



Leicester School Building Project

October 15, 2019



**Finegold
Alexander
Architects**



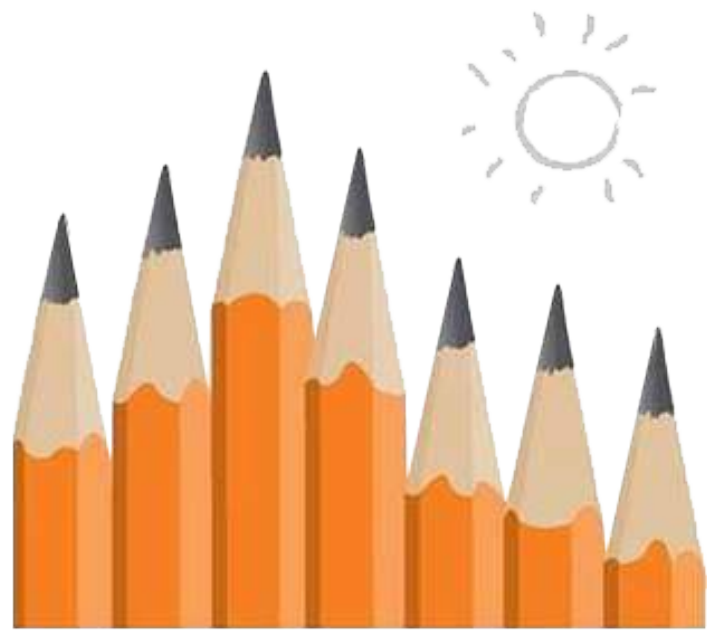
Community Forum # 2
Leicester Elementary School

Mark Armington	Community Member and Engineer
Jeff Berthiaume	Director of Technology and Digital Learning
Tina Boss	School Principal, Elementary School
Harry Brooks	SBC Chair, Member Board of Selectmen
Chris Clark	Community Member and Parent
Chris Fontaine	School Principal, Leicester Middle School
David Genereux	Town Administrator, SBC who is MCPPO certified
Tom Lauder	School Committee
Kristina Looney	Leicester MS Teacher, Music Education
Cady Maynard	Director of Finance and Operations
Dennis McGrail	Finance Advisory Board and Parent
Paul McCarthy	Community Member and Parent
Jim Reinke	Committee Member/Contractor
Marilyn Tencza	School Superintendent
David White	Local Official for Building Maintenance

School Building Committee Members

April 2019	Submit Preliminary Design Program
April / June 2019	Develop Study Options
June 20, 2019	SBC Vote on Preferred Alternative
July 10, 2019	Submit Preferred Schematic Report (PSR) to MSBA
August 28, 2019	MSBA Board Vote: Preferred Alternative
August 2019	Begin Schematic Design
January 2020	Complete Schematic Design to MSBA
April 2020	MSBA Board Vote: Project Scope and Budget Agreement
June 6, 2020	Town Meeting – Funding Approval
June 9, 2020	Election

Schedule Overview - Next Steps



Massachusetts School
Building Authority

2019 Base Reimbursement Rate for Leicester is 59.21%

- Applies only to **eligible** school project costs
 - Limits site reimbursement
 - Limits size of project and cost/SF
 - Does not apply to auditoriums and playing fields
- Rate may be increased for incentive points
 - Sustainable Design – 2.0% (LEED Silver)
 - Maintenance Program – 1.72%
- Incentive points subject to change by the MSBA

MSBA Effective Reimbursement Rate

Visioning Workshop # 1:

Visioning Workshop #2:

School Tours:

Visioning Workshop #3:

Faculty Workshop:

January 29, 2019

February 5, 2019

February 14, 2019

February 29, 2019

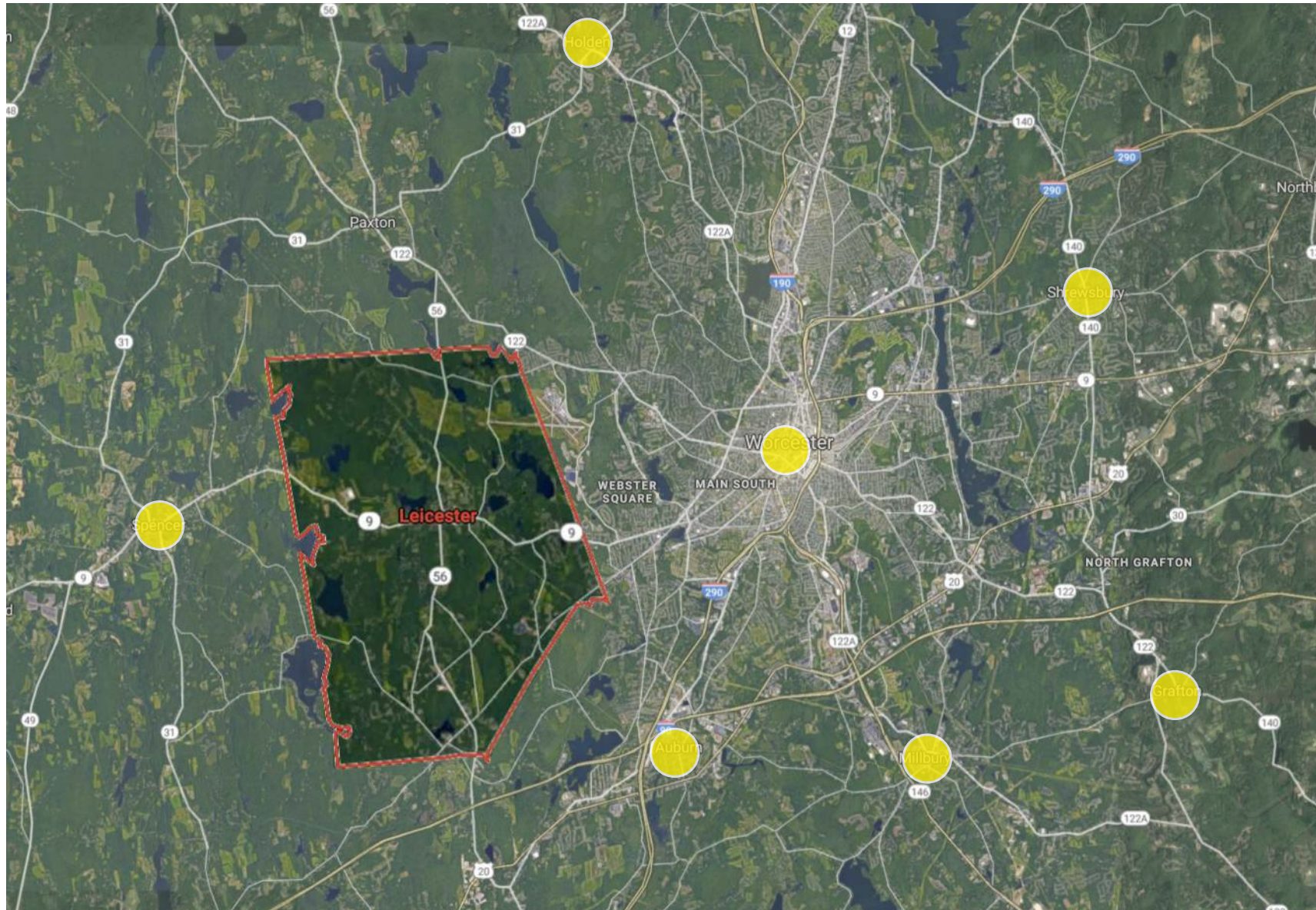
March 5, 2019

Guiding Principles for Design

1. Innovation and Engagement
2. Collaboration and Cooperation
3. A Place You Want to Be
4. Community Access
5. Adaptability and Flexibility
6. Outdoor and Nature Connections
7. Sustainability



