

Hildreth Elementary School

Story of a Building

13 October, 2022



ARROWSTREET





NORTH
AMERICA

DENALI 3,350 miles

HUDSON BAY 1,300 miles

HARVARD

OLD FAITHFUL 1,950 miles

GRAND CANYON 2,200 miles

EVERGLADES 1,250 miles

HAWAII 5,000 miles

Welcome

Your Speakers Today

Massachusetts School Building Authority

- James A. MacDonald, CEO
- Barbara Hansberry, Director of Strategic Planning

Harvard Public Schools

- Dr. Linda Dwight, Superintendent
- Dr. Rebecca Katsh-Singer, Principal
- SusanMary Redinger, Chair

Project Team

- Thomas P. Murphy, AIA, NV5
- Laurence Spang, AIA, Arrowstreet
- Ryan Lynch, Shawmut Design and Construction



Today's Agenda

8 – 8:25 **Welcome**

8:25 – 9:50 **Session 1: The Learning Environment**

- Educational Benefits for Student Learning Dr. Linda Dwight
- Creating a Sense of Identity and Place Larry Spang
- Q+A

Break - 10 Minutes

10 – 10:45 **Building Tour**

10:45 – 11 **Q+A**

11 – 12:30 **Session 2: Working with the Community**

- Getting to Yes SusanMary Redinger
- A Building for Harvard Larry Spang
- Managing the Process Tom Murphy
- Building a School Ryan Lynch
- Q+A

186

Mrs. Cutler

BUMBLEBEE



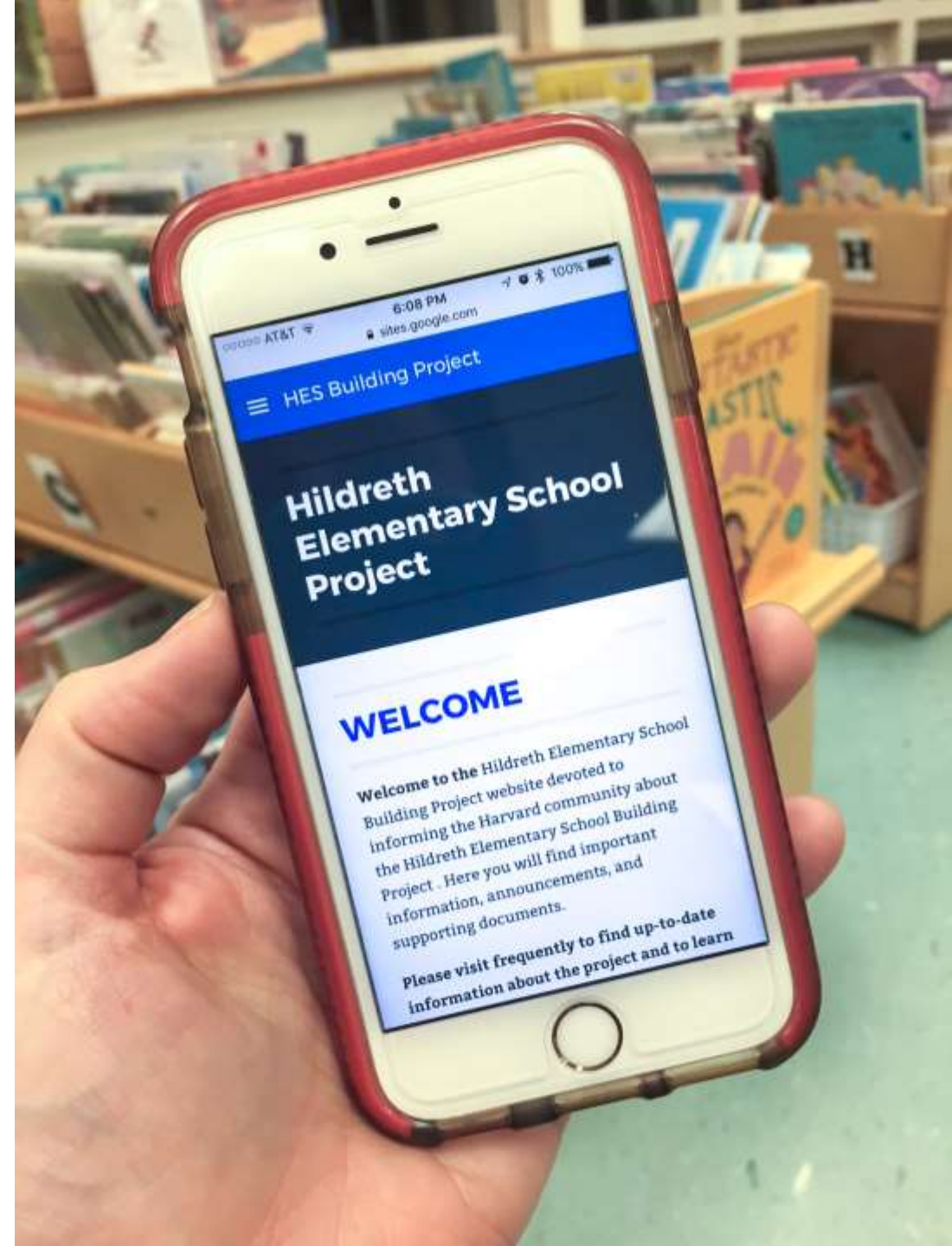
Educational Benefits for Student Learning



HES Visioning Committee

Goals

- Create spaces that will enhance learning beyond the classrooms and promote 21st century skills
- Enhance support for Special Needs
- Build a sense of a learning community
- Provide advanced technology with future flexibility
- Provide an optimal learning environment
- Create a building that is safe and secure while providing for community use



Harvard Public Schools Vision Statement:

We commit to providing a high quality education centered around dynamic learning and personal well-being in a community where everyone can find belonging.

