

“The taste of the apple...lies in the contact of the fruit with the palate, not in the fruit itself; in a similar way...poetry lies in the meeting of the poem and reader, not in the lines of symbols printed on the pages of a book. What is essential is the aesthetic act, the thrill, the almost physical emotion that comes with each reading.”

-Jorge Luis Borges, *Forward to Obra Poetica*

:00

Introductions

:02

Prevalence

:10

Research

:20

Development

:30

Experience

:40

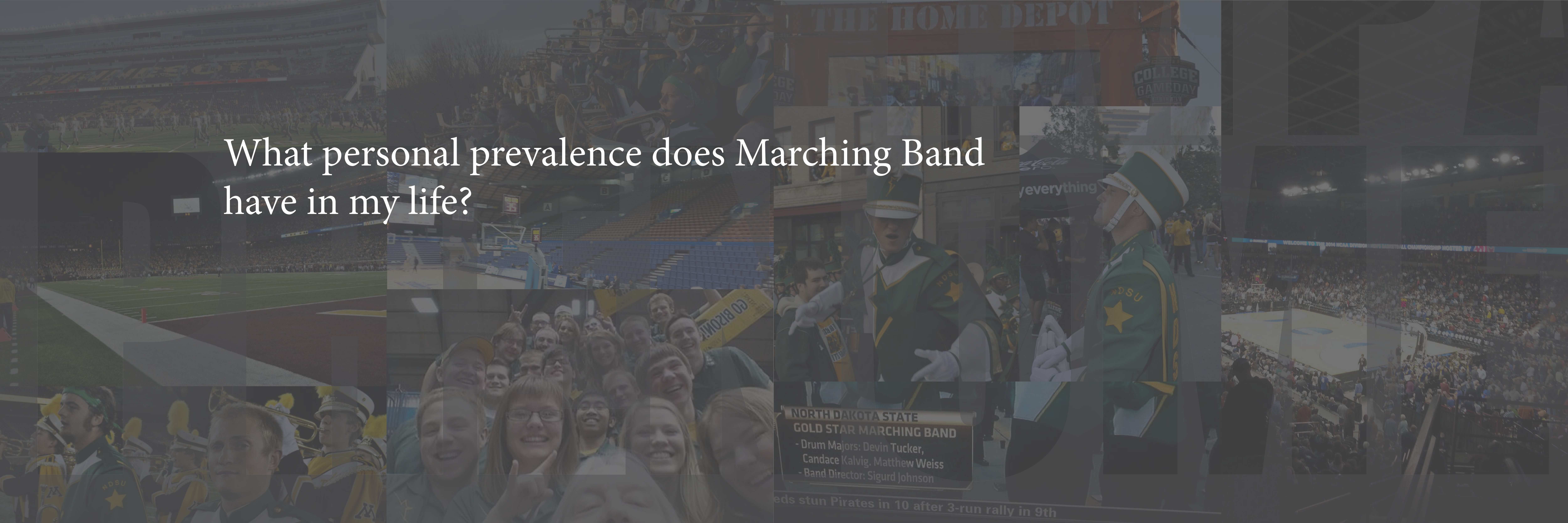
Analysis

:55

Lasting Impressions

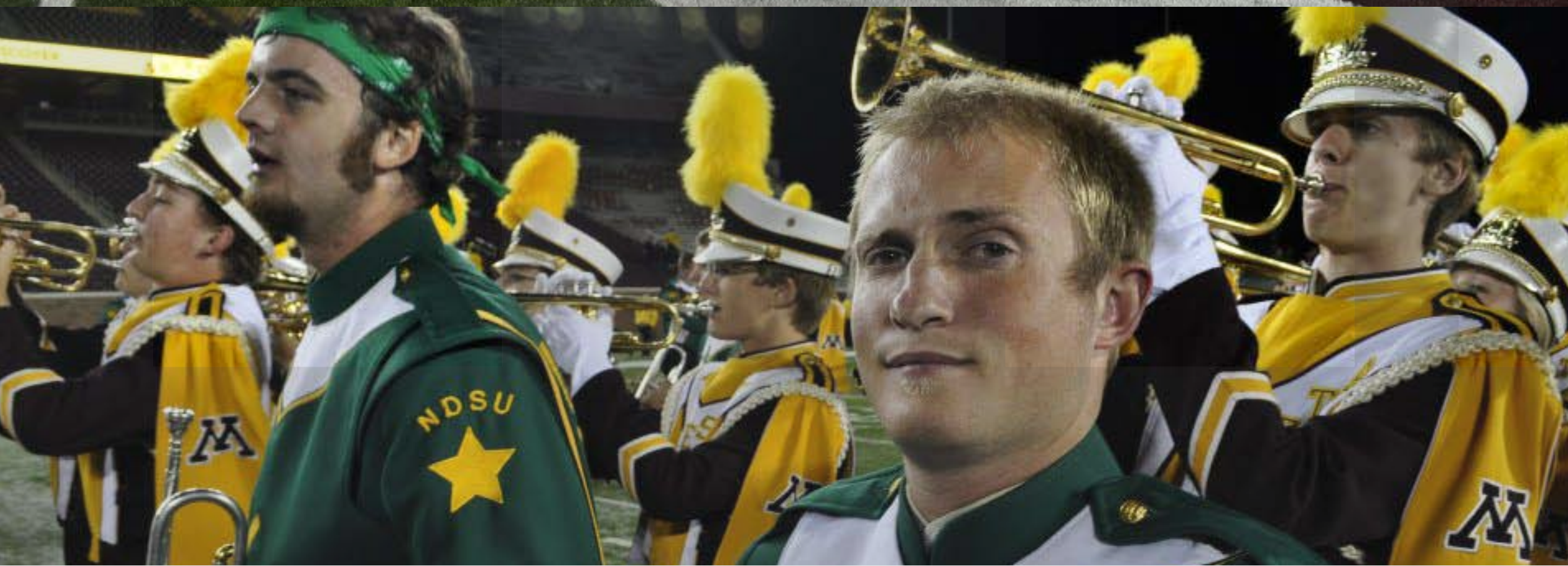
1:30

What personal prevalence does Marching Band have in my life?



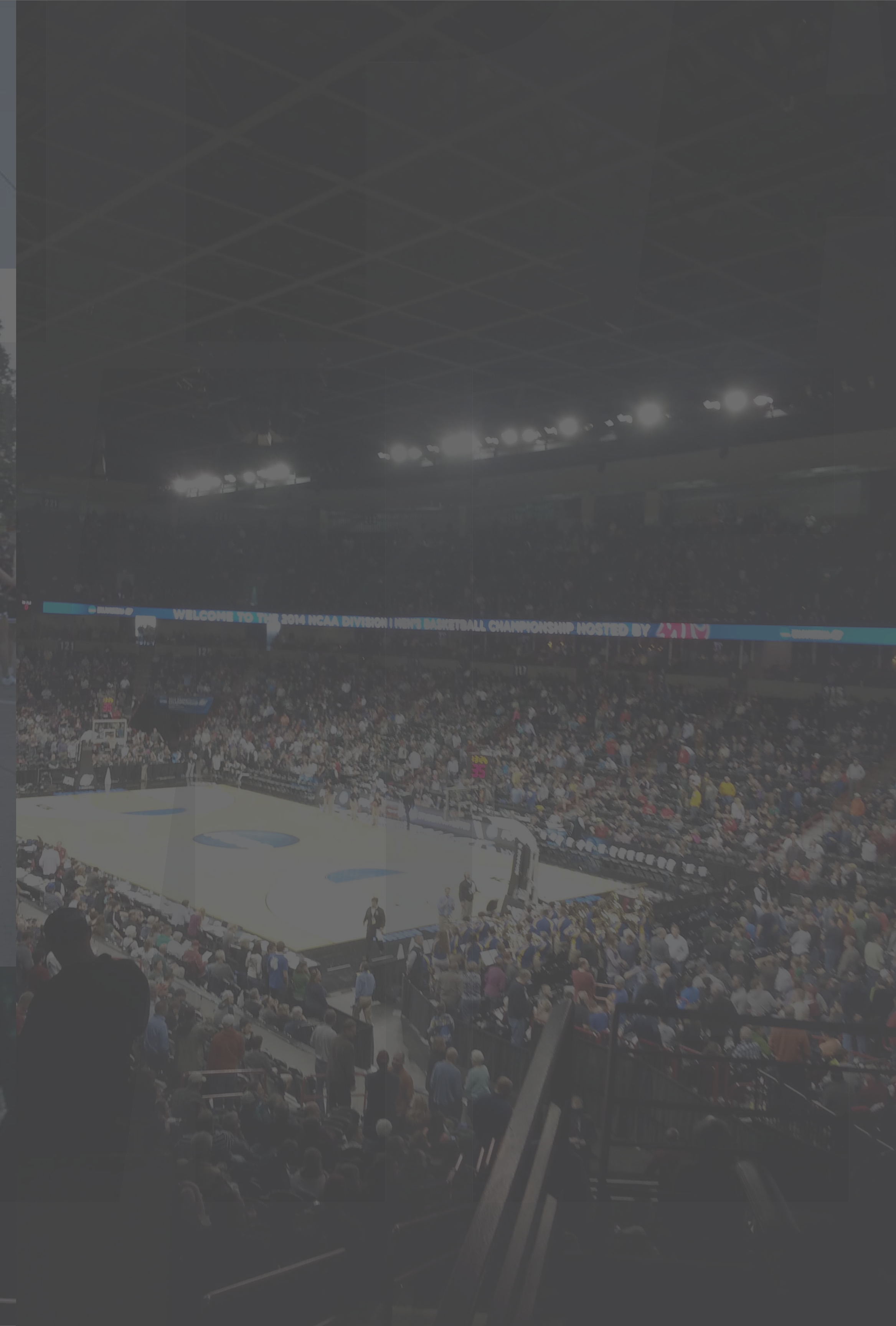
**NORTH DAKOTA STATE
GOLD STAR MARCHING BAND**
- Drum Majors: Devin Tucker,
Candace Kalvig, Matthew Weiss
- Band Director: Sigurd Johnson

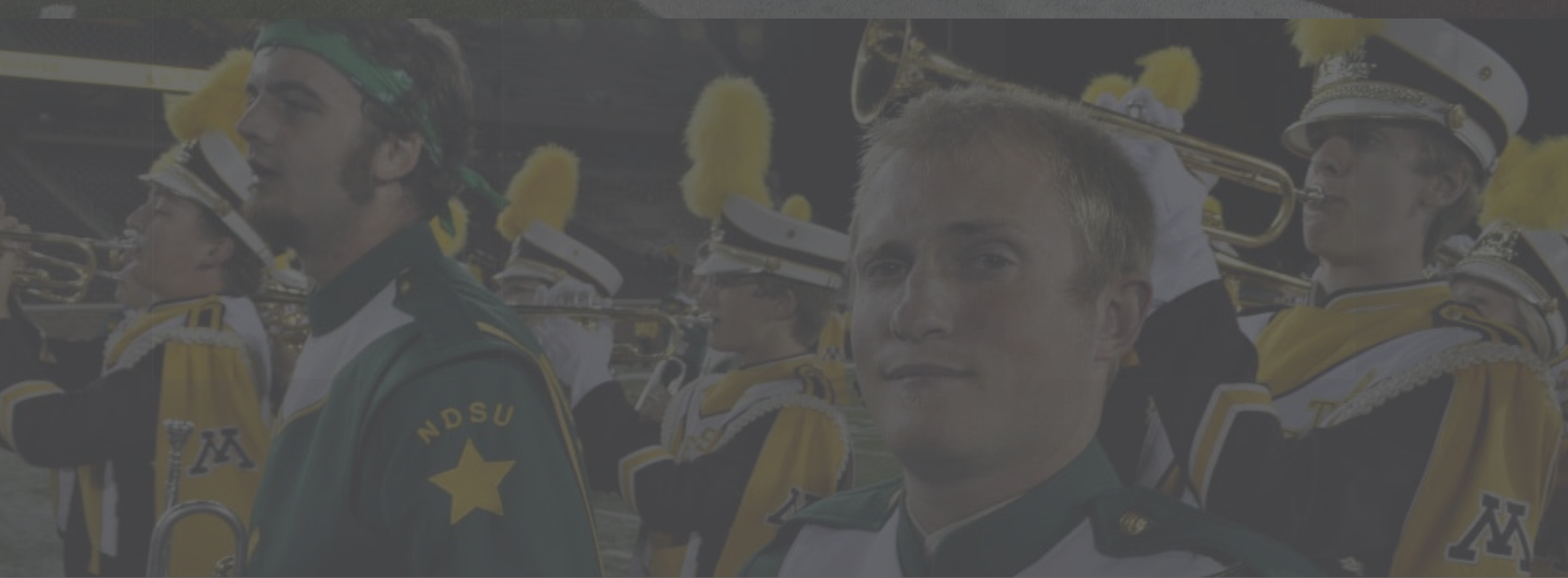
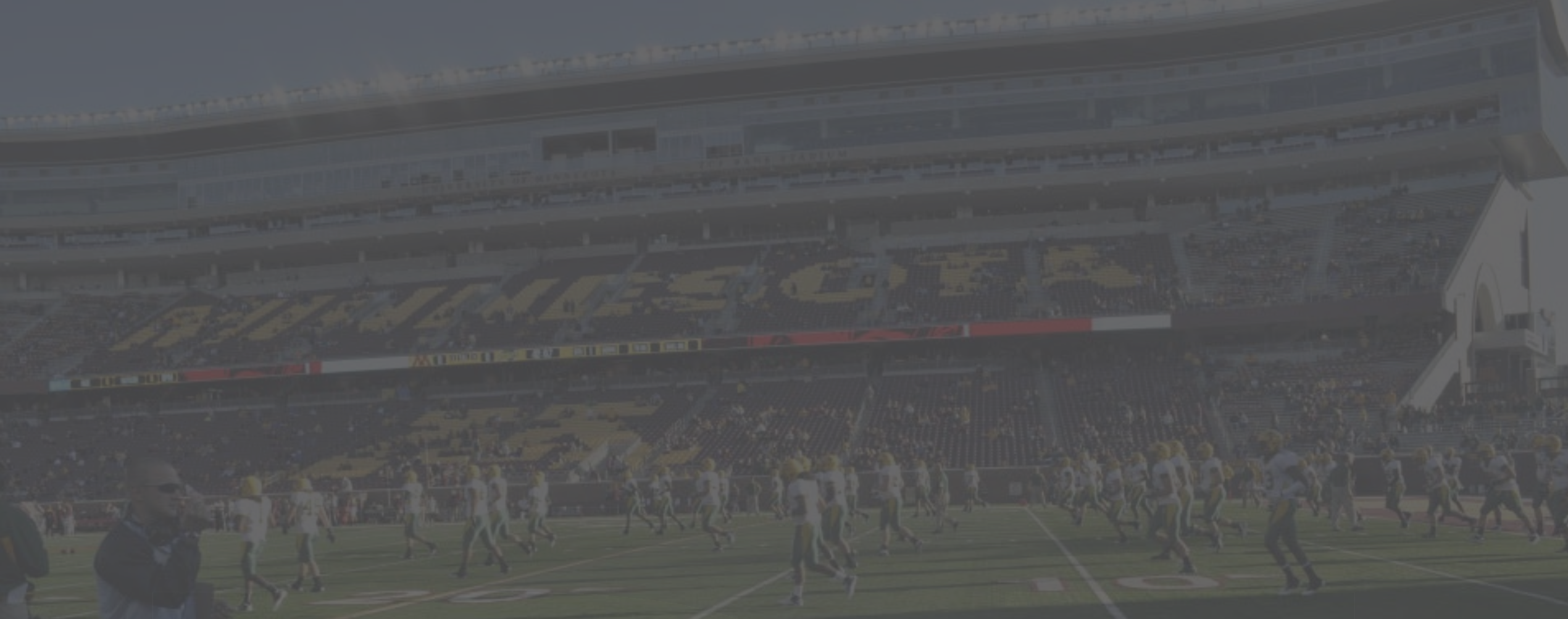
eds stun Pirates in 10 after 3-run rally in 9th



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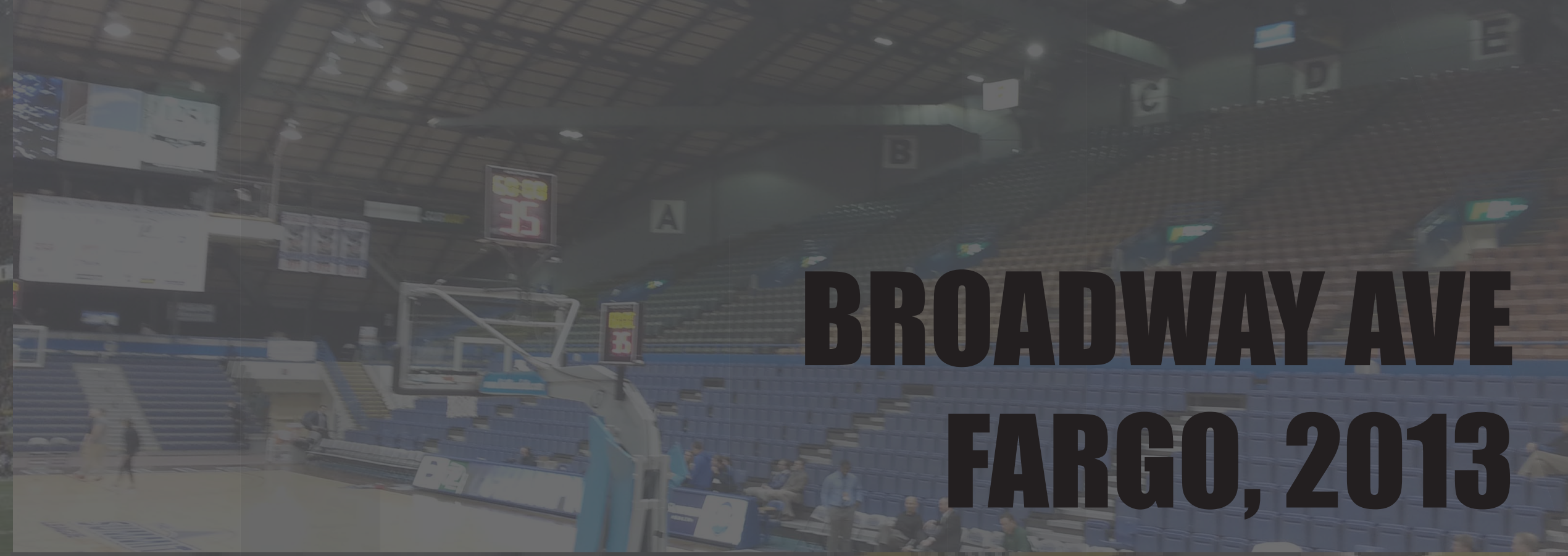
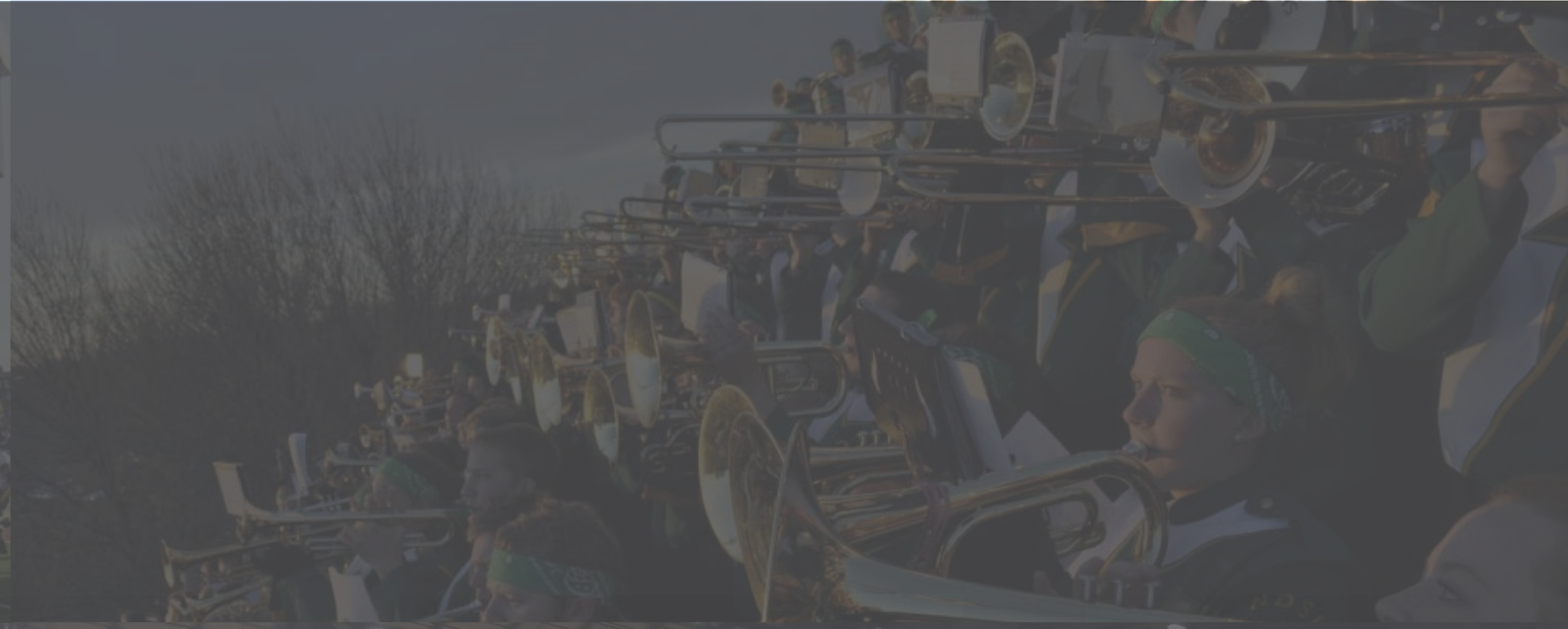
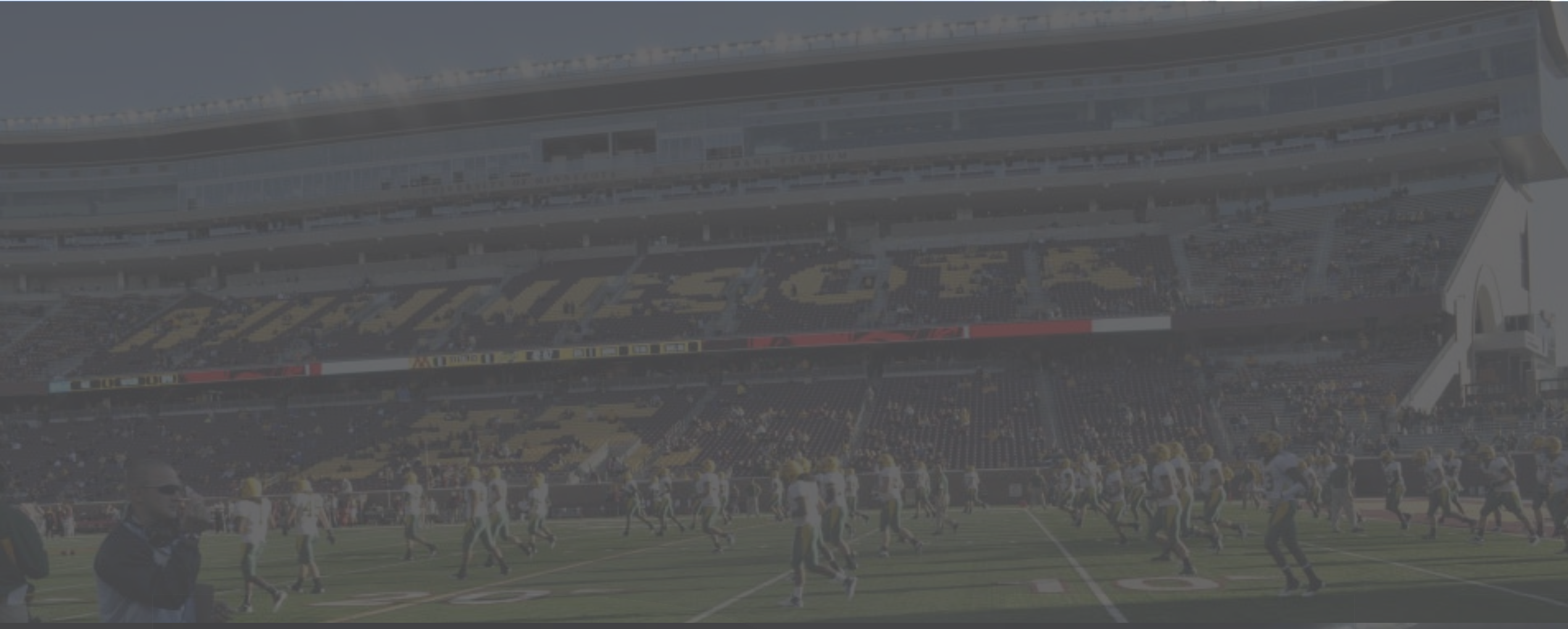


