

Solid Rock

PHYSICAL REHABILITATION CENTER

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ARCH 772, Design Thesis, Spring 2010

Department of Architecture & Landscape Architecture

North Dakota State University

What is the correlation between physical,
social, and emotional attributes?

Problem Statement

The physical environment changes due to the day-to-day behavior of people.

Theoretical Premise

Site



Site

Located in the Kenwood District of Duluth, Minnesota, this wooded site is approximately 100 acres in size. Located to the south is the United Health Insurance Group, and residential neighborhoods border the site on the east. Secondary roads provide access to the site.



Located north of the site is a ski clubhouse. There are a few man-made paths used for cross country skiing and hiking. (Upper Right)



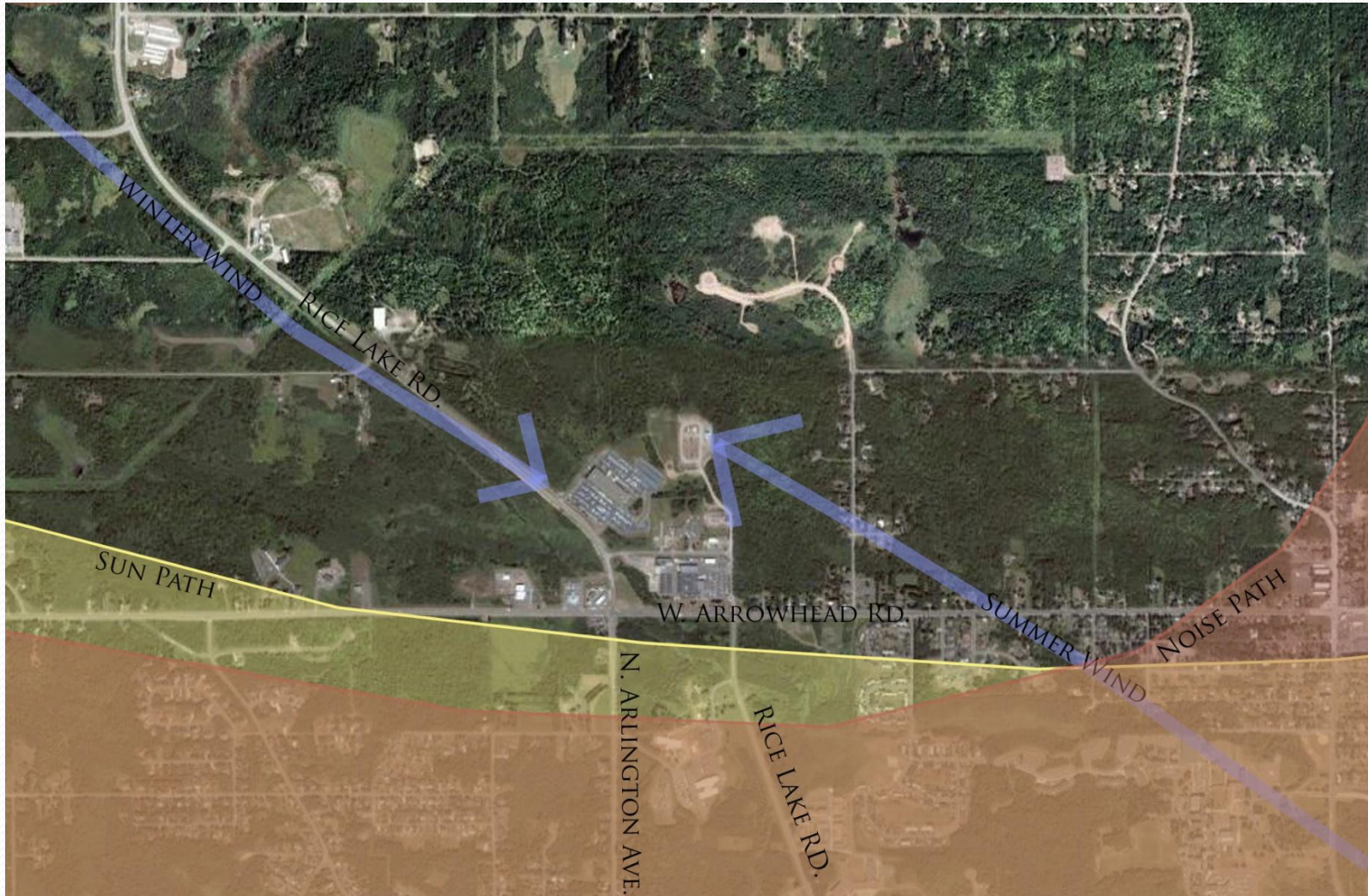


There are a few dead trees,
but overall the site is densely
filled with vegetation.



Sun, Wind, & Noise Directions

Varying vegetation height on the site blocks some wind, sunlight, and noise from penetrating into the site.



Site Sections



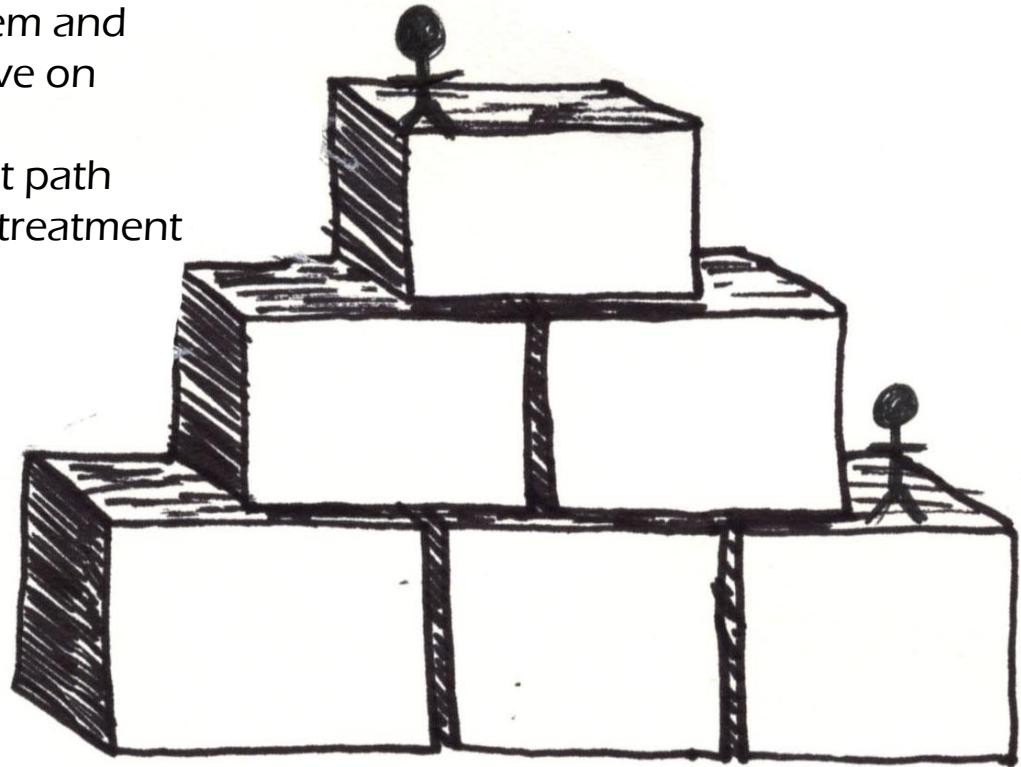
South to North Site Section



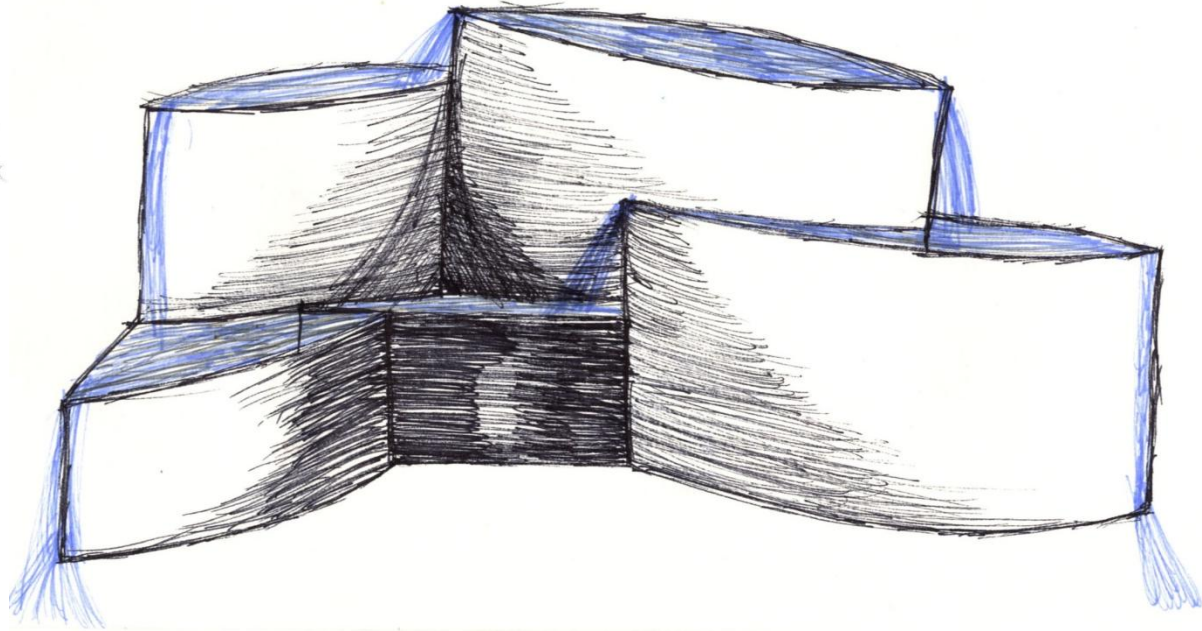
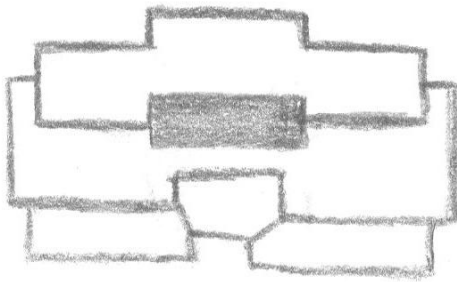
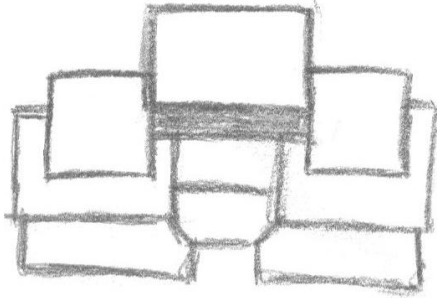
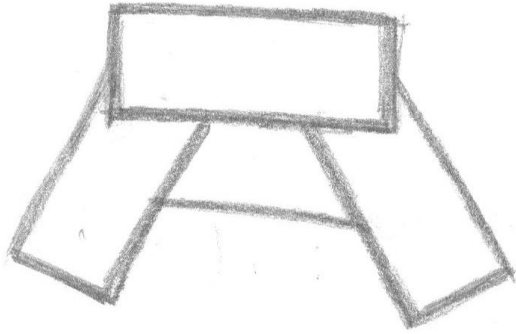
East to West Site Section

