

Table Topics Workshop

Topic 1: Walkable / Neighborhood Schools

Topic 2: Environmentally Responsible / Net Zero (Ready)

Topic 3: Community Uses (Current / Potential)

Topic 4: Cost and Schedule

Topic 5: Renovation vs. New Building

Topic 6: School Size / Culture

Topic 7: Swing Space / Adjacent Construction

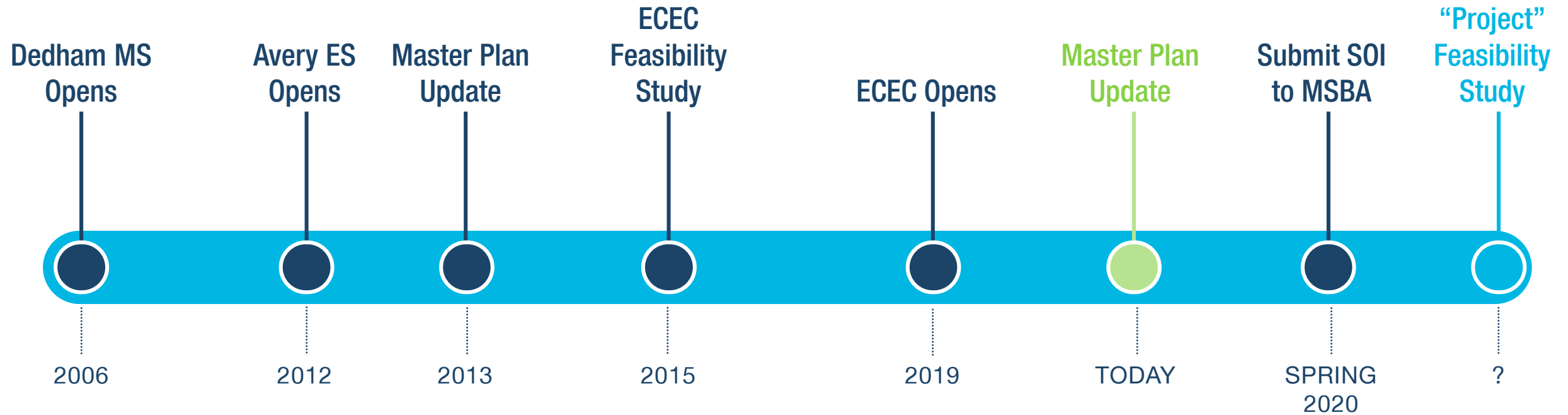
Topic 8: Demographics

| SMMA

Dedham Public Schools Community Workshop #2 Environments for Learning

December 9, 2019

Schedule



Workshop Format



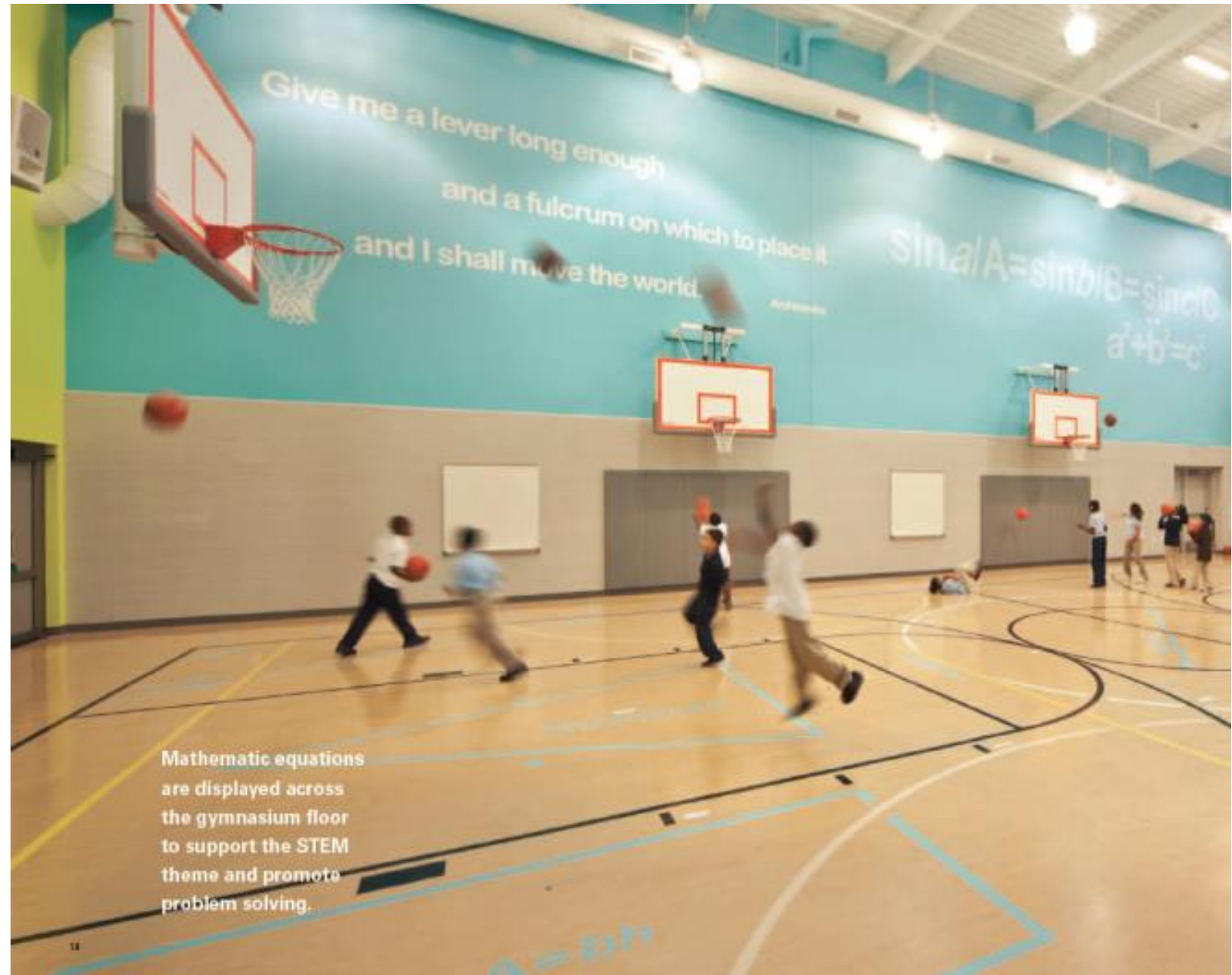
Dedham Master Plan Goals

- **Comprehensively rebuild or replace** Oakdale, Riverdale and Greenlodge Elementary Schools
- **Create a plan** for schools that will meet the needs of all our students in the future and have the flexibility to accommodate them
- **Develop a master plan** where the elementary schools can serve the community well into the future with flexibility to accommodate changing educational needs
- **Provide equity of facilities** for all elementary children within the town
- To the extent possible, plan for school(s) that **foster a small school / neighborhood environment and feeling**
- Develop project(s) that are **fiscally responsible** and **politically viable** for the community

School Environments Designed to Promote:

- Project / Problem Based Learning
- Social Emotional Learning
- Joy
- Differentiation and Personalization
- STEM / STEAM / STREAM
- Peer to PEER Learning
- The Third Teacher
- Learning Through Play
- Universal Design for Learning

Entire Building and Site as Learning Environments



Mathematic equations are displayed across the gymnasium floor to support the STEM theme and promote problem solving.

Booker T. Washington STEM Academy,
Champaign IL. – Cannon Design

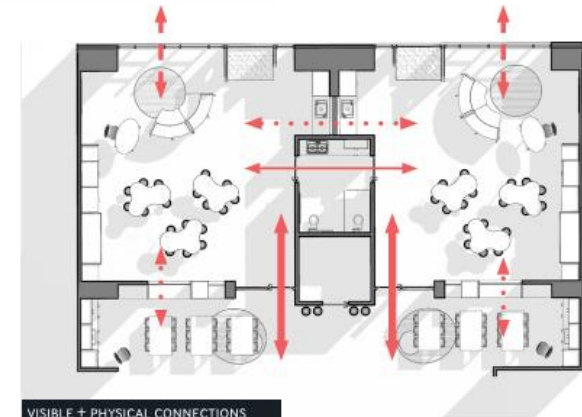
Flexible Learning Spaces

 EXTERIOR VISUAL CONNECTION
 INTERIOR VISUAL CONNECTION
 INTERIOR PHYSICAL CONNECTION

- ① INTERACTIVE TECHNOLOGY
- ② STUDENT STORAGE
- ③ READING NOOK
- ④ TEACHER WASHING / RESOURCE
- ⑤ ENTOURAGE / GROUP DINING + ARTS
- ⑥ ENTOURAGE STORAGE
- ⑦ HANDS-ON ACTIVE LEARNING
- ⑧ FOCUSED GROUP LEARNING
- ⑨ PERFORMANCE PLATFORM
- ⑩ STUDENT WASHING
- ⑪ SHARED STUDENT TOILETS



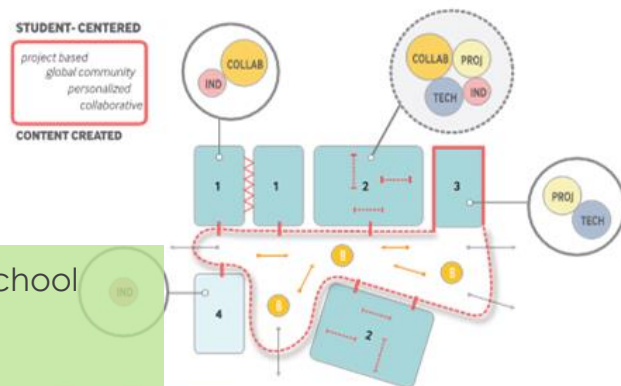
- A** STUDIO
- B** ENTOURAGE
- C** SUPPORT



Elon W. Rhodes Early Learning Center
 Harrisonburg, Virginia
 VMDO Architects

Agile, Adaptable Learning Spaces

During the planning process, educators expressed a desire for team teaching. The resulting design promotes teacher and student collaboration and individualized learning by creating spatially-diverse neighborhood environments that provide a variety of flexible scales and arrangements. Breakout spaces and resource hubs are distributed throughout the neighborhood to empower one-on-one collaborations that complement the project-based work occurring in studios.



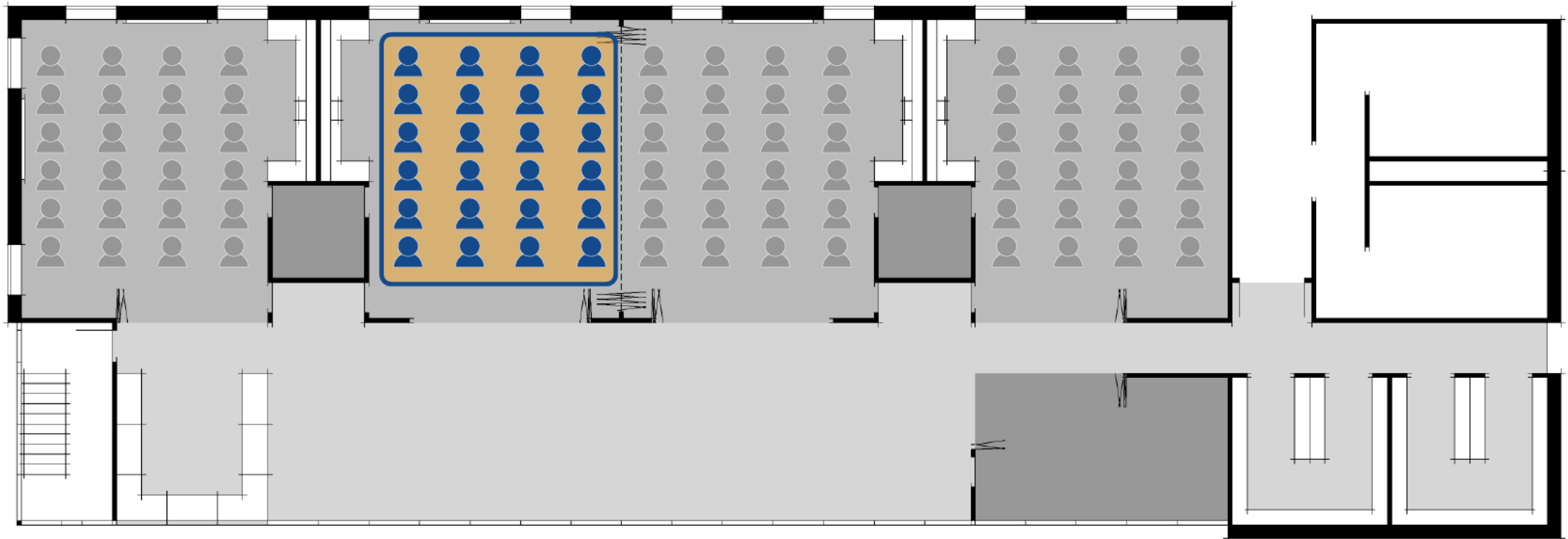
Bluestone Elementary School
Harrisonburg, Virginia
VMDO Architects

