

Town of Brookline, Brookline Public Schools John R. Pierce School Feasibility Study

SBC Meeting #1 | JANUARY, 28 2021



Meeting the Complexity of the Pierce School Project



Shared Ethos of Collaboration

MDS: prime architect – Will Spears, Principal-in-Charge

Sasaki: associated architect

ARCHITECTURAL SCOPE	FEASIBILITY STUDY		SCHEMATIC DESIGN		DD & CDs		CONSTRUCTION ADMINISTRATION	
Project Management	MDS		MDS		MDS		MDS	
Community Engagement	MDS	Sasaki	MDS	Sasaki	MDS	Sasaki		
Analysis + Feasibility	MDS	Sasaki	MDS	Sasaki				
Design + Documentation			MDS	Sasaki	MDS	Sasaki		
Review / Approvals			MDS	Sasaki	MDS	Sasaki		
Bid Process					MDS			
Contract Administration							MDS	Sasaki

MDS/Sasaki Collaboration:

- design of building
- design of site
- sustainable strategies
- community engagement
- cost control
- peer review and quality control

MDS Responsibilities:

- project management & coordination
- organization of the learning environments
- development of interior environments
- integrity of the document package
- specifications
- construction administration

Sasaki Responsibilities:

- landscape / civil design and coordination
- net zero, all electric strategies
- development of exterior envelope

Diversity

- (4) Provide a listing of your firm's minority and women employees including the following information: Title, Job Duties, Length of employment with the firm, Location (Boston area or other), Demographic (please include specific information as to Black/African American, Hispanic/Latinx, Asian or Native American).

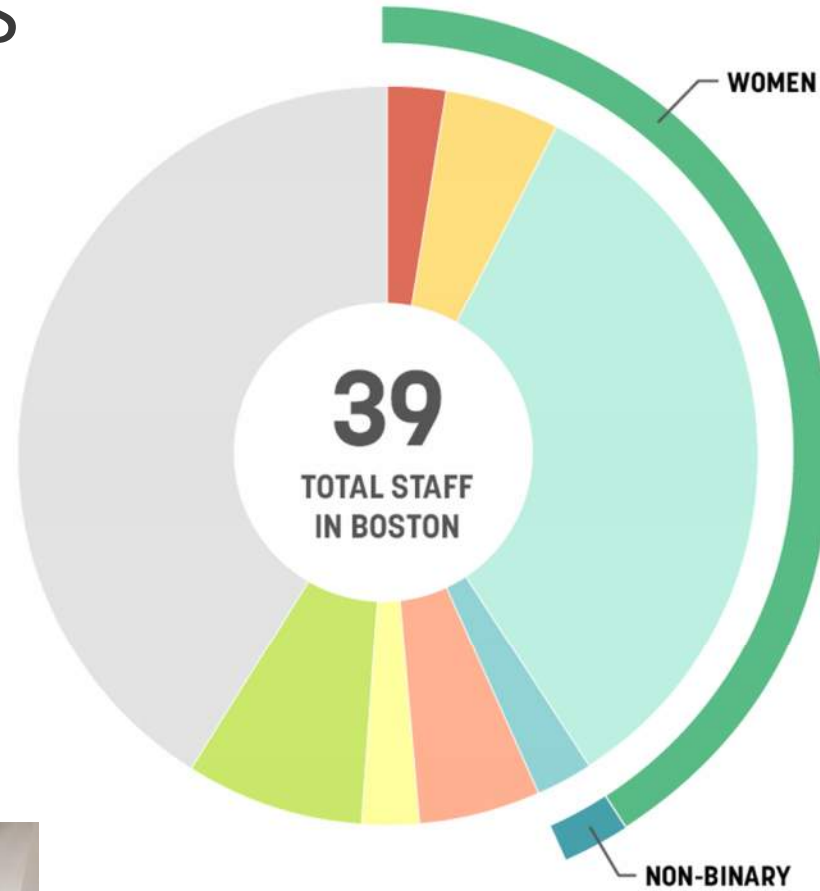
Diversity at MDS

MDS is a Woman
Business
Enterprise (WBE)

41% Women

2% Non-Binary

23% Minorities



■	BLACK/AFRICAN AMERICAN WOMAN
■	HISPANIC/LATINX WOMEN
■	WHITE/CAUCASIAN WOMEN
■	WHITE/CAUCASIAN GENDER NON-BINARY
■	BLACK/AFRICAN AMERICAN MEN
■	HISPANIC/LATINX MAN
■	ASIAN MEN
■	WHITE/CAUCASIAN MEN



MDS YEARS	PRINCIPALS
27	James Loftus, AIA, LEED Green Assoc., NCARB, MCPPD, Principal
23	Amy MacKrell, AIA, LEED AP BD+C, Principal
27	Myron Miller, AIA, Senior Principal
27	Will Spears, AIA, LEED AP, MCPPD, Principal
21	Kate Wonkka, AIA, LEED AP BD+C, WELL AP, Principal
ASSOCIATES + SENIOR ASSOCIATES / PROJECT MANAGERS / QA/QC	
16	Danyul Cho, AIA, MCPPD, Associate
19	Margaret Clark, RA, LEED AP BD+C, WELL AP, MCPPD, Senior Associate
12	Samantha Clarke, IIDA, LEED AP ID+C, WELL AP, NCIDQ, Senior Associate, Director of Interior Design
26	Paul Farrell, RA, Senior Associate
8	Molly Moore, Associate, Director of Marketing
19	Nereyda Rodriguez, RA, LEED AP BD+C, MCPPD, Associate, Director of Sustainable Design
21	Susann Schlaud, RA, LEED AP BD+C, Associate
20	Tim Teabo, RA, LEED AP BD+C, CDT, CSI, NCARB, Senior Associate
STAFF / PROJECT ARCHITECTS / DESIGNERS / JOB CAPTAINS / DRAFTERS	
17	David Anderson, Assoc. AIA
2	Emerson Ball
18	Richard Berliner, RA, LEED AP BD+C, CDT, CSI
3	Meghan Burke, AIA
3	Connor Byrne, AIA
1	Jake Droogan, LEED AP BD+C
8	Brendon Duffy, AIA, NCARB
1	Stephanie Duhau, Senior Interior Designer
1	Ugo Ewulonu
13	Gaia Grazia Giudicelli, LEED AP BD+C
5	Norm Goulet, AIA, LEED AP, Director of Laboratory and Health Facilities
1	Rowan Greenlaw
8	Kelsey Holmes, RA, LEED Green Assoc.
2	Courtney Kresel, IIDA, LEED AP, NCIDQ, EDAC, Senior Interior Designer
7	Diana Lattari, LEED AP BD+C
20	Joanne O'Rourke, Receptionist
12	Brian Pace, RA, LEED AP
1	Keyanna Phillips
1	Warren Randle
15	Jon Ramos, LEED AP
1	Álvaro Ribeiro, AIA, Senior Research and Laboratory Architect
3	Katie Skeeles
1	Sumath Sok, RA
15	Zachary Stanesa
17	Steven Thomas
1	Connor Tiches

Diversity at Sasaki

Sasaki's practice is built on bringing many perspectives together

48% Women

1% Non-Binary

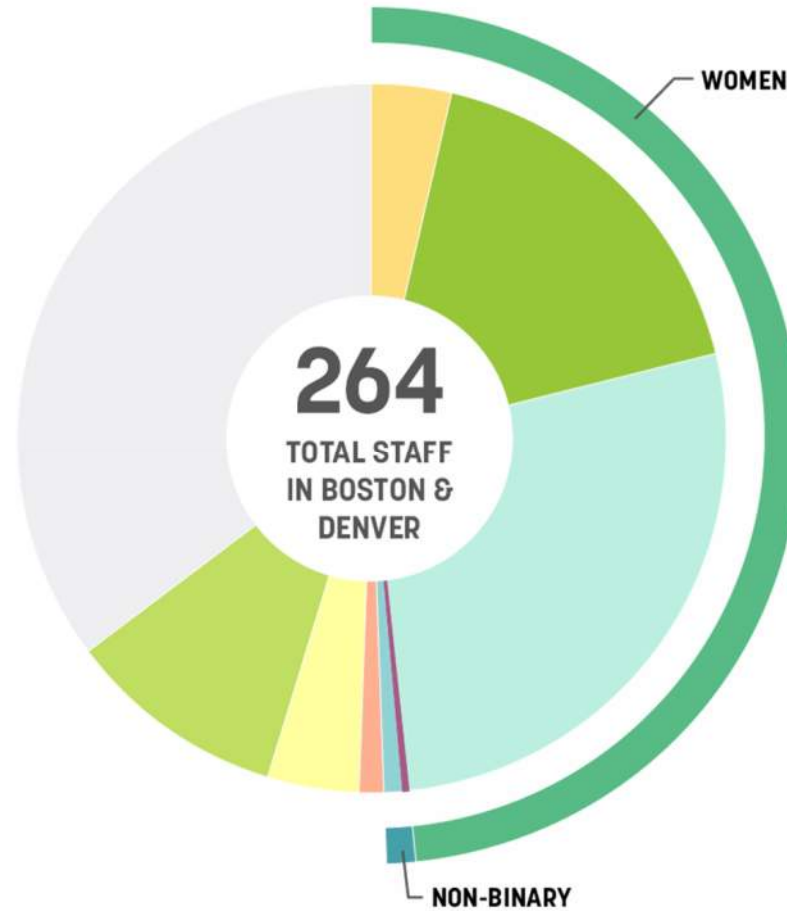
37% Minorities

8 Professional Disciplines

45 Languages Spoken

30 Countries Represented

20 years - Sasaki Foundation supports equity in design and pipeline-building initiatives



