

July 14, 2021

Nauset Regional High School

Design Development Phase

School Building Committee Meeting



Massachusetts School Building Authority



AGENDA

I. Call to Order/Agenda Changes/Recording Notification

II. Citizens Speak

III. Priority Business

A. Review, Discuss, Vote Daedalus /CHA OPM update and organizational chart and new member to the OPM team and their roles, Joe Sullivan presents

B. Project status / review presentation materials with Flansburgh Kent Kovacs, Jorge Cruz

C. Project Updates from Daedalus, Joe Sullivan

D. Questions about the project

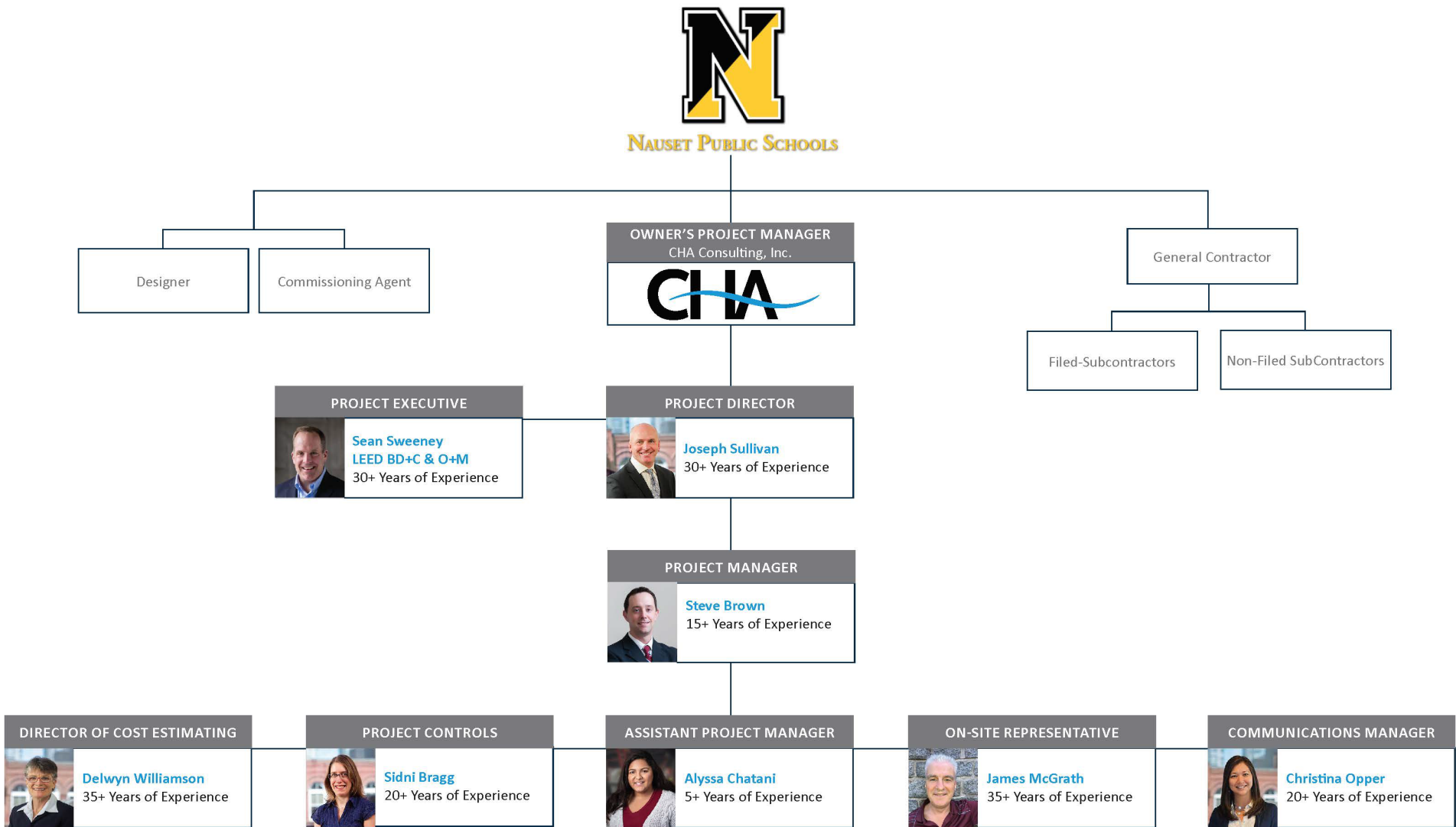
E. Payment of Bills, Jim Nowack

IV. Approval of Minutes

Approve the minutes of 5-26-2021

V. Adjournment

OPM TEAM UPDATE



AGENDA

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DESIGN DEVELOPMENT PHASE

Progress Report

- ✓ MSBA Project Funding Agreement (PFA) complete
- Ongoing coordination with Lincoln School project on the procurement of modular buildings to be used for temporary classrooms.
- Development and review of OPM and Designer contract amendments for design and construction administration services.
- Procurement of moving company services to begin planning for packing and moving to temporary classrooms in Summer 2022.
- Flansburgh and their design team have additional Educational Logistic Working Group meetings scheduled throughout July and August.
- Site Surveys and Civil Engineering have begun.

Milestones - Design

- **Design Development (DD)**

SBC Review/Approval Meeting Date:

MSBA DD Submission Date:

April 2021 – September 2021

September 15, 2021

September 16, 2021

- **60% Construction Documents (60CD)**

SBC Review/Approval Meeting Date:

MSBA 60% CD Submission Date:

October 2021 – December 2021

December 15, 2021 (*tentative*)

December 16, 2021 (*tentative*)

- **90% Construction Documents (90CD)**

SBC Review/Approval Meeting Date:

MSBA 90% CD Submission Date:

January 2022 – March 2022

TBD

TBD

Milestones – Prequalification & Bidding

- **Temporary Classrooms** **November 2021 – February 2022**
Preparing buildings for relocation, site preparation, moving/transport, construction
- **Prequalification of GCs and Filed Subs** **December 2021 – January 2022**
Advertising, submissions, review and scoring, notification of prequalification
- **Bidding of GCs and Filed Subs** **May 2022 – July 2022**
Advertising, submissions, verification and DCAMM file review, notification of award

Upcoming Meetings

- **School Building Committee** **July 14, 2021**
OPM Update: Team, Schedule, Budget
Designer Update: Phasing Plan, Modular Classrooms,
Floor Plans, BIM Coordination, Mechanical System
Overview
- **School Building Committee** **August 4, 2021**
- **School Building Committee** **August 25, 2021**
- **School Building Committee** **September 15, 2021**
DD Submission Package Approval Vote Required
- **School Building Committee** **October 6, 2021**
- **School Building Committee** **October 27, 2021**

BUDGET

as of 6/30/2021

	Project Budget (PFA June 2021)	Current Project Budget (subject to MSBA BRR approval)	Committed Amount (under contract)	Amount Paid to Date	Balance to Finish (Current Budget vs. Paid to Date)
Feasibility Study	\$1,300,000	\$1,300,000	\$1,346,714	\$1,346,714	-
Administration	\$122,000	\$122,000	-	-	\$122,000
Owners Project Manager	\$3,470,000	\$3,470,000	-	-	\$3,470,000
Architecture & Design	\$10,325,000	\$10,325,000	-	-	\$10,325,000
Construction	\$104,708,165	\$104,708,165	-	-	\$104,708,165
Misc. Project Costs	\$3,445,000	\$3,445,000	-	-	\$3,445,000
FF&E	\$2,805,500	\$2,805,500	-	-	\$2,805,500
Contingency	\$5,650,000	\$5,650,000	-	-	\$5,650,000
TOTAL PROJECT BUDGET	\$131,825,665	\$131,825,665	-	-	\$131,825,665

