

# Whitman Middle School

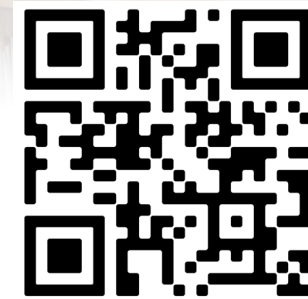
School Building Committee // April 25, 2023

## Agenda

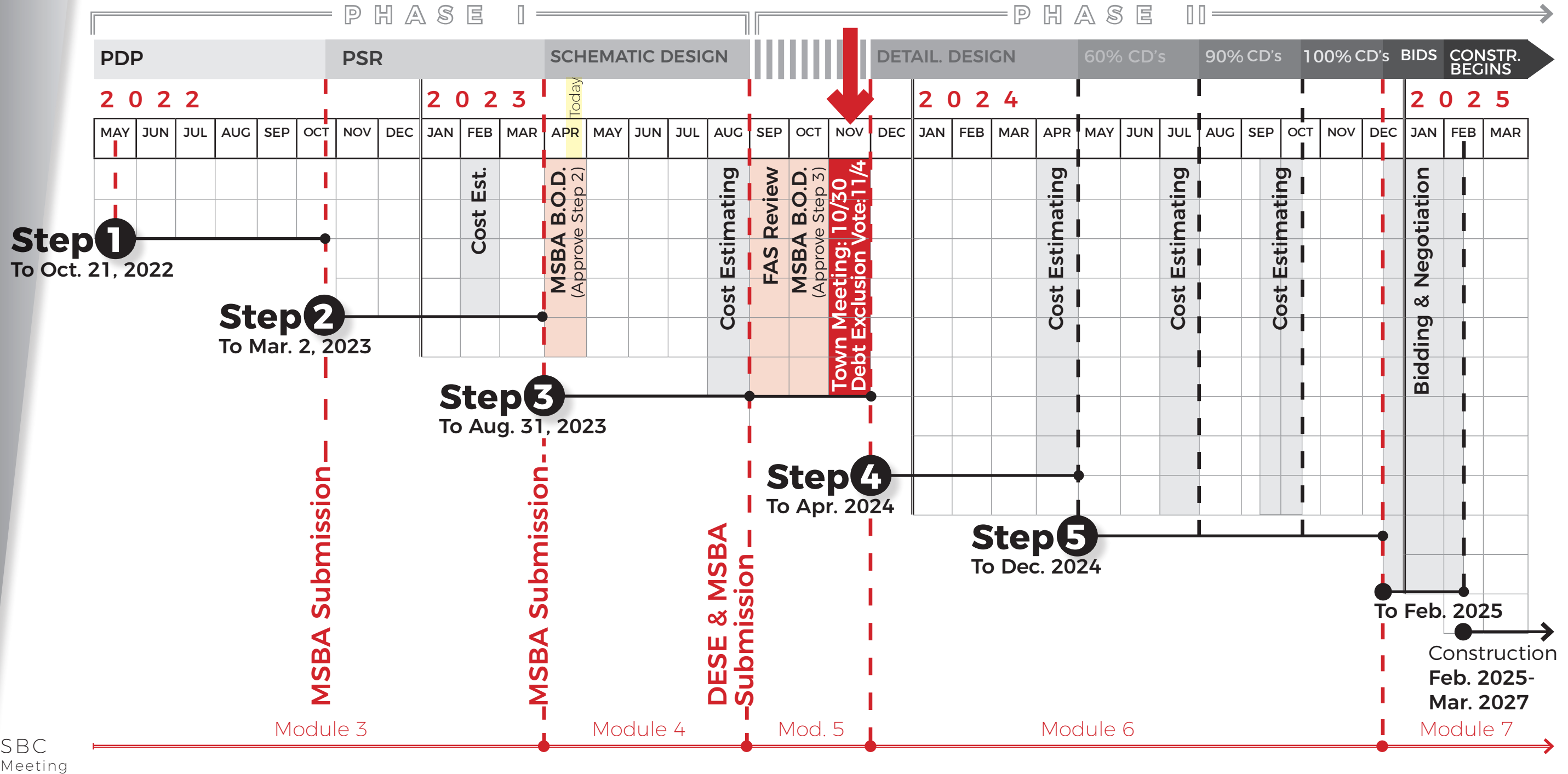
- // Schematic Design (SD) Activities & Milestones
- // SBC Determinations (**VOTE**)
  - / Energy Goals
- // Intro. to Proprietary Items
- // Design Update
- // Upcoming Events