Historic Experience

- (3) The potential project as described in the RFS includes scope of work that involves significant existing historic building construction. Describe your firm's experience working with historic buildings and any efforts to successfully incorporate new construction with existing historic building areas.

Finding a Common Language Between Historic and New

Town of Brookline, Lawrence School



New Construction Alongside Historic Buildings

Bolling Municipal Building



Collaborating with Brookline

- (2) The Brookline community has multiple boards, committees, and individuals representing important constituencies who have approval authority and/or a vested interest in this project. Describe how you have collaborated with such committees and community groups successfully on other projects to disseminate information and help the District achieve consensus of design while keeping the project on track.

Collaborating with Brookline & Brookline Public Schools



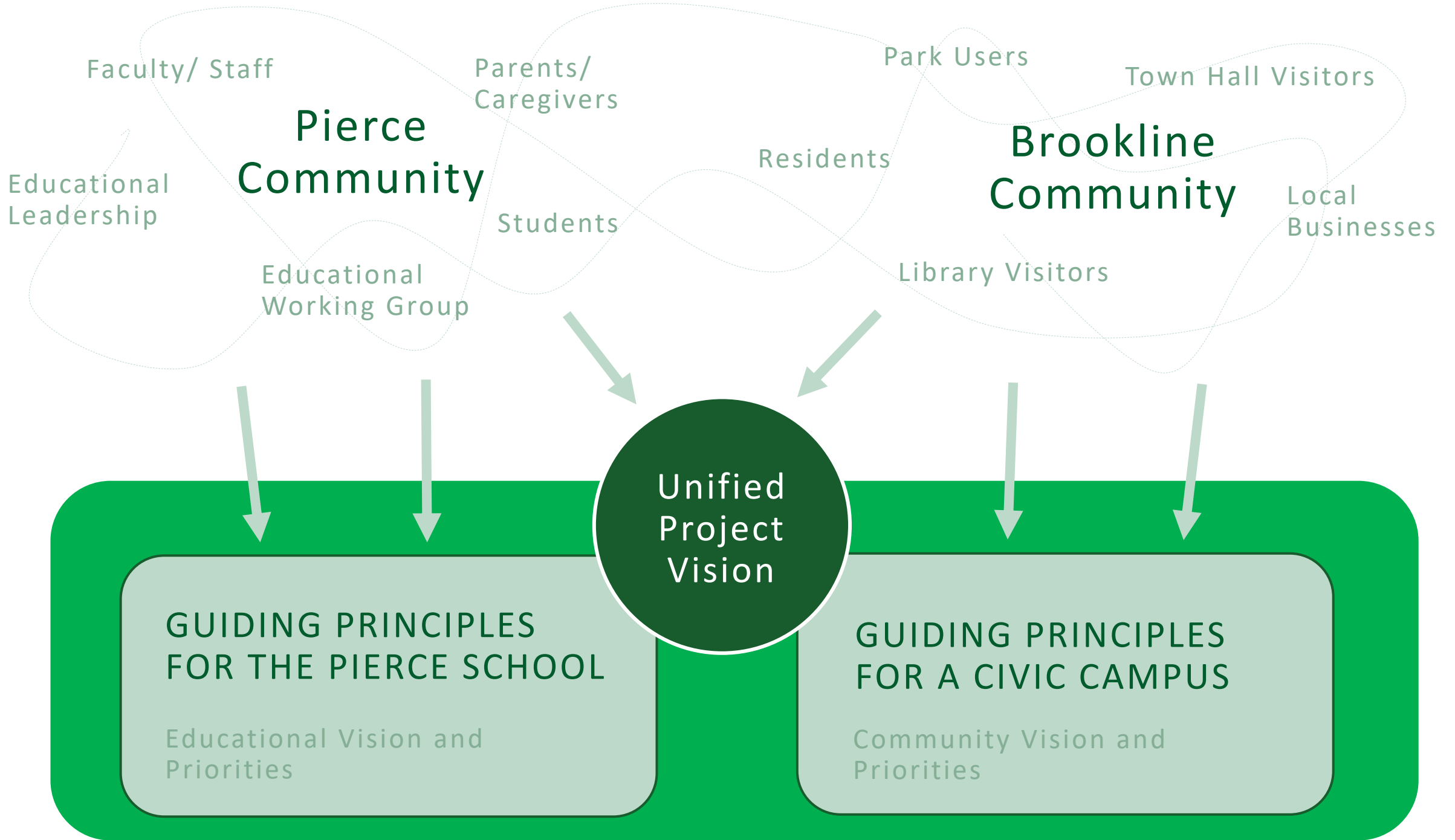
Lawrence School Renovation/Expansion

- Preservation Commission
- Park & Recreation Commission
- Neighborhood
- Building Commission
- Tony Guigli, Project Manager



Heath School Renovation/Expansion

- Neighborhood
- Brookline Commission on Disability
- Building Commission
- Ray Masak, Project Manager



3 STRATEGIES FOR INCLUSIVE ENGAGEMENT:

1. Expand engagement from single workshops to “waves”
2. Provide more ways to engage
3. Make participation fun & meaningful



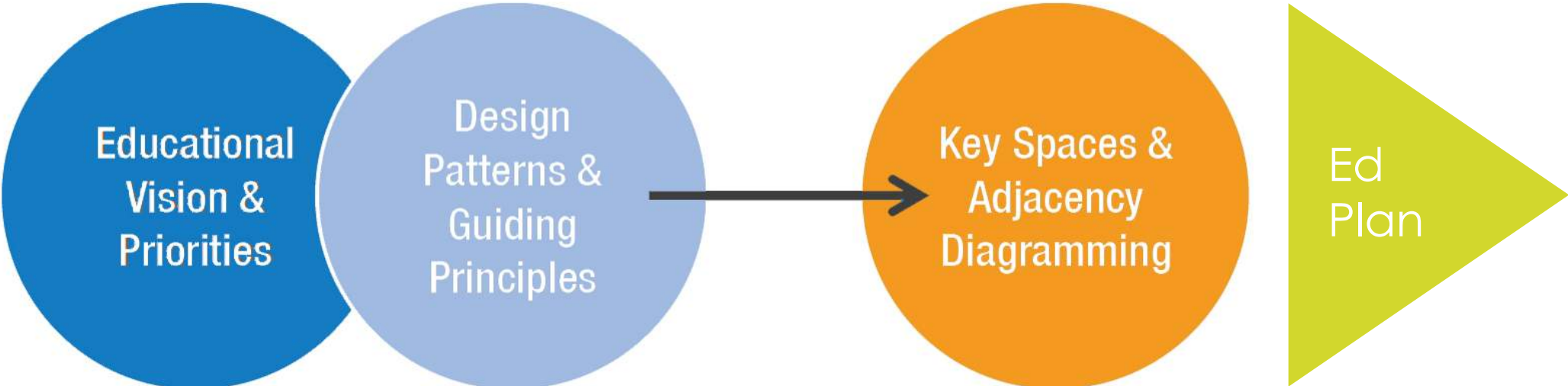
Engagement in COVID

Making it accessible and fun



*pending COVID public health guidelines & best practices

The Visioning Process



Sustainable Design

- (1) The District intends to investigate the feasibility of additional high-performance energy features beyond standard design and construction practices and minimum MSBA requirements, including “fossil fuel free” and/or “net zero energy.” What design elements would you suggest pursuing to further the community's increased environmental and sustainability goals? Discuss cost premiums, maintenance and pay-back aspects of each. Give examples of other project(s) where you have implemented these and describe the benefits to the community, and where these options had a larger upfront cost, how you communicated to the community the value of the upfront investment.
- (5) Provide examples of choices you have made in specifying systems such as lighting, BMS, HVAC and/or auditorium controls that provide the “right” level of sophistication. Describe “lessons learned” from previous projects that you will implement in the proposed project.