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PROJECT MANAGEMENT

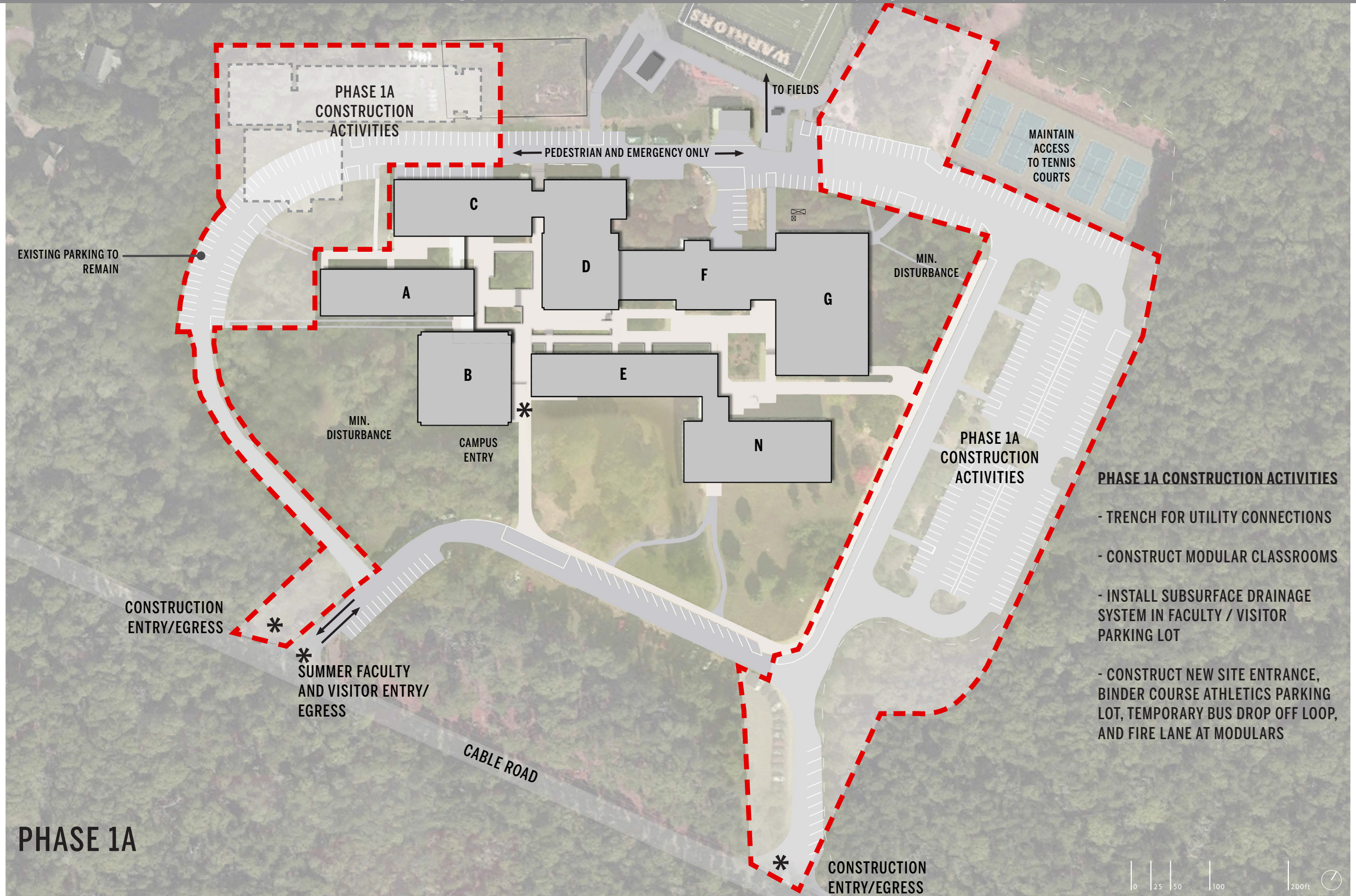


Massachusetts School Building Authority

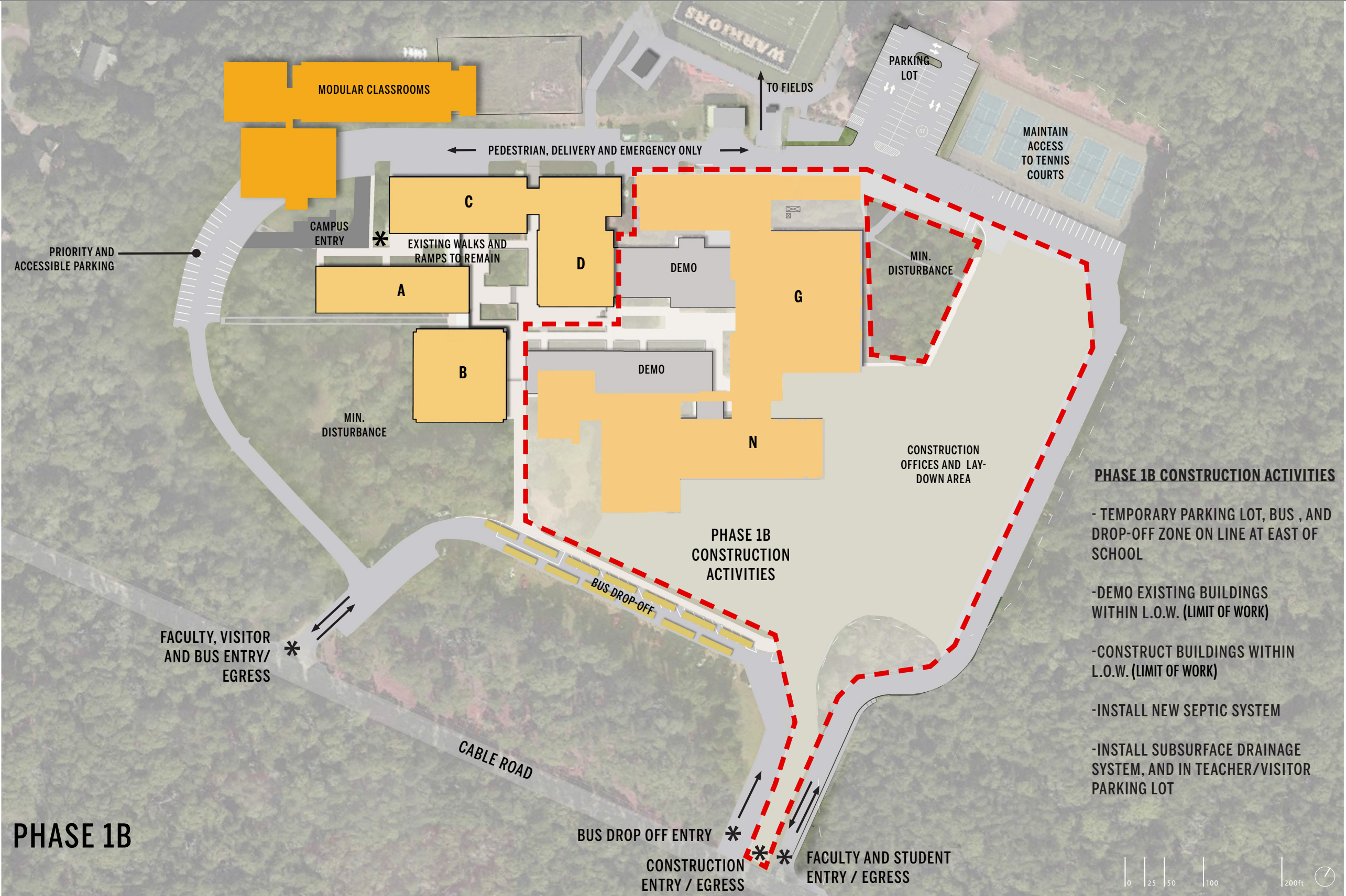
FLANSBURGH

Agenda

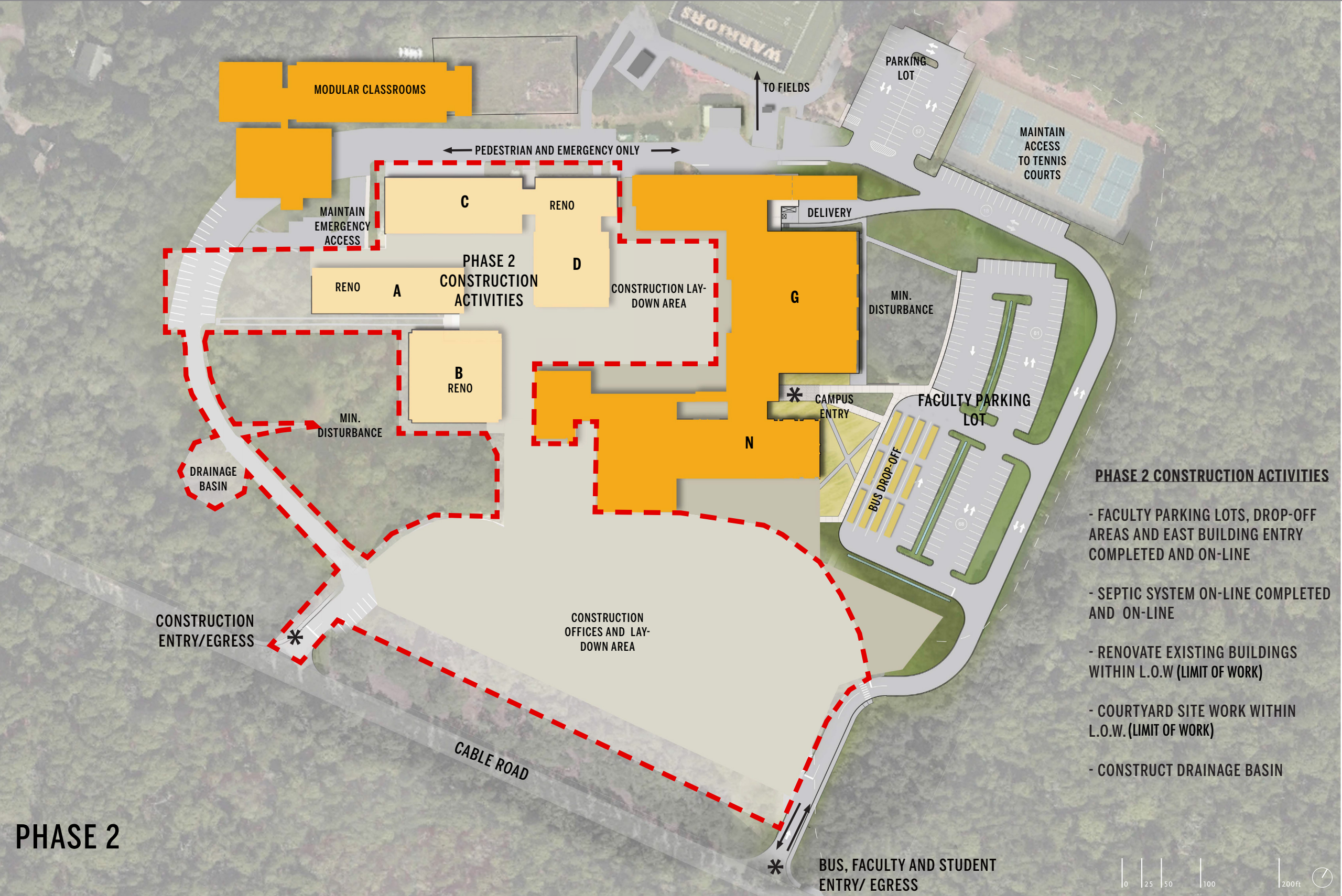
- Phasing Plan Review
- Modular Classrooms
- Floor Plan Update
- BIM Coordination
- Mechanical System Overview



Phasing Plans - Phase 1B (September 2022 - May 2024)



Phasing Plans - Phase 2 (May 2024 - May 2025)



Phasing Plans - Phase 3 (May 2025 - August 2025)

* Removal of Modular Classrooms and finish site work



Phasing Plans - Completed Site



Modular Review

This architectural floor plan illustrates the layout of a school building, featuring a variety of rooms and their respective square footages. The plan is organized into several distinct sections:

- Top Section:** A long horizontal strip of rooms including multiple classrooms (CR) of 850 SqFt, a Nurse's office (380 SqFt, highlighted in green), and a large OT/PT room (600 SqFt, highlighted in green).
- Middle Section:** A central area containing a large Library (1,115 SqFt), a Teacher Workroom (810 SqFt), an IT room (280 SqFt), an Elect. room (120 SqFt), a Conference Room (440 SqFt), and an Office (650 SqFt).
- Bottom Section:** A large area designated for classrooms, with labels for "CLASSROOM", "TEACH. PLAN", "SMALL GROUP", and "OFF TEST". It also includes restrooms labeled "TOILET".
- Left Section:** A cluster of rooms including a large CR (1,200 SqFt), several smaller CRs (300, 150, 180, 830 SqFt), and a CR (510 SqFt).

The plan also includes various site markers and dimensions, such as "60.50", "60.7", "62.92", and "61.92", indicating specific locations and measurements within the building's footprint.

Department Meetings to Date

DATE:	MEETING:
May 5, 2021	<ul style="list-style-type: none">• Dining Service• Visual and Applied Arts (Auditorium, Stage, Music, Chorus, Drama)• Athletics/ P.E.• Science & Math
May 17, 2021	<ul style="list-style-type: none">• Fine & Applied Arts• English & History• Technology & Computer Science• Special Needs
May 18, 2021	<ul style="list-style-type: none">• World Language & S.W.S.• Math• Administration
June 2, 2021	<ul style="list-style-type: none">• Custodial• Research Center• Biotechnology• Fine and Applied Arts
June 3, 2021	<ul style="list-style-type: none">• Vanderweil Engineers
June 23, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group
June 24, 2021	<ul style="list-style-type: none">• Facilities Working Group• Technology Working Group
June 30, 2021	<ul style="list-style-type: none">• Site Planning, Hydrant Location, Phasing Logistics