Three steps to the overall healing process

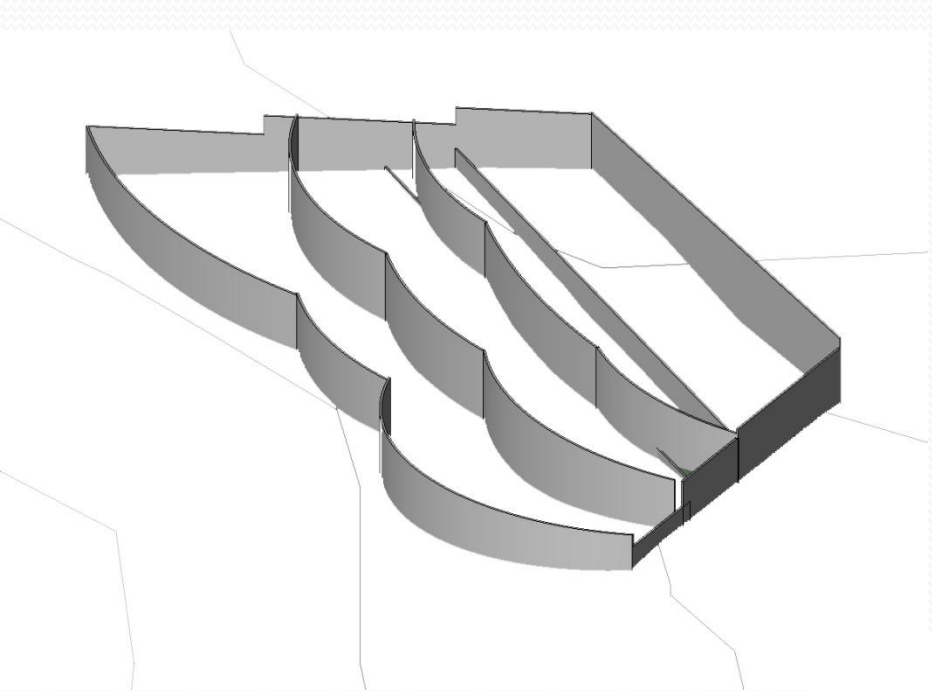
- ▣ 1 – Accepting there is a problem and wanting to overcome it to move on
- ▣ 2 – Finding the right treatment path and going through the entire treatment process to heal
- ▣ 3 – Moving on with life after treatment and living with the impairment



Healing Process

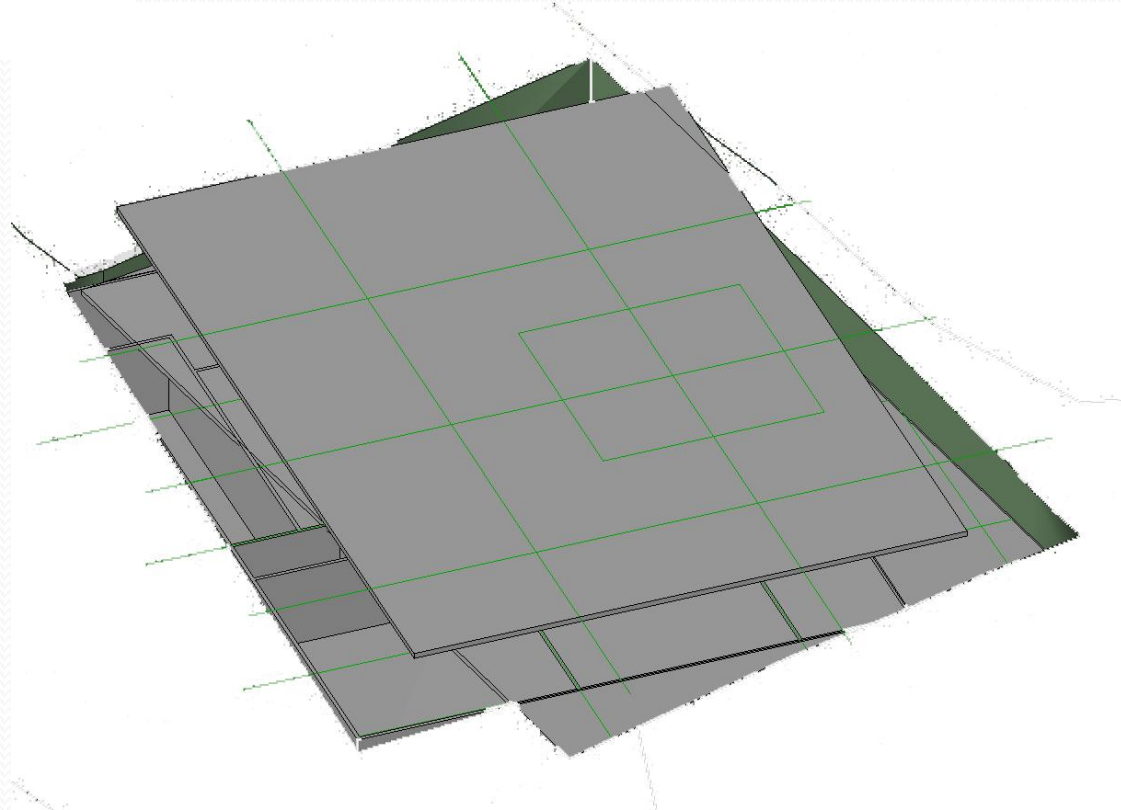


Design Process

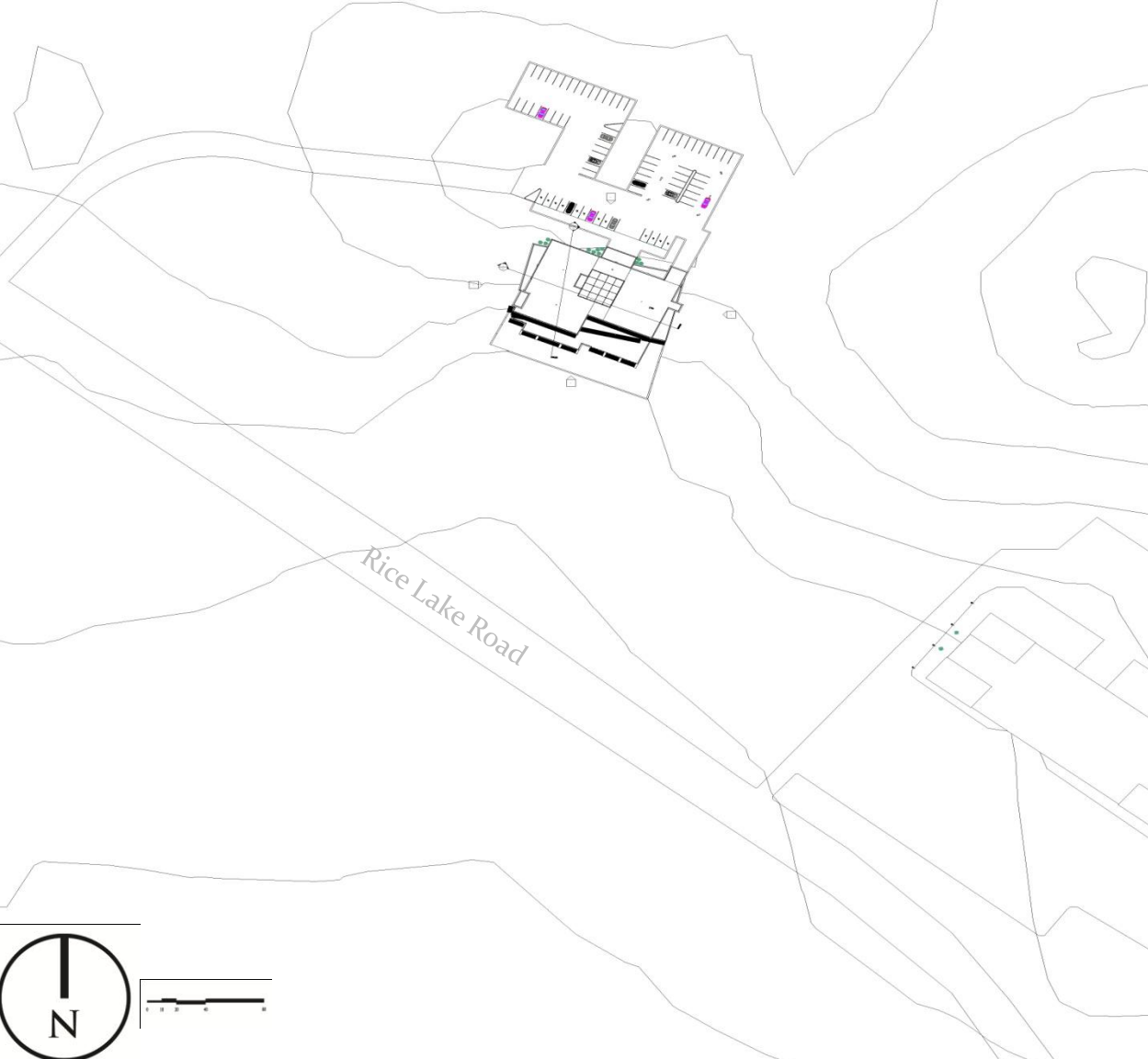


The initial design had more of an organic shape to follow the topography of the site. The process developed into a more structured design following the forms of treatment provided.