21ST CENTURY MODEL OF LEARNING

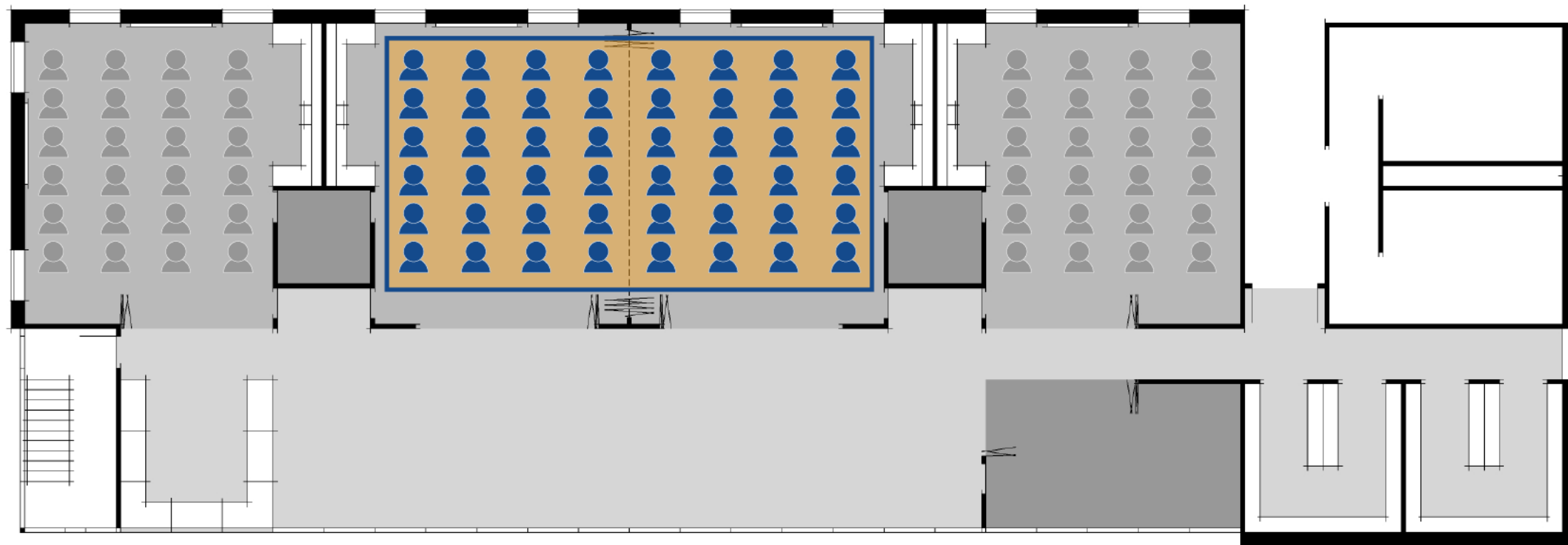


Classrooms / Learning Commons

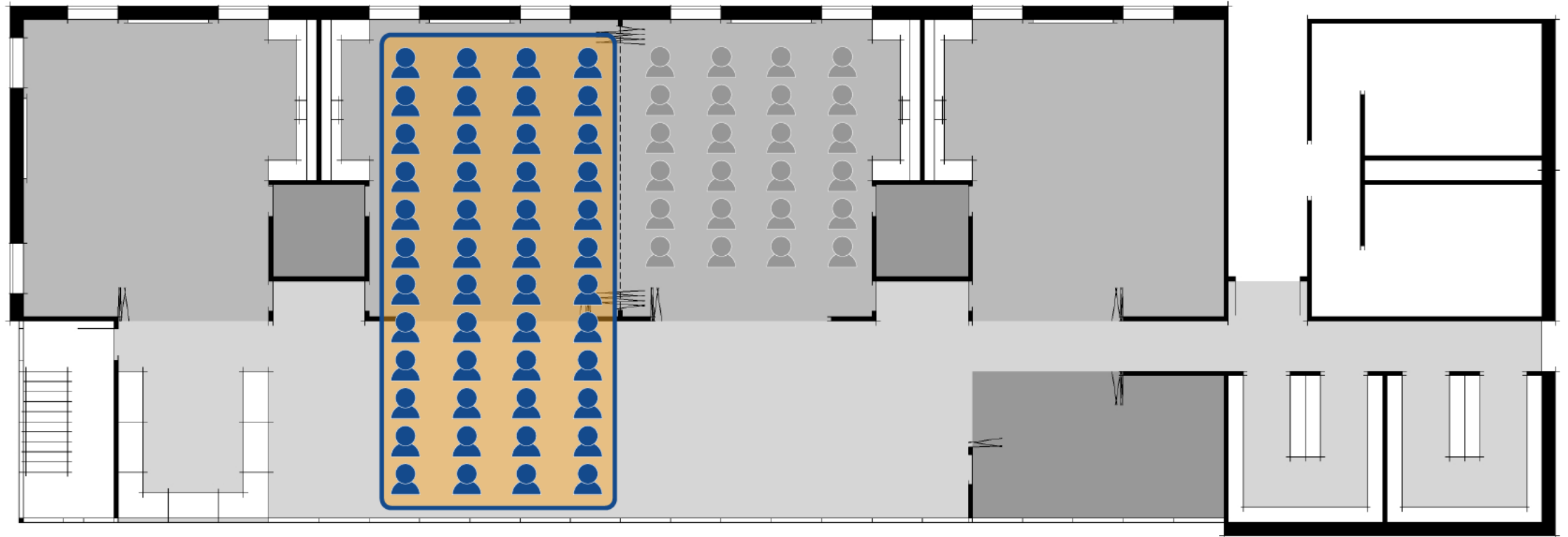
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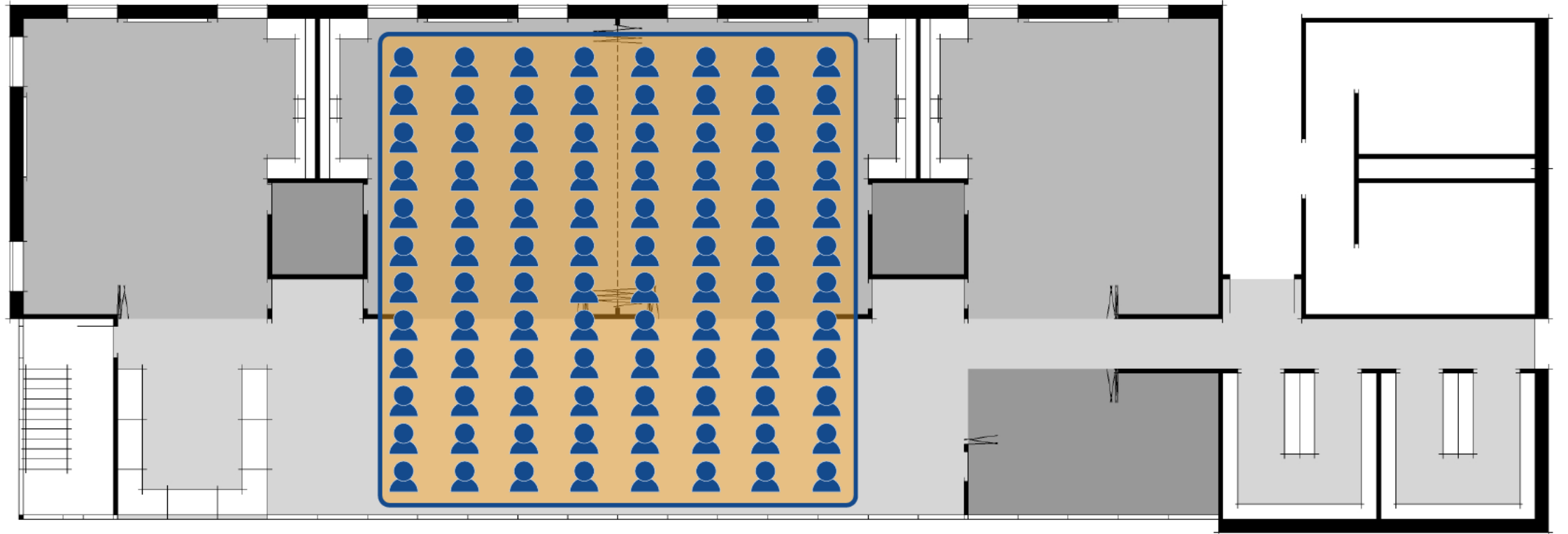
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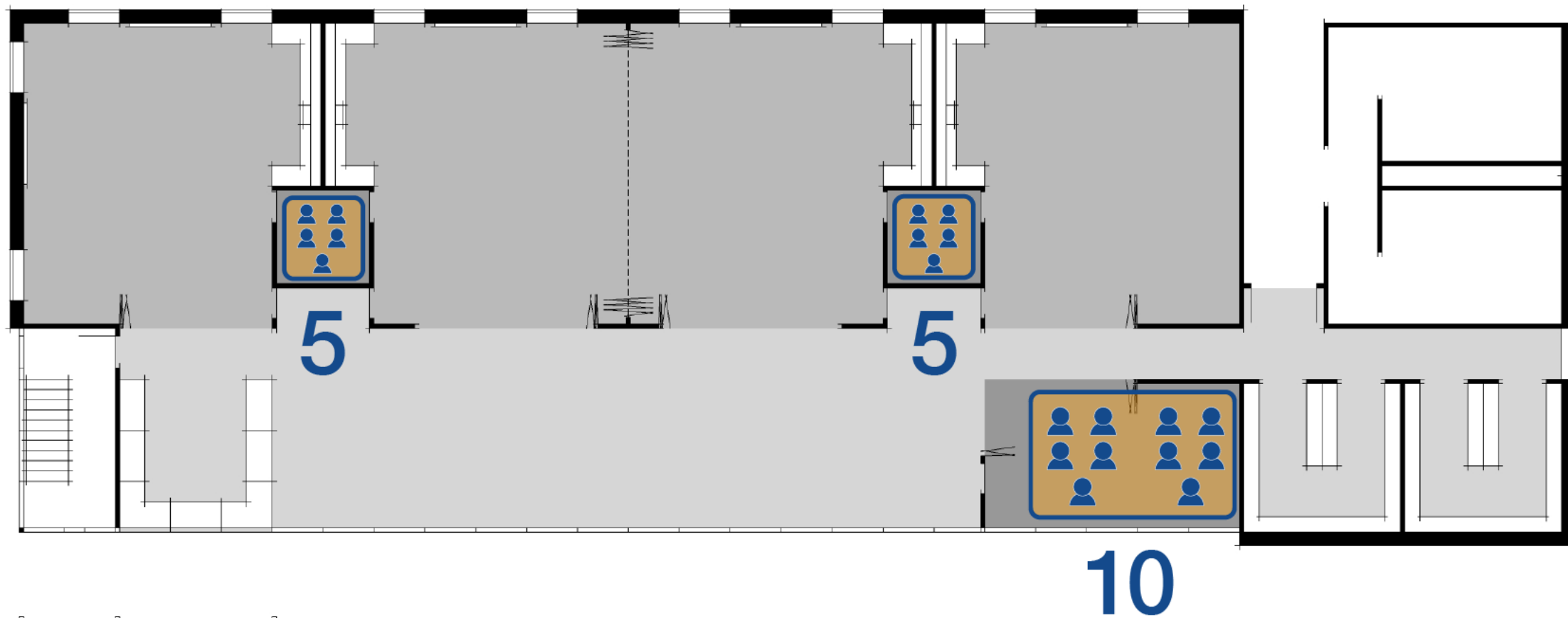
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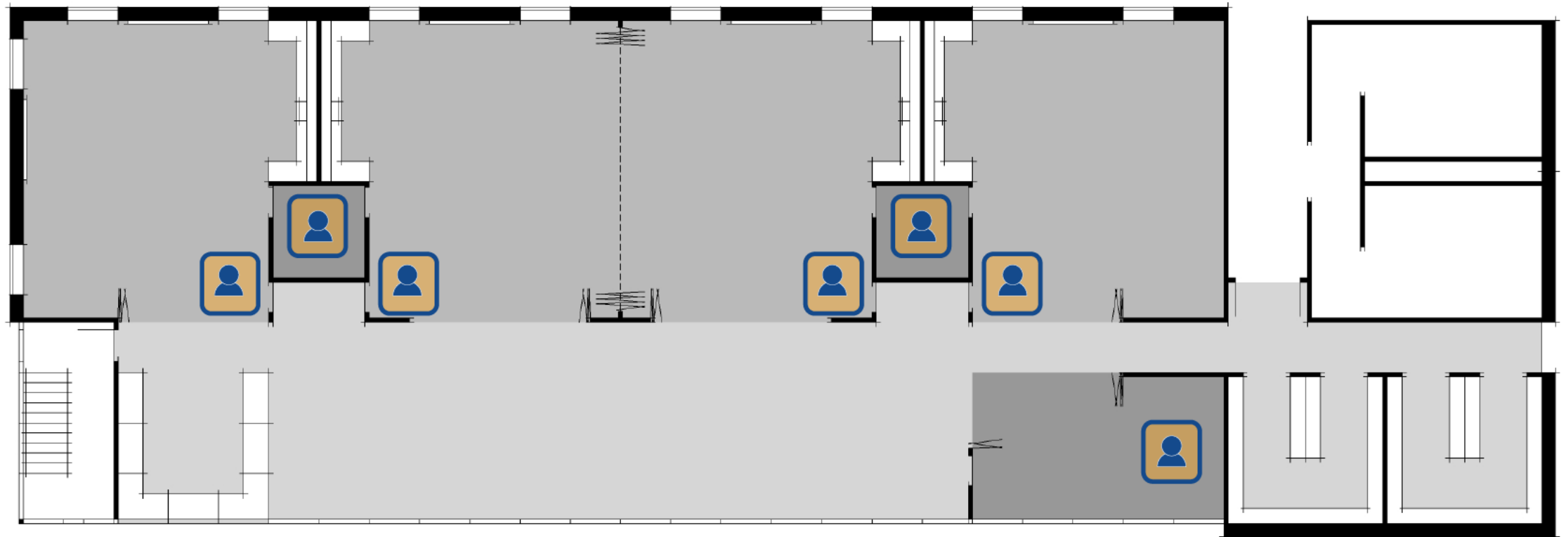
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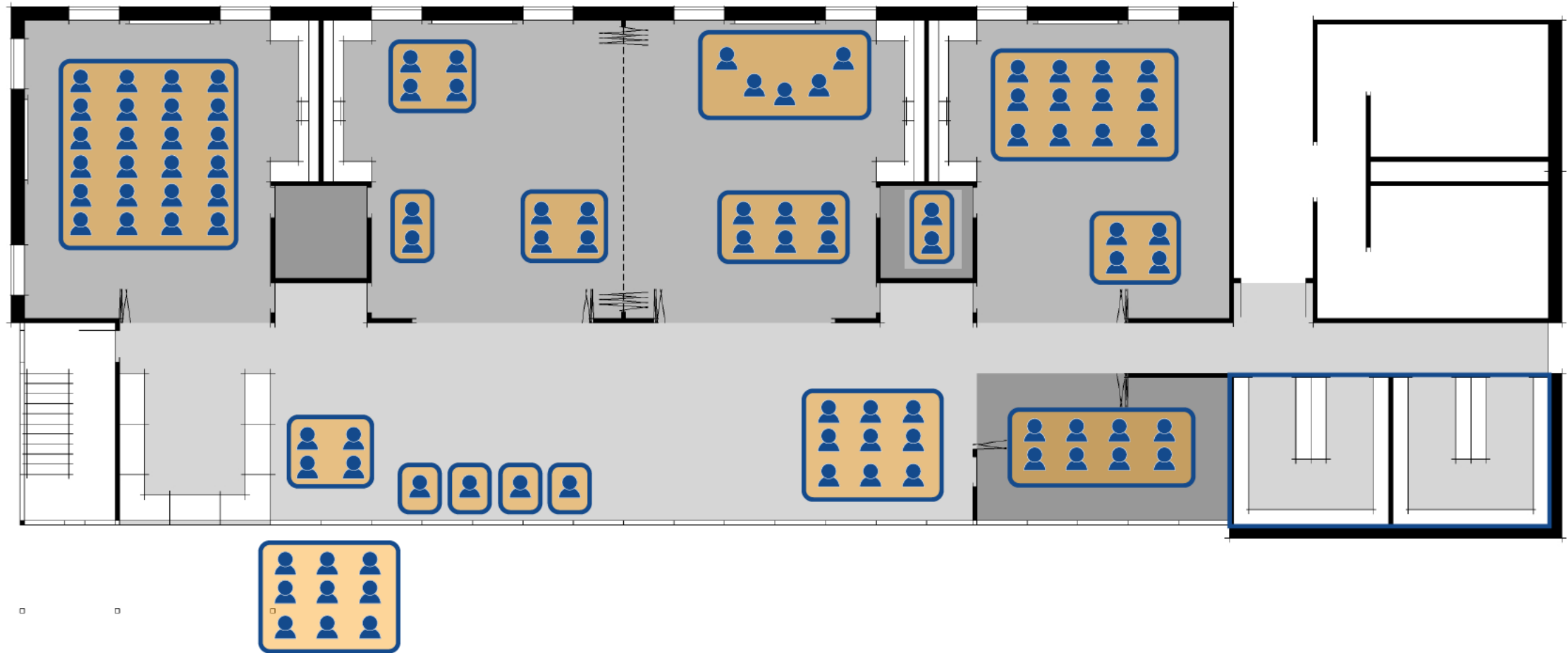
Small Group