Floor Plan Review

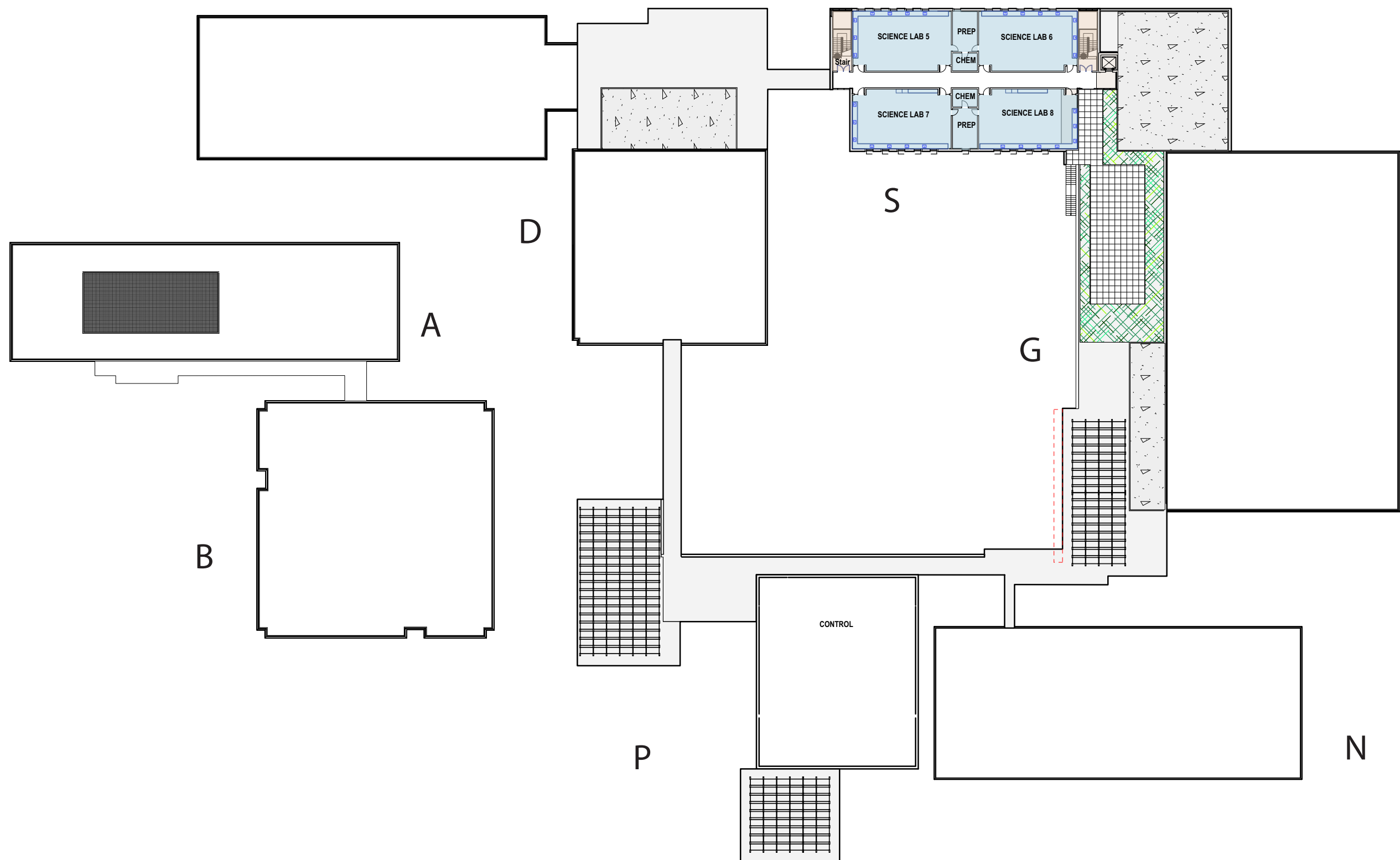
Overall First Floor Reference Plan



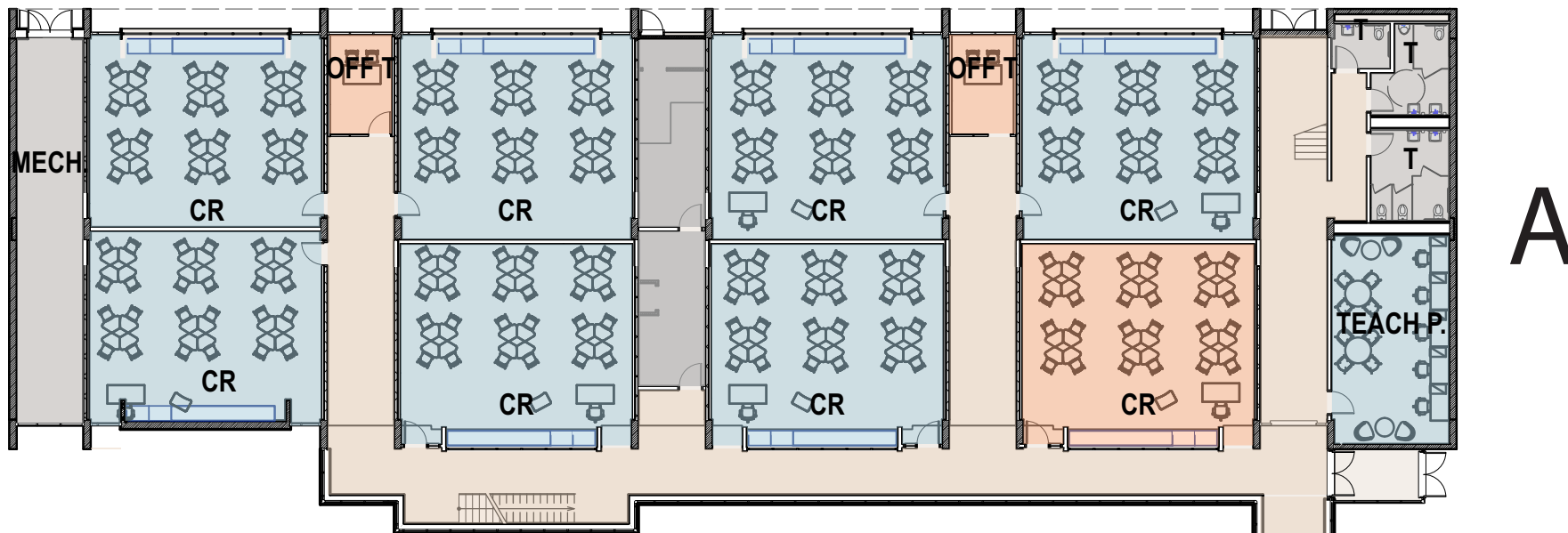
Overall Second Floor Reference Plan



Overall Third Floor Reference Plan

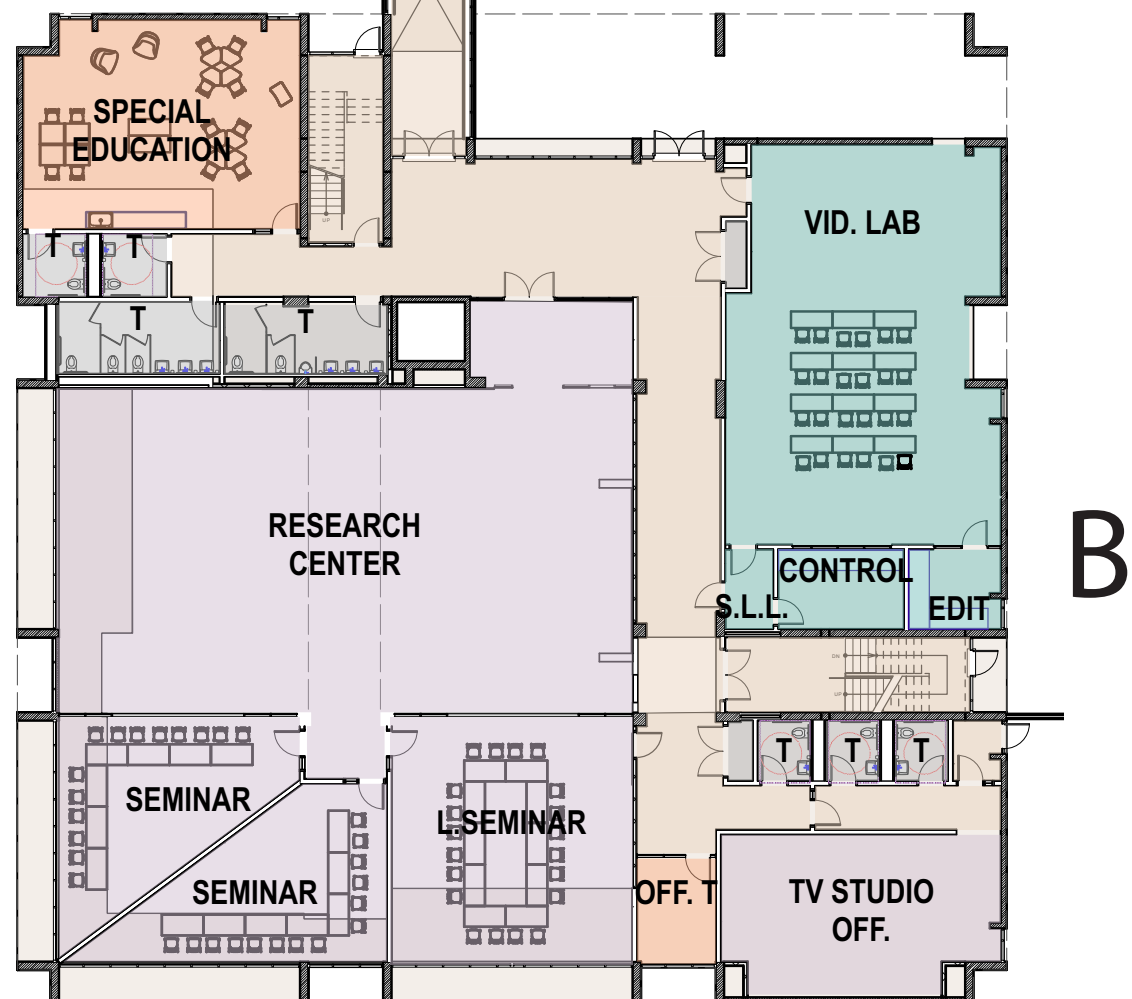


Enlarged First Floor Plan A&B

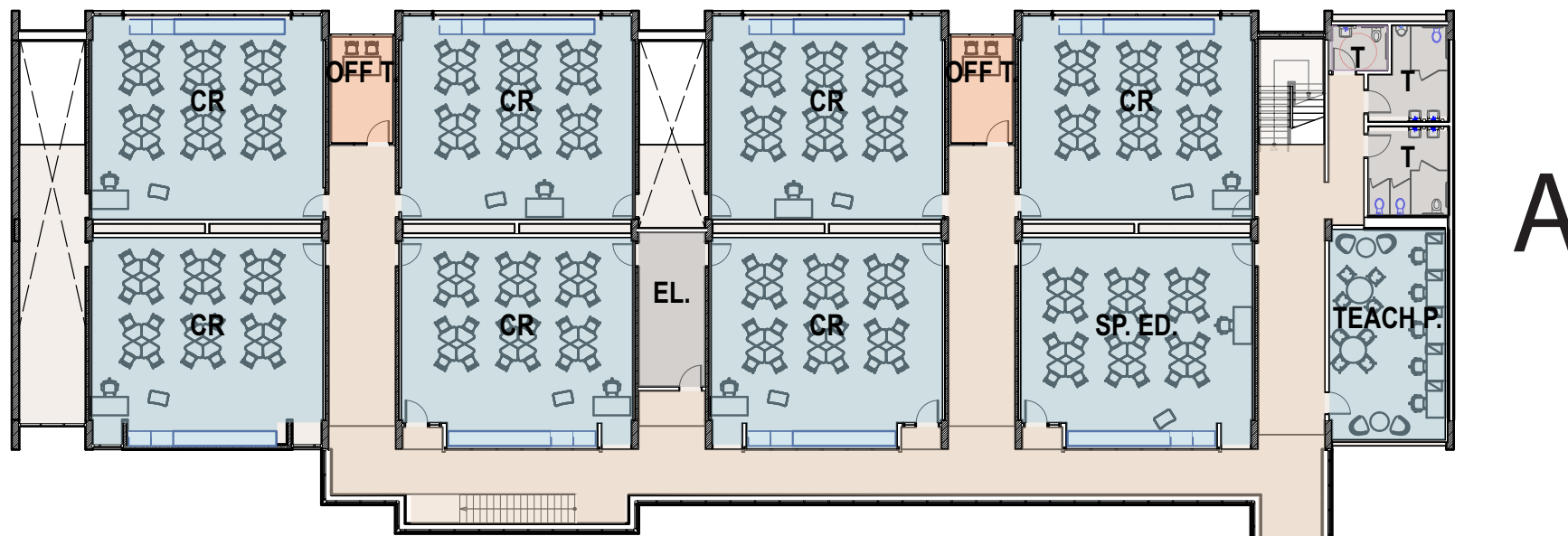


Programming Highlights

- Provide glass enclosed corridor for classroom access at Building A
- Raised floor level of Research Center to be at the main level of entry to comply with ADA
- Provide separate entry for Lower Cape TV Studio outside of security perimeter



Enlarged Second Floor Plan A&B

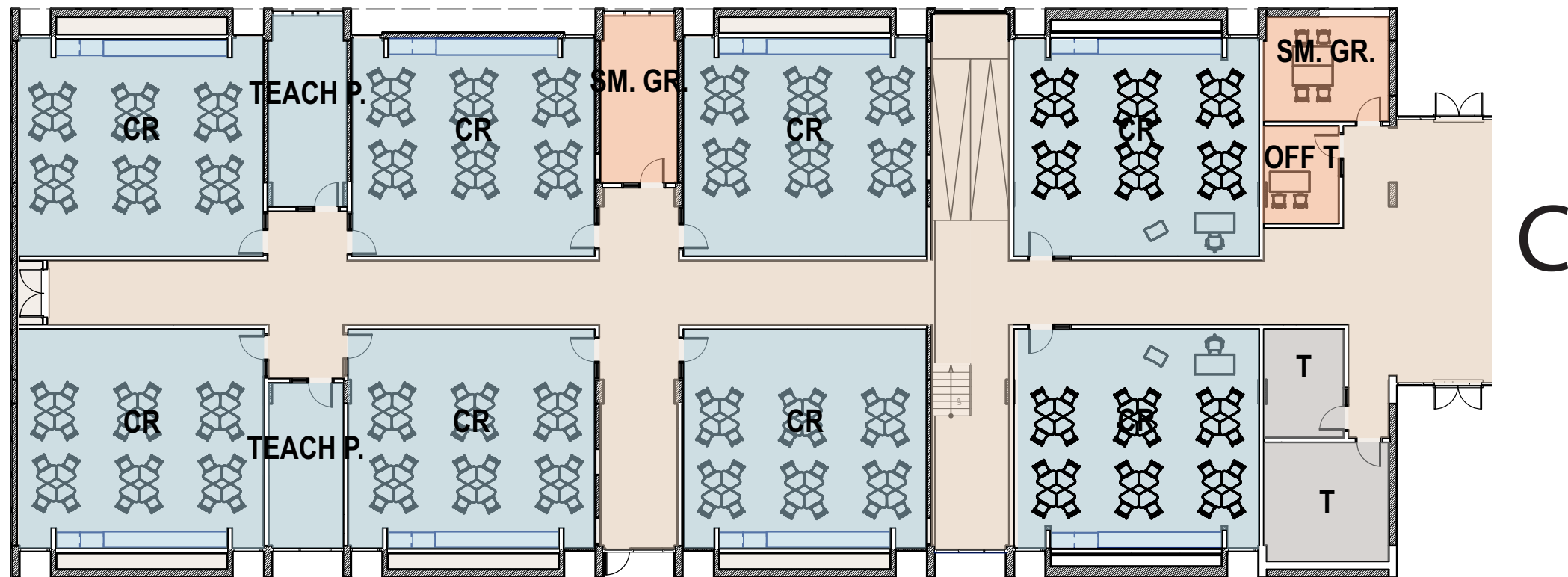


Programming Highlights

- Provide glass enclosed corridor for classroom access at Building A
- Enclosed walkway between Buildings A & B
- Glass enclosed bridge overlook to Research Center
- Interior Mechanical Room at Building B eliminates need for roof top HVAC units



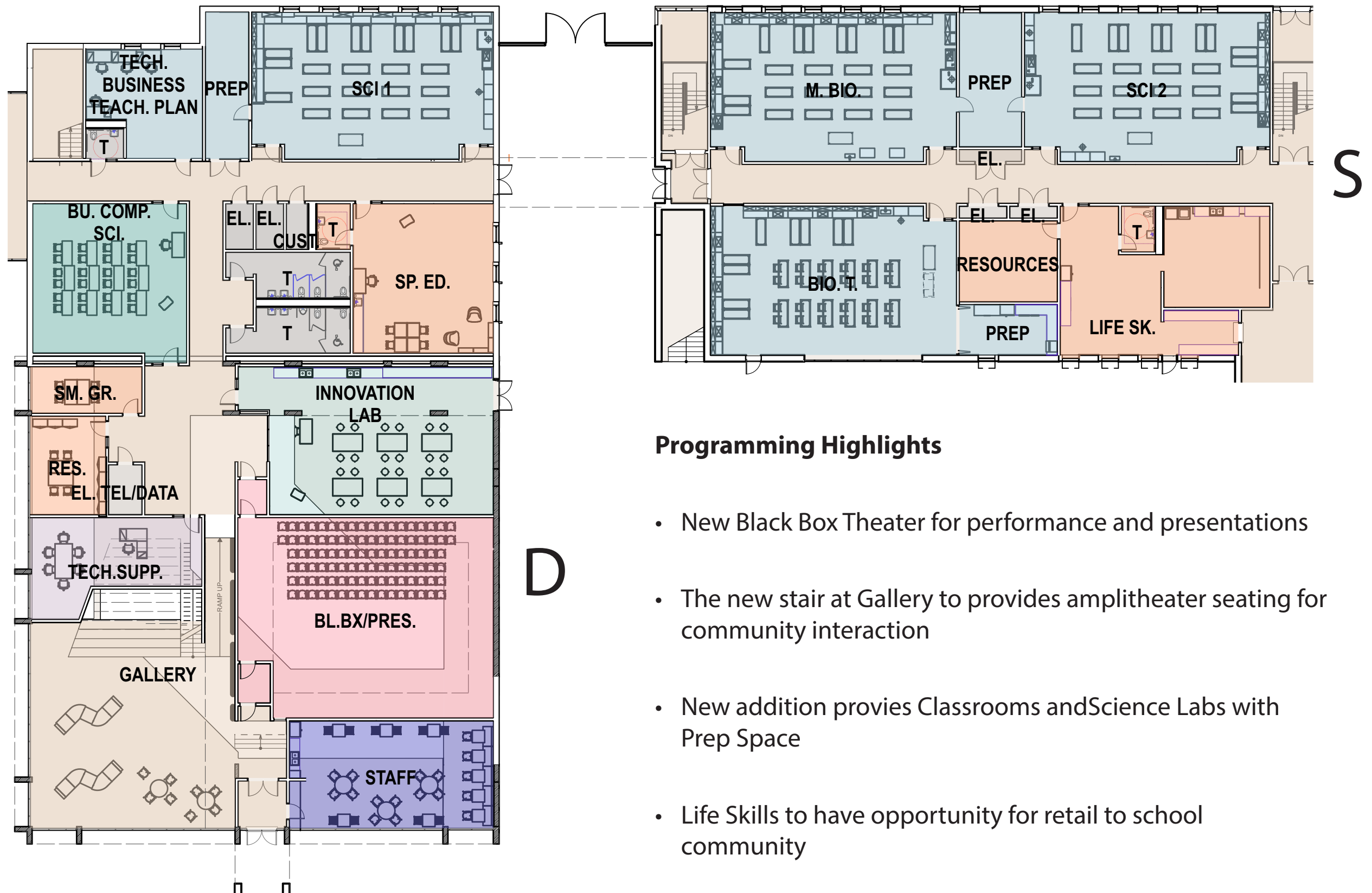
Enlarged First Floor Plan C



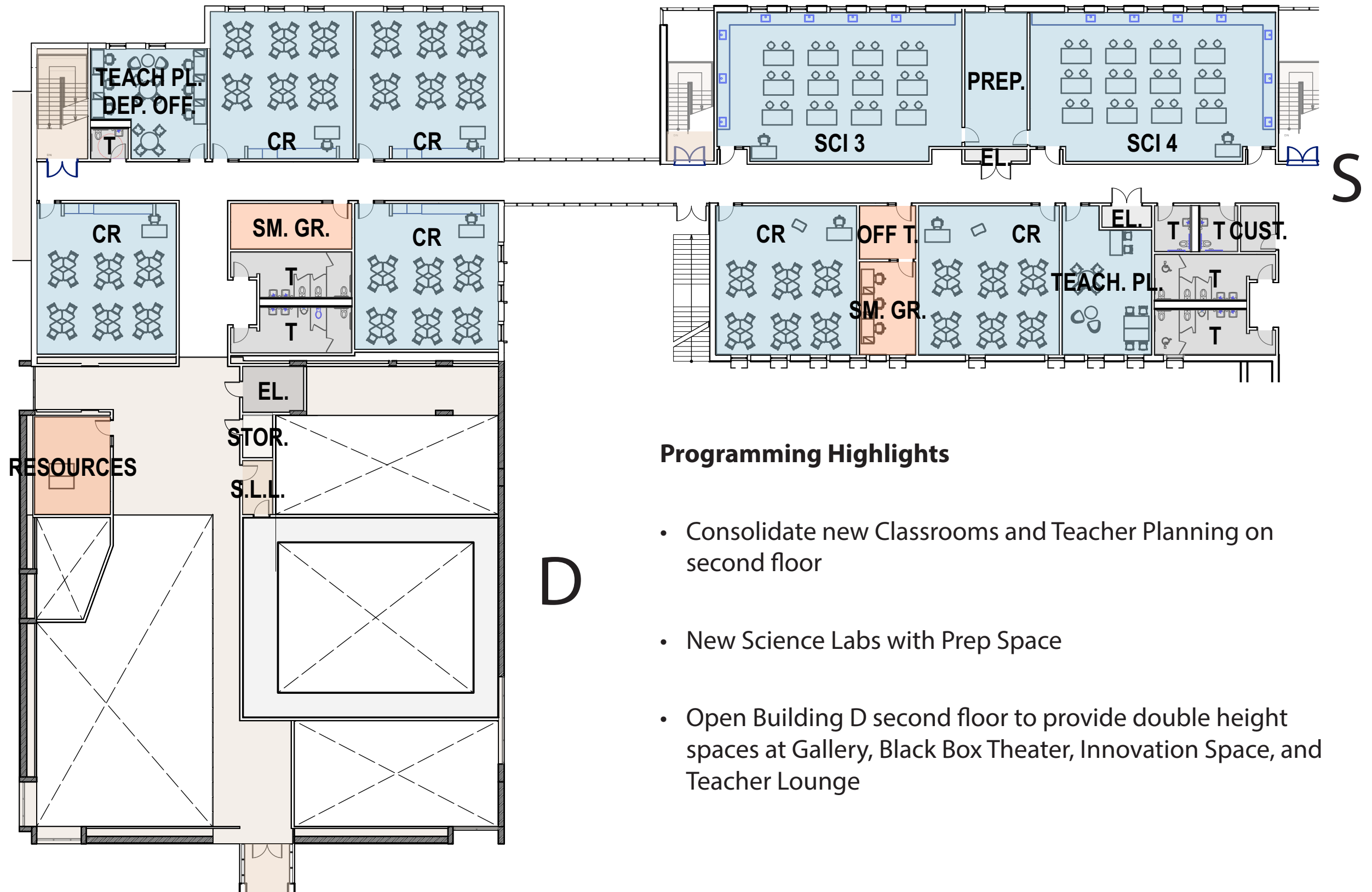
Programming Highlights

- Existing large art rooms converted to classrooms
- Interior hallway provides for classroom access
- Ramp connects lower and upper levels