Organic to
Structured



Site Plan



Floor Plans

Upper Floor

Middle Floor

Lower Floor

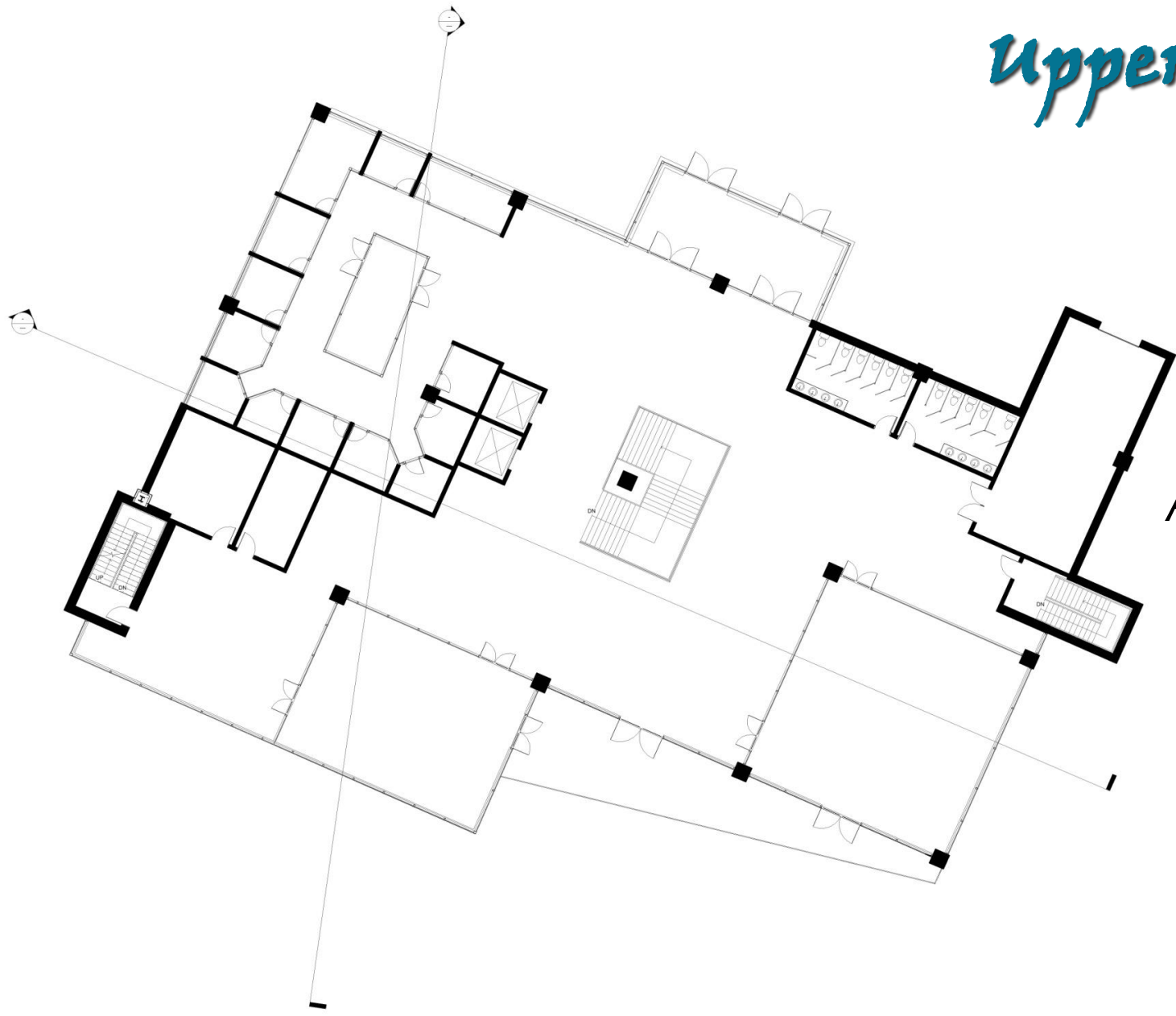
Sections

Transverse

Longitudinal

Site

Upper Floor



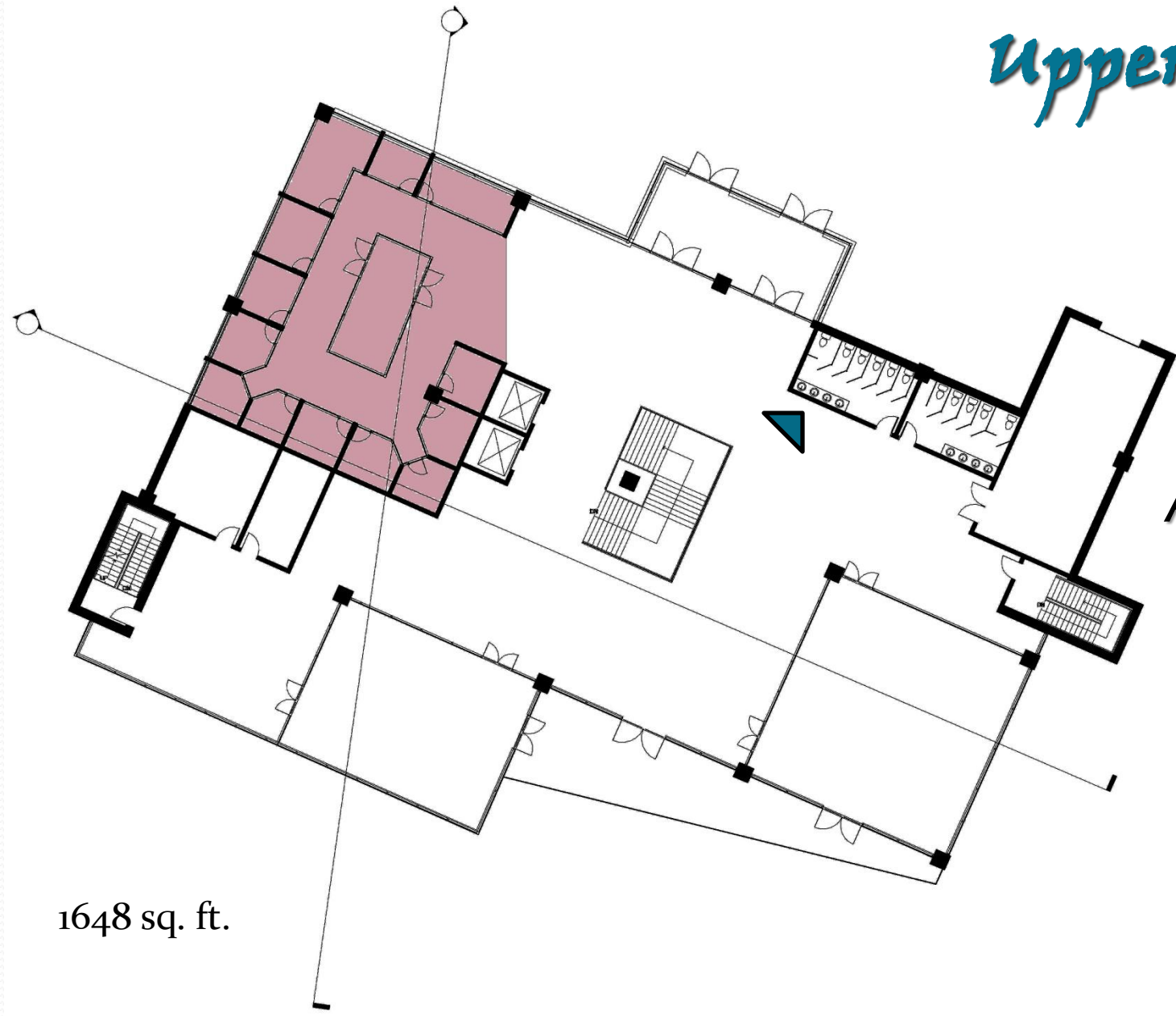
Administration

Cafeteria

Multipurpose

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Upper Floor



Administration

Cafeteria

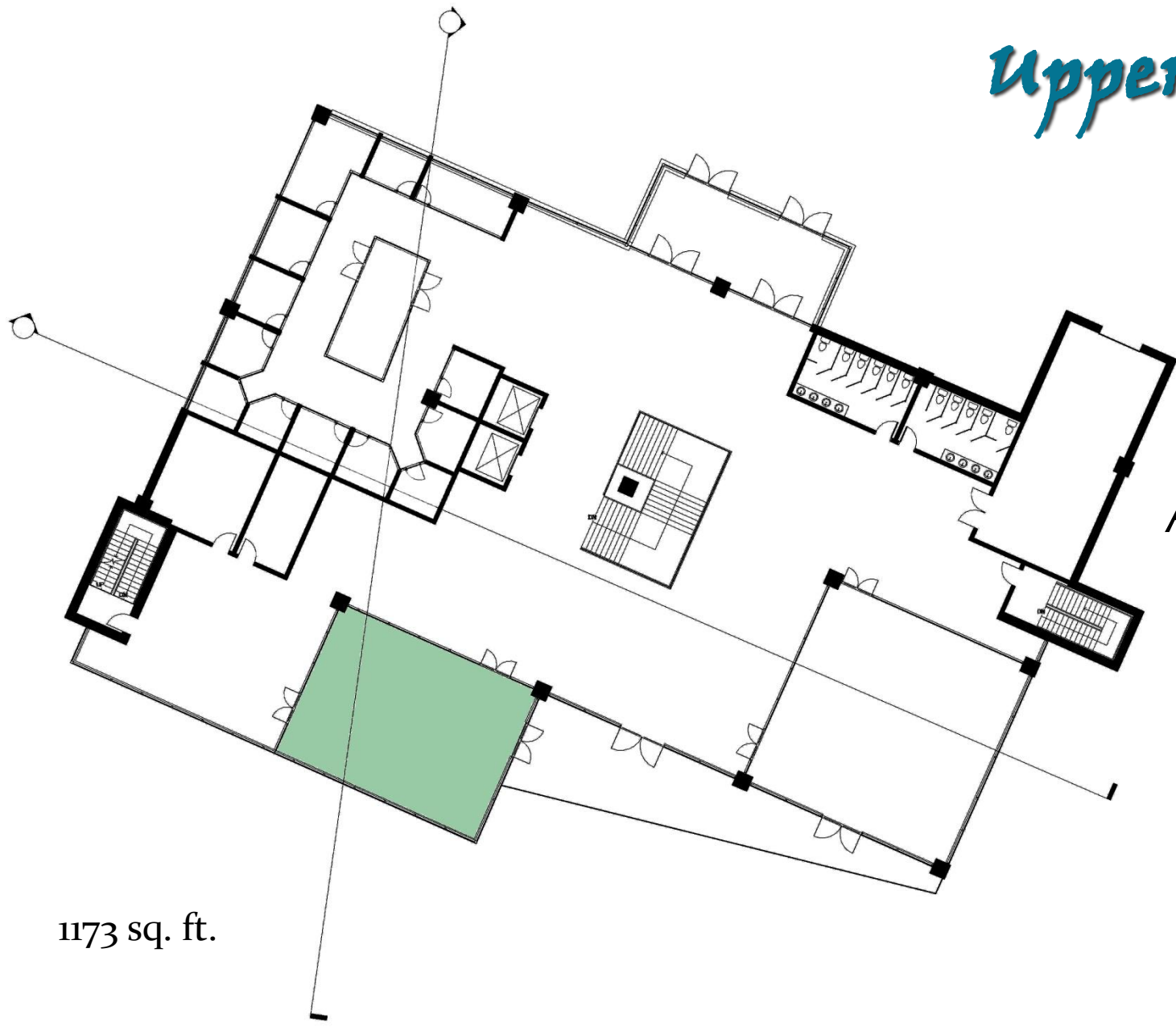
Multipurpose

1648 sq. ft.

