

Belmont Skating Rink

Schematic Design

August 17th, 2022

Design Focused Charge

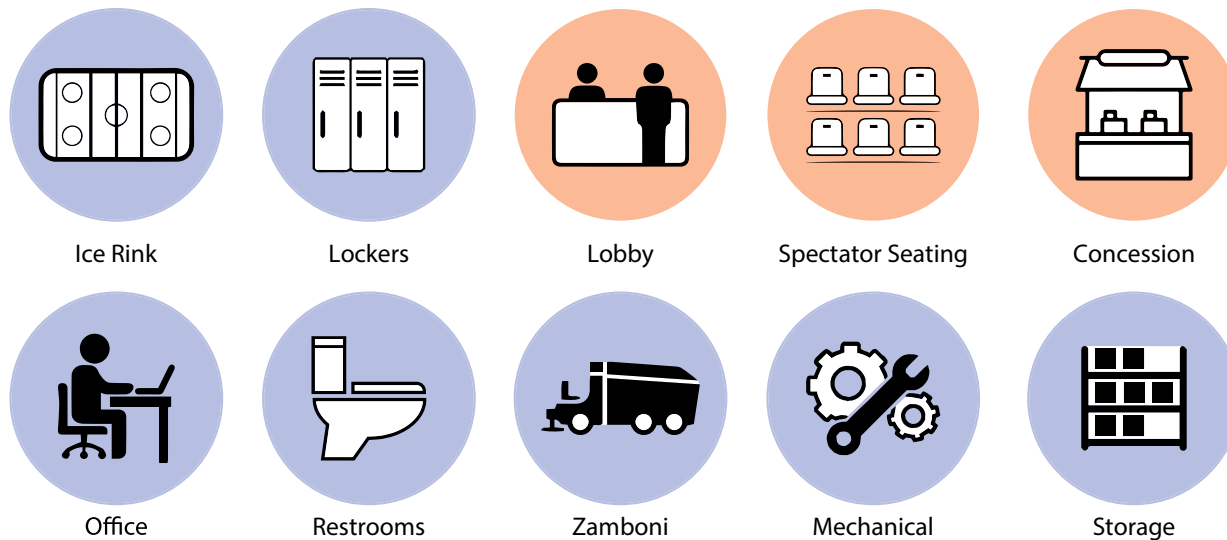
- Renovate and Expand Skating Rink
- Remove White Field House
- Make new rink as sustainable as possible
- Fields remain functional after building is complete
- Consider Implication of Fields - Conceptual Design
- Consider Implication of Parking - Conceptual Design



Skip Viglirolo Skating Rink

Built in 1969
Completed in 1971

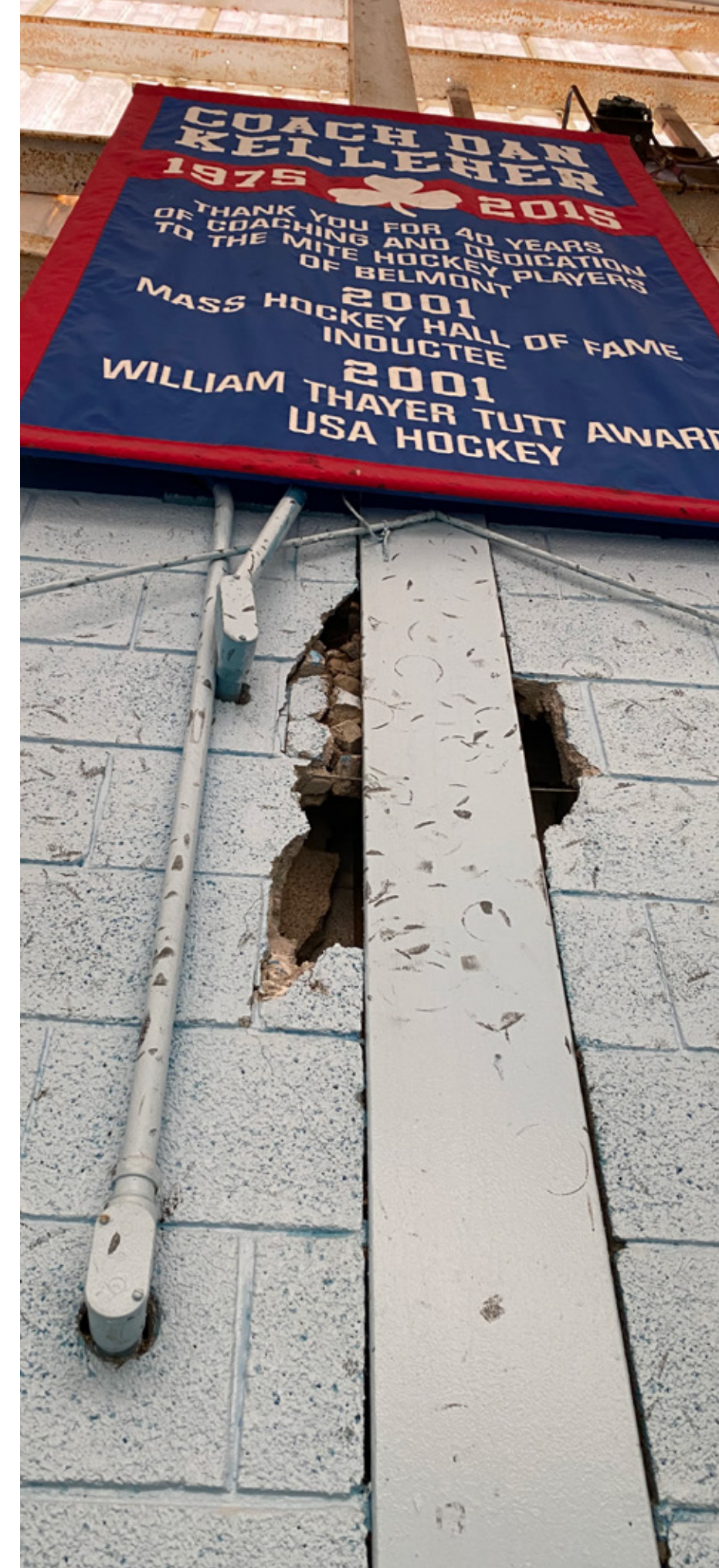
Thousands of young people participate in Youth
Hockey programs
High School Varsity and JV Hockey programs
Middlesex League titles
Appearances at MIAA Division I state tournaments
Champions 2020





Deficiencies

- Building not insulated
- Roof leaks
- Rusted structure



Deficiencies

- Envelope compromised
- Energy inefficiency
- Non-ADA compliant
- Non-MAAB compliant
- Walls crumbling