Healthy Classrooms

HEALTHIER
MATERIALS

ERGONOMIC
FURNITURE

DAYLIGHT
& VIEWS

OPERABLE
WINDOWS

NATURAL
LOOK
MATERIALS

DISPLACEMENT
VENTILATION FOR
THERMAL
COMFORT & AIR
QUALITY

ACOUSTICS

DIMMABLE
INDIRECT
LIGHTING



Breakout Spaces



Grades K-1

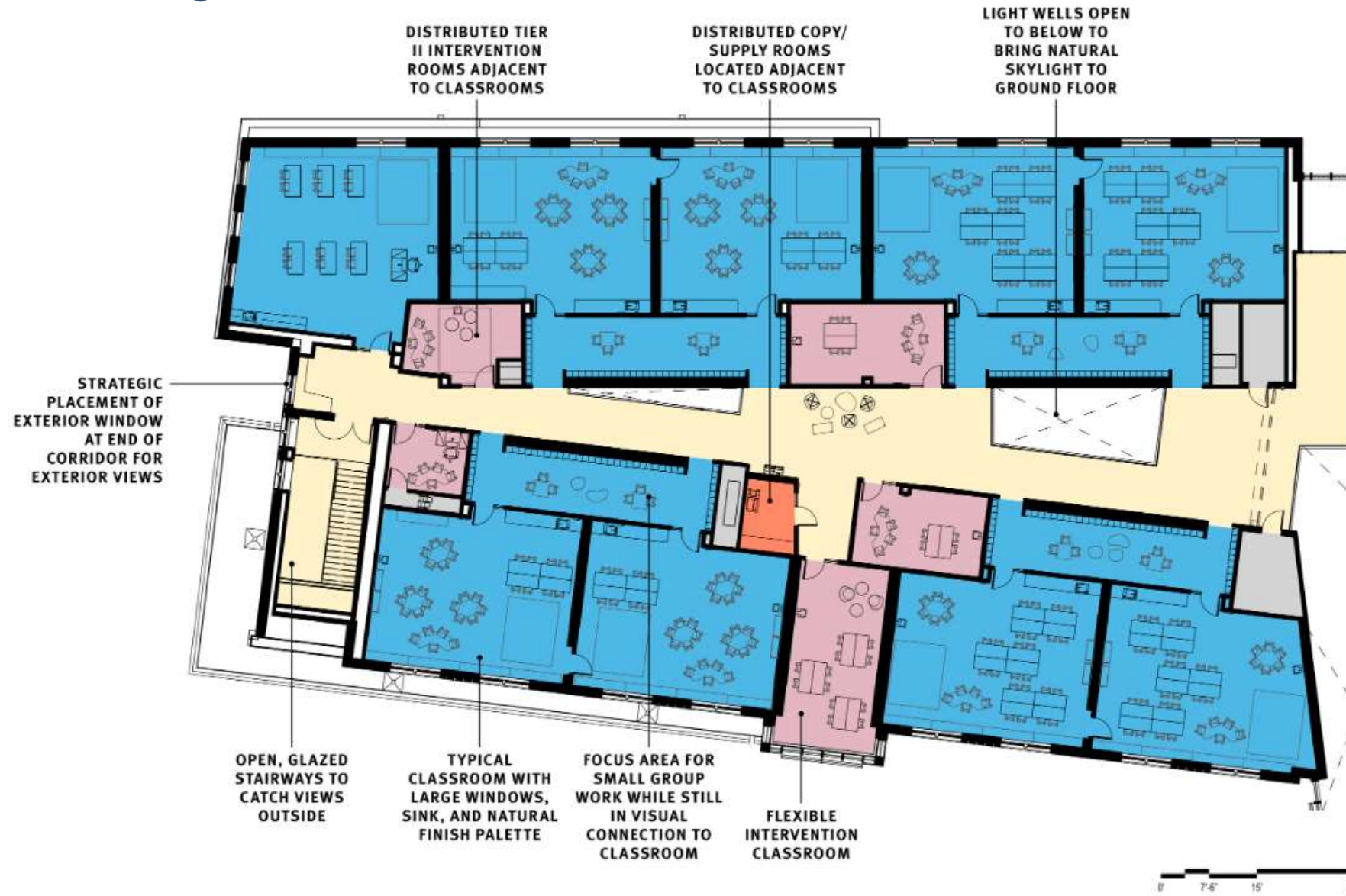


Grades 2-3



Grades 4-5

Gr 2-3 Neighborhood



Open Media Center



Learning Stairs



Art/STEM Room



Natural Daylight



Art Room



Grade 4-5 Breakout Area

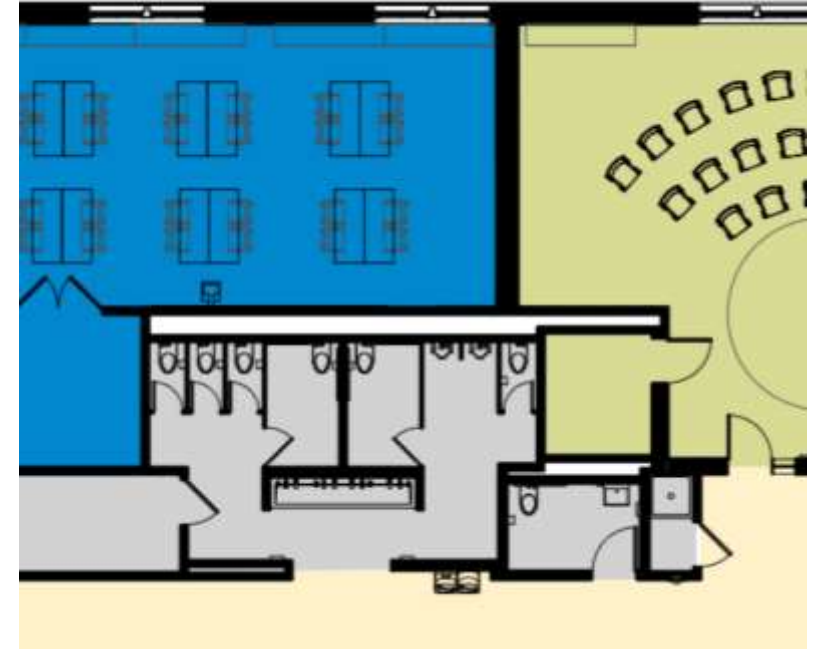


Gymnasium

Alternate Learning Spaces



Adapting to the Future



Shared Sinks at Toilet Room

Community Resources





Creating a Sense of Identity and Place

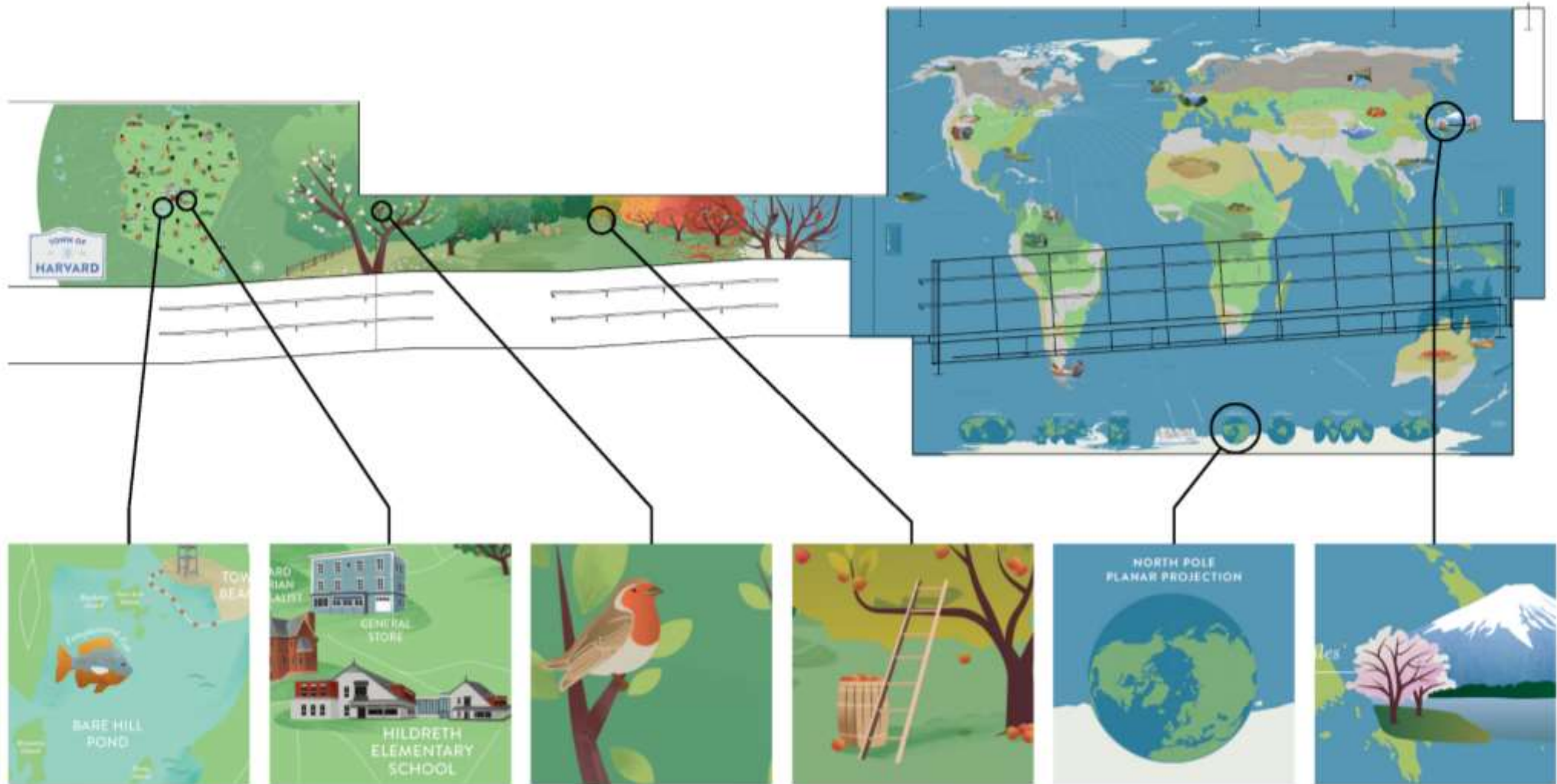
Identity and Place



Identity and Place



Identity and Place



Wayfinding



PRESCHOOL & KINDERGARTEN



FIRST GRADE



SECOND GRADE



THIRD GRADE





Q&A / Discussion

Building Tour



- | | |
|---|---|
| ■ CORE ACADEMIC SPACES | ■ DINING & FOOD SERVICE |
| ■ SPECIAL EDUCATION | ■ MEDICAL |
| ■ ART & MUSIC | ■ ADMINISTRATION & GUIDANCE |
| ■ VOCATIONS & TECHNOLOGY | ■ CUSTODIAL & MAINTENANCE |
| ■ HEALTH & PHYSICAL EDUCATION | ■ OTHER |
| ■ MEDIA CENTER | ■ CIRCULATION |
| ■ AUDITORIUM/DRAMA | |



