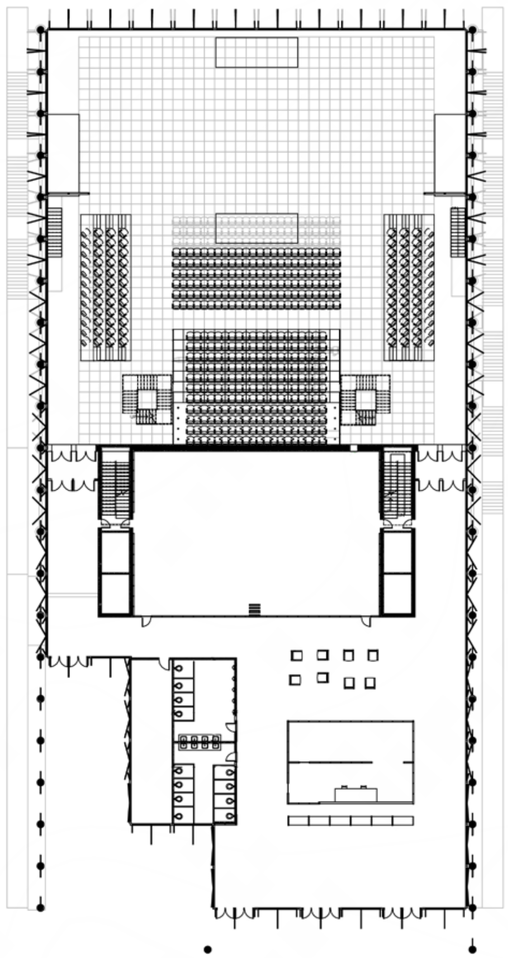


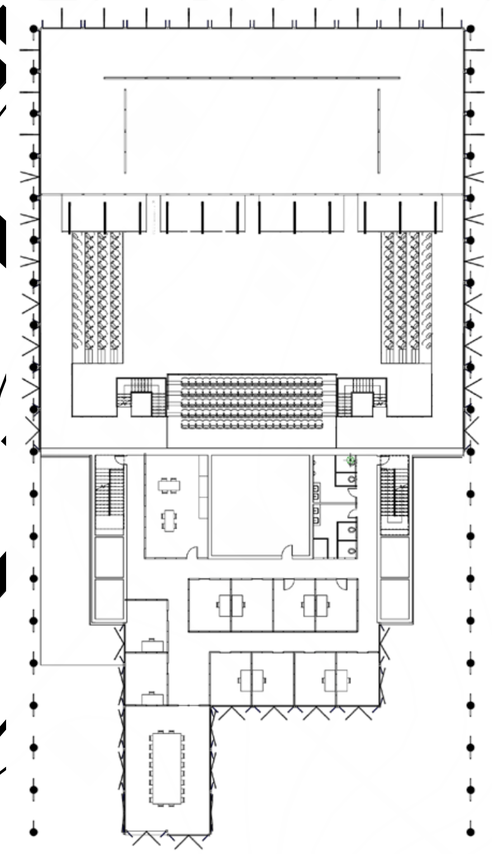
Site Information











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