James White Memorial Field House

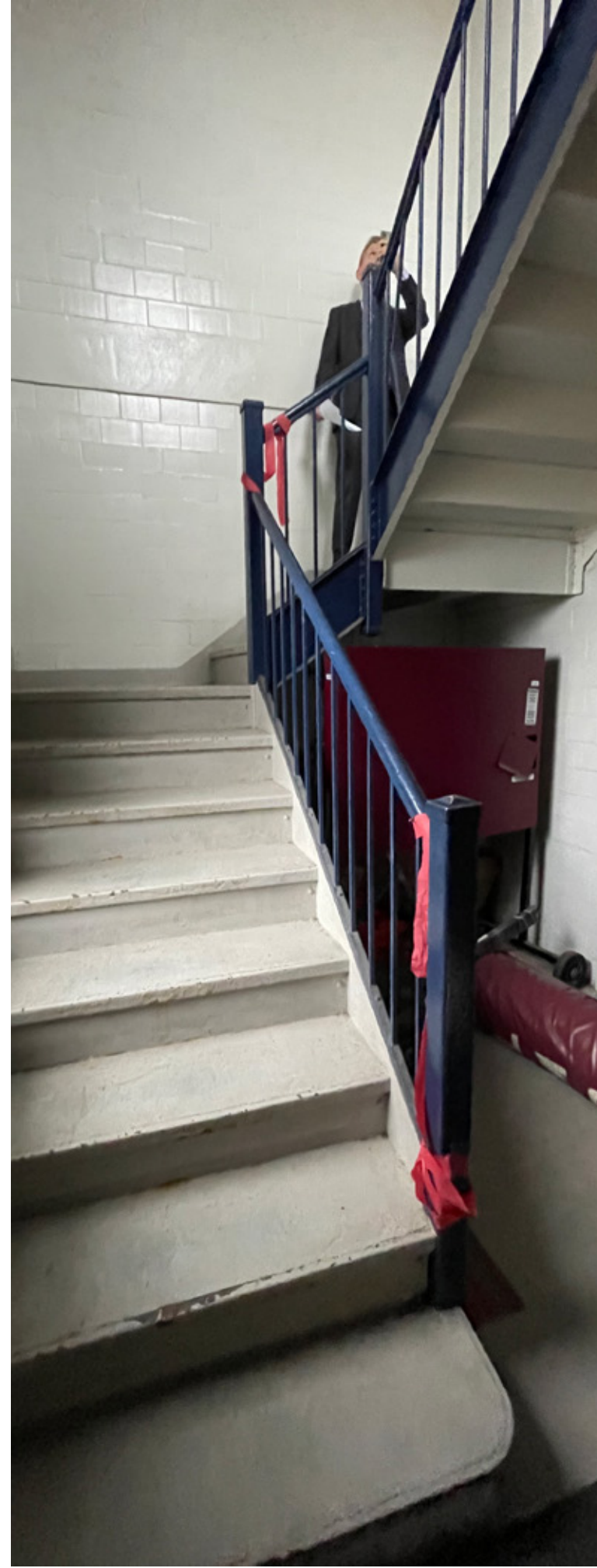
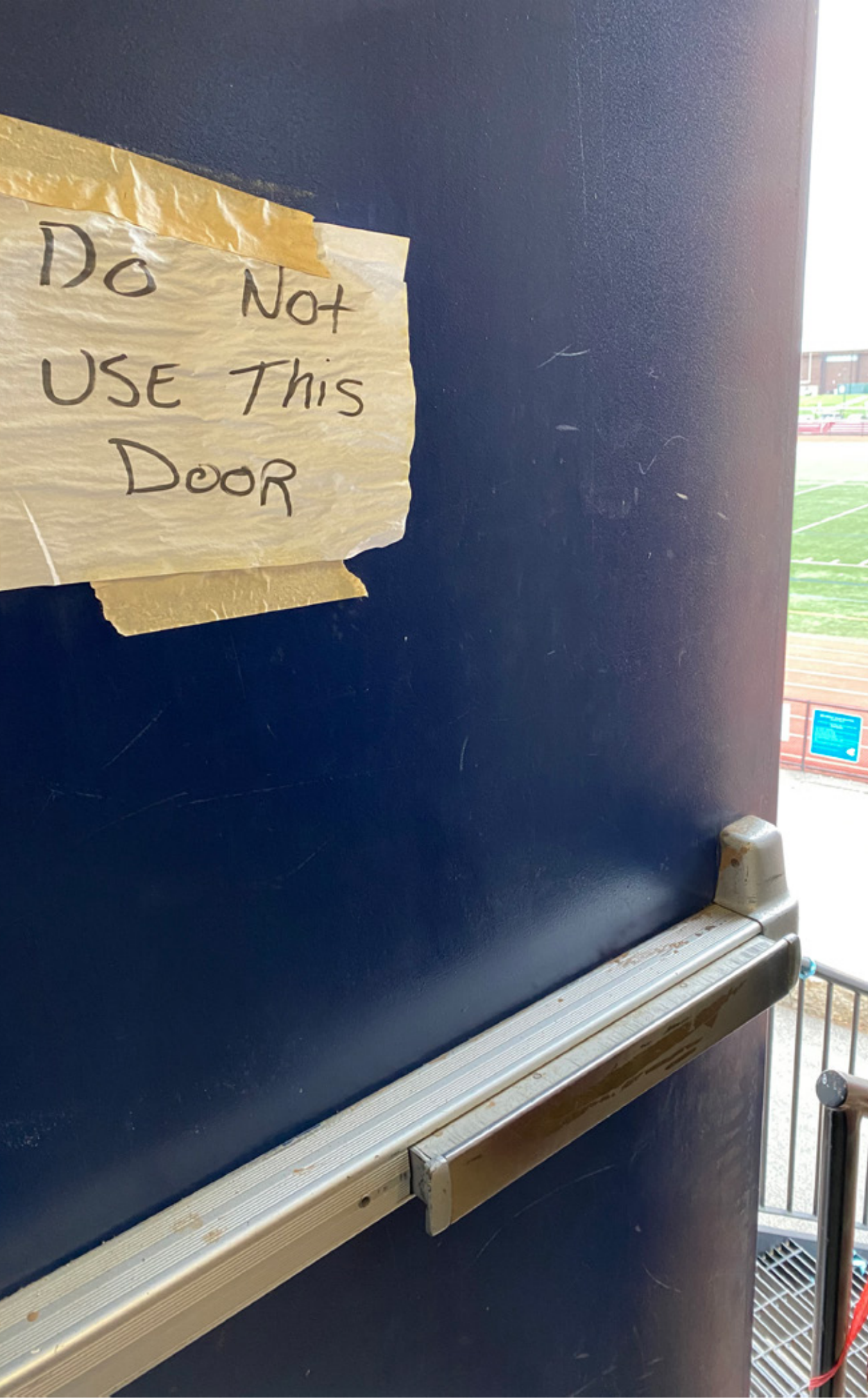
Built in 1932





Deficiencies

- Extensive cracked masonry
- Roof failure
- Broken glass windows
- Non-ADA compliant
- Hazardous entry



Deficiencies

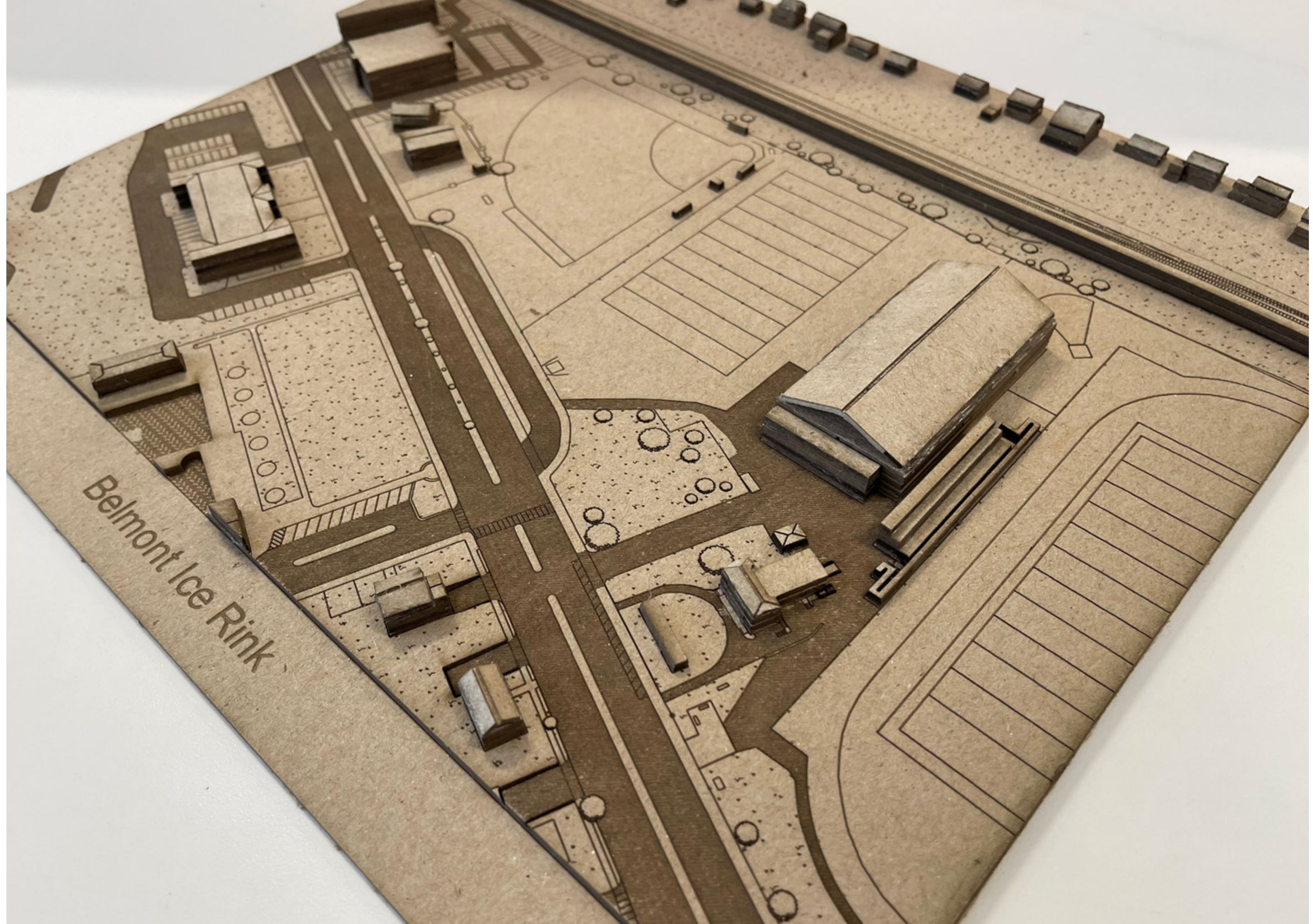
- Compromised egress
- Non-ADA compliant
- Equipment obsolete