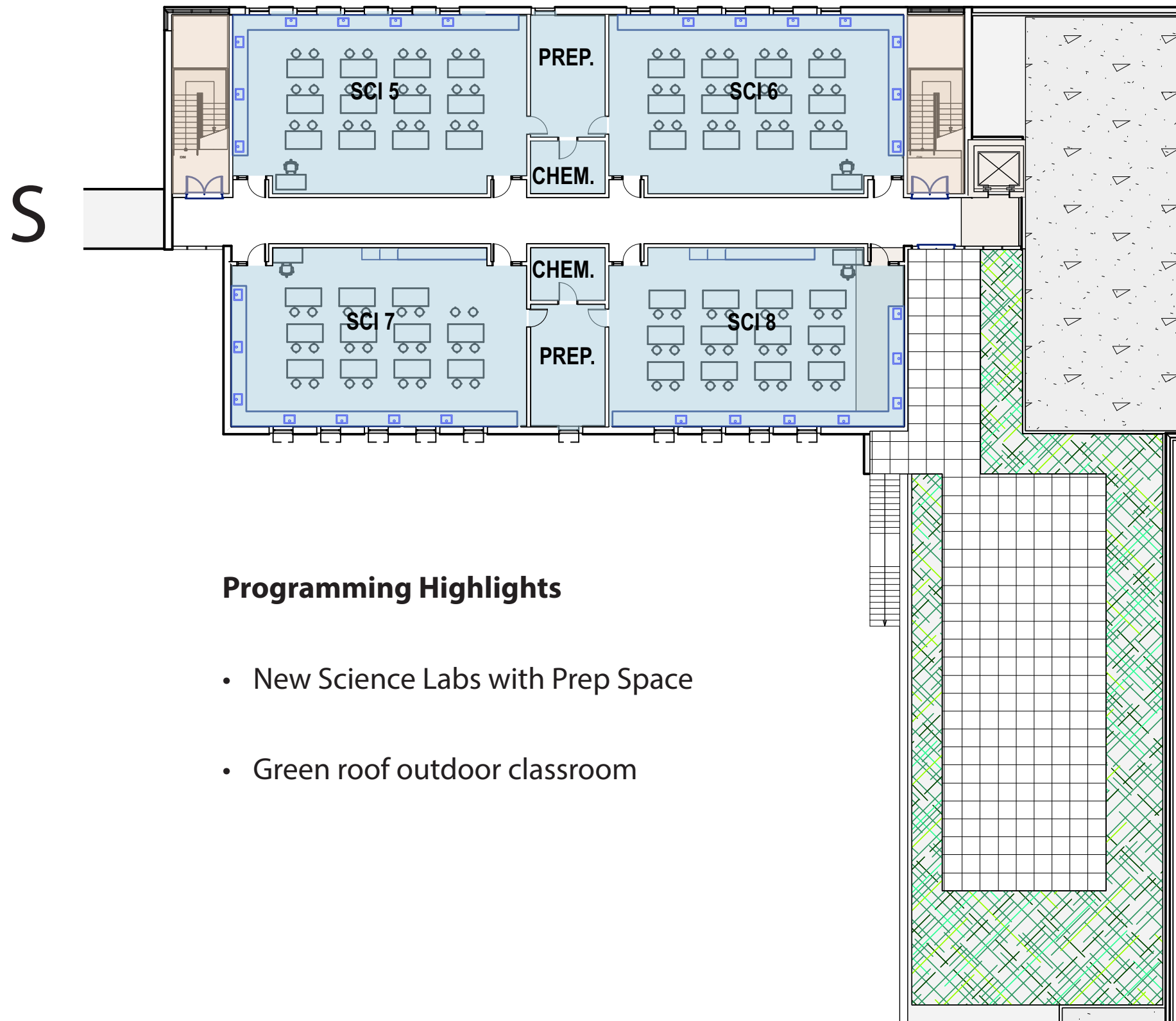
Enlarged First Floor Plan D&S



Enlarged Second Floor Plan D&S



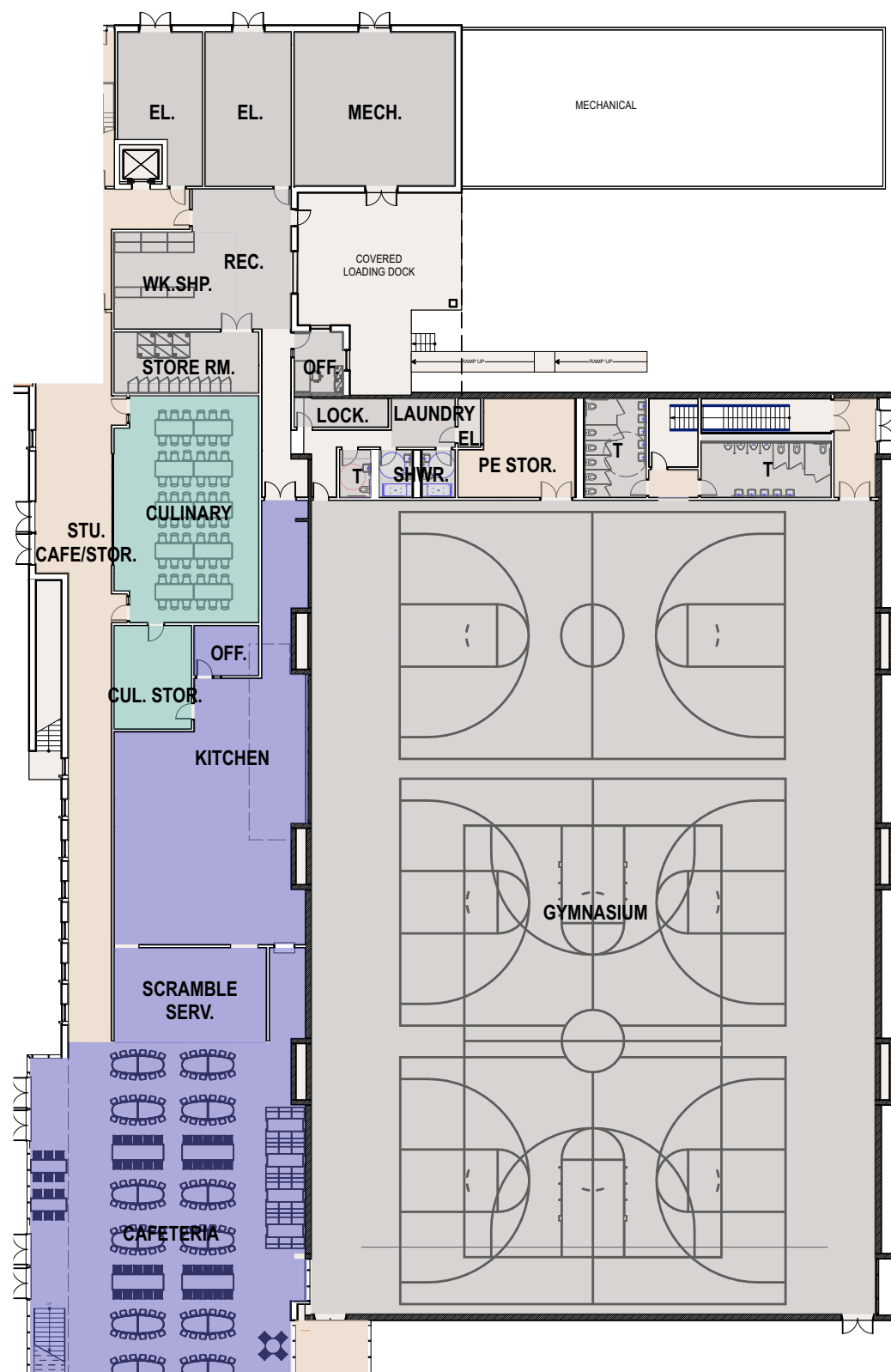
Enlarged Third Floor Plan S



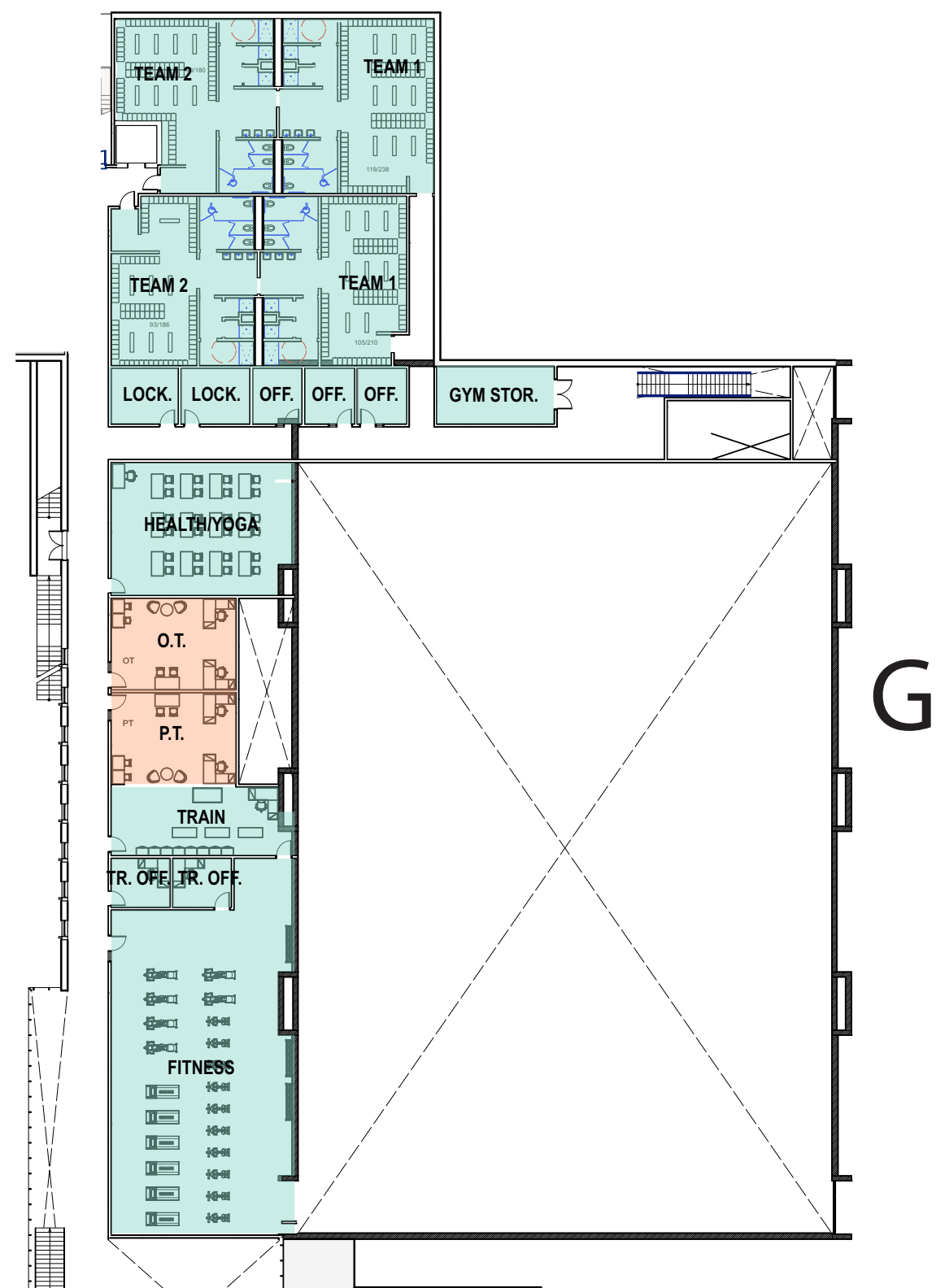
Programming Highlights

- New Science Labs with Prep Space
- Green roof outdoor classroom

Enlarged First & Second Floor Plan G

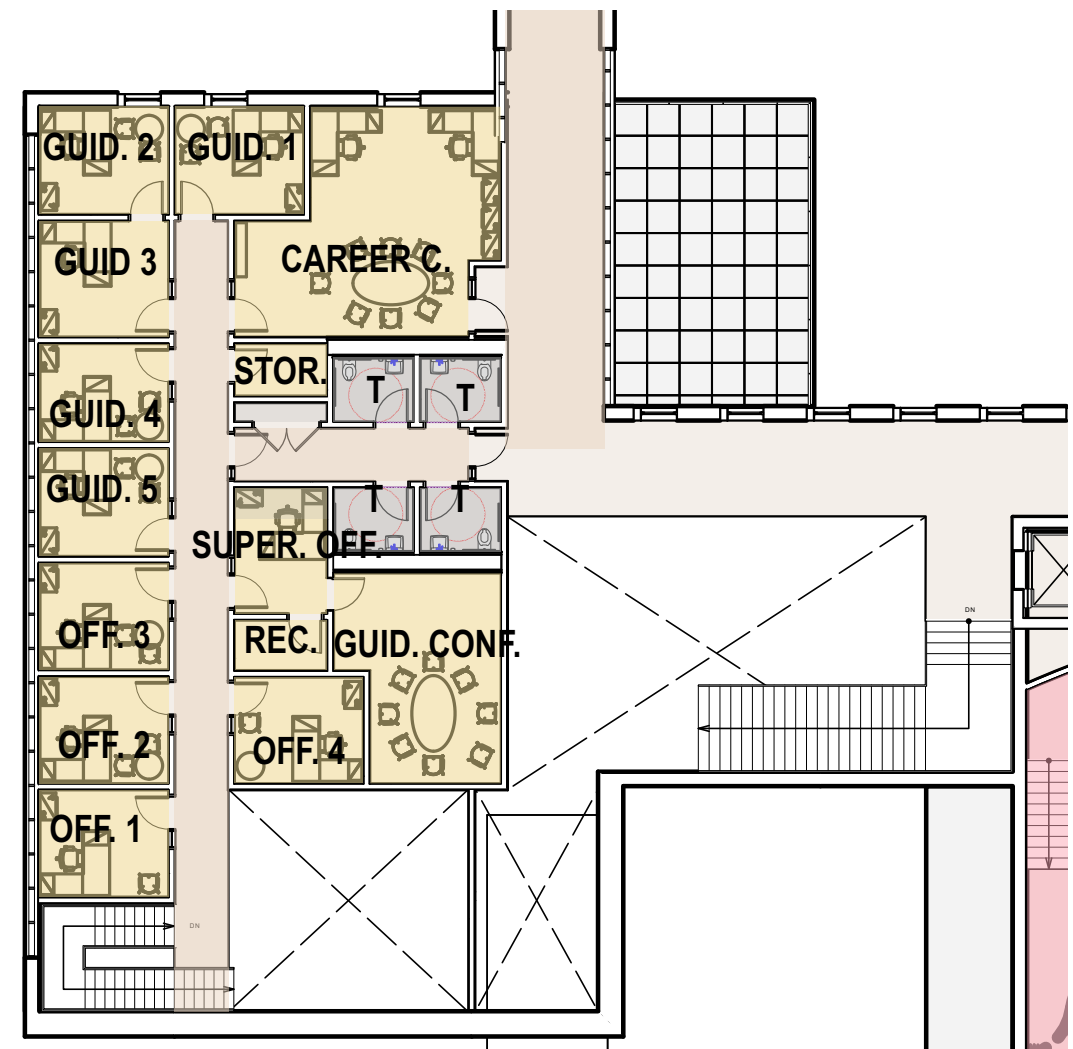
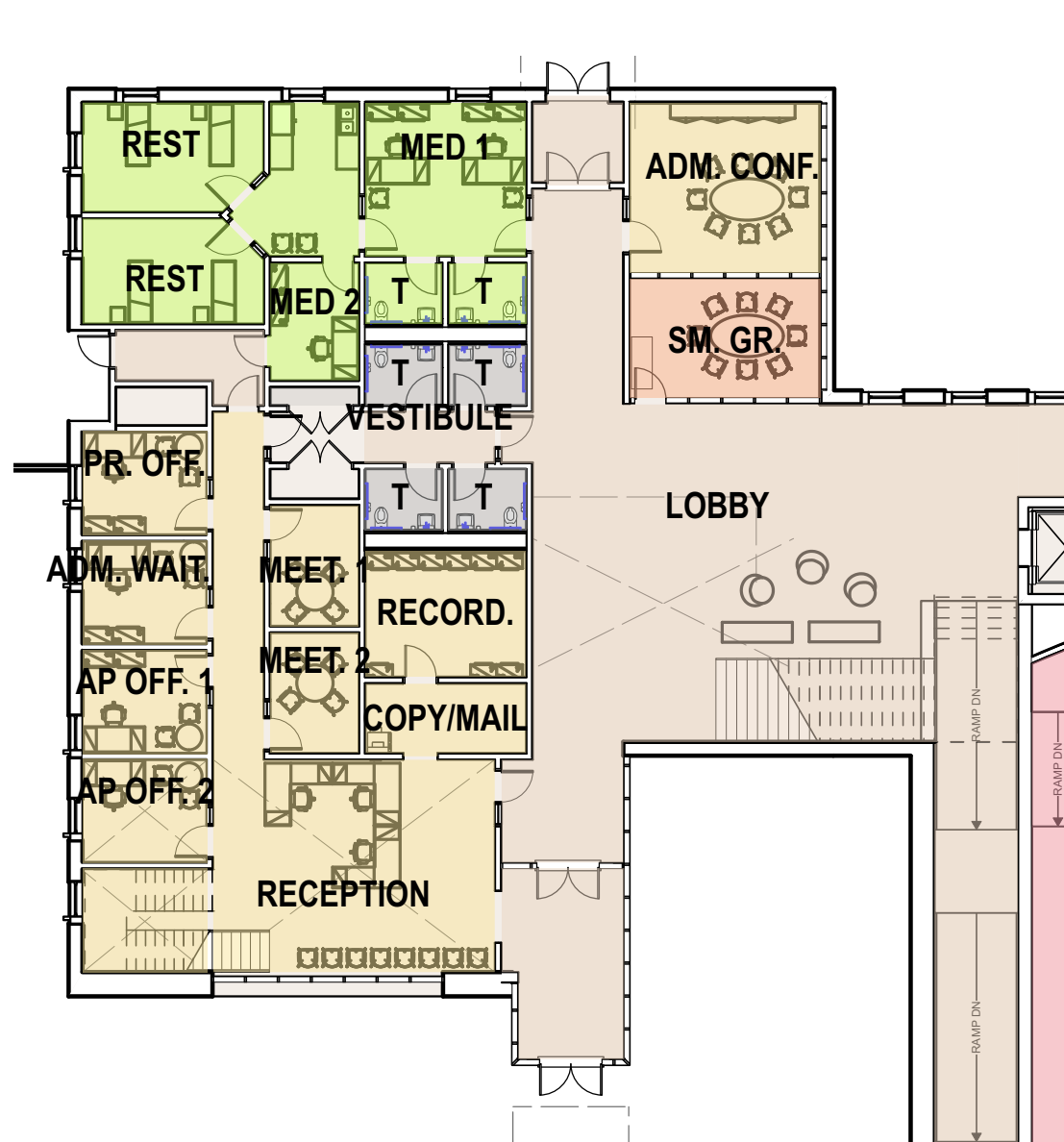