HOWARD WOOD STADIUM/ SIOUX FALLS ARENA SIOUX FALLS, 2011, 2013, 2014

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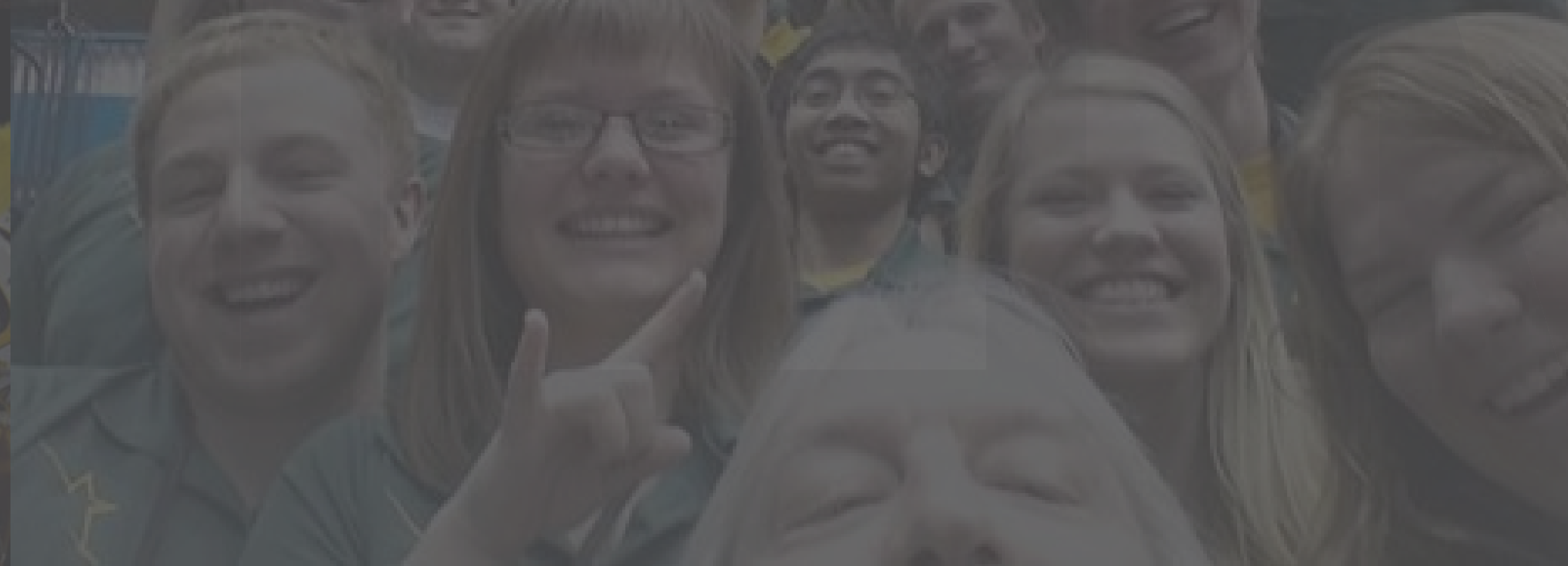
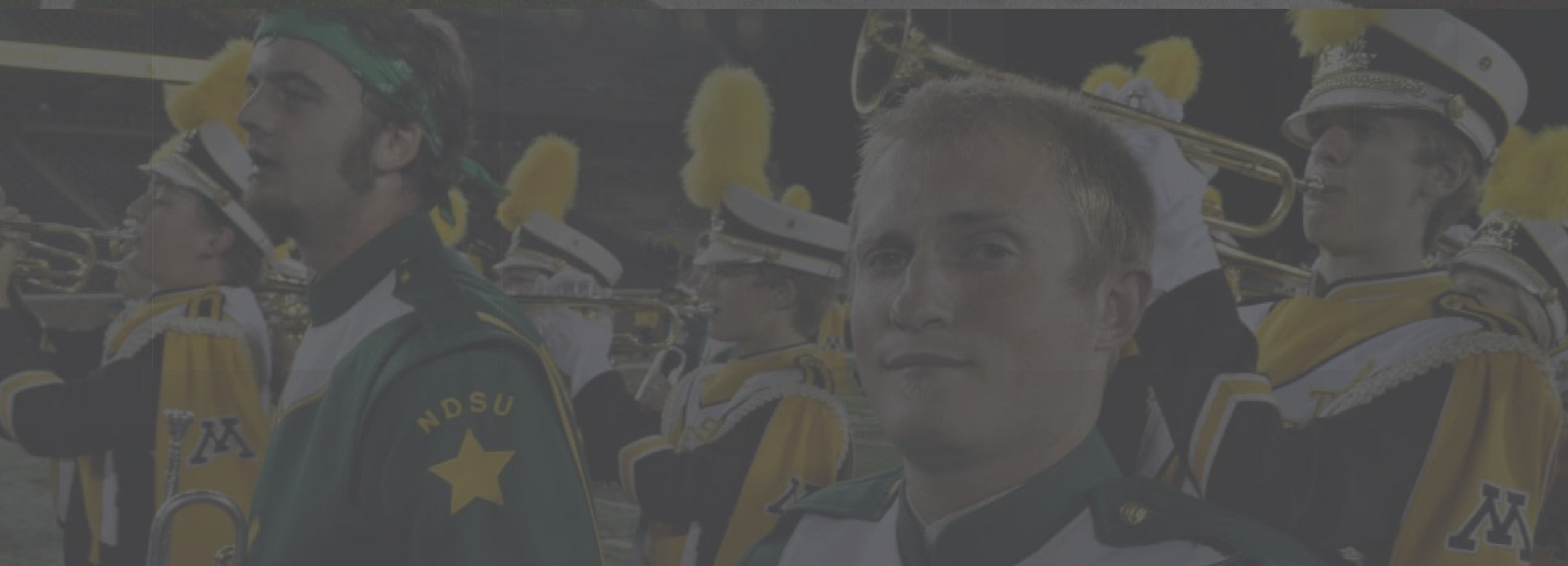


BROADWAY AVE FARGO, 2013

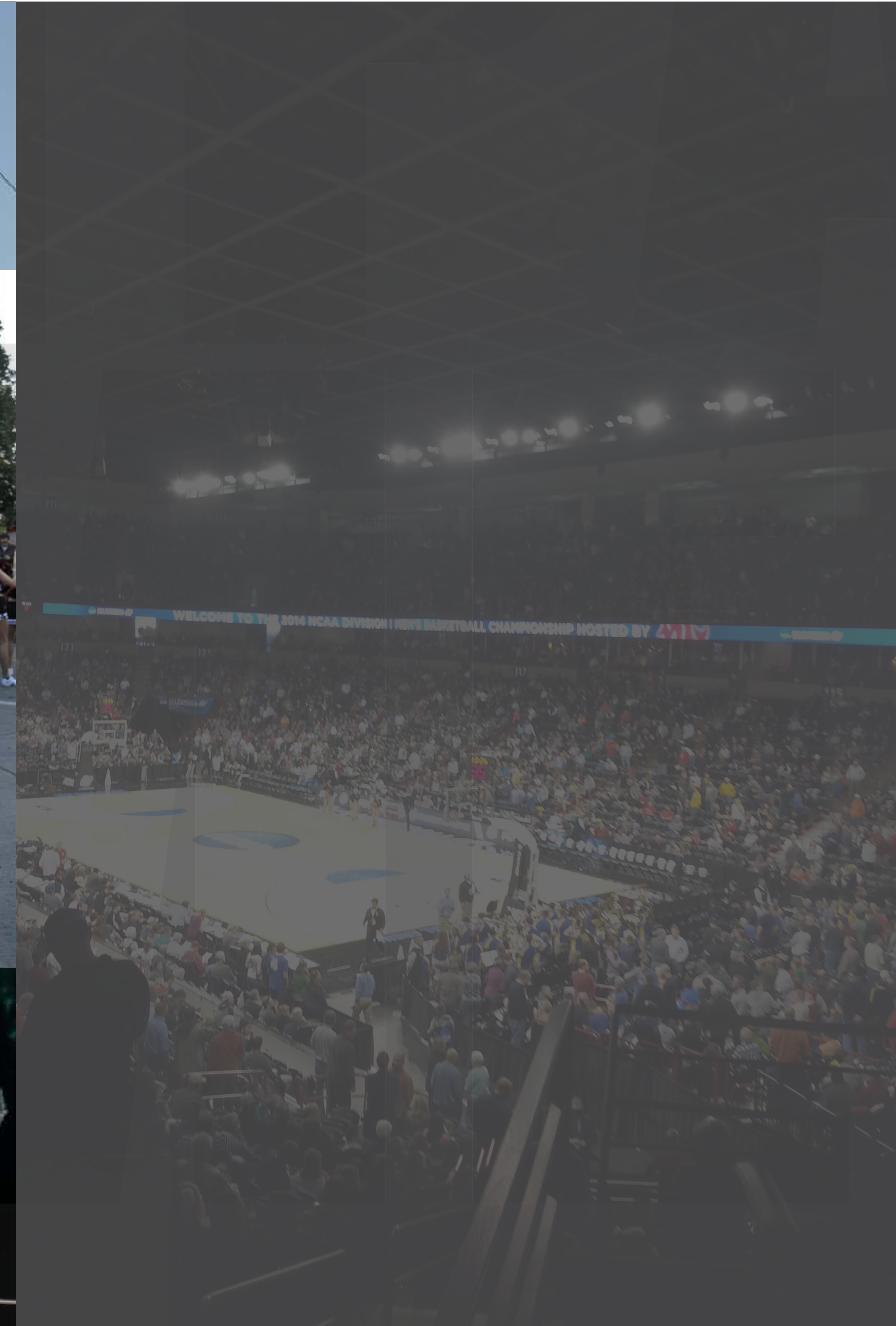


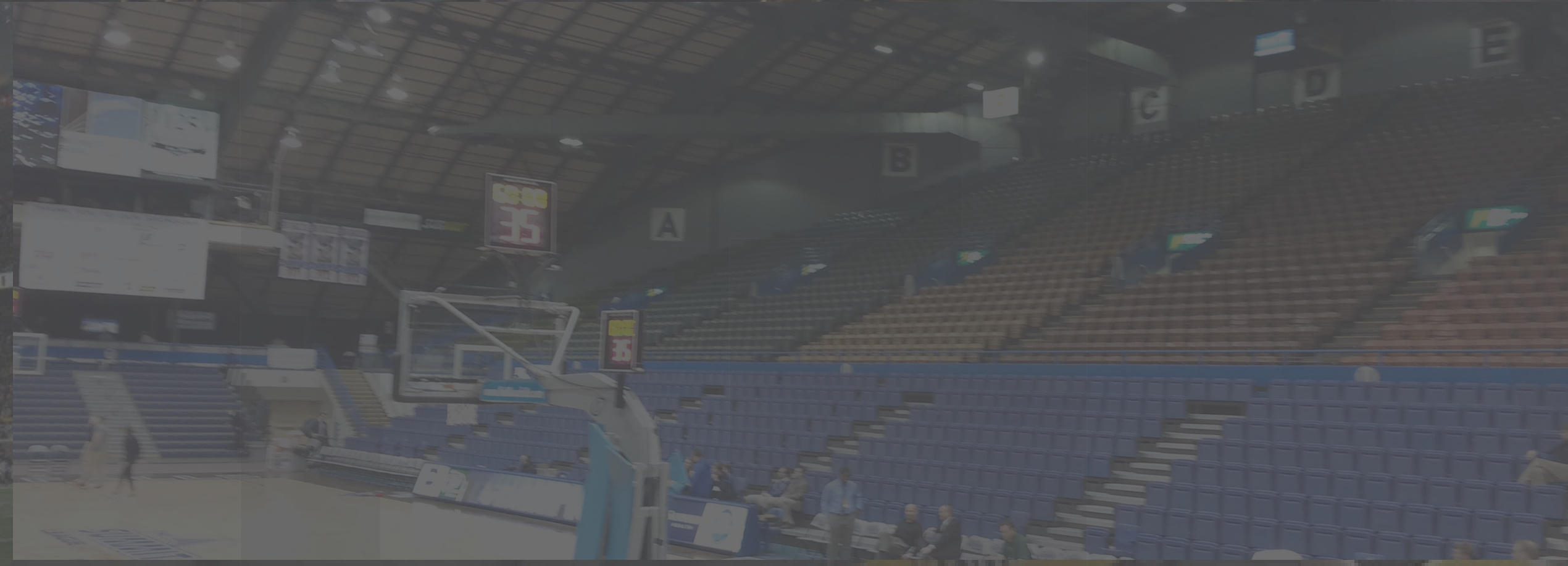
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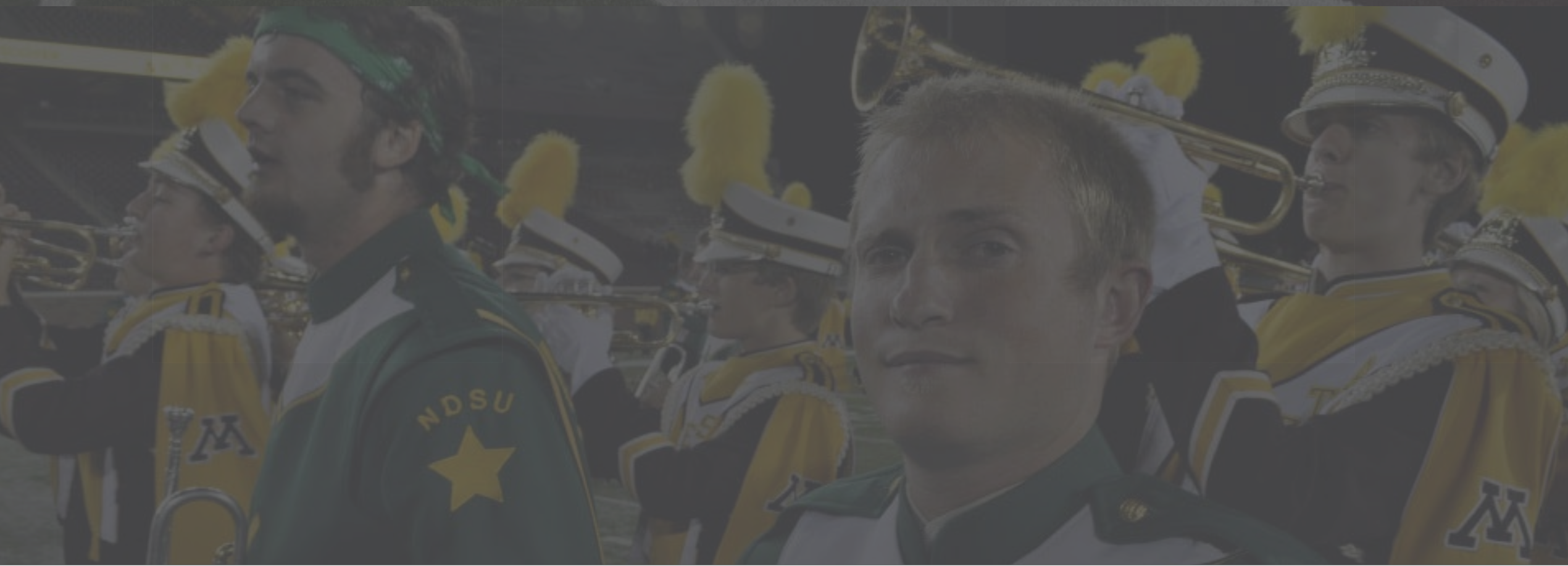


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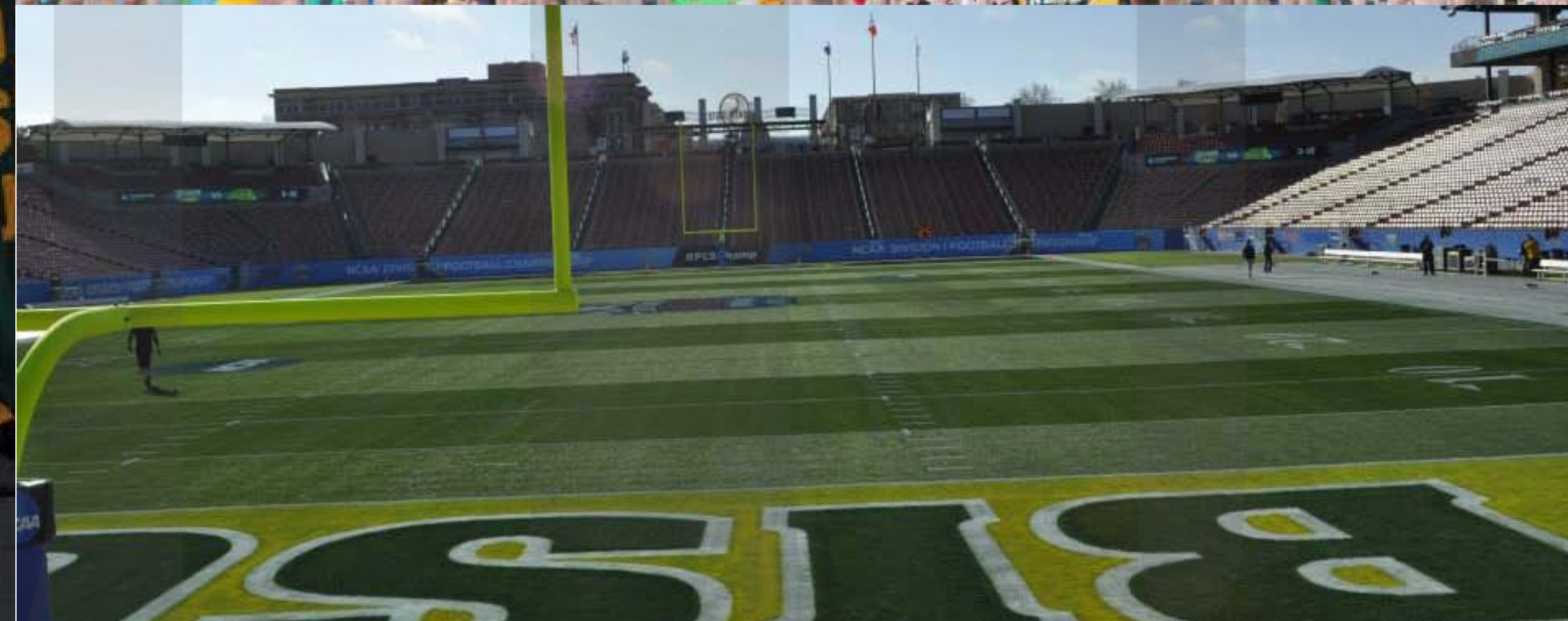
VETERANS MEMORIAL ARENA SPOKANE, WA, 2014



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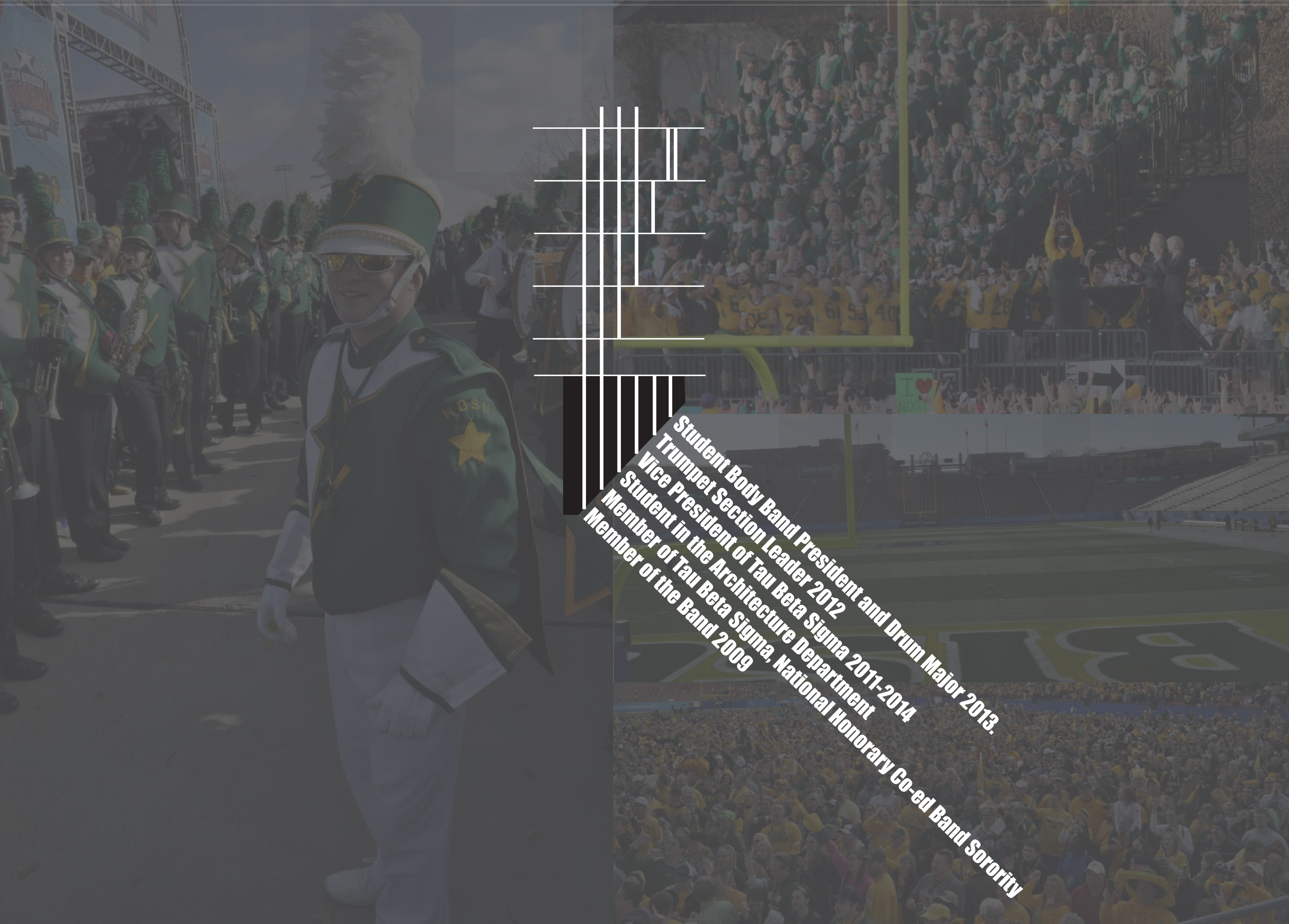


**DR. PEPPER BALLPARK/ TOYOTA STADIUM
FRISCO, TX, 2012, 2013, 2014**



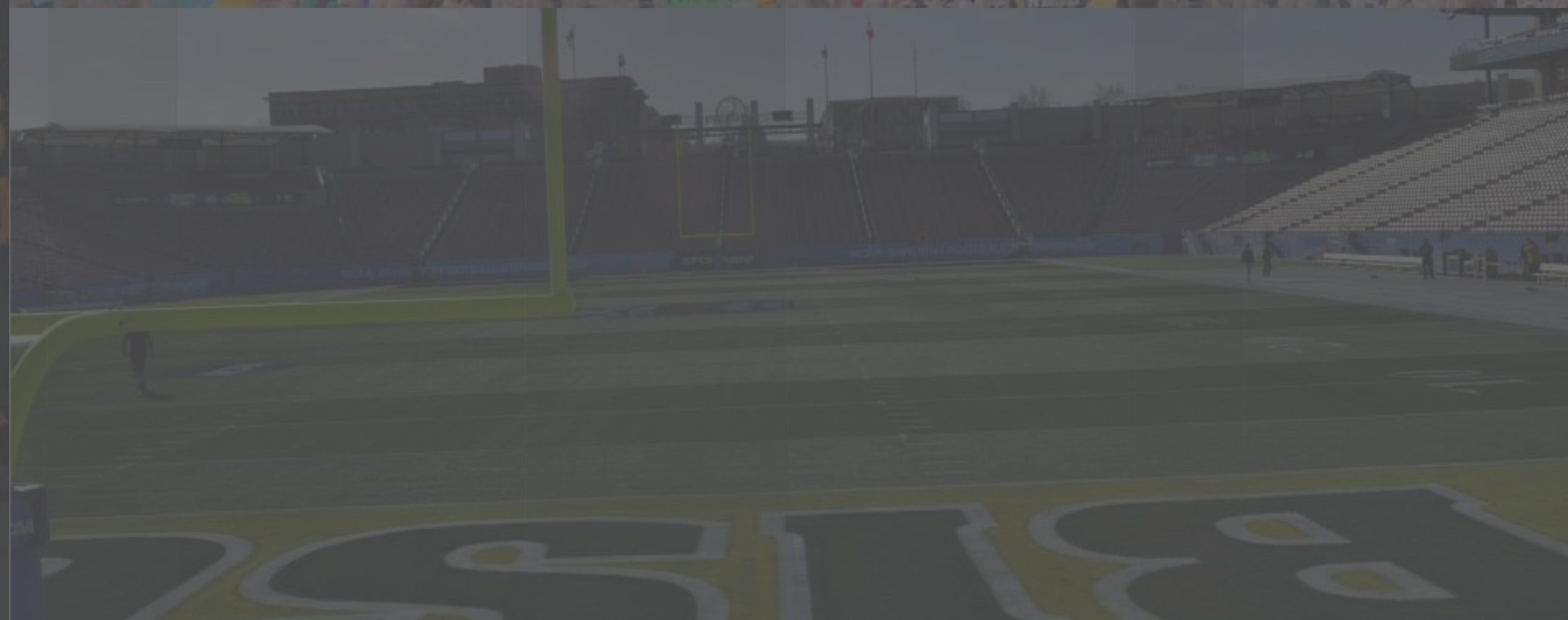


**FARGODOME
FARGO, ND, 2009-2013**



Student Body Band President and Drum Major 2013.
Trumpet Section Leader 2012
Vice President of Tau Beta Sigma 2011-2014
Student in the Architecture Department
Member of Tau Beta Sigma, National Honorary Co-ed Band Sorority
Member of the Band 2009





PREVALENCE?

“The taste of the apple...lies in the contact of the fruit with the palate, not in the fruit itself; in a similar way...poetry lies in the meeting of the poem and reader, not in the lines of symbols printed on the pages of a book. What is essential is the aesthetic act, the thrill, the almost physical emotion that comes with each reading.”

-Jorge Luis Borges, *Forward to Obra Poetica*

poetry AS architecture

TRANSLATION

reader AS witness

“The taste of the apple...lies in the contact of the fruit with the palate, not in the fruit itself; in a similar way...[architecture] lies in the meeting of the [designed space] and [witness], not in the [designed space][!] What is essential is the aesthetic act, the thrill, the almost physical emotion that comes with each [witnessing].”

-Matthew James Weiss, *Impactful Phenomenologies*, translation from Jorge Luis Borges, *Forward to Obra Poetica*

“The taste of the apple...lies in the contact of the fruit with the palate, not in the fruit itself; in a similar way...**[architecture]** lies in the meeting of the designed space and **[witness]**, not in the designed space itself^[!] What is essential is the aesthetic act, the thrill, the almost physical emotion that comes with each **[witnessing]**.”

-Matthew James Weiss, *Impactful Phenomenologies*, translation from Jorge Luis Borges, *Forward to Obra Poetica*

Four Presumptions on Phenomenology

- 1| All architecture contains a specific and unique set of materials, form and detail in which time, light, and humanity can impact.
- 2| Architectural elements always “export data” in the form of perception.
- 2| Perception requires a human participant
- 4| Conscious thought of perception can lead to a heightened state of being.