Model 21st Century Sustainable Design

Brookline goals: Zero Carbon by 2050

Electrification is our best strategy!

- No fossil fuels
- Road Map to Net-Zero with renewables
- Grid is increasingly clean
- Reduced health risk from toxic fumes
- Potential to reduce costs

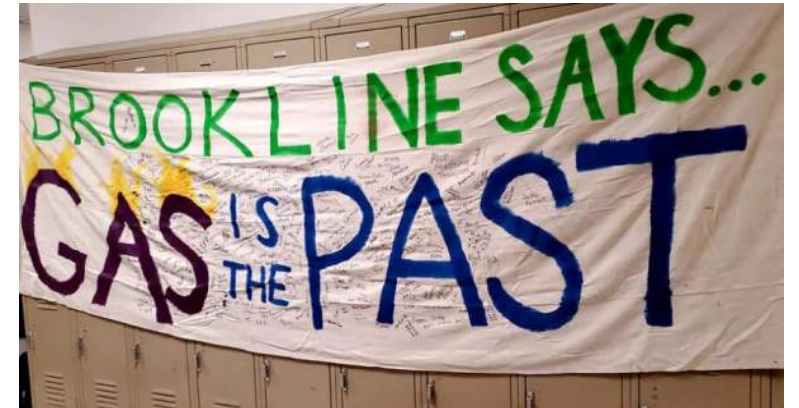
MSBA core values: Net Zero Energy, Fossil-Fuel Free

Recipe for Net-Zero: integrated design process

- Passive strategies to reduce loads
- High performance envelope
- Most efficient systems
- Renewable energy generation

Our Strategy:

Sustainability integrated into design workflow



Net-Zero 5 Projects

AIA COTE TOP 10 AWARD FOR SUSTAINABILITY
FIRST NET-ZERO ENERGY LAB BUILDING IN NORTHEAST
LEED PLATINUM CERTIFIED



**BRISTOL COMMUNITY COLLEGE
HEALTH SCIENCES CENTER
FALL RIVER, MA**

WELL, Fitwel Largest on East Coast



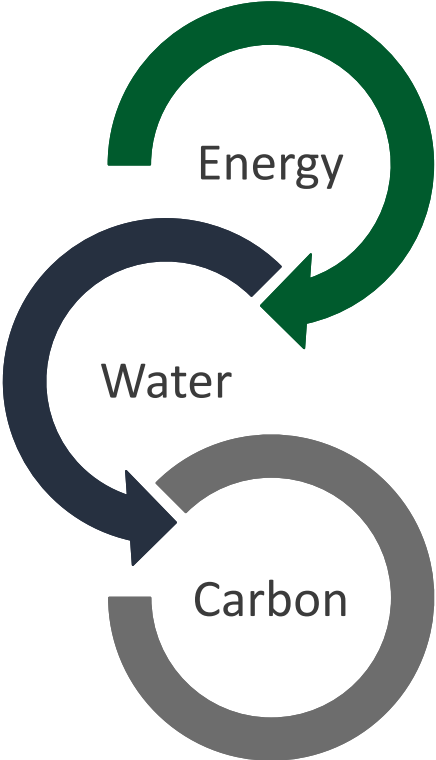
**AKAMAI HEADQUARTERS
CAMBRIDGE, MA**

All-Electric, Carbon-Free 7 Projects



**HARVARD UNIVERSITY ARTLAB
ALLSTON, MA W/BARKOW LEIBINGER**

Sustainability Metrics: Whole Project Analysis



Whole-project energy use
 $EUI = \text{kBtu/ft}^2/\text{yr}$

Whole-project water use
 $WUI = \text{gallons/ft}^2$

Whole-project carbon
 $CUI = \text{kgCO}_2/\text{m}^2$

Sasaki’s new Embodied Carbon Planning Calculator



Pierce School Design Opportunities

A School and Neighborhood that have evolved together over time

Recent investments
in open space

A civic district

Many front doors

Inward-facing



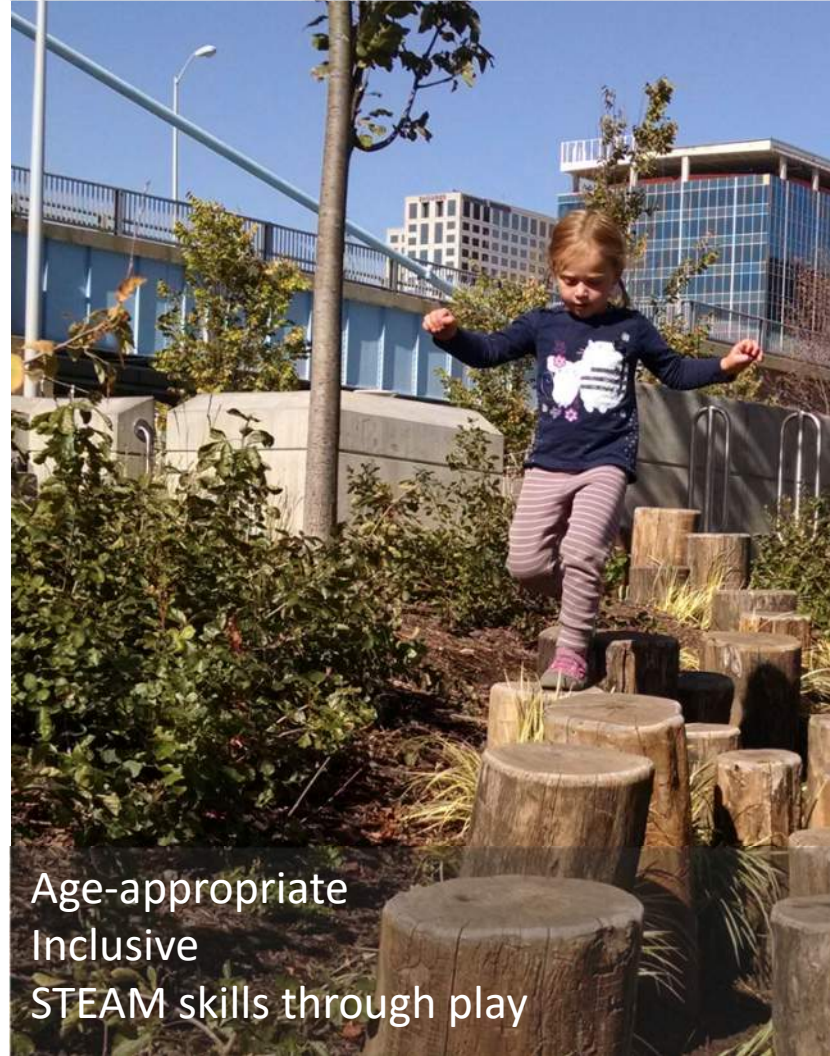
Site Design Goals

A Civic Campus



Engage the community
Relate to park, library and town hall
Cultivate a sense of place

Playful + Educational



Age-appropriate
Inclusive
STEAM skills through play

Intentional Connections



Indoor-outdoor learning space
Microclimates and thermal comfort
Well-used is the goal