- Culinary Arts adjacent to Cafeteria Kitchen



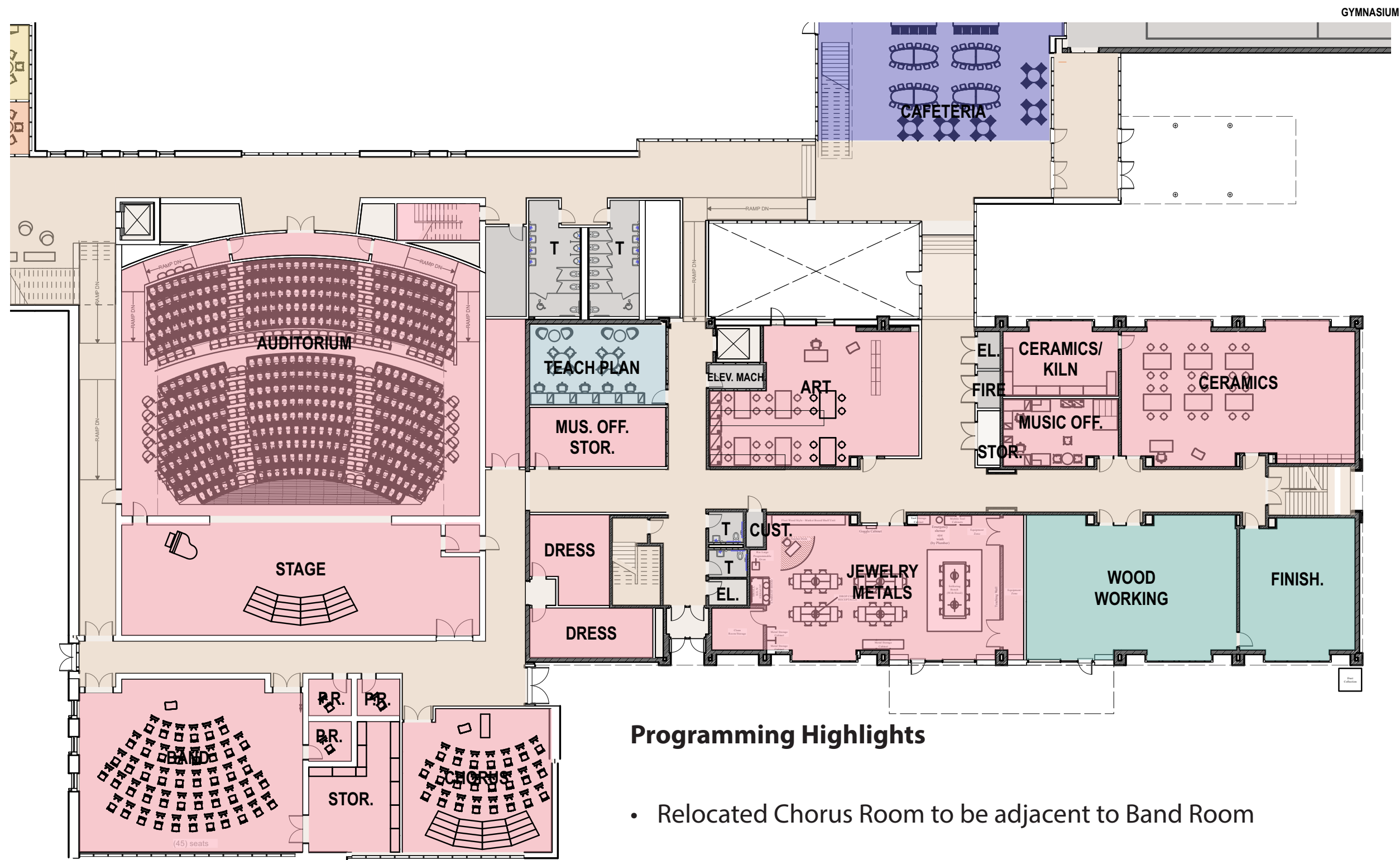
- Locker Rooms divided to have separate team rooms

First & Second Floor Plan Administration



- Nurses Suite with two resting rooms (+) cots
- Double height entry Lobby

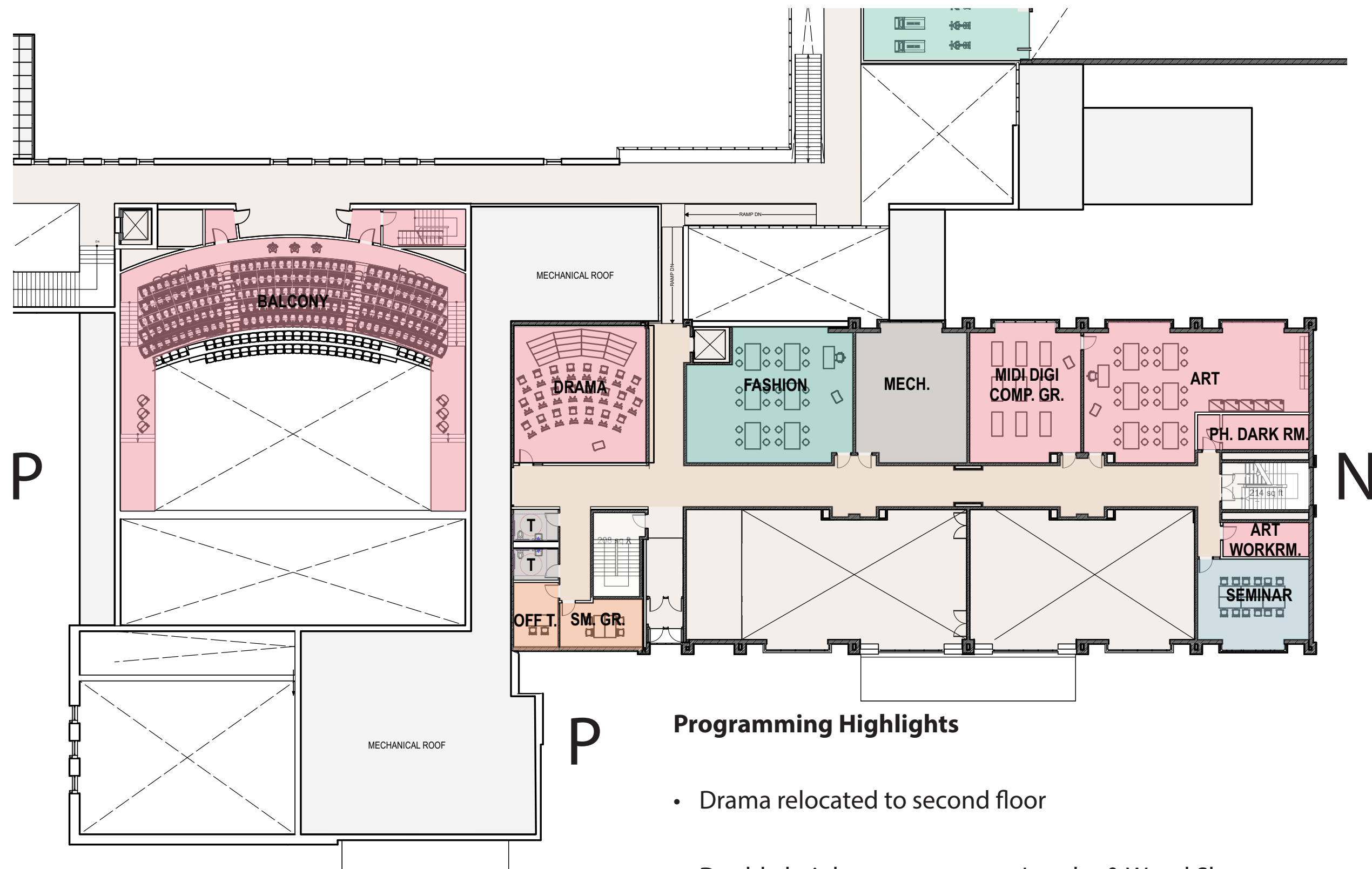
Enlarged First Floor Plan P&N



Programming Highlights

- Relocated Chorus Room to be adjacent to Band Room
- Curved Auditorium to provide sense of intimacy

Enlarged Second Floor Plan P&N



P

N

Programming Highlights

- Drama relocated to second floor
- Double height space open to Jewelry & Wood Shop

Building Information Modeling

B.I.M.

- Introduction by Brian Hores AIA, LEED AP BD+C
- Process during the design phase
- Process during the construction coordination phase

Vanderweil Mechanical Presentation



Nauset Regional High School HVAC System Design

July 14, 2021



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VANDERWEIL

Vanderweil Mechanical Presentation

Topics

1. System and Components
2. Plant Location Options
3. Design Development



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Vanderweil Mechanical Presentation

HVAC System and Components

- Modular Air Source Heat Pump Plant (to produce Hot and Chilled Water)
- Gas Fired Boiler Plant (to boost Hot Water temperature during cold weather)
- Chilled Water distributed to Air Handling Units and Fan Coil Units
- Hot Water distributed to Air Handling Units, Fan Coil Units, VAV Box Reheats and Fin Tube Radiation
- Miscellaneous Exhaust Systems



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Vanderweil Mechanical Presentation

HVAC Plant Location Options

CENTRALIZED - ONE PLANT

All Buildings:

- Modular Air Source Heat Pumps
- Gas Fired Boiler Plant

Located in Mechanical Yard at Building G.

DECENTRALIZED - TWO PLANTS

Buildings C-D-G-N

- Modular Air Source Heat Pumps
- Gas Fired Boiler Plant

Located in Mechanical Yard at Building G.

Plus

Buildings A-B

- Modular Air Source Heat Pumps
- Gas Fired Boiler Plant

Located on Roof or at Grade at Building A or B.

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HVAC Plant Advantages and Disadvantages

CENTRALIZED – ONE PLANT

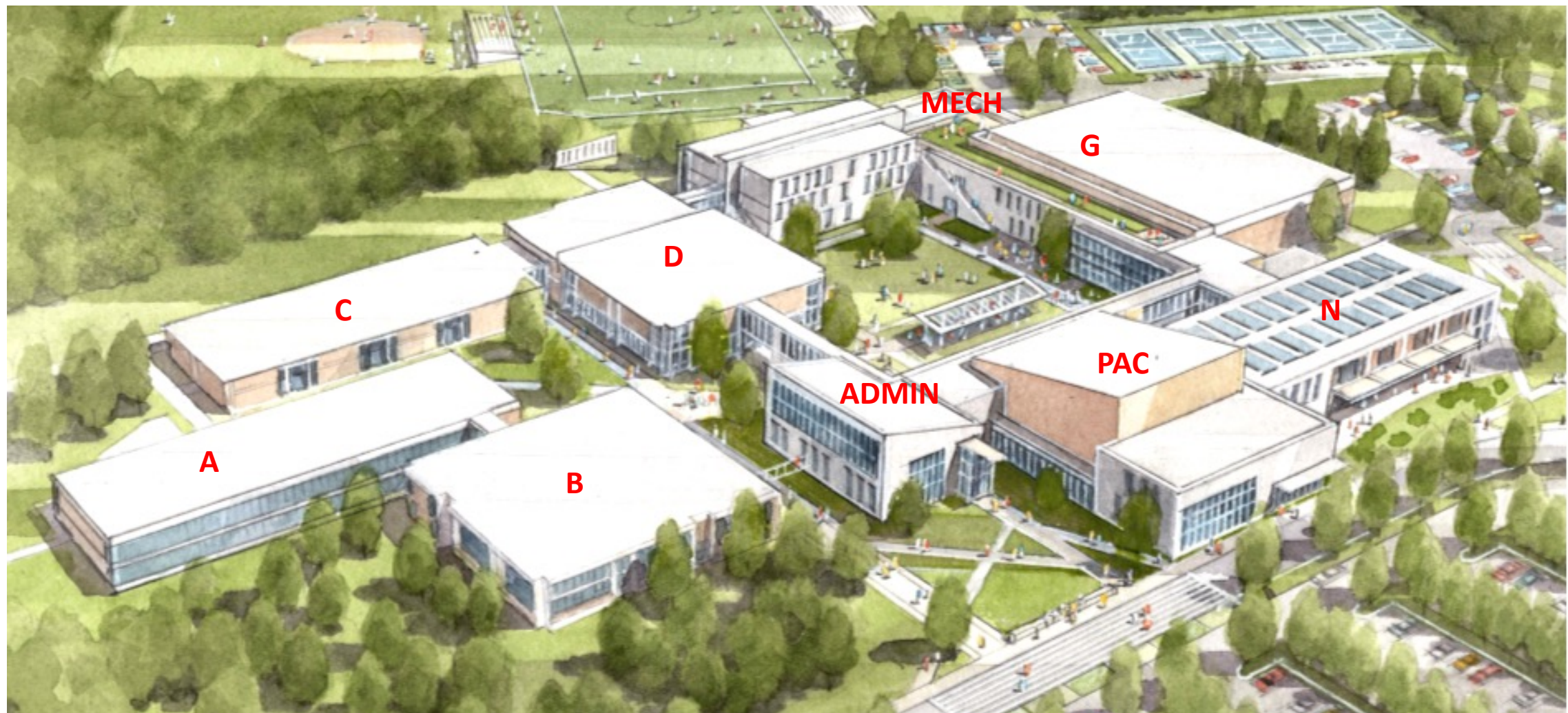
- Advantages
 - Lower financial impact to project
 - All mechanical equipment is in a central location
 - Ease of maintenance as all equipment is centralized in one location
 - Fewer utility connections
 - Fewer pieces of equipment to maintain saves maintenance time and cost (fewer pumps, boilers and accessories to maintain)
 - Fewer controls in a single ASHP
 - Less equipment on the roof or on-grade by A/B means better aesthetics and fewer structural concerns
 - Controls - with a centralized, modular system, buildings A/B (or any building) can be isolated and run independently through controls
- Disadvantages
 - Pumps are slightly larger
 - Boilers are slightly larger