Visioning Workshops



Spencer

David Pouty High School - Eligibility

Worcester

Doherty Memorial High School - Eligibility

Millbury

Raymond E. Shaw Elementary School - Design

Worcester

South High School - Construction

Shrewsbury

Beal Early Childhood Center - Construction

Holden

Mountview Middle School - Completed in 2016

Auburn

Auburn Middle School - Completed in 2015

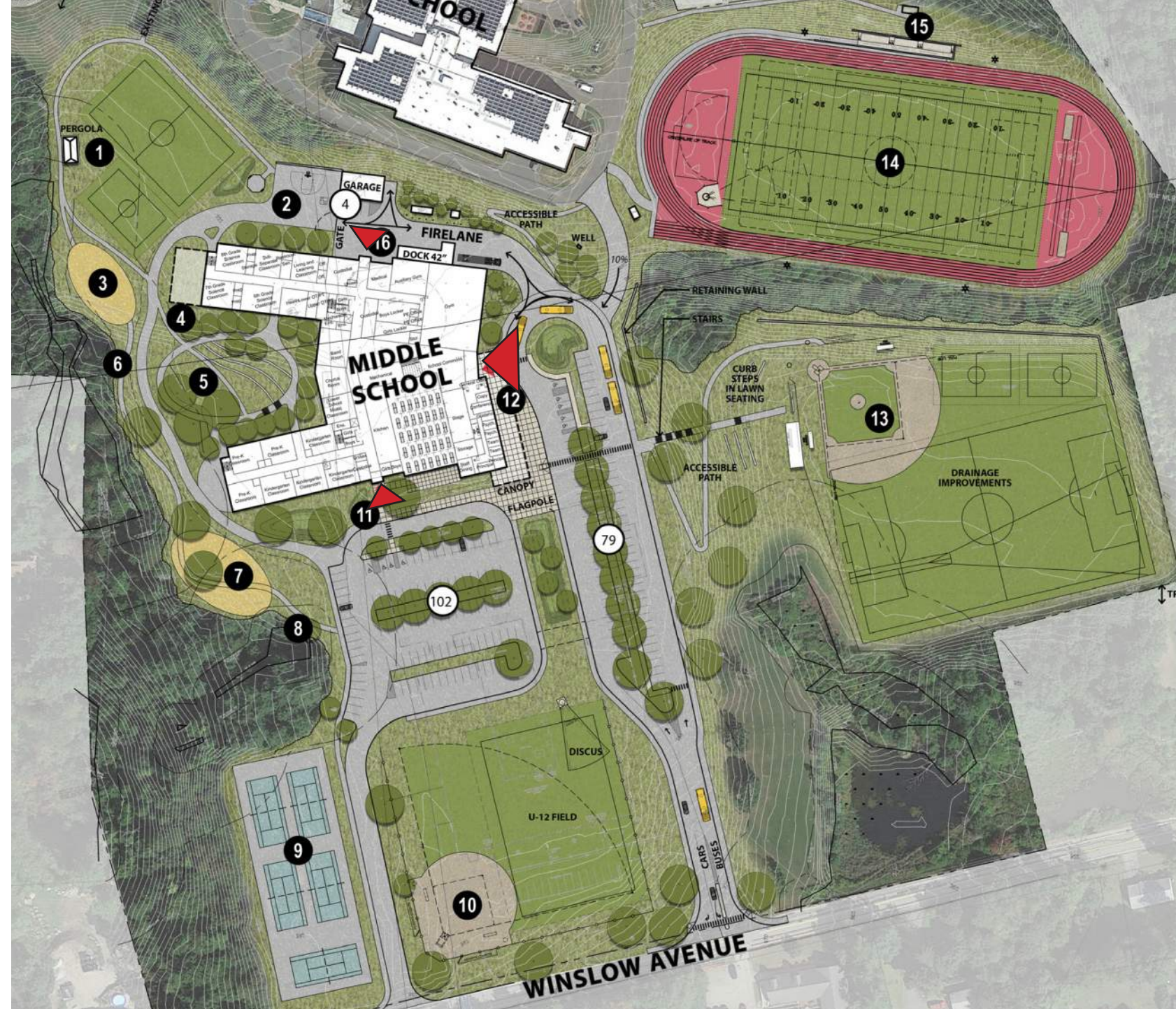
Grafton

Grafton High School - Completed in 2012

School Facility Improvement in Surrounding Communities

Analysis Performed to Date:

- Full site and topography survey
- Wetlands analysis
- Geotechnical analysis



Preferred Solution Location



Memorandum

Date: October 1, 2019
Recipient: Finegold Alexander Architects
Regan Shields Ives and Christopher Lane
Sender: Jonathan W. Patch, P.E.
Project: Leicester Middle School
Project No: 6743.2.00
Subject: Preliminary Geotechnical Review of Proposed Building Location

The purpose of this letter is to confirm that the preliminary foundation design recommendations contained in our Preliminary Foundation Engineering Report (PFER) dated April 1, 2019 are still applicable to the proposed construction now that the location of the proposed building on site has been determined.

The location of the proposed building on the site had not been determined at the time the subsurface exploration program was completed as part of our preliminary geotechnical study. As such, eight (8) borings were performed across the entire site for the purpose of obtaining subsurface information in order to provide preliminary foundation design recommendations not knowing where on site the building would be located. The borings indicated that the ground surface is underlain by a thin, surficial layer of topsoil. Below the topsoil, the borings encountered about 2 to 7 feet of uncontrolled fill which was underlain by a dense natural glacial till deposit. Groundwater was observed within five (5) borings upon completion of drilling at depths ranging between 6 and 8 feet below the existing ground surface.

Recently, the proposed building location was determined and is in close proximity to borings MA-2, MA-3, MA-5 and MA-6 which encountered the dense natural glacial till deposit at depths of 4 to 5 feet. Based on this preliminary boring information, it is recommended that foundation support for the proposed building be provided by conventional footing foundations in conjunction with slab-on-grade construction as outlined in the above-referenced PFER. Please reference the aforementioned PFER for additional recommendations regarding foundation design and building pad preparation.

Additional subsurface explorations (borings and/or test pits) will need to be performed to further delineate the depth to the natural glacial till deposit across the proposed building footprint. The information obtained from these explorations will be utilized to prepare a Final Foundation Engineering Report, however, at this time, it is not anticipated that the conditions observed within these explorations will result in an alteration of McPhail's foundation design recommendations as presented in the PFER. Lastly, it is not anticipated

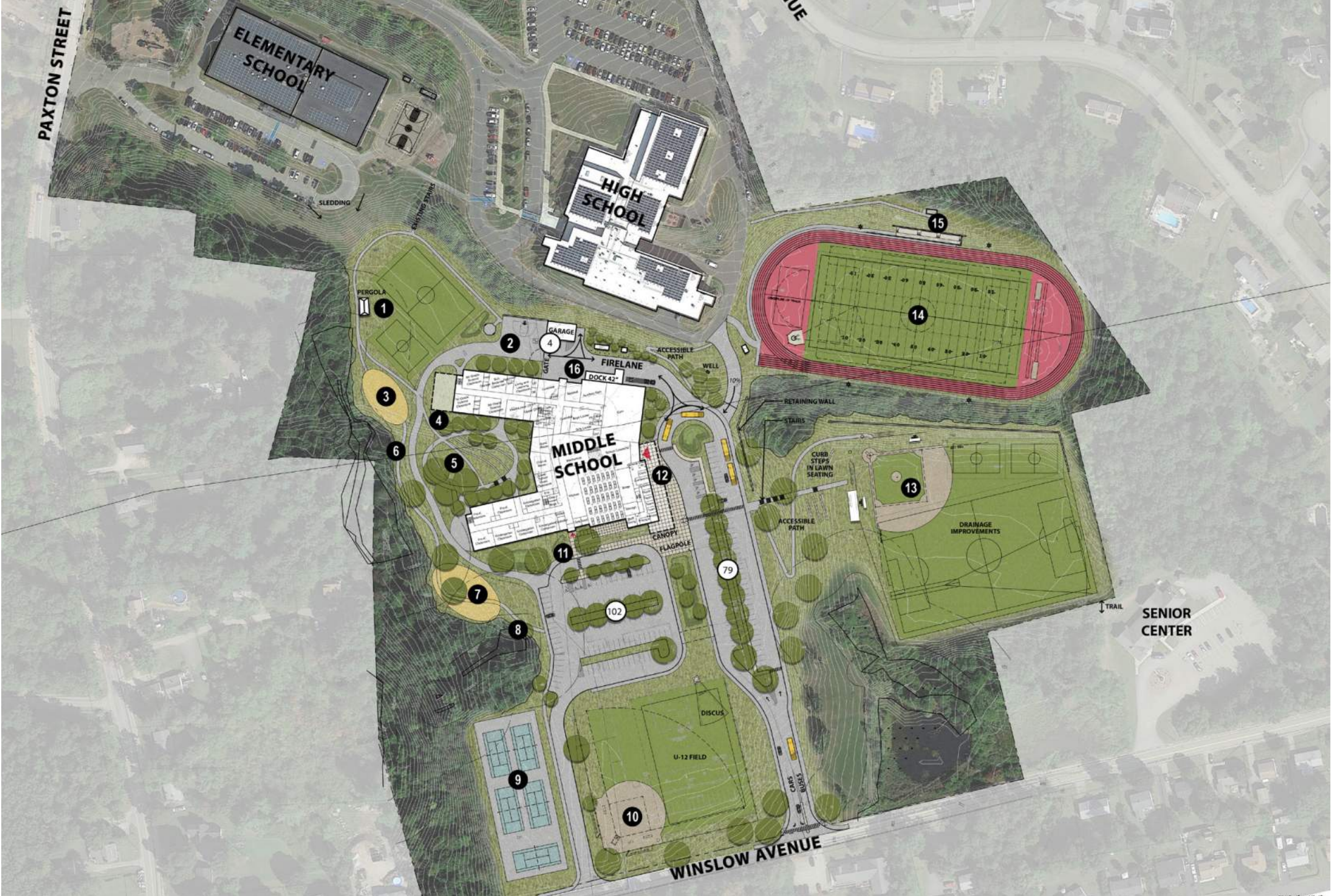
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LEICESTER MIDDLE SCHOOL SITE PLAN

LEGEND

- 1 CAMPUS COMMONS
- 2 HARD SURFACE PLAY
- 3 K-5 PLAY
- 4 SCHOOL GARDEN
- 5 AMPHITHEATER COURTYARD (FLEX-USE)
- 6 SENSORY GARDEN
- 7 PRE-K PLAY
- 8 WOODLAND TRAIL
- 9 RENOVATED + NEW TENNIS COURTS
- 10 NEW SOFTBALL FIELD
- 11 SECONDARY ENTRANCE
- 12 PRIMARY ENTRANCE
- 13 BASEBALL FIELD
- 14 NEW SYNTHETIC TURF + RECONSTRUCTED TRACK
- 15 BLEACHERS, PRESSBOX CODE RETROFIT
- 16 SERVICE AREA

PARKING
185 SPACES (9' X 18')



LEICESTER SCHOOL CAMPUS PROPOSED SPORTS LAYOUT

LEGEND

- 1** YOUTH SOCCER, (3) 50'X80' AND (1) 90'X150'
- 2** BASKETBALL, (1) HALF COURT, (1) FULL COURT
- 3** RECONSTRUCTED TRACK
- 4** SYNTHETIC TURF FIELD, (3X USE, FOOTBALL, SOCCER, FIELD HOCKEY)
- 5** BASEBALL FIELD, 330' OUTFIELD
- 6** VARSITY SOCCER, 195'X330'
- 7** FOOTBALL PRACTICE, 160'X270'
- 8** SOFTBALL FIELD, 225' OUTFIELD
- 9** RENOVATED TENNIS COURTS, (4)
- 10** NEW TENNIS COURT (1)
- 11** BATTING CAGE