Building Design Goals

Pedagogy



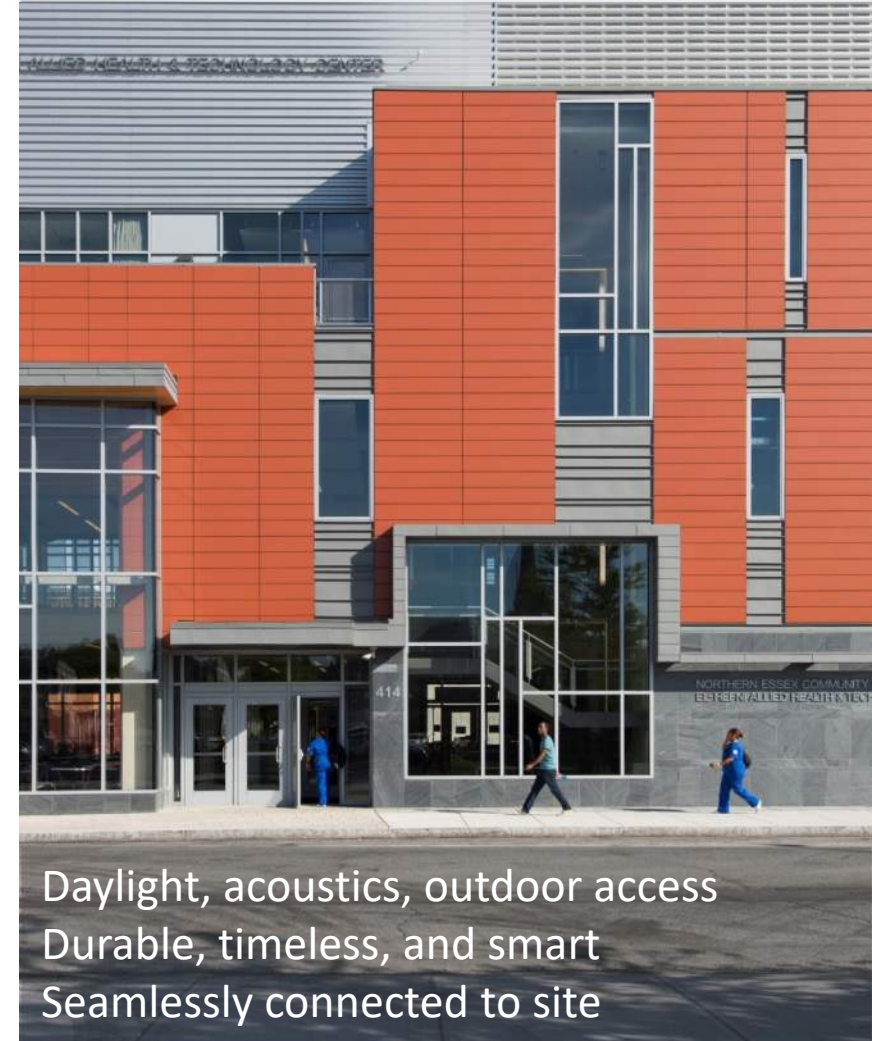
Collaborative
Flexible
Acoustics

Student Experience



Sense of Ownership
Neighborhoods + Cohorts
Whole-Community Spaces

The Building



Daylight, acoustics, outdoor access
Durable, timeless, and smart
Seamlessly connected to site

Decision Matrix

Option A: Strategic Reno

Option B: Central Pavilion

Option C: A New Heart

Option D: A New School



Cost	\$\$\$
Schedule	TBD
Pedagogy	Strategic
Student Life	Strategic
Campus	Strategic
1854 Building	Renovated
Energy Use	Baseline
Embodied CO ₂	Baseline

Cost	\$\$
Schedule	TBD
Pedagogy	Improved
Student Life	Improved
Campus	Improved
1854 Building	Renovated
Energy Use	-20%
Embodied CO ₂	6x

Cost	\$\$
Schedule	TBD
Pedagogy	Improved
Student Life	Improved
Campus	Transformed
1854 Building	TBD
Energy Use	-22%
Embodied CO ₂	10x

Cost	\$\$
Schedule	TBD
Pedagogy	Transformed
Student Life	Transformed
Campus	Transformed
1854 Building	to Town
Energy Use	-67%
Embodied CO ₂	18x



WORK PLAN

BROOKLINE PIERCE SCHOOL WORK PLAN SCHEDULE

	Activity Name	Duration (Days)	Start Date	Finish Date	Jan 21					Feb 21				Mar 21				Apr 21				May 21				
					27	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11	18	25	2	9	16	23
5	MSBA Kick off Meeting	0.00	2/4/21	2/4/21							◆															
7	Existing Conditions	32.00	2/1/21	3/16/21							▬															
21	Programming	44.00	1/25/21	3/25/21							▬															
22	Kick-Off Meeting with Educational Leadership	5.00	2/1/21	2/5/21							▬															
23	Educational Visioning Workshops	20.00	2/8/21	3/5/21							▬															
24	Workshop(s) 2/8,2/10,2/11?	5.00	2/8/21	2/12/21							▬															
25	Workshop(s) 2/23,2/24,2/25?	5.00	2/22/21	2/26/21																						
26	Workshop(s) 3/2,3/3,3/4?	5.00	3/1/21	3/5/21																						
27	Sustainability Workshop	5.00	2/8/21	2/12/21							▬															
28	Community/Neighbor Listening Meeting	5.00	2/22/21	2/26/21																						
29	Online Community Survey	5.00	3/1/21	3/5/21																						
30	Initial Space Summaries	10.00	3/8/21	3/19/21																						
31	Programming Diagrams	19.00	3/1/21	3/25/21																						
32	Ed Program	44.00	1/25/21	3/25/21							▬															

- Existing Conditions Review
- Programming critical in February and March.
- Educational Program Development

What is important to the Pierce School and Pierce community?

EQUITY

- Equity with other schools in the district.
 - What does that mean at Pierce?
 - Program, Site open space, etc.

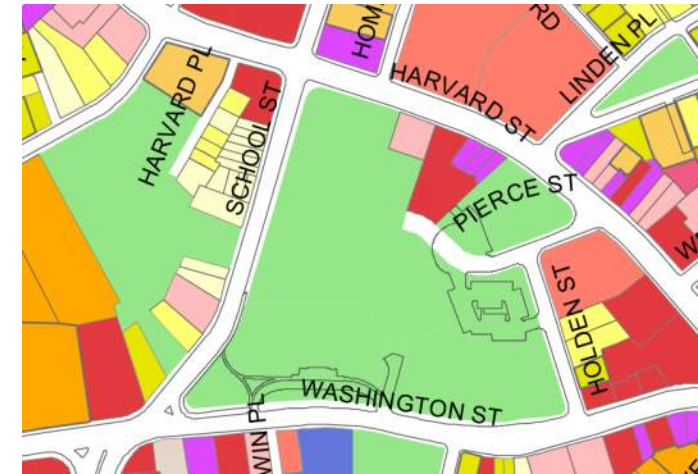
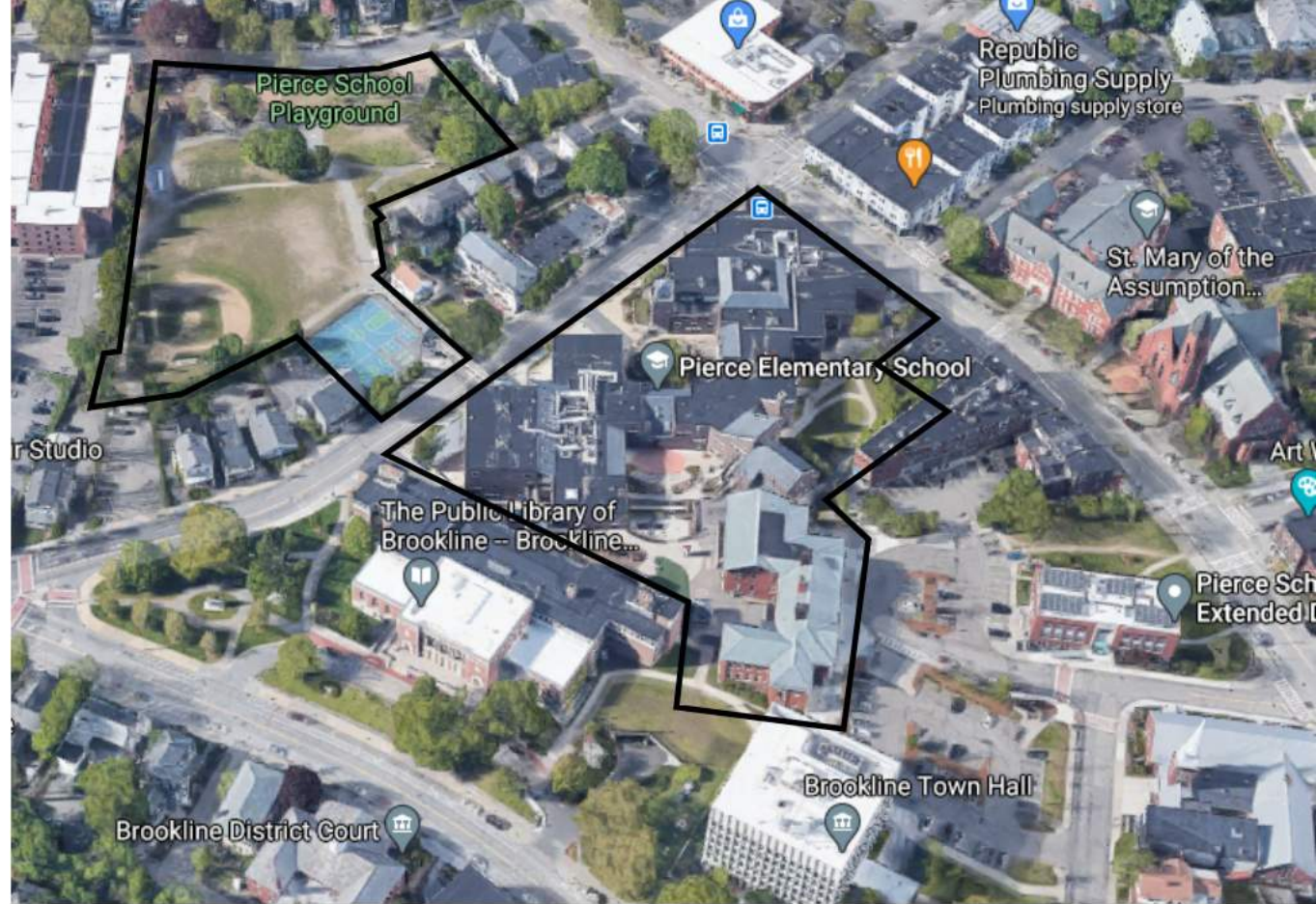
CONSTRUCTION IMPLICATIONS