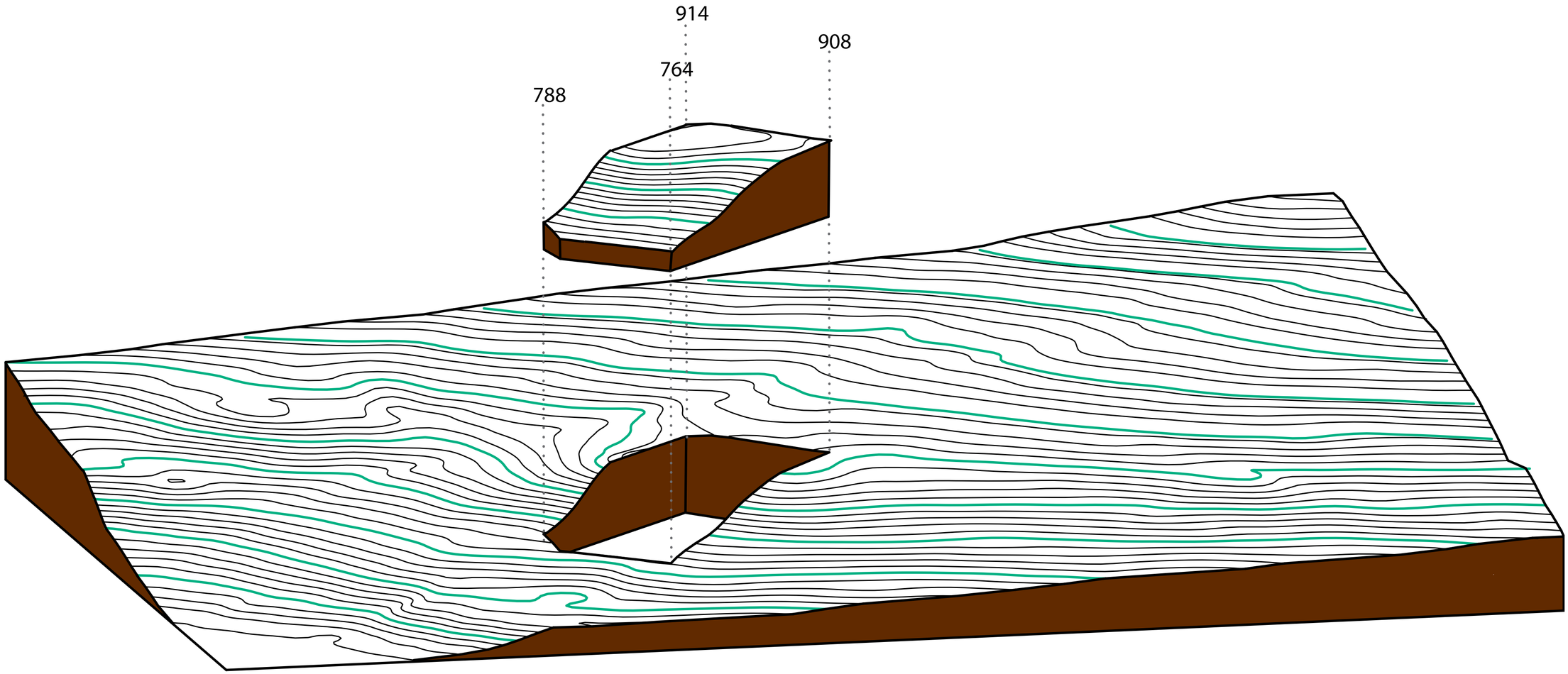
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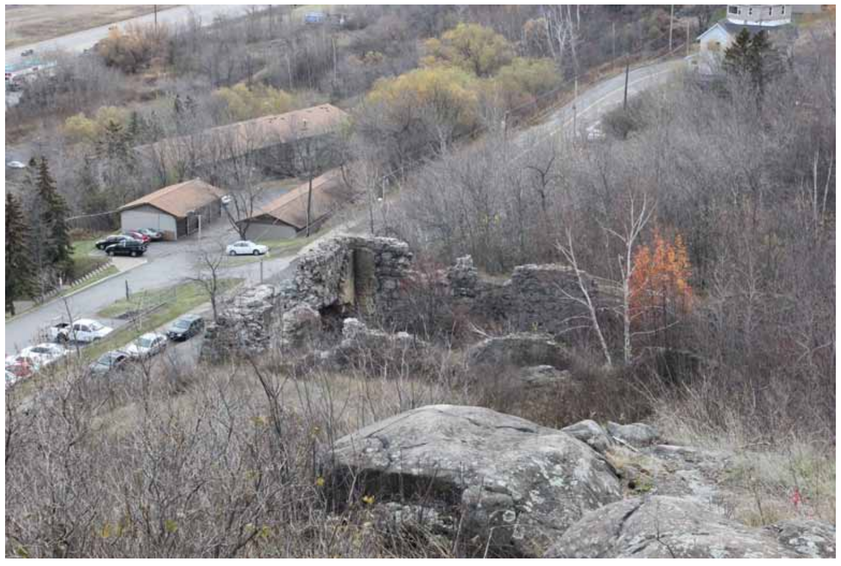