Teachers and Paraprofessionals



Teacher & Student Options



Bancroft Elementary



Arlington Elementary School
Tacoma, Washington
Mahlum Architects





Parker Elementary School
Billerica, MA.
SMMA Architects

Parker Elementary
Billerica, MA
SMMA



Springfield Literacy Center
Springfield, PA
Stantec



The Learning Commons: Lower Grades



The Learning Commons: Upper Grades





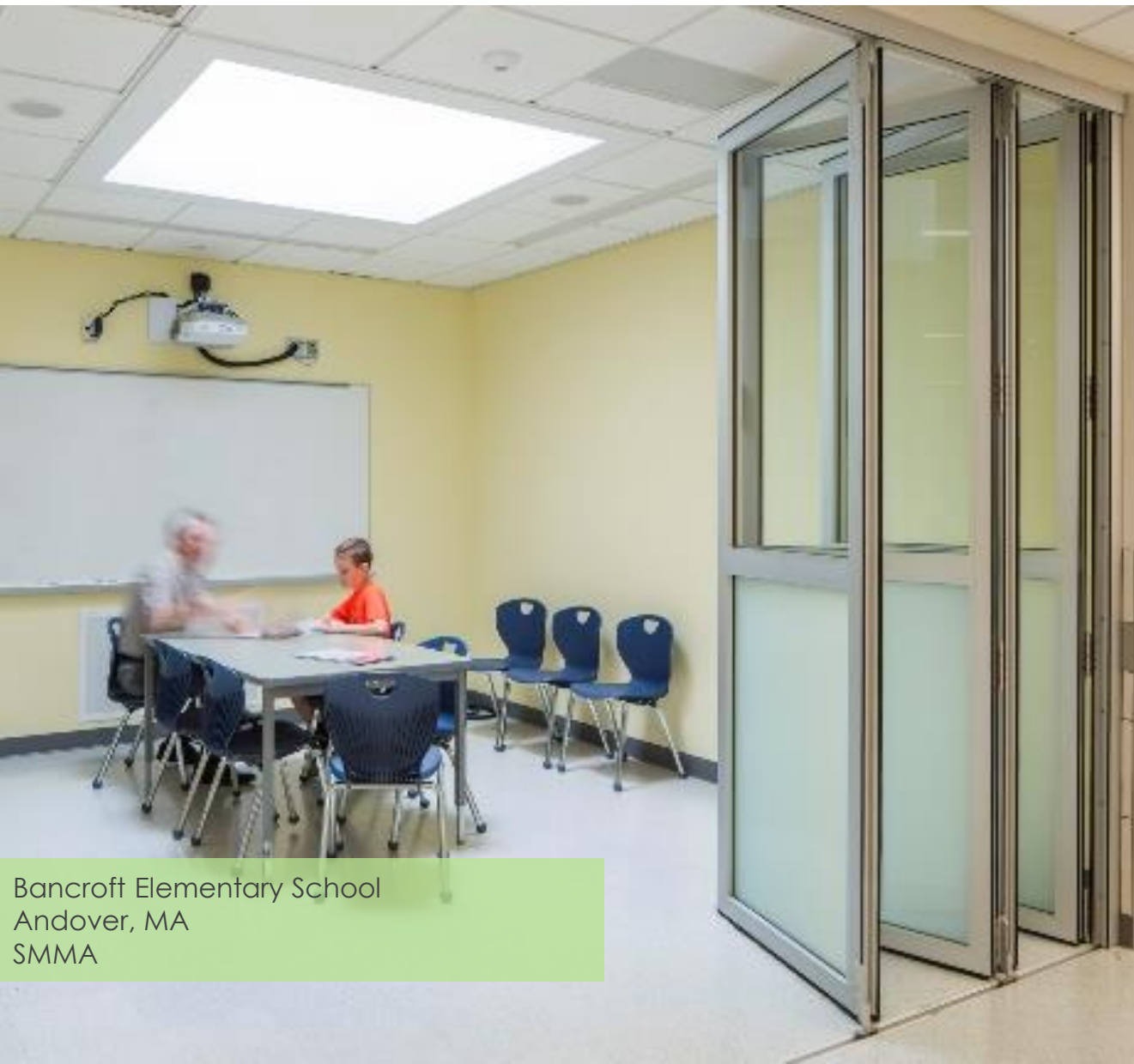
High Plains School, ECE-8
Loveland, CO.
RBB Architects

Small Group



Northwood Elementary School
Mercer Island School District
Mahlum Architects

Pull Over / Small Group



Bancroft Elementary School
Andover, MA
SMMA





Parker Elementary School
Billerica, MA.
SMMA Architects



Douglas Park School
Regina Saskatchewan
Fielding Nair International



Center Elementary School
Stow, MA.
SMMA Architects



Parker Elementary School
Billerica, MA.
SMMA Architects

Modernizing the Media Center



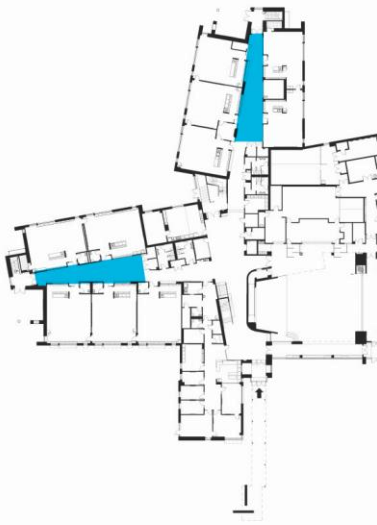


Trillium Creek Primary School
West Lynn OR.
Dull Olson Weeks, IBI



Trillium Creek Primary School, West Lynn OR.
– Dull Olson Weeks, IBI

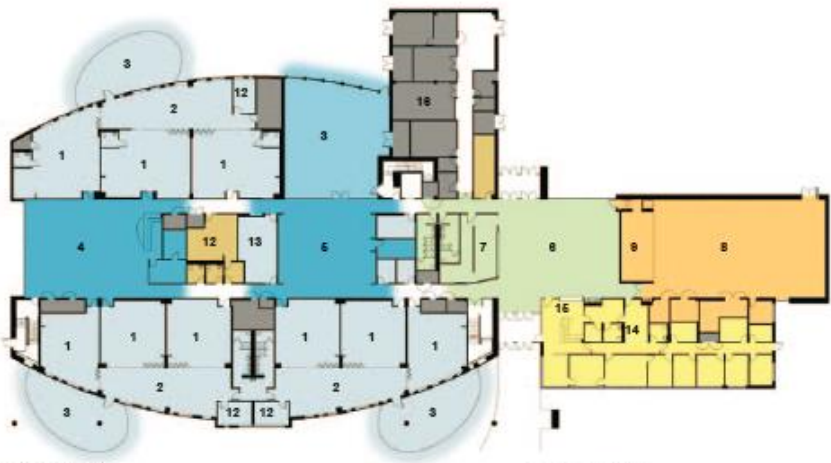




er Elementary School
rica, MA.
MA Architects

5.

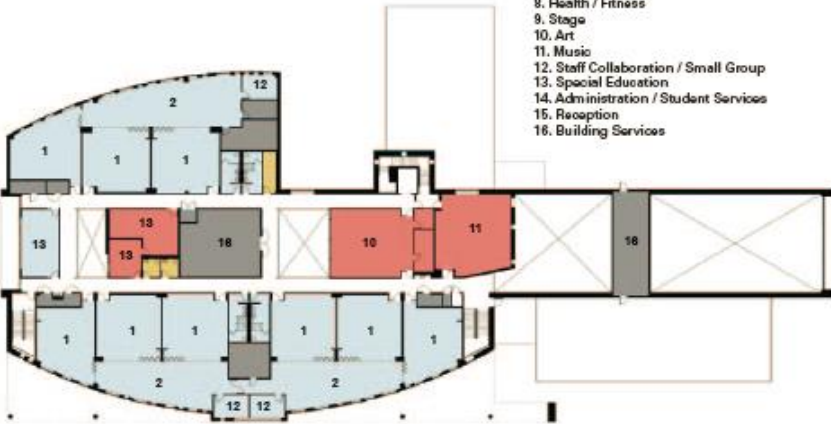
The STEM Studio is located in the middle of the spine, where students connect with instructors and local university experts to explore and create projects that express their understanding of STEM.



FIRST FLOOR

4.

The Library bookends the center spine where students can connect with information vital to the advancement of STEM, and the Student Commons where graphics make the students aware of how STEM impacts all facets of life.



SECOND FLOOR

6.

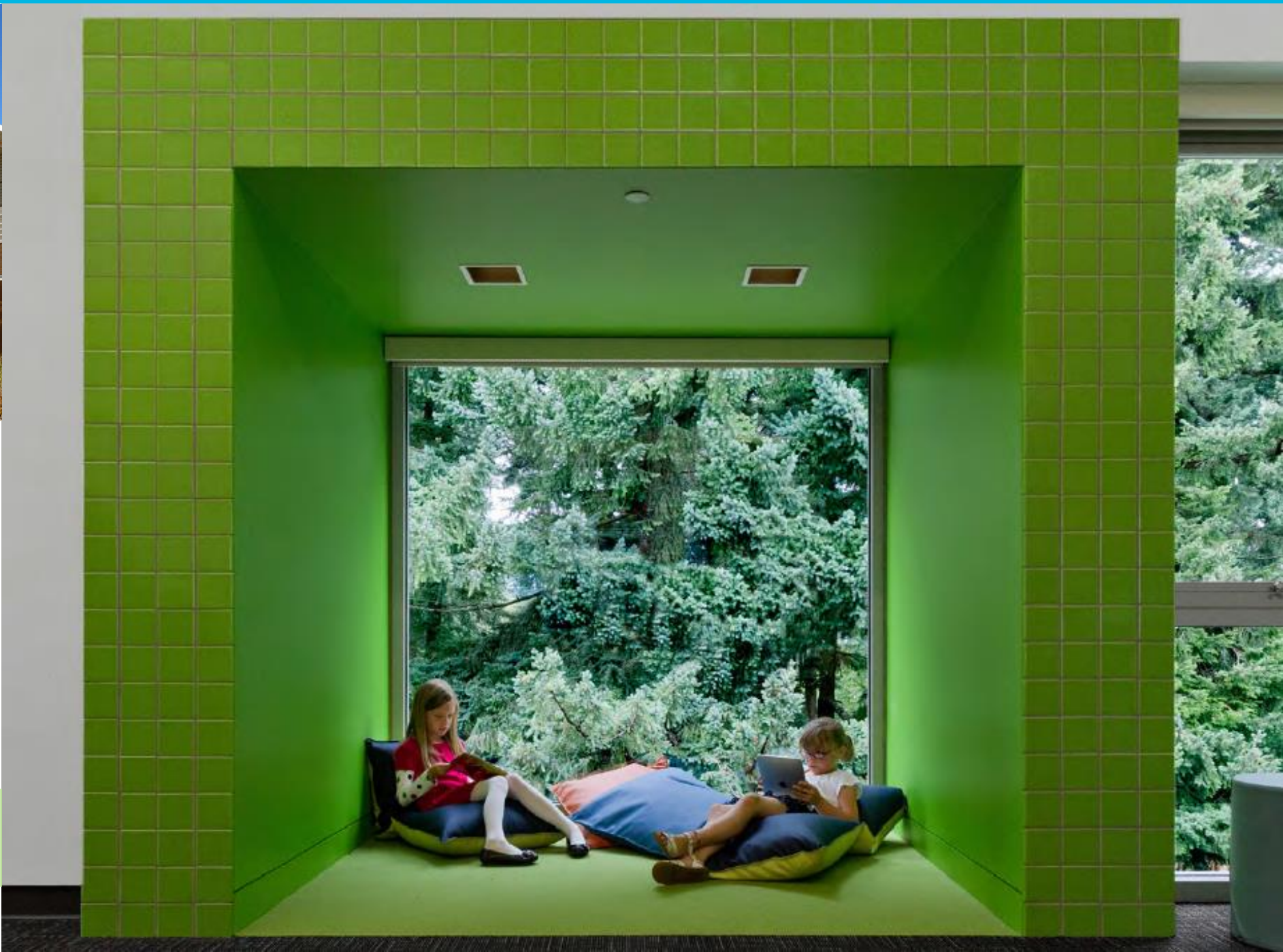
The Student Commons is also where artwork, models, and graphics are prominently displayed.