- Confirm availability of Town swing space during construction.
 - Old Lincoln School (capacity?)
 - Other?



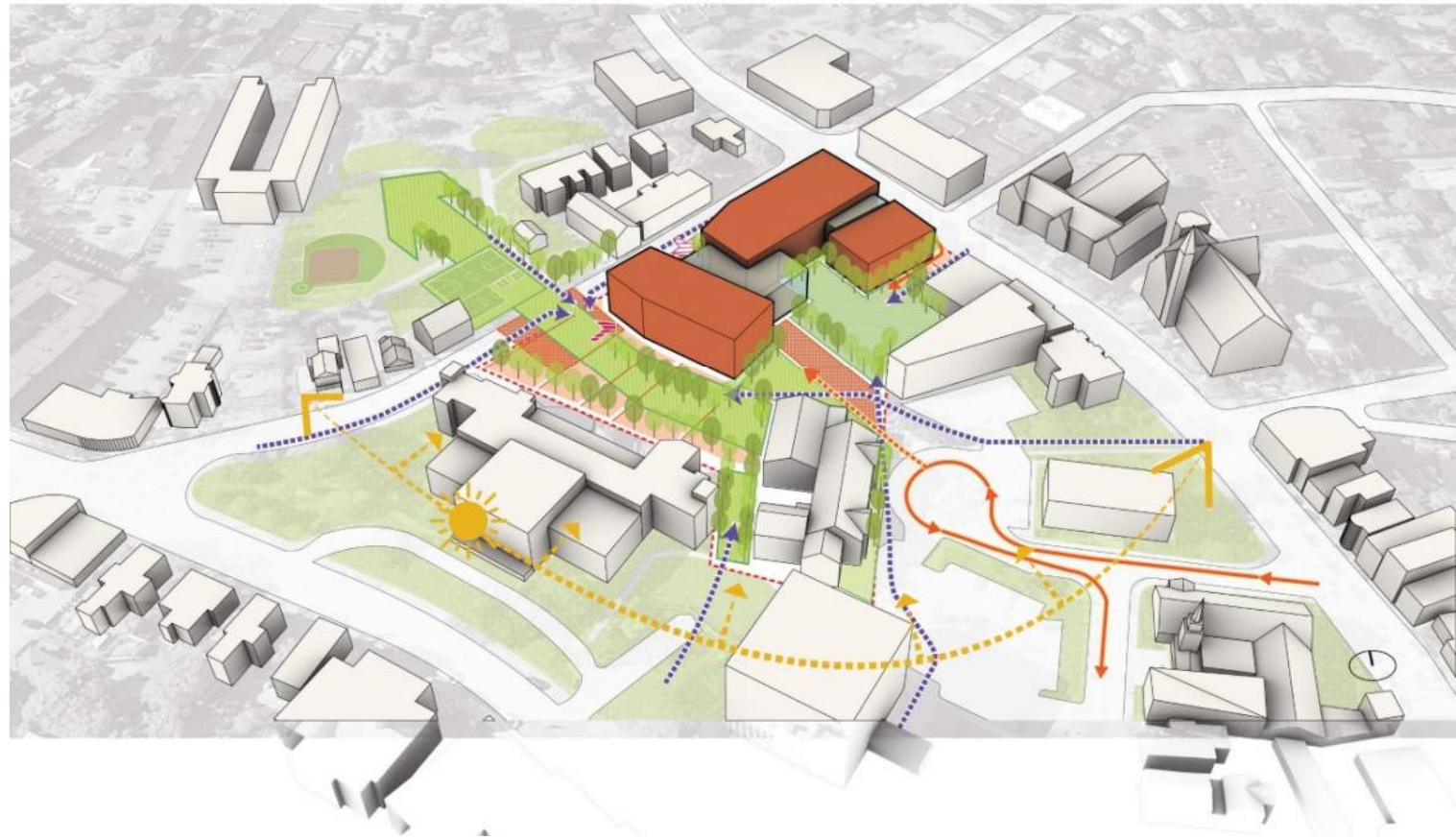
SITE

- Pierce Playground Site Investigation of land swap
- Viability of building park over parking
- Acquisition of neighboring properties to expand available space?
- Program on both sides of School Street



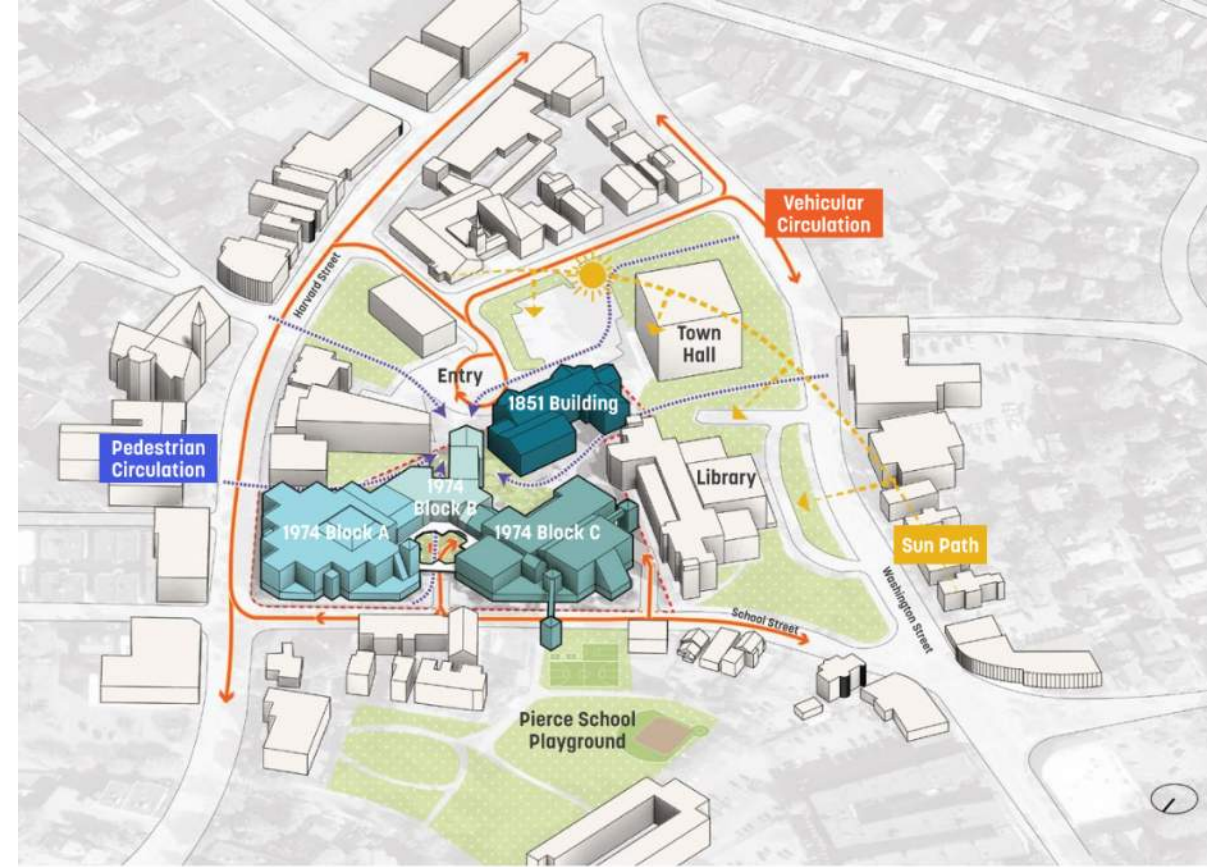
SITE

- Civic Shared Open Space
 - Balance of green space and built area
 - Creation of a Civic Space / Town Green
 - Create play space co-located with school
 - Community use of school amenities
 - Improve connection between existing school site and Pierce playground.
 - Solving for Accessibility / Universal Design