TRACK AND FIELD EVENTS

LEGEND

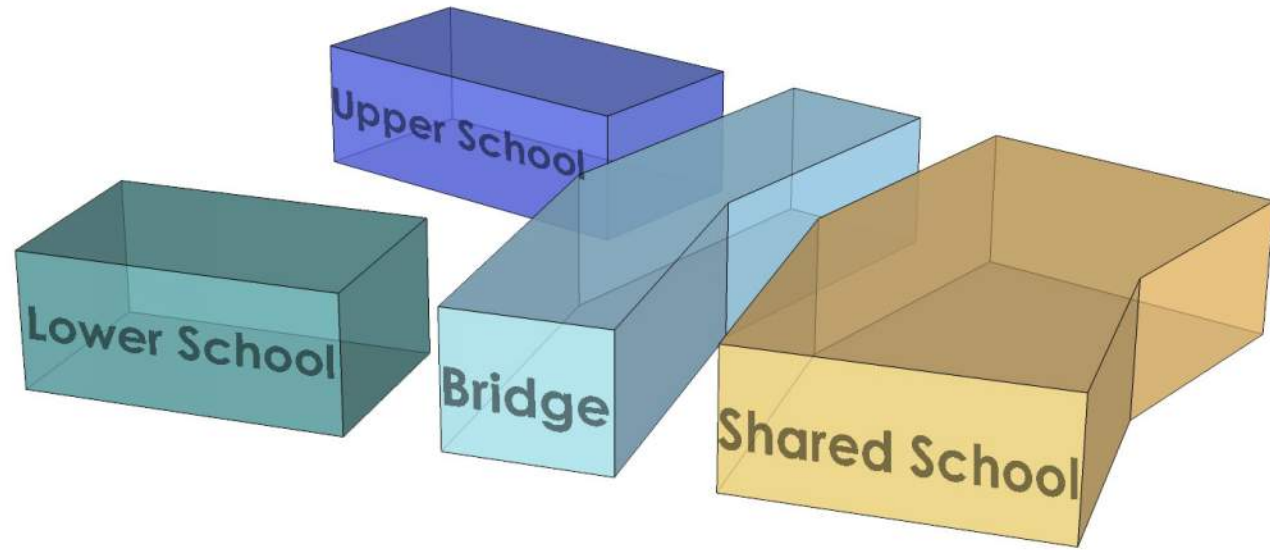
- A** DISCUS
- B** LONG JUMP
- C** SHOTPUT
- D** JAVELIN
- E** HIGH JUMP

CROSS COUNTRY

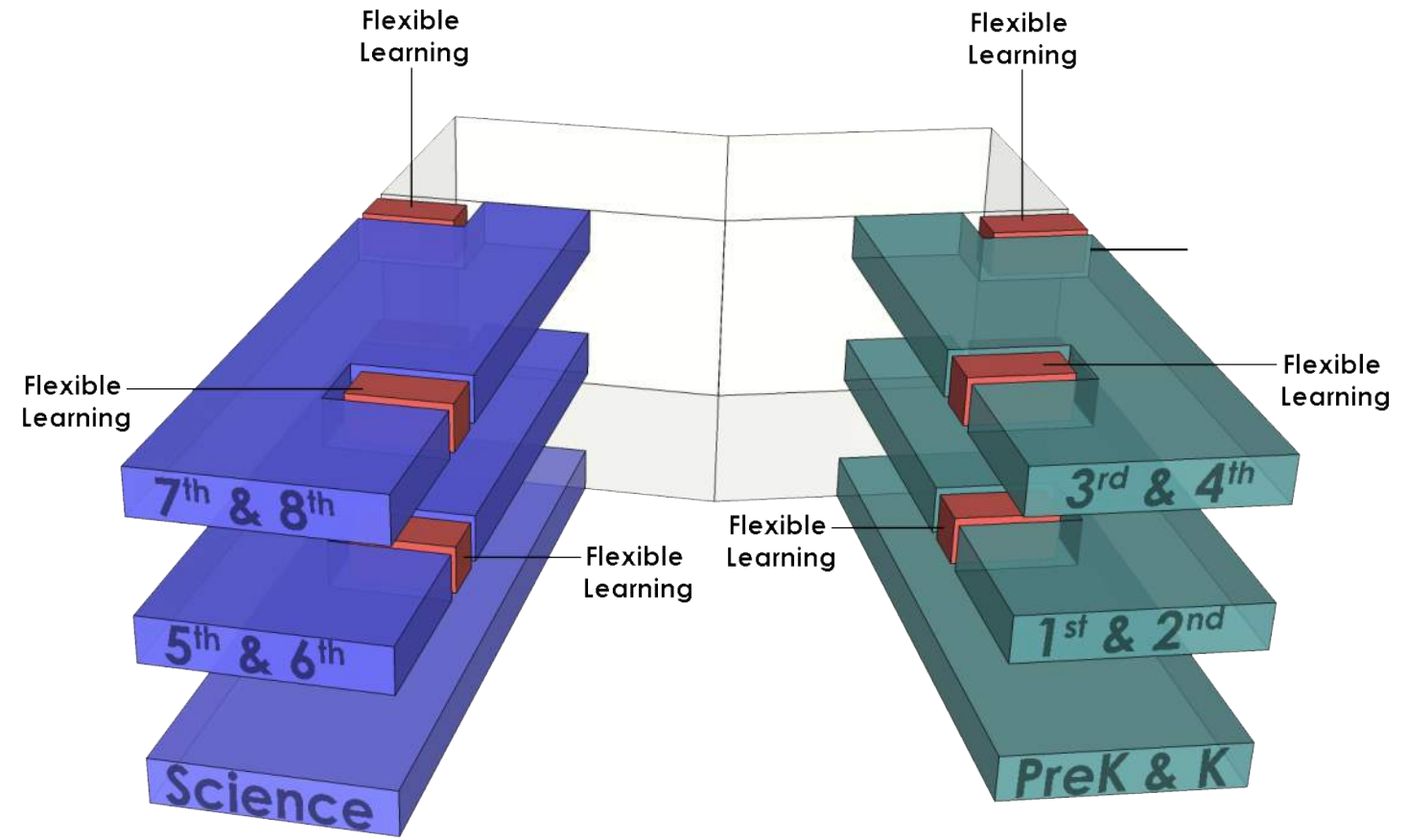
NEW PATHWAYS TO PROVIDE OPPORTUNITIES FOR X-COUNTRY COURSE