Round lighting fixtures in each of the six Piazza ceilings are composed in patterns of constellations.



Trillium Creek Primary School
West Lynn OR.
Dull Olson Weeks, IBI



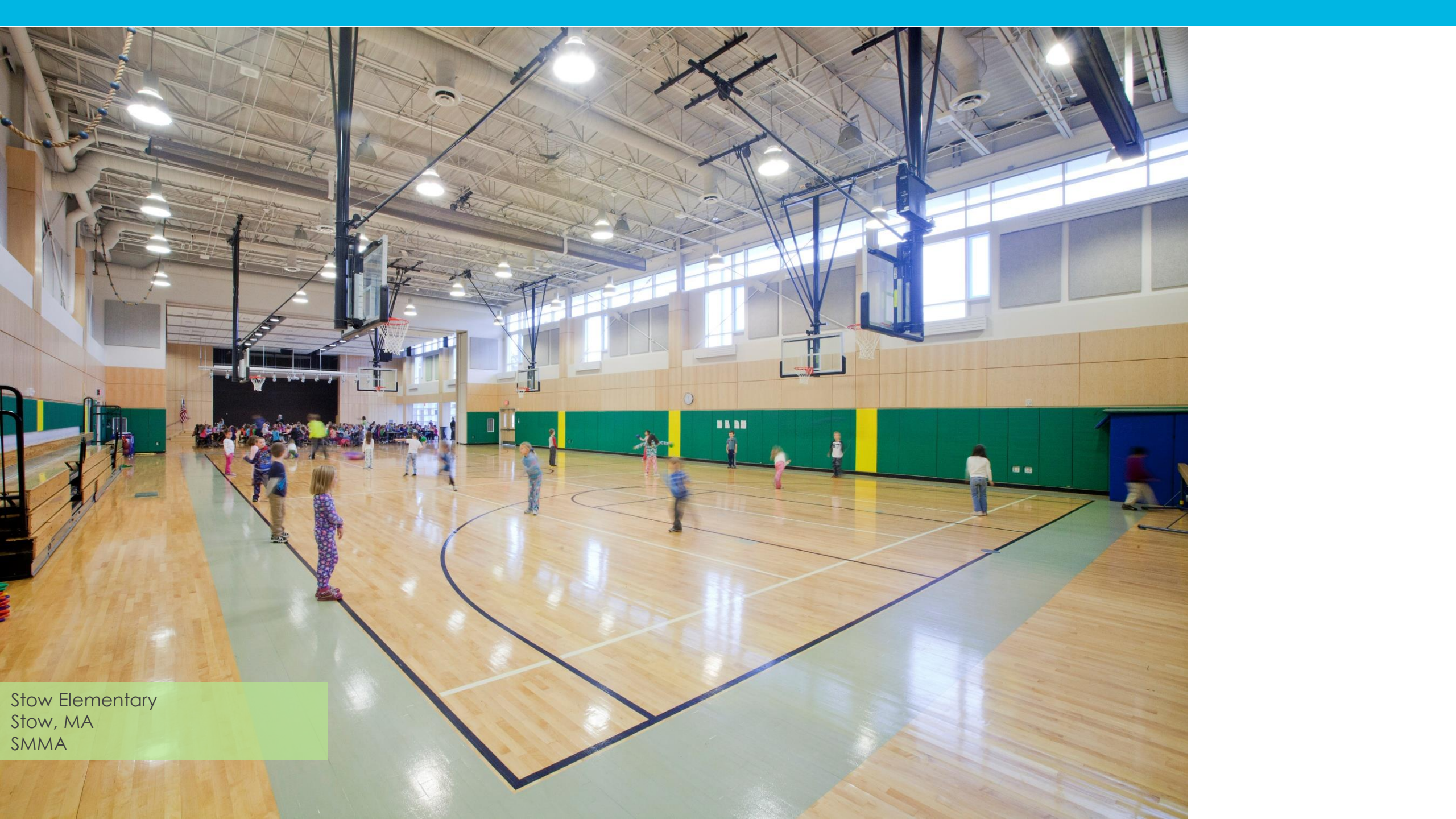


Parker Elementary School
Billerica, MA.
SMMA Architects



Stow Elementary,
Stow, MA
SMMA

Dining / Gym



Stow Elementary
Stow, MA
SMMA



Bancroft Elementary, Andover, MA
SMMA



Transparency





ARLINGTON ELEMENTARY SCHOOL

Arlington Elementary School
Tacoma, Washington
Mahlum Architects



ARLINGTON ELEMENTARY SCHOOL

Arlington Elementary School
Tacoma, Washington
Mahlum Architects





Wilkes Elementary School
Bainbridge Island, WA.
Mahlum Architects

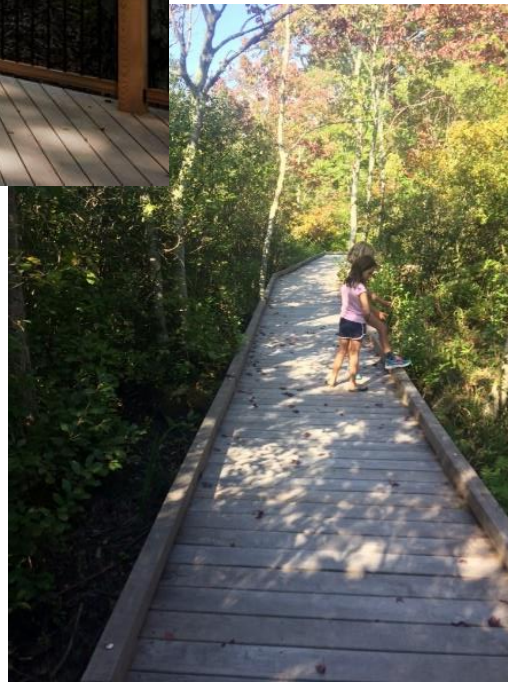
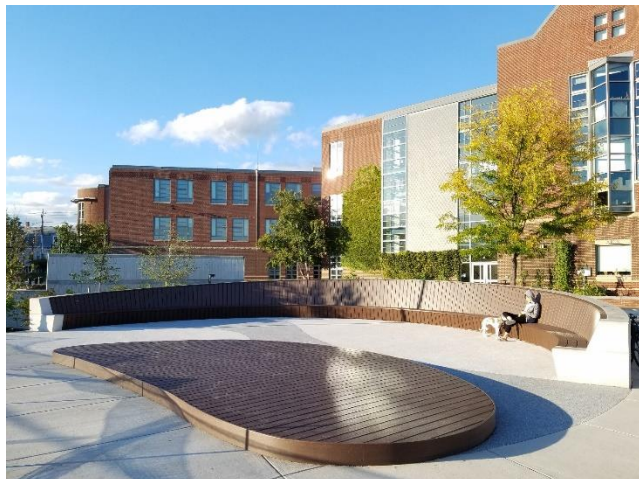
Sheltered Outdoor Learning Spaces



Engaging the Outdoors



Engaging the Outdoors



Hanscom Middle/Primary School - Lincoln, MA.





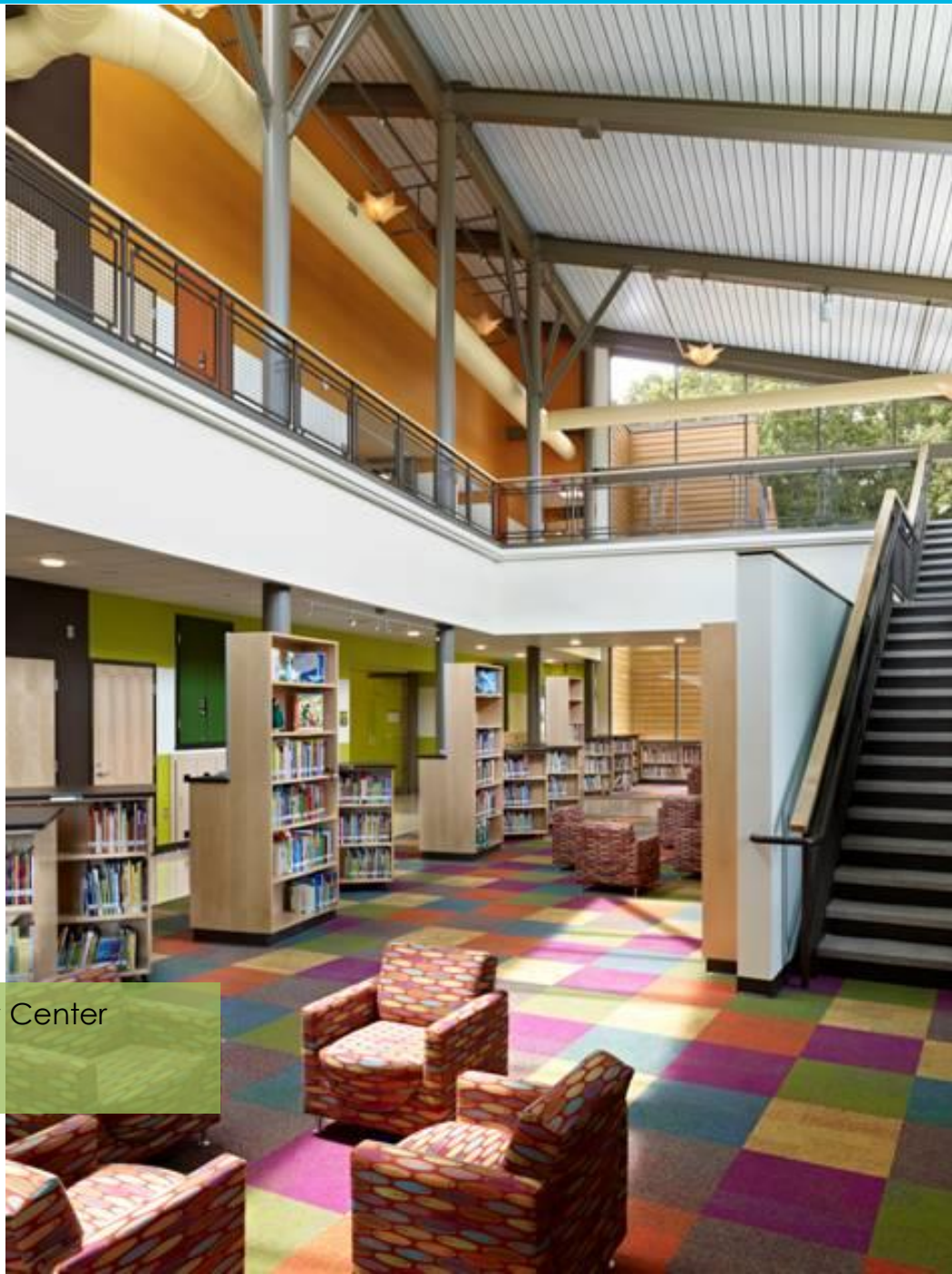
- Bancroft Elementary School
- SMMA





Trillium Creek Primary School, West Lynn OR.
– Dull Olson Weeks, IBI





Springfield Literacy Center
Springfield, PA
Stantec





Springfield Literacy Center
Springfield, PA
Stantec

Rockland Elementary School

PROGRAM LEGEND

- ADMINISTRATION AND GUIDANCE
- ART AND MUSIC
- CIRCULATION
- CORE ACADEMIC
- CUSTODIAL AND MAINTENANCE
- DINING AND FOOD SERVICE
- HEALTH AND PHYSICAL EDUCATION
- MEDIA CENTER
- MEDICAL
- OTHER
- SPECIAL EDUCATION

First Floor

Second Floor

Rockland Elementary School
Rockland MA
SMMA



Aerial Front

Discussion



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Topic 6: School Size / Culture