PHENOMENAL EXPERIENCE

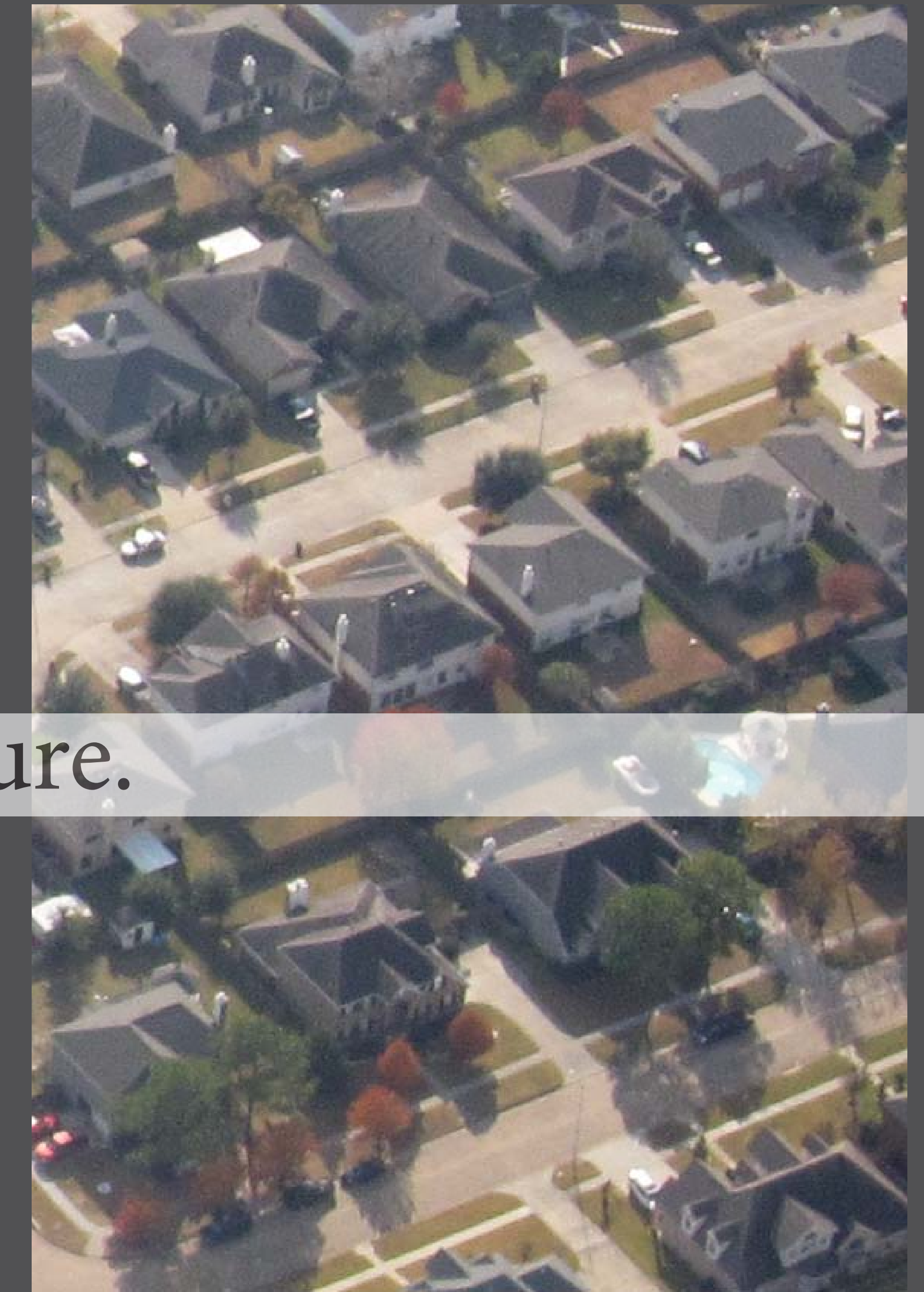
Blue Devils Drum and Bugle Corps

“Take Five,” arranged by Paul Desmond, from the performance “Phenomenon of Cool.”

World Champions, 2003, score of 98.8. Music Excerpt from 2003 Drum Corps International Finals at Orlando, FL.

Each phenomenological realm, whether it be haptic (touch) or visual, has been dulled by commercially industrial methods. The greed associated with the 'quick and easy' has effectively displaced the essences of true architecture: that is, the texture, detail and material honesty.

Often, we associate suburban sprawl with economically driven architecture.





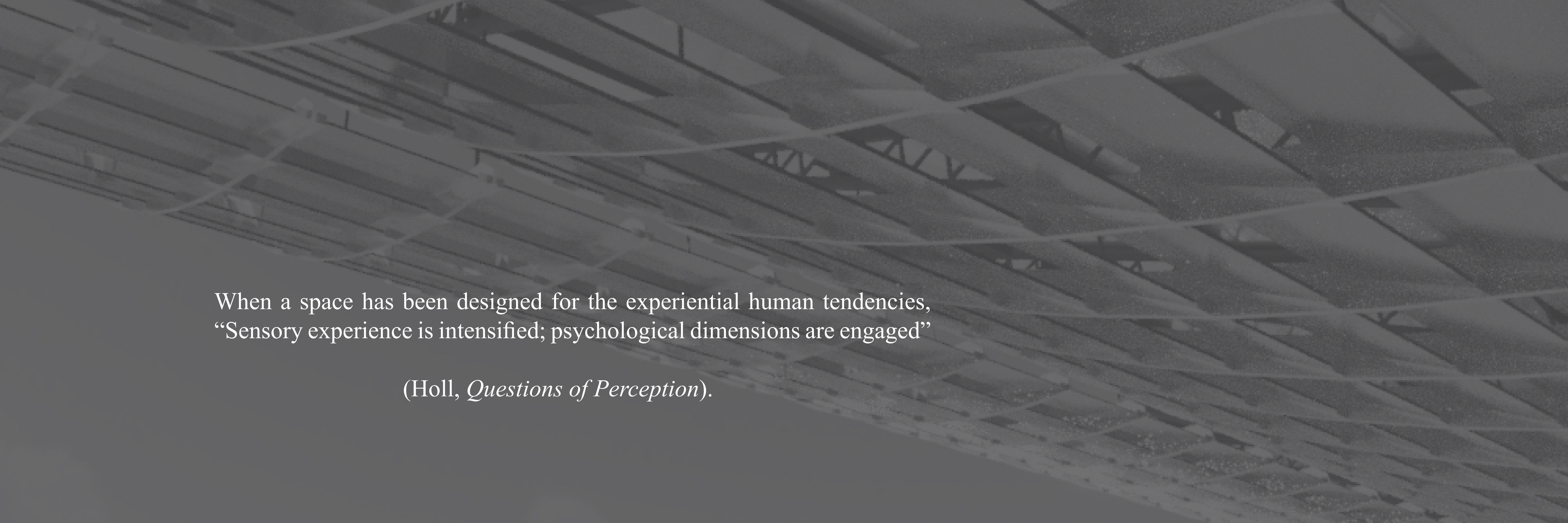
For Good Reason





Sound helps define Space.

but a Space is what designs the Sound



When a space has been designed for the experiential human tendencies,
“Sensory experience is intensified; psychological dimensions are engaged”

(Holl, *Questions of Perception*).

RECAP

Material as Medium. The Transfer of Data

IMPACT

1im·pact

verb \im-'pakt\
verb

: to have a strong and often bad effect on (something or someone)

: to hit (something) with great force

Merriam Webster Online Dictionary



Santa Clara Vanguard, 2009, closing with 'Simple Gifts' at the World Championship in Lucas Oil Stadium, Indianapolis, IN

Architectural Impact

IMPACT and MEMORY

Minute deformation with mental impermanence
Minute deformation with temporary permanence
Lasting deformation with mental permanence

Impact as Memory

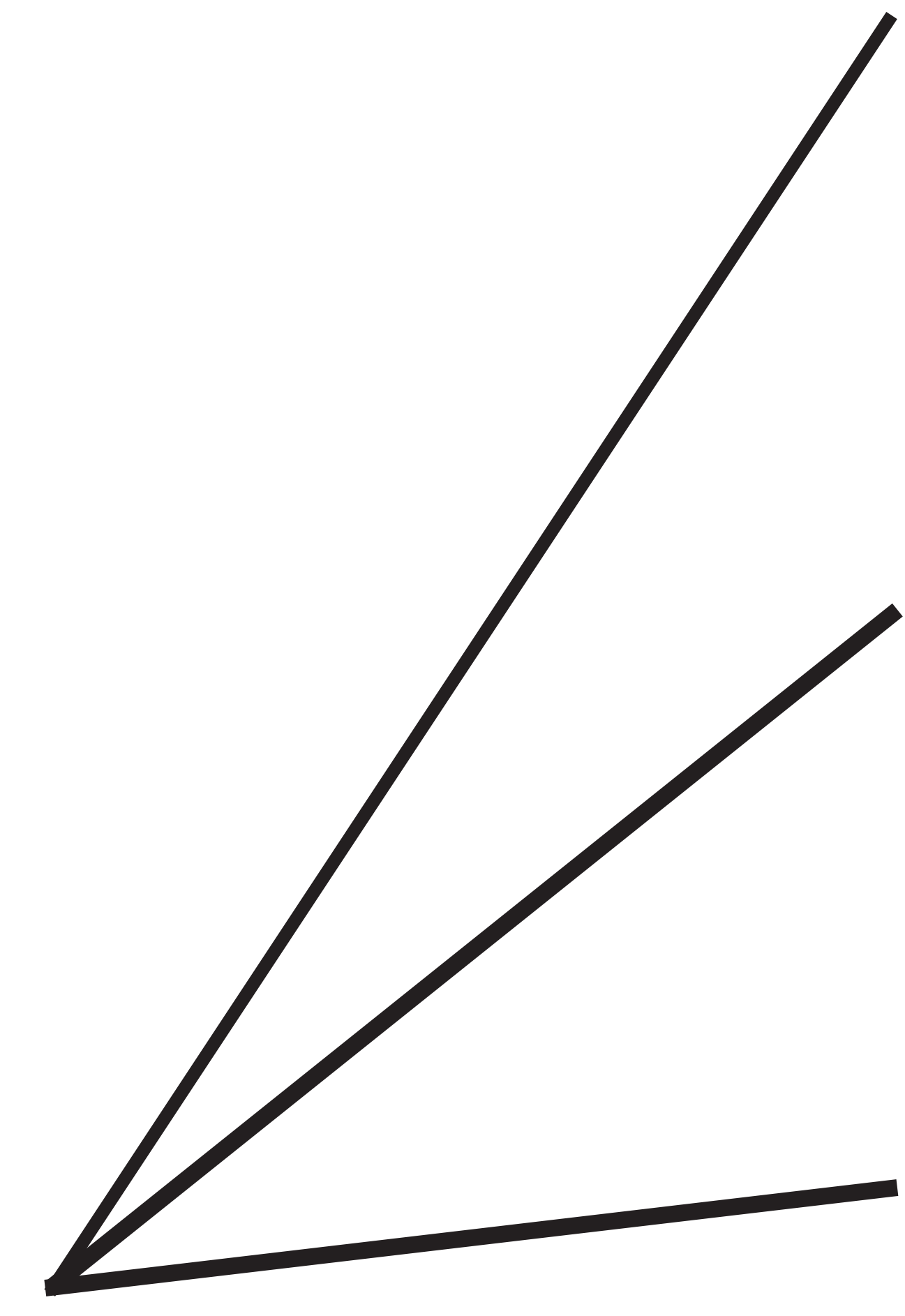
Memory as Phenomenology

Phenomenology as Impact

MEMORY

Impact as Memory
Memory as Phenomenology
Phenomenology as Impact

MEMORY=



sustained revenue

cultural importance

growth in the community

PROBLEM STATEMENT

How can Impactful Phenomenologies lend to a greater experience of space?



**IMPACTFUL
PHENOMENOLOGIES**

USER-CLIENT DESCRIPTION

Day Campers

Permanent Ensemble Groups

Facility Staff

One-Time Performance Ensembles

Public Viewers/Fanbase

MAJOR DESIGN ELEMENTS

Performance Space

Living Space

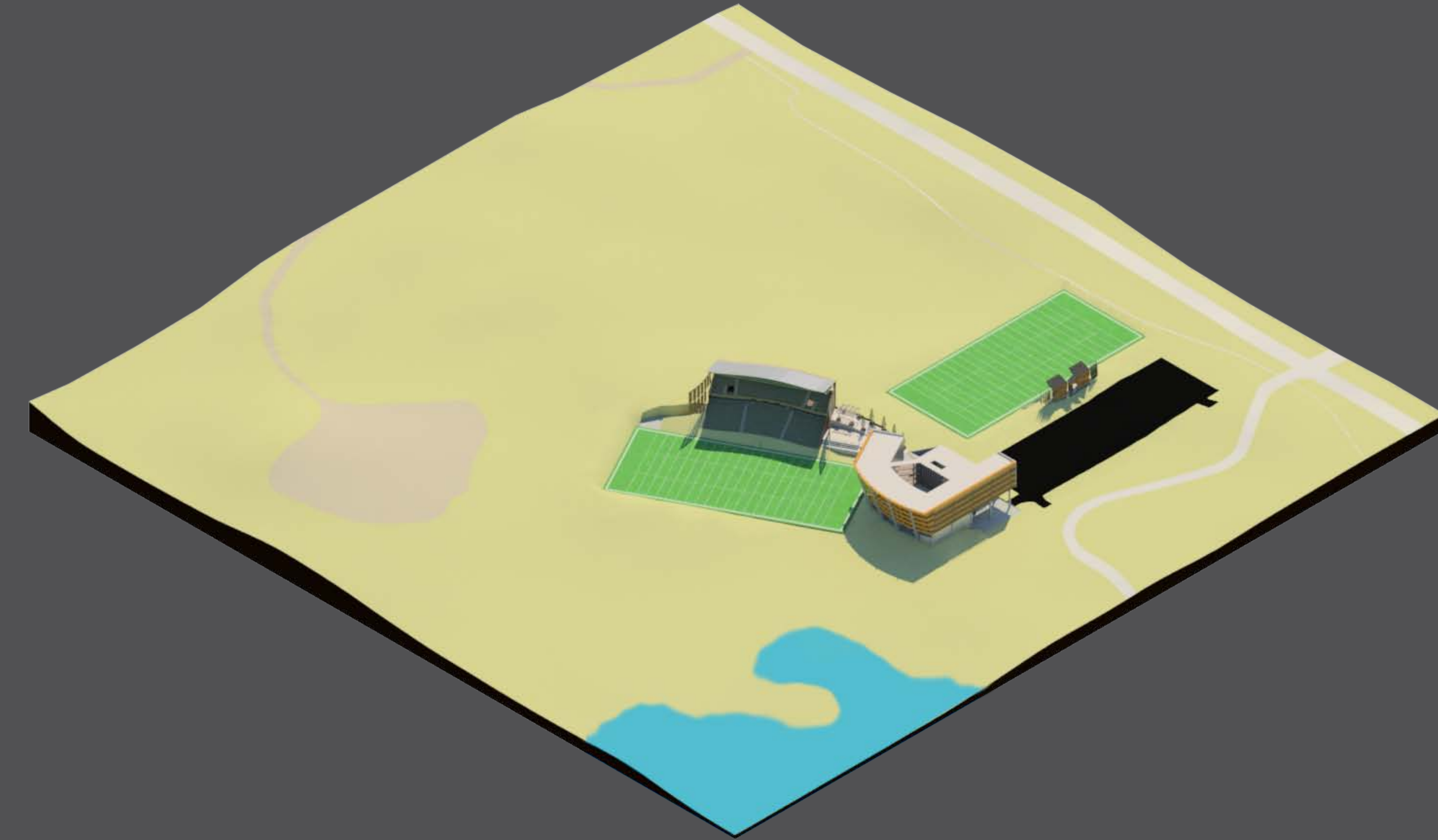
Service Space

Office Space

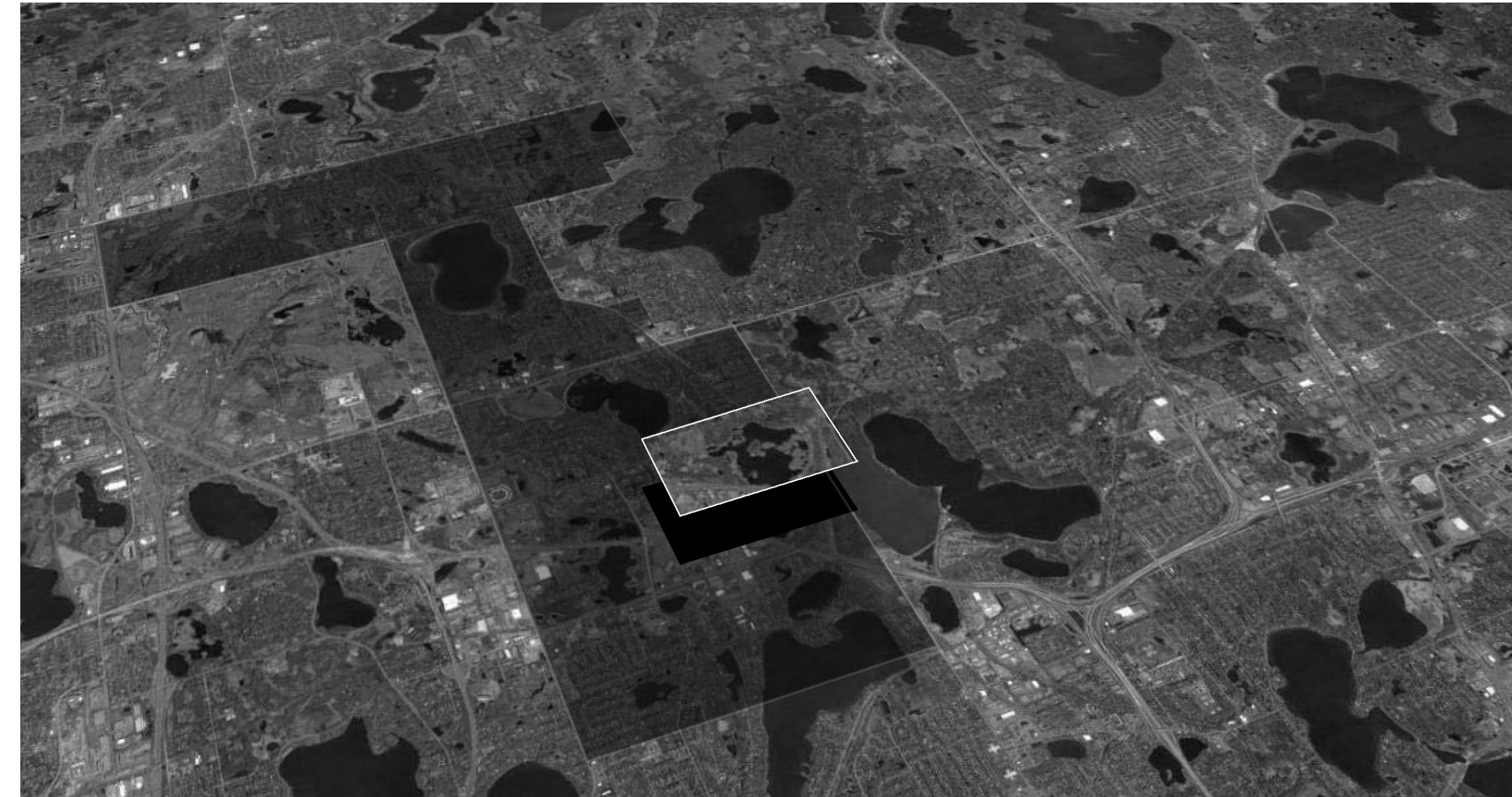
Recreation Space

Practice Space

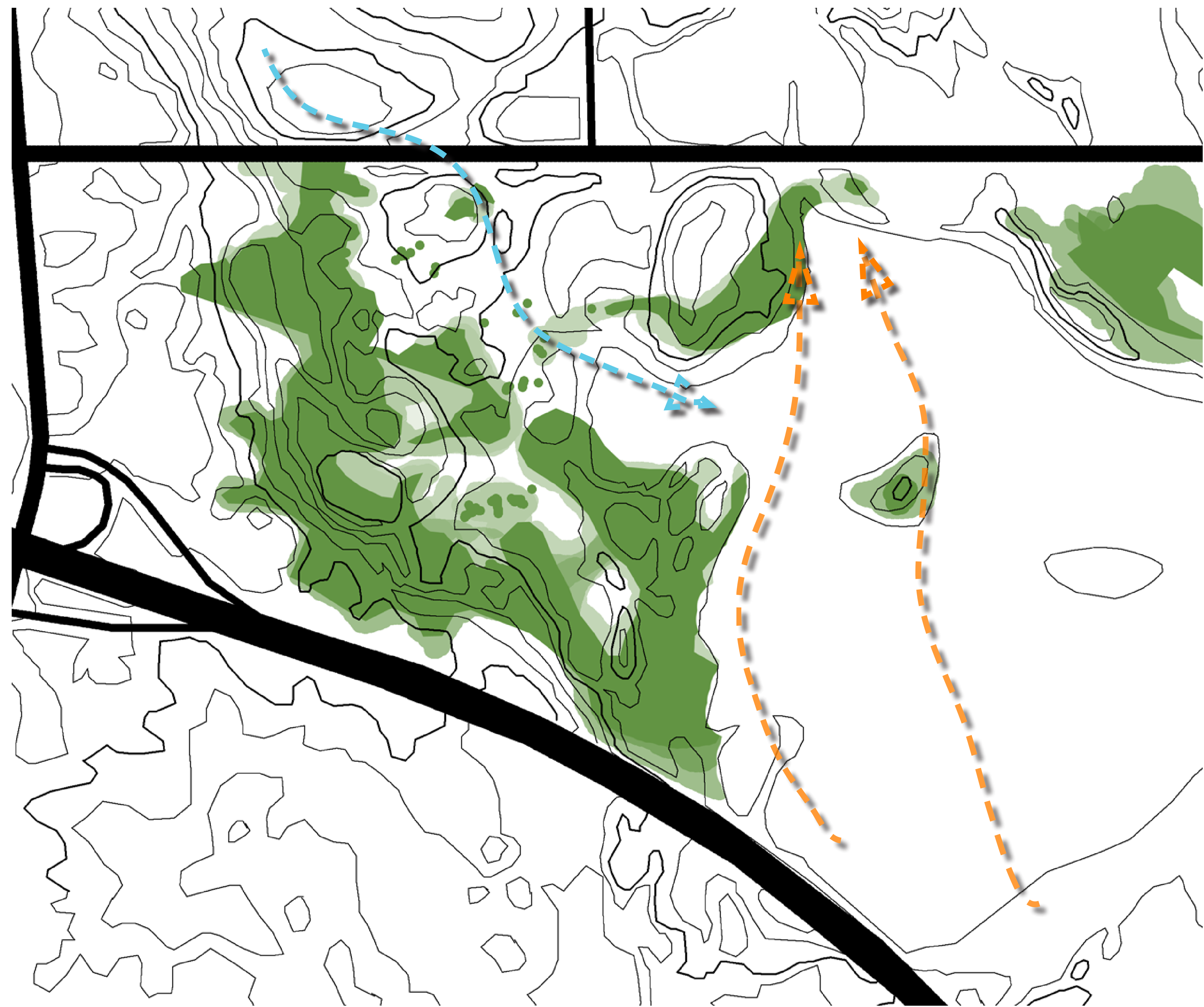
Human Space



SITE INFORMATION: MACRO TO MICRO







Vegetation

Old growth, deciduous forest.

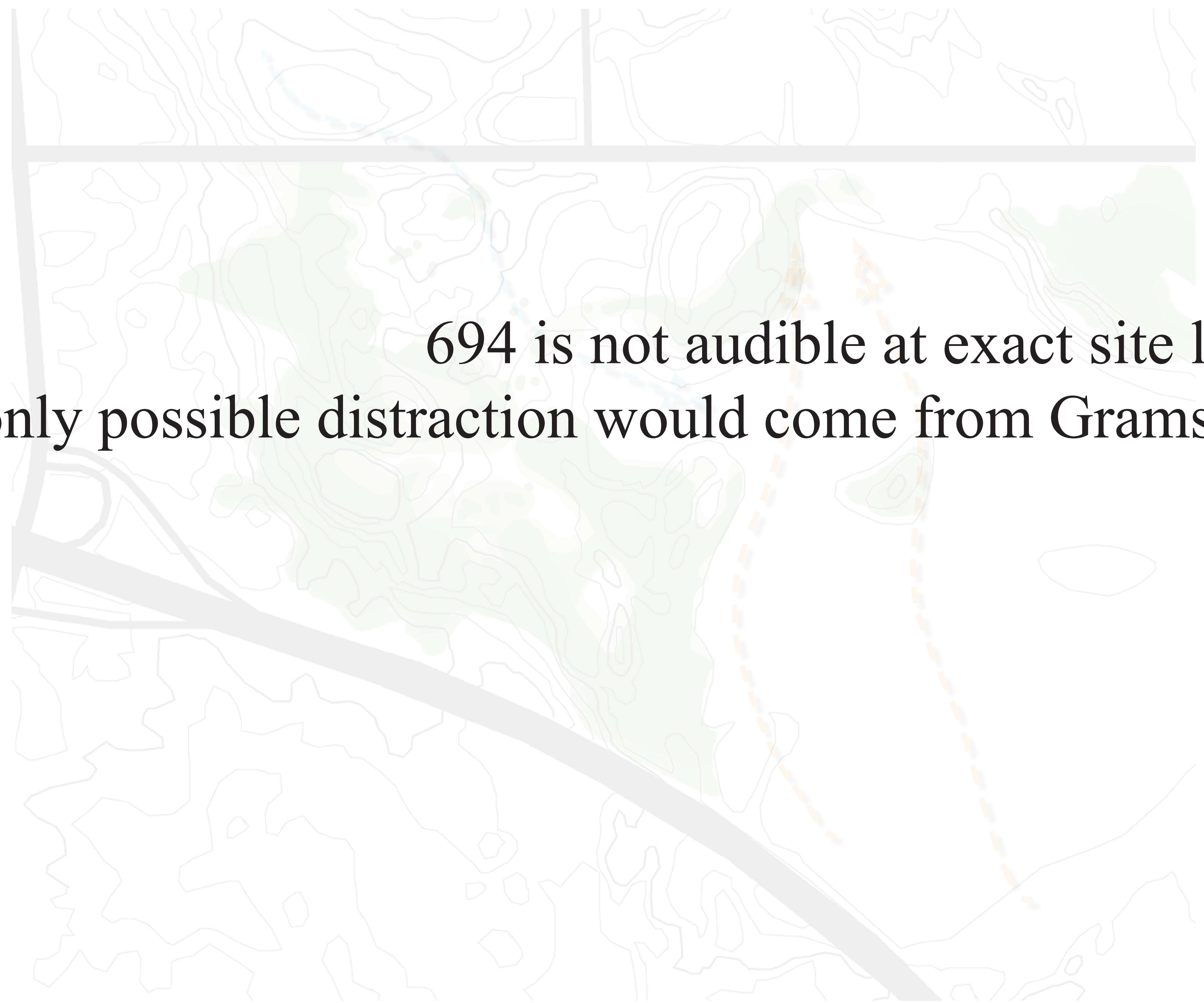
Prairie.