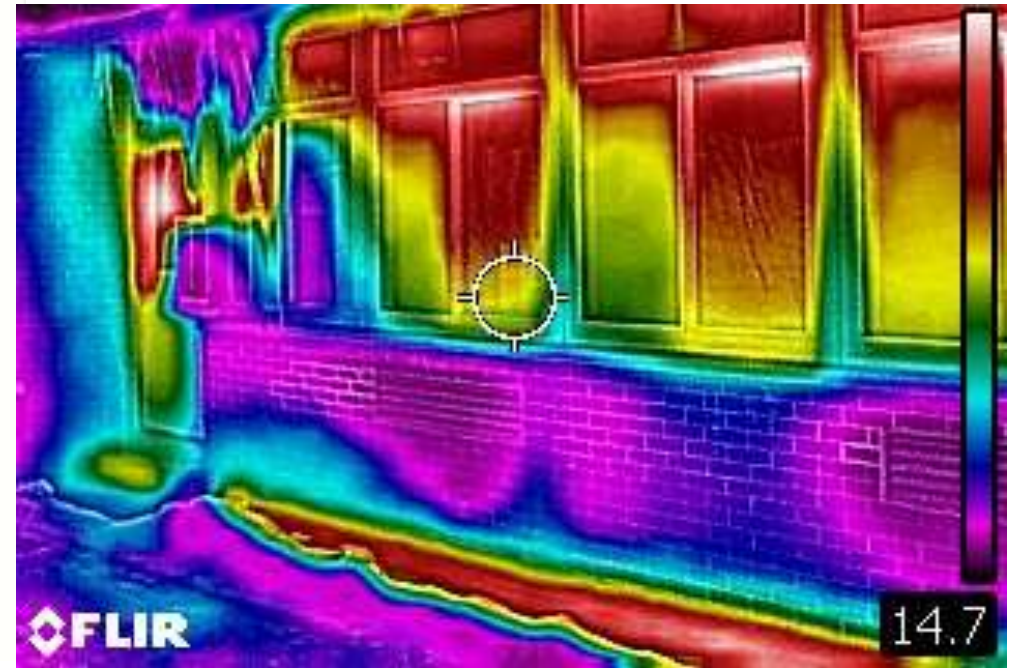
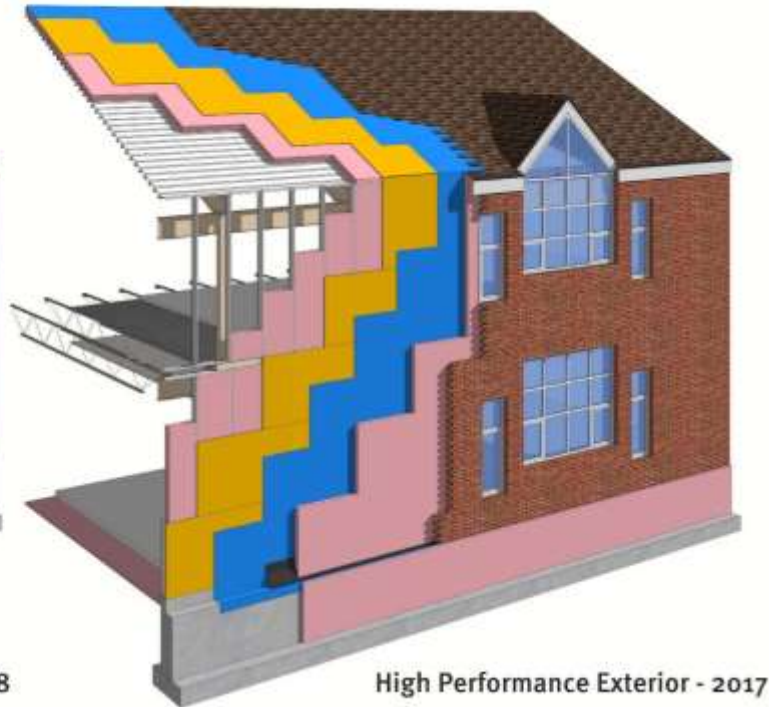
Working with
the Community

Involve the Community



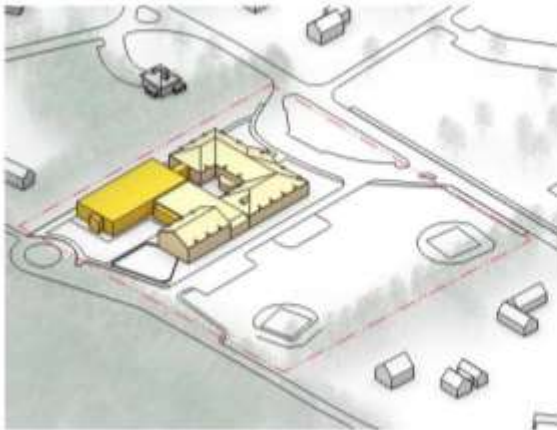
Document Existing Deficiencies

Preliminary Investigations



Study the Alternatives

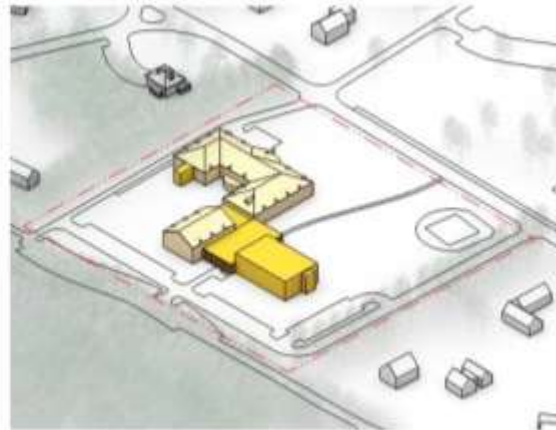
Scheme 1



**Renovation of 1988 Building
+ New Classroom Wing**

Scheme 1 Area	± 73,095 SF
Budget Cost/SF	\$301
Total Project Budget	\$31,000,000
Anticipated Reimbursement (~51.68%)	\$15,700,000
Construction Budget (Net to Harvard)	\$16,000,000

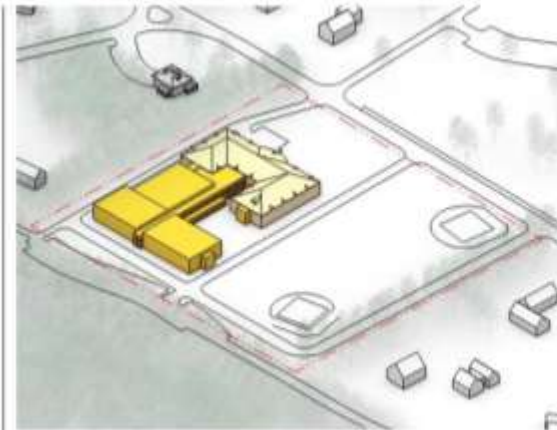
Scheme 2



**Renovation of 1988 Building
+ New Classroom Wing
+ New Cafeteria**

Scheme 2 Area	± 75,327 SF
Budget Cost/SF	\$330
Total Construction Budget	\$35,000,000
Anticipated Reimbursement (~51%)	\$17,600,000
Construction Budget (Net to Harvard)	\$19,000,000

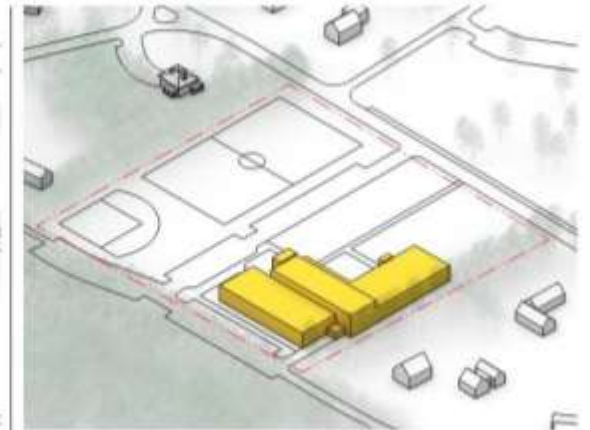
Scheme 3



**Renovation of 1988 Building
+ New Classroom Wing
+ New Cafeteria
+ New Gymnasium**

Scheme 3 Area	± 76,572 SF
Budget Cost/SF	\$360
Total Construction Budget	\$38,300,000
Anticipated Reimbursement (~51%)	\$19,400,000
Construction Budget (Net to Harvard)	\$22,100,000

Scheme 4



New Construction

Scheme 4 Area	± 73,000 SF
Budget Cost/SF	\$510
Total Construction Budget	\$37,215,000
Anticipated Reimbursement (~45%)	\$10,693,000
Construction Budget (Net to Harvard)	\$26,522,000

Notes:

1. MSBA reimbursement has been calculated based on 45% of building construction costs and 8% of site allowance.

Inform the Public

The Vote and Construction Timeline

YES

Town Votes YES
at ATM
and the ballot

Detailed Design work	now - Apr '19
Bids received	April 2019
Construction begins	June 2019
New building completed	Feb 2021
Site work completed	August 2021

Town Cost \$34.8M
Tax increase - 11%

What Happens if the Town Votes No?