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Whitman Middle School  
Project Website

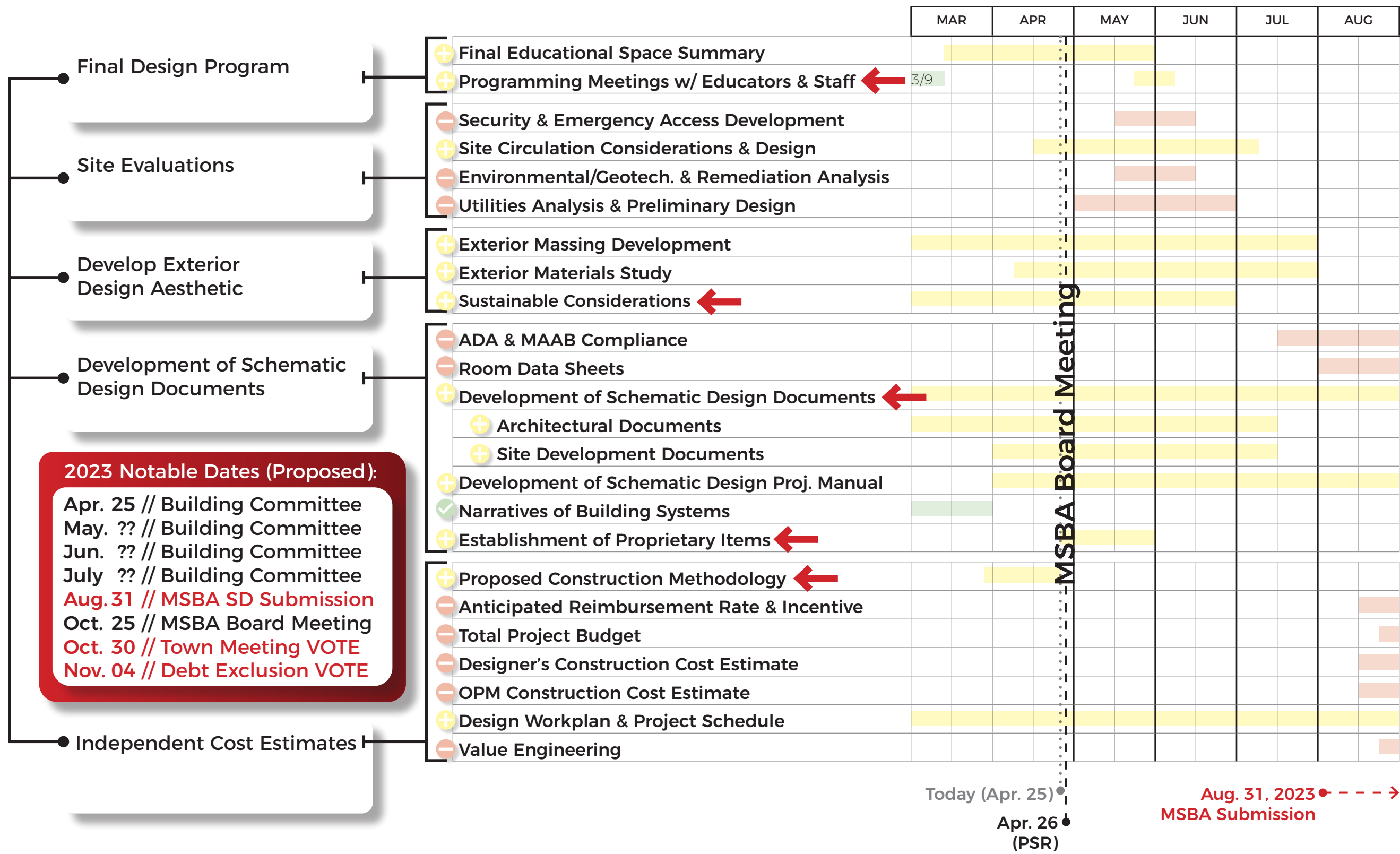


# WMS Project Schedule Overview



# Step 3 Schematic Design (SD) Submission

Apr. - Oct. 2023



**2023 Notable Dates (Proposed):**  
 Apr. 25 // Building Committee  
 May. ?? // Building Committee  
 Jun. ?? // Building Committee  
 July ?? // Building Committee  
**Aug. 31 // MSBA SD Submission**  
 Oct. 25 // MSBA Board Meeting  
**Oct. 30 // Town Meeting VOTE**  
**Nov. 04 // Debt Exclusion VOTE**

Completed  
 Initiated  
 Pending

Today (Apr. 25)  
 Apr. 26 (PSR)  
**Aug. 31, 2023 MSBA Submission**

# School Building Committee Determinations

## Selection of Project Delivery Method for Construction:

**VOTE**

Ch. 149 Design-Bid-Build (DBB)

*or*

Ch. 149a Construction Manager at Risk (CMr)

## Selection of Energy Goal Pathway for Project:

**VOTE**

### Mass Save Path 1

Commitment to a Net Zero & Low EUI Building (EUI of 25 or less)