No Coniferous, mostly due to native soils

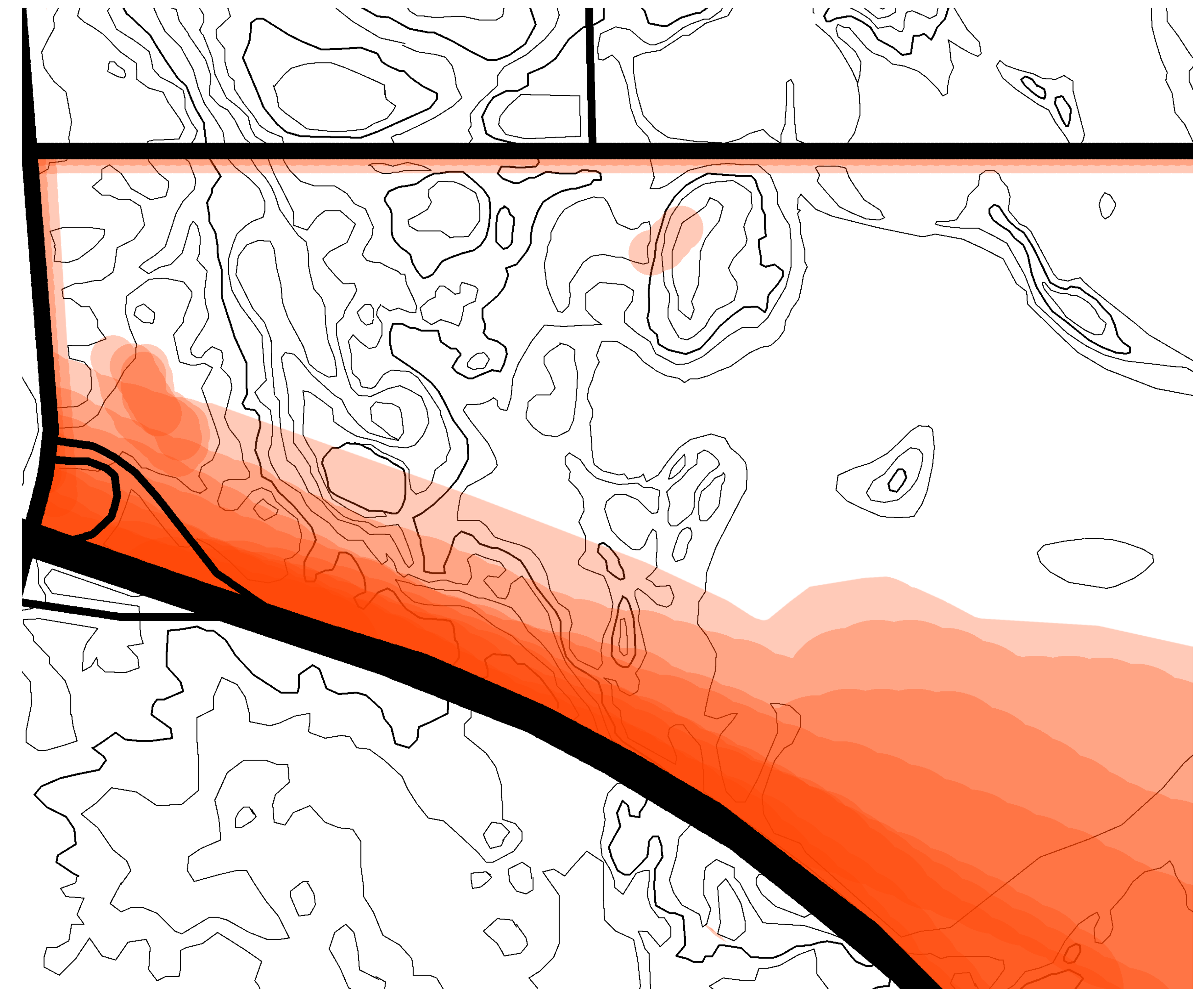
Wind Patterns

Sheltered from Southerly Winds

Moderately affected by Northerly Winds

A topographic map showing noise contours. The map features a light green shaded area representing a site, a grey road, and a dashed orange line. The contours are light green and yellow, indicating noise levels. The text is overlaid on the map.

Noise
694 is not audible at exact site location.
The only possible distraction would come from Gramsie Road





CASE STUDIES

Connecting Space

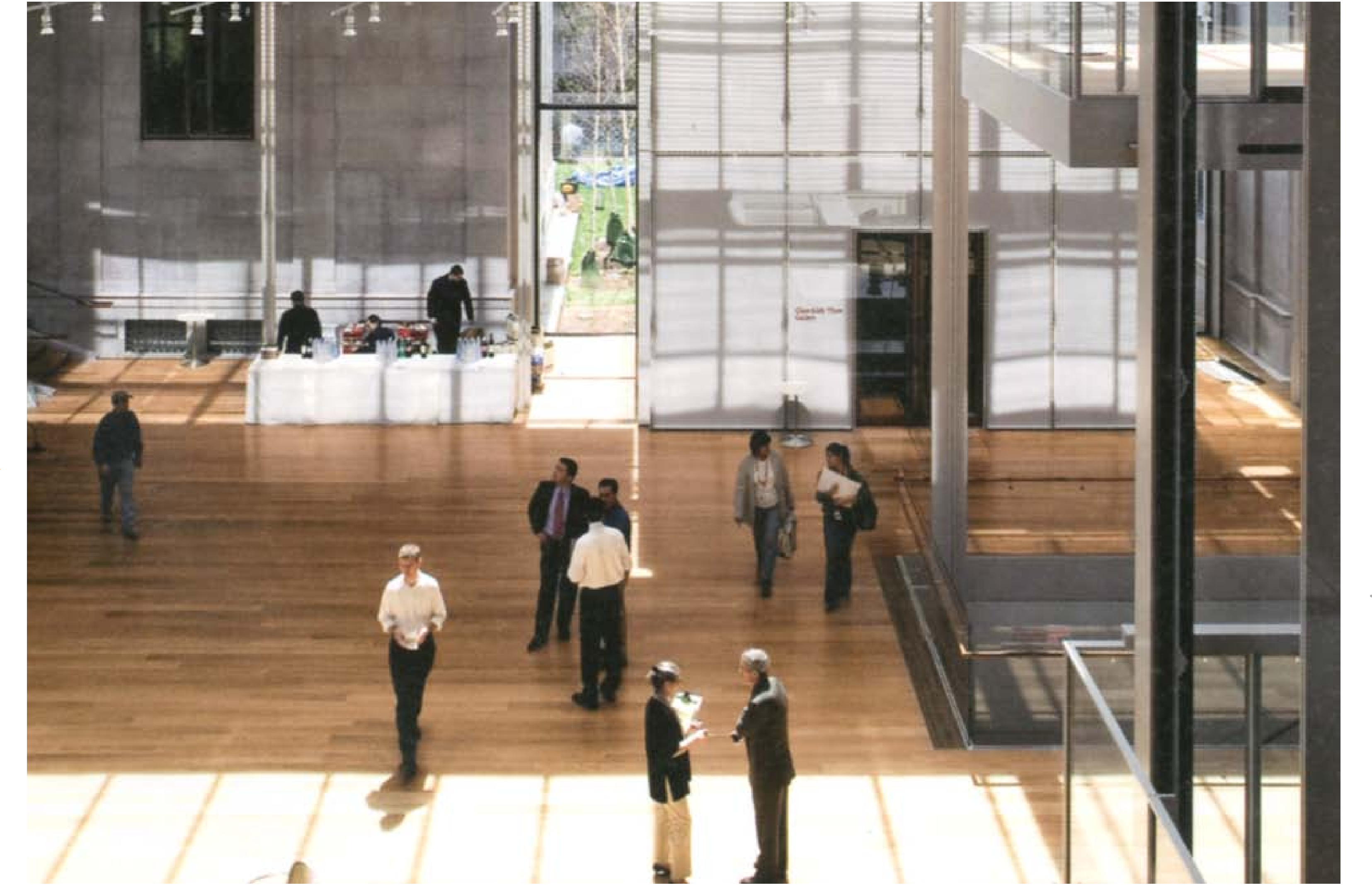
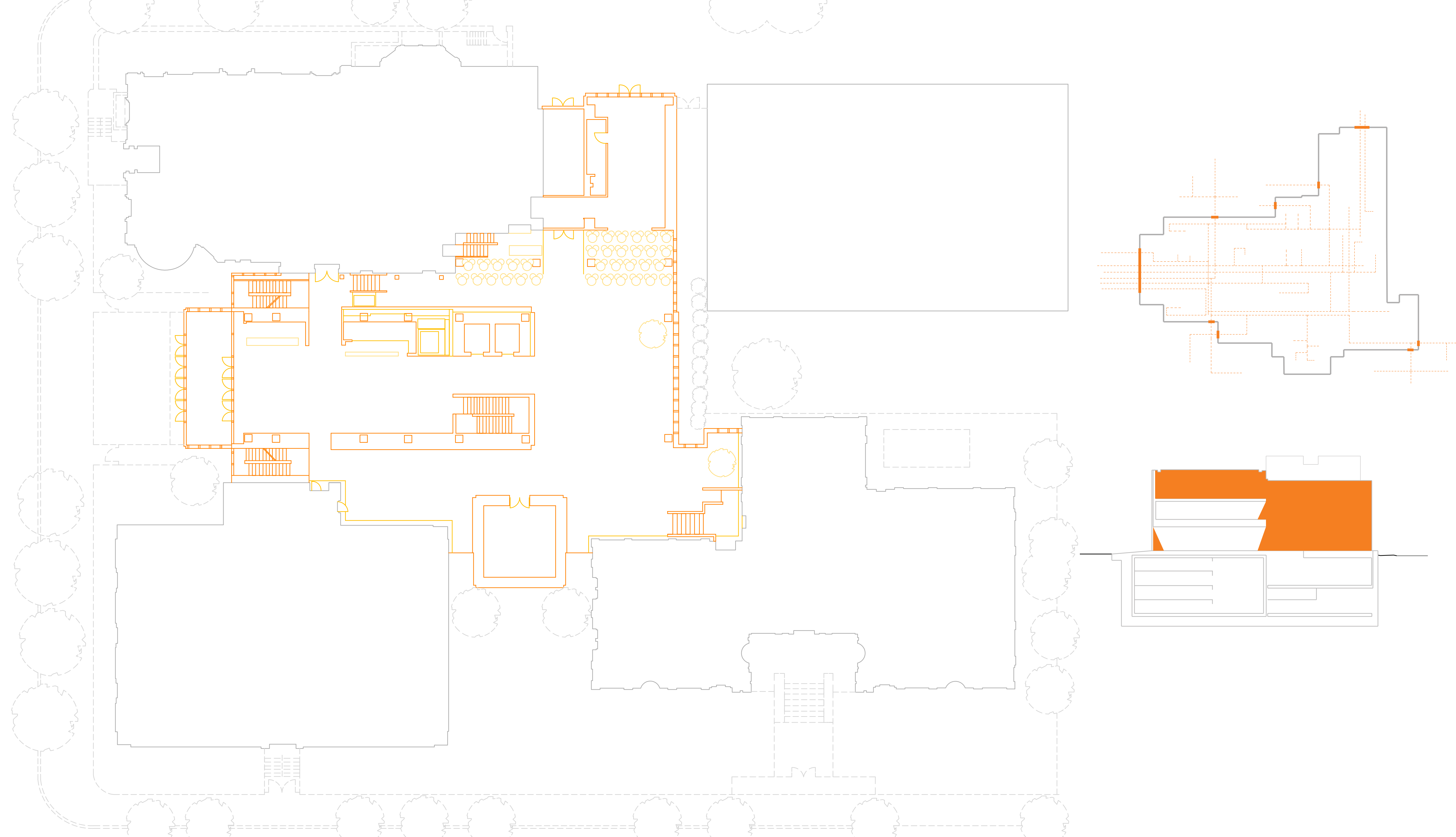


Community Residential

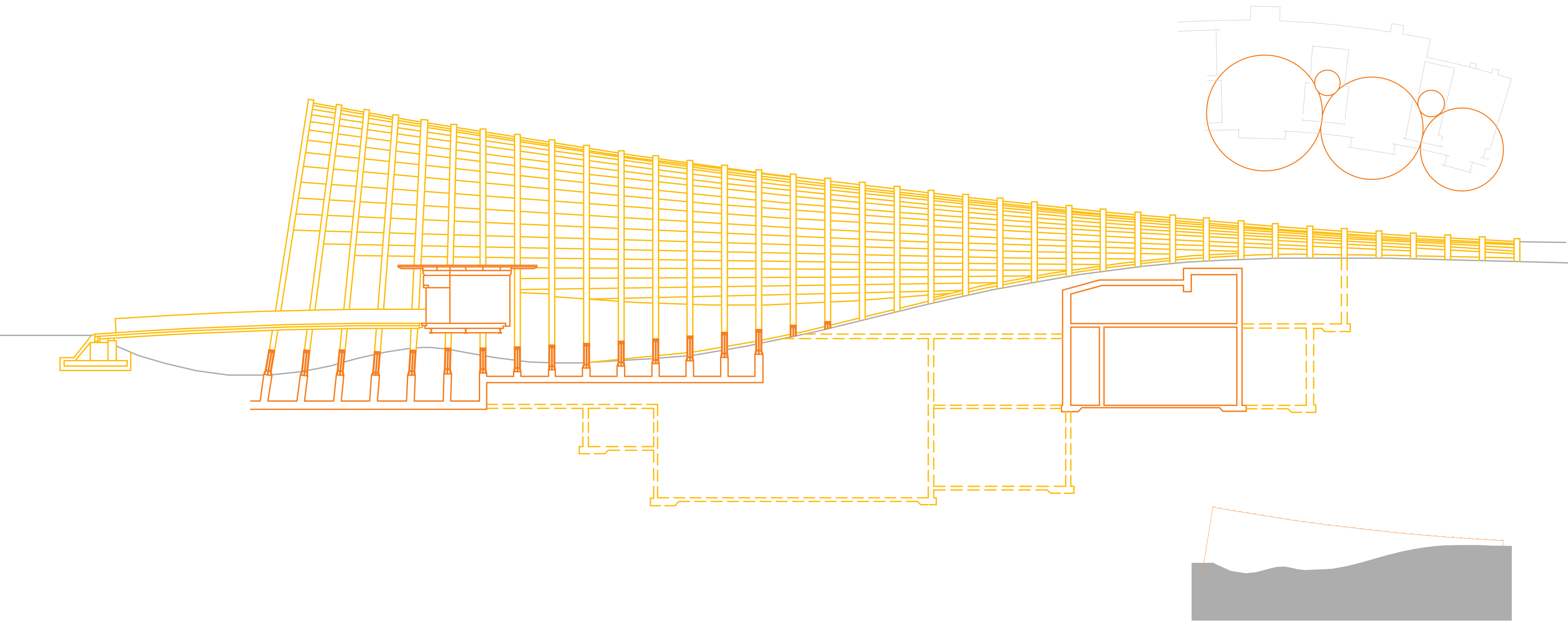


Performance Space

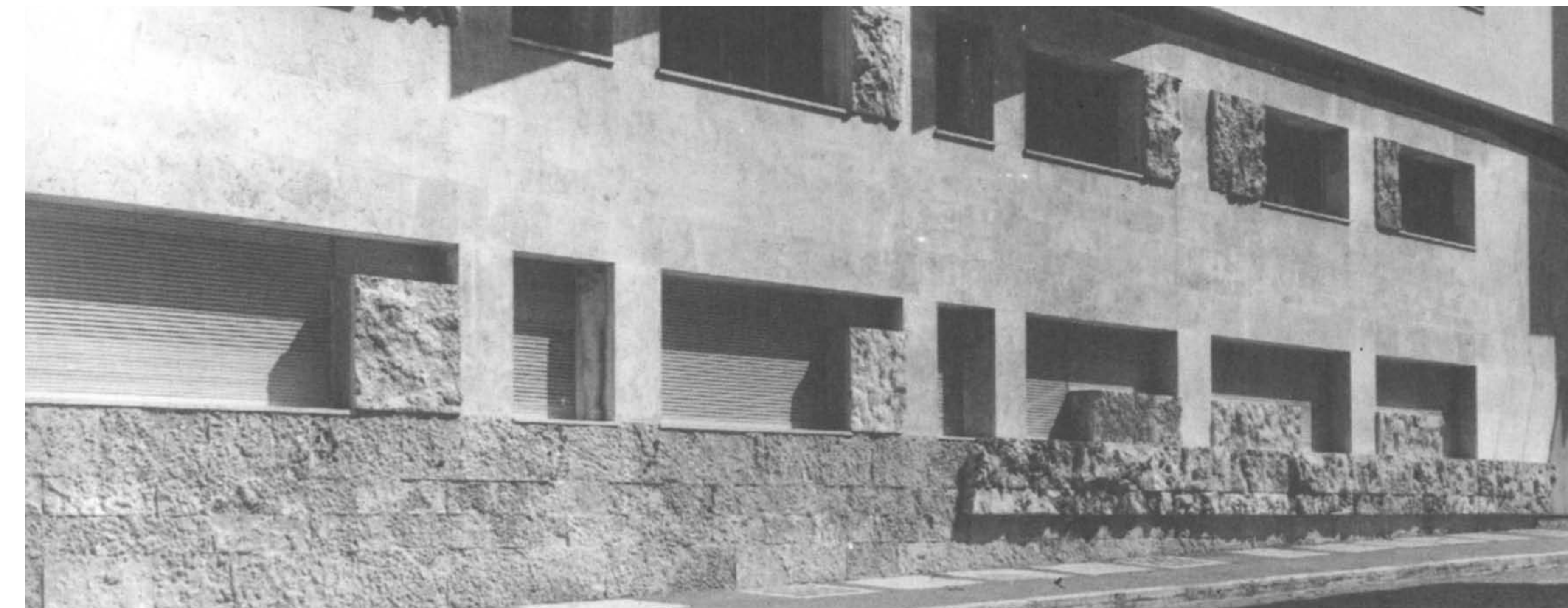
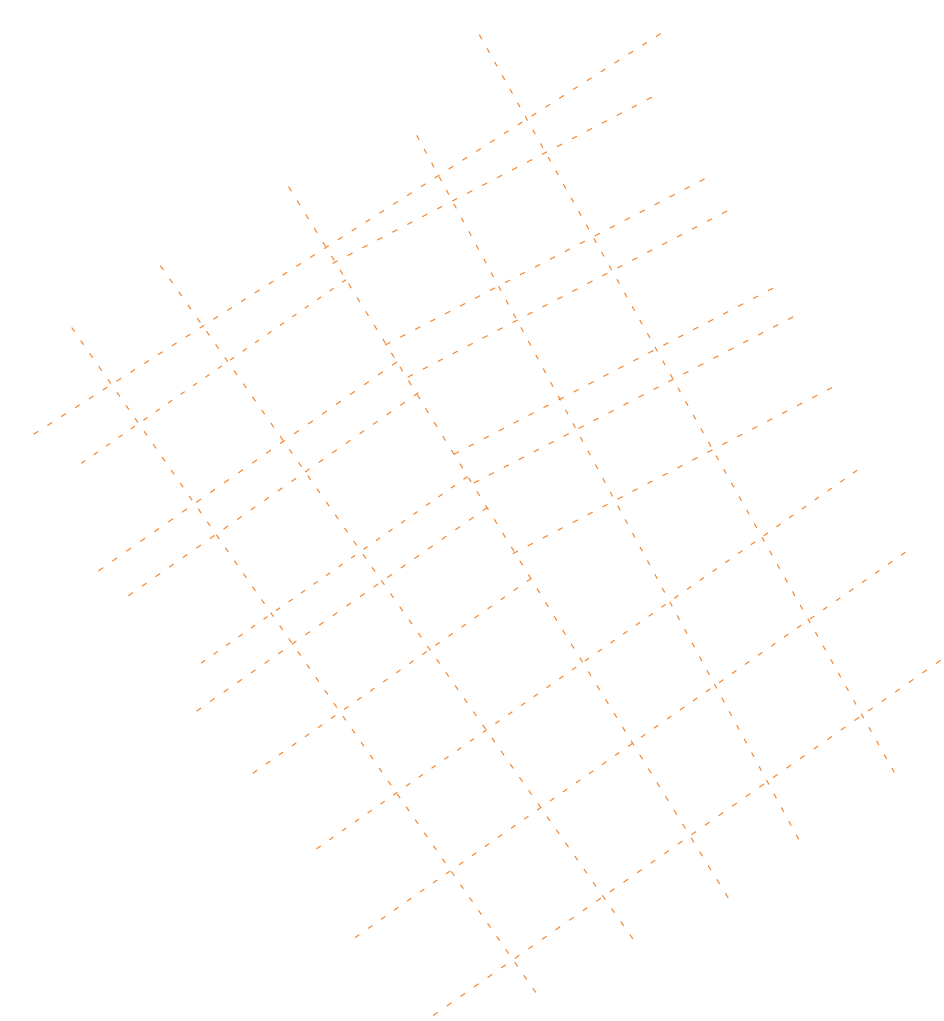
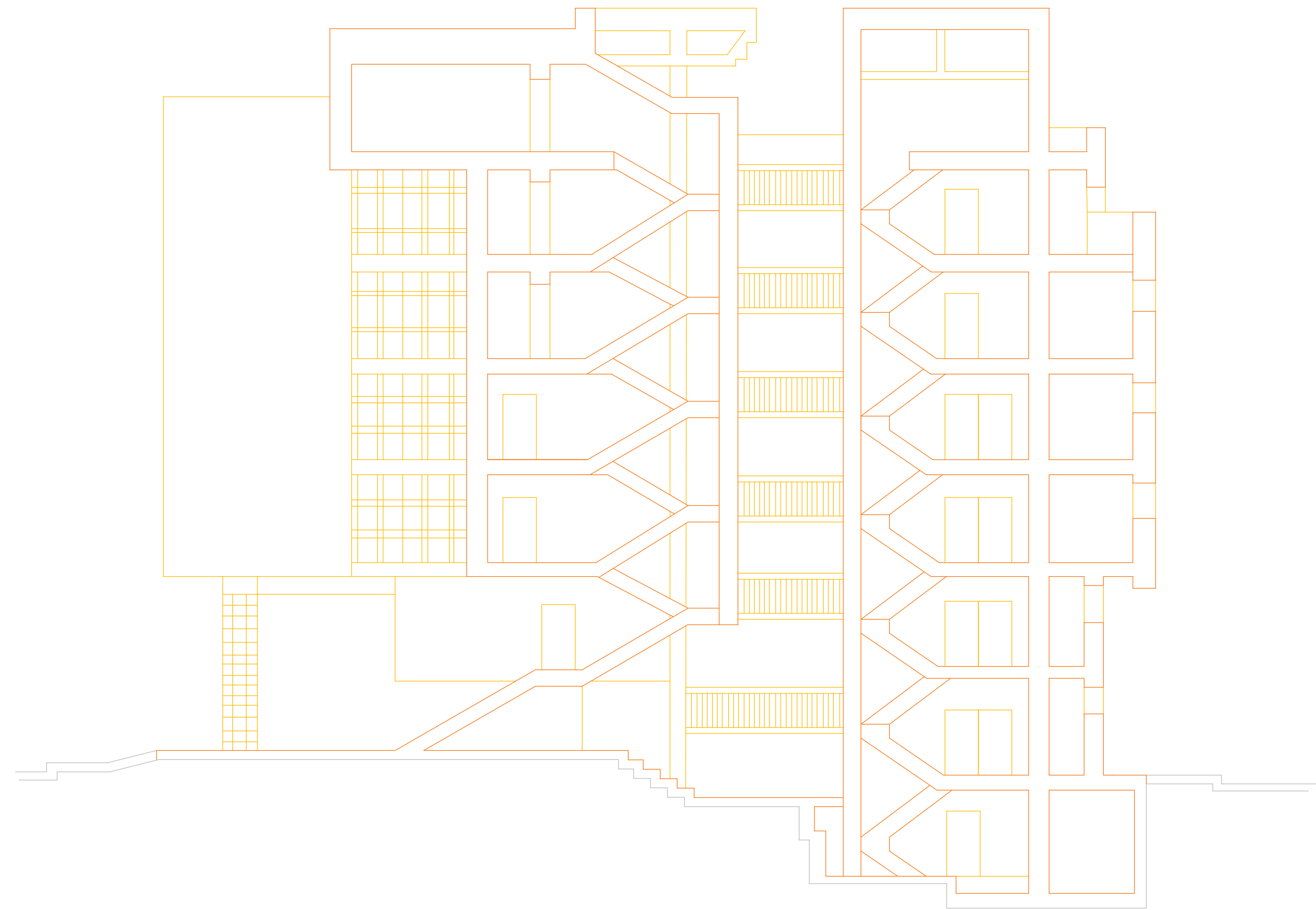