YES vote • BUILD A NEW SCHOOL
Cost: 11% tax increase (based on info from 4/2018)

- ✓ Receive \$18 + million grant from state
- ✓ No roof problems

NO vote • BACK TO DRAWING BOARD
Cost: 10% tax increase (based on info from 2017*)

- ✗ Lose grant from state & pay for new feasibility study (adds years to project)
- ✗ Roof still gets ice dams, will leak again and need future replacement

Renovation
DENIES funding*

Vote on New	April 2020
City Funds	April 2021
Vote on	April 2021
ion Funds	April 2022
sted	April 2022
ction begins	June 2022
ions complete	'23 - '24

Cost \$32M-\$47.4M**
increase 12%-19%

*Timeline and costs are much less certain if MSBA denies funding. This timing assumes a best-case scenario. Costs will ultimately depend on what the town approves.

The Better Way School



New Kindergarten Wing

Renovations to the 1988 Building

- New Roof
- Improved Heating system
- Sprinklers and all code updates

It's \$14M using SBC's own project cost data

Costs for Replacing K-wing and Repairing 1988 Elementary School Building

CONSTRUCTION BUDGET	
Foundations and site work	\$2,588,860
New Roof	\$2,164,727
New construction (K-wing)	\$2,187,216
Interior/special construction	\$4,183,842
Plumbing/conveying/electrical	\$2,041,740
Fire protection/sprinkler	\$320,778
Heating and ventilation system	\$1,415,740
Equipment/furnishings	\$693,050
Hazardous materials abatement	\$460,000
Demolition	\$582,290
Construction soft costs (design, pricing, bonds, fees, general conditions, contingencies)	\$6,162,176
3% annual escalation, construction budget	\$1,463,820
Deducting educational improvements	
Included in original renovation estimate	-\$2,000,000
CONSTRUCTION SUBTOTAL	\$22,264,189
PROJECT COSTS	
Classrooms	\$2,115,000
Furniture, fixtures, equipment	\$667,500
Energy/OPM soft costs	\$2,893,986
Feasibility study - town share	\$330,000
TOTAL PROJECT COST	\$28,270,675

from 1980s
 der/HVAC install
 ly at 110% capacity)

students & staff
 ooms (date unknown)
 own)
 wn)
 on't come back)
 roject will be higher-
 est rates.

g less!

What if? Repairing HES could top \$28 million; state would pay nothing

What if? Repairing HES could top \$28 million; state would pay nothing

BY MAHTY GREEN THURSDAY, FEBRUARY 15, 2018



Source: School Building Committee, 2/15/18 Harvard Press

BETTER WAY SCHOOL	
Start with above total from SBC	\$28,270,675
Less Modular Classrooms*	-\$2,115,000
Less Furniture, Fixtures, Equipment	-\$667,500
Less Energy/OPM Soft Costs	-\$2,893,986
Less Feasibility Study - Town Share	-\$330,000
Total	\$22,660,189



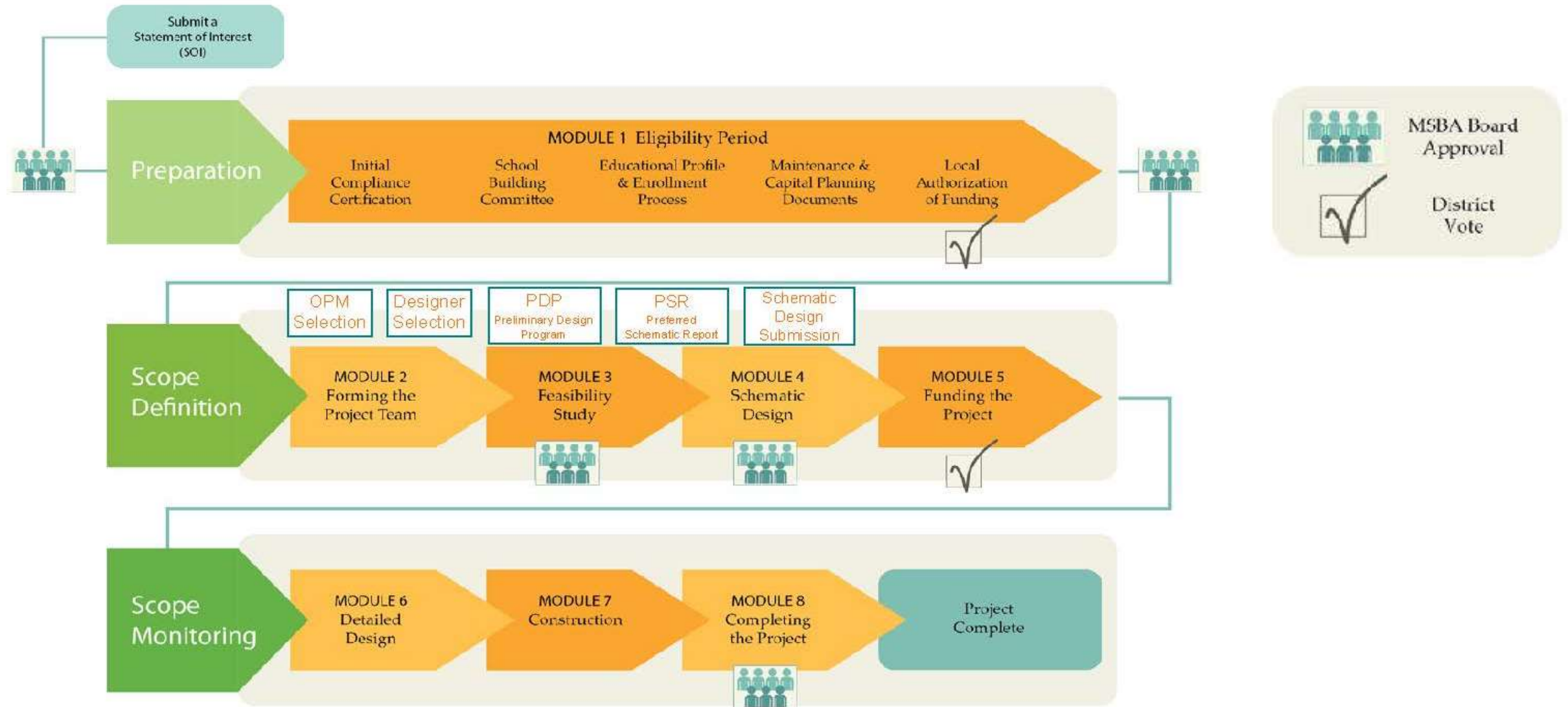
Prepare for Debate



Yes to HES



MSBA Core Program Process Overview



MSBA Templates

Total Project Budget

Board: **Walworth - Option 4** School Building Committee Reviewed on: **Insert Date of SDC Review Date**

Total Project Budget: All costs associated with the project are subject to MSB-CMR 2.1000	Estimated Budget	Single Year Estimated Rate for Estimated Basis of Maximum Facilities Grant (Owner's Estimate)	Estimated Basis of Maximum Total Facilities Grant	Estimated Maximum Total Facilities Grant
Project Budget	\$45,127,292	\$11,288,831	\$33,837,471	1799225.25

Board Administration	Design Consultant	44.5% Reimbursement Rate Before Incentive Points
Total Building Grant Floor Area (GFA)	440	4.5% Total Incentive Points
Total Project Budget (including Contingencies)	\$1,834	49.21% MSBA Reimbursement Rate
Scope Items Excluded or Otherwise Ineligible	\$45,127,292	
Third Party Funding (Ineligible)	\$11,845,892	
Estimated Basis of Maximum Total Facilities Grant	\$34,277,174	
Reimbursement Rate	49.21%	
Est. Max. Total Facilities Grant (before recovery)	\$17,992,225	
Cost Recovery	\$0	
Estimated Maximum Total Facilities Grant	\$17,992,225	