Topic 7: Swing Space / Adjacent Construction

Topic 8: Demographics

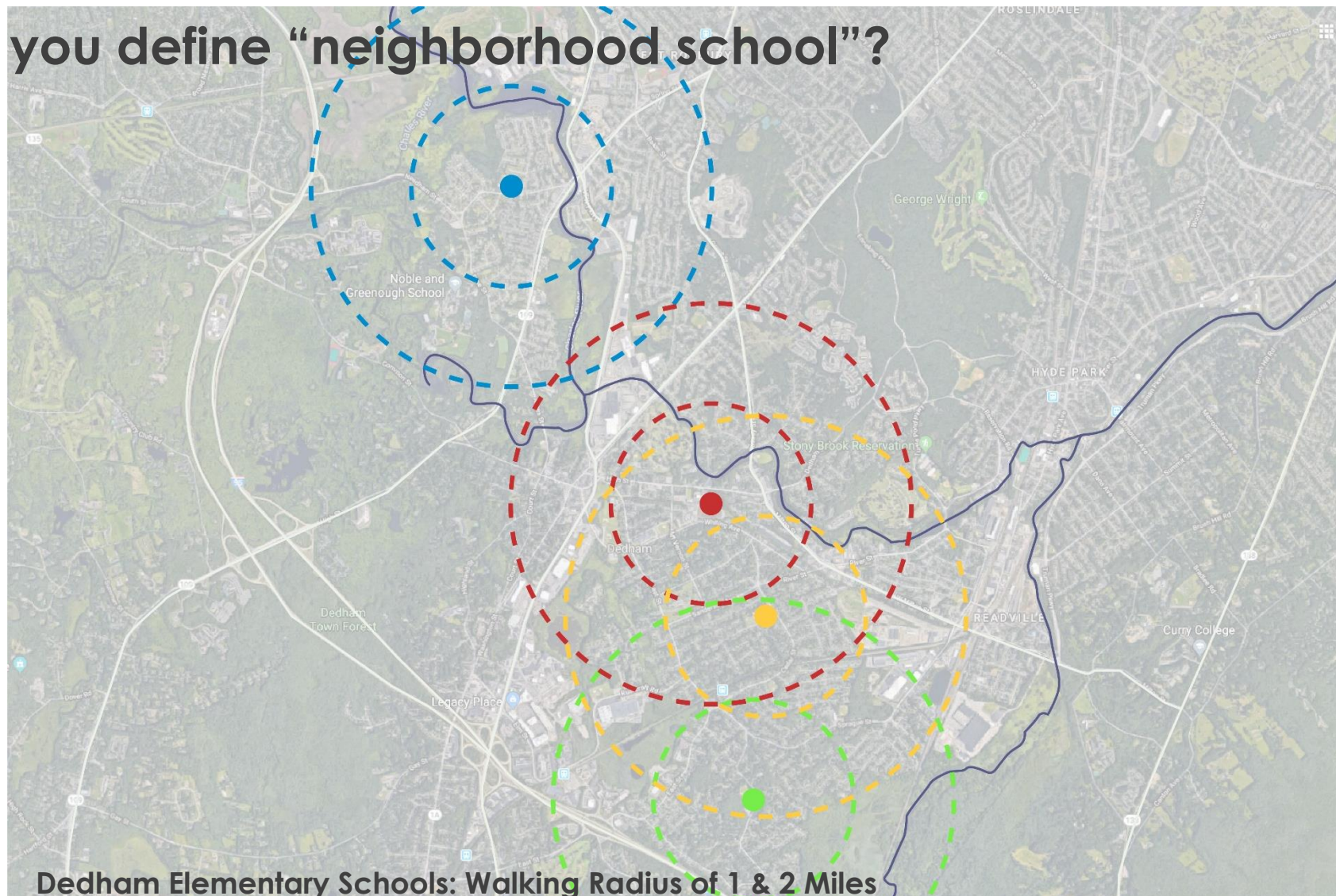
Table Topic 1: Walkable / Neighborhood Schools

- Safe Routes to Schools
- Traffic
- Walking and Biking
- Bussing
- Arrival & Dismissal



Table Topic 1: Walkable / Neighborhood Schools

How do you define “neighborhood school”?



- Riverdale
- Avery
- Oakdale
- Greenlodge

Table Topic 1: Walkable / Neighborhood Schools

DEDHAM SC POLICY (JC) ATTENDANCE AREAS

Attendance areas for the various schools of the town will be drawn up by the Superintendent and approved by the Dedham School Committee. The primary considerations that govern the establishment of a school attendance area are school capacity and transportation considerations. Generally, students will attend the school in the attendance area in which they live.

In establishing an attendance area, the following general guidelines will also be applied:

- 1. Use of safe waking conditions consistent with the Committee's transportation policies; where possible, major traffic thoroughfares and natural barriers will be used for boundaries.**
- 2. Honoring community of interest; where possible, school attendance zones will incorporate community patterns.**

From time to time an overcrowded condition in an existing school, the development of new residential areas, or the opening of a new school may require the establishment or change of previously established school attendance areas.

The Committee will confer with community representatives prior to setting new attendance lines. However, the Committee's primary basis for judgment must be equality of educational opportunity for all students rather than the personal desires of any one group. The Superintendent is authorized to make exceptions to attendance lines for individual children in the best interests of the student and/or the school.

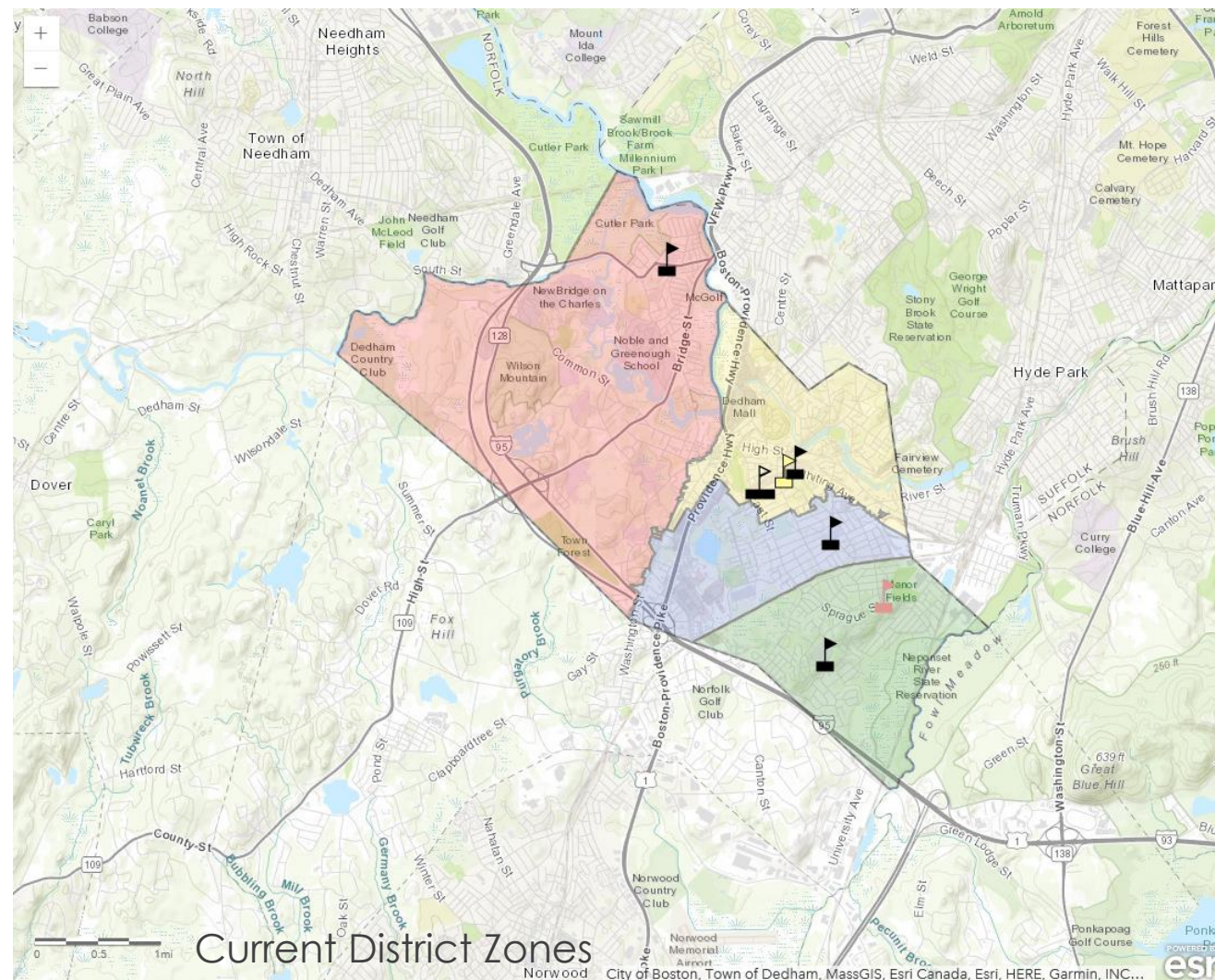
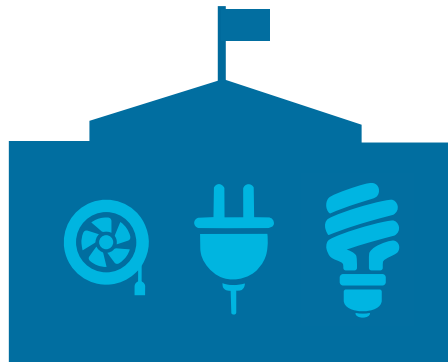


Table Topic 2: Sustainable / Net Zero (Ready)

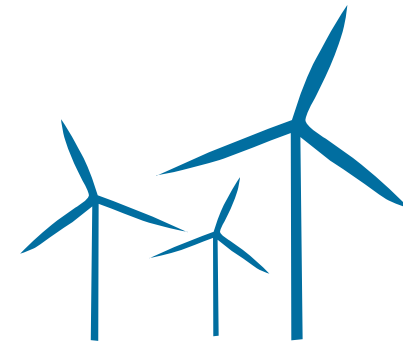
- Sustainability, Resiliency, Net Zero (ready)
- Healthy Schools (LEED, WELL Standards)
- Low Energy Use



Energy
Consumption
(KBTU/yr)



People



Renewables

Energy Use Intensity Goal: **30** kBtu/SF/yr. or better

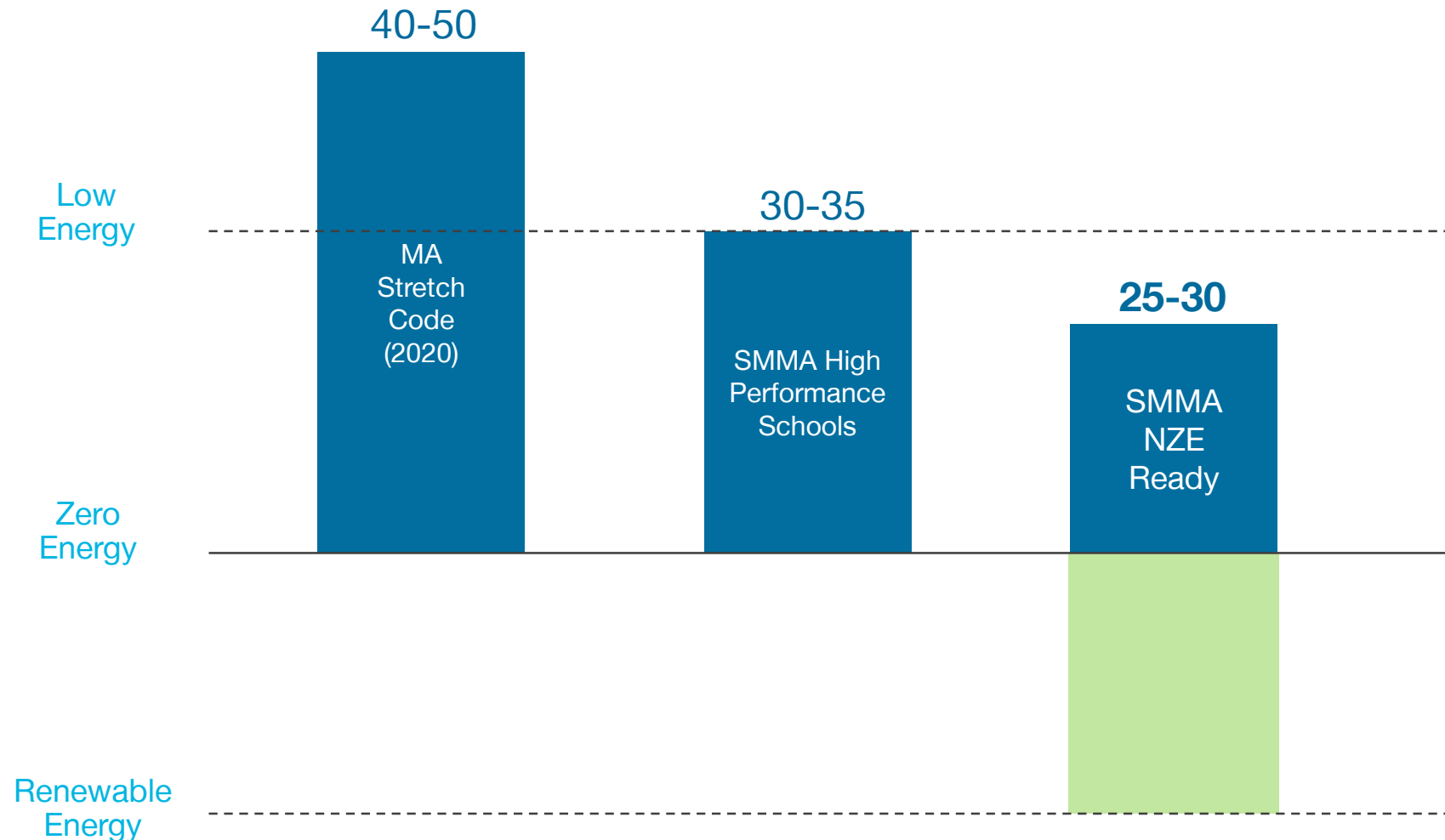


Table Topic 2: Environmentally Responsible / Net Zero (Ready)

School	School Type	Phase	Target EUI	All Electric	Zero Net Energy Goal
Cambridge - King Open	Elementary	Complete	26-28	Yes	60%
Cambridge - MLK	Elementary	Complete	26-28	No	43%
Worcester - Nelson	Elementary	Complete	25	No	No
Brookline - Coolidge Corner	K-8	Complete	23-26	Yes	Yes
Lexington - Hastings	Elementary	Under Construction	25	Yes	Yes
Westborough - Fales	Elementary	Under Construction	23	Yes	Yes
Belmont	Middle/High	Under Construction	30	Yes	Yes
Lincoln	Elementary	Under Construction	23	Yes	Yes
Arlington	High School	Under Construction	30-33	Yes	Yes
Watertown	Elementary	Design	23	?	Yes
Wellesley - Hunnewell	Elementary	Design	26-28	Yes	Yes
Acton-Boxborough	Elementary	Design	28	Yes	Yes
Swampscott – Hadley	Elementary	Design	20-30	?	?