Entrance Lobby



Upper Floor



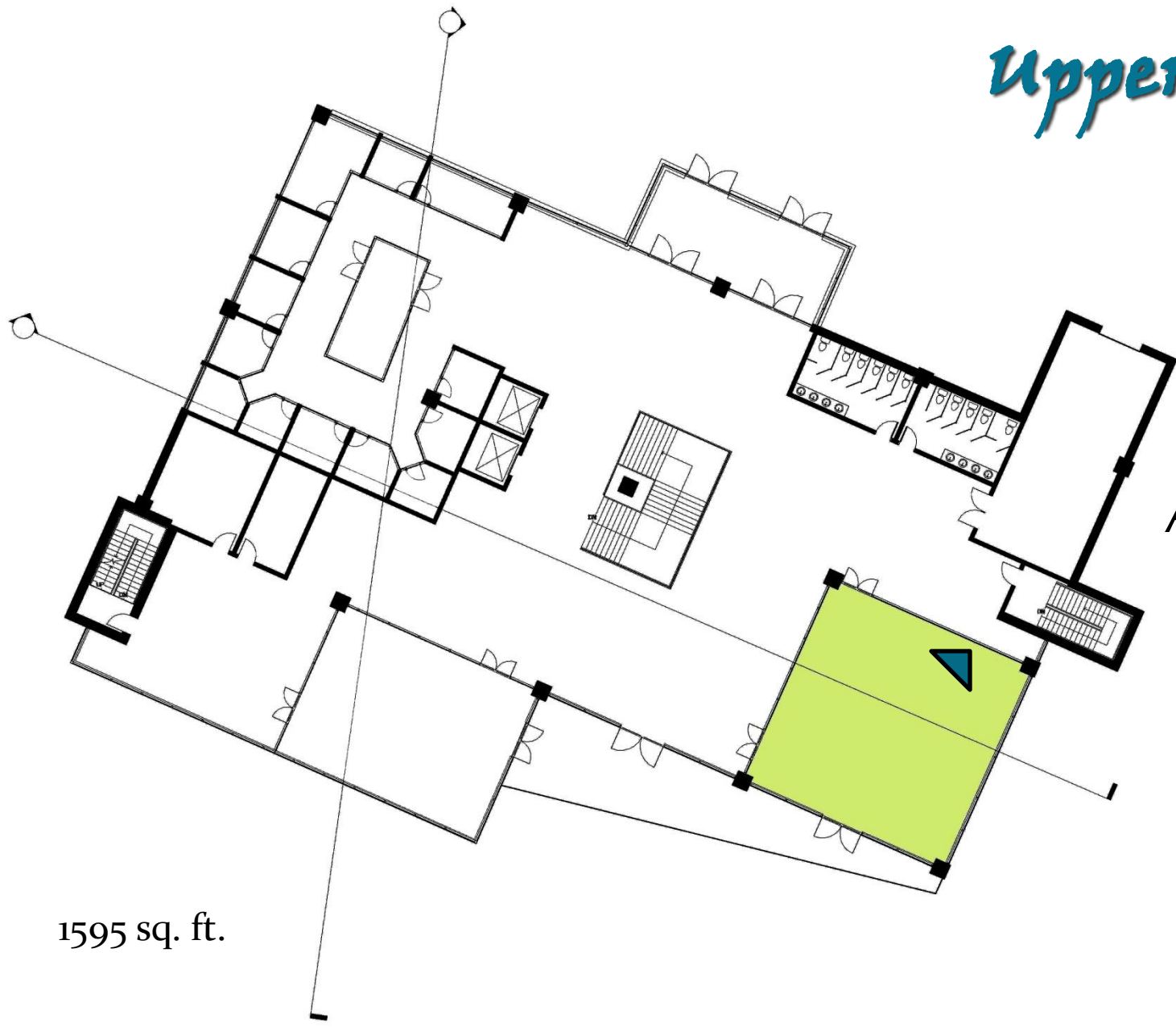
Administration

Cafeteria

Multipurpose

1173 sq. ft.

Upper Floor



Administration

Cafeteria

Multipurpose

1595 sq. ft.

Multipurpose Space



Middle Floor



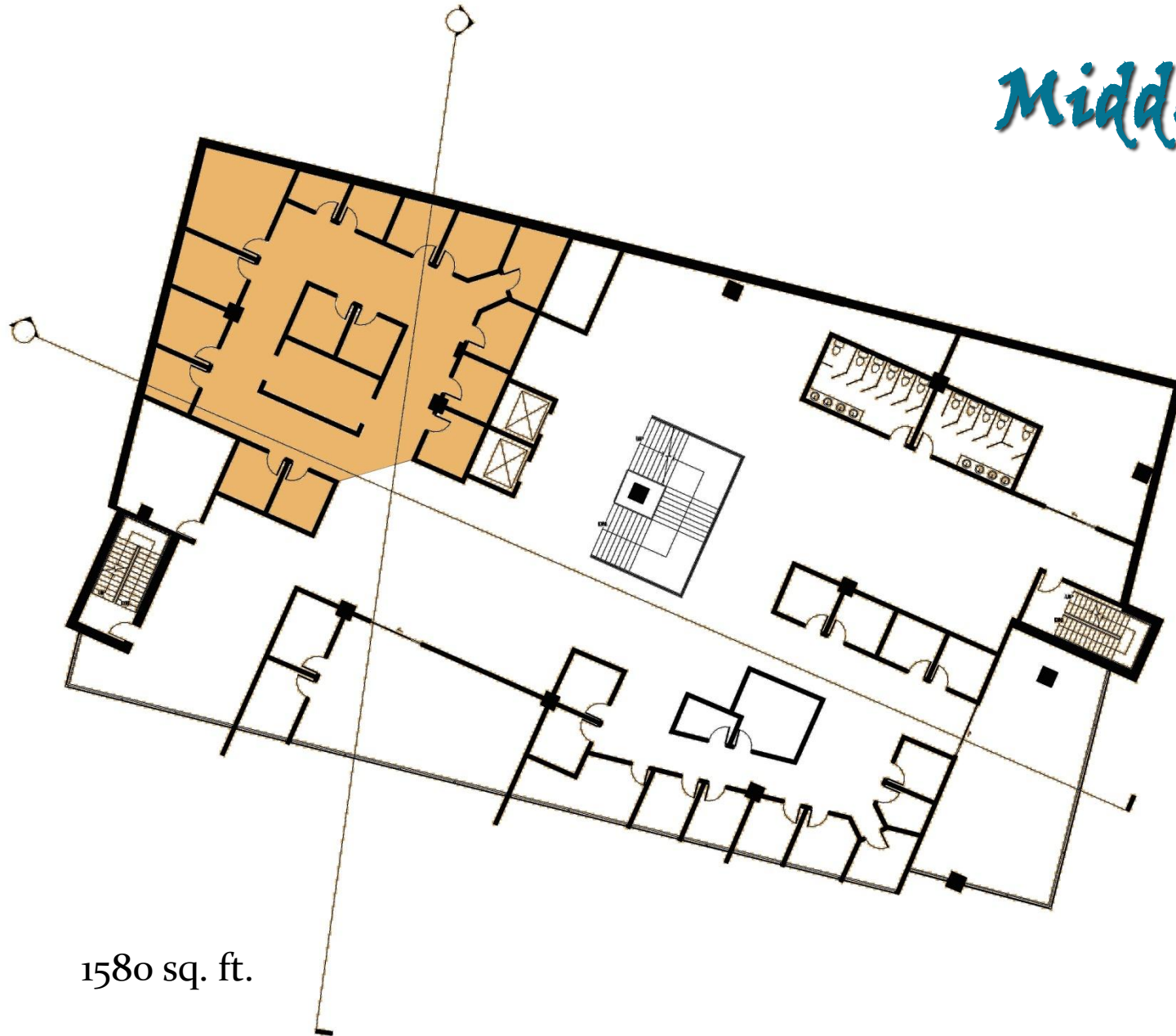
Medical
Department

Physical Therapy
Department

Back Therapy
Department

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Middle Floor



Medical
Department

Physical Therapy
Department

Back Therapy
Department

1580 sq. ft.

Middle Floor



Medical
Department

Physical Therapy
Department

Back Therapy
Department

2474 sq. ft.