Contingency	Value
Construction Contingency	\$1,944,730
Ineligible Construction Contingency	\$1,055,770
Potentially Eligible Construction Contingency	\$888,960
Owner's Contingency	\$396,944
Ineligible Owner's Contingency	\$396,944
Potentially Eligible Owner's Contingency	\$0
Total Potentially Eligible Contingency	\$888,960
Reimbursement Rate	49.21%
Potential Additional Contingency Grant Funds	\$1,011,288
Maximum Total Facilities Grant	\$17,256,029
Total Project Budget	\$45,800,720
Town Share	\$27,808,497

Green Meadow Elementary School Existing Conditions

PROPOSED

Date: Enter Date Enter Submittal

ROOM	NFA ¹	# OF RKS	Area Totals	MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)		
				ROOM NFA ¹	# OF RKS	Area Totals
GREEN ACADEMY SPACES						
<i>(All classrooms of different sizes separating)</i>						
Pre-Kindergarten w/ toilet	0	0	0	1,200	1	1,200 SF min - 1,200 SF max
Kindergarten w/ toilet	0	0	0	1,200	4	4,800 1,200 SF min - 1,200 SF max; 2,000 max req.
General Classrooms - Grade 1-6	0	0	0	950	14	13,300 900 SF min - 1,200 SF max; 2,000 max req.
STE Room Grade 3-6	0	0	0	1,000		Refer to STE Guidelines for Additional Information
STE Storage	0	0	0	120		Refer to STE Guidelines for Additional Information
SPECIAL EDUCATION						
<i>(Classrooms of different sizes separating)</i>						
Self-Contained SPED - toilet	0	0	0	950	3	2,850 900-1,200 SF equal to surrounding classrooms
Resource Room	0	0	0	300	2	1,200 120 sq feet min.
Small Group Room / Reading	0	0	0	300	1	300 120 sq feet min.
ART & MUSIC						
Art Classroom - 25 seats	0	0	0	1,200	1	1,200 1,200 sq feet min; 2,000 sq feet max
Art Workroom w/ Storage & kits	0	0	0	150	1	150 1,200 sq feet min; 2,000 sq feet max
Music Classroom / Large Group - 25-50 seats	0	0	0	1,200	1	1,200 1,200 sq feet min; 2,000 sq feet max
Music Practice / Ensemble	0	0	0	75	3	225
HEALTH & PHYSICAL EDUCATION						
Gymnasium	0	0	0	6,000	1	6,000 120' x 100' min. size
Gym Storage	0	0	0	150	1	150
Health Instructor's Office w/ Shower & Toilet	0	0	0	150	1	150
MEDIA CENTER						
Media Center / Reading Room	0	0	0	2,400	1	2,400
CAFETERIA & FOOD SERVICE						
Cafeteria / Dining	0	0	0	2,900	1	2,900 2,000 sq feet min
Stage	0	0	0	1,000	1	1,000
Chair / Table / Equipment Storage	0	0	0	350	1	350
Kitchen	0	0	0	1,050	1	1,050 1,000 SF to 1,500 SF + 1 staff kitchen area; 200 SF storage
Staff Lunch Room	0	0	0	200	1	200
MECHANICAL						
Medical Suite Toilet	0	0	0	50	1	50
Nurses Office / Waiting Room	0	0	0	250	1	250
Examination Room / Waiting	0	0	0	100	2	200

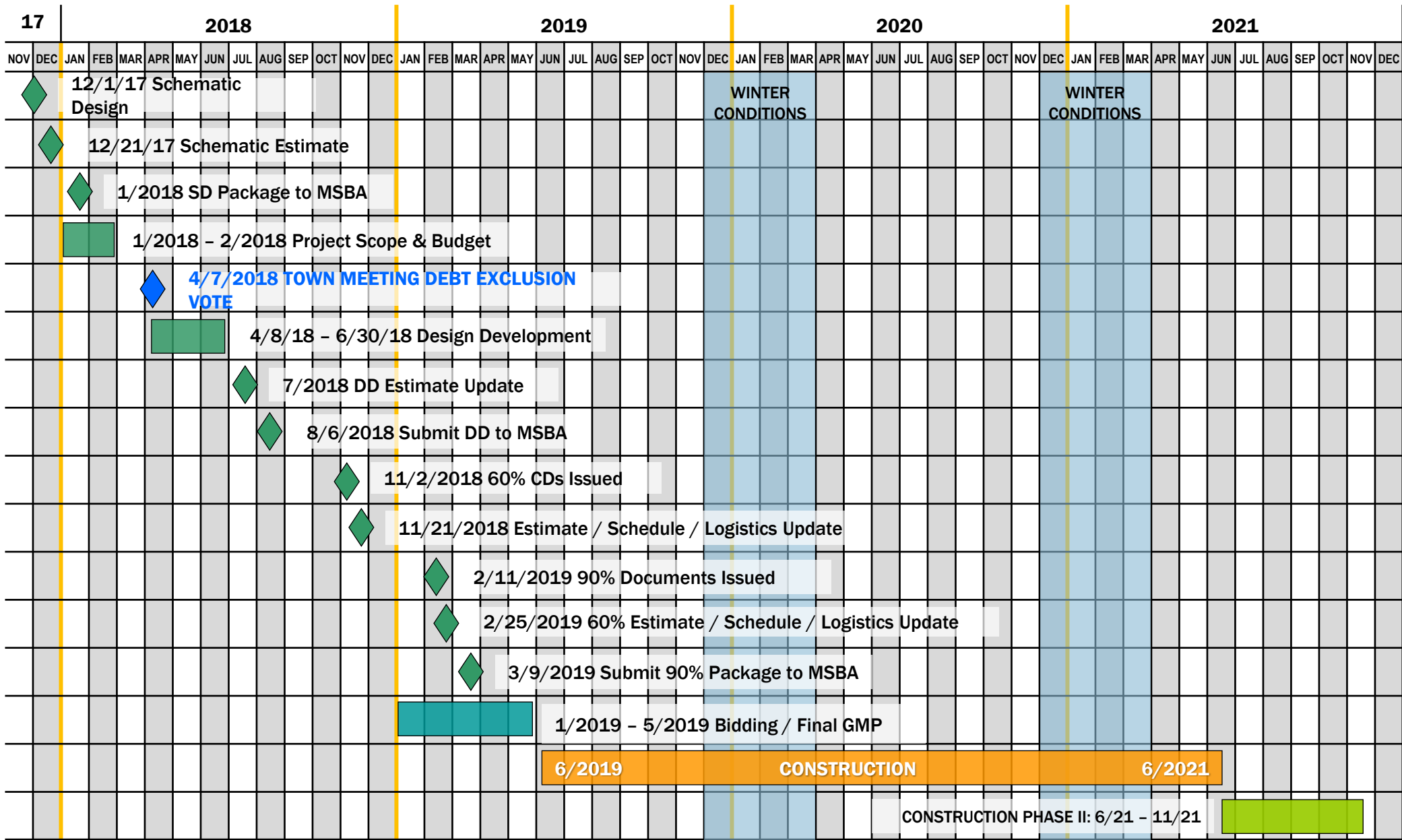
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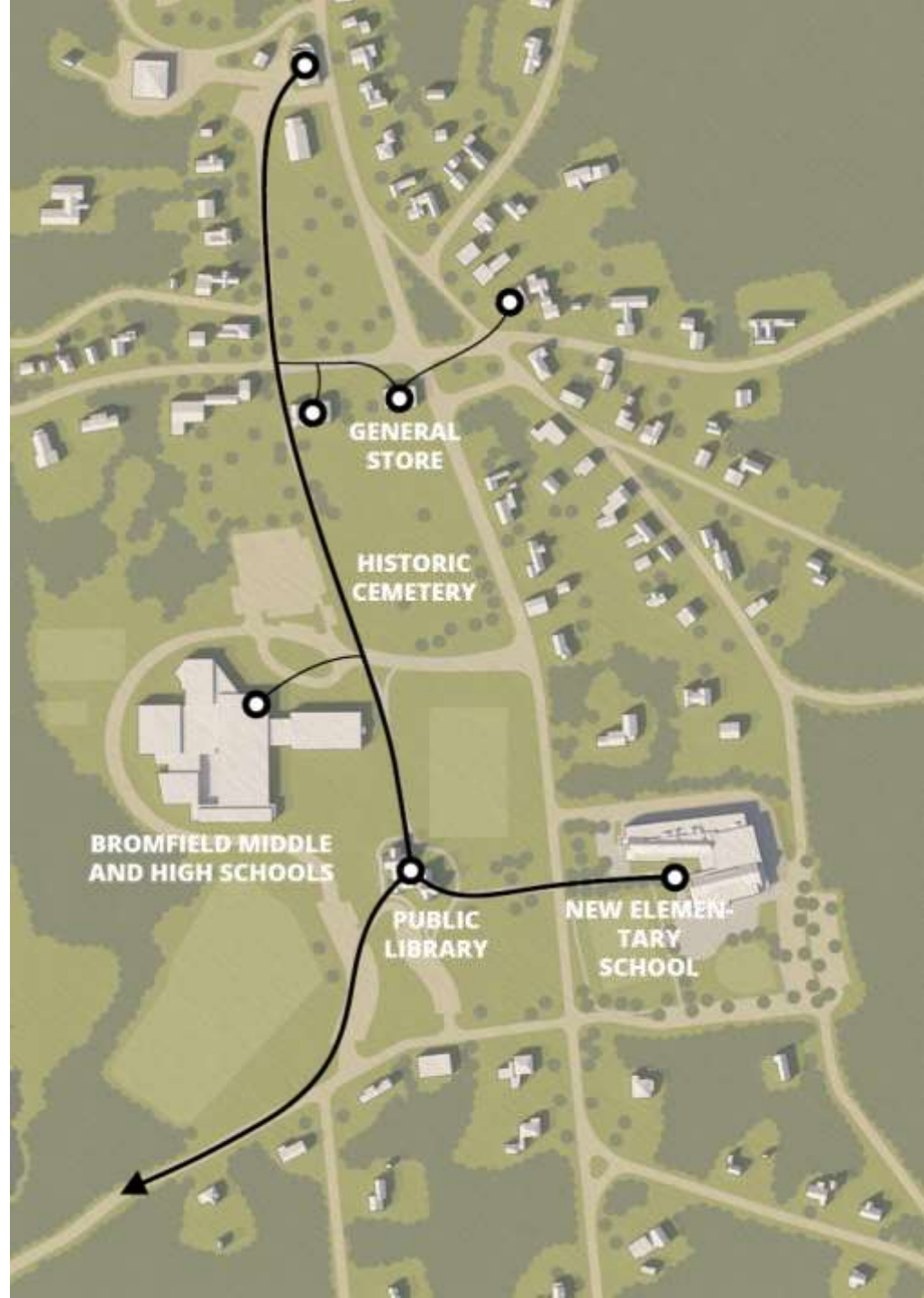
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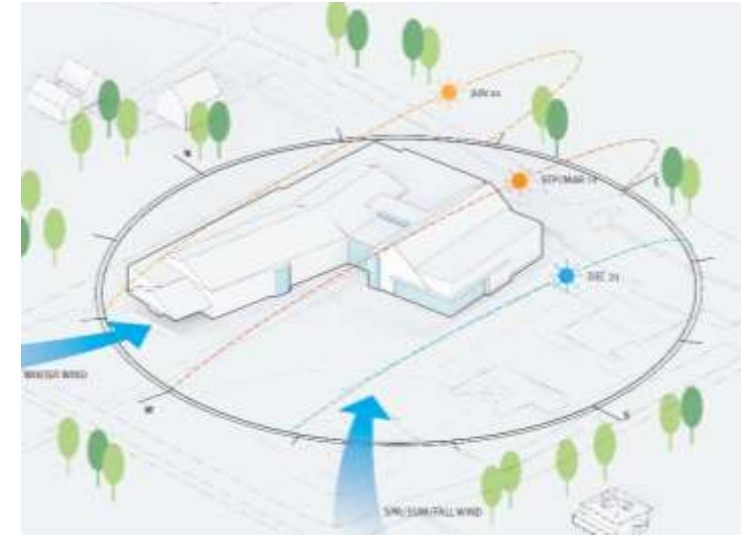
A Building for Harvard