Playing Field Analysis

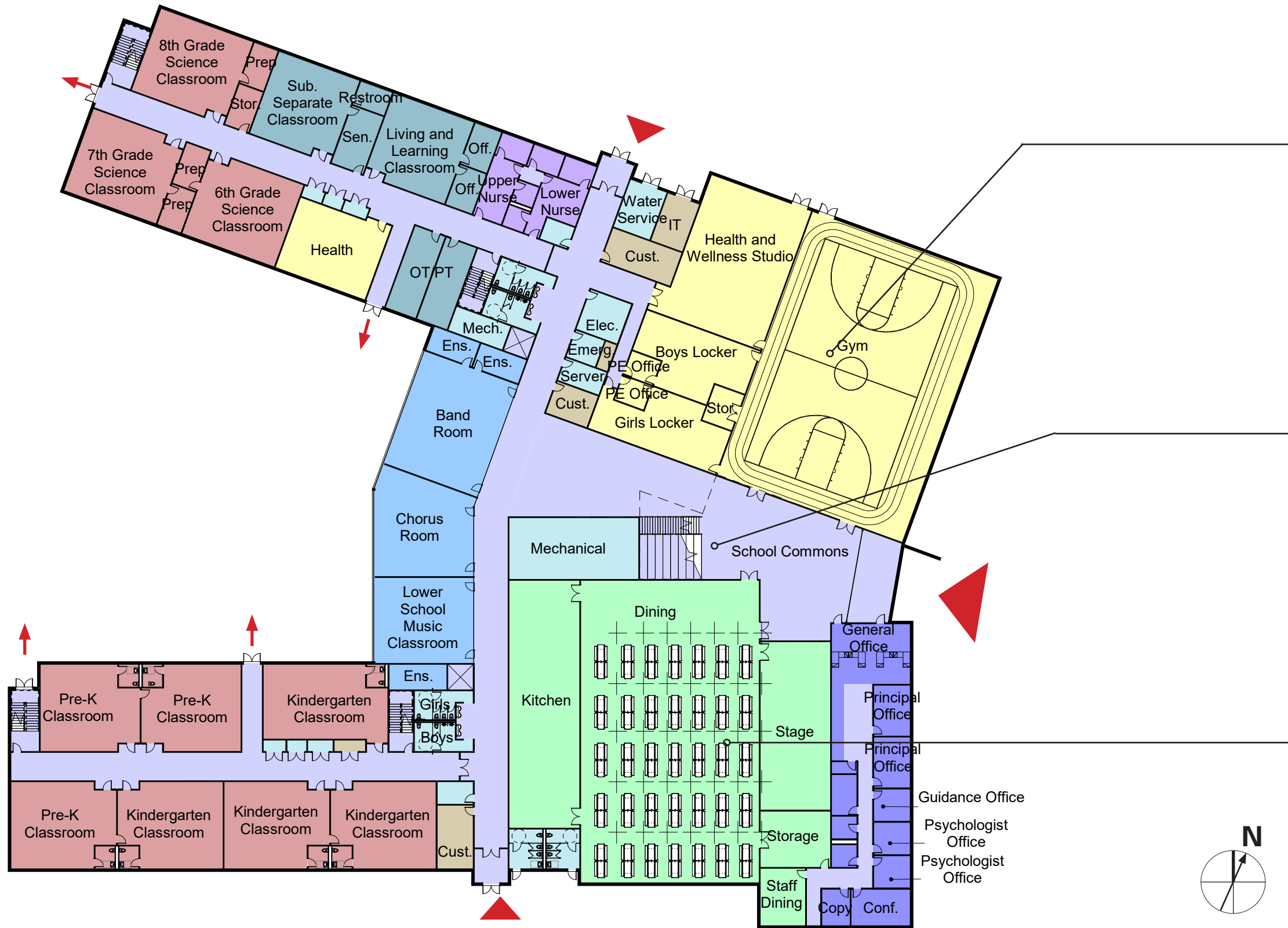


2 Schools, 1 Roof

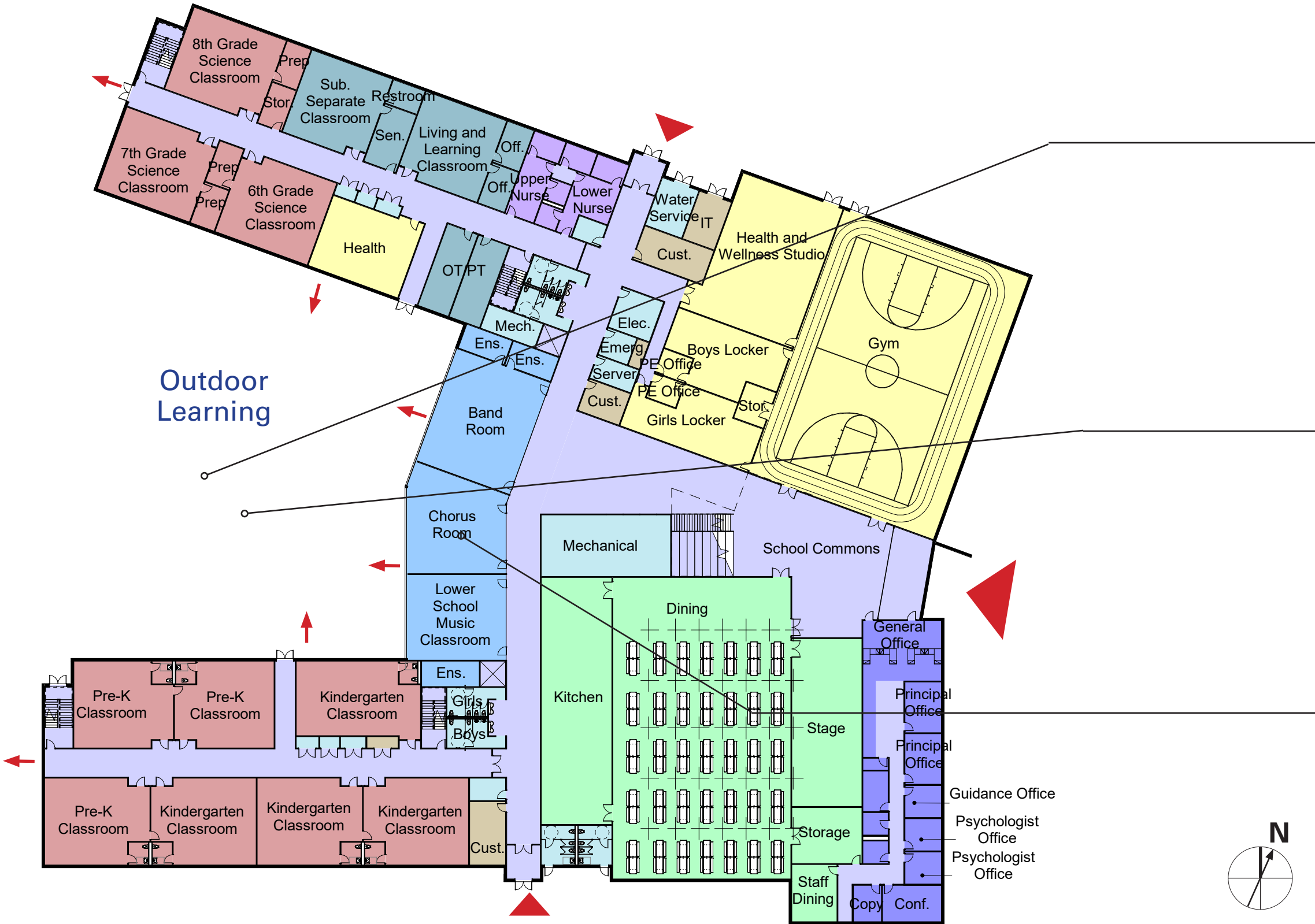


Grade Neighborhoods
Flexible Learning Space

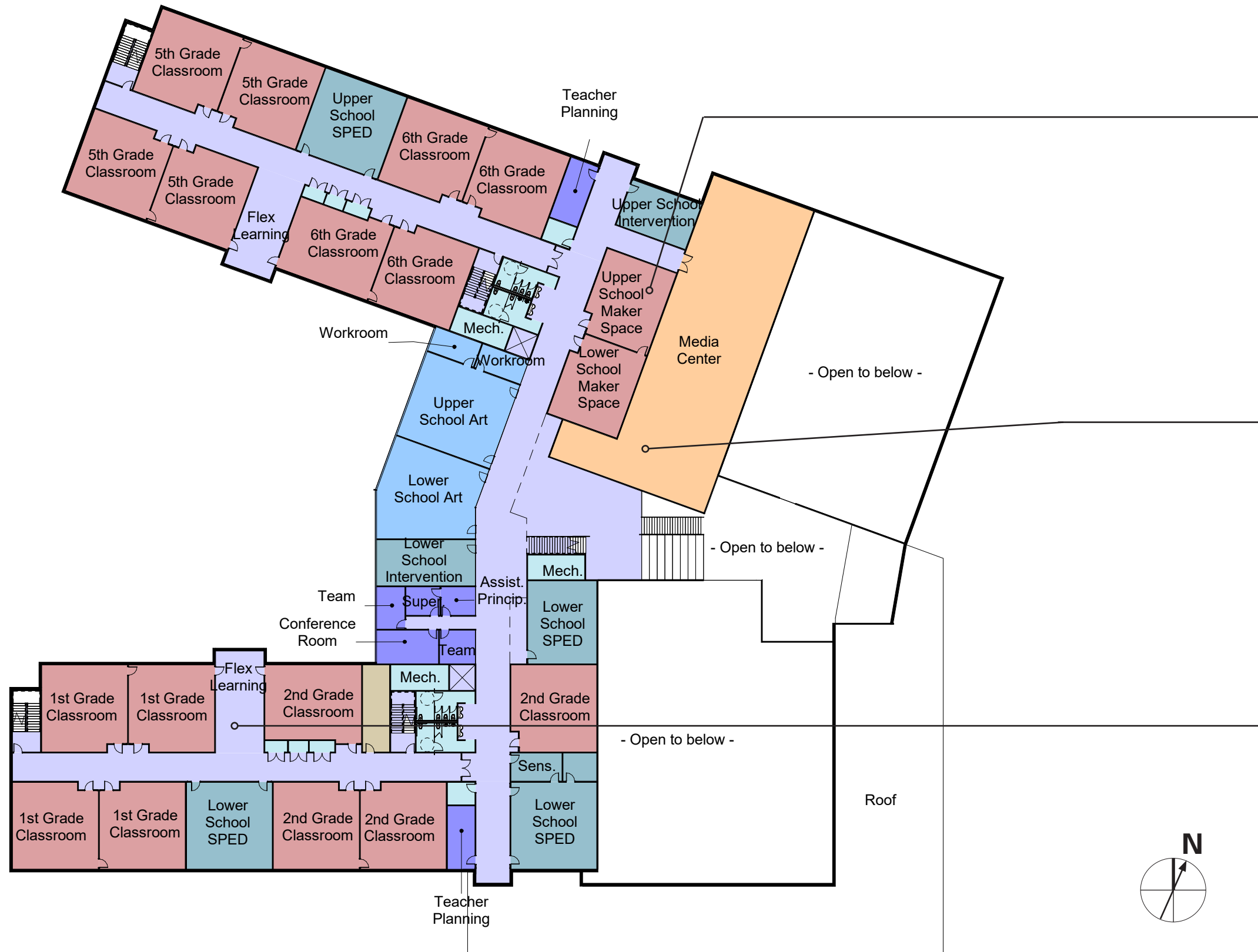
Preferred Solution Key Concepts