Areas to Consider



PHYSICAL MODEL

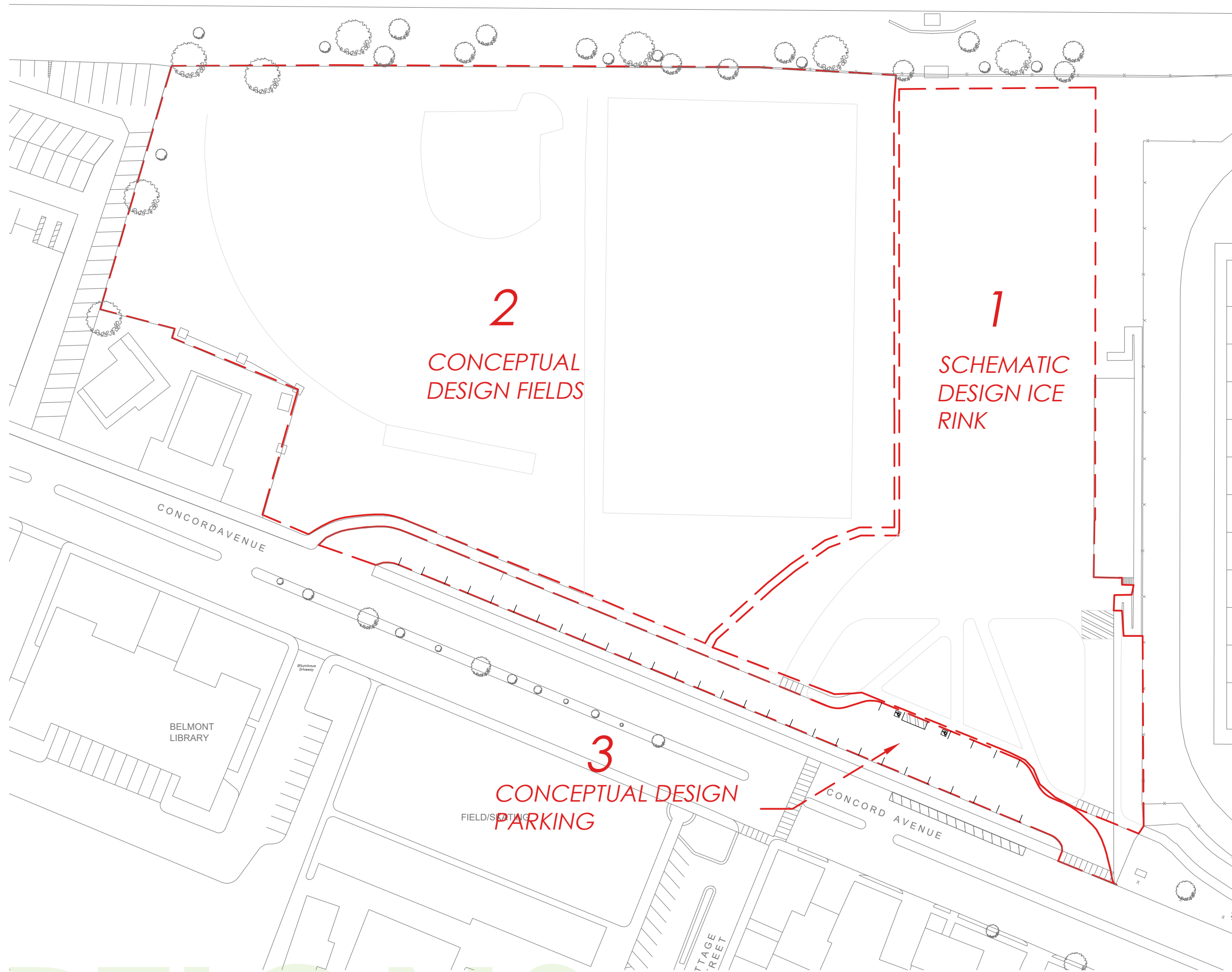
Existing Conditions



Belmont Ice Rink

PHYSICAL MODEL

Existing Conditions



Program Overview

EXISTING PROGRAM

SKIP VIGLIROLO ICE RINK

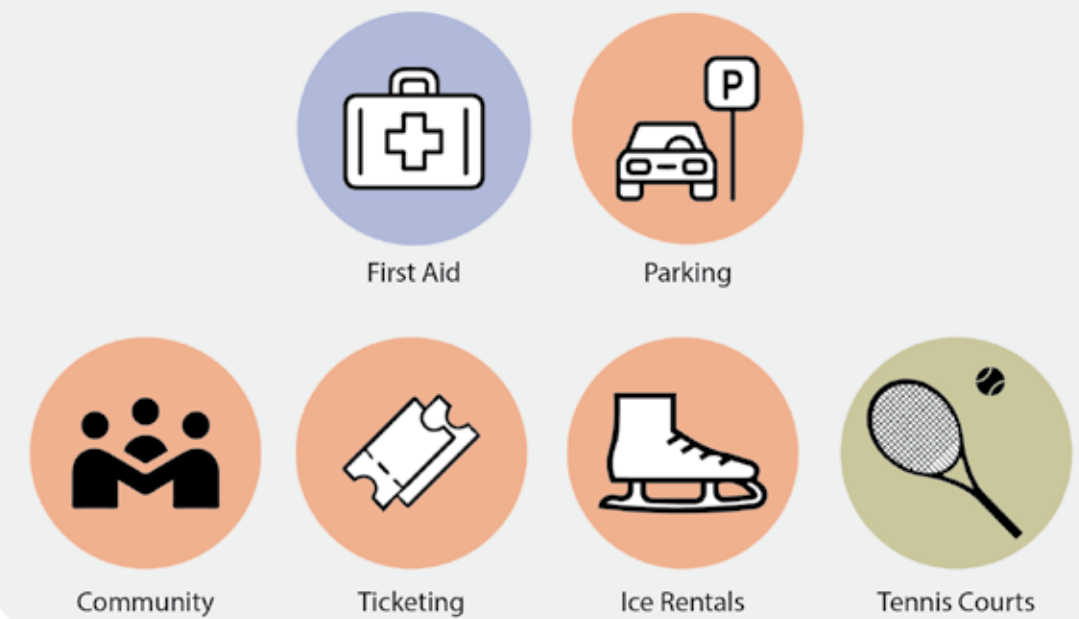


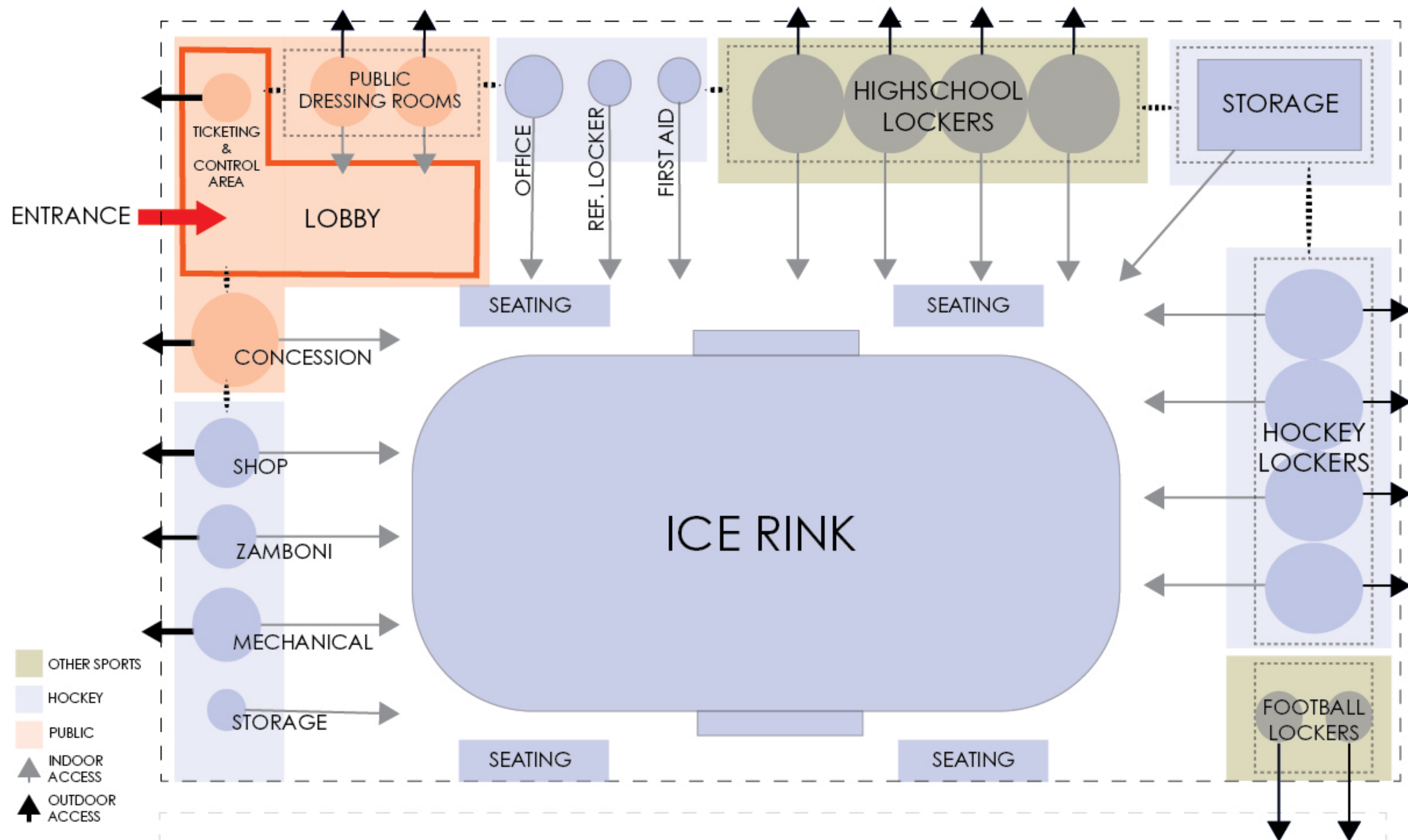
WHITE FIELD HOUSE



NEW PROGRAM

OPTIONAL





Net-Zero Energy Goal

Potential for Town Wide Net Zero Approach

Energy Reducing Features - 1 of 2

- Schematic Design: The Green Engineer
- Renovate / re-use / recycle
- Use of modular cubes to make ice
- Use waste heat to prevent ground from freezing
- Thermally super-insulated building envelope: floor, walls, and roof
- Natural daylight being brought into rink for lighting and views
- Capturing embodied energy of existing building components

Energy Reducing Features - 2 of 2

- Fossil fuel free building and systems
- All electric building and site
- Photovoltaic panels on roof
- Closed loop geothermal wells for heating and cooling
- Demand control ventilation via CO2 monitoring
- Use of heat pumps even without geothermal
- Desiccant based dehumidifiers
- Minimize impact on green space development