DE-CENTRALIZED – TWO PLANTS

- Advantages
 - Centralized systems require using the existing underground utility tunnel or new buried piping to get to A/B
 - Routine system maintenance could be scheduled according to A/B and remainder of campus schedules
- Disadvantages
 - Higher financial impact to project
 - Multiple plants to maintain, higher maintenance budget
 - More pieces of equipment (pumps, boiler and accessories)
 - Multiple utility connections (gas and electrical)
 - Equipment potentially located on the roof or ground, which will require additional architectural screening
 - Potential structural impact if located on roof of existing building

Vanderweil Mechanical Presentation

HVAC Design Development

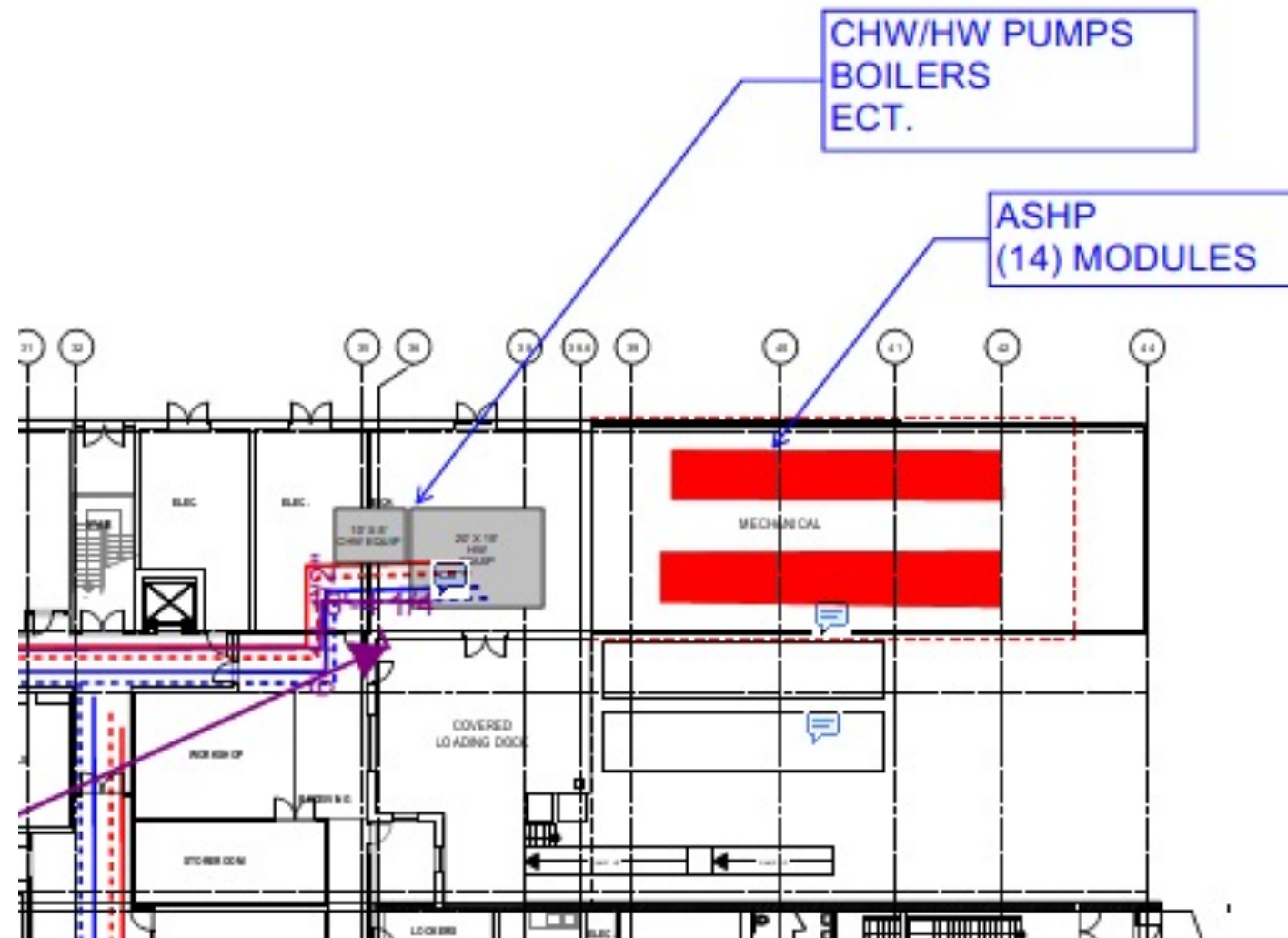
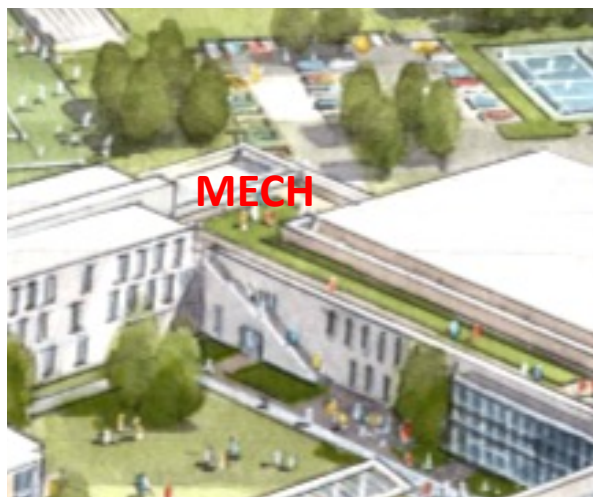


VANDERWEIL

Vanderweil Mechanical Presentation

HVAC Design Development

Mechanical Equipment Yard
(Centralized)

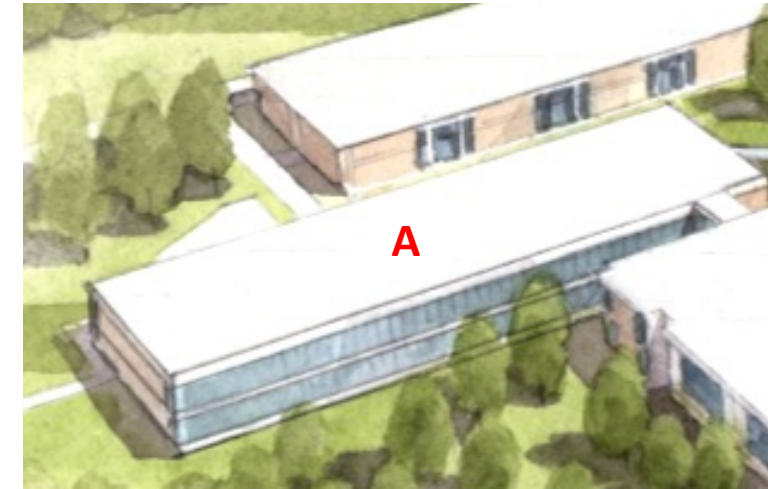
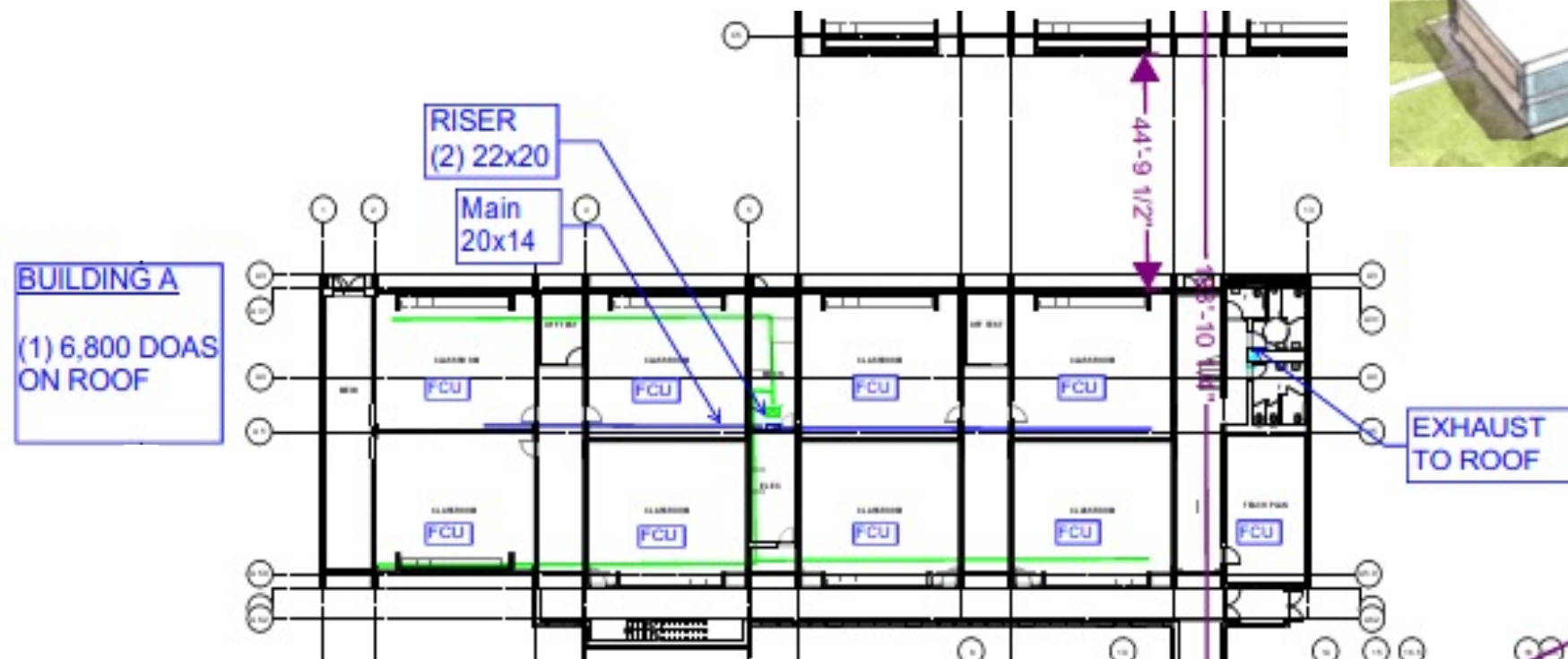