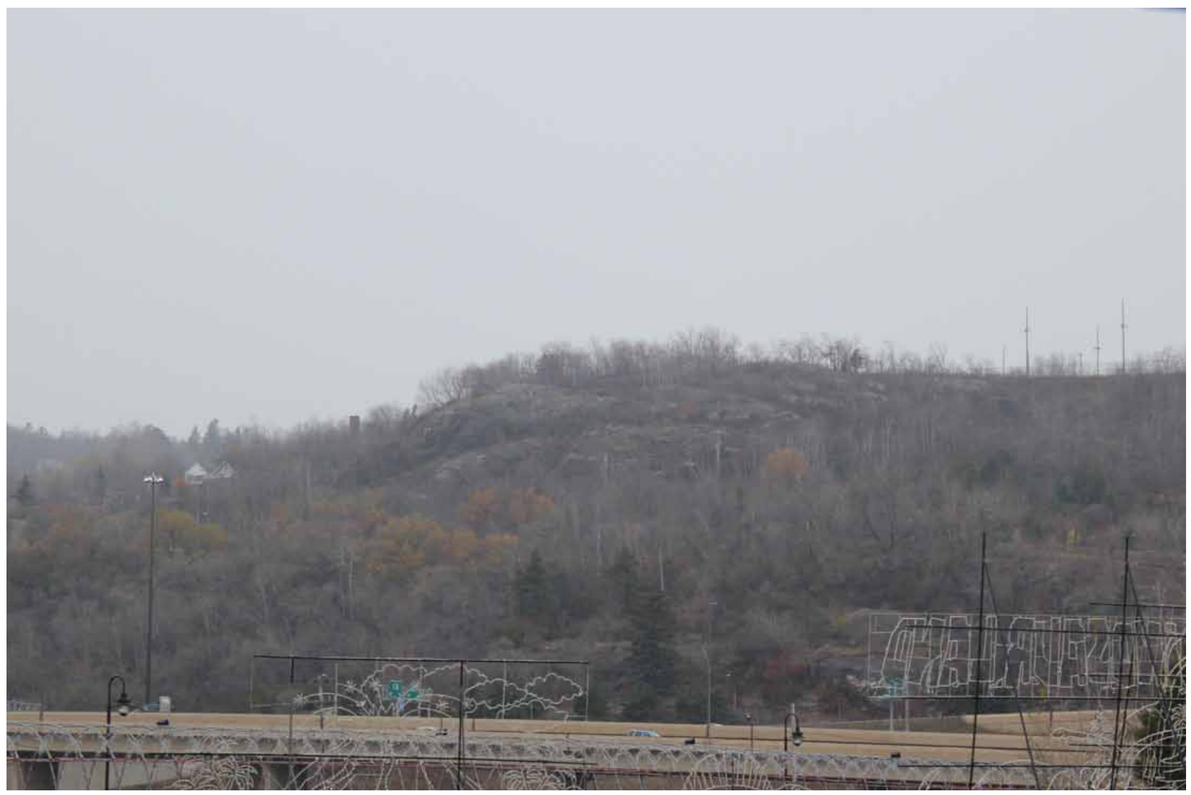
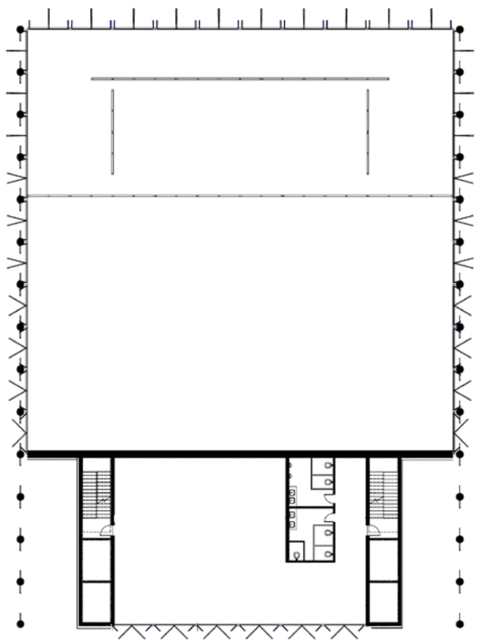
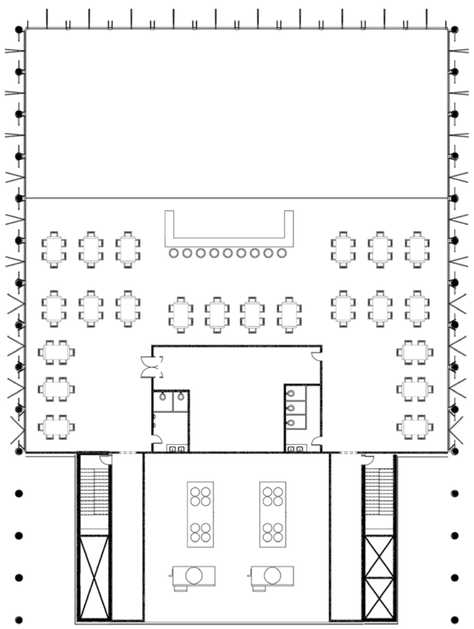
VOTE NO