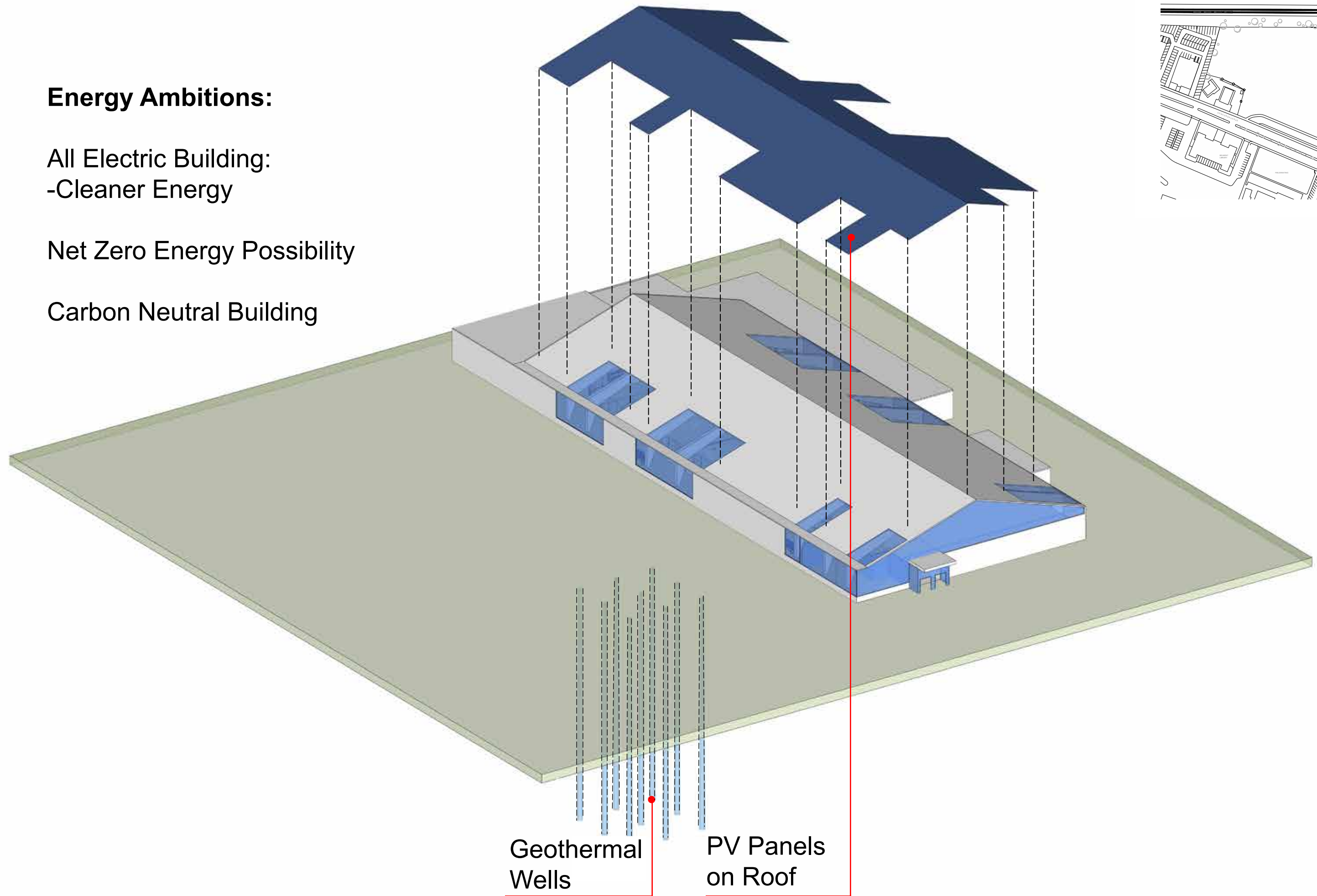
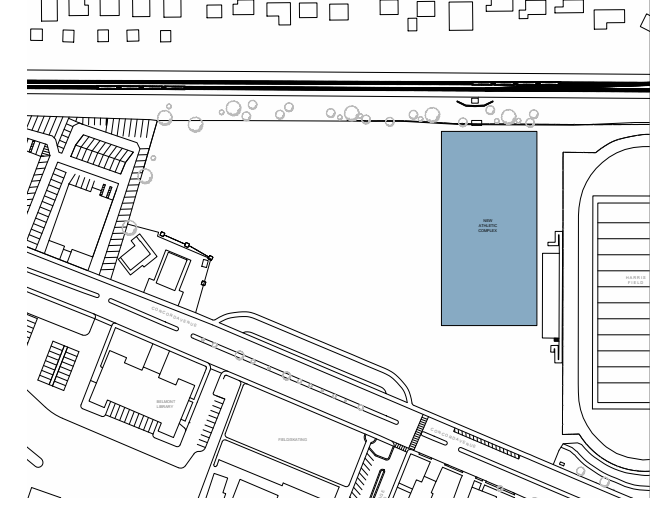
Energy Ambitions:

All Electric Building:

-Cleaner Energy

Net Zero Energy Possibility

Carbon Neutral Building



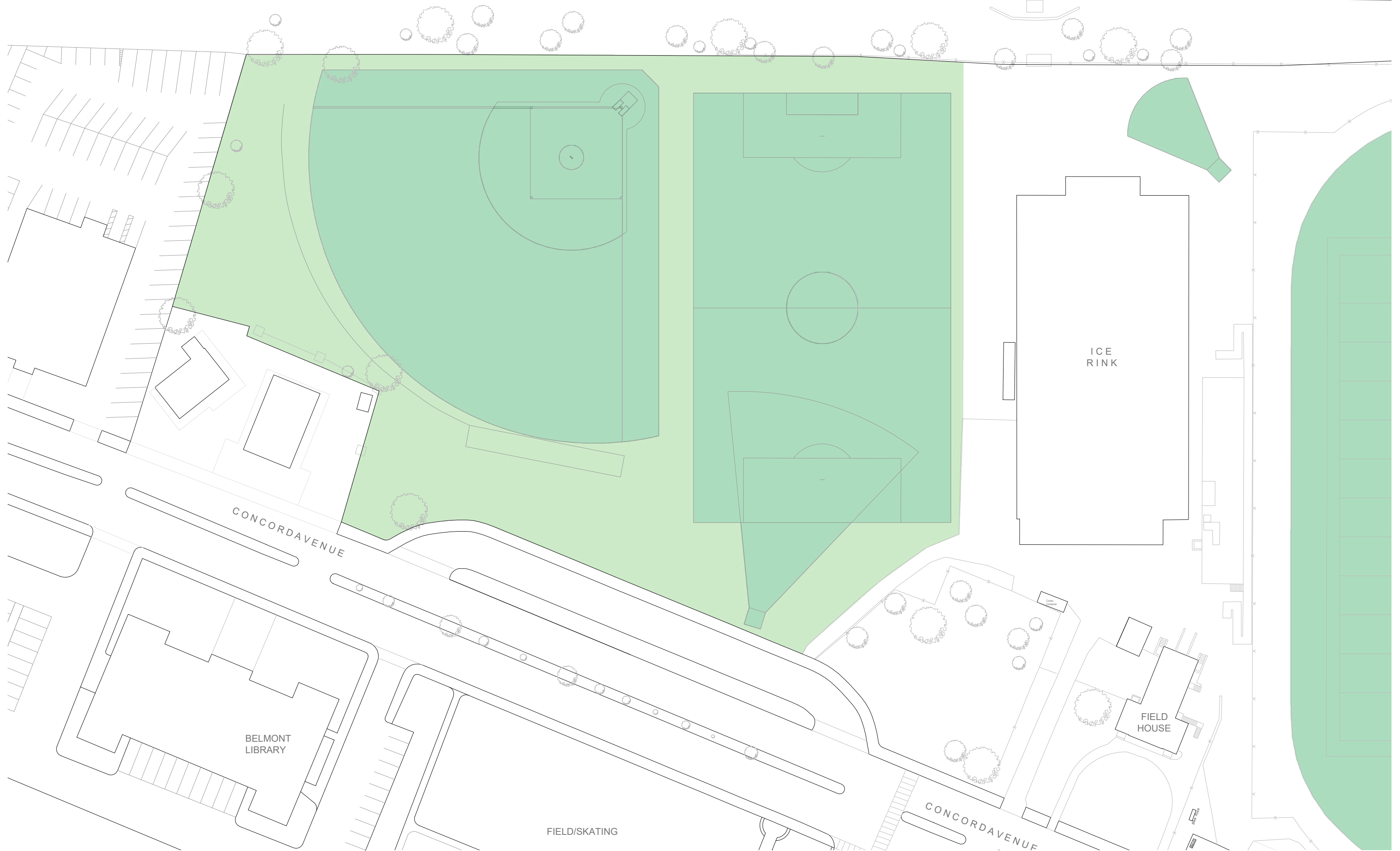
Geothermal
Wells

PV Panels
on Roof

Net-Zero Energy Goal

SITE OPTION

Renovate and Expand



CONCORD AVENUE

BELMONT
LIBRARY

FIELD/SKATING

ICE
RINK

FIELD
HOUSE

CONCORD AVENUE

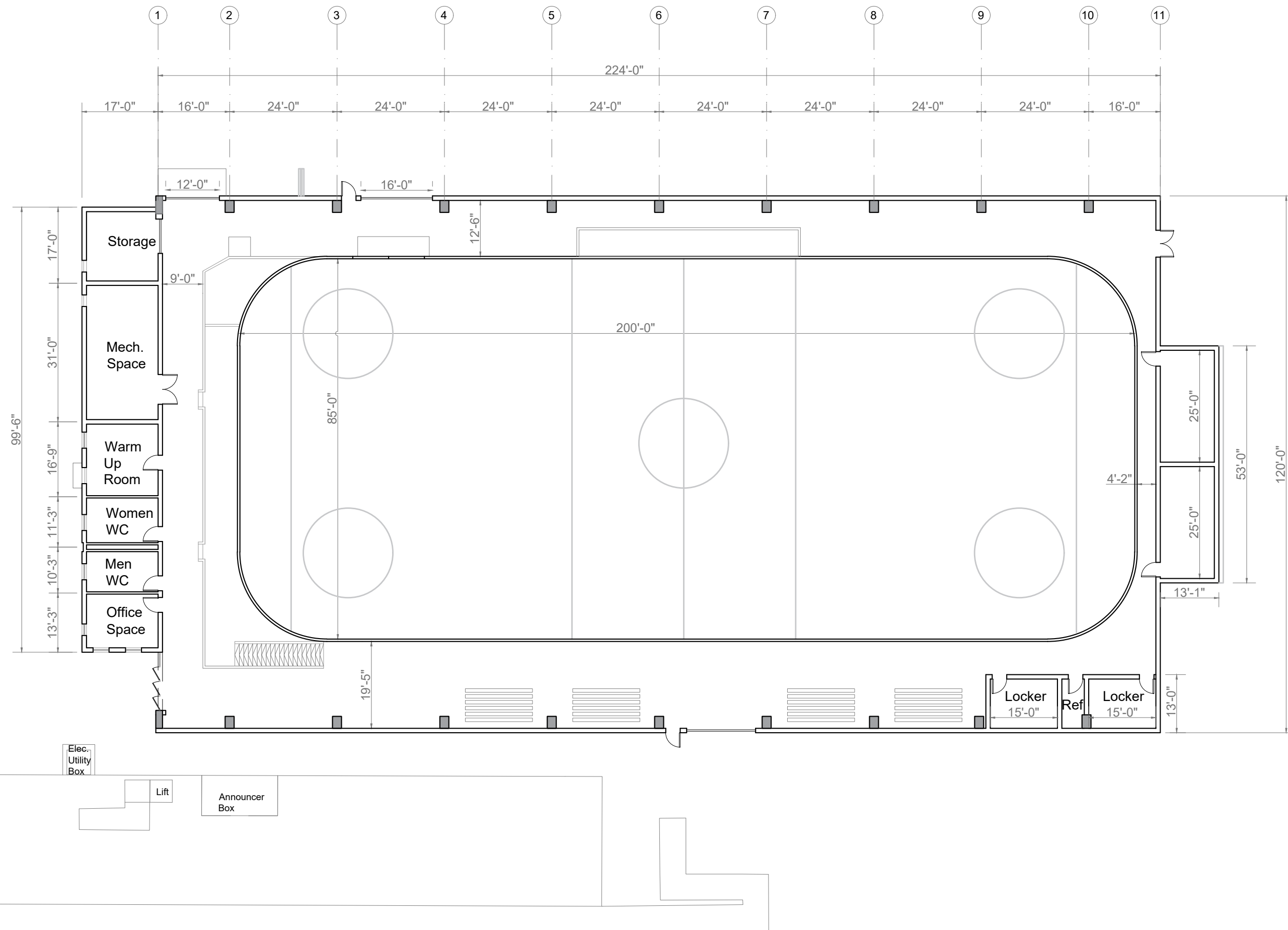
TGAS
THE GALANTE ARCHITECTURE STUDIO

CURRENT STATE

Existing Site Plan

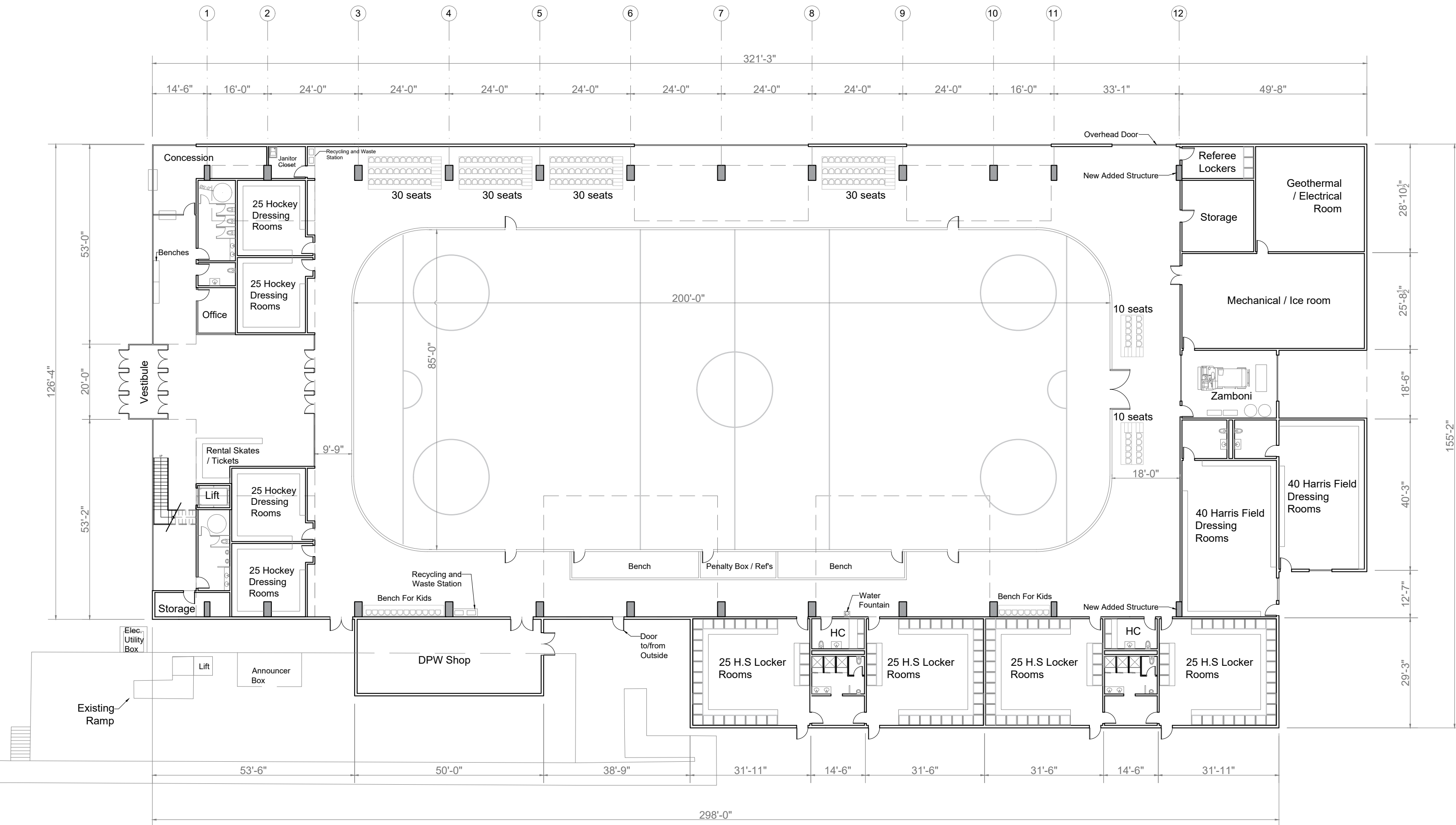






Existing Floor Plan ± 29,600 sf

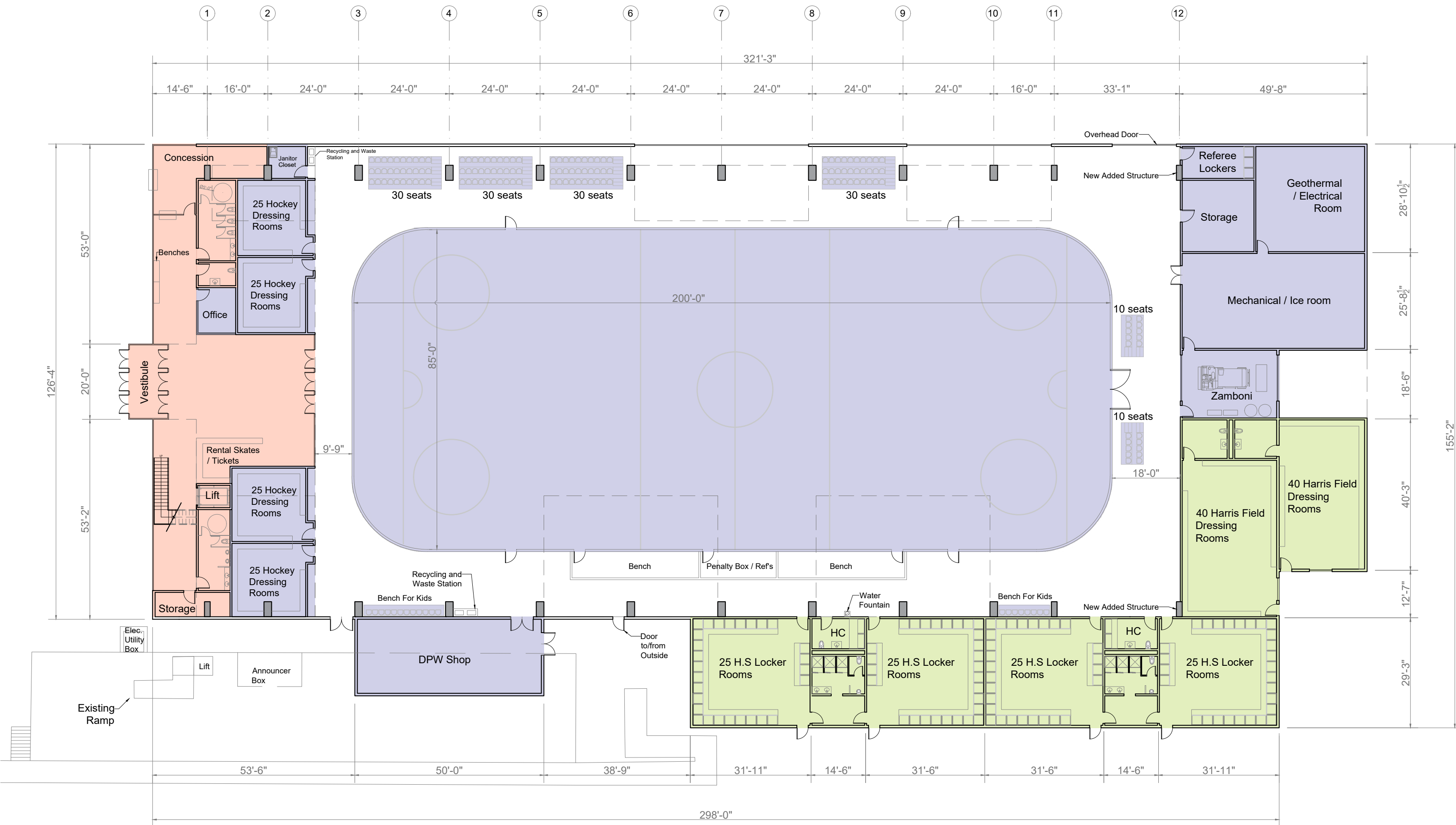




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Renovate and Expand - Ground Floor Plan ± 45,922 sf