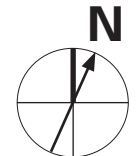
First Floor Plan



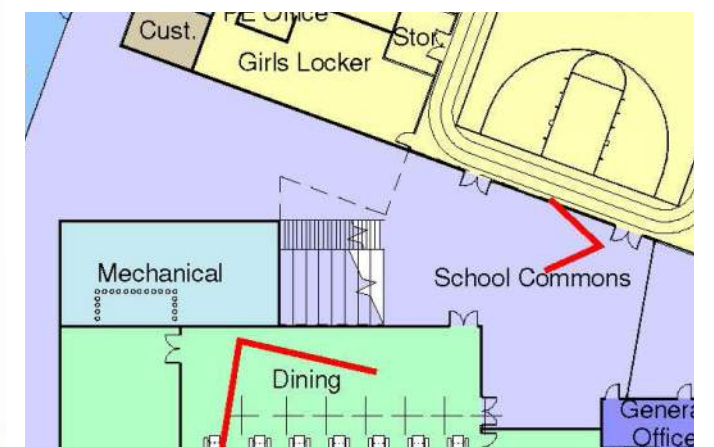
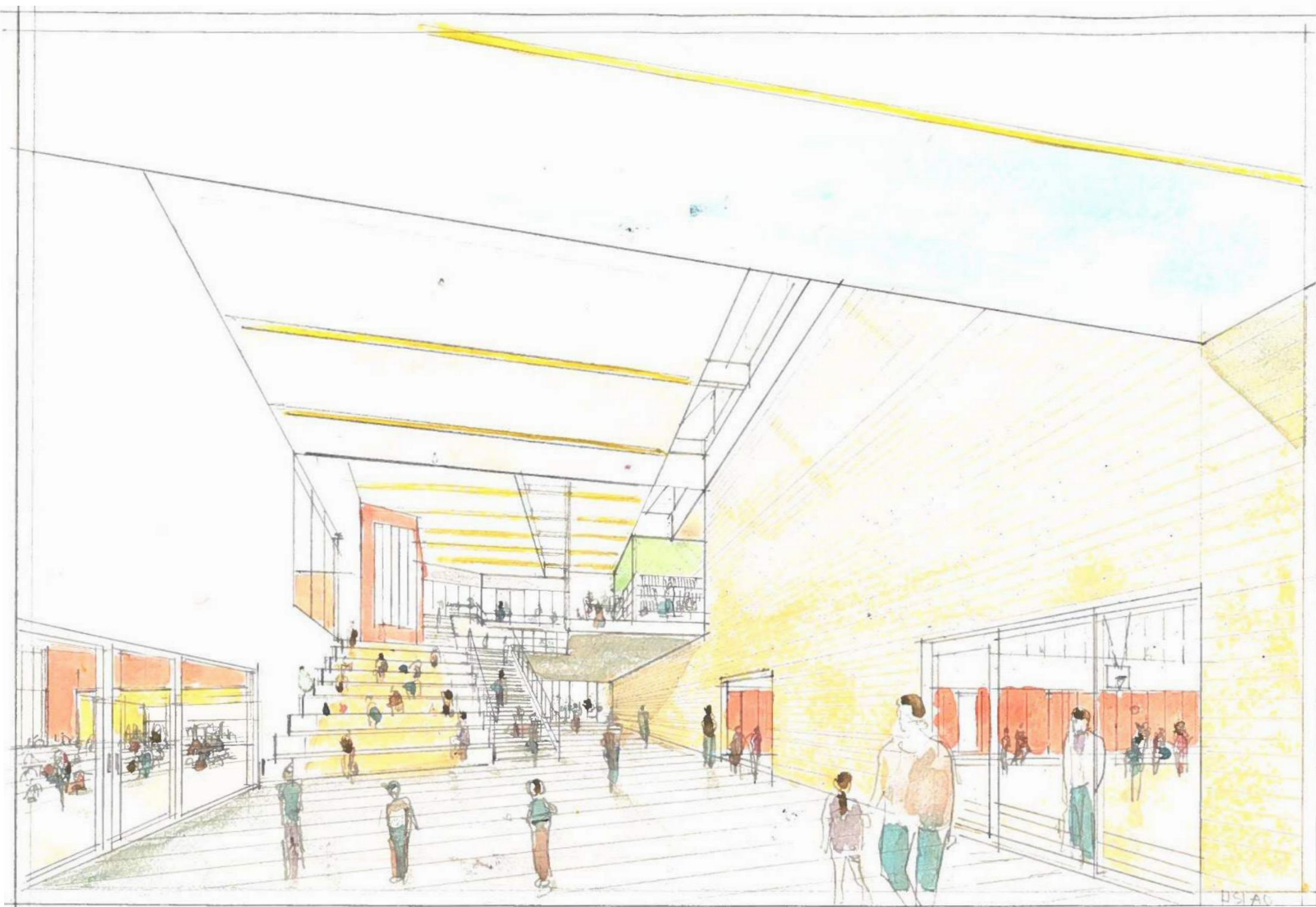
First Floor Plan



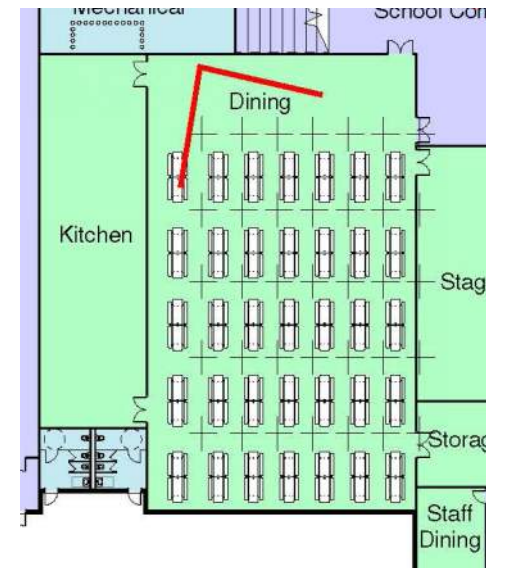
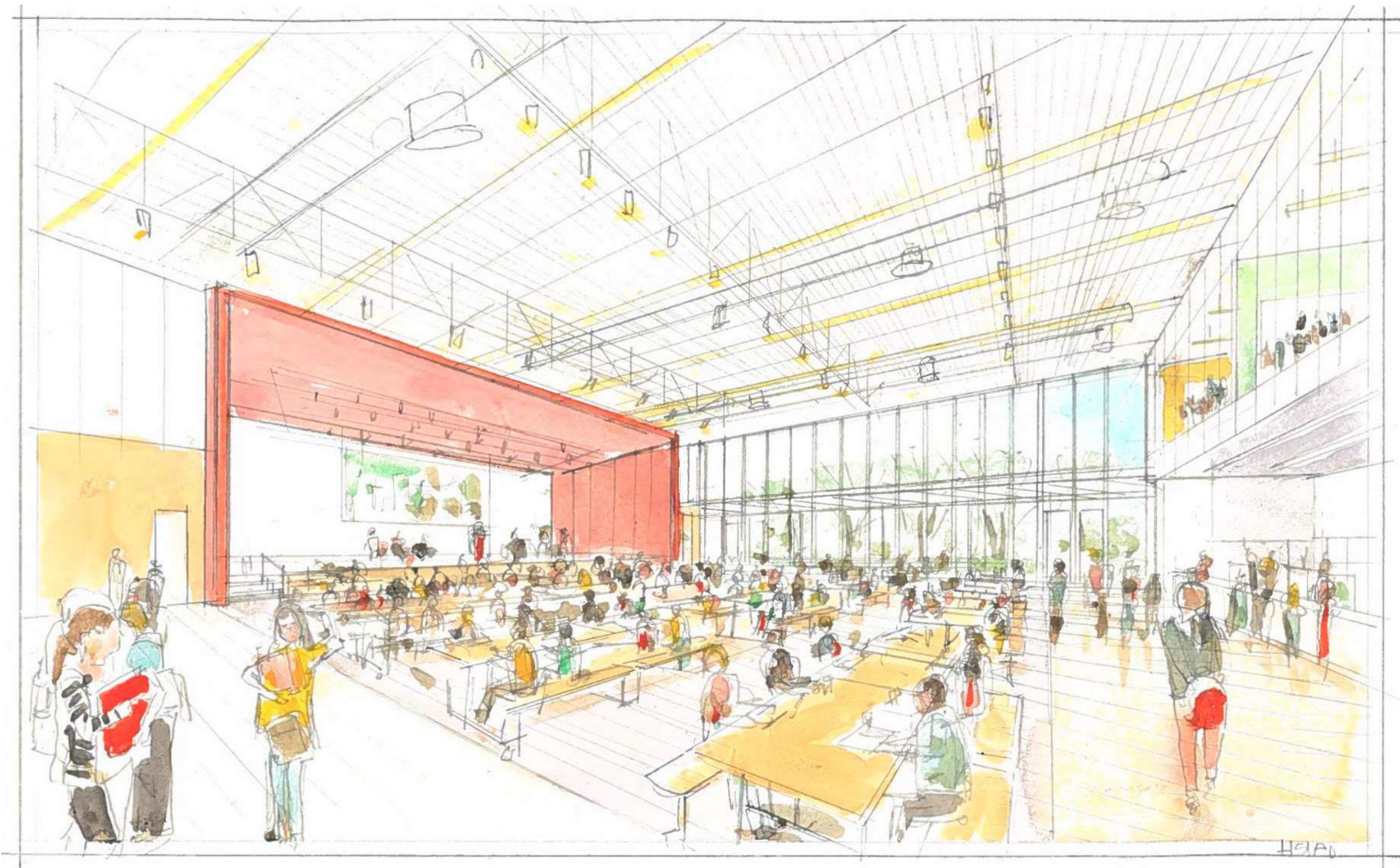
Second Floor Plan