Massachusetts Schools with Low Energy Goals

Table Topic 3: Community Uses (Current / Potential)

- Before School / After School – Students
- Evening / Weekend Use – Building
- Evening / Weekend Use – playgrounds and site
- District Policies
 - Outside community group use of facilities
- Summer uses
- Playgrounds and fields
- Gymnasias
- Cafeterias



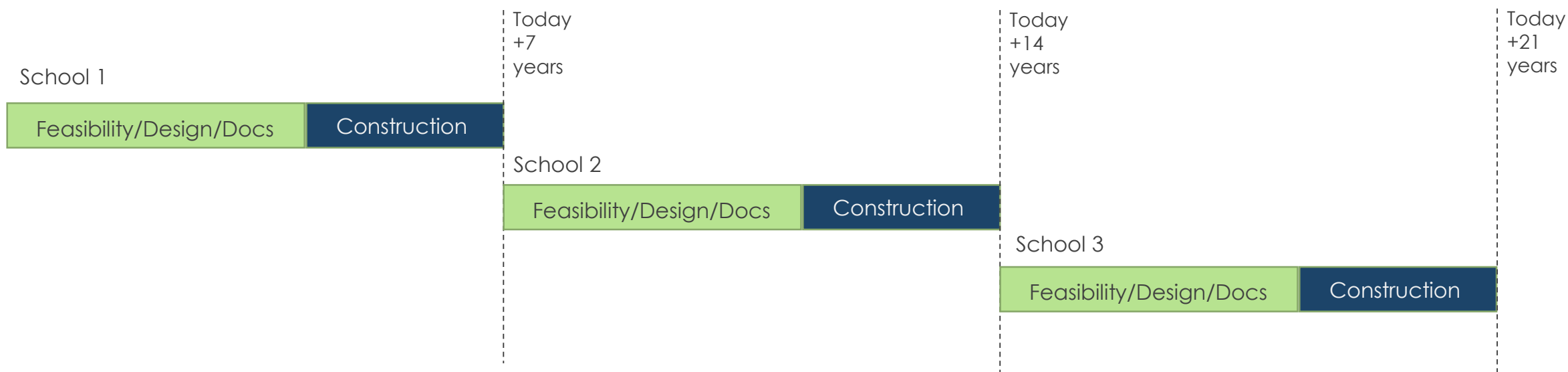
Table Topic 3: Community Uses (Current / Potential)

- MSBA gym reimb. 6000; typical community request 7000+
- Elementary School equity
- Typical for ES: Stage (no auditorium)
- What is the current playing field inventory and what is the need?
- New vs. add/reno
 - Dedicated/controlled public access



Table Topic 4: Cost and Schedule

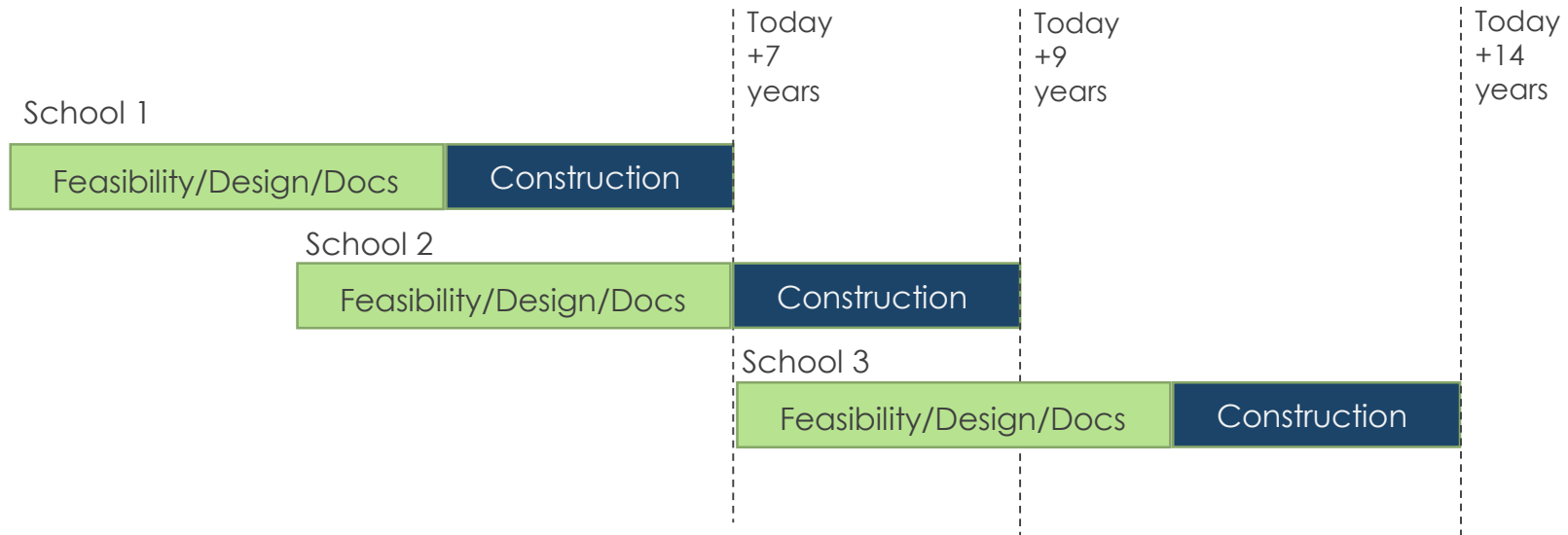
- MSBA Timelines
- Single Project or Simultaneous Multiple Projects
- Costs of Multiple Projects
- Swing Space



Timeline for Design + Construction

Table Topic 4: Cost and Schedule

- Potential to condense schedule if one project is not MSBA?



Timeline for Design + Construction

Table Topic 4: Cost and Schedule

Square Footage using MSBA baseline

Assume 1,110 (grades 1-5) students total

Assume 775 needed + Avery

SF for **1 school** 114,300 gross SF **114,300 gross SF total**

SF for **2 schools** (each) 68,400 gross sf x 2 = **136,800 gross SF total**

SF for **3 schools** (each) 54,500 gross sf x 3 = **163,500 gross SF total**

Proposed Space Summary- Elementary Schools

Existing Conditions				PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			0			0			0			0			20	19,050
<i>(List classrooms of different sizes separately)</i>																
Pre-Kindergarten w/ toilet													1,200		-	1,100 SF min - 1,300 SF max.
Kindergarten w/ toilet													1,200	3	3,600	1,100 SF min - 1,300 SF max; 2 sinks min. req.
General Classrooms - Grade 1-6													950	15	14,250	900 SF min - 1,000 SF max; 2 sinks min. req.
STE Room- Grade 3-6													1,080	1	1,080	Refer to STE Guidelines for Addition
STE Storage													120	1	120	Refer to STE Guidelines for Addition
SPECIAL EDUCATION			0			0			0			0			4,530	
<i>(List rooms of different sizes separately)</i>																
Self-Contained SPED													950	3	2,850	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - toilet													60	3	180	
Resource Room													500	2	1,000	1/2 size Genl. Chm.
Small Group Room / Reading													500	1	500	1/2 size Genl. Chm.
ART & MUSIC			0			0			0			0			2,575	
Art Classroom - 25 seats													1,000	1	1,000	scheduled schedule 2 times / week / student
Art Workroom w/ Storage & kiln													150	1	150	
Music Classroom / Large Group - 25-50 seats													1,200	1	1,200	scheduled schedule 2 times / week / student
Music Practice / Ensemble													75	3	225	
HEALTH & PHYSICAL EDUCATION			0			0			0			0			6,300	Excess PE Spaces Policy
Gymnasium													6,000	1	6,000	6000 SF Min. Size
Gym Storeroom													150	1	150	
Health Instructor's Office w/ Shower & Toilet													150	1	150	
MEDIA CENTER			0			0			0			0			2,416	
Media Center / Reading Room													2,416	1	2,416	
DINING & FOOD SERVICE			0			0			0			0			6,127	
Cafeteria / Dining													2,910	1	2,910	2 seatings - 155 SF per seat

Table Topic 4: Cost and Schedule

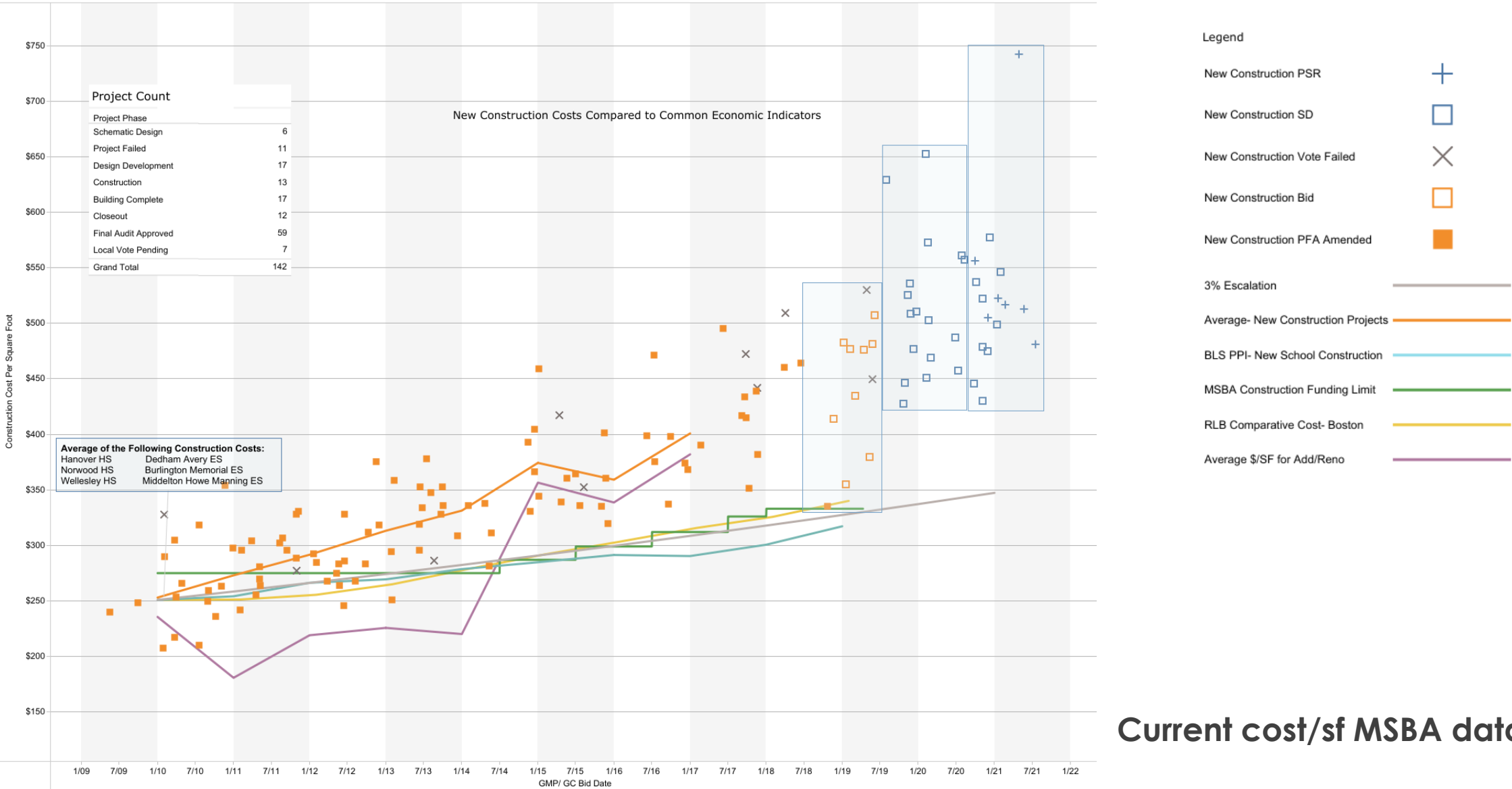


Table Topic 5: Renovation vs. New Building

- Fulfillment of Educational Needs vs. Compromises?
- Student / Staff Safety
- Educational Disruption
- Handicapped Accessibility