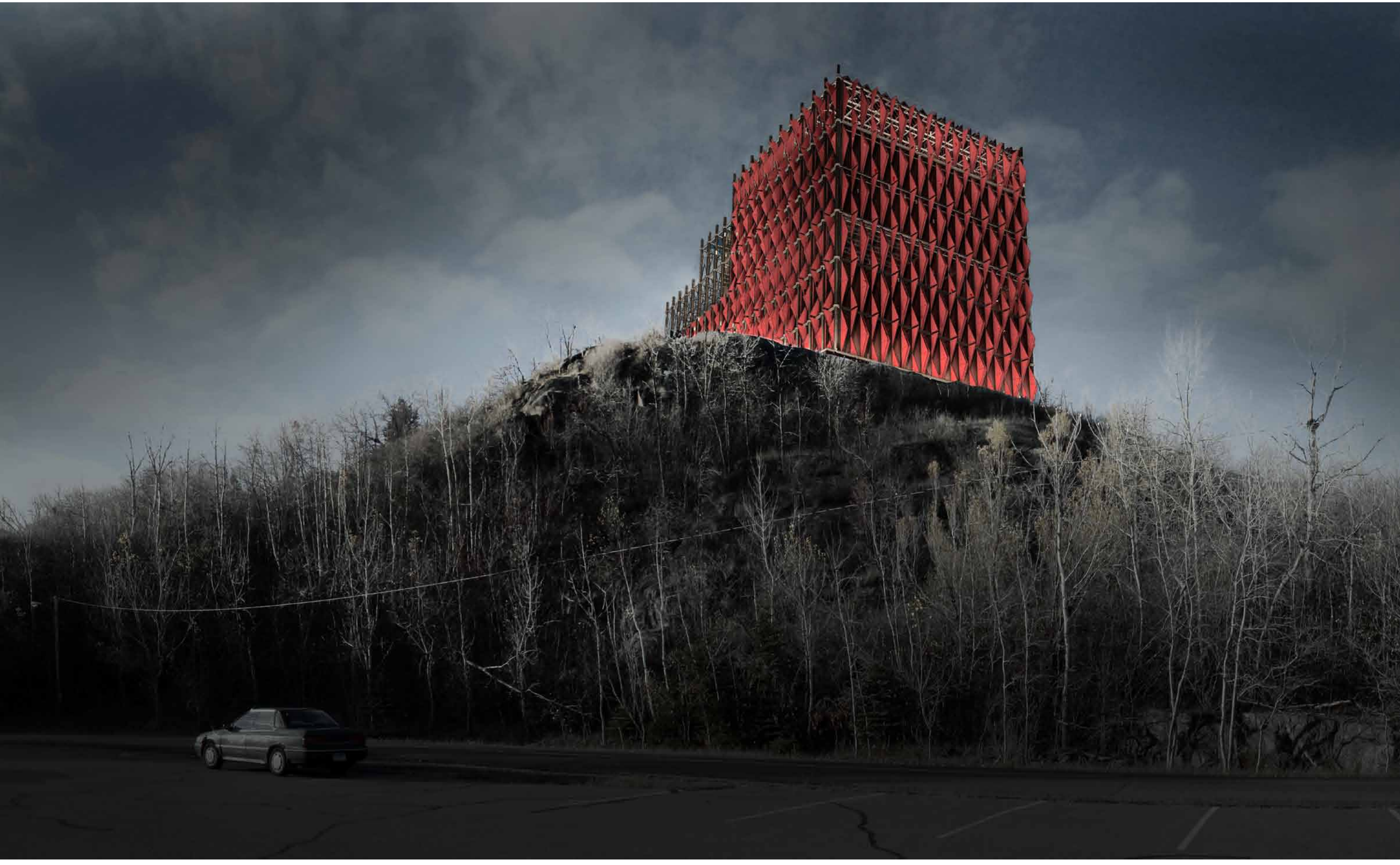

W 3rd St

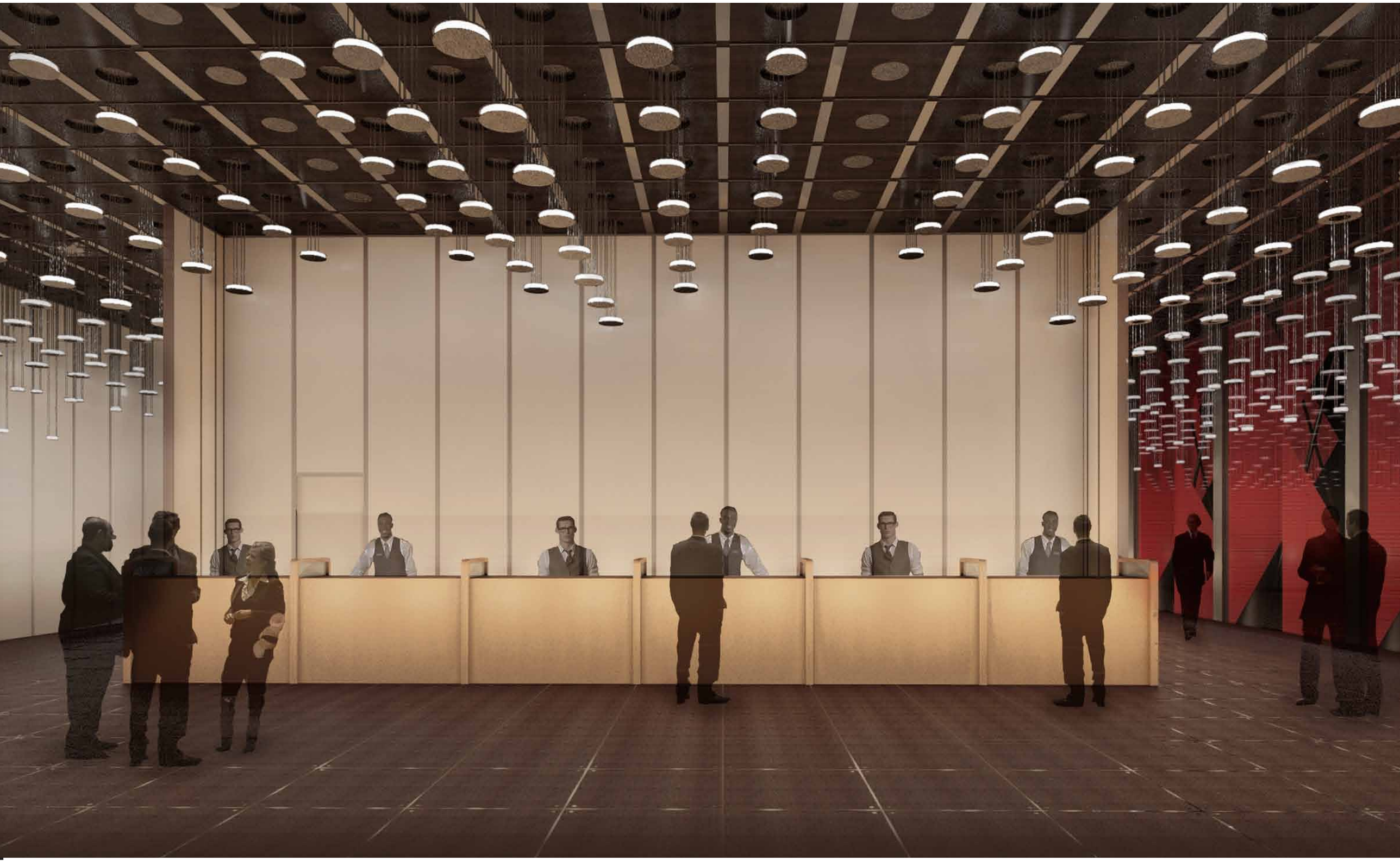