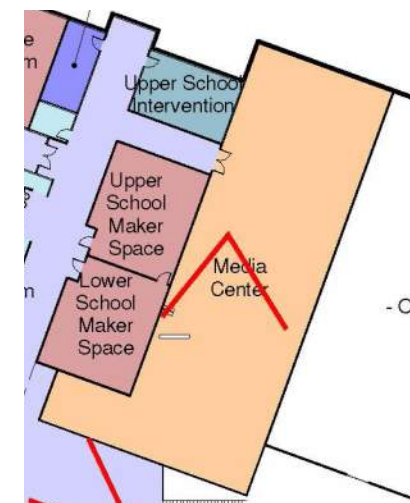
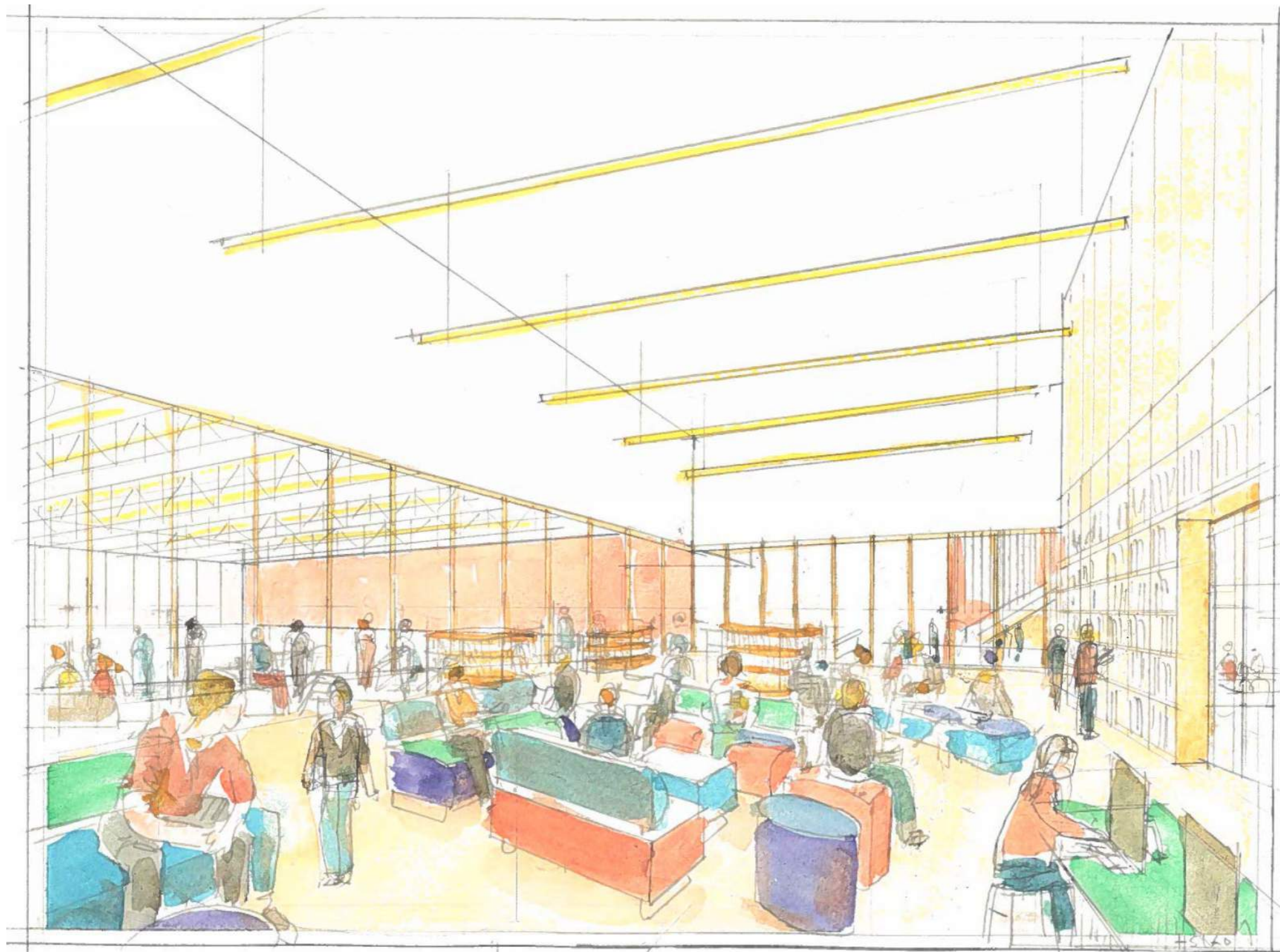
Third Floor Plan



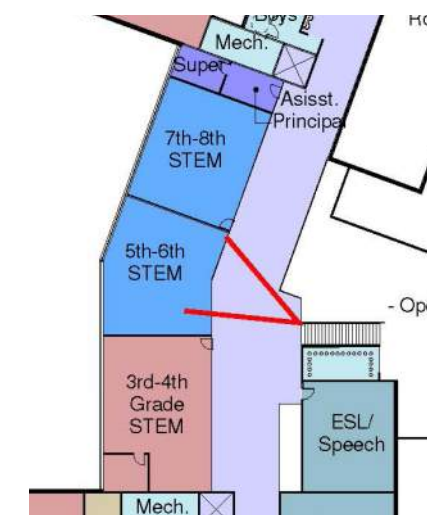
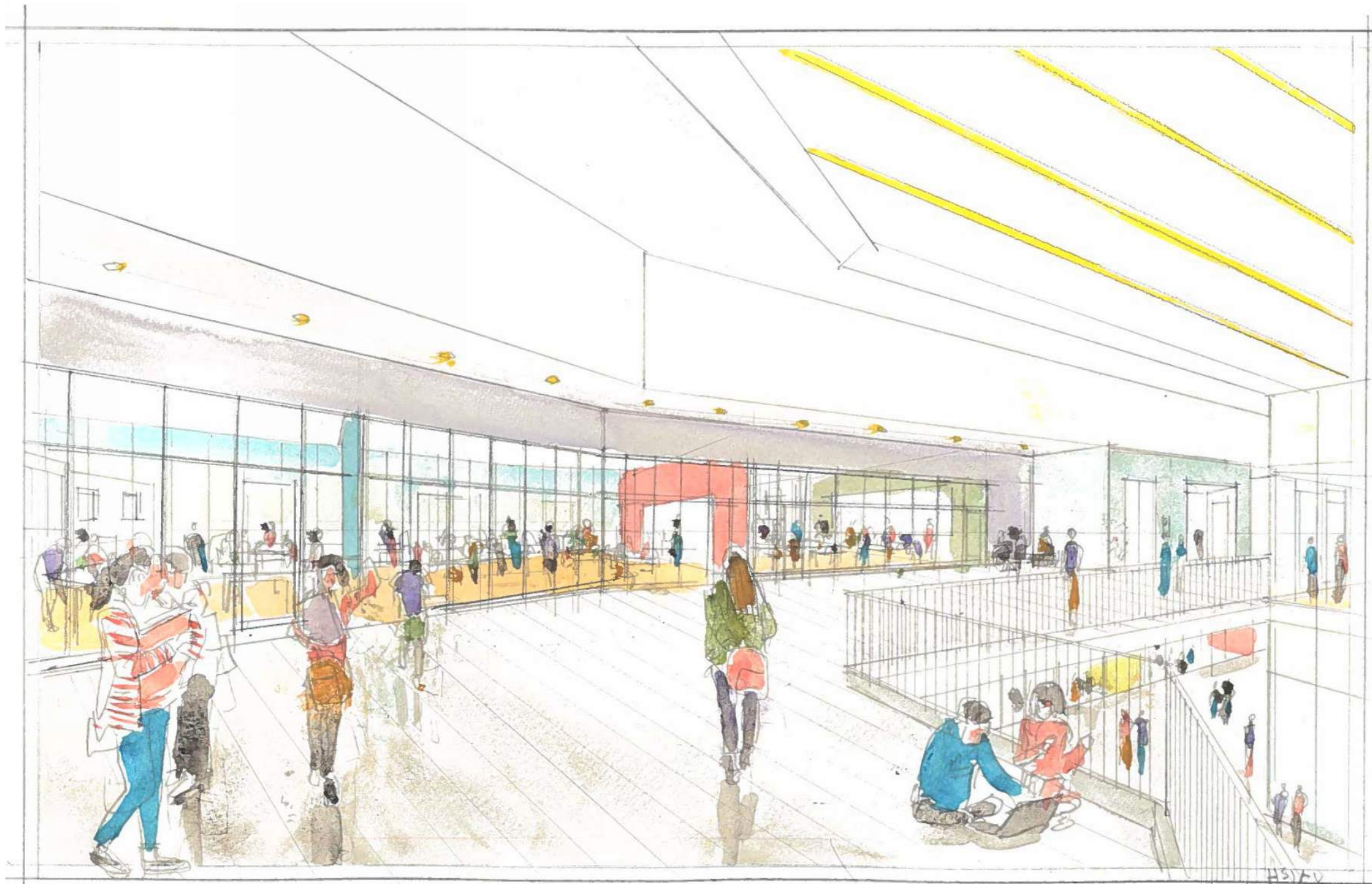
School Commons