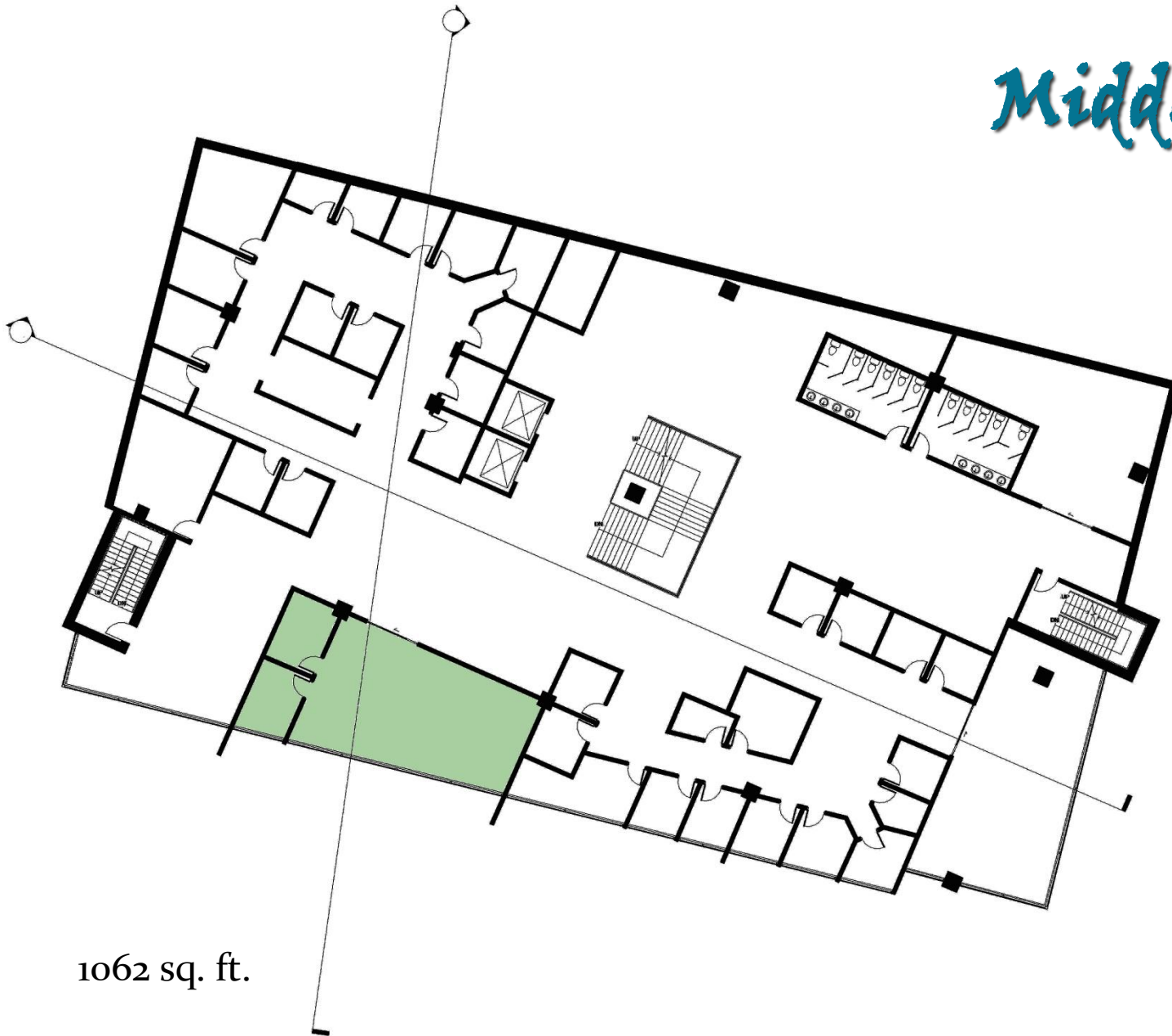
Treatment Room



Group Treatment Space



Middle Floor



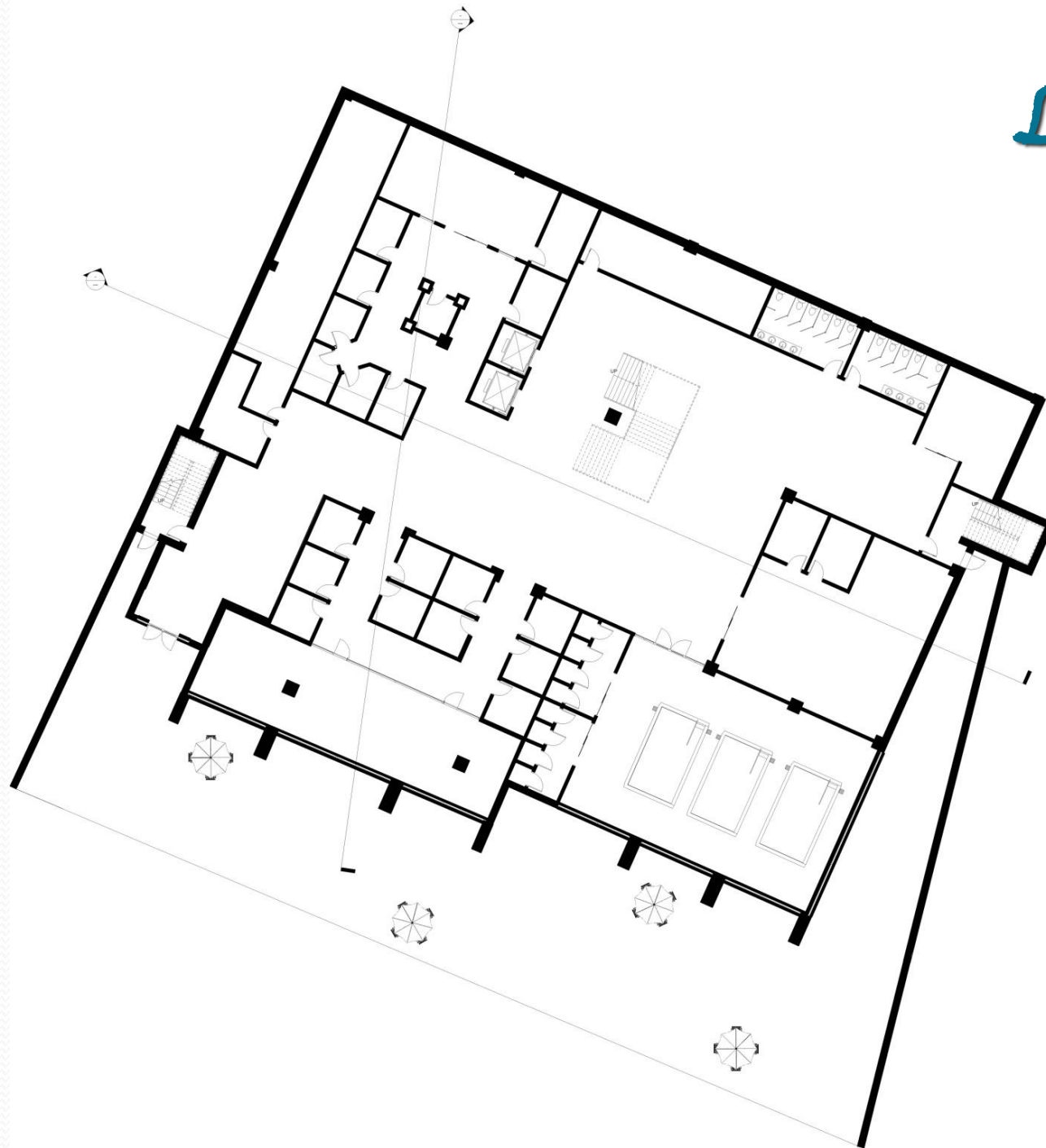
Medical
Department

Physical Therapy
Department

Back Therapy
Department

1062 sq. ft.

Lower Floor



Sports Therapy
Department

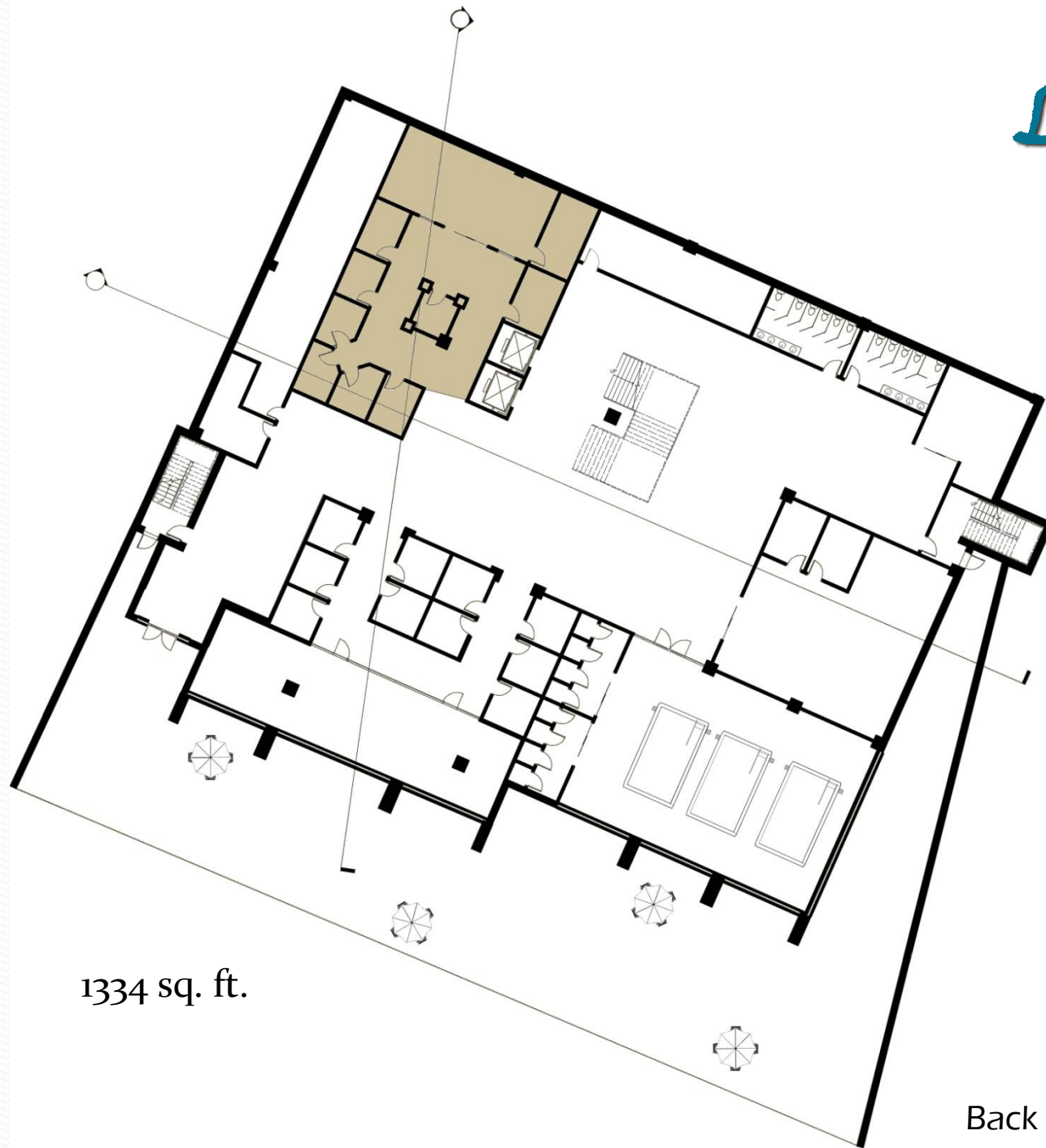
Neurological Therapy
Department

Occupational
Therapy Department

Aqua Therapy
Department

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Lower Floor



**Sports Therapy
Department**

Neurological Therapy
Department

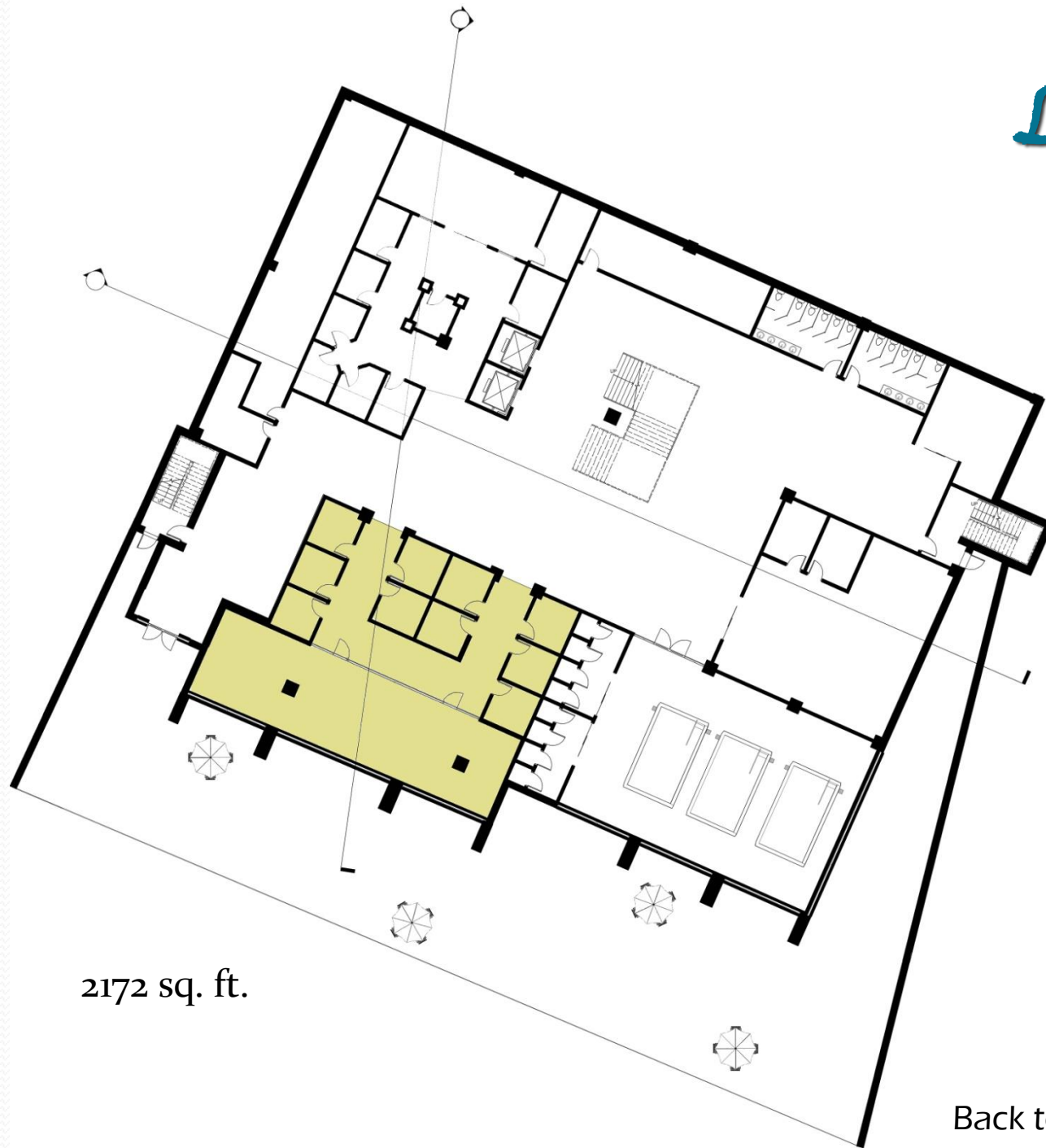
Occupational
Therapy Department

Aqua Therapy
Department

1334 sq. ft.