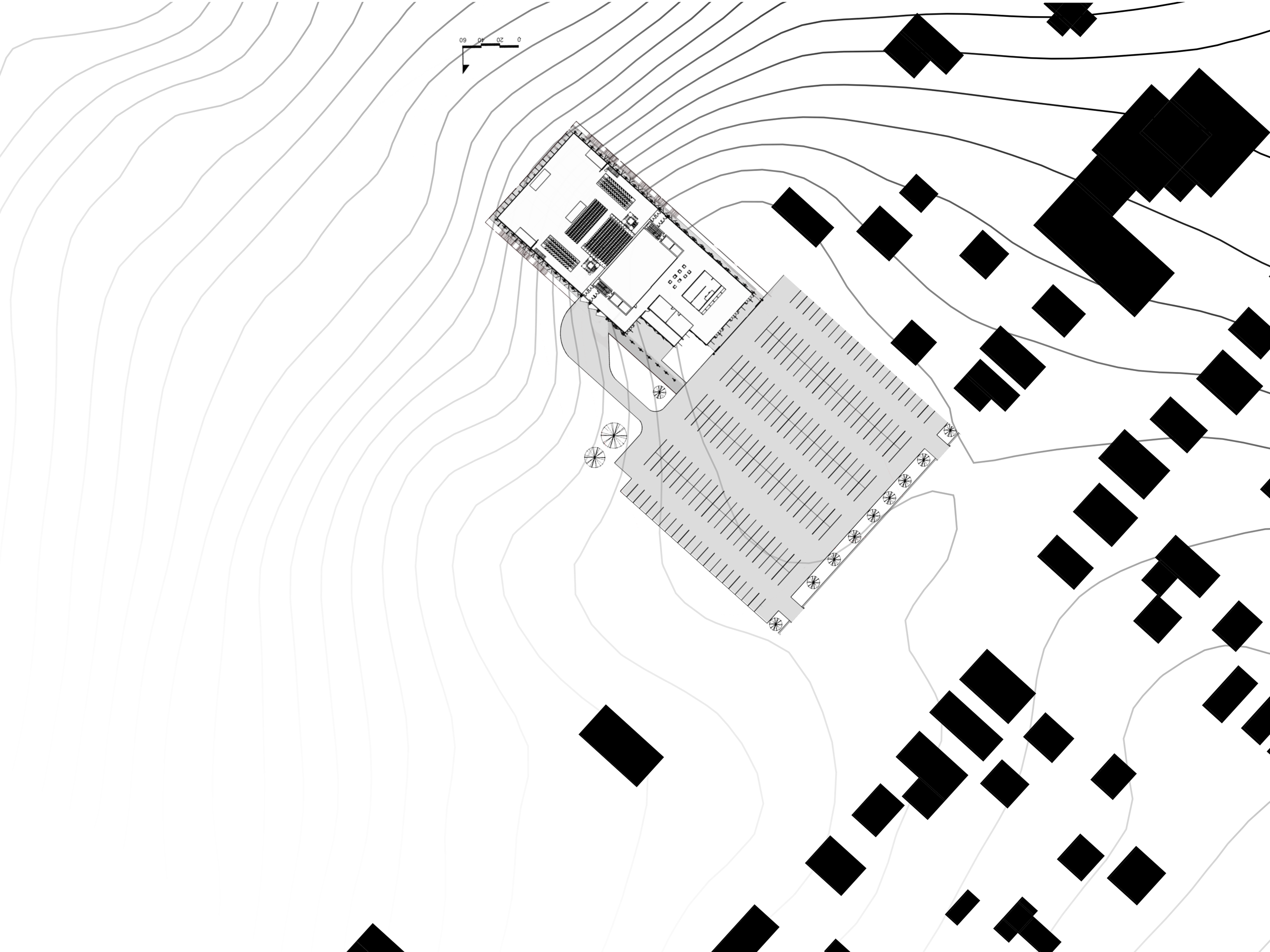