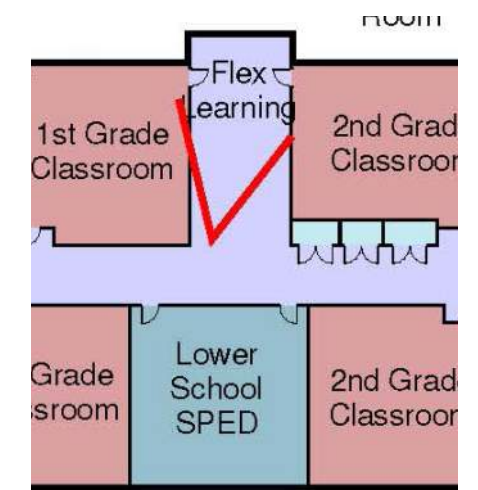
Cafetorium



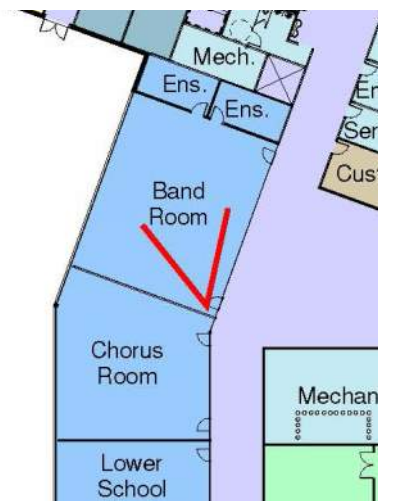
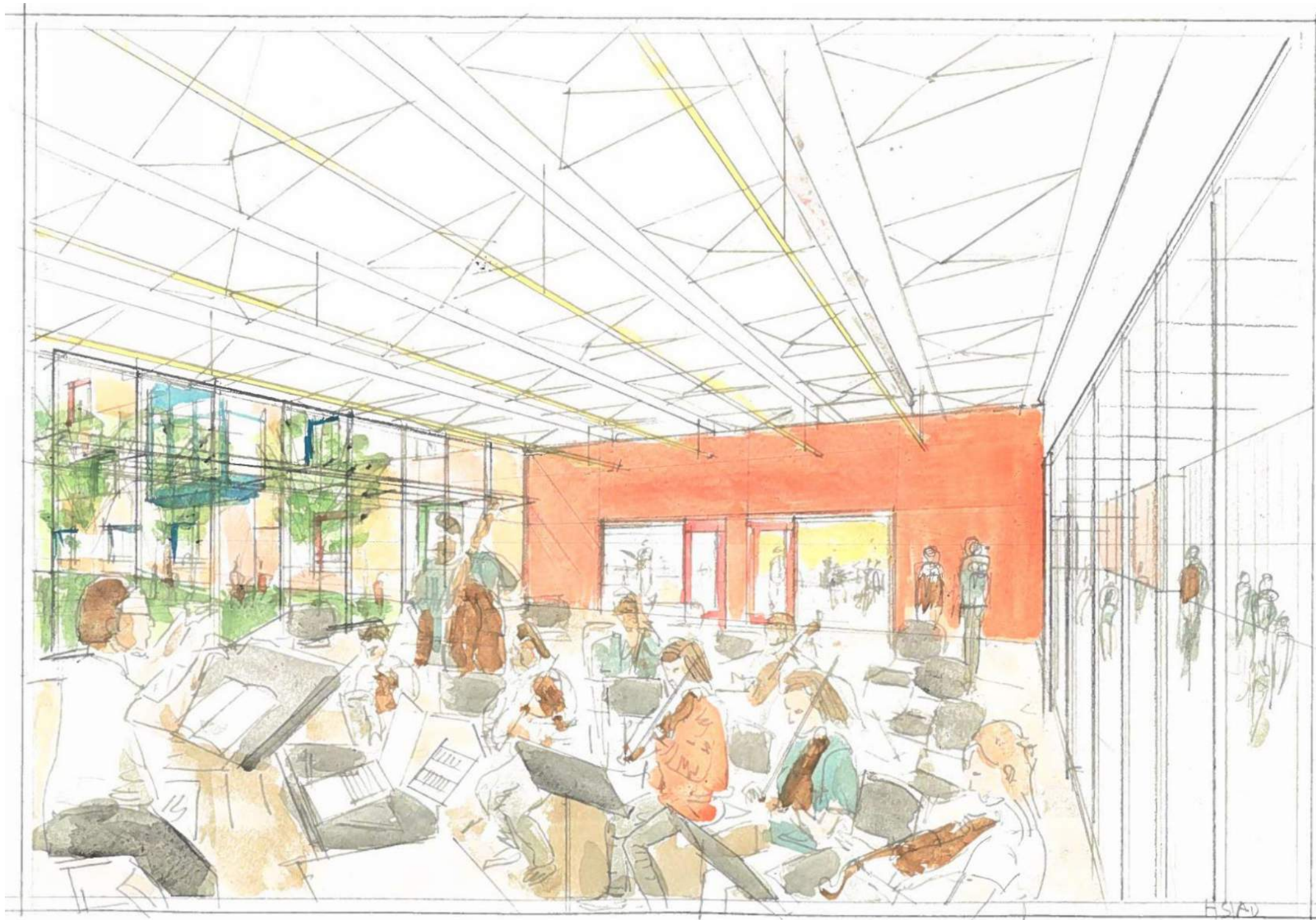
Media Center



STEM Space



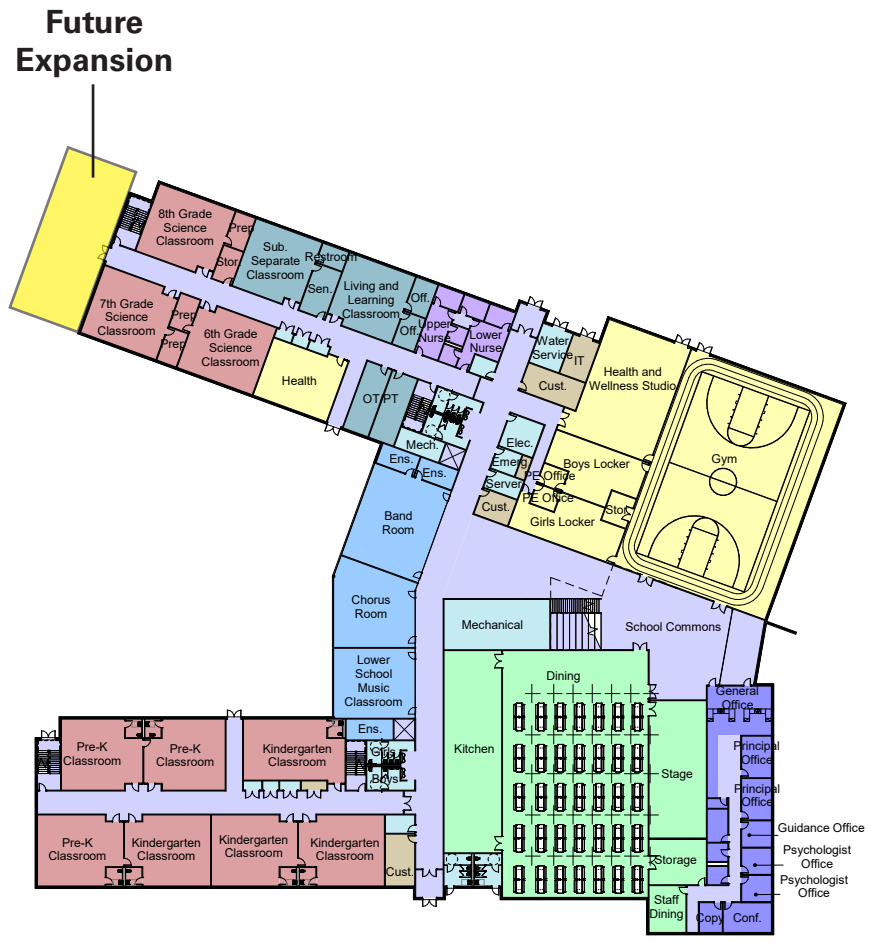
Flexible Learning



Music Room



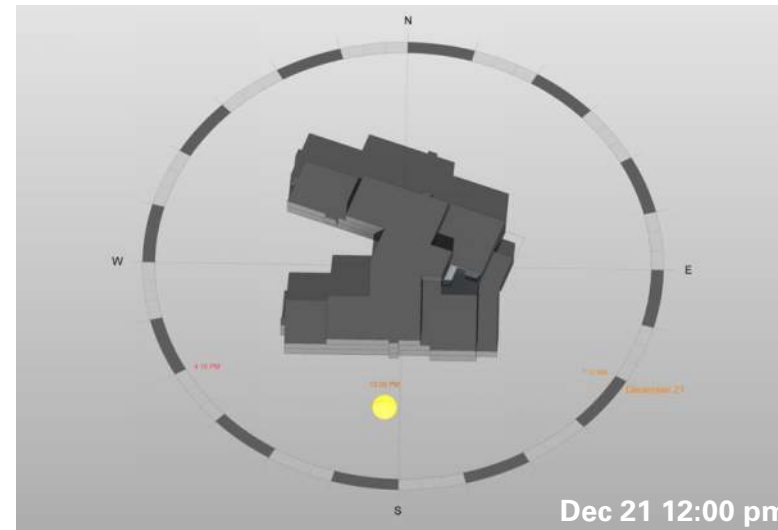
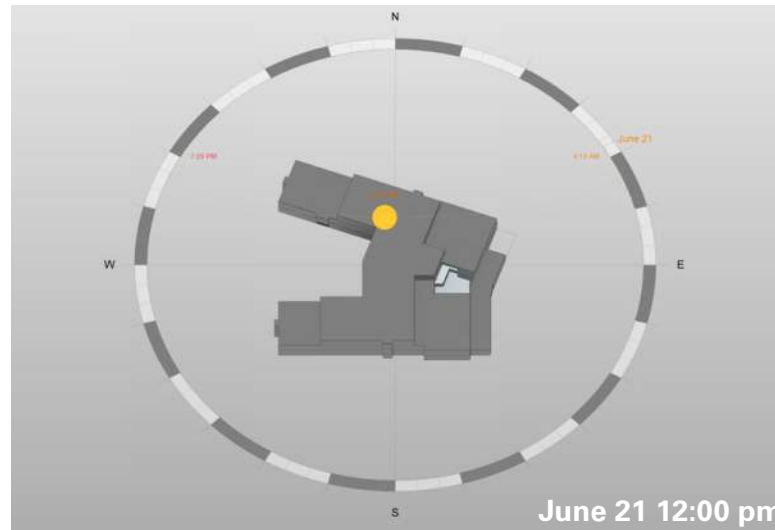
Courtyard



Preferred Solution Future Expansion

Sustainability Design Goals:

- ✓ 2 schools under one roof for building and site efficiencies
- ✓ Pursuing LEED-S V4 Silver
- ✓ Optimal solar orientation with classroom “wings” oriented north-south
- ✓ Durable, sustainable finish materials on interior for optimal indoor air quality
- ✓ “Wings” frame open outdoor classroom space oriented to wetlands
- ✓ Heat Loss Form Factor (compactness) is 1.38 which is exceptional