SITE

- Site Circulation
 - Where should the front door(s) be?
 - Traffic patterns during regular school use
 - Buses and Parent drop-off / pickup (What are the congestion issues at drop-off/pick-up times?...conflicts with public parking?)
 - Capacity of drop-off (Is there a need to expand or create a through street? Potential drive off Harvard Street at Health Building? Or connection to School Street?)
 - Data on students walking vs. bus vs. drop-off?
 - Traffic study timing and full occupancy? Adjust data to account for Covid19?



- Safe Pierce playground access
 - Bridge, Traffic calming island, Linked building
- Loading
 - Maintain existing shared loading/service drive?
 - Frequency and size of vehicles

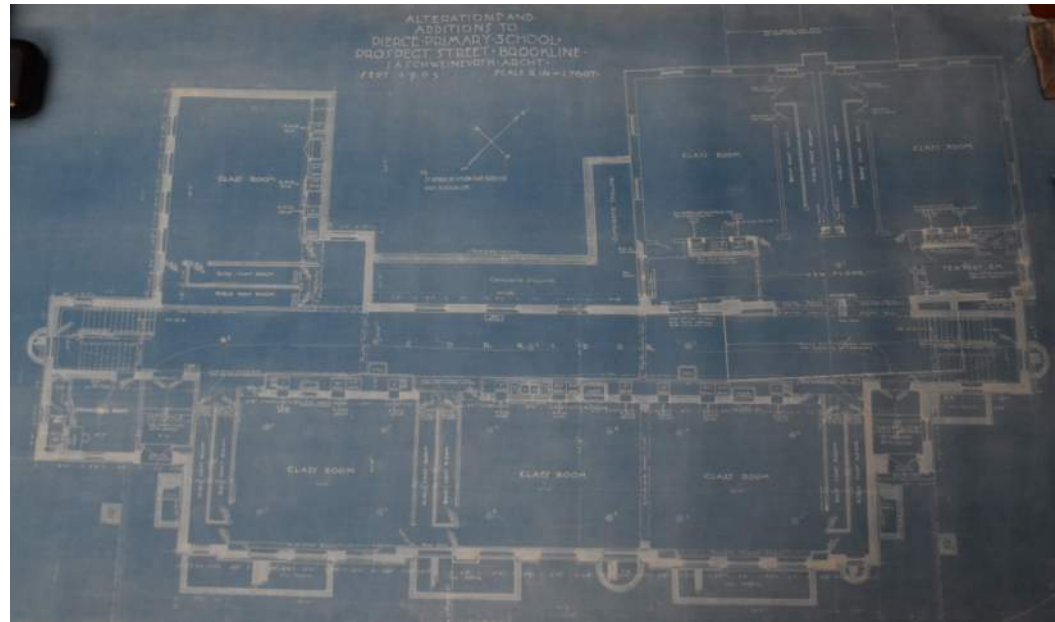
PARKING

- Does the existing parking count need to be maintained?
- What are the Town needs vs. School needs?
- Potential to Build/Reuse parking?
- Locations of parking entrance(s)?



HISTORIC BUILDING

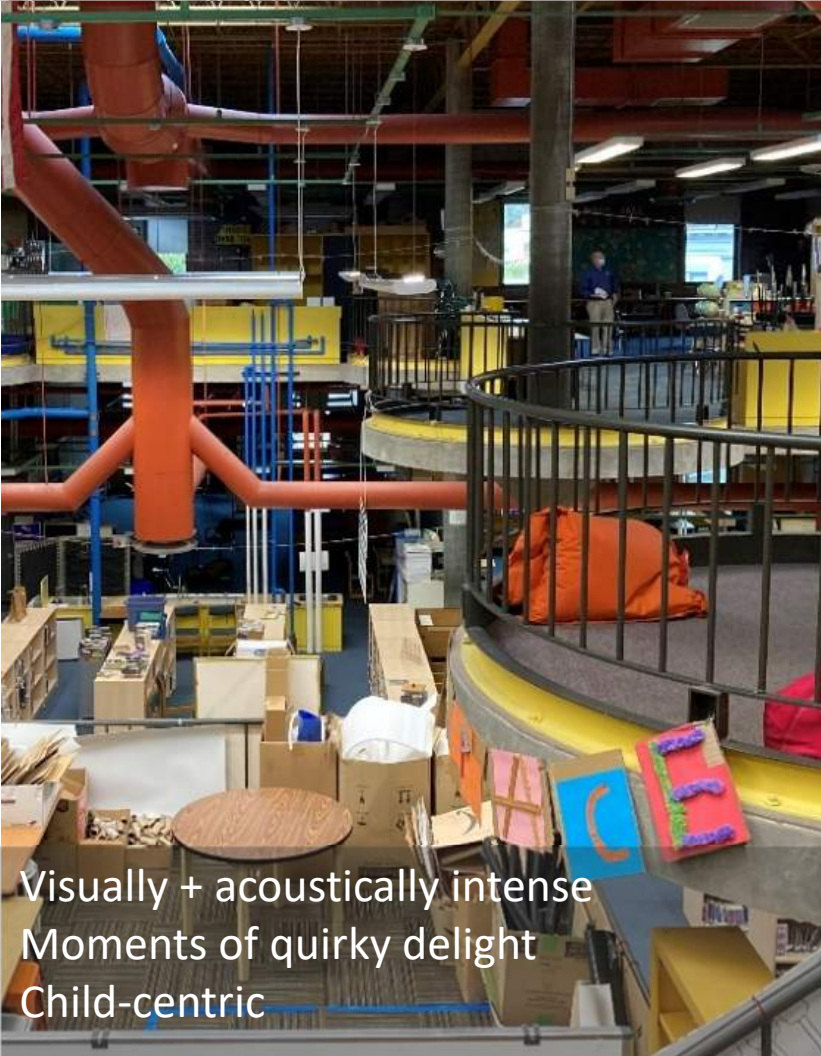
- Are there other Town needs/uses better suited to this building/location?
- Connection between historic building and new.
 - Tunnel, bridge, attached, no building connection (site path only).