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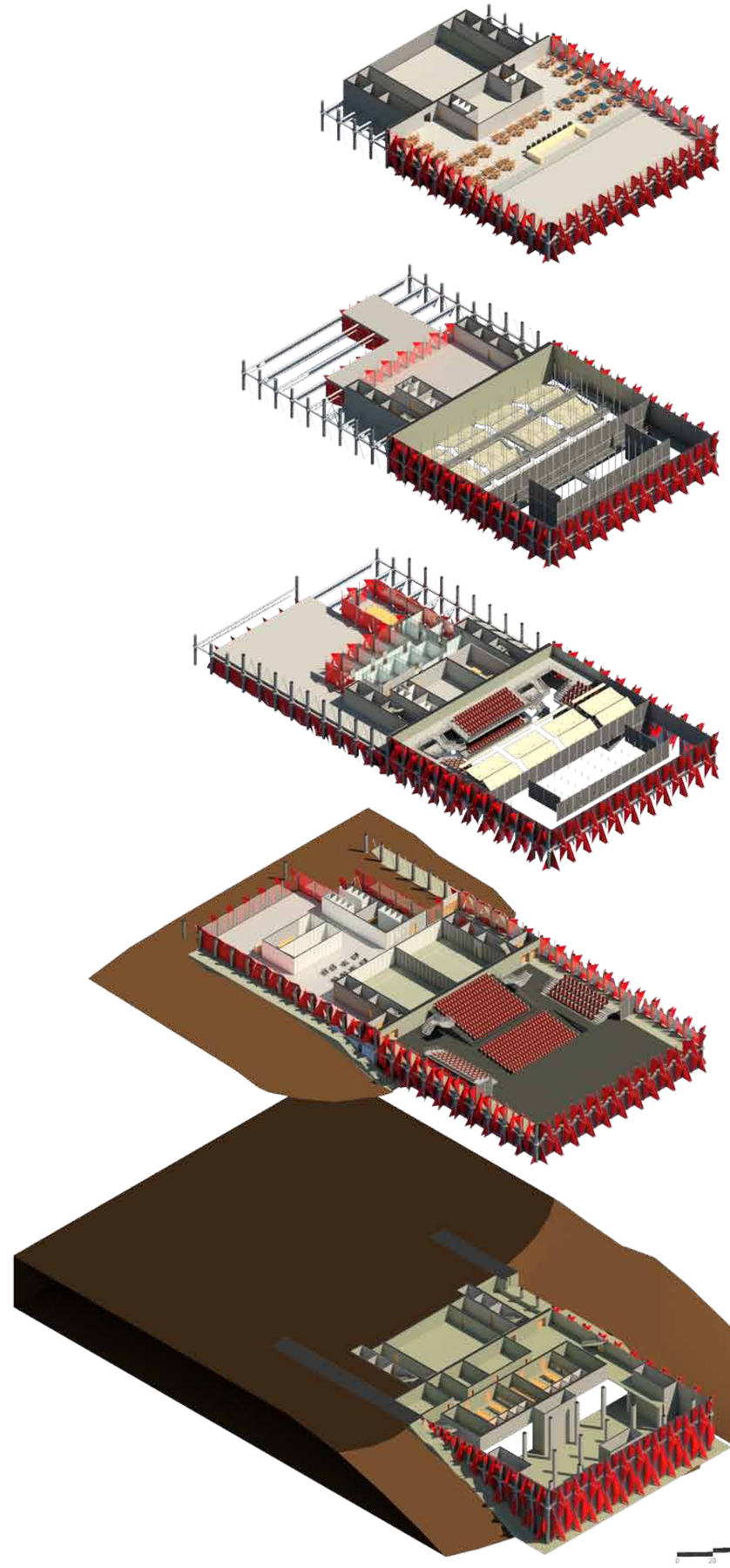