LEEDv4 BD+C: Schools (LEEDv4 SC) Project Scorecard		Project: Leicester School MS Address: 174 Paxton Street, Leicester, MA 01524 Date: 30-May-19		The Green Engineer Sustainable Design Consulting	
LEED Goal: MSGA 2%		Bldg Area: 140,000		Site Area: 139,140	
Parking: 530		Staff: 139,140		Students: 530	
Visitors: 530					
POINT TOTALS					
41		49		12	
GENERAL PROJECT DOCUMENTATION					
Req'd	Team	Notes			
1		REQUIRED: Project must meet all MRPs to be eligible for LEED certification. TGE will work with Nitch on developing LEED boundary.			
INTEGRATIVE PROCESS					
Req'd	Team	Notes			
1		CREDIT: Perform energy and water-use analysis in early design through the use of a "simple box" model and development of a water budget, respectively. Follow-up discussion is needed in the next few weeks to determine if this credit will be pursued.			
LOCATION & TRANSPORTATION					
Req'd	Team	Notes			
1		CREDIT: Project located in a LEED ND development.			
1		CREDIT: Locate the development footprint on land that has been previously developed. Project is less than 100' to wetland.			
2		CREDIT: Locate on a brownfield where soil or groundwater contamination has been identified, and where the local, state, or national authority (whichever has jurisdiction) requires its remediation. There may be underground contamination. Project is not in a DDA.			
1		CREDIT: Avg. surrounding density >22,000 sf (2pts) or >35,000 (4pts) and/or within 1/2 mile walking distance of at least 8 diverse uses (2pts). Multiple uses within 1/2 mile. Calculations need to be done for walking distance.			
1		CREDIT: 1pt: 72 wldy & 40 wldn; 3 pts: 140 wldy & 108 wldn; 6 pts: 360 wldy & 210 wldn kpts. Project does not have enough daily trips by bus to meet the credit.			
1		CREDIT: Locate within 200 yds of bicycle network and provide long-term bike storage for at least 5% of all regular building occupants and short-term storage for at least 2.5% of all peak visitors. Provide one shower for the first 100 regular building occupants and one additional for every 150 thereafter. There likely will not be staff showers in the school.			
1		CREDIT: Do not exceed the minimum local code requirements for parking capacity. Provide preferred parking for carpools for 5% of the total parking capacity. Calculations need to be performed to determine if the parking count meets the requirements. In addition, the number and location of carpool parking will need to be determined.			
1		CREDIT: Designate 5% of all parking spaces as preferred parking for green vehicles (a discounted parking rate of at least 20% for green vehicles is an acceptable substitute). In addition, install electrical vehicle supply equipment (EVSE) in 2% of all parking spaces used by the project. The project will need to provide electric charging stations in addition to green vehicle parking spaces. Eversource and National Grid have a new program supporting EV charging infrastructure cost for up to 5% of the site's parking spaces.			
SUSTAINABLE SITES					
Req'd	Team	Notes			
1		REQUIRED: Create/Implement an EBC plan for all construction activities associated with the project. The plan must conform to the requirements of the 2012 US EPA Construction General Permit (CGP). The project will implement an EBC plan.			
1		REQUIRED: Conduct a Phase I Environmental Site Assessment as described in ASTM E1527-05 (or a local equivalent) to determine whether environmental contamination exists at the site. If contamination is suspected, conduct a Phase II Environmental Site Assessment as described in ASTM E1903-11 (or a local equivalent). If a site is contaminated, remediate the site to meet local, state, or national environmental protection agency region residential (unrestricted) standards, whichever are most stringent. Phase I site assessment and survey has been completed.			
1		CREDIT: Complete and document a site assessment that includes: Topography, Hydrology, Climate, Vegetation, Soils, Human Use, Human health effects. Project team will perform a site assessment. There are drainage issues on site - a lot of grading needed. A lot of large rocks on the site.			
2		CREDIT: Preserve and protect from all development and construction activity 40% of the greenfield area on the site (if such areas exist) and restore 30% (including the building footprint) of the previously developed site area with native & adaptive vegetation OR provide financial support equivalent to at least \$0.40 per square foot for the total site area to a nationally or locally recognized land trust or conservation organization. Project will include native and adapted vegetation. Too early in design to determine if credit can be achieved.			
1		CREDIT: Provide outdoor space greater than or equal to 30% of the total site area (excluding building footprint). A minimum of 25% of that outdoor space must be vegetated (if grass does not count as vegetation) or have overhead vegetated canopy. The outdoor space must be physically accessible. Calculations will have to be performed as the design develops to determine if the credit can be achieved. School wants to create site education opportunities - gardens, etc.			
3		CREDIT: On site, manage the runoff from the developed site for the 95th percentile (2pts) or 98th percentile (3pts) of regional or local rainfall events using LID & CI strategies that best mimic natural site hydrology OR manage on site the annual increase in runoff volume from the natural land cover condition to the post developed condition. (3 pts). The credit can be difficult to achieve. Nitch will look at the LEED v4.1 version of this credit and determine if the credit can be achieved. A system, vegetated swales, rain gardens were discussed as possibilities.			
2		CREDIT: Use any combination of non-roof Measures, high-Reflectance roof, or vegetated roof to be equal to or greater than the total roof + hardscape area on-site AND/OR place a minimum of 75% of parking spaces under cover. Project will have a light colored roof. Project team should consider light colored materials for walkways and other hardscape.			
1		CREDIT: Do not exceed allowable backlight, uplight or glare (BLUG) ratings for all exterior lighting as determined by the project's lighting zone (LZ). Project will have a limited amount of outdoor lighting - only have the quantity needed for safety. Full cut off lighting that is dark sky compliant will be specified. There will be a flag pole that will require lighting.			

Sustainable Design Goals

Approved Enrollment:	930 Student Enrollment (Grades Pre-K - 8)	
Approximate Project Size:	141,241 SF per MSBA Space Templates	
Est. Construction Cost:	\$485/SF* per Independent Est. Firms	
Add Soft Costs:	Approximately 25% of construction cost	
Adjust for Escalation:	Estimated 3% per year / year to construction mid-point	
New K-8 on Existing Site:	Estimated Total Project Cost:	\$87 mil
	Estimated Facilities Grant:	\$41.5 mil
	Estimated District Share:	\$45.5 mil
	Estimated Average Residential Tax Impact:	\$832/year

*MSBA will reimburse up to \$333/SF

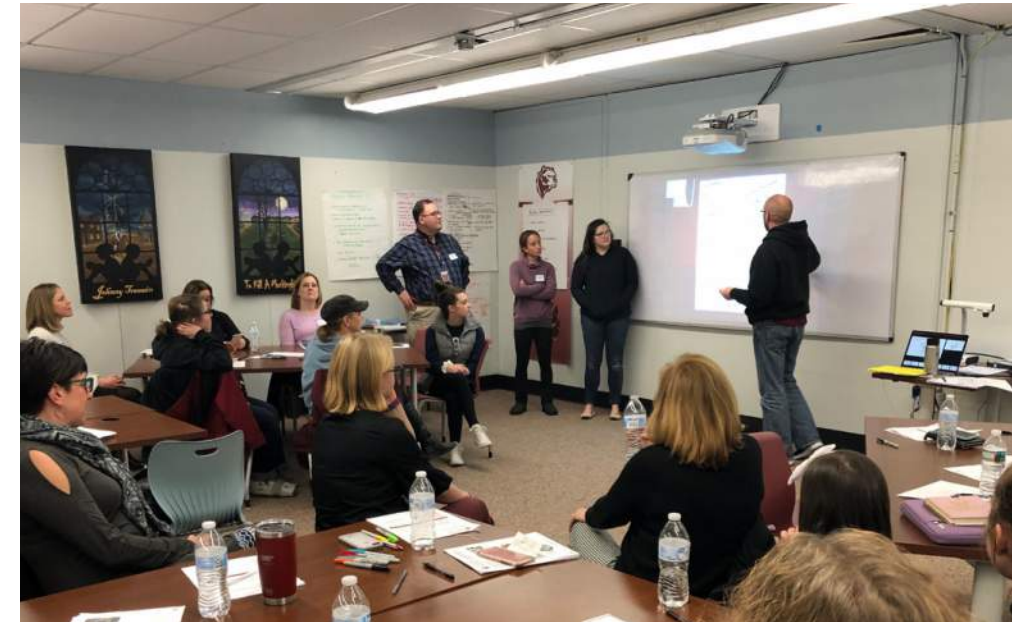
Preliminary Project Cost Scenarios

	Total Project Cost	State Share (MSBA)	District Share (Leicester)
Renovate Existing Elementary and Middle Schools *	\$31,068,545	\$0	\$31,068,545
New Pre-K - 8 School:	\$87,000,000	\$41,500,000	\$45,500,000

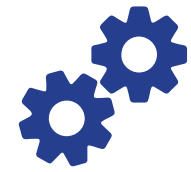
* Johnson Roberts Maintenance Report - 2014 with Project Cost for 2019 (3% escalation/year)

Preliminary New And Renovation Cost Summary

School Building Committee Meeting	June 28, 2018
School Building Committee Meeting	July 08, 2018
School Building Committee Meeting	July 19, 2018
School Building Committee Meeting	September 20, 2018
School Building Committee Meeting	October 18, 2018
School Building Committee Meeting	November 08, 2018
School Building Committee Meeting	December 20, 2018
School Building Committee Meeting	January 10, 2019
School Building Committee Meeting	February 26, 2019
School Building Committee Meeting	March 21, 2019
School Building Committee Meeting	April 11, 2019
School Building Committee Meeting	May 16, 2019
School Building Committee Meeting	May 21, 2019
Community Forum: # 1	June 06, 2019
School Building Committee Meeting	June 27, 2019
Combined Select Board Meeting:	July 31, 2019
Community Engagement Kick-off:	August 08, 2019
School Building Committee Meeting	September 12, 2019
School Building Committee Meeting	September 12, 2019
School Building Committee Meeting	October 01, 2019
School Building Committee Meeting	October 10, 2019
Community Forum: # 2	October 15, 2019
School Building Committee Meeting	November 07, 2019
Community Forum: # 3	November 20, 2019



Community Outreach



Efficiency



Safety



Community Improvement



Increased Property Value



Community Use



Financially Responsible Choice



leicesterbuildingproject.com