WORKING WITH THE EXISTING SCHOOLS

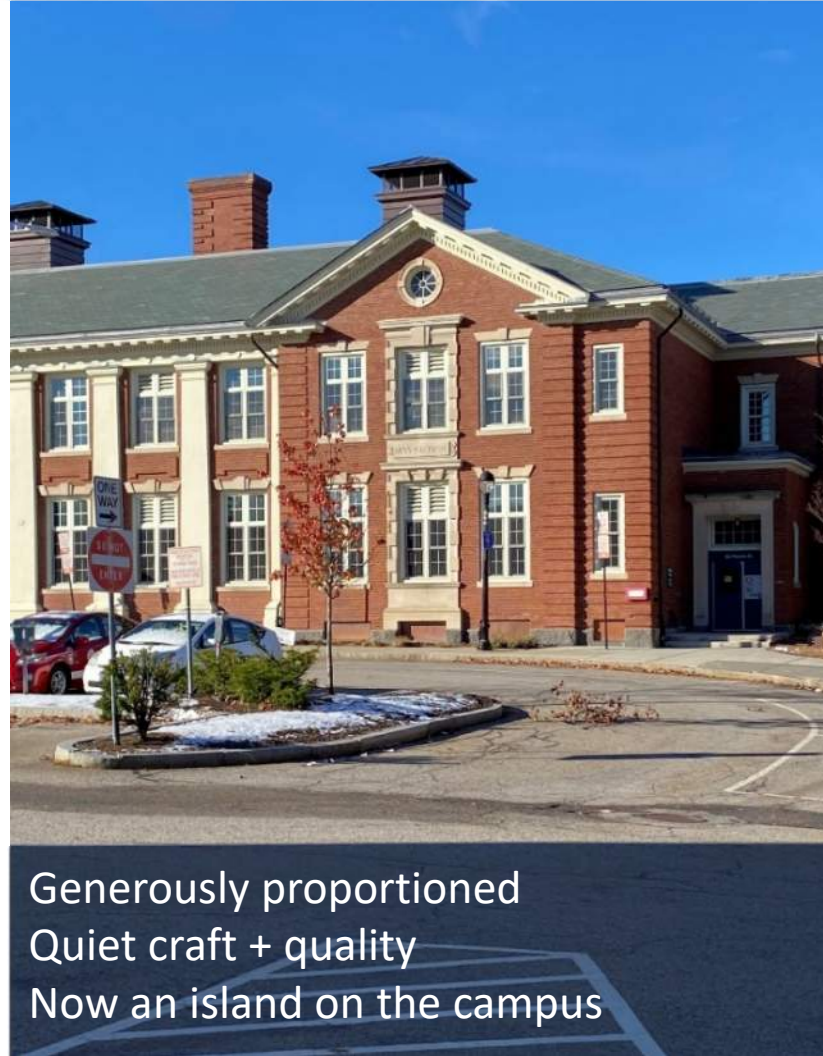
What about this place is unique that could be adapted to 20th century learning?

1974 Open School



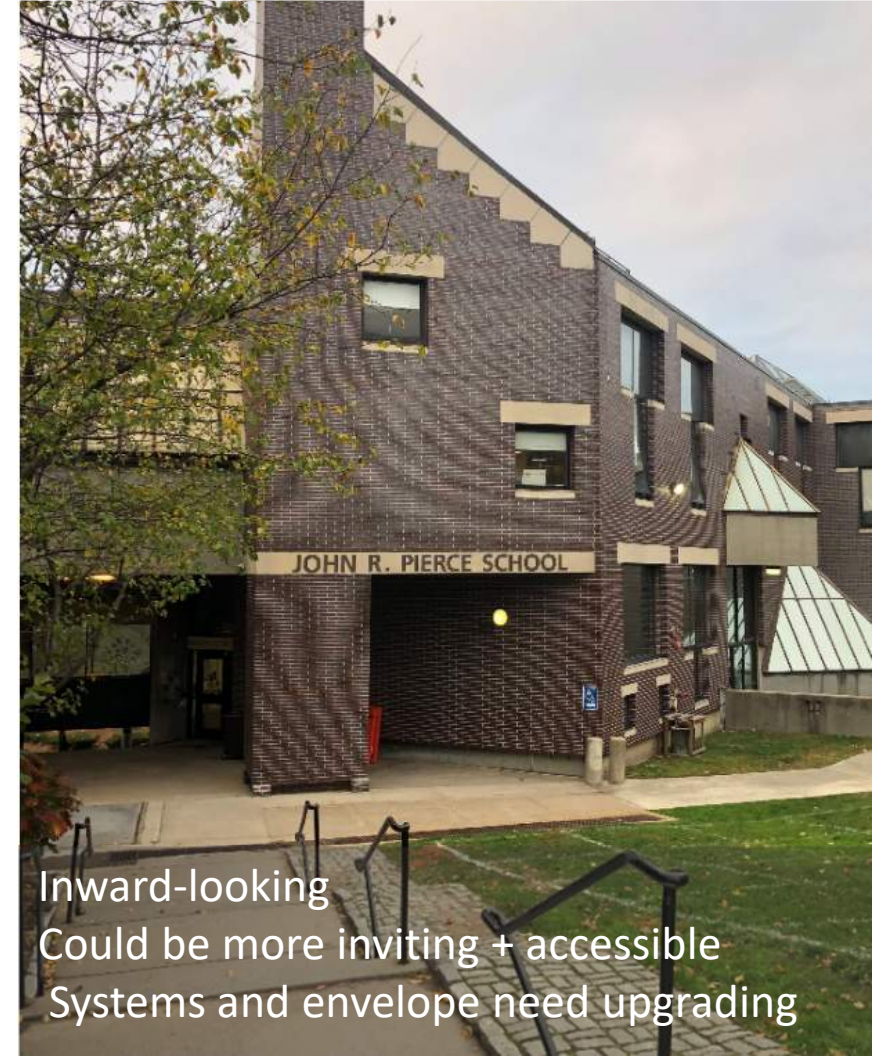
Visually + acoustically intense
Moments of quirky delight
Child-centric

1854/1904 Age of Reform



Generously proportioned
Quiet craft + quality
Now an island on the campus

Products of their Times



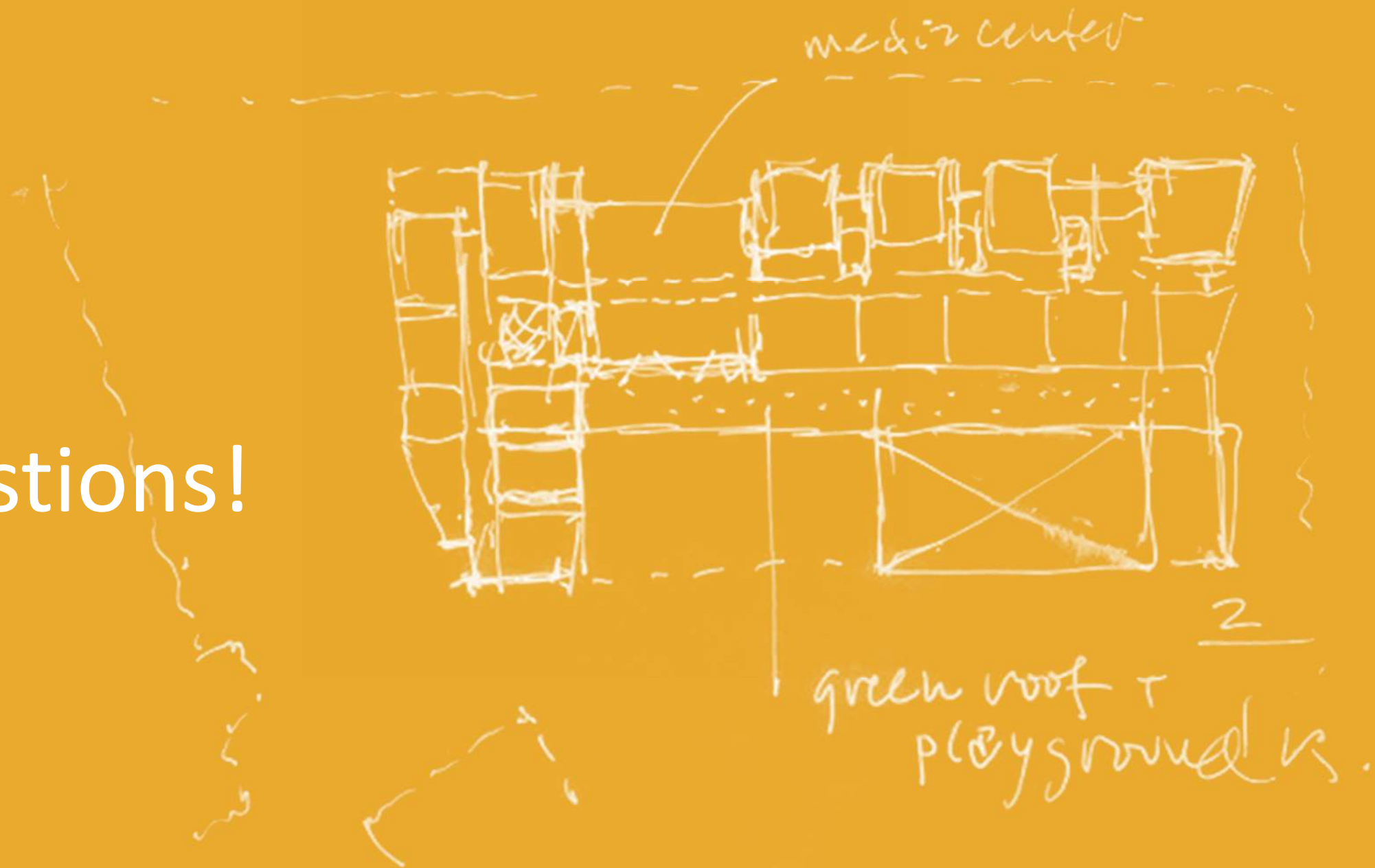
Inward-looking
Could be more inviting + accessible
Systems and envelope need upgrading