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Lower Floor



Sports Therapy
Department

Neurological Therapy
Department

Occupational
Therapy Department

Aqua Therapy
Department

2172 sq. ft.

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Lower Floor



Sports Therapy
Department

Neurological Therapy
Department

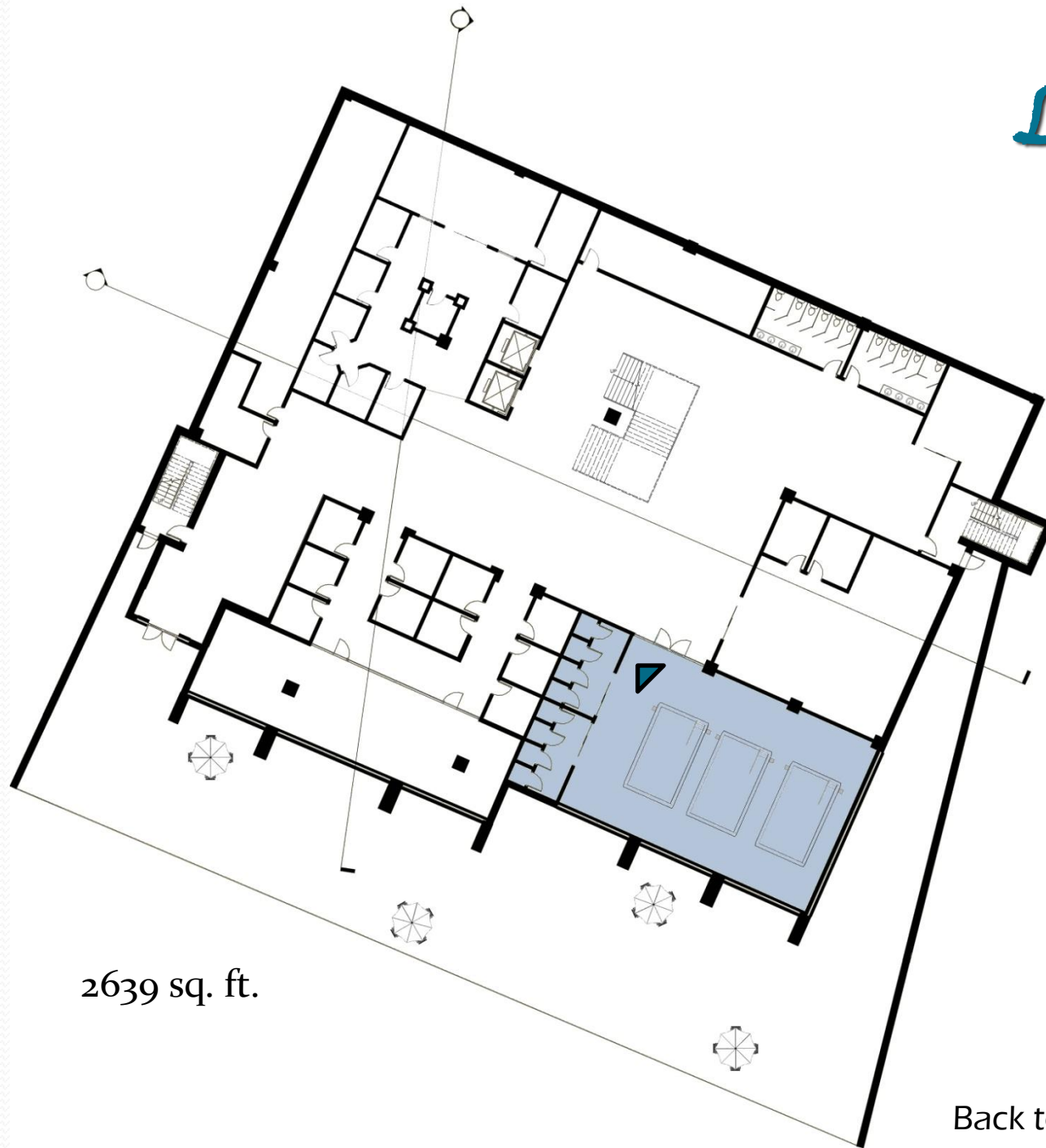
Occupational
Therapy Department

Aqua Therapy
Department

1485 sq. ft.

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Lower Floor



Sports Therapy
Department

Neurological Therapy
Department

Occupational
Therapy Department

**Aqua Therapy
Department**


2639 sq. ft.

Aqua Therapy Pools



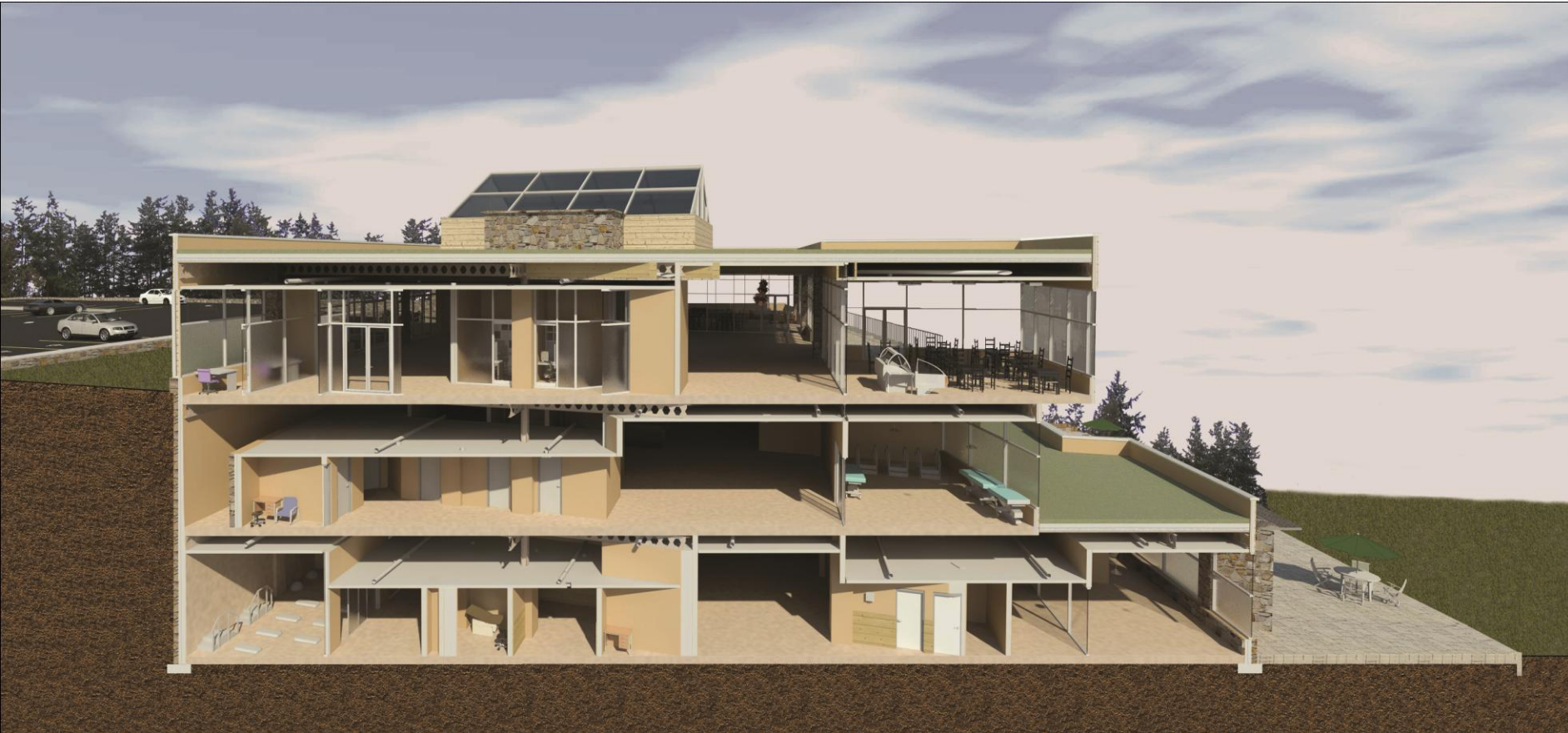
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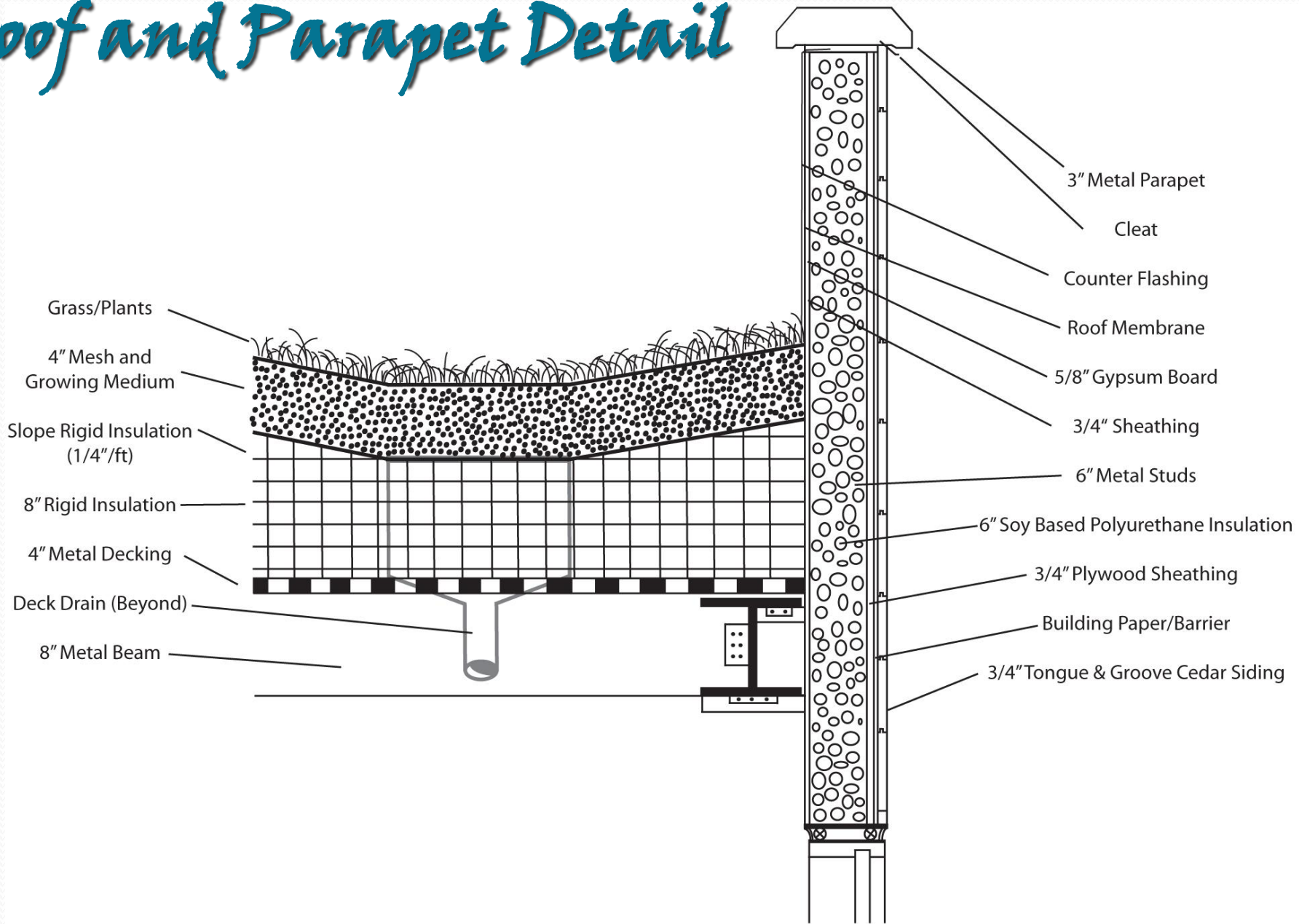