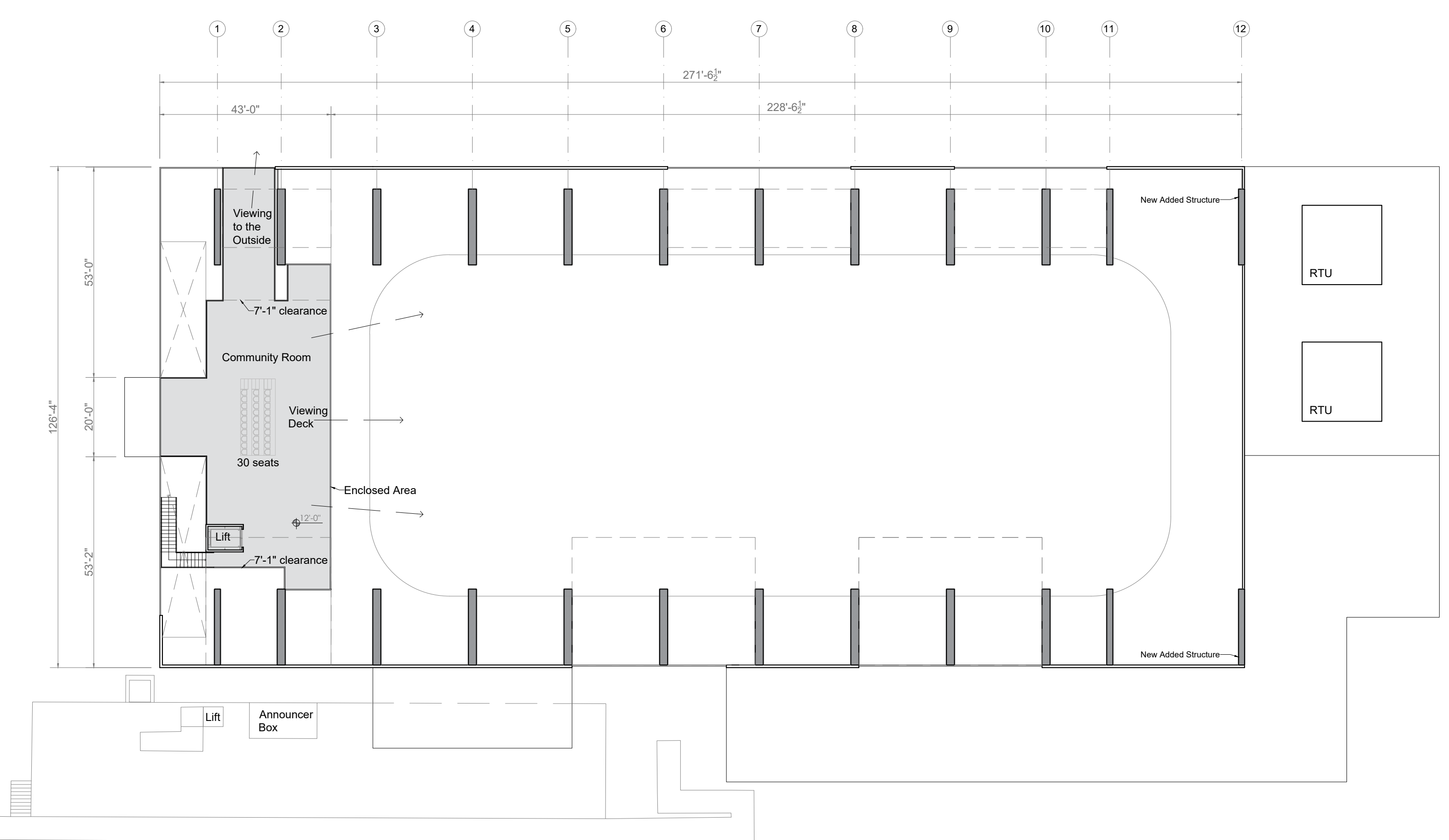




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Renovate and Expand - Program Plan

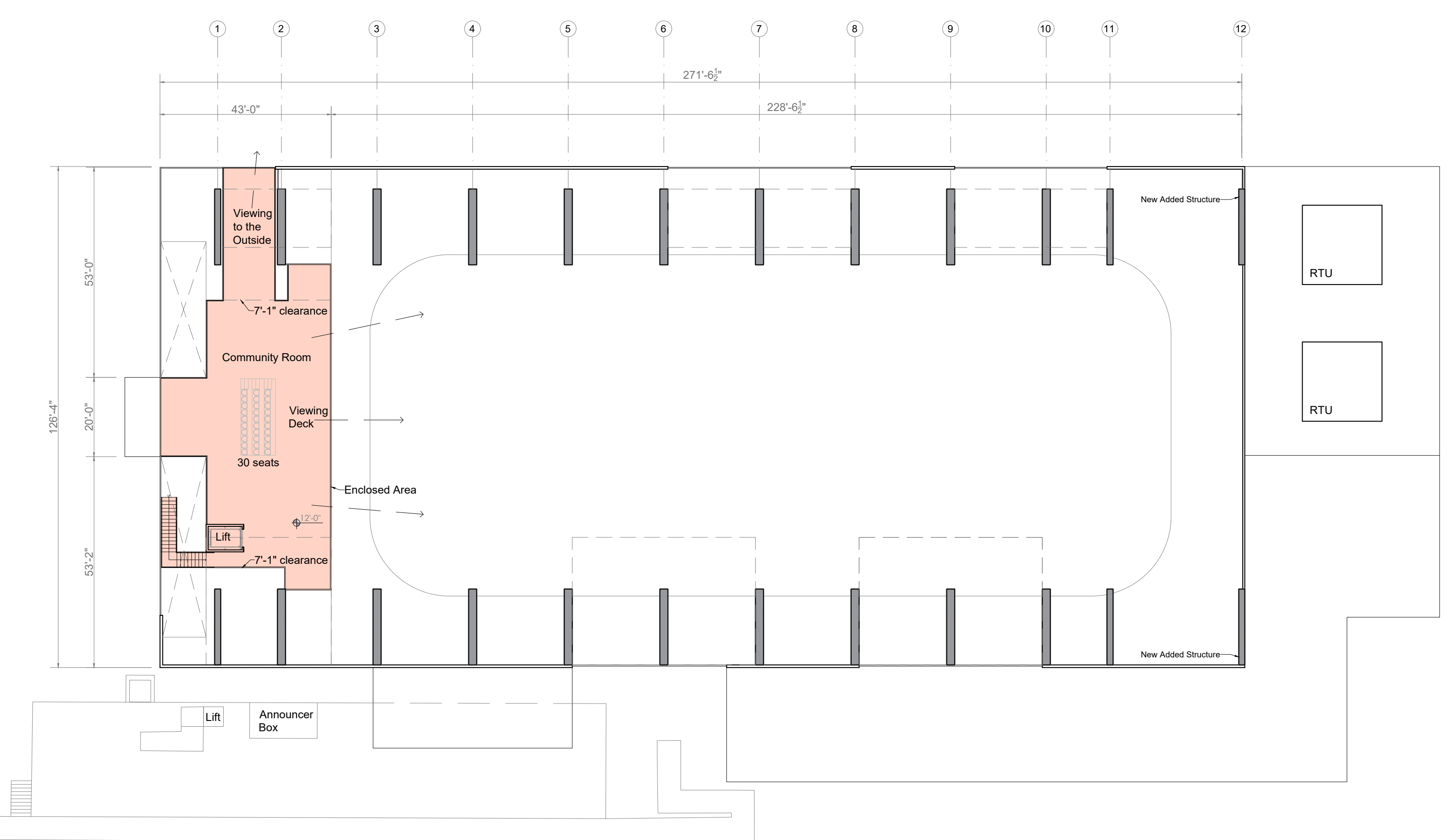




PROPOSED

Renovate and Expand - Mezzanine ± 2,960 sf

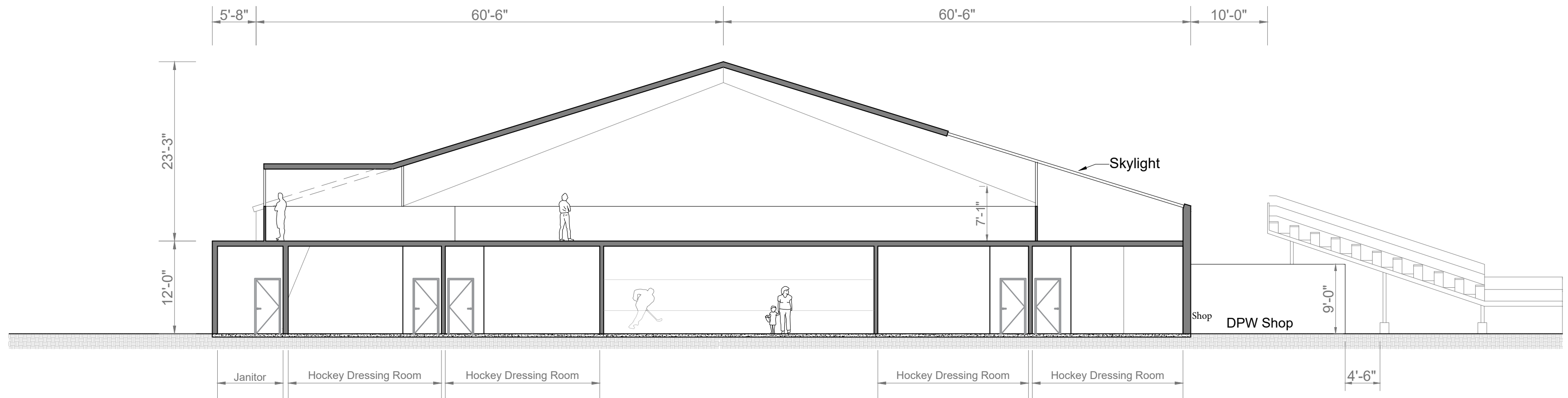




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Renovate and Expand - Program Plan