Table Topic 5: Renovation vs. New Building

- Universal Design for Learning
- Schedule
- Swing Space

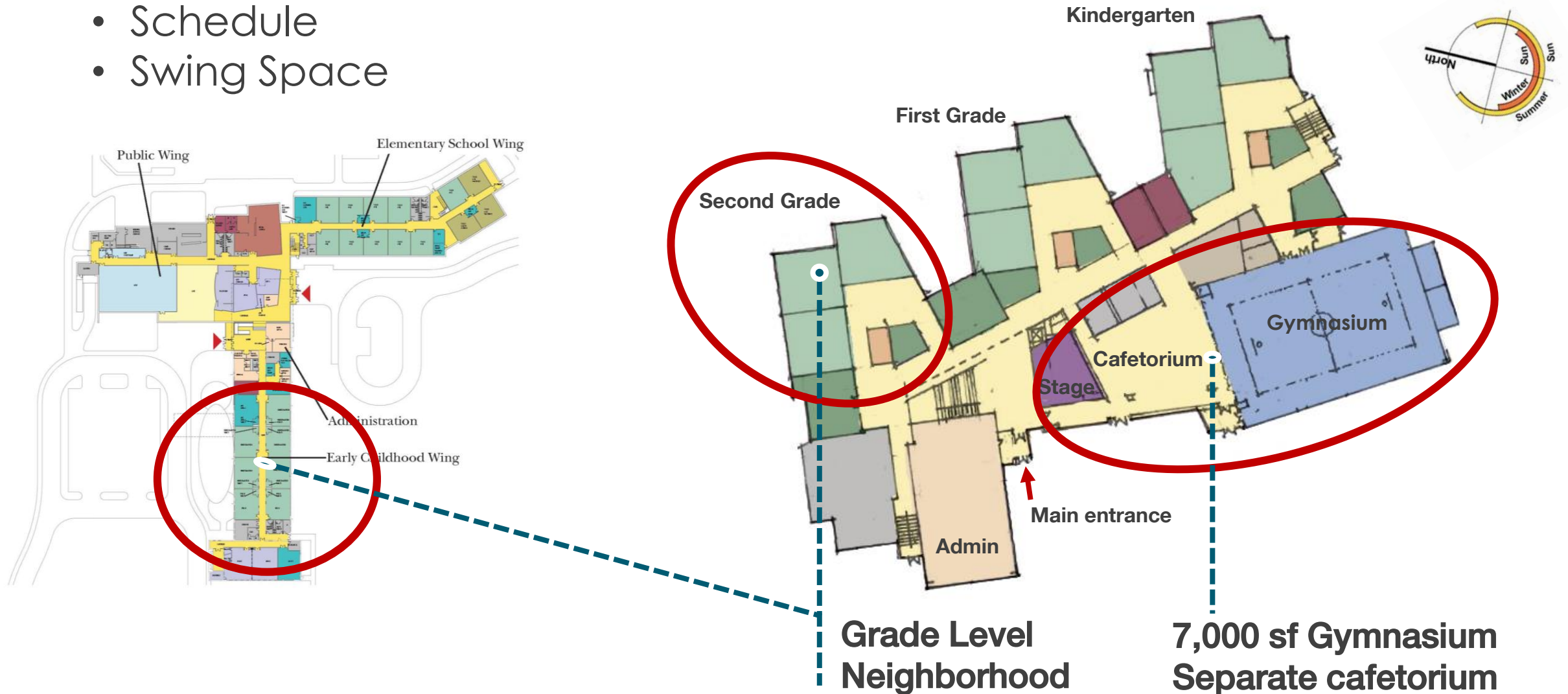


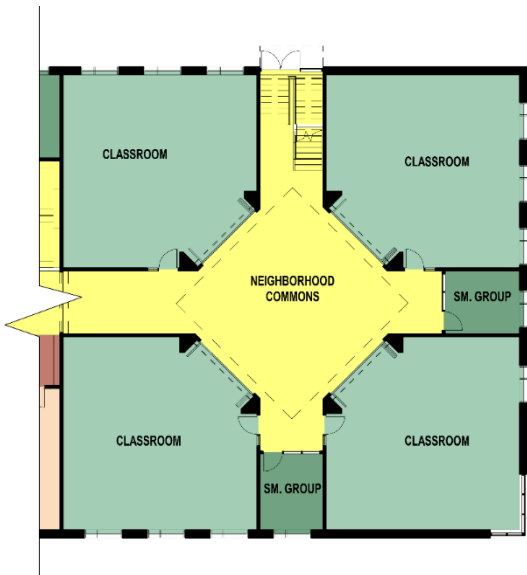
Table Topic 6: School Size / Culture

- Educational Neighborhoods
- Schools within a school
- How small is too small
- Advantages of a larger school
- Redistricting
- Operational budget



Table Topic 6: School Size / Culture

- Advantages of a larger school
- Redistricting
- Operational budget



Recent ES Projects f/ MSBA Website				
South Hadley	270		only school	
Revere	690			
Whitman-Hansen	800			
Athol-Royalston	545			
Newton	465			
Gloucester	355		1 of 5	
Milford	985			
Northborough	270		1 of 4	
Worcester	600			
Woburn	410			
Brookline	1,010			
New Bedford	400			
Hopkington	395			
Carver	750			
Narrahansett	580			
Granby	430			
Dedham ECEC	200			
Hanover	560			
Needham	430			
Amherst	750			
Bourne	460			
Newton	480			
Millis	515			
Clarksburg	150		only school	
Lexington	645			
Taunton	735			
Tisbury	285		only school	
Ludlow	630			
Marlborough	610			
Ipswich	775			
Harvard	445			
Northbridge	1,030			
Easthampton	1,010			
Foxborough	270		only school	
Manchester-Essex	335		only school	
Springfield	800			
				average school design population
	20070	36	557.5	
				smallest school without Clarksburg
				270150 school
				1,030largest school

Table Topic 7: Swing Space / Adjacent Construction

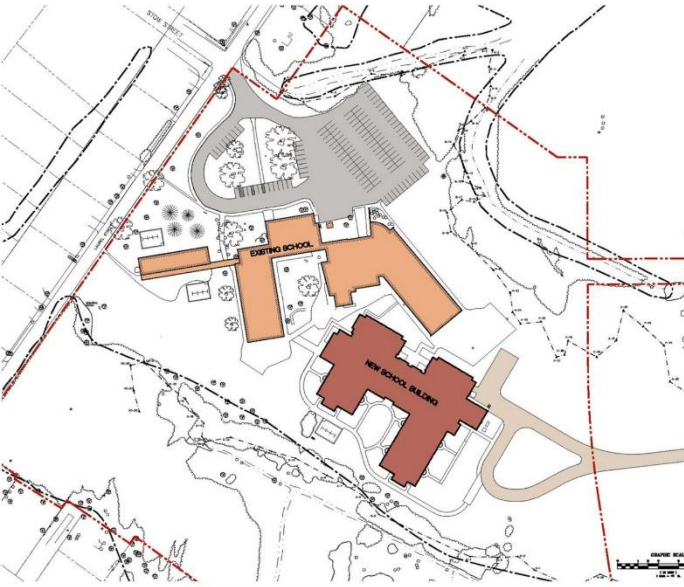


Table Topic 7: Swing Space / Adjacent Construction

- Modular Classrooms
- No Occupied Reno's



Table Topic 8: Demographics

- Universal PreK, demand for increased space
- Multi-location PreK - what might that mean?
- Increased Kindergarten Population – what might that mean?

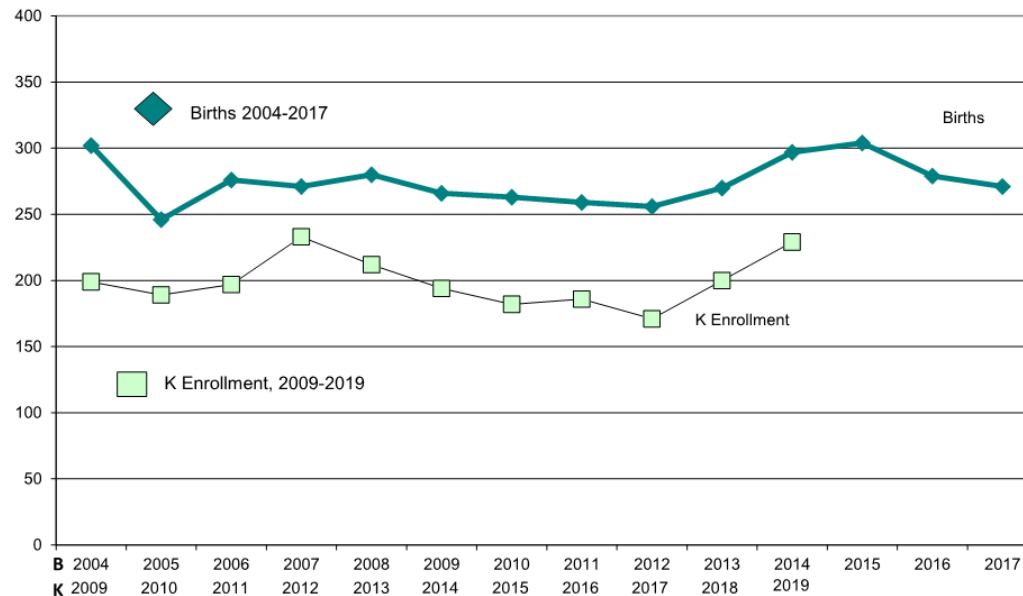
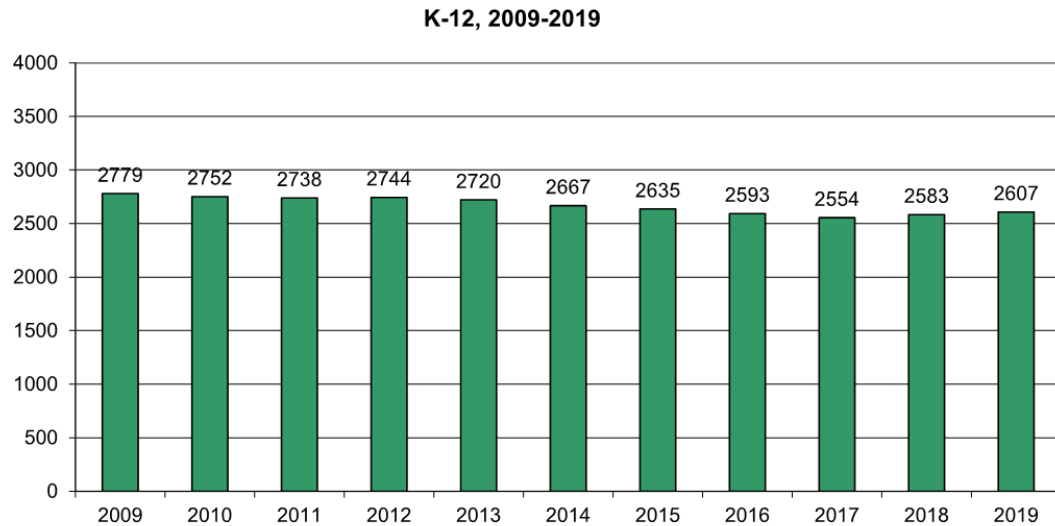


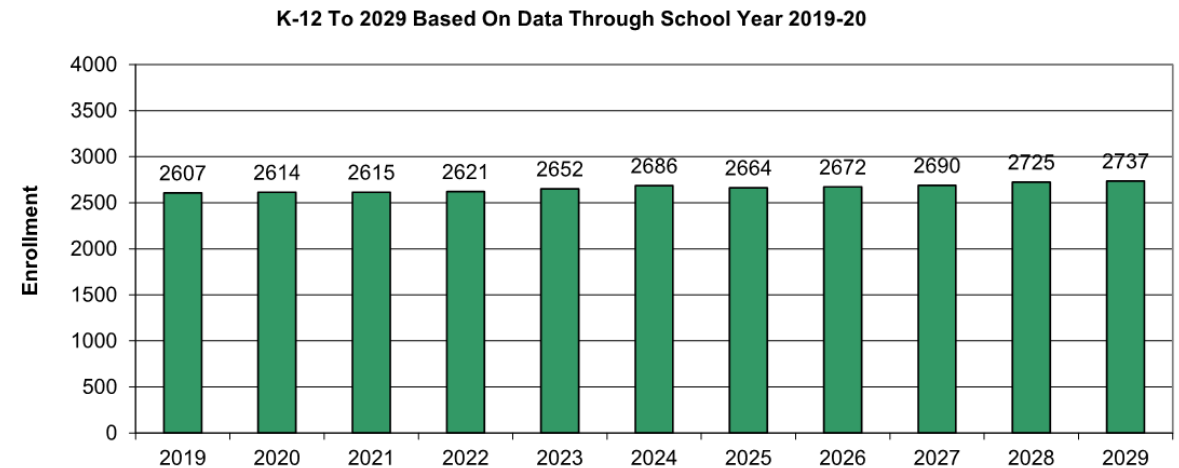
Table Topic 8: Demographics

- School Building sizes
- Neighborhoods of Growth?
- If You Build It, They Will Come

NESDEC
Dedham, MA Historical Enrollment



NESDEC
Dedham, MA Projected Enrollment



Step 1. Brainstorm (20 min)

Step 2. Summarize (10 min)

Step 3. Share (20 min)

Step 4. Prioritize – Gallery Walk (10 min)

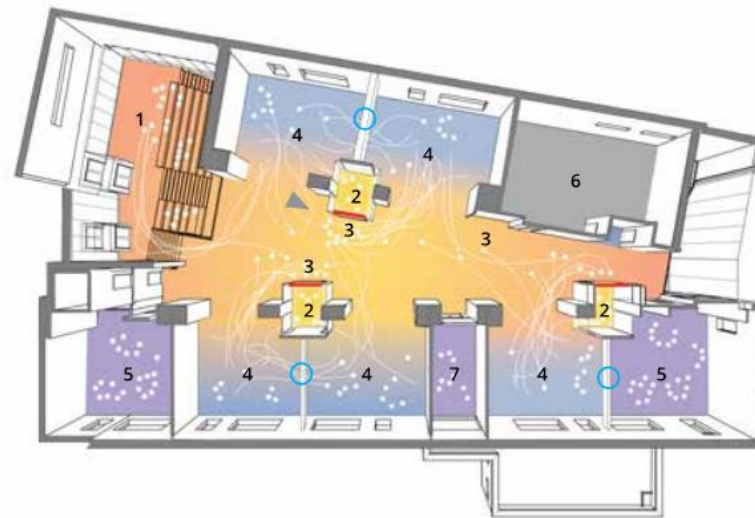
- **1st Preference - Green Dot**
- **2nd Preference – Yellow Dot**
- **3rd Preference – Red Dot**