Administration Department	1648 sq. ft.
Cafeteria	1173 sq. ft.
Multipurpose Space	1595 sq. ft.
Medical Department	1580 sq. ft.
Physical Therapy Department	2474 sq. ft.
Back Therapy Department	1062 sq. ft.
Sports Therapy Department	1334 sq. ft.
Neurological Therapy Department	2172 sq. ft.
Occupational Therapy Department	1485 sq. ft.
Aqua Therapy Department	2639 sq. ft.
General Public Support Spaces	<u>31052 sq. ft.</u> 48975 sq. ft.

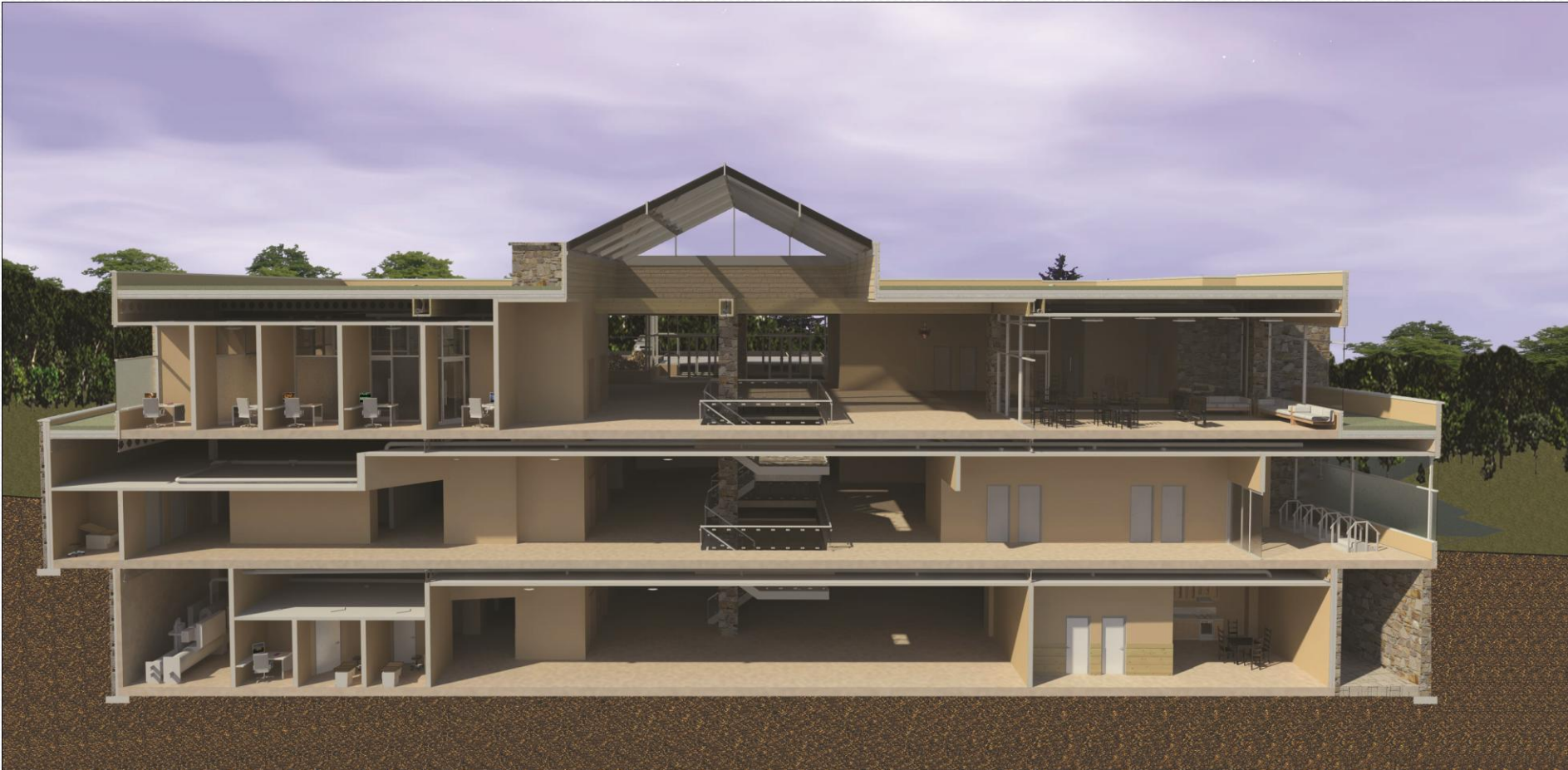
Transverse Section



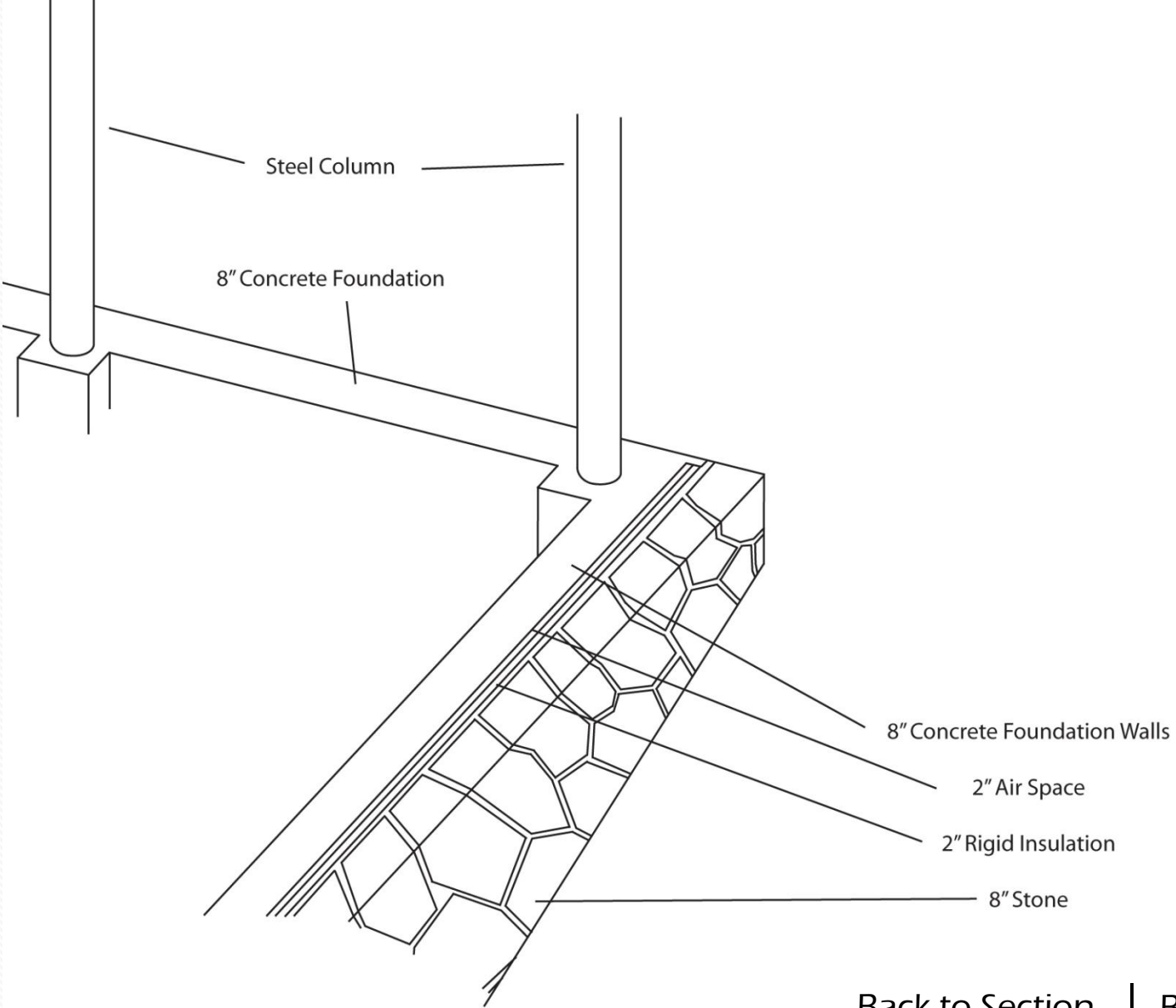