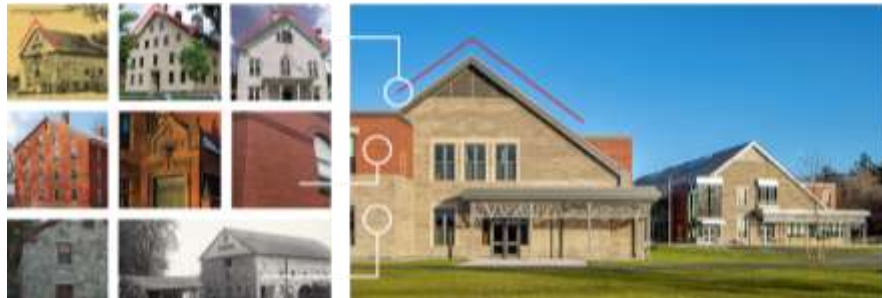
Place in the Community



Oriented for Optimization



Historic Context



Reflecting the Community





EXIT

Sources: Computer (Audio)
Use Slides
To display Help, press the H button



POOKEY GAME 2.0
- Collaborate on appropriate
- Linked only with...
- All groups will
- Student leader of group
- Support by the team
- Team leader
- Monitor

CLASSROOM FLEXIBILITY
- INDEPENDENT / GROUPS
- FLEXIBLE / CLEAN
- CAFETERIA / PERIODIC
- LIBRARY / MEDIA AND THE HUB
- TEACHER / GAME DISTRIBUTED
- TABLES & VIEWS