Next Steps

- SMMA to Prepare Summary of Workshop #2
- Workshop #3 – Monday, January 13th
- DPS to Prepare Statement of Interest (SOI), Submit to MSBA, Spring 2020

Thank You





- 1 Informal Presentation Area
- 2 Small Conference Room
- 3 Informal Collaboration Space
- 4 Flexible Classroom

- 5 Dedicated Classroom
- 6 Utility Core
- 7 Staff Room
- Operable Glass Partitions

Wilson High School
Tacoma, WA.
NAC Architecture



Douglas Park School
Regina Saskatchewan
Fielding Nair International

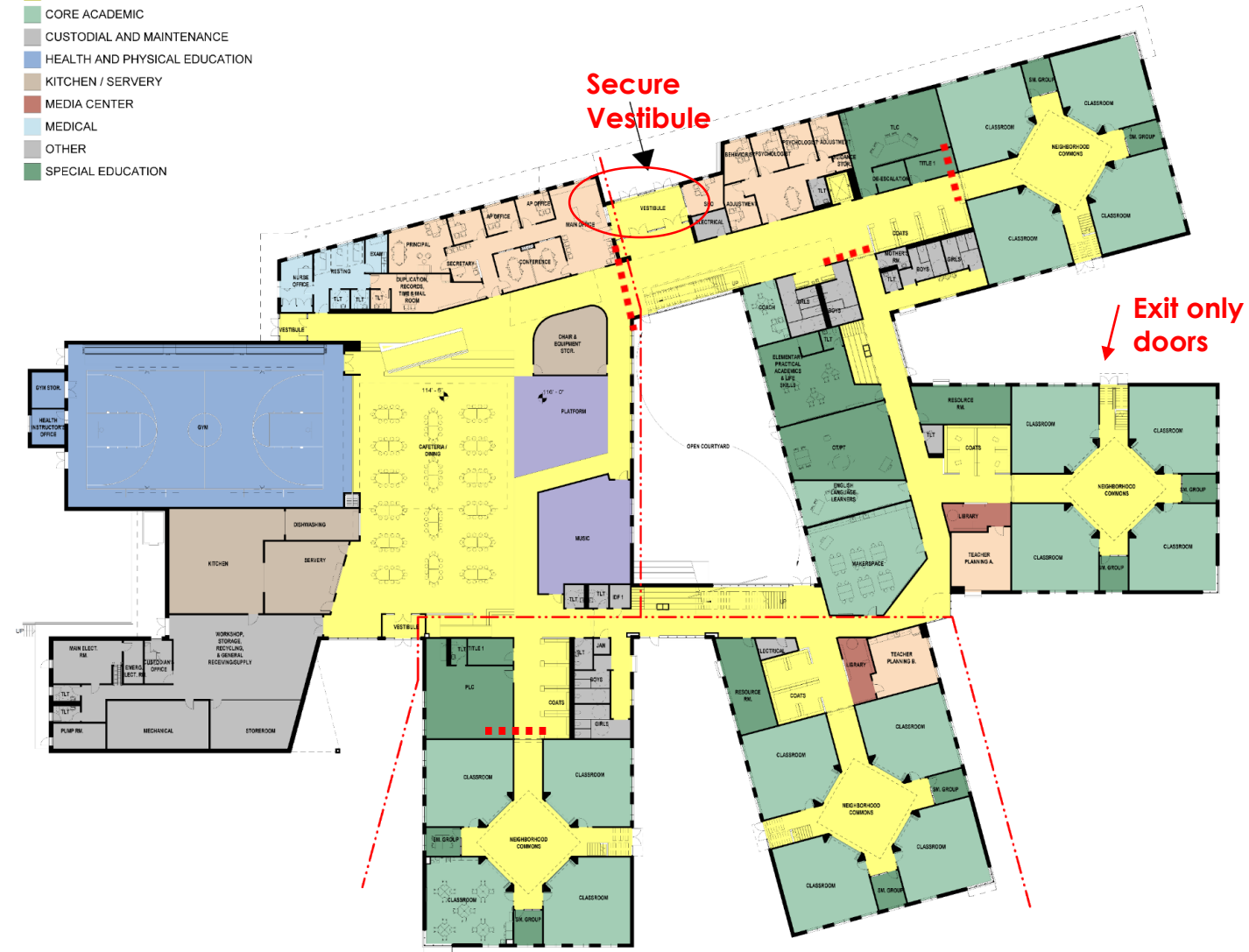
School Safety and Security

- Use of CPTED principles in design – property line to building edge
- Single point of entry
- Minimizing of exterior doors
- Invisible elements (zoning)
- Soft side of Safety and Security



PROGRAM PLAN LEGEND

ADMINISTRATION AND GUIDANCE
ART & MUSIC
ART AND MUSIC
CIRCULATION
CORE ACADEMIC
CUSTODIAL AND MAINTENANCE
HEALTH AND PHYSICAL EDUCATION
KITCHEN / SERVERY
MEDIA CENTER
MEDICAL
OTHER
SPECIAL EDUCATION



Sheltered Outdoor Learning Spaces

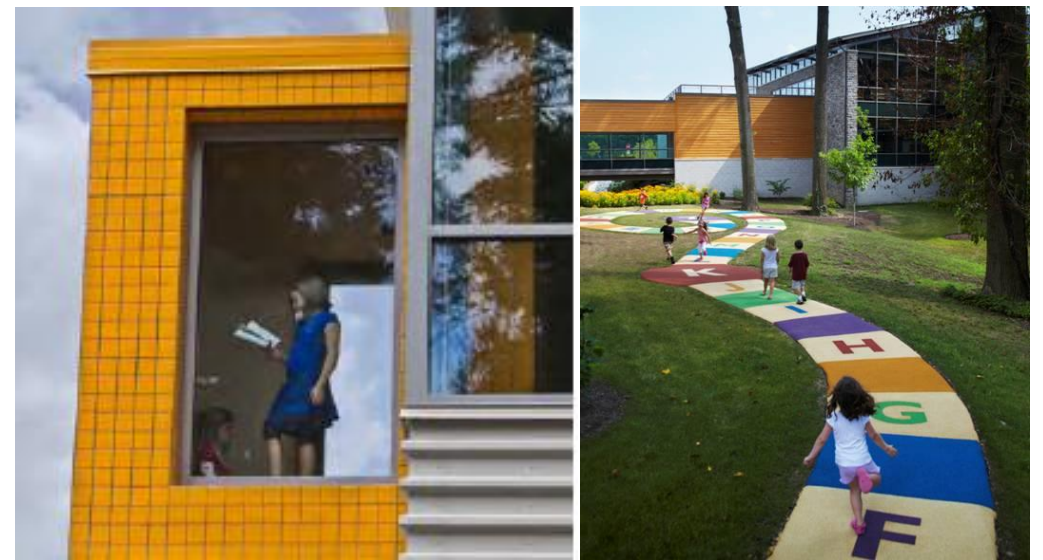




Rockland Elementary School
Rockland MA
SMMA

Entry Perspective



Engaging the Outdoors



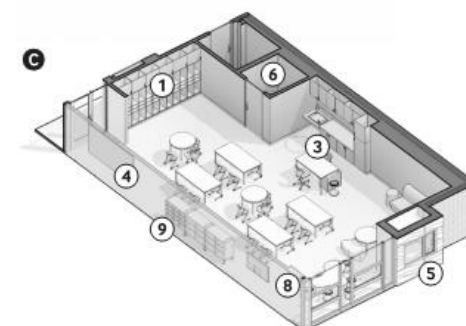
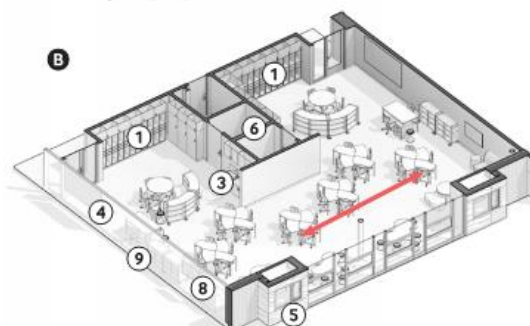
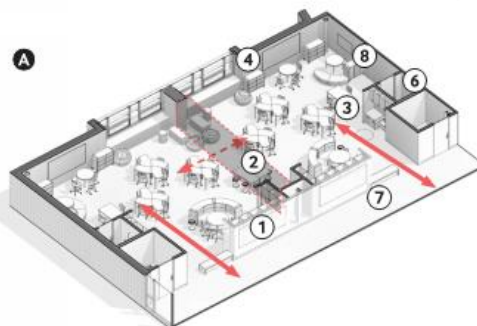
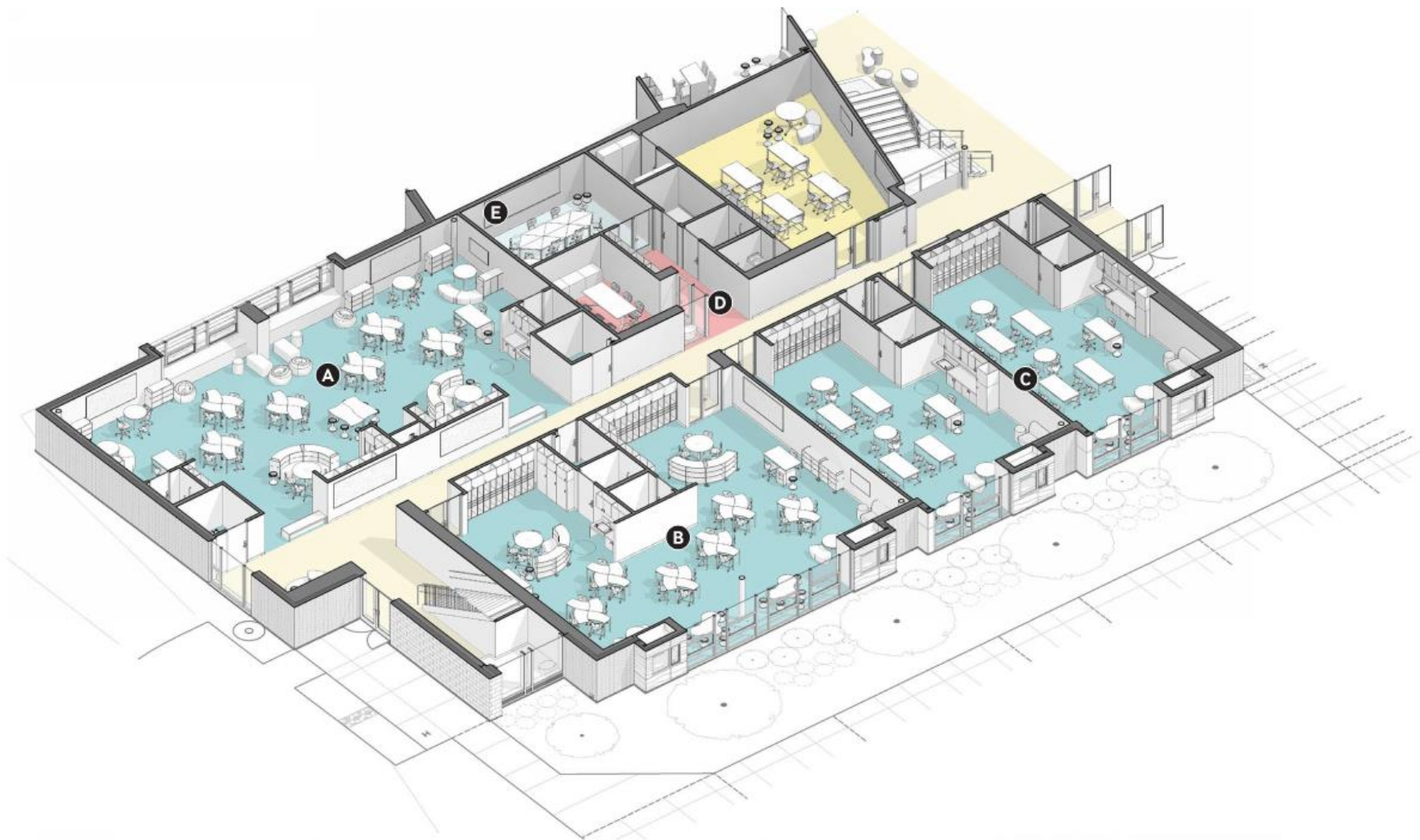
Trillium Creek Primary School, West Lynn OR.
– Dull Olson Weeks, IBI

Flexible Studio Spaces

- A** OPEN STUDIO
- B** SUPER STUDIO
- C** SINGLE STUDIO
- D** SHARED STAFF RESOURCE / MEETING
- E** SMALL GROUP RESOURCE

-  FLEXIBLE CONNECTION
-  PERMANENT CONNECTION
-  MOVABLE PARTITION

- 1** STUDENT + TEACHER RESOURCE STORAGE
- 2** MOVABLE PARTITION
- 3** SINK + RESOURCE AREA
- 4** TACKABLE SURFACE
- 5** READING WINDOW NOOK
- 6** STUDIO TOILET (K/1)
- 7** THRESHOLD BENCH
- 8** INTERACTIVE TECHNOLOGY
- 9** WRITABLE WALL



Bluestone Elementary School
Harrisonburg, Virginia
VMDO Architects