PROGRAM ORGANIZATION

- Balance with open space could create a taller building - 3 to 4 stories.
- Separation of grade levels - Schools within a school
- Appropriate program to activate and define street edge and outdoor space
- Orientation to maximize daylighting



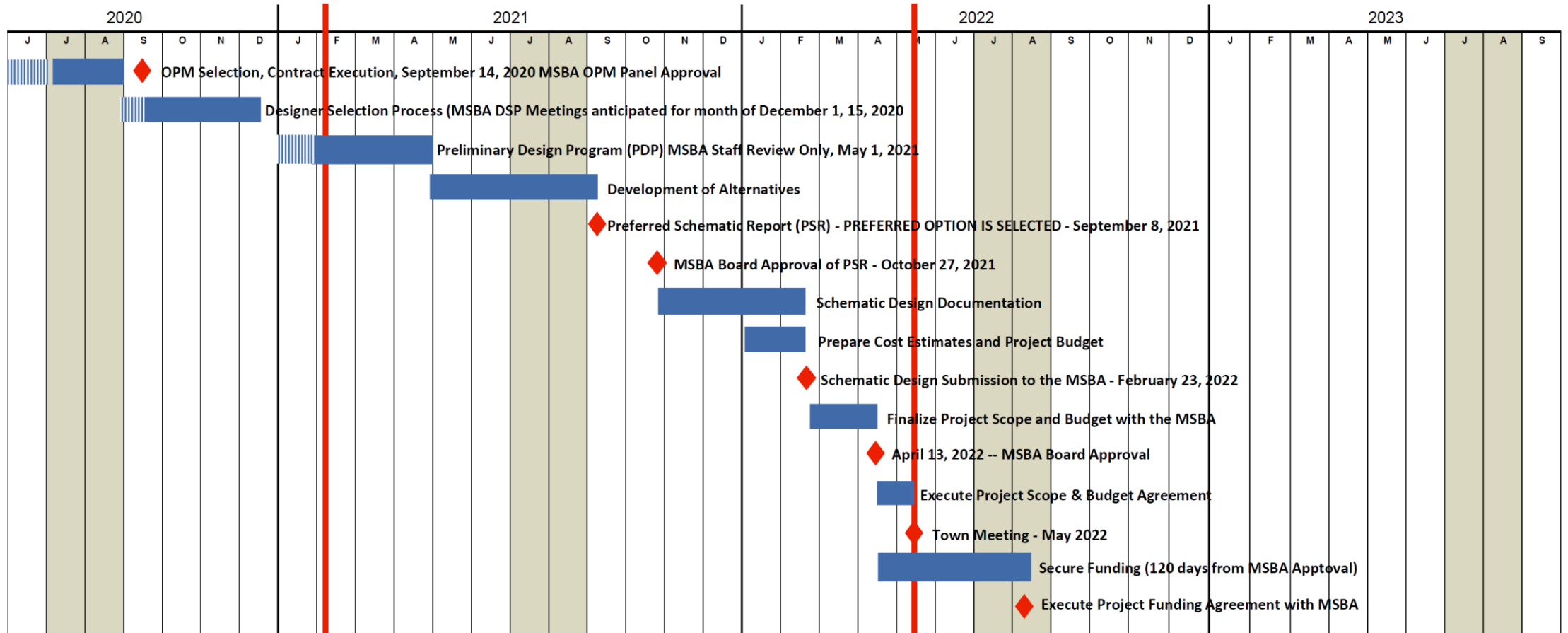
Questions!





JOHN R. PIERCE SCHOOL

School Building Committee



Total Project Budget Status Report

ProPay Code	Description	Total Project Budget	Authorized Changes	Revised Total Budget	Total Committed	% Cmtd to Date	Actual Spent to Date	% Spent to Date	Balance To Spend	Comments
FEASIBILITY STUDY AGREEMENT										
0001-0000	OPM Feasibility Study/Schematic Design	\$ 100,000	\$ 225,000	\$ 325,000	\$ 325,000	100%	\$ 61,580	19%	\$ 263,420	*FSA 1
0002-0000	A&E Feasibility Study/Schematic Design	\$ 950,000	\$ 344,466	\$ 1,294,466	\$ -	0%	\$ -	0%	\$ 1,294,466	
0003-0000	Environmental & Site	\$ 150,000		\$ 150,000	\$ -	0%	\$ -	0%	\$ 150,000	
0004-0000	Other	\$ 800,000	\$ (569,466)	\$ 230,534	\$ -	0%	\$ -	0%	\$ 230,534	*FSA 1
	SUB-TOTAL	\$ 2,000,000	\$ -	\$ 2,000,000	\$ 325,000	16%	\$ 61,580	3%	\$ 1,938,420	
ADMINISTRATION										
0101-0000	Legal Fees	\$ -		\$ -	\$ -				\$ -	
	Owner's Project Manager	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0400	Design Development	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0500	Construction Documents	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0600	Bidding	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0700	Construction Administration	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0800	Closeout	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-0900	Extra Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0102-1000	Reimbursable Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-1100	Cost Estimates	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0103-0000	Advertising & Printing	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0104-0000	Permitting	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0105-0000	Owner's Insurance	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0199-0000	Other Administrative Costs	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
Architectural & Engineering										
	A/E Basic Services	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-0400	Design Development	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-0500	Construction Documents	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-0600	Bidding	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-0700	Construction Administration	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-0800	Closeout	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0201-9900	Other Basic Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	Extra/Reimbursable Services	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0203-9900	Other Reimbursables	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0204-0200	HazMat (incl. monitoring)	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0204-0300	Geotechnical/Geo-Environmental	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0204-0400	Site Survey & Site Requirements	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0204-0500	Wetlands	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0204-1200	Traffic Studies	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
SITE ACQUISITION										
0301-0000	Land/Bldg. Purchase/Associated Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	

Total Project Budget Status Report

ProPay Code	Description	Total Project Budget	Authorized Changes	Revised Total Budget	Total Committed	% Cmtd to Date	Actual Spent to Date	% Spent to Date	Balance To Spend	Comments
PRE CONSTRUCTION COSTS										
0501-0000	CMR Pre-Con Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
CONSTRUCTION COSTS										
0502-0001	Construction Budget	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0508-0000	Change Orders	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
ALTERNATES										
0506-0000				\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	#REF!	\$ -	\$ -	0%	\$ -	0%	\$ -	
OTHER PROJECT COSTS										
0507-0000	Construction Contingency	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
	Miscellaneous Project Costs	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0601-0000	Utility Company Fees	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0602-0000	Testing Services	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0699-0000	Other Project Costs	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	Furnishings and Equipment	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
0701-0000	Furnishings	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0702-0000	Equipment	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0703-0000	Technology Equipment	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
0801-0000	Owner's Contingency	\$ -		\$ -	\$ -	0%	\$ -	0%	\$ -	
	SUB-TOTAL	\$ -	\$ -	\$ -	\$ -	0%	\$ -	0%	\$ -	
TOTAL PROJECT BUDGET		\$ 2,000,000	\$ -	\$ 2,000,000	\$ 325,000	16%	\$ 61,580	3%	\$ 1,938,420	

FUNDING SOURCES	Max w/ Conting.	Max w/o Conting.	Project Budget	Scope Items Excluded	Contingencies	Basis of Total Facilities Grant	Reimbursement Rate
Maximum State Share	\$ 645,200	\$ 645,200					
Local Share	\$ 1,354,800	\$ 1,354,800					
SUB-TOTAL	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ -	\$ -	\$ 2,000,000	32.36%

CONSTR. COST ESTIMATES	Date	Estimator	Amount	SF	Cost Per SF
PSR Cost Estimate					#DIV/0!
CM SD Cost Estimate					#DIV/0!

Feasibility Study Agreement Budget Transfers:

FSA BRR 01	11/30/2020	Transfer \$225,000 from Other Contingency to OPM Feasibility Study/Schematic Design to fund OPM Base Contract for Feasibility Study/Schematic Design.
FSA BRR 01	1/12/2021	Transfer \$344,466 from Other Contingency to A/E Feasibility Study/Schematic Design to fund A/E Base Contract for Feasibility Study/Schematic Design.