Vanderweil Mechanical Presentation

HVAC Design Development

Building A

- DOAS on roof with local fan coils



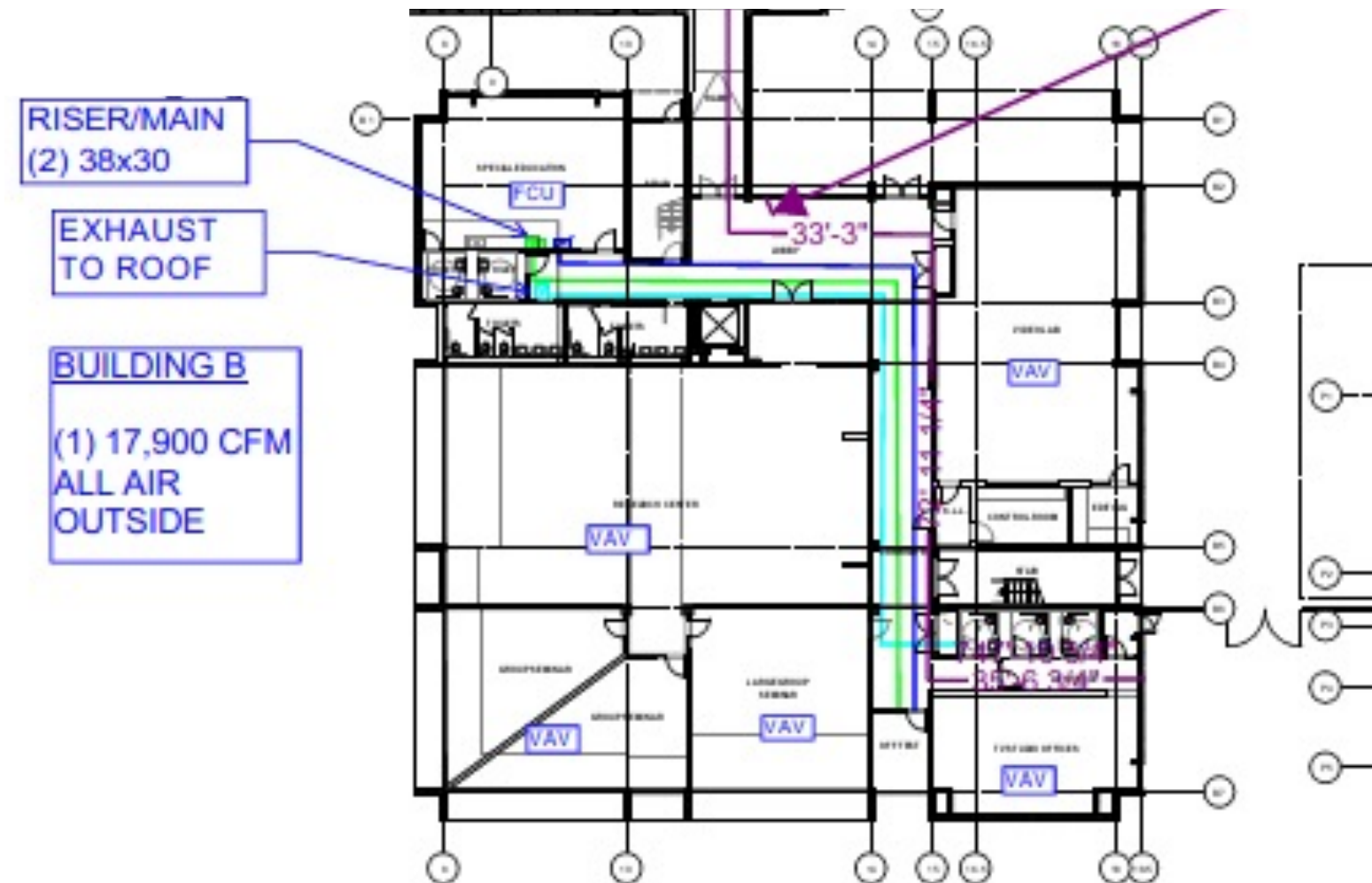
VANDERWEIL

Vanderweil Mechanical Presentation

HVAC Design Development

Building B

- All-Air VAV; AHU in level 2 mechanical room

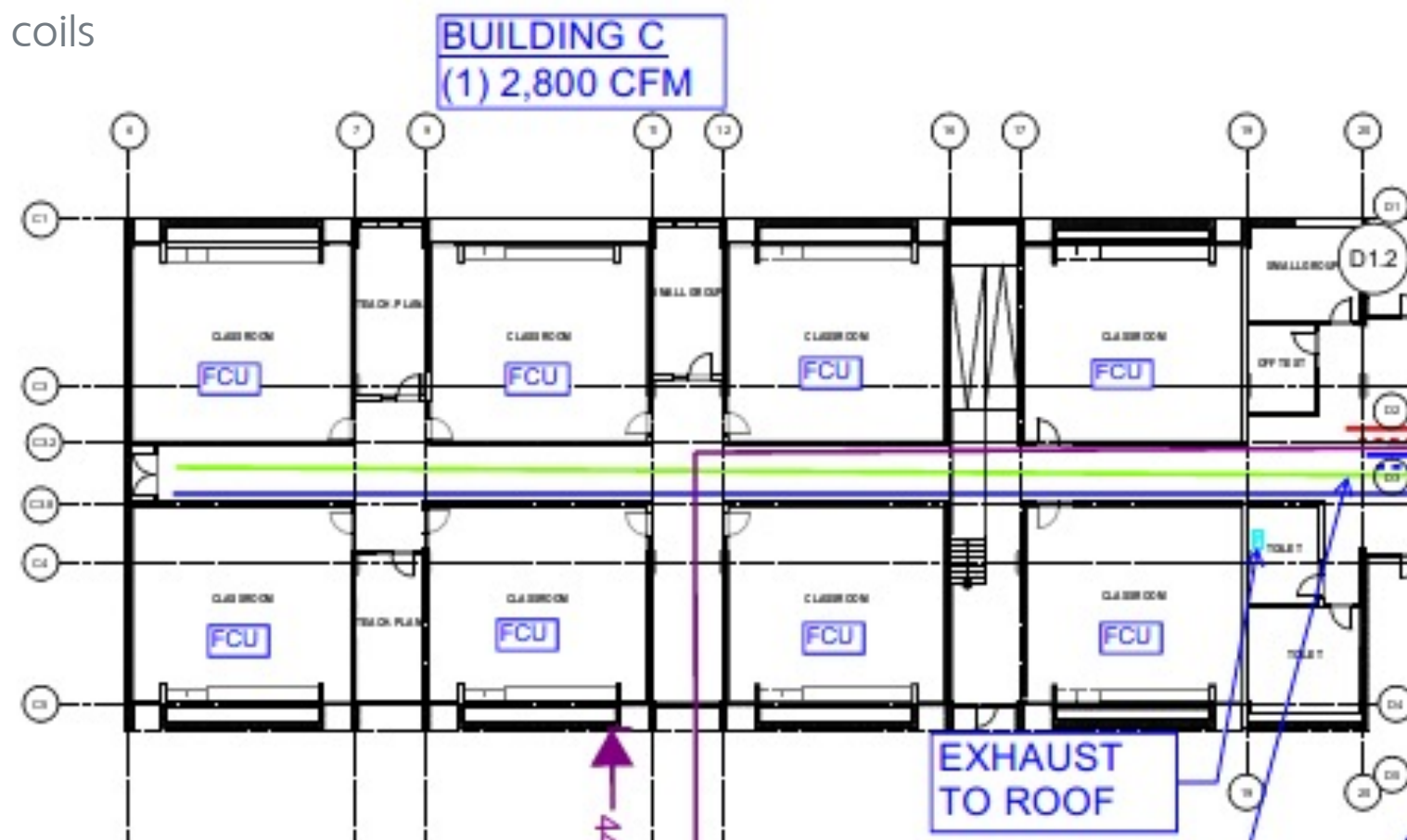


Vanderweil Mechanical Presentation

HVAC Design Development

Building C

- DOAS on roof with local fan coils



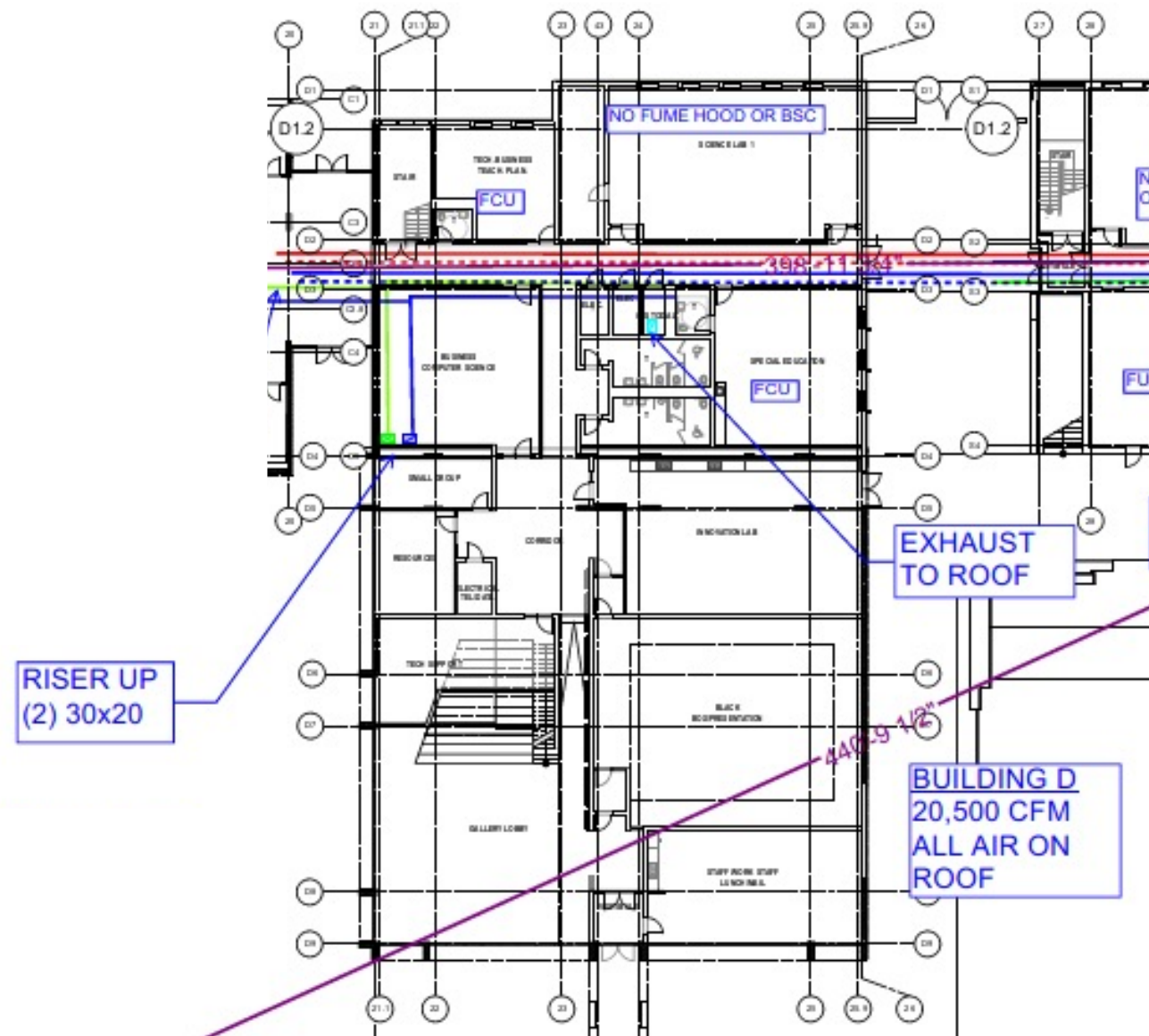
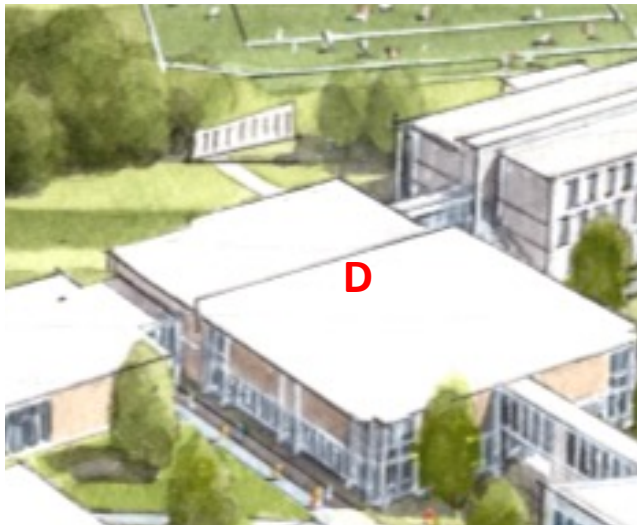
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Vanderweil Mechanical Presentation

HVAC Design Development

Building D

- All-Air VAV; AHU on roof

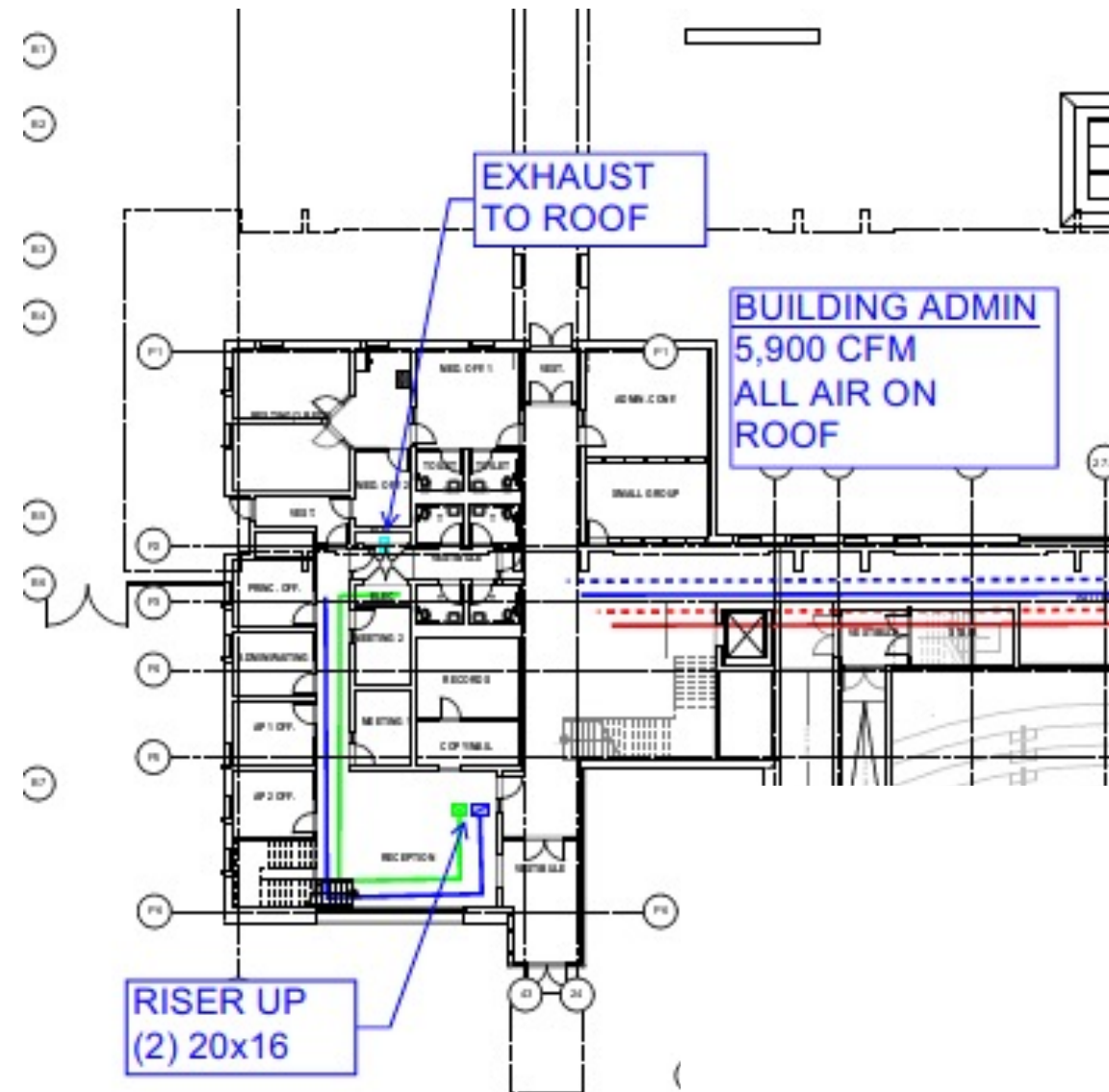
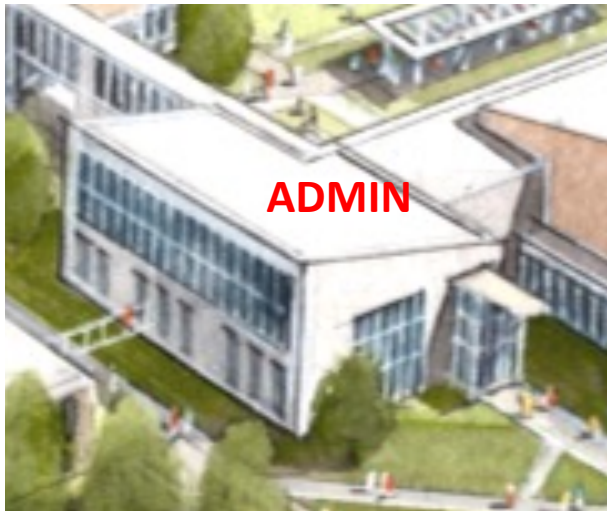