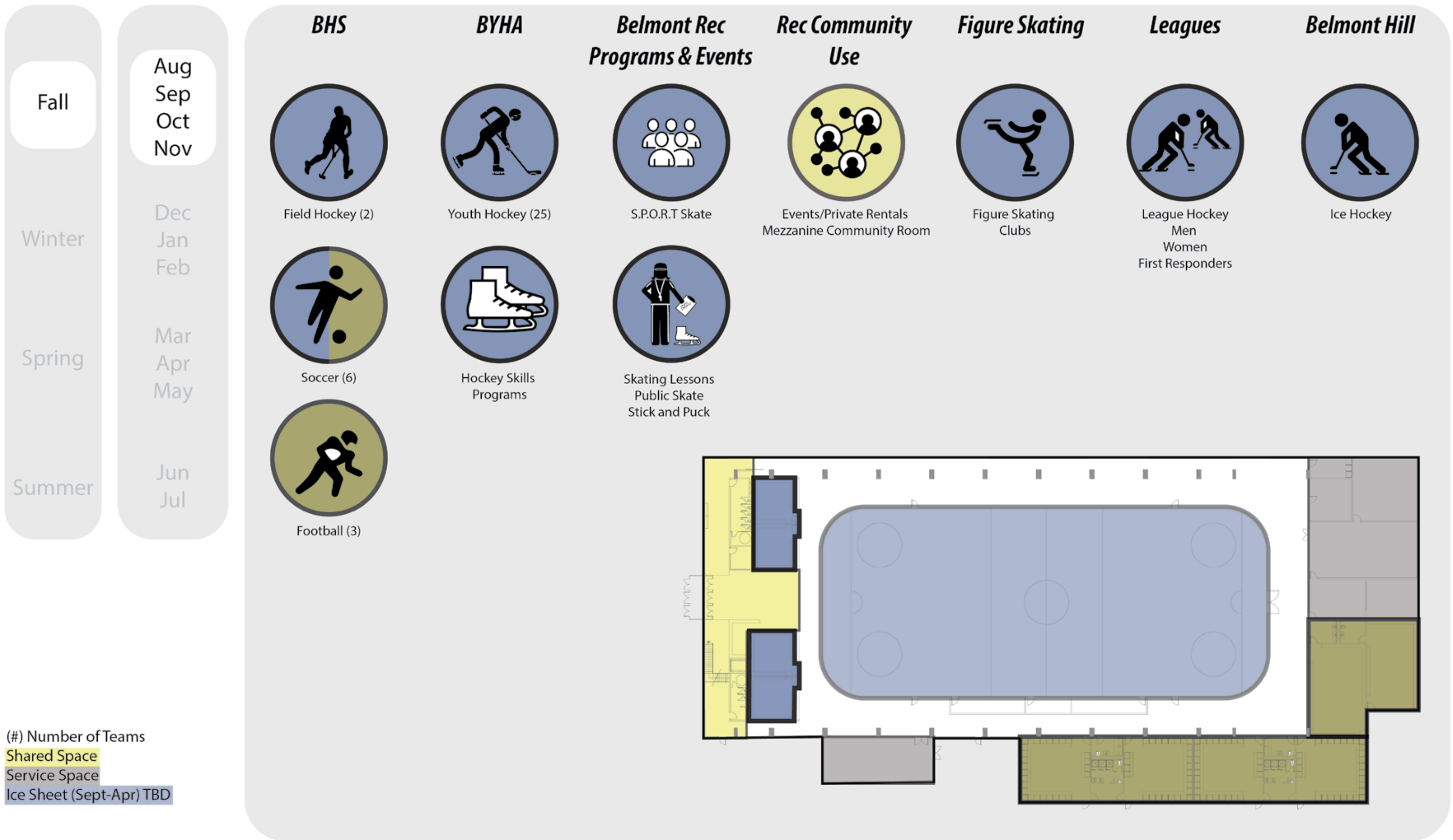




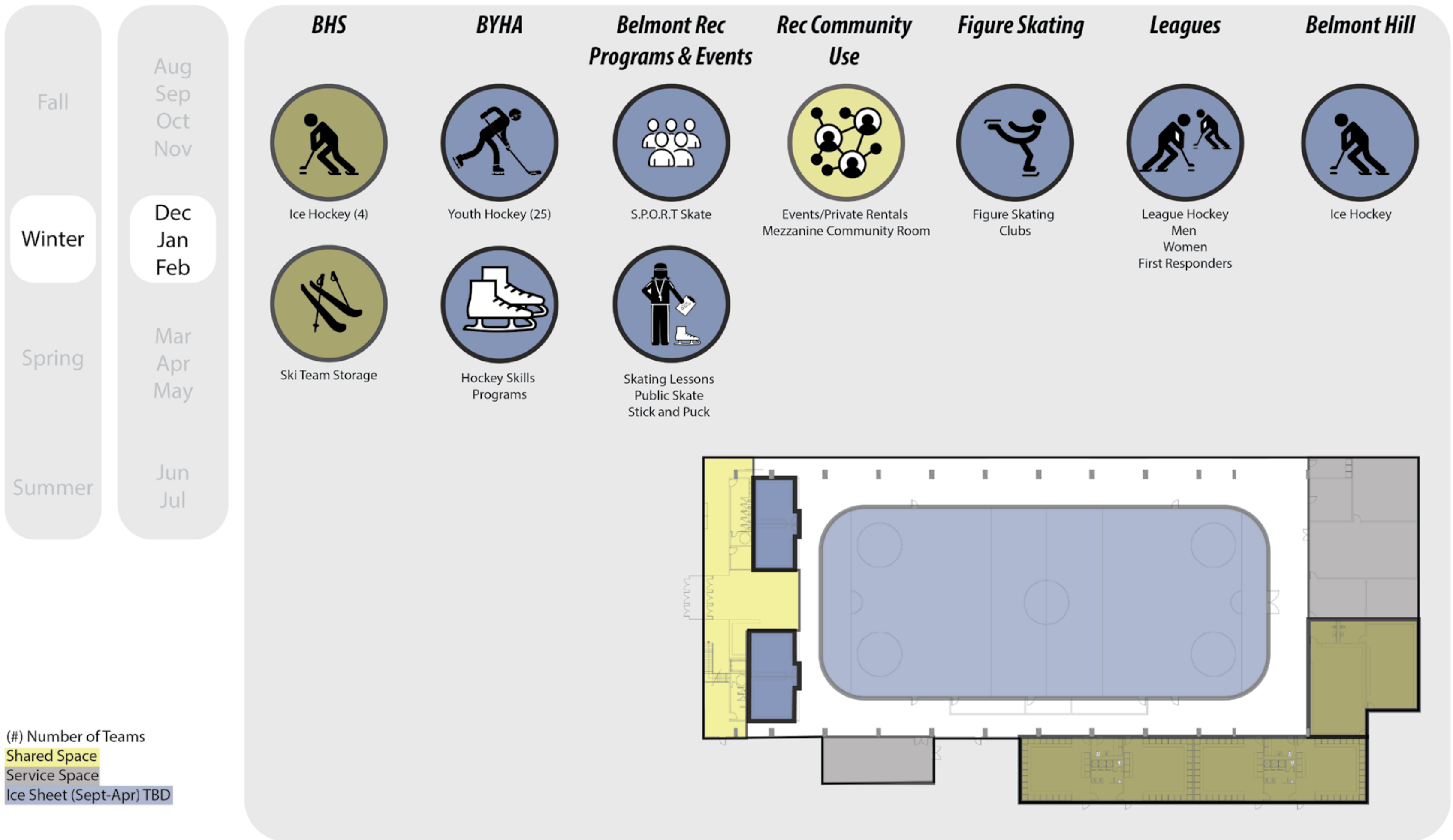
Renovate and Expand - Conceptual Section