LEVEL 3

3456 GALLERY
BATHROOMS

LEVEL 2

CONFRENCE ROOM
OFFICES
6000 BATHROOMS

TECHNOLOGY ROOM

LEVEL 1

LOBBY
BATHROOMS
13600 TICKET/COAT CHECK
REHEARSAL ROOM

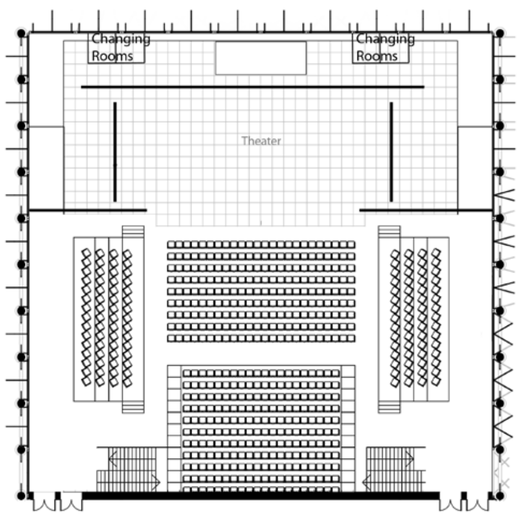
14400 AUDITORIUM

LOWER LEVEL

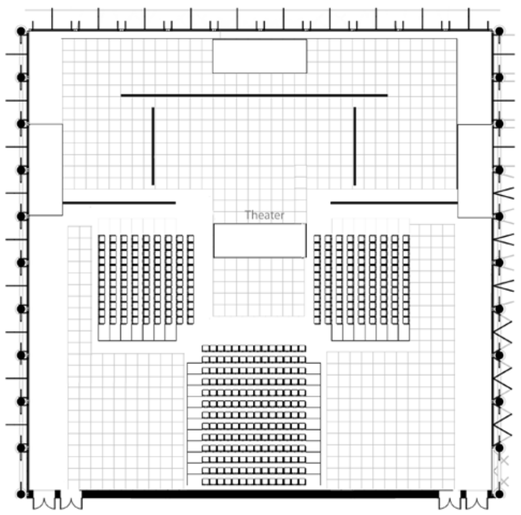
800 LOADING DOCK

1960 MECHANICAL

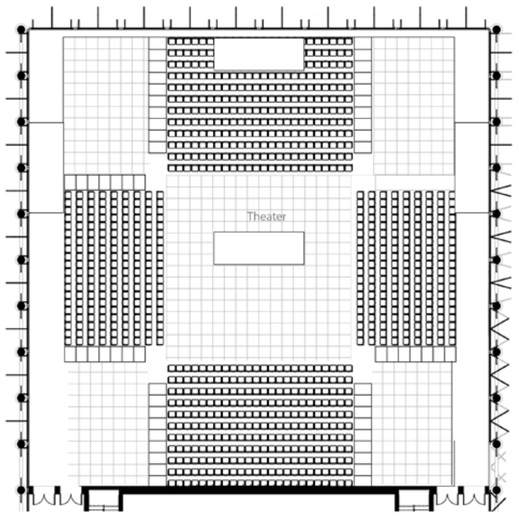
1533 PROP/INSTRUMENT/