Vanderweil Mechanical Presentation

HVAC Design Development

Admin Building

- All-Air VAV; AHU on roof

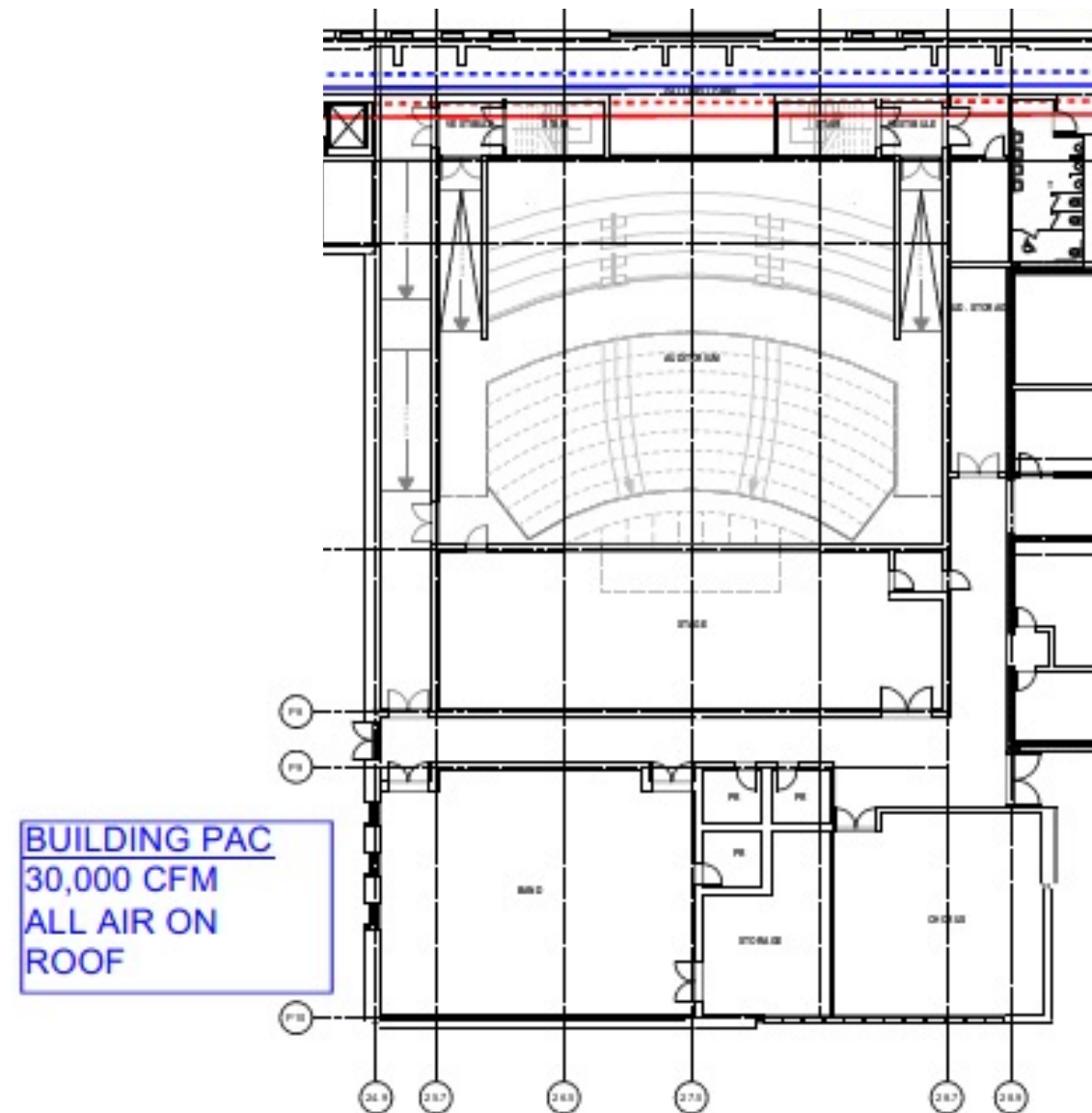
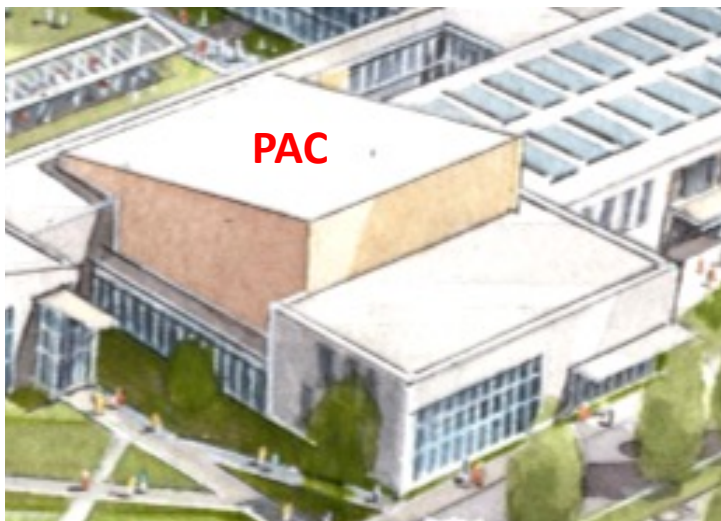


Vanderweil Mechanical Presentation

HVAC Design Development

PAC Building

- All-Air VAV; AHU on roof

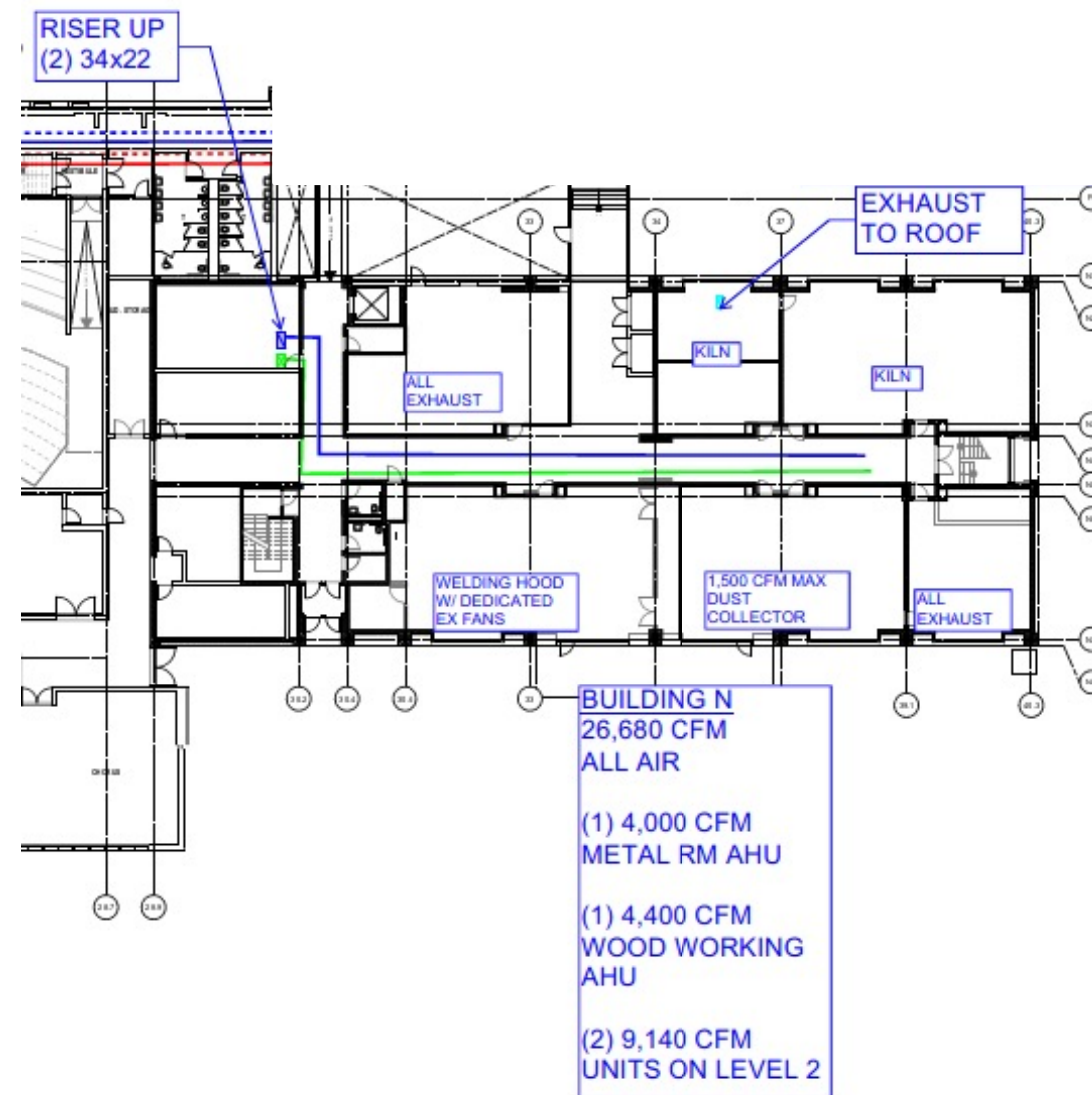


Vanderweil Mechanical Presentation

HVAC Design Development

Building N

- All-Air VAV; AHUs (1) in mechanical well, (1) indoors, dedicated AHUs for woodshop and metal shop
- Shop exhausts, dust collection

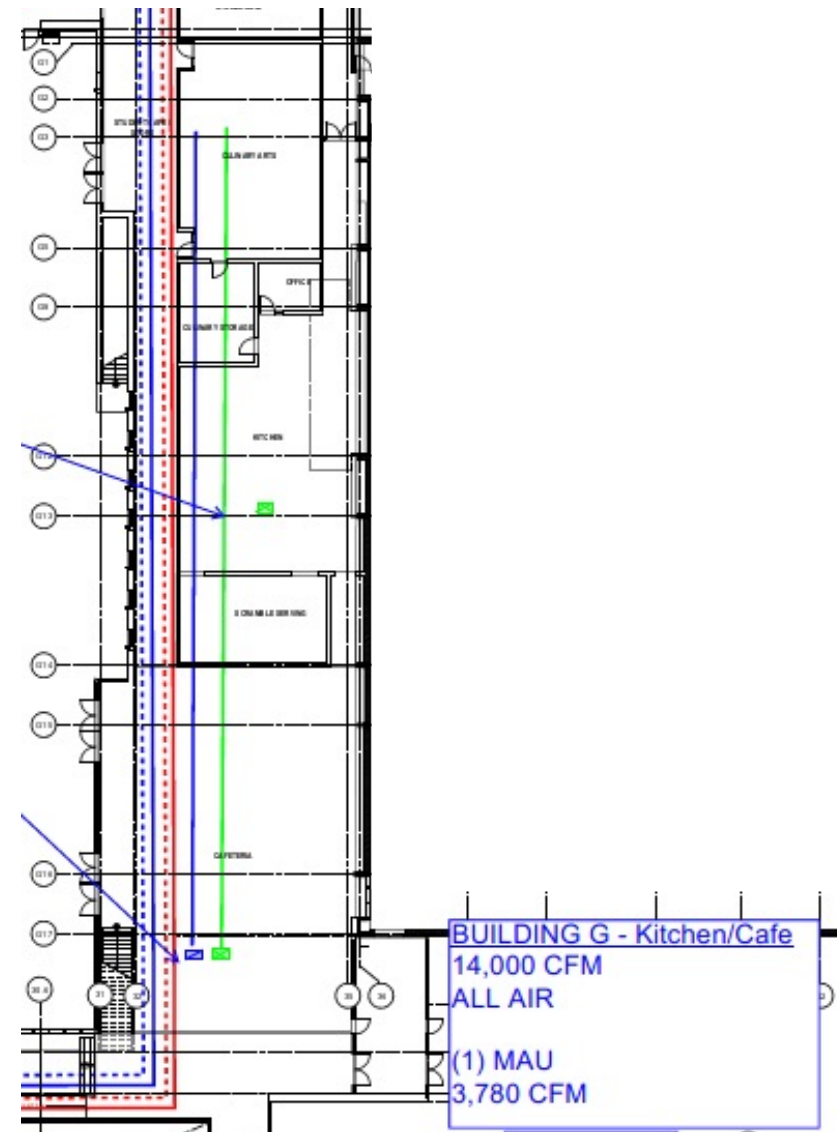


Vanderweil Mechanical Presentation

HVAC Design Development

Building G Kitchen/Cafe

- All-Air VAV; AHUs on roof
- Kitchen Makeup Air and Exhausts



Vanderweil Mechanical Presentation

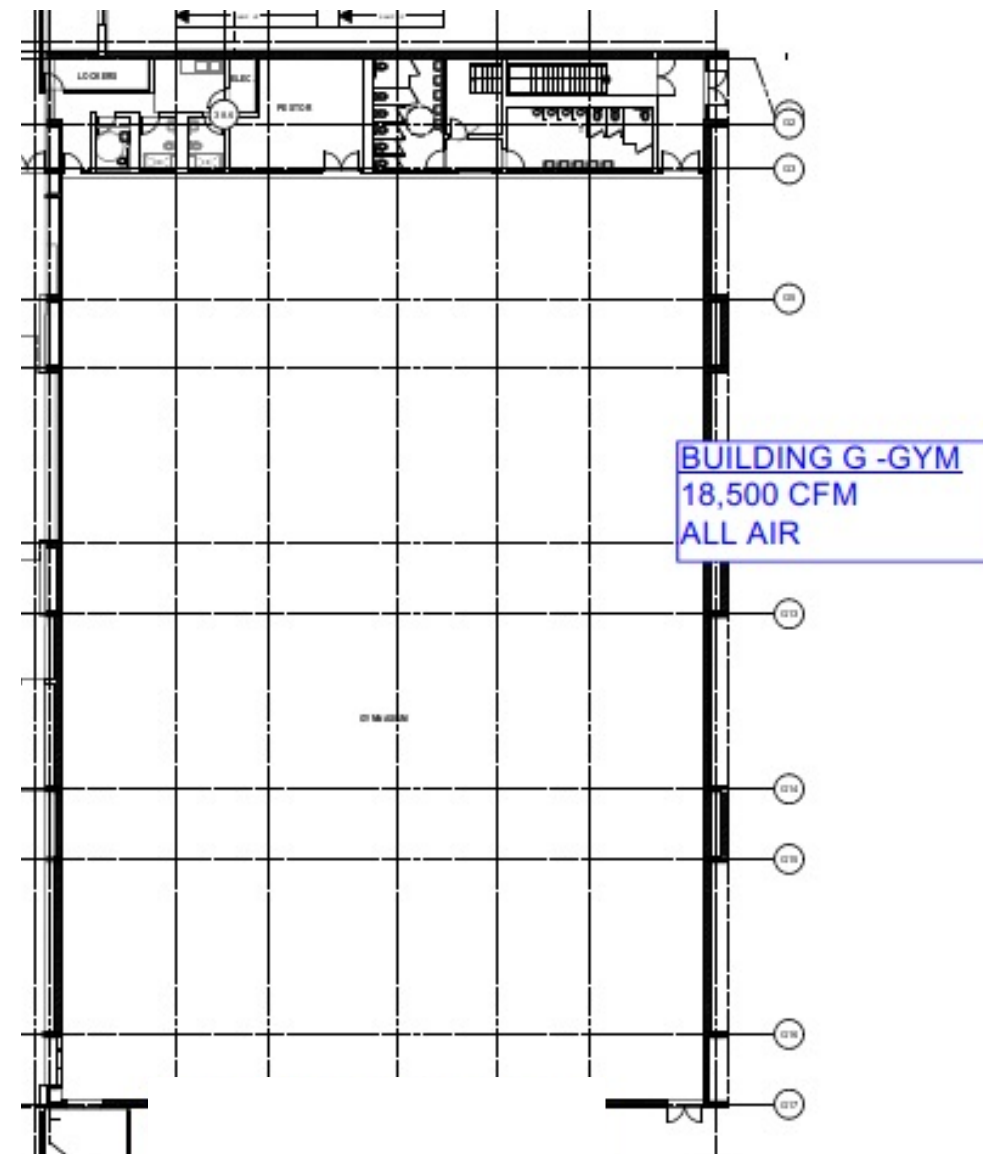
HVAC Design Development

Building G Gym

- All-Air VAV; AHU on roof area above locker rooms

Building G Fitness Center

- All-Air VAV; AHU on roof area above locker rooms



Vanderweil Mechanical Presentation



Nauset Regional High School HVAC System Design

July 14, 2021



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Upcoming Meetings and Activities

DATE:	MEETING:
July 22, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group, Other
August 5, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group, Other
August 19, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group, Other
September 16, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group, Other
September 30, 2021	<ul style="list-style-type: none">• Educational Logistic Working Group, Other

CONTACT Us!

Find more information on the project website:

www.NausetBuildingProject.com

Have questions? Email us at:

nausetbuildingproject@nausetschools.org