Roof and Parapet Detail



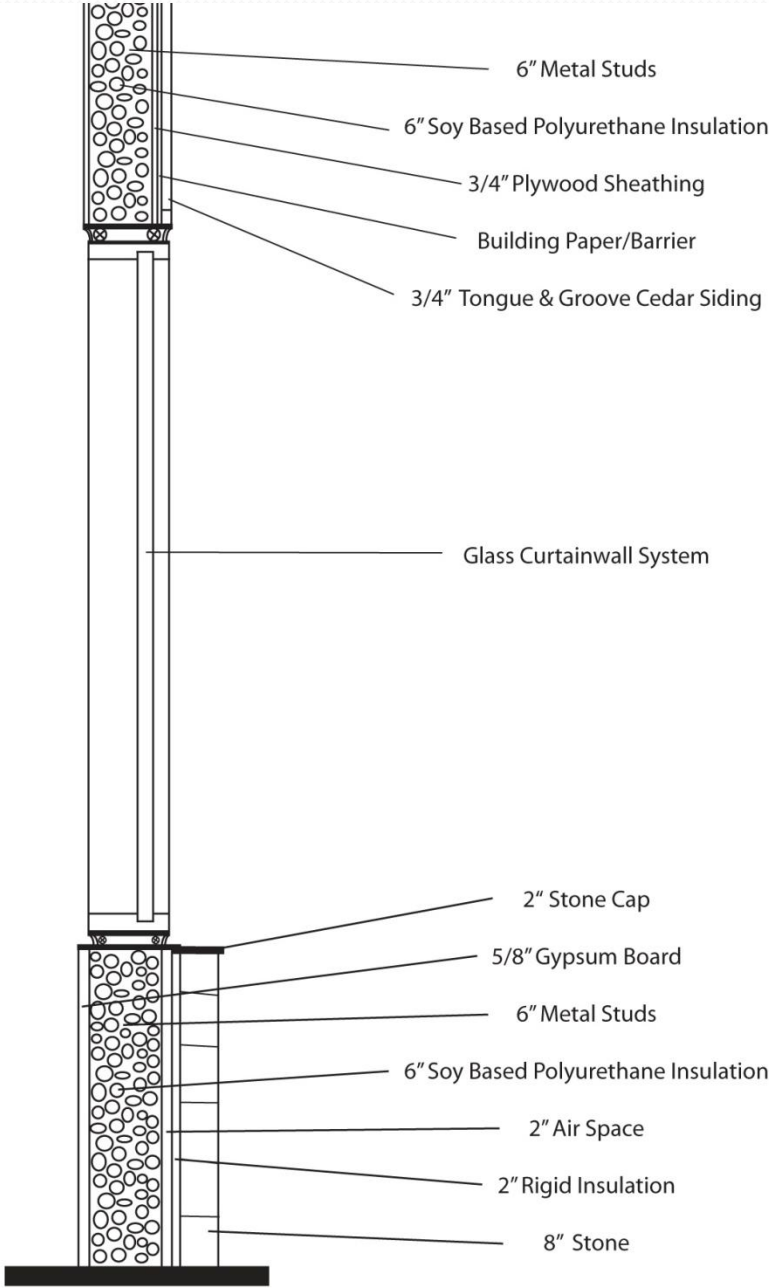
Longitudinal Section



Foundation Detail



Wall Detail



Site

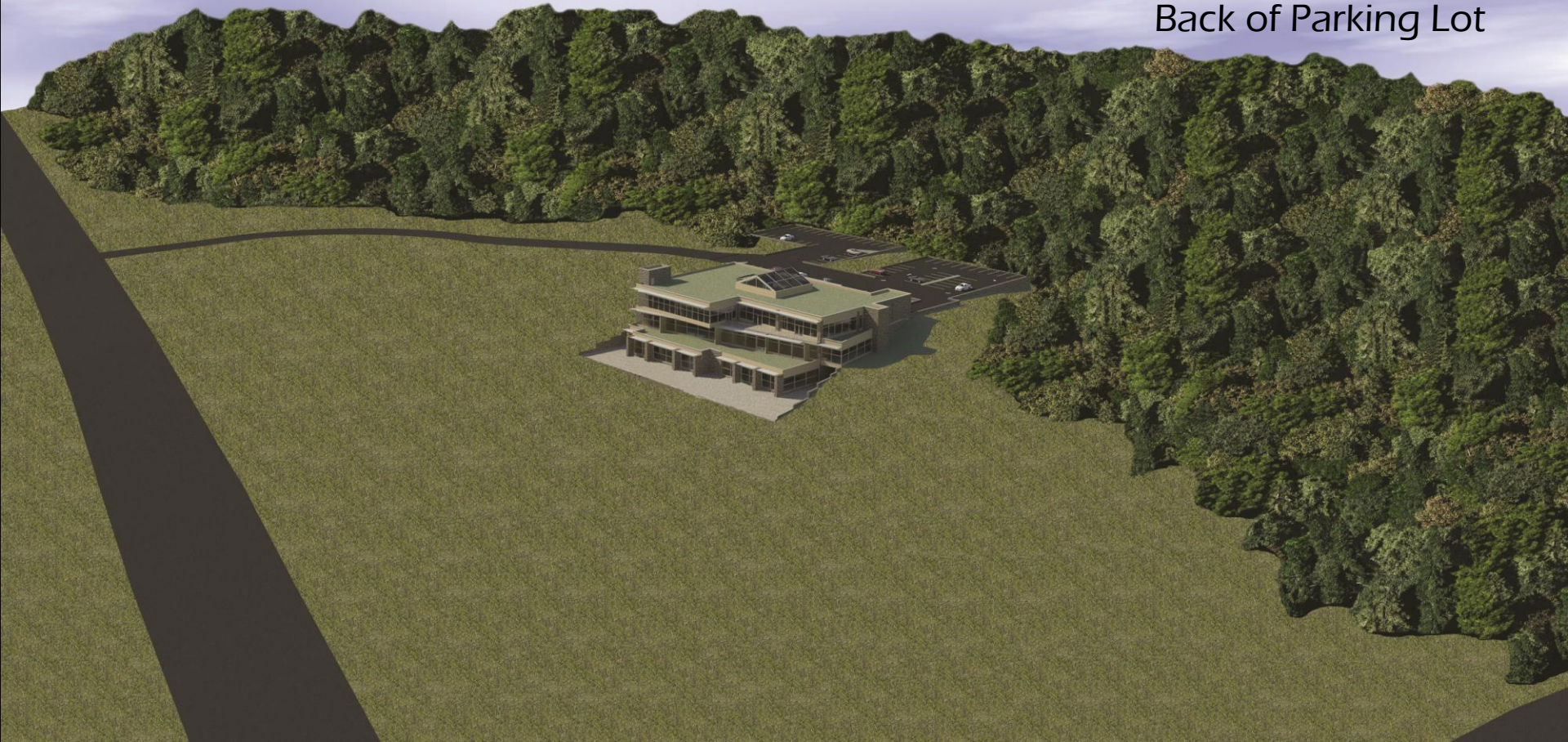
Approaching from Driveway

South Elevation

Lower Exterior Patio

Entrance

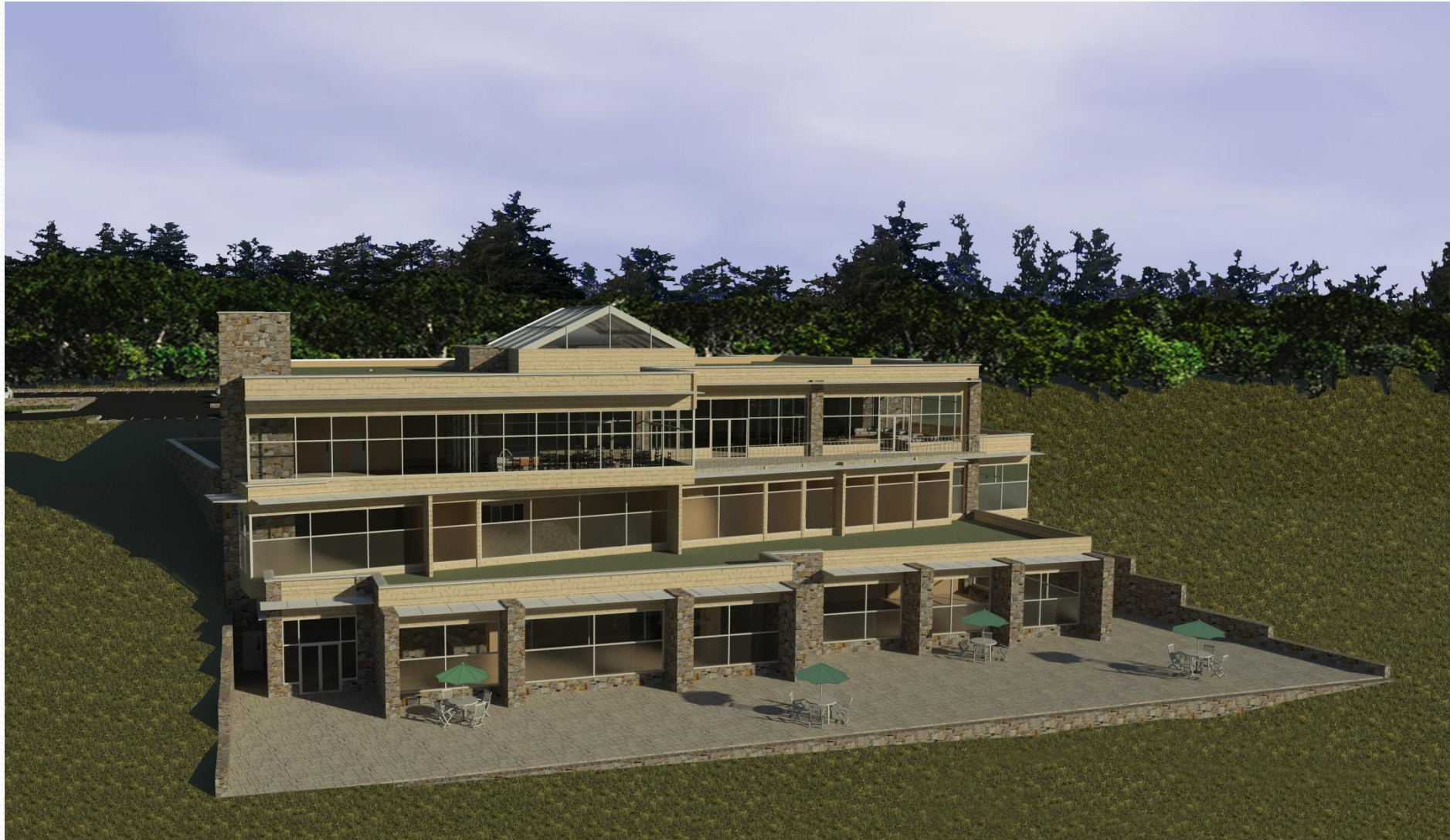
Back of Parking Lot



Approaching from Driveway



South Elevation



Lower Exterior Patio



Entrance



Back of Parking Lot



Solid Rock Physical Rehabilitation Center



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