SEASON'S READINGS



Managing the Process

Building a School



Safety – A Culture of Care



Regular Safety Huddles



**NEW ENGLAND 9 YEARS
COMPANY WIDE 6+ YEARS**

Communication



Site Accountability



**BADGING PROGRAM / CORI
CHECKS / DRUG TESTING**

Detailed Construction Management Plan



Site Specific Safety Plan



Clear Easy To Follow Signage



Worker Identification



Safety Inside and Outside The Fence



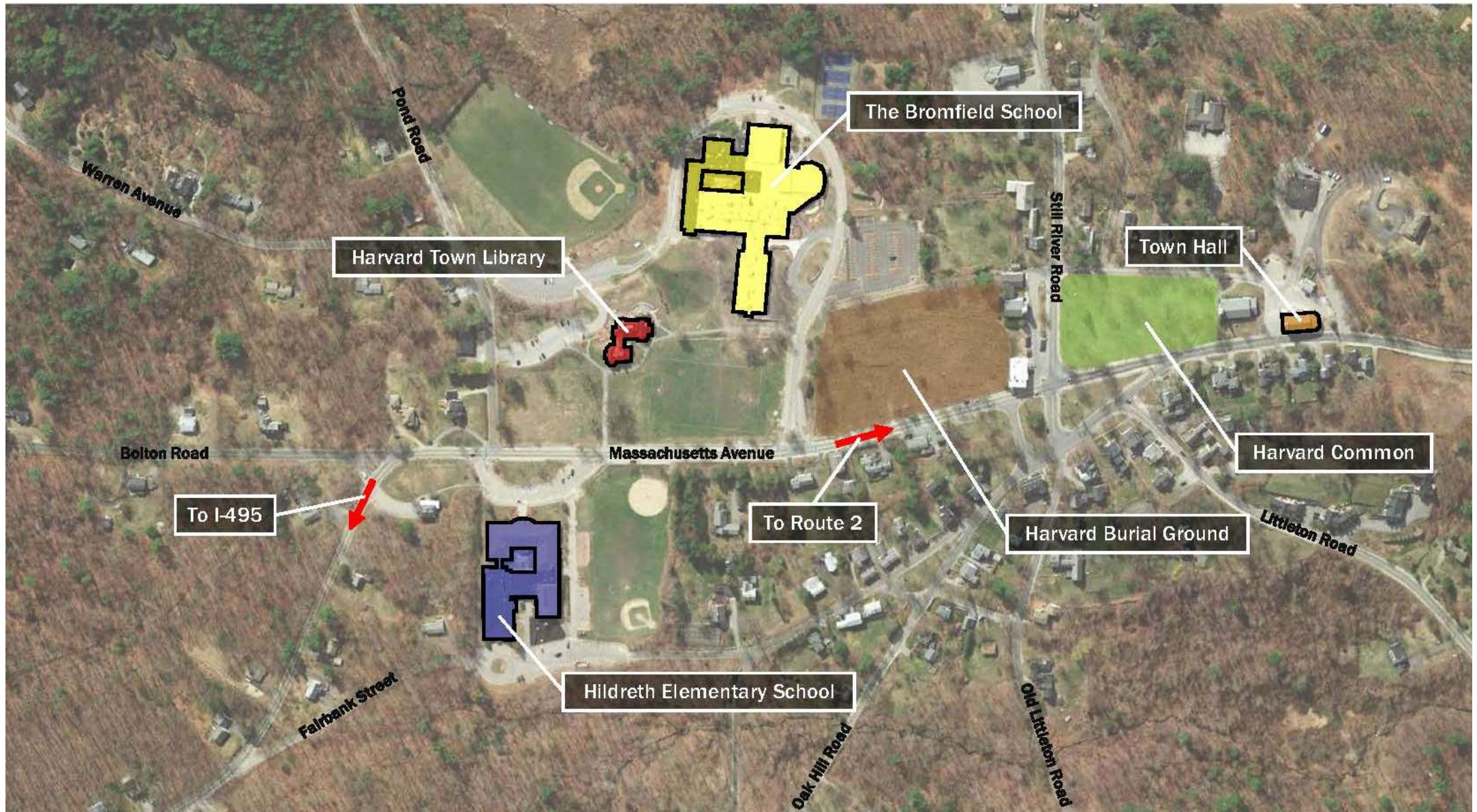
Focus on Education / Community



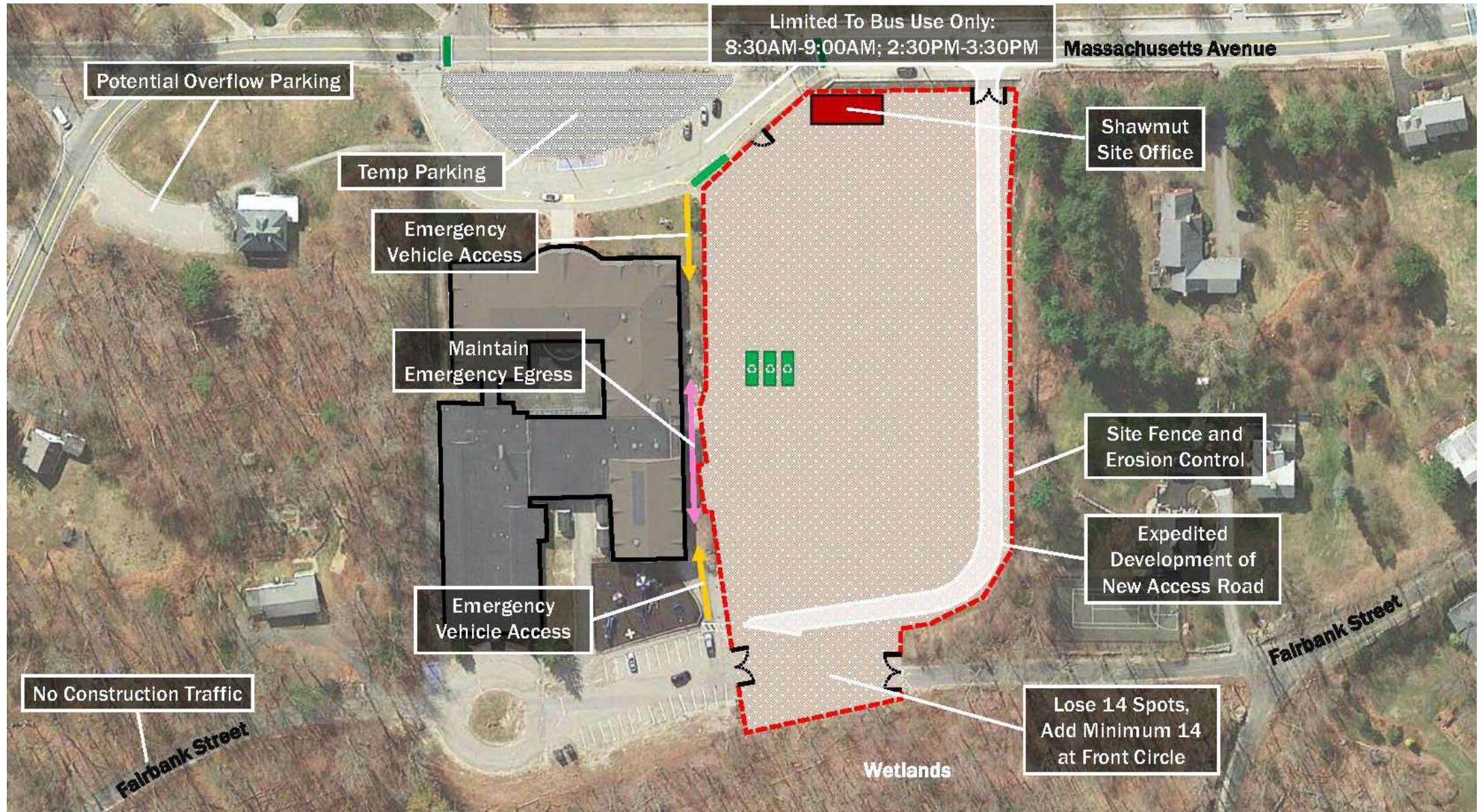
*Not Just Building a Building ... Building a **New Learning Experience for Future Leaders***

Site Logistics

Existing Conditions



Phase – 1A: April 2019 – August 2019



Potential Overflow Parking

Temp Parking

Emergency Vehicle Access

Maintain Emergency Egress

Emergency Vehicle Access

No Construction Traffic

Fairbank Street

Limited To Bus Use Only:
8:30AM-9:00AM; 2:30PM-3:30PM

Massachusetts Avenue

Shawmut Site Office

Site Fence and Erosion Control

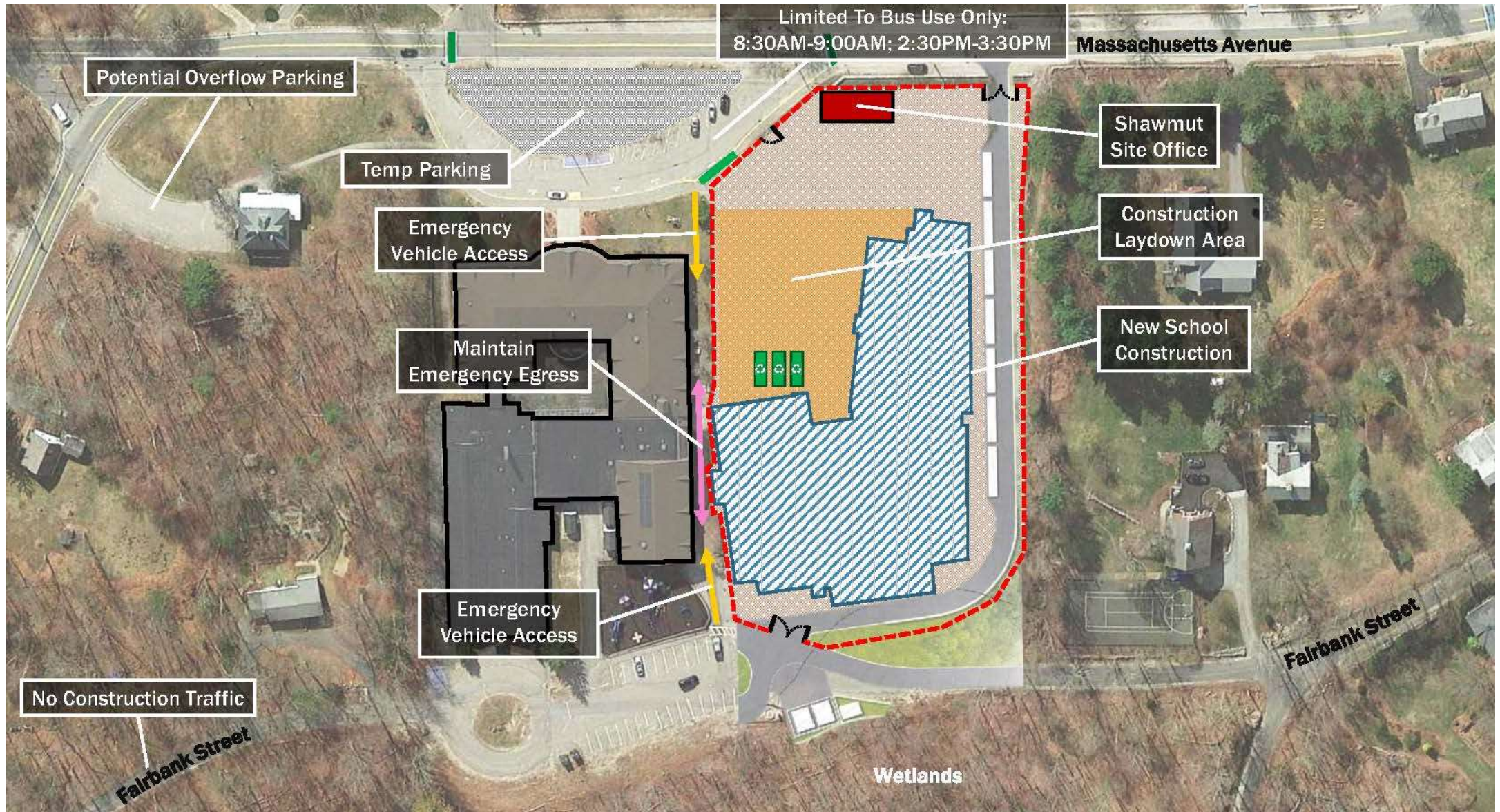
Expedited Development of New Access Road