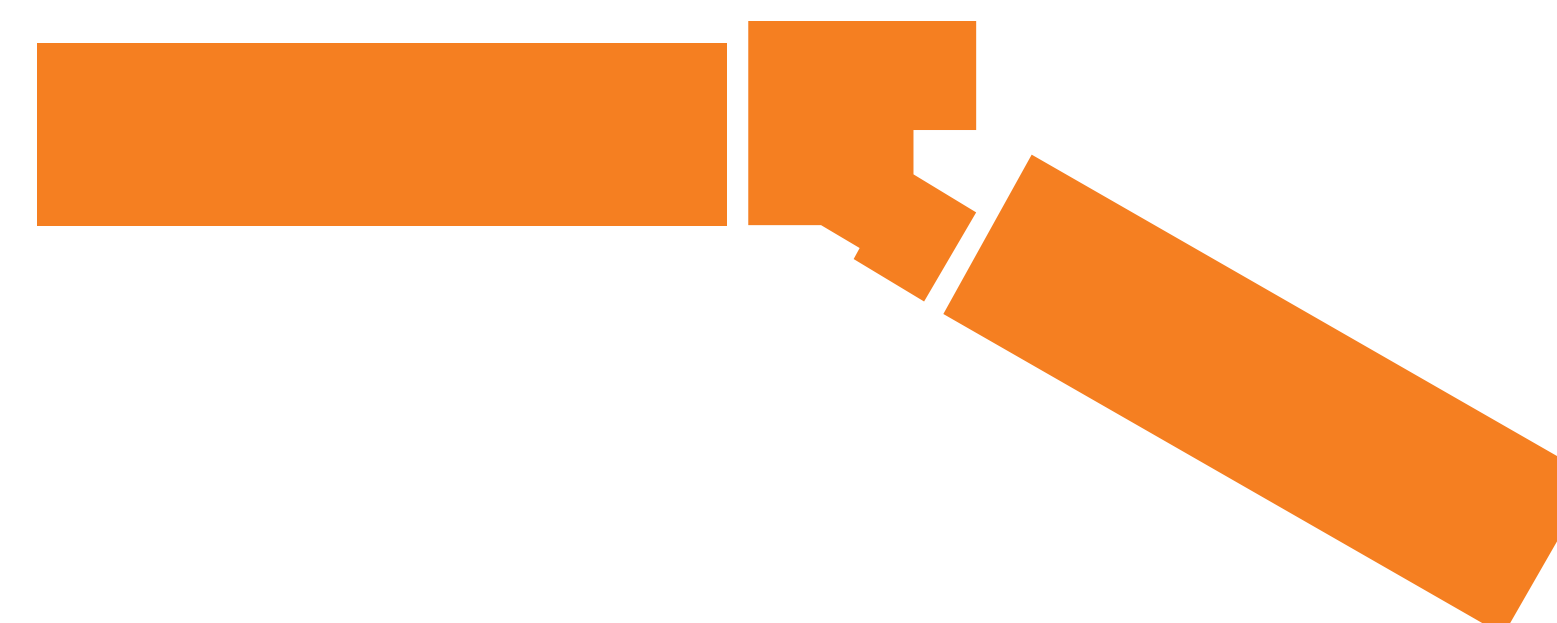
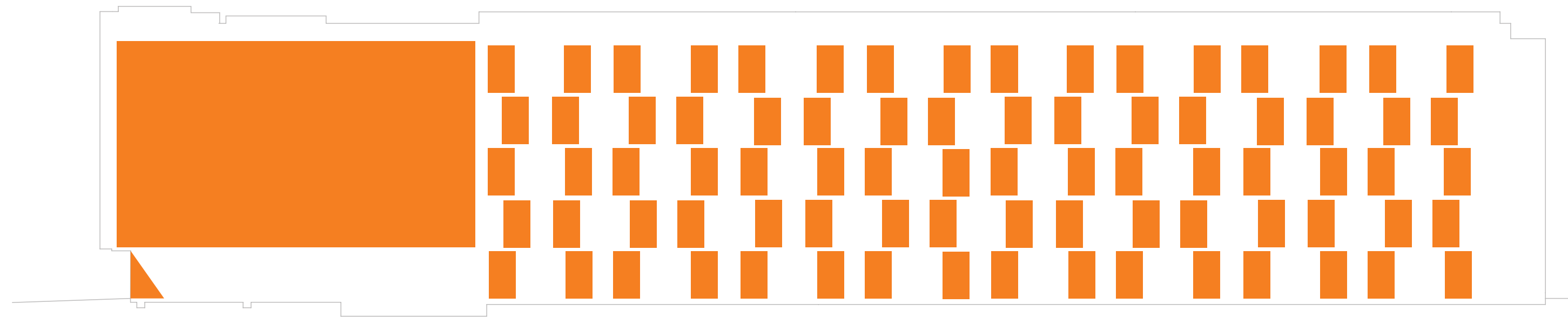
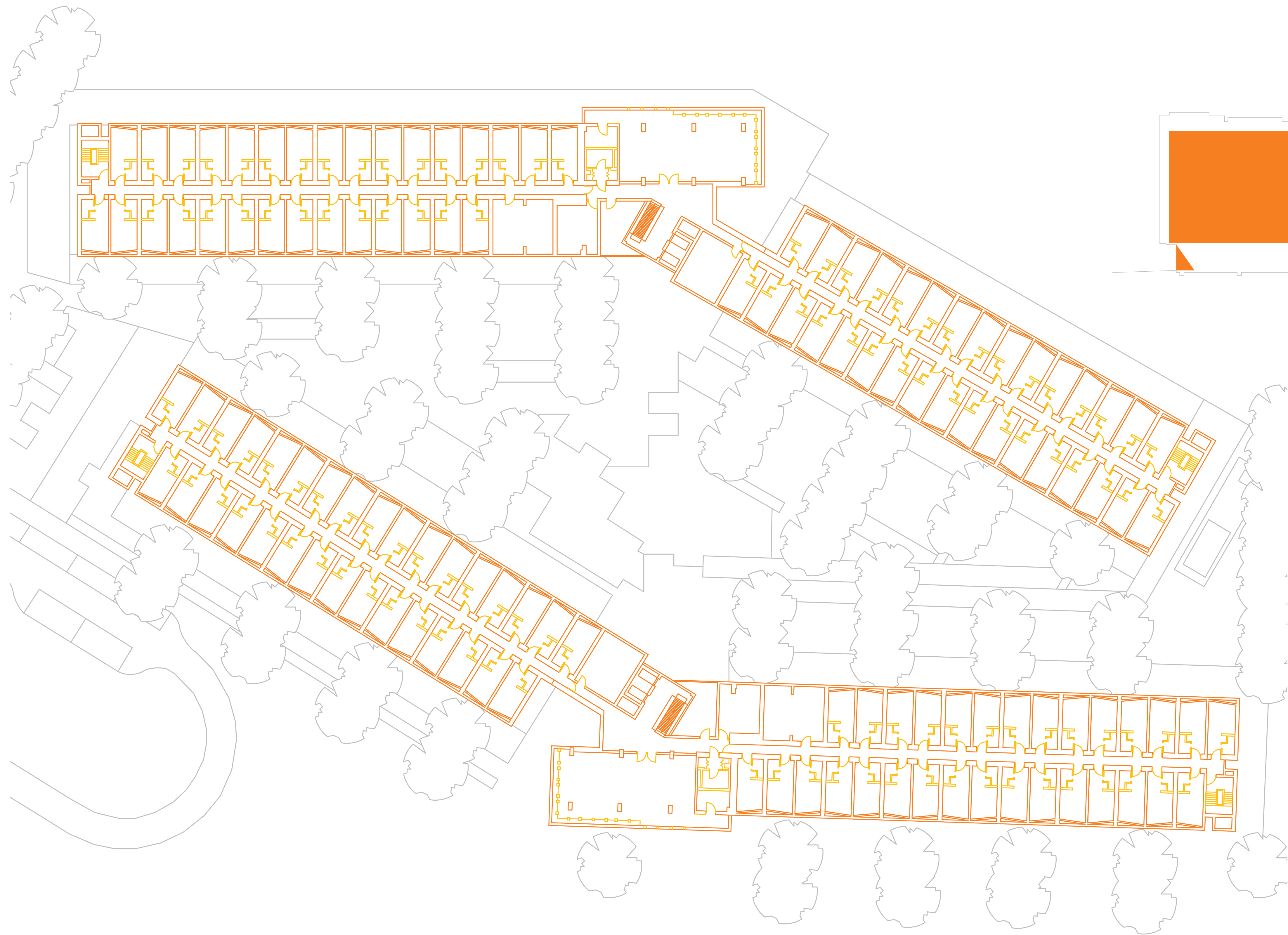
Morgan Library Expansion
2000-2006
Renzo Piano Building Workshop



Zentrum Paul Klee
1999-2005
Renzo Piano Building Workshop



Il Girasole
2000-2006
Luigi Moretti

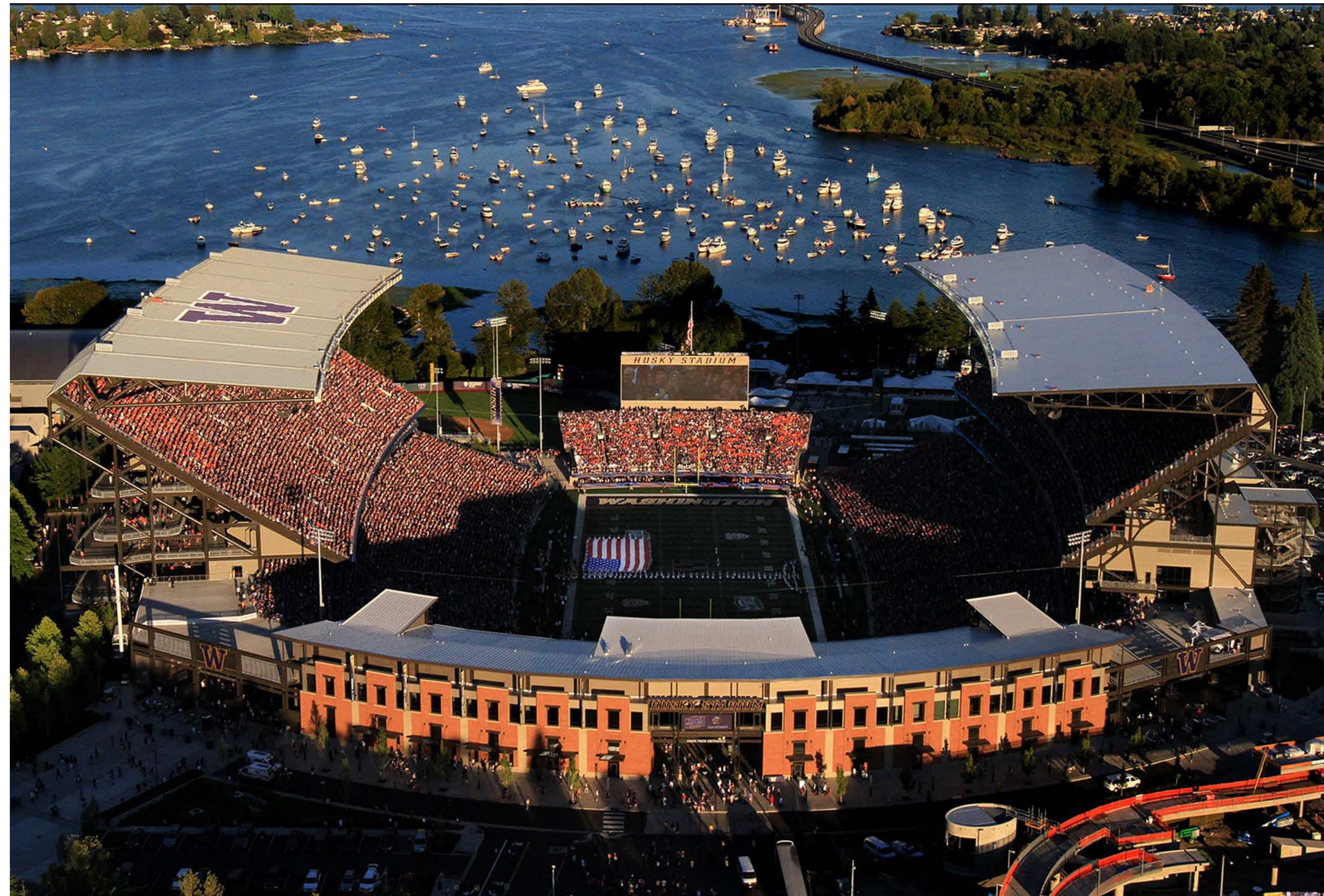


Monash University Student Housing
2011
BVN Donovan Hill



TCF Bank Stadium
2006-2009
Populous

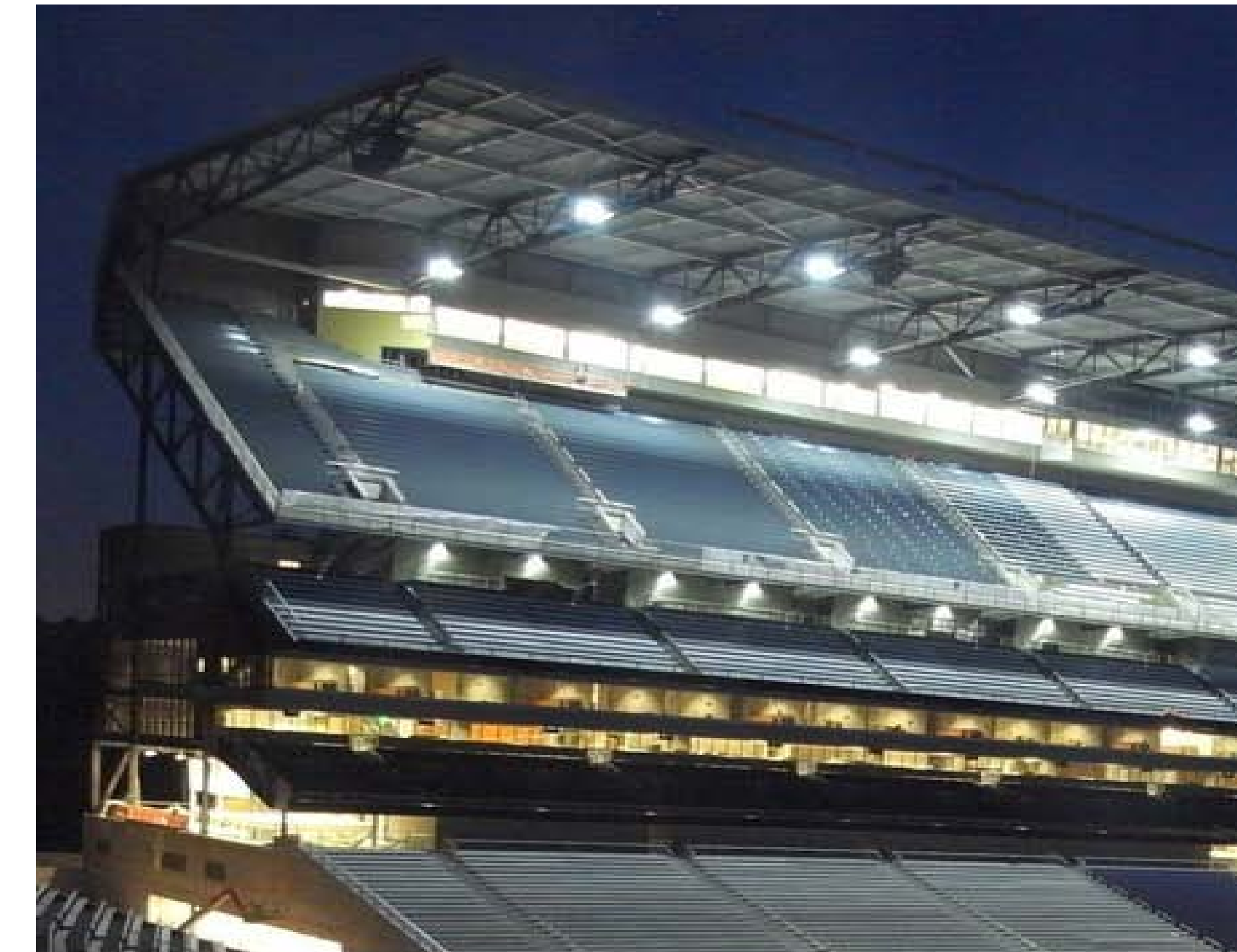




Husky Stadium

1920-2013

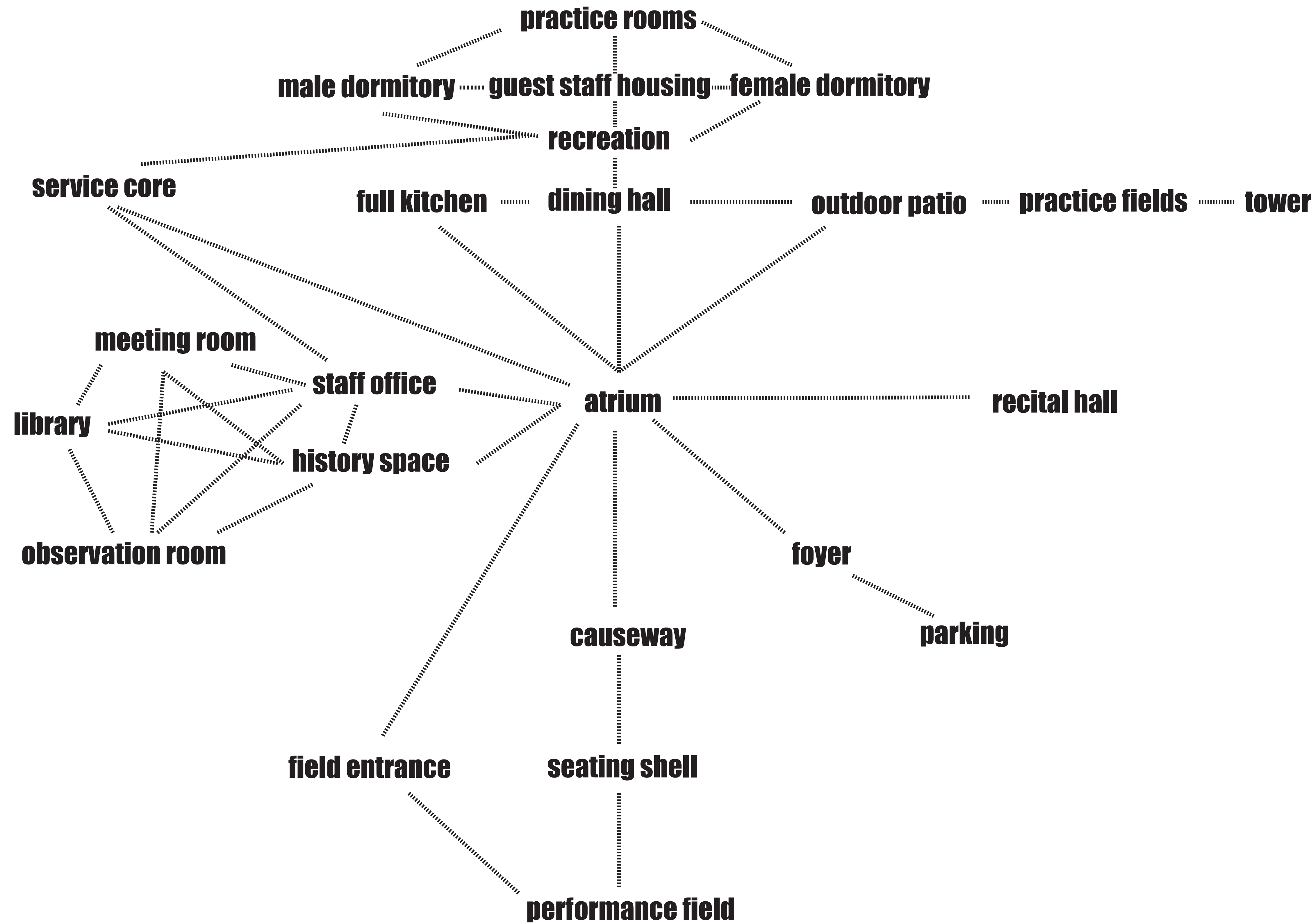
Bebb and Gould/ 360 Architecture (recent renovation)



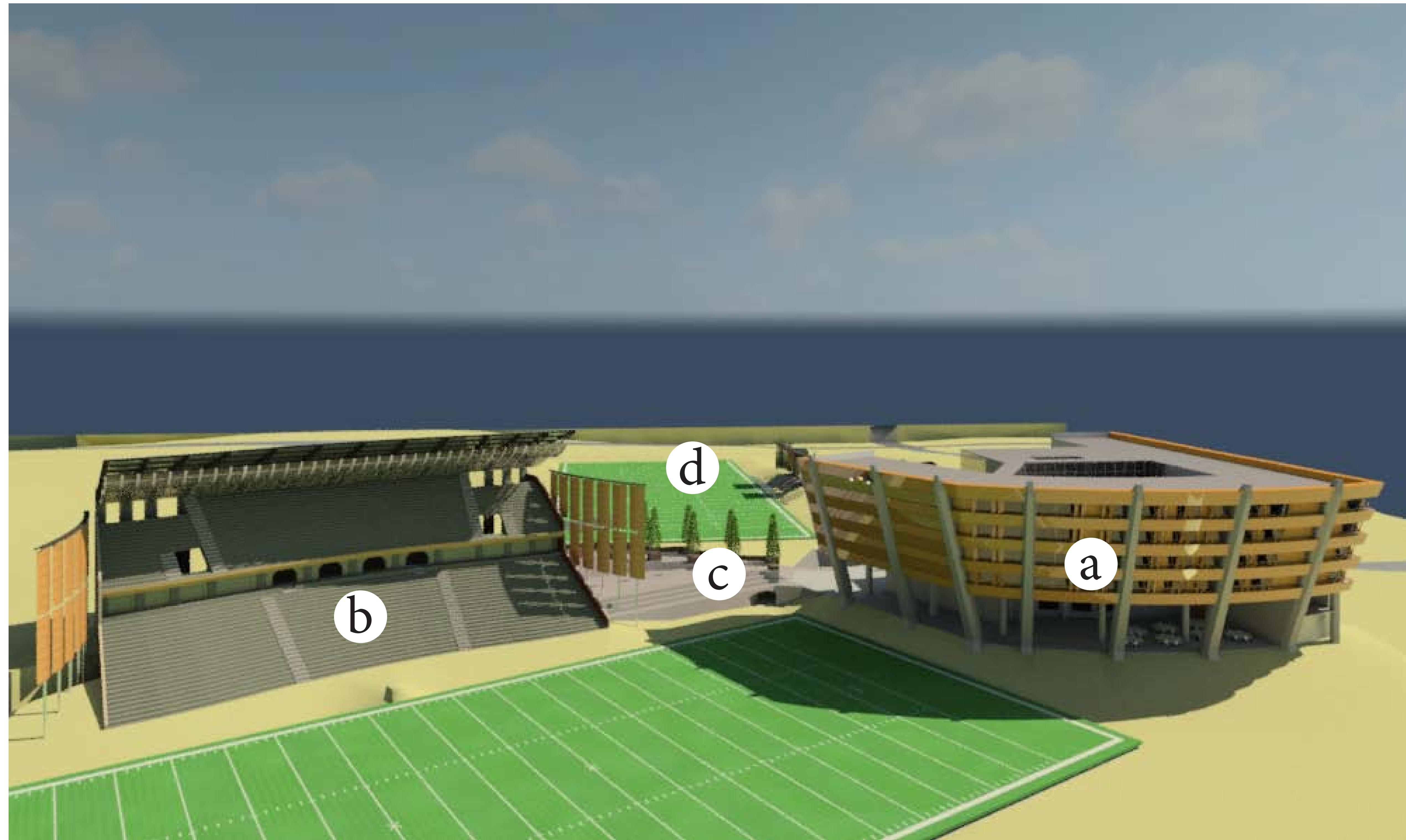


Schwarzenbert Thingplatz
1935-1938
Erzgebirge (architect)