Building Use

Program Matrix

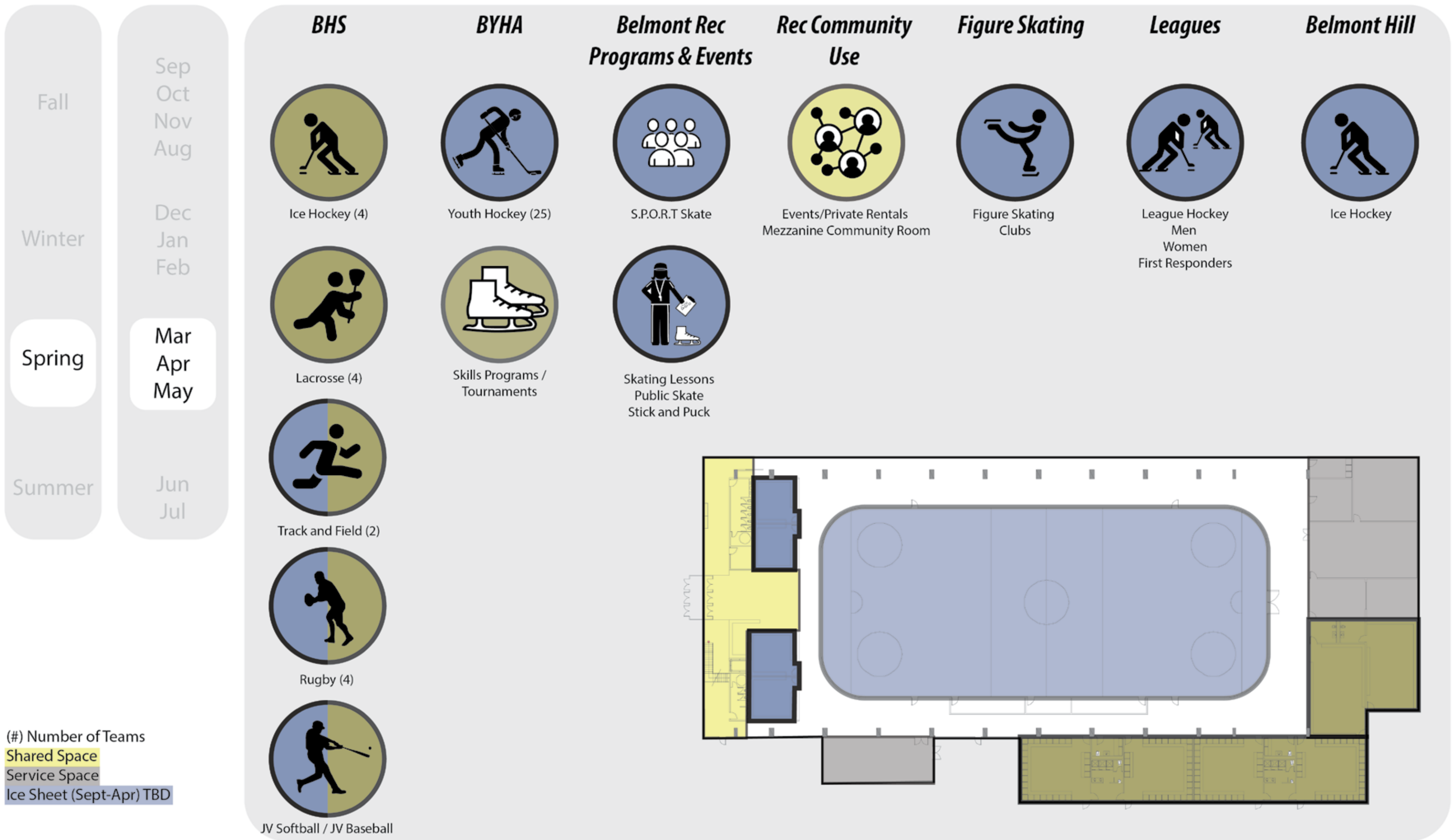


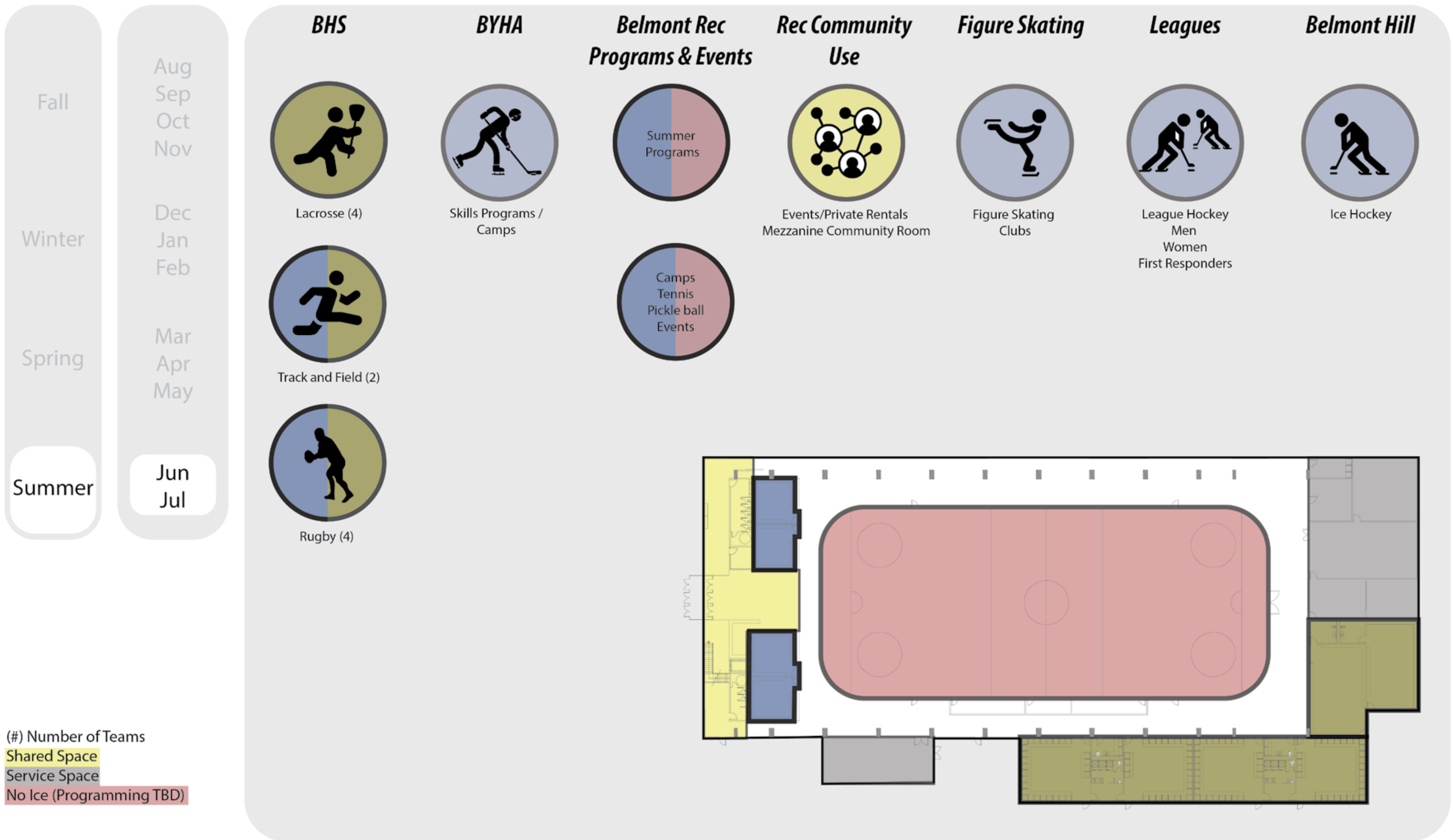
(#) Number of Teams
 Shared Space
 Service Space
 Ice Sheet (Sept-Apr) TBD



(#) Number of Teams
 Shared Space
 Service Space
 Ice Sheet (Sept-Apr) TBD

Winter: Dec, Jan, Feb





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THE GALANTE ARCHITECTURE STUDIO

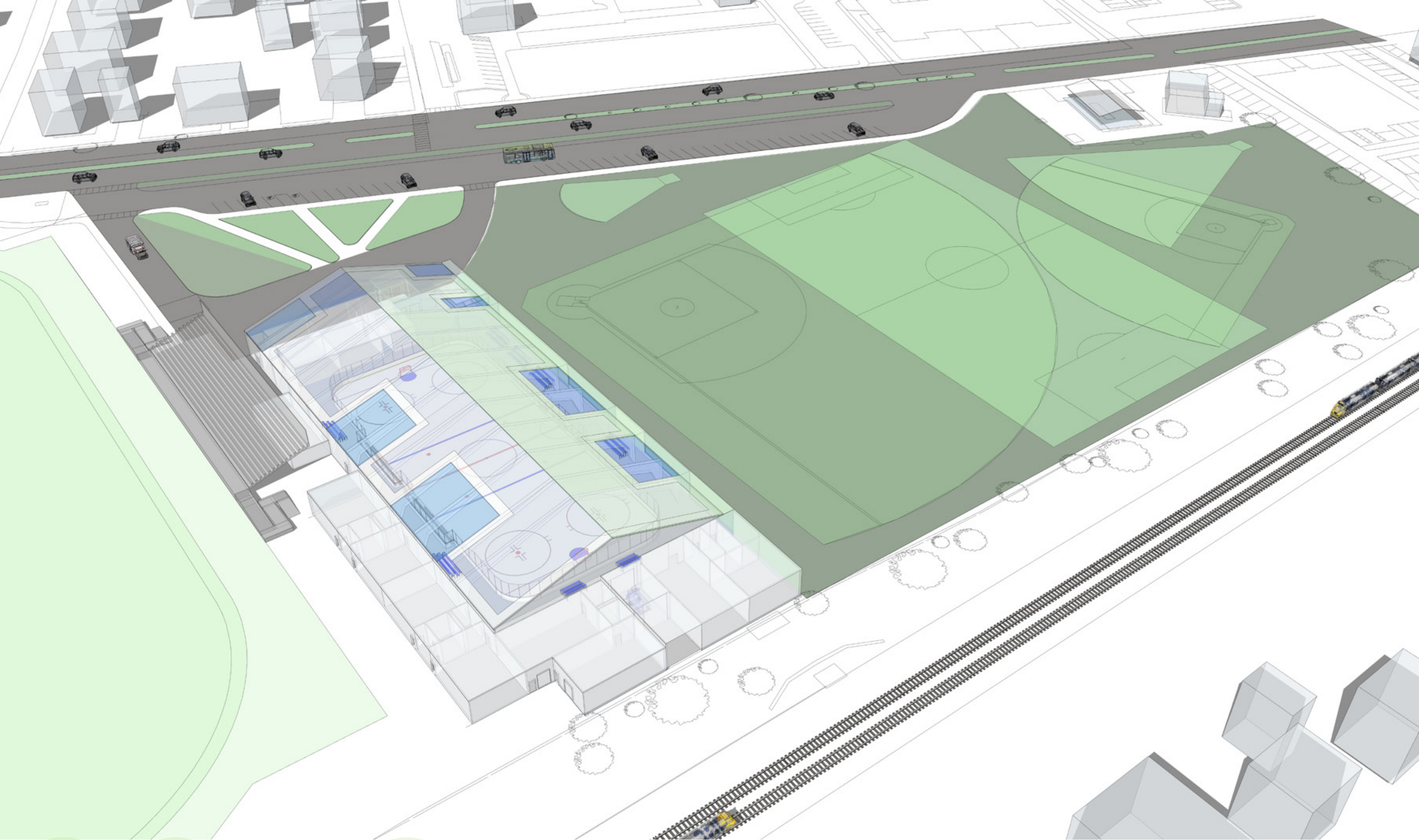
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Renovate and Expand

Conceptual Views





CONCEPTUAL

Conceptual Views