COSTUME/STORAGE/
GREEN ROOM/
6450 CHANGING ROOM/GREEN



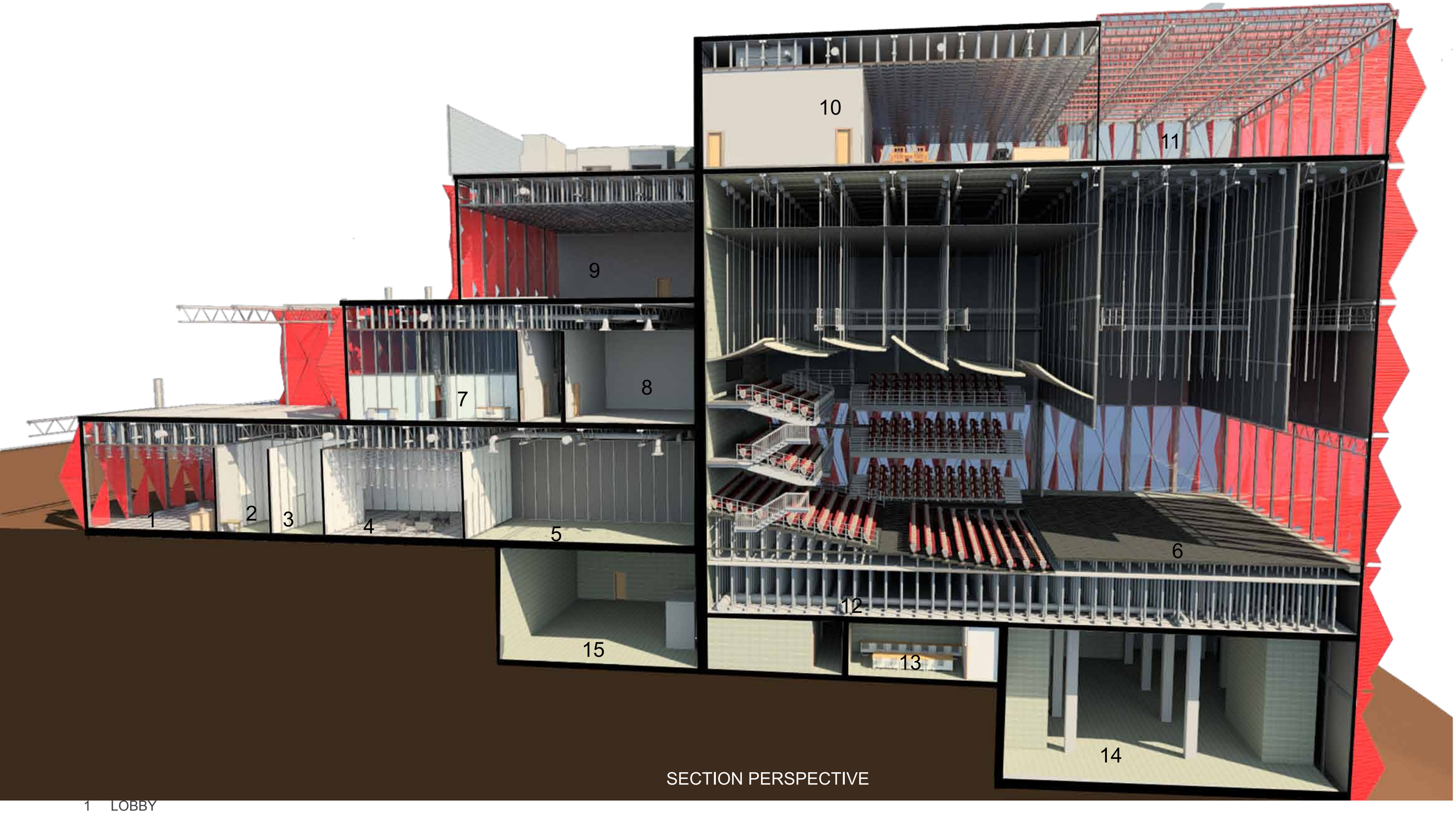
PROSCENIUM



THRUST



ARENA



SECTION PERSPECTIVE

1 LOBBY
2 TICKET COUNTER
3 COAT ROOM
4 LOUNGE
5 REHEARSAL ROOMS
6 AUDITORIUM
7 OFFICES
8 THEATRE TECHNOLOGY ROOM
9 GALLERY
10 RESTAURANT
11 GREENHOUSE GARDEN
12 LIFTS
13 CHANGING ROOM
14 SET STORAGE
15 MECHANICAL ROOM

REHEARSAL ROOM