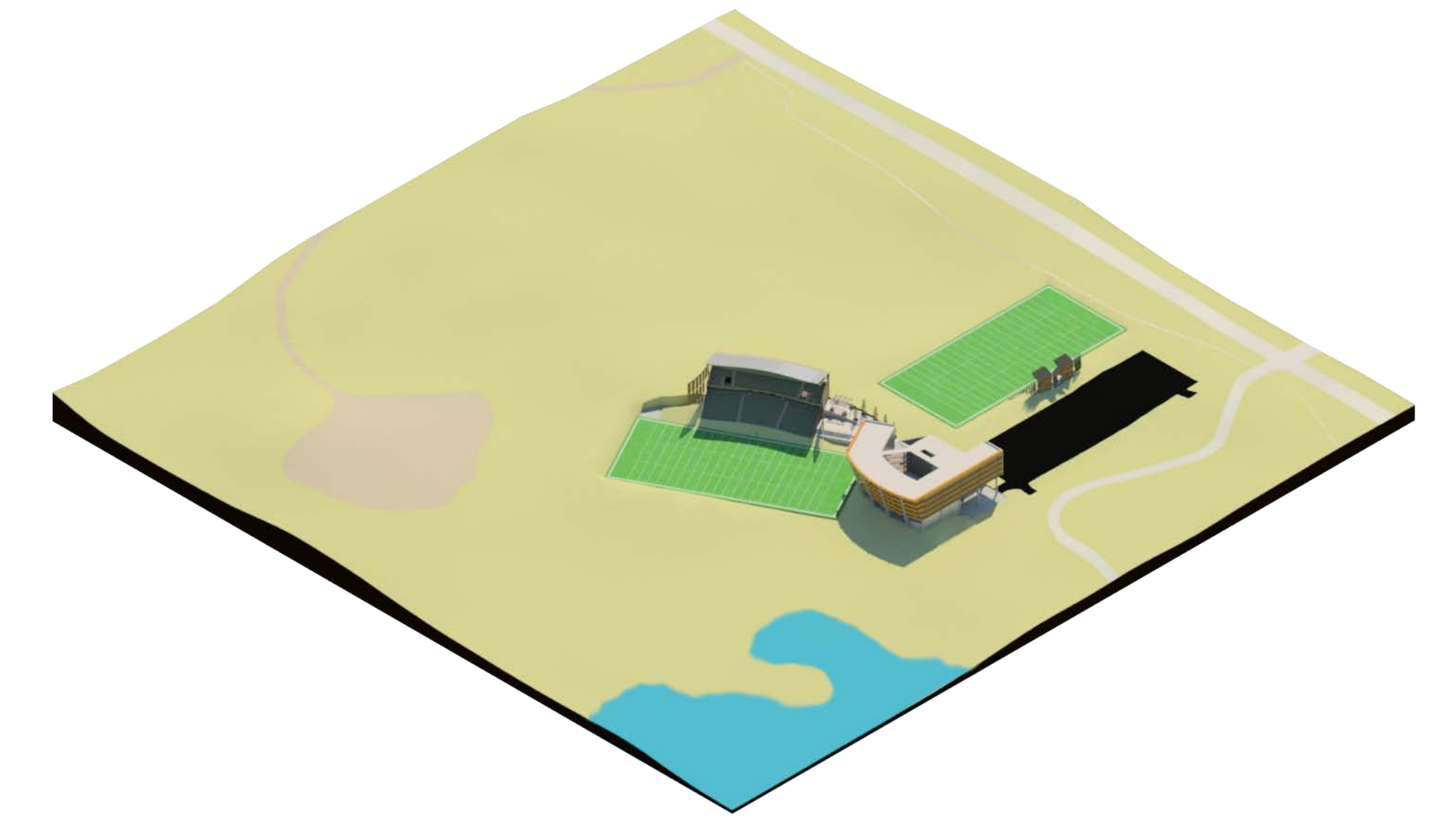


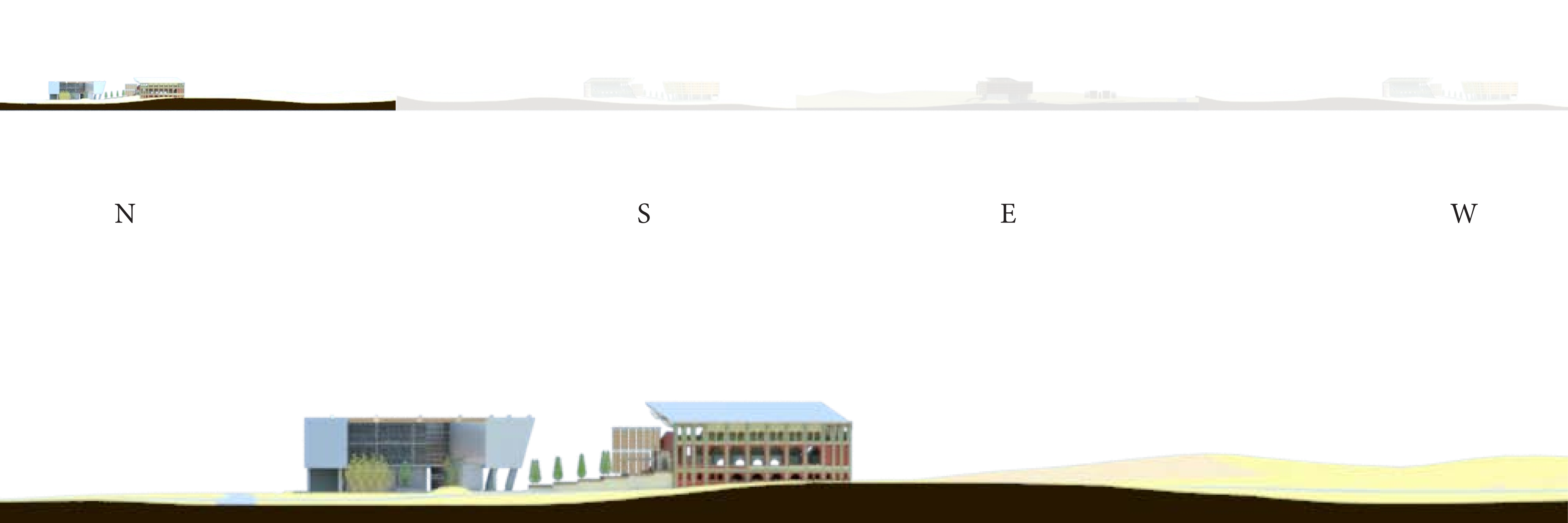
	Total SF	Dimensions	%Error	Indv. SF	#Units
Performance Field	57600	360x160	0		1
Seating Shell	28000		15	3.5	8000
Recital Hall	4500		5	10	450
Field Entrance	1600	10x80	10	800	2
Practice Fields	115200	360x160	0		2
Practice Rooms	1120	6x7	0	35	32
Tower	30	5x6	0		1
Male Dormitory	60000		10	240	250
Female Dormitory	60000		10	240	250
Guest Staff Housing	2880		10	240	12
Recreation	1500		30	1500	1
Dining Hall	10000		15	20	500
Full Kitchen	400		35		1
Outdoor Patio	1000		10		1
Atrium	10000		25		1
Foyer	3000		10		1
History Space	1500		5		1
Circulation					
Library	240		0		1
Staff Office	2000		10	100	20
Meeting Room	480		5		1
Observation Room	480		5		1



MASTER PLAN

- a Dormitory/Office
- b Performance Venue
- c Connecting Space
- d Practice Field



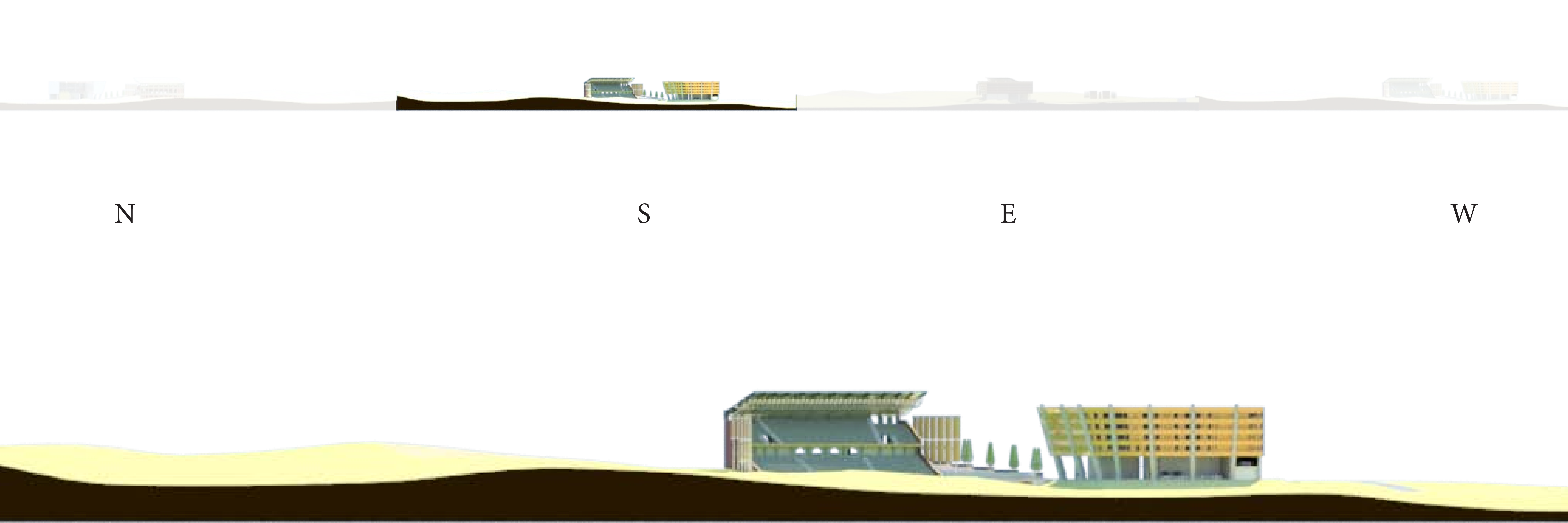


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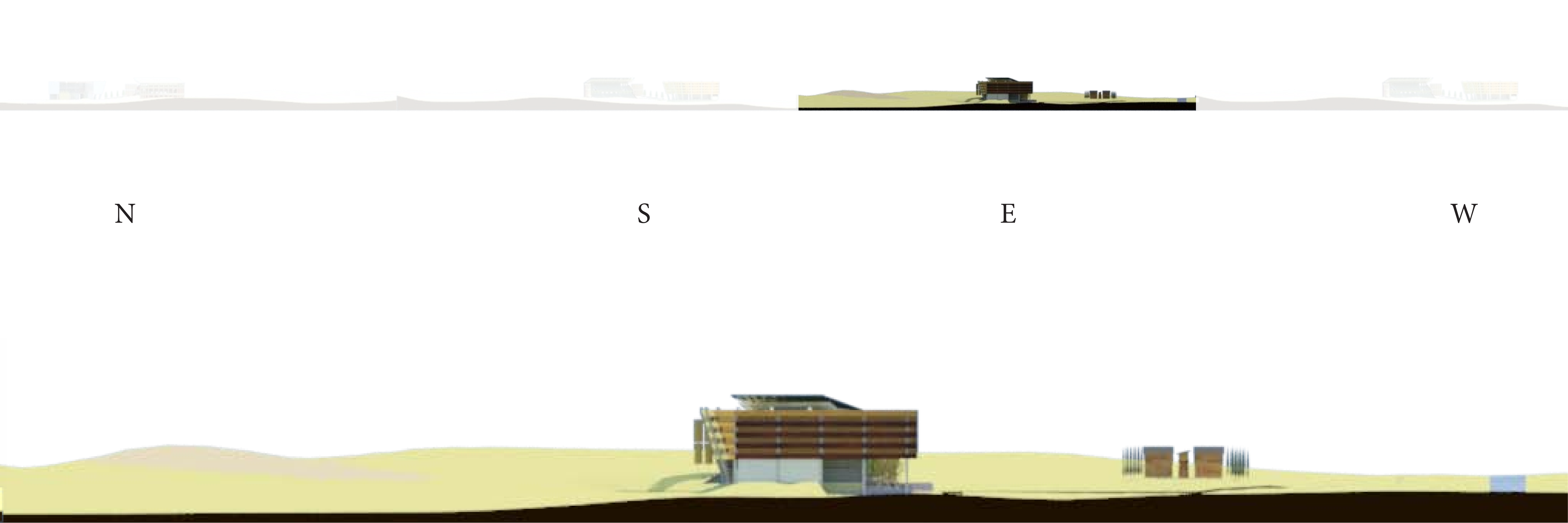


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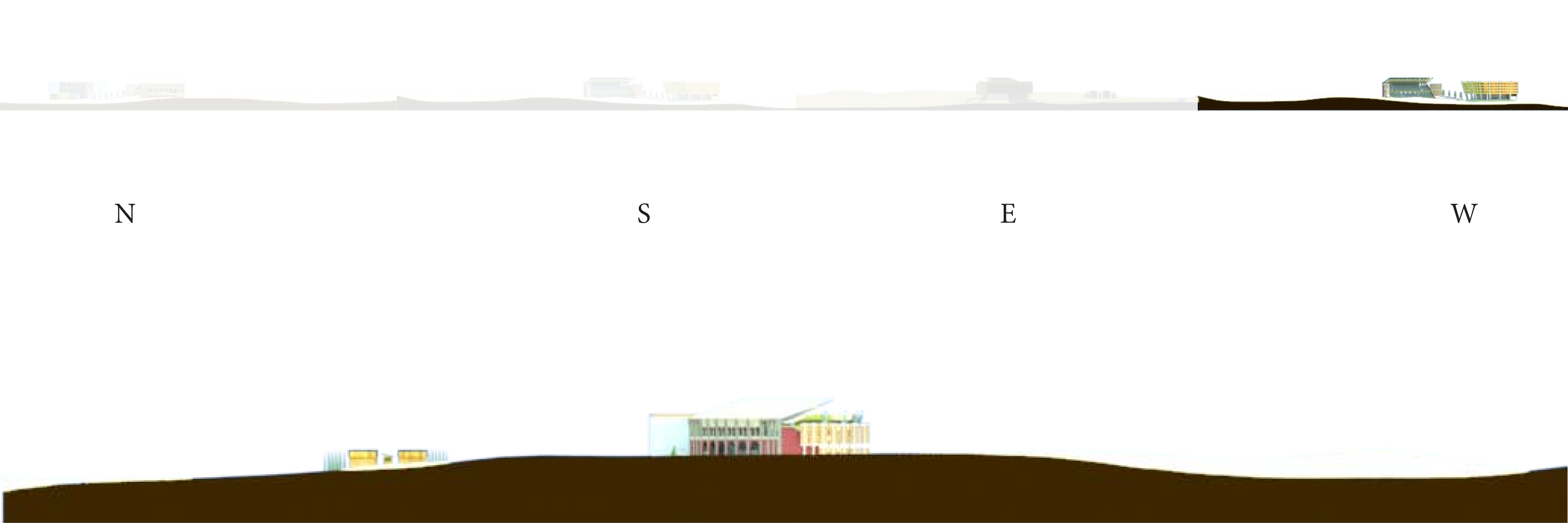


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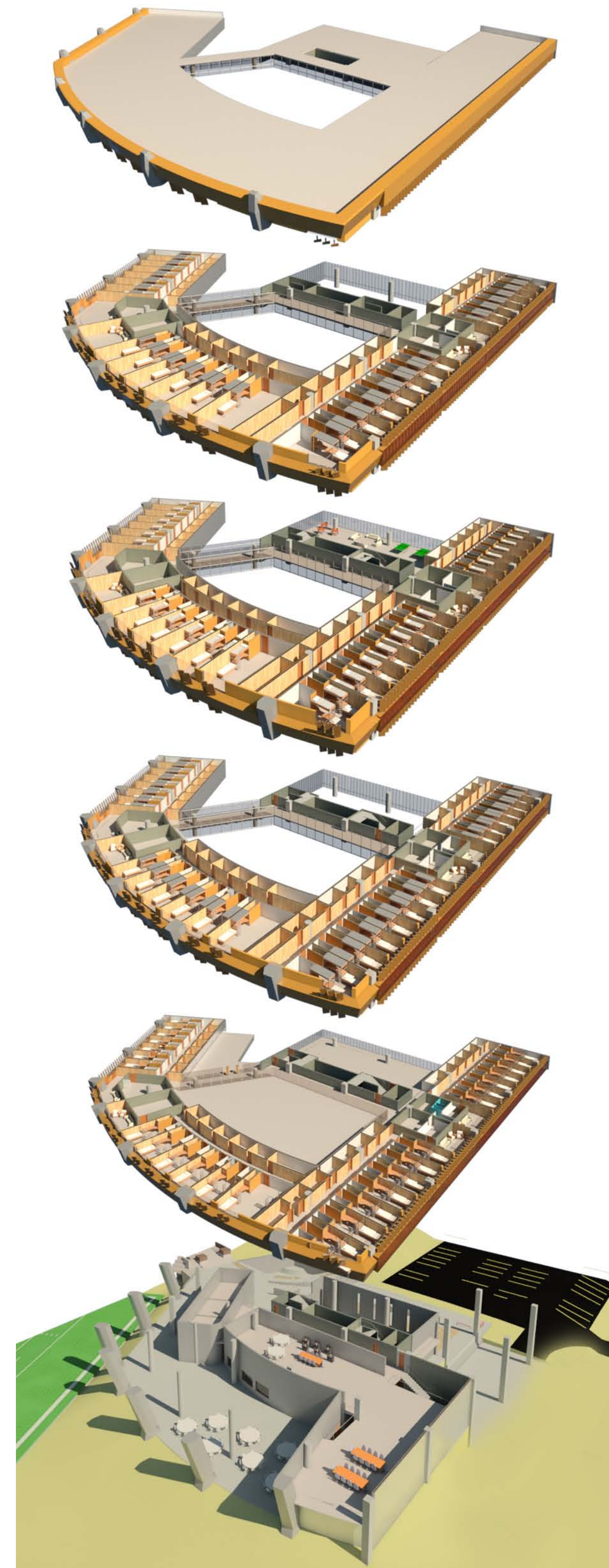
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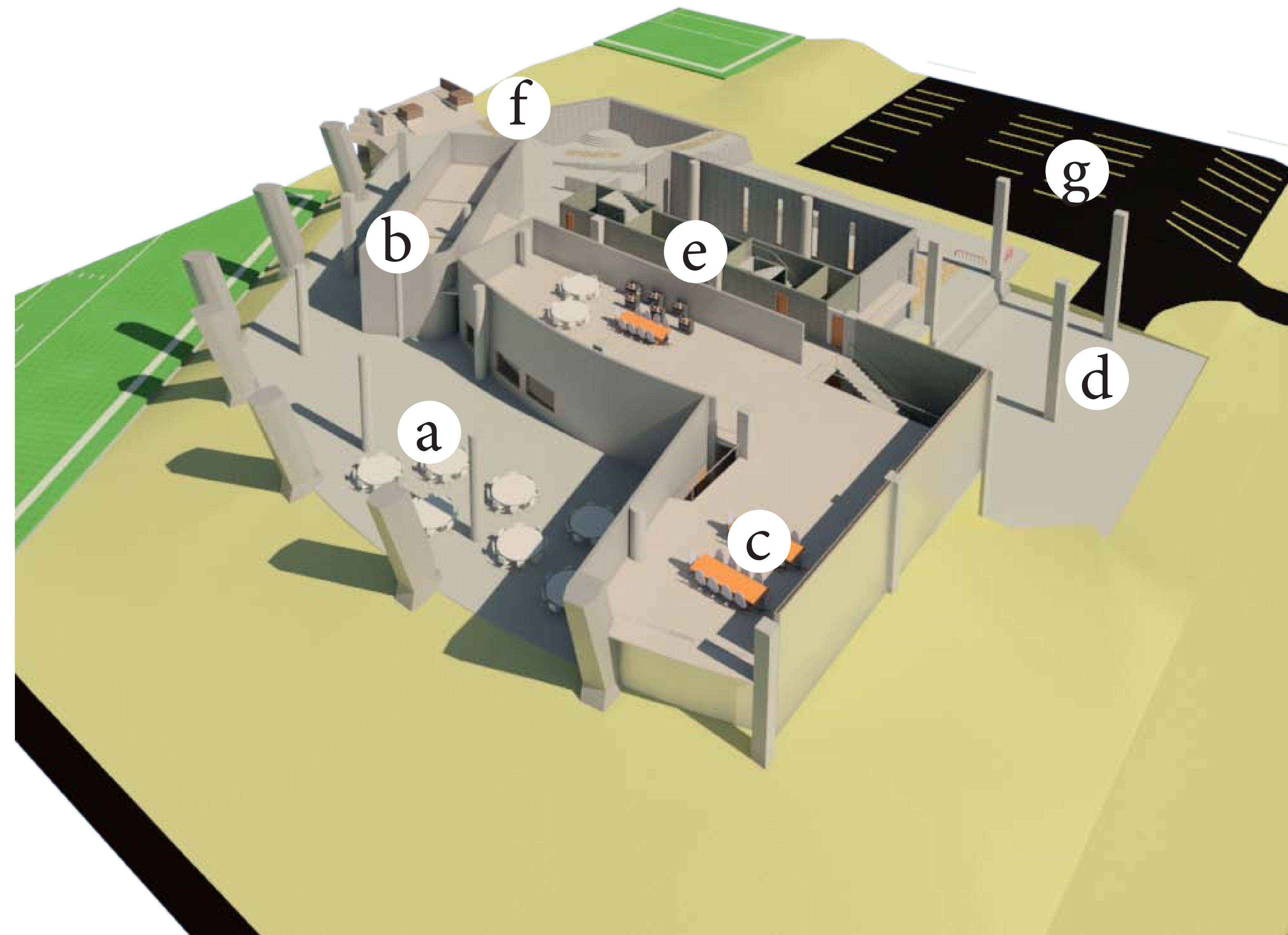
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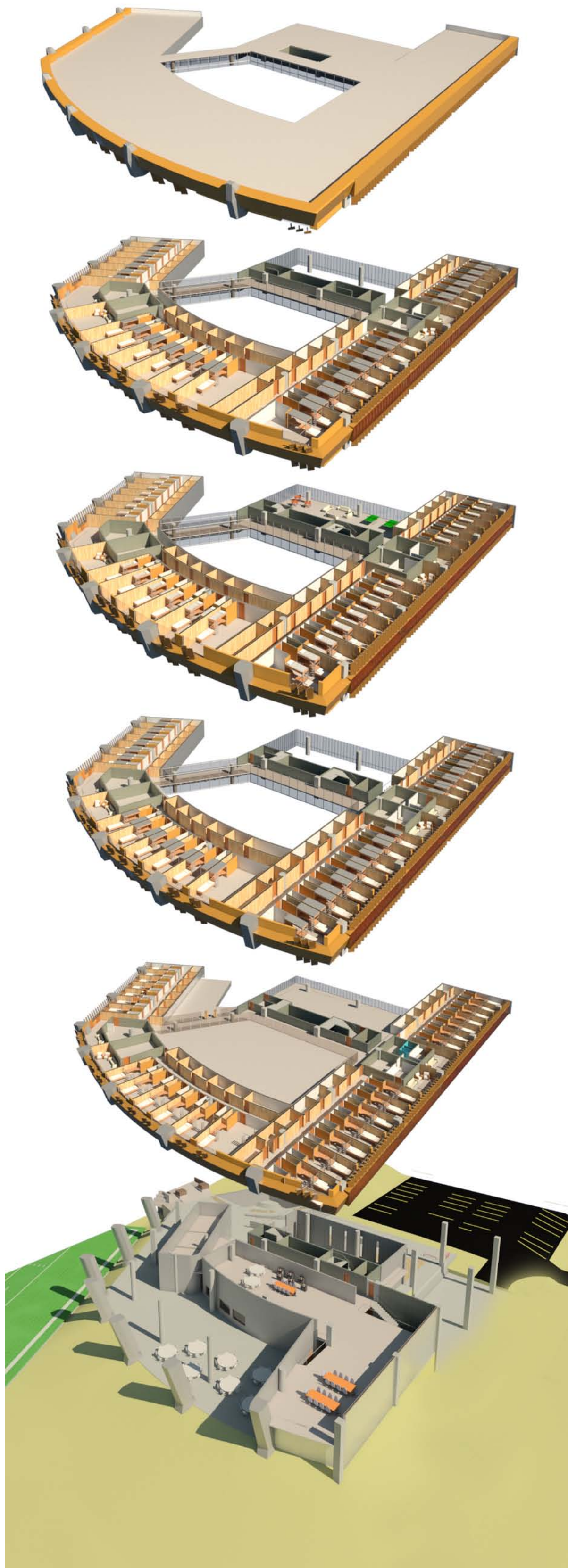
W

FIRST AND SECOND FLOOR



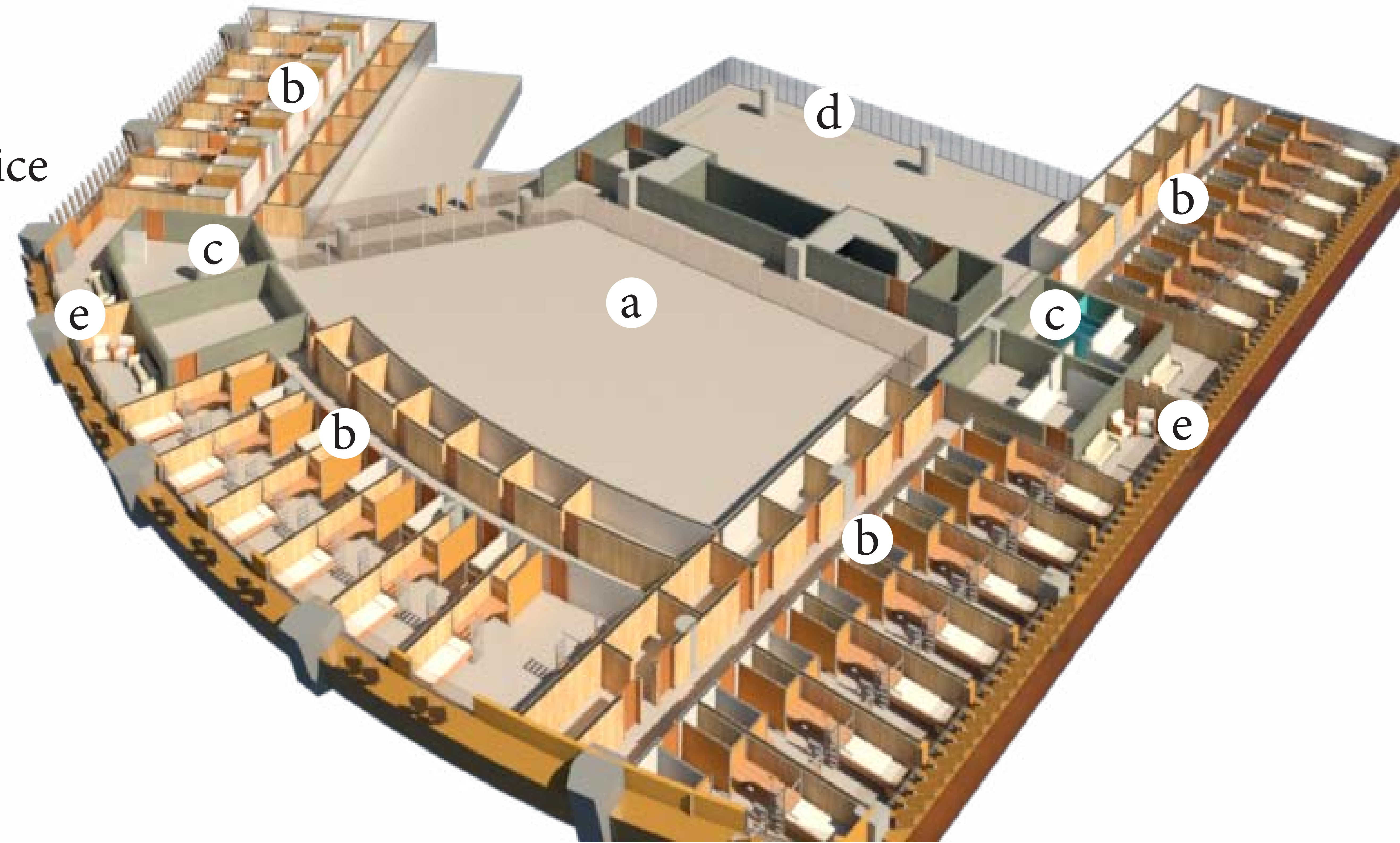
- a Cafeteria with Kitchen
- b Restrooms
- c Office-Two Levels
- d Staff Parking
- e Building Core
- f Entrance/ Amphitheater
- g Parking