Fairbank Street

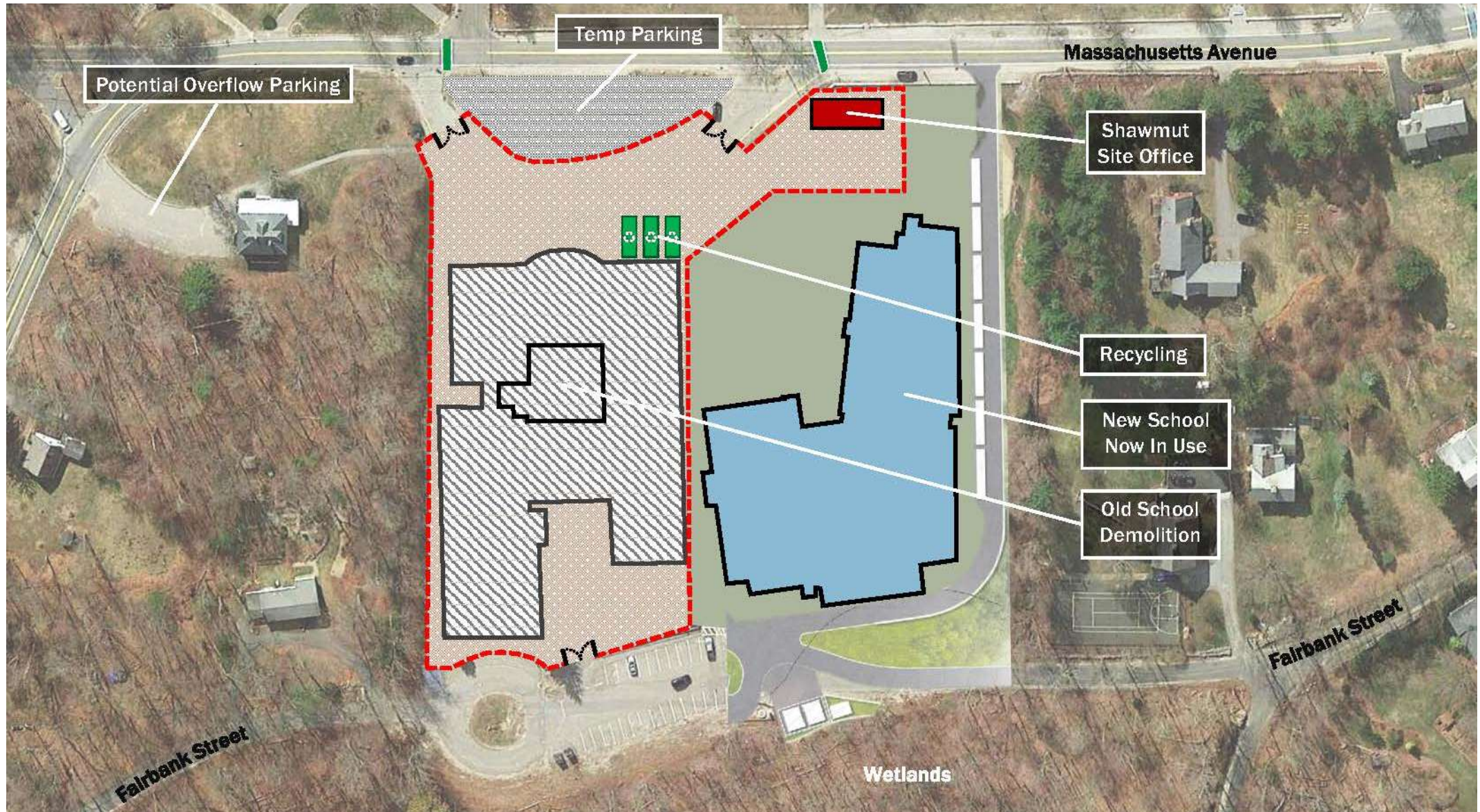
Lose 14 Spots,
Add Minimum 14
at Front Circle

Wetlands

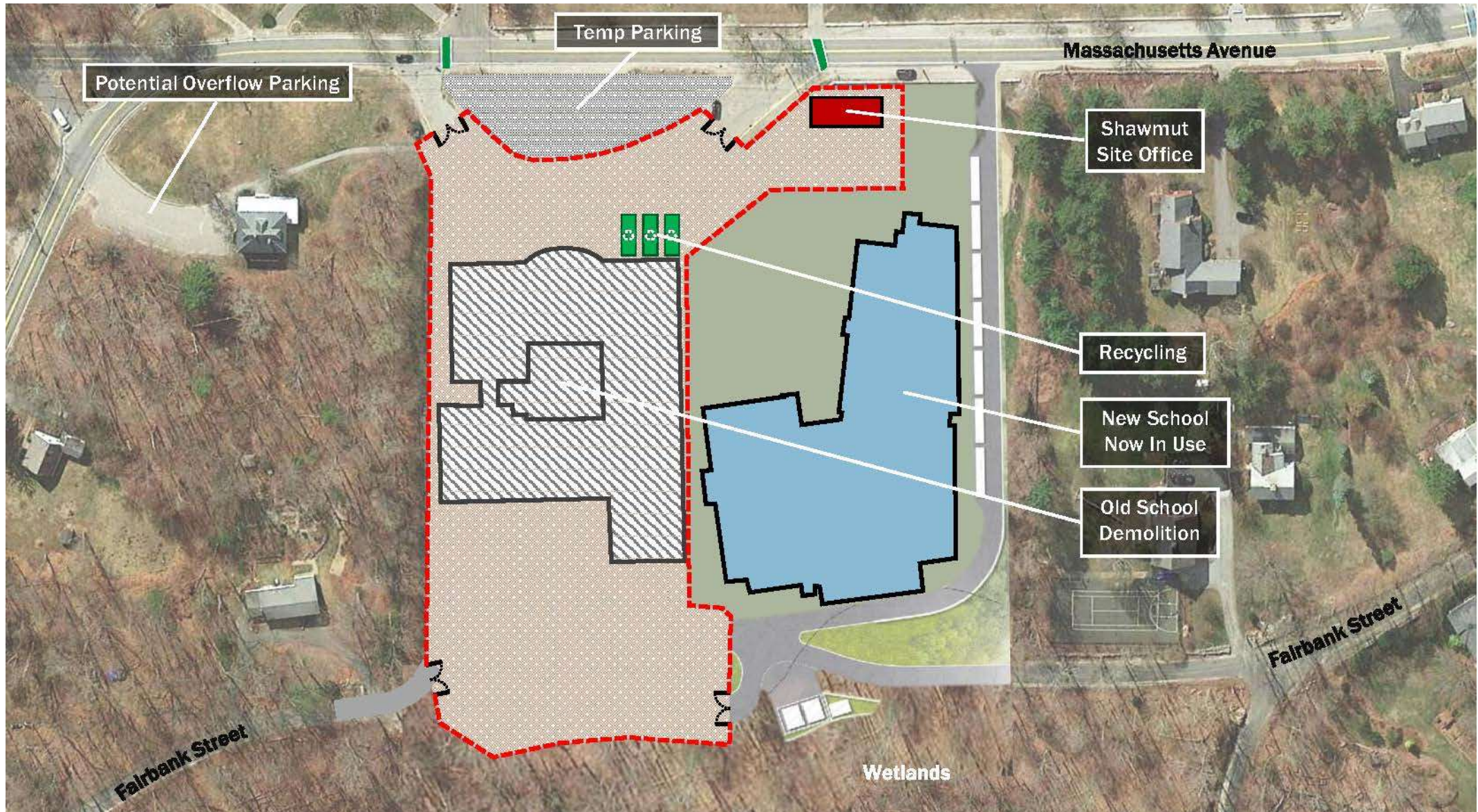
Phase – 1B: September 2019 – April 2021



Phase – 2A: April 2021 – May 2021



Phase – 2B: June 2021 – August 2021



Phase – 2C: September 2021 – November 2021



Project Complete – November 2021





Q&A / Discussion