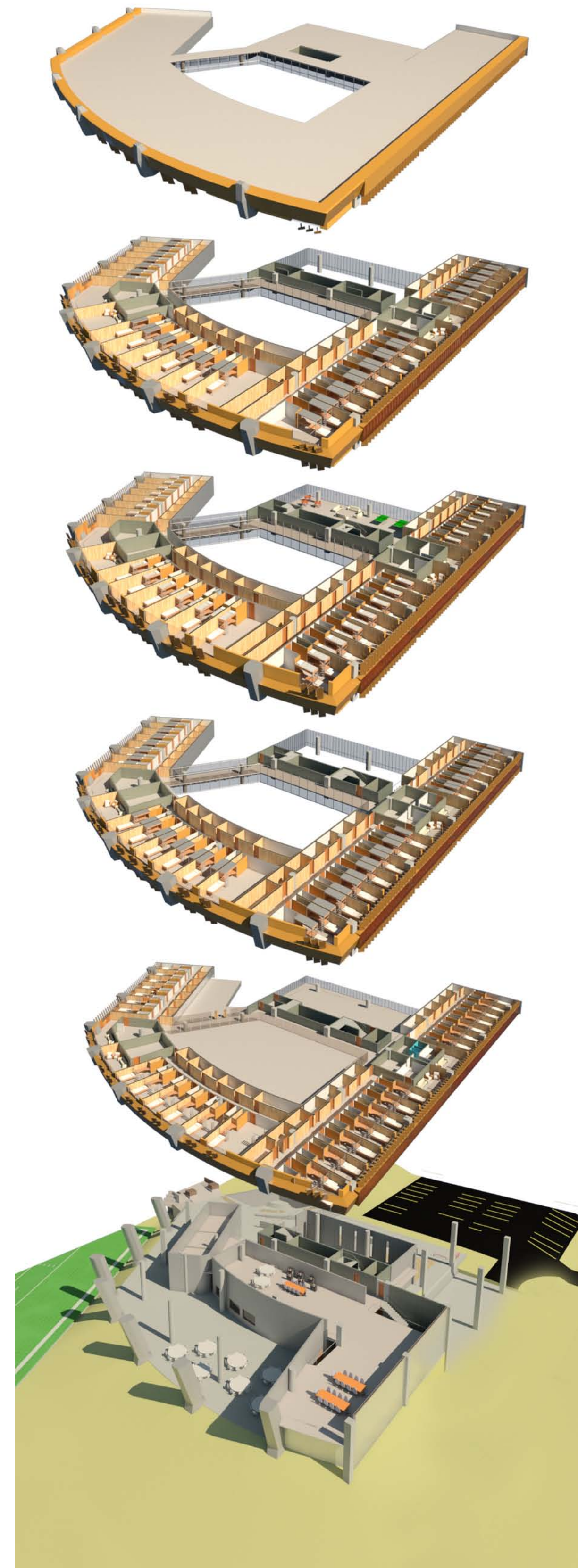




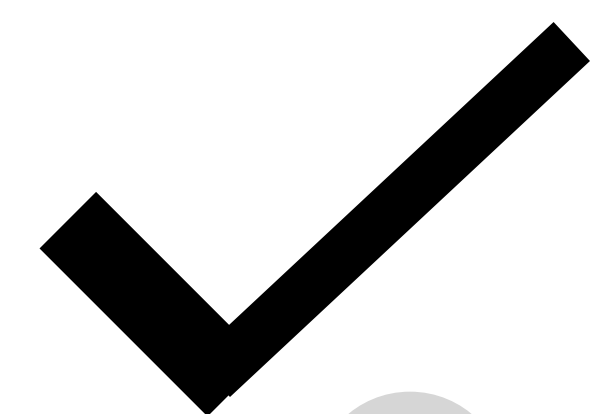
THIRD FLOOR

- a** Interior Atria/ Colorguard Practice
- b** Dormitory Pods
- c** Restrooms
- d** Communal Space
- e** Private Gathering Space

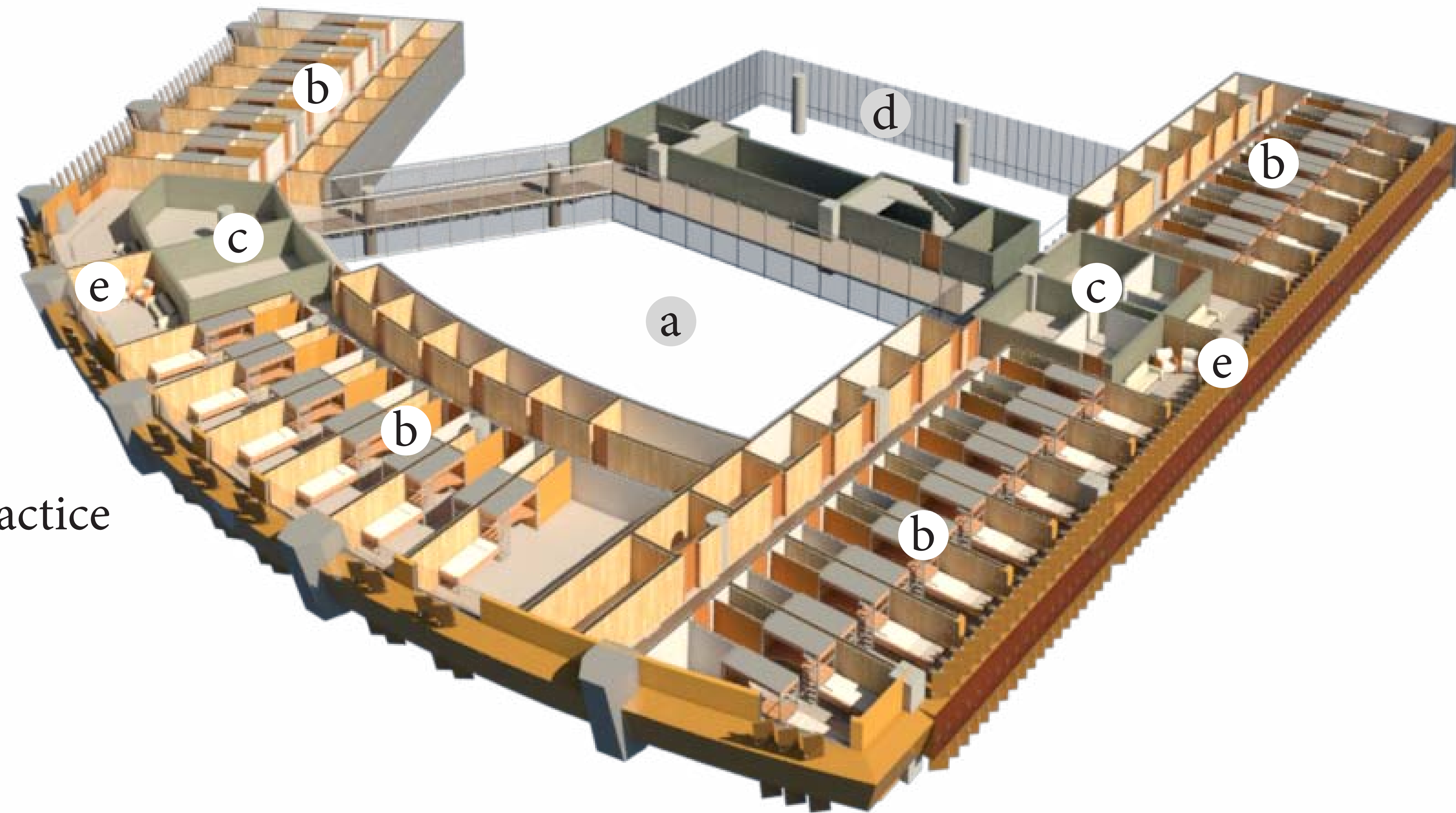


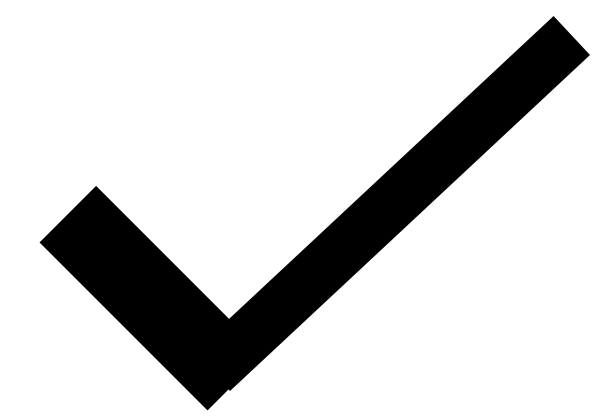
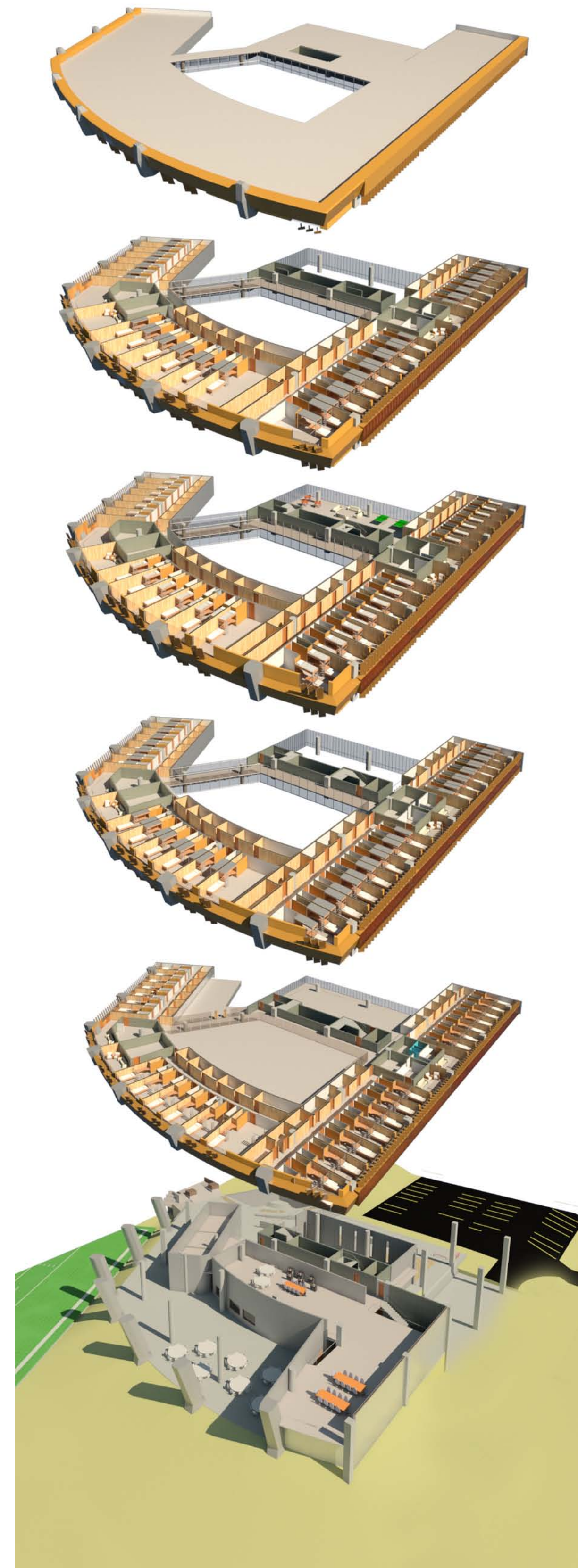


FOURTH FLOOR



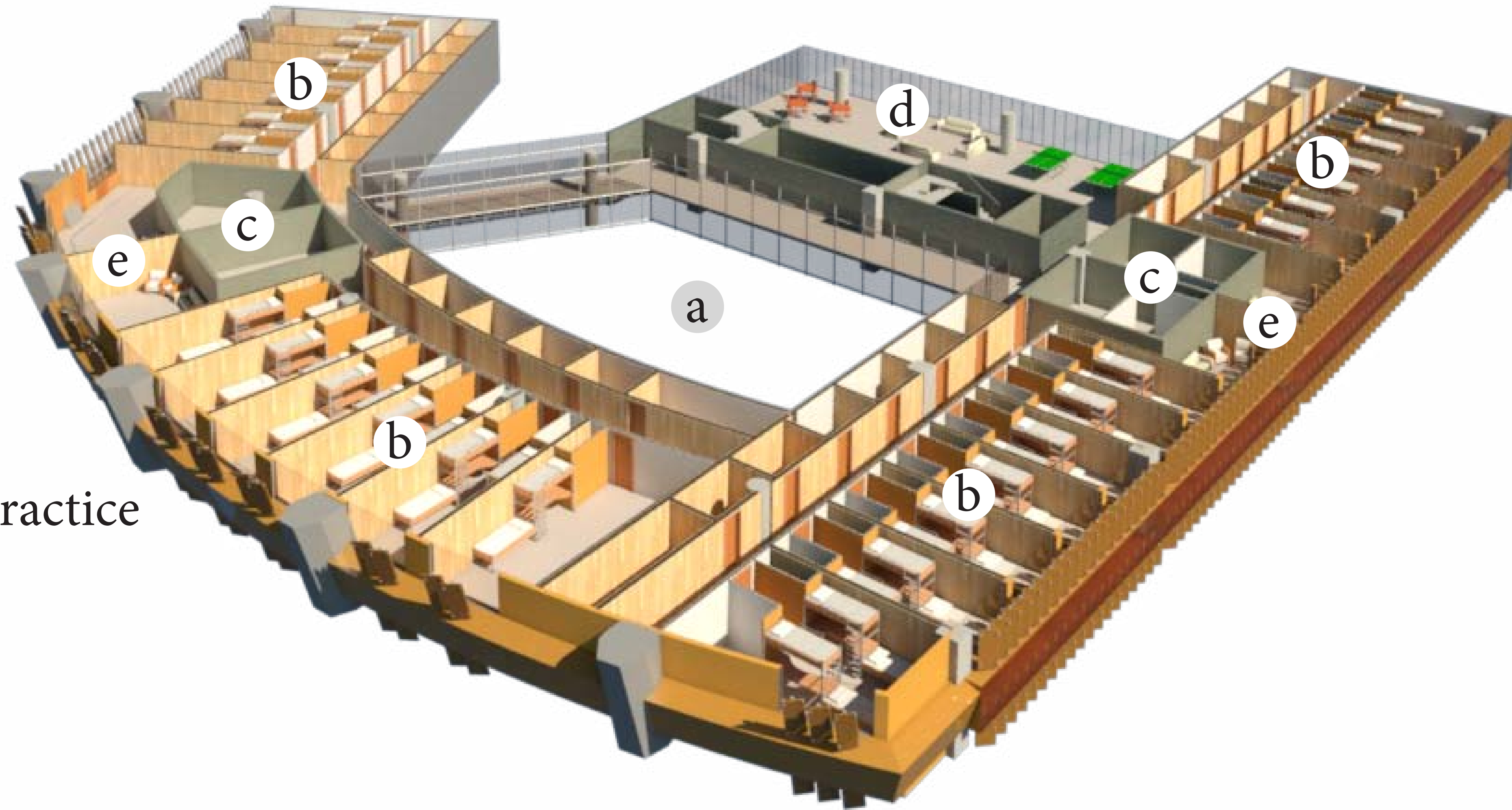
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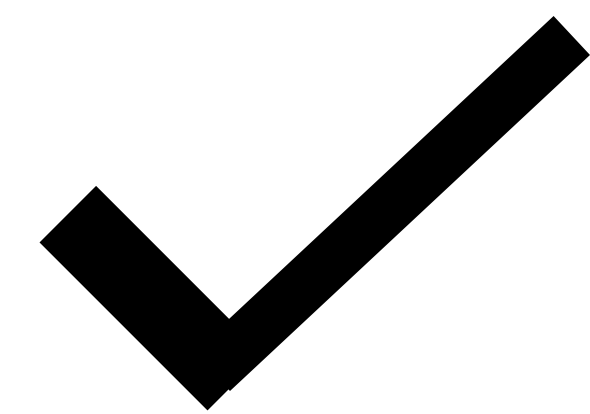
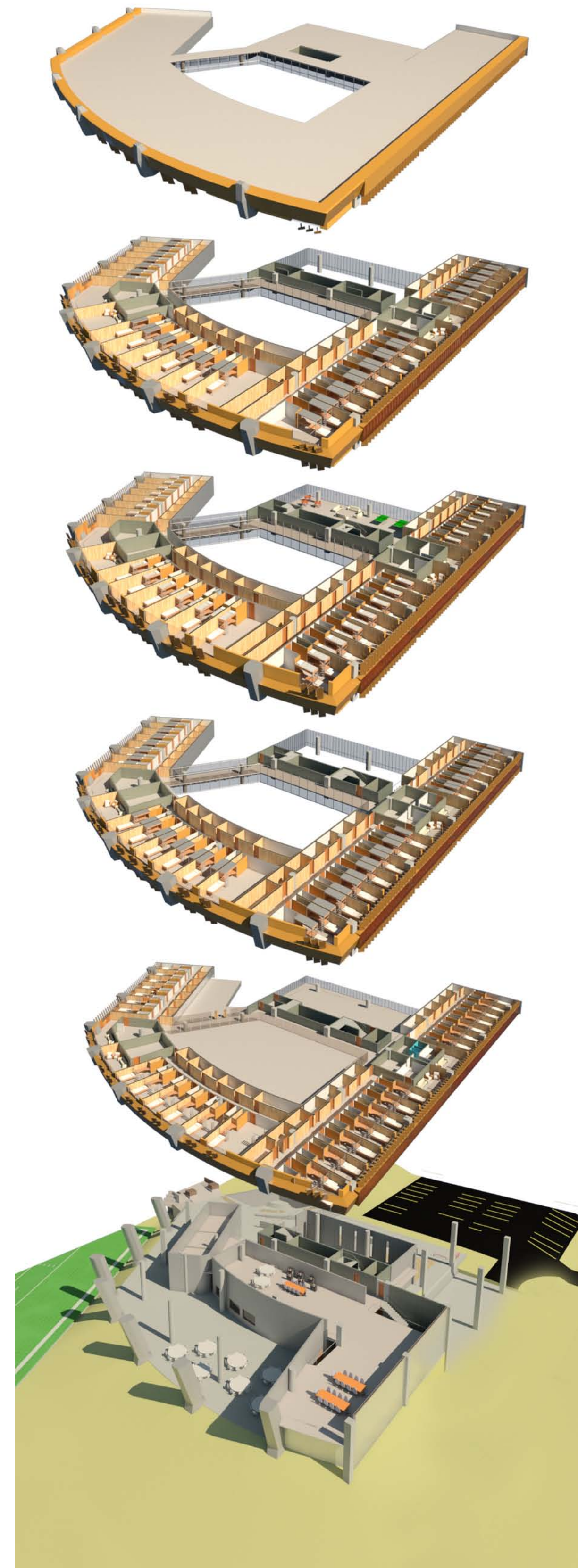




FOURTH FLOOR

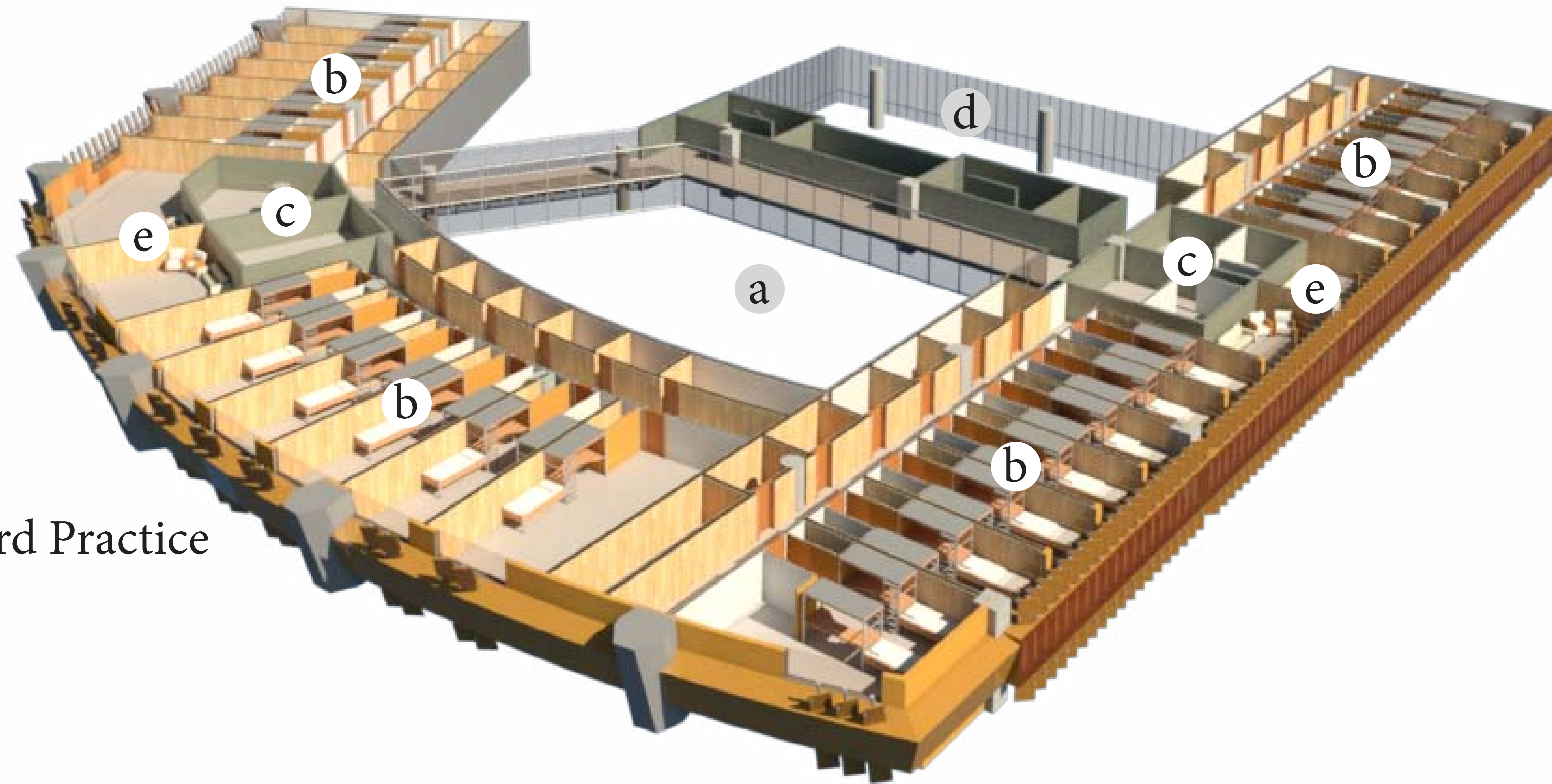
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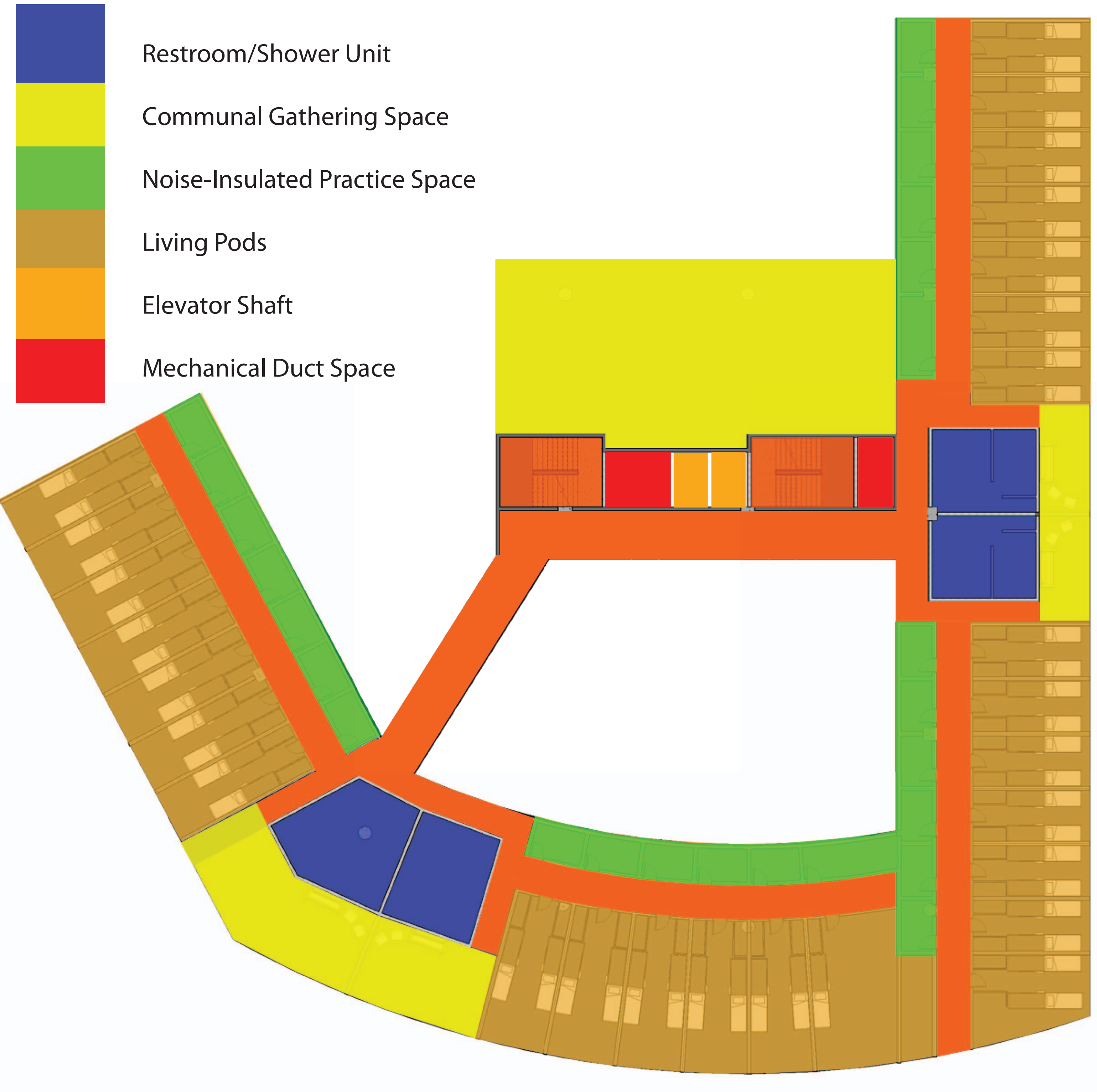




FOURTH FLOOR

- a** Interior Atria/ Colorguard Practice
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- c** Restrooms
- d** Communal Space
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Restroom/Shower Unit

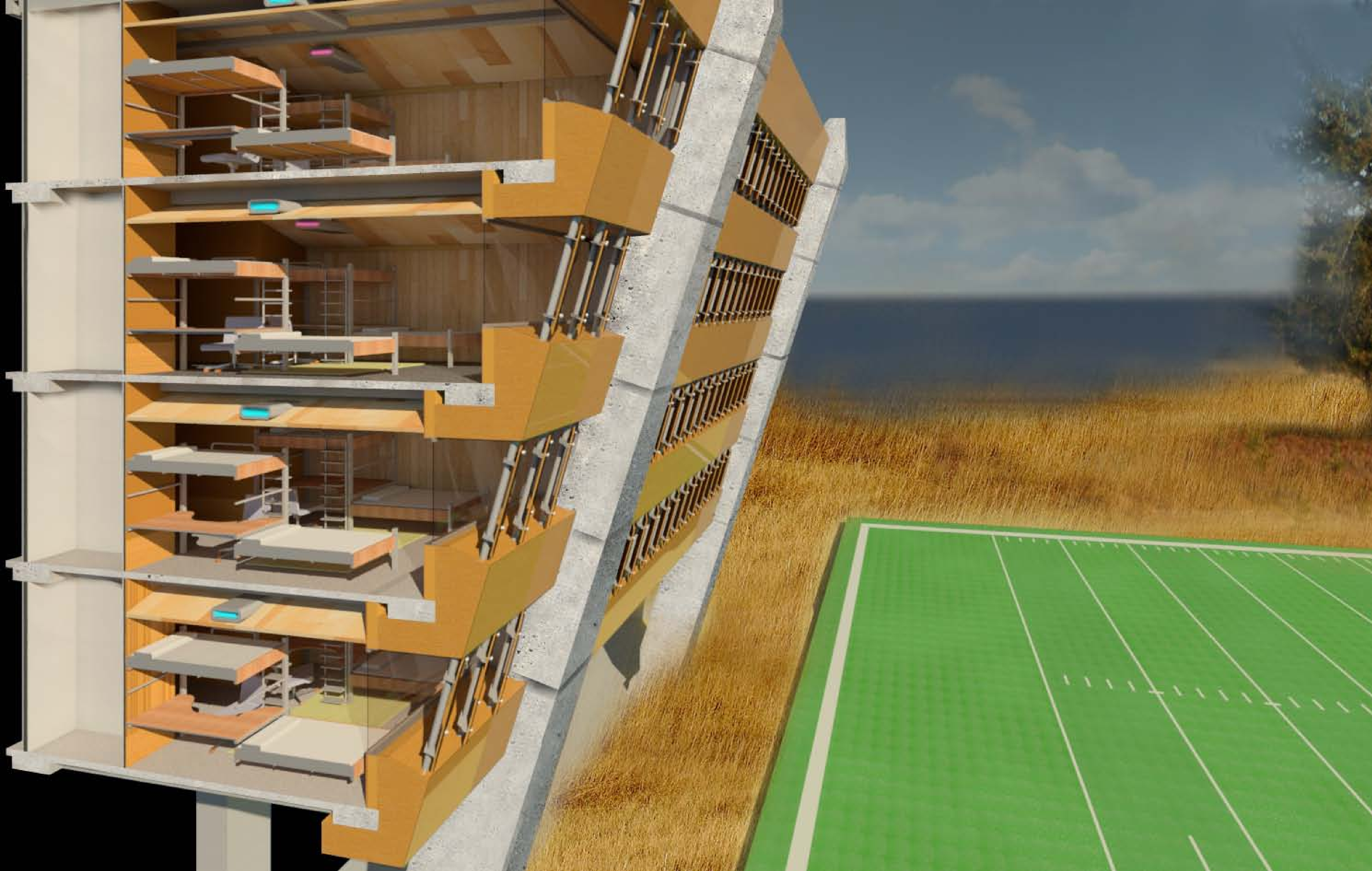
Communal Gathering Space

Noise-Insulated Practice Space

Living Pods

Elevator Shaft

Mechanical Duct Space



Dormitory Section Perspective

Precast Custom Concrete Panels

Custom Wall Sweep

Linear Louver Array

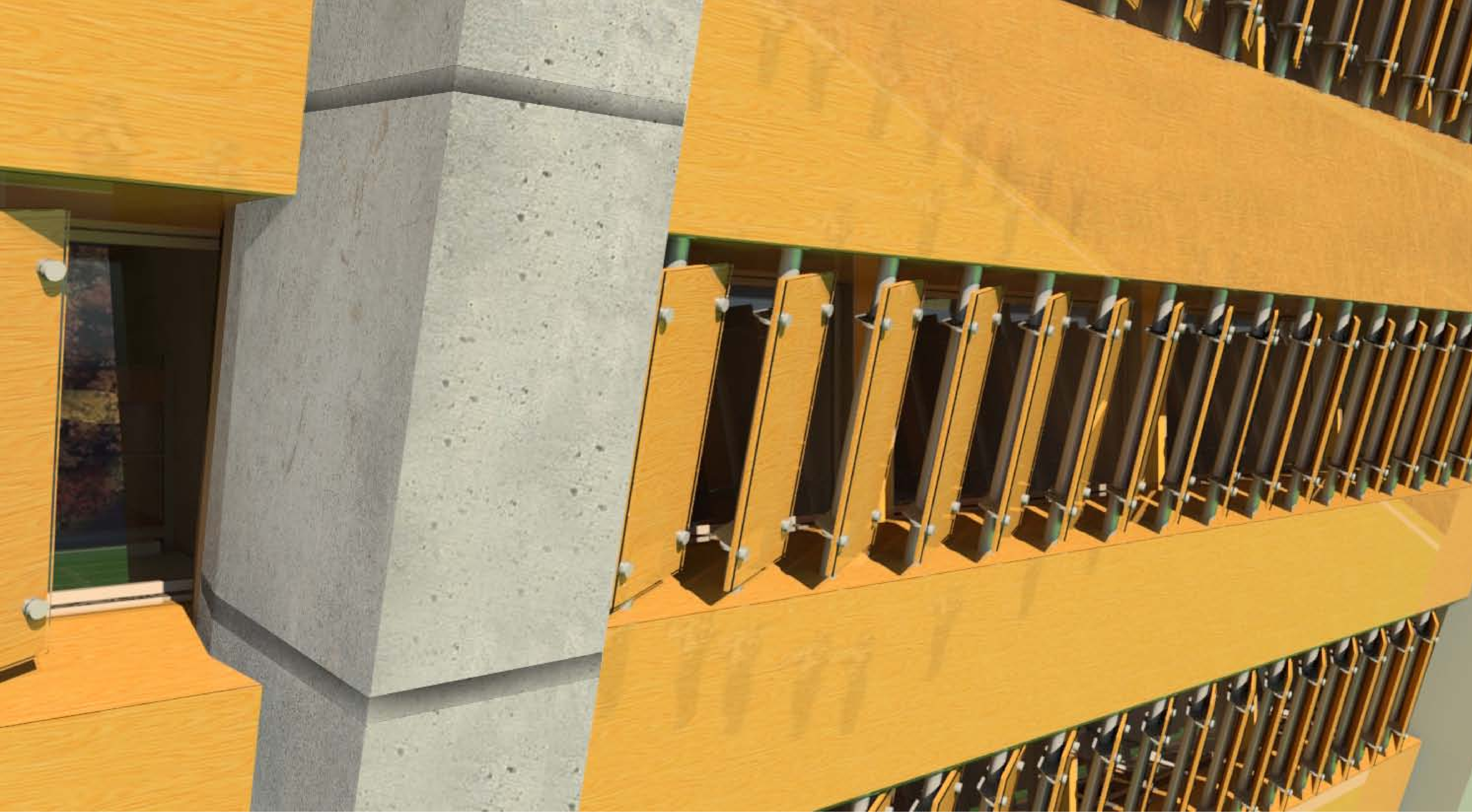
Custom Bunk Bed

Cabin Ceiling

Dormitory Curtain Wall

Partition Walls







[connecting space]

Terraced Entryway

Poured Concrete Amphitheater, board-formed

Birch Alee

Covered Portal to Concourse

Stone and Mortar planters for Prairie Grasses



Practice Field Section Perspective

Laminated Buffer

Practice Tower

Field

Concrete Spanish Steps

Crushed Gravel Path



Performance Stadium Section Perspective

Beams/Girders: Precast Concrete-standard weight.

Concrete Risers; triple-risers

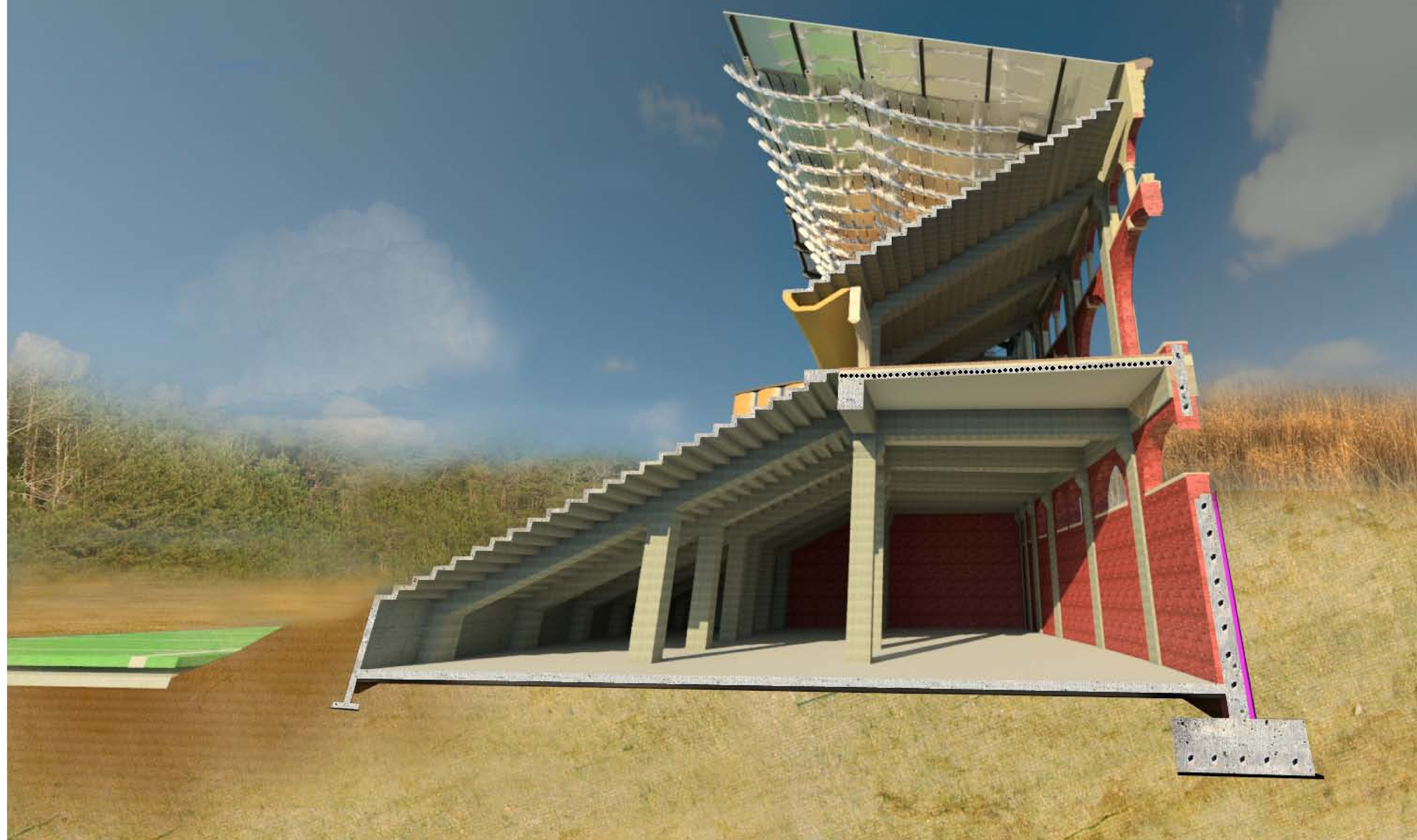
Concourse Floor; built up of Precast Hollow Core Concrete Planks, finish is Stone Pavers

Canopy Structure; Heavy steel trusses, triangulated against the force of gravity. Steel cross beams at 10' O.C. hold corrugated steel roofing in place. Below the Trusses is a custom steel profile to hold the glazing in place.

Canopy Finish Material; Tempered Glass, Bronze Tinted at modular panel sizes of 5'x2.'

Side Buffer Panels; Douglas Fir

Masonry Walls; Traditional motifs and complex brick facades still define the traditional stadiums. Colors chosen based on local grasses





Tempered Glass, Modular Panel Size
at 5'x2.' Light Bronze tint



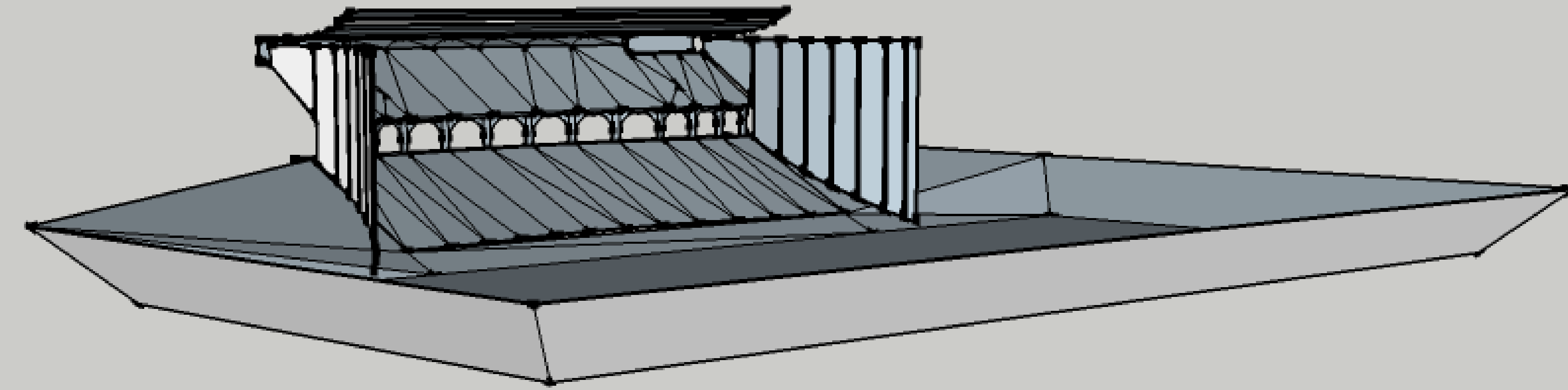
Traditional Motifs set upon a prairie.

Analysis

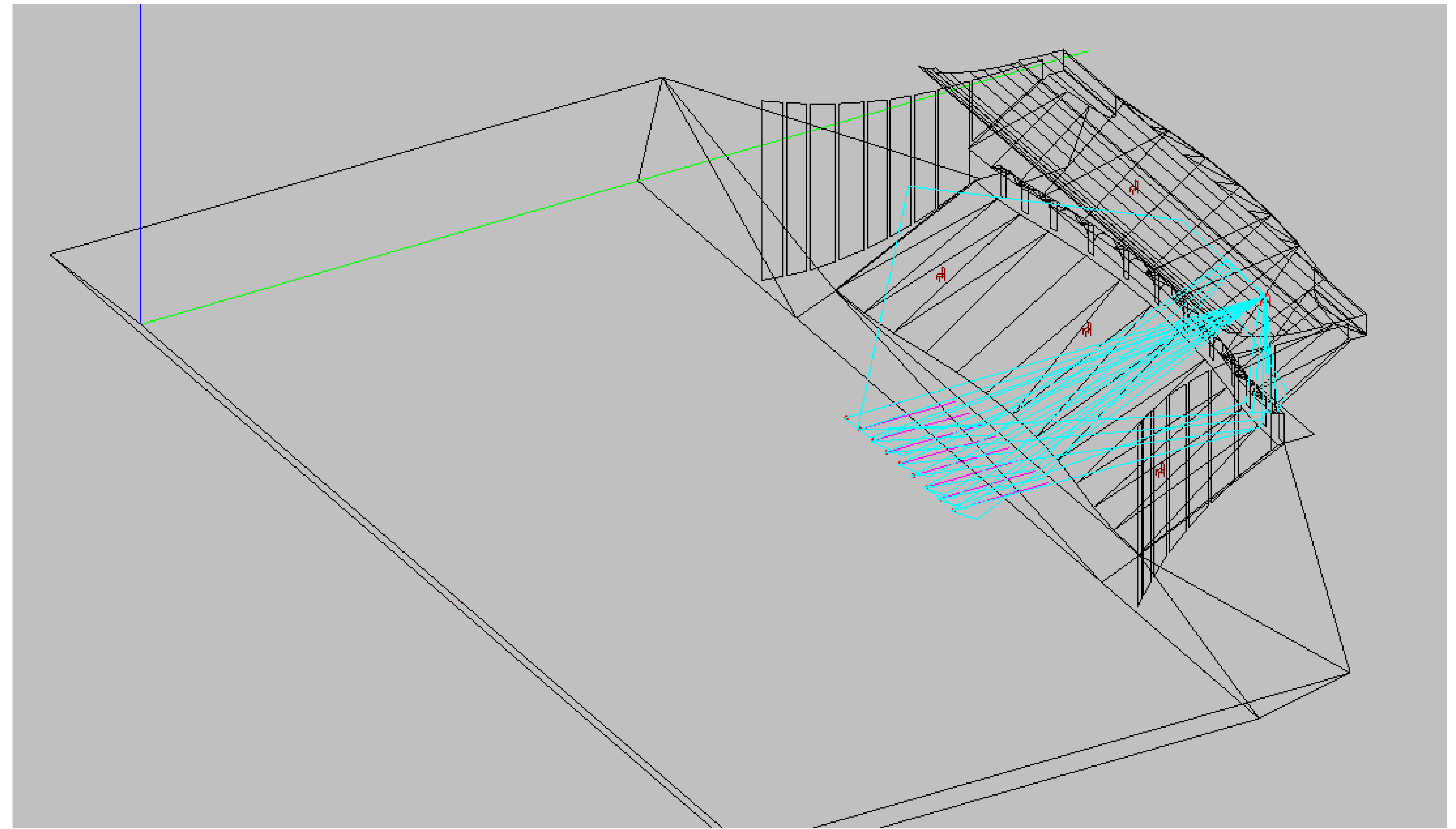
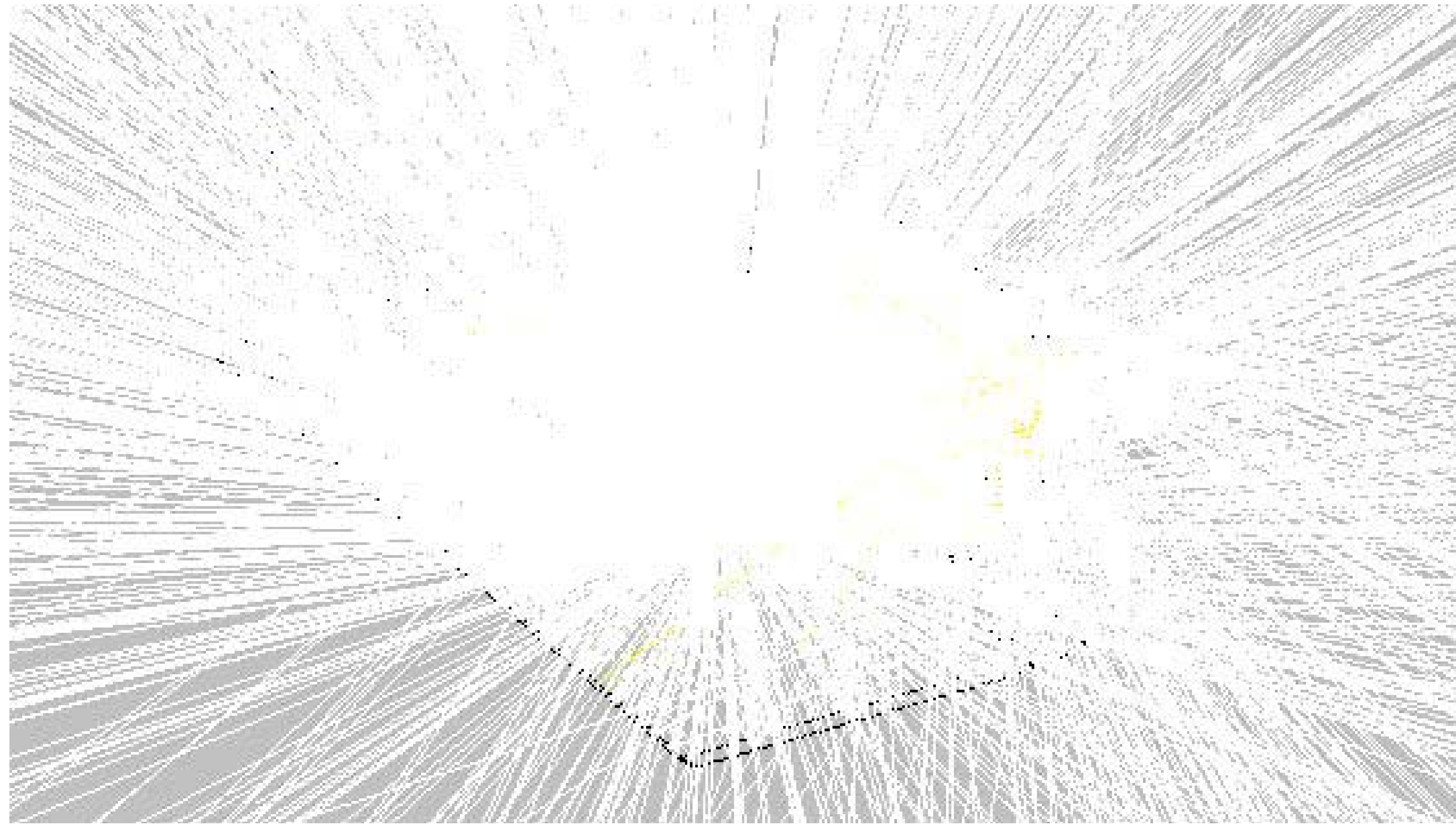


EASE Acoustical Analysis Software

Ease Imports DXF and SKP files. Sketchup proved the easier modeler engine.

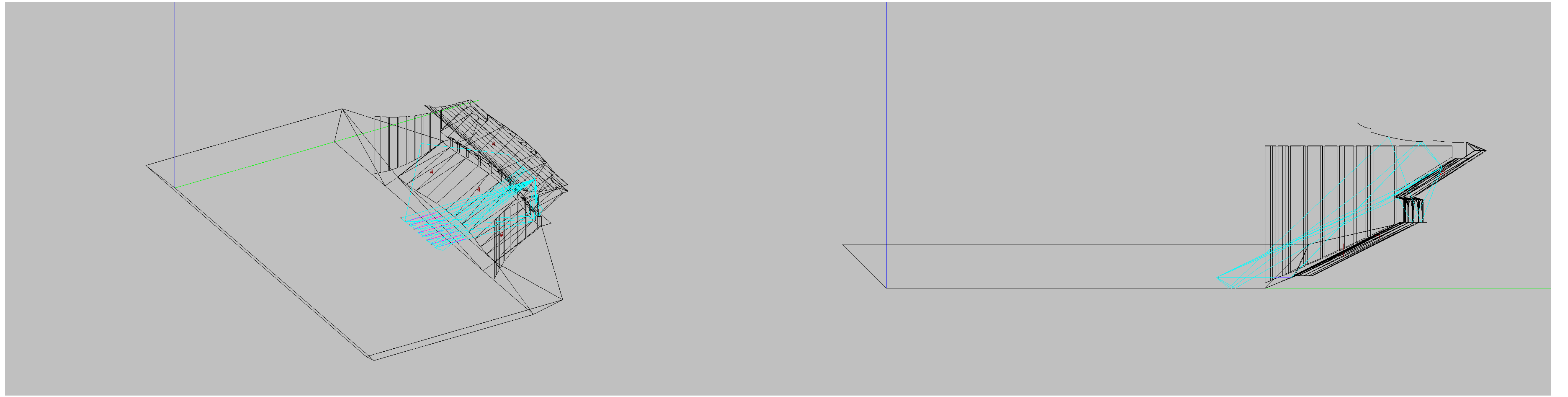


Export from Revit as .DWG>> Import .DWG in SketchUp>>Trim model, clean and save as Version 7 .SKP>>

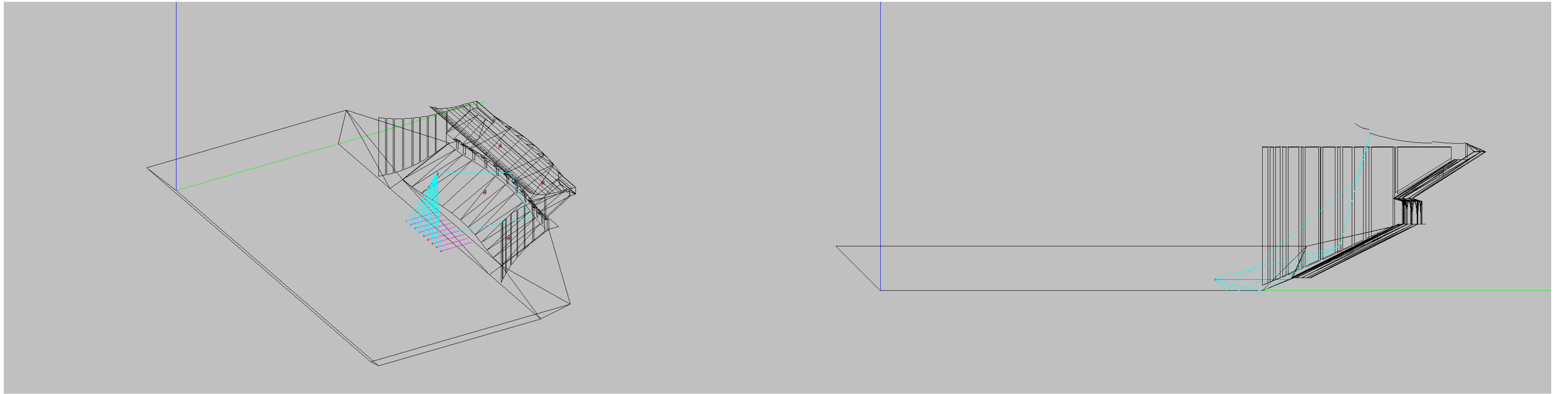


Import .SKP in EASE and assign materials>> Please Check Data First>> If successful, place loudspeakers and seats>> Run Ray Tracing and save Trace File>> Open Trace File and check for Impact Rays>> Set Parameters and run Impact Simulation and save as a Binaural Impulse Response, .BIR>>

Import .BIR in Auralization window>> Set .BIR as convolving filter>>Import Mono .WAV file at 44100 Hz>>
Commence Convolution>> Export as convolved .WAV file with Binaural Experience.



Balcony Deck, Mid-Right Seat



Main Deck, Mid-Left Seat

Balcony Deck, Center Seat

Main Deck, Center Seat

THANK YOU!

Questions and Comments Please!