**\$2.00/sf Incentive\* = \$277,208 +  
\$1.50/sf Post Occ. Bonus\* = \$207,906**

*or*

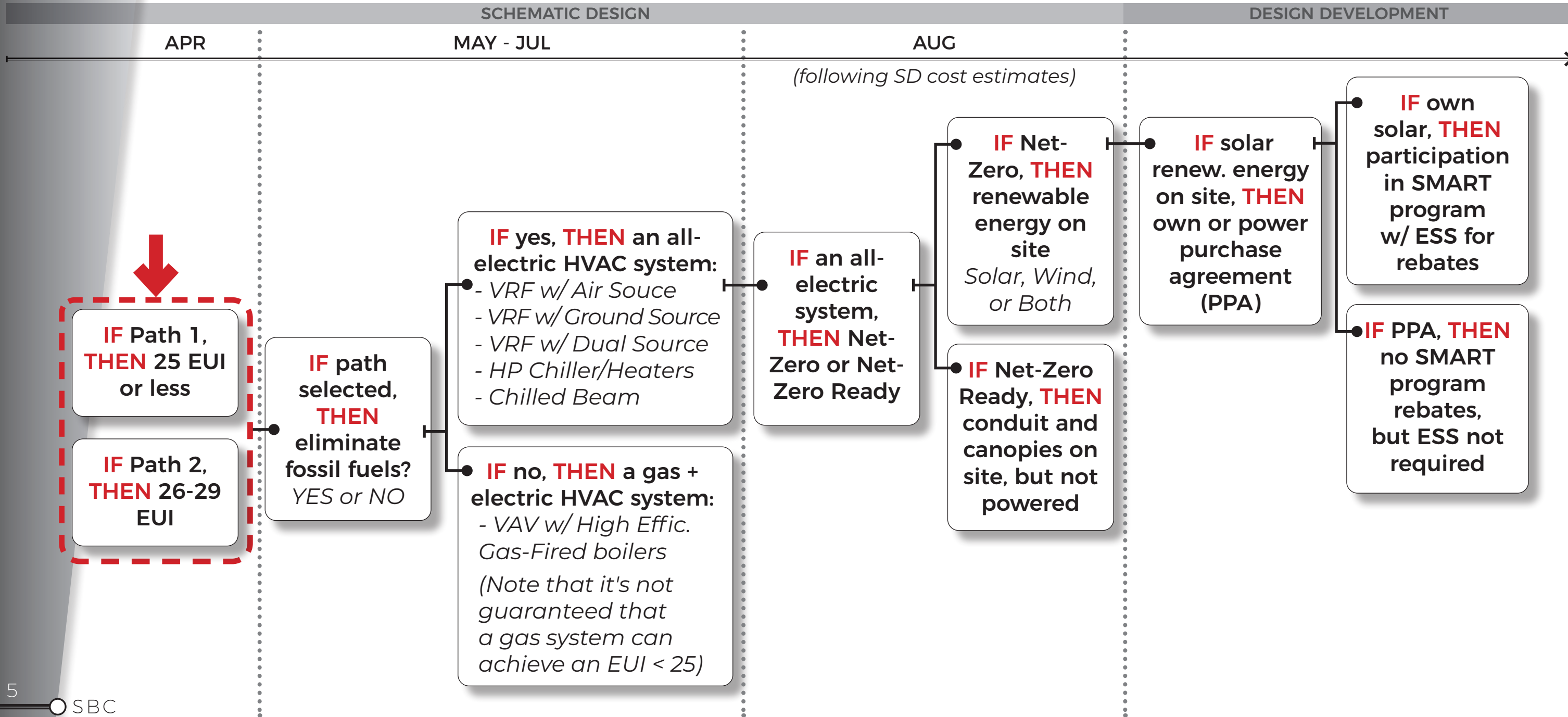
### Mass Save Path 2

Commitment to a Reduction in Whole Building EUI (10% reduction)

**\$1.25/sf Incentive\* = \$173,255**

*\*1-time pay out following construction*

# Energy Goals: Decision Making Tree



# Life-Cycle Analysis per HVAC System

**SAMPLE** project with an area of 177,360 sf \*

	A	B	C	D	E	F	G	H	I	J	K	L	M
HVAC System	Gross Capital Cost (\$\$)	Annual Electric Use (kWh)	Annual Gas Use (MBtu)	Annual Electric Cost (\$\$)	Annual Gas Cost (\$\$)	Total Utility Cost (\$\$)	Annual Utility Cost/SF (\$\$/sf)	Annual EUI (kBtu/sf)	Annual O&M Cost (\$\$)	15-year Replace. Cost (\$\$)	Combined Annual Expense (\$\$)	Combined Expense Savings (\$\$)	Total Life-Cycle Savings (\$\$)
VAV with Gas-Fired Boilers <i>Code-Compliant</i>	\$10.6 mil	2,020,046	2865	\$242,405	\$36,501	\$278,456	\$1.57	55.1	\$46,710	\$175,000	\$325,166	-	-
VAV with Gas-Fired Boilers <i>High-Efficiency, Exceeds Code</i>	\$9.1 mil	1,239,201							\$46,000	\$175,000	\$209,118	\$116,048	\$4.6 mil
VRF with Ground-Source Heat Pumps <i>w/ Supplemental Electric Boiler</i>	\$12.2 mil	1,426,301							\$960	\$0	\$208,084	\$117,082	\$3.2 mil
VRF with Ground-Source Heat Pumps	\$12.8 mil	1,409,139	0	\$169,097	\$0	\$169,097	\$0.96	27.2	\$35,460	\$0	\$204,557	\$120,609	\$2.7 mil
VRF with Air-Source Heat Pumps	\$6.6 mil	1,299,531	0	\$155,944	\$0	\$155,944	\$0.88	25.0	\$34,000	\$0	\$189,944	\$135,222	\$4.1 mil

**PENDING**

**WMS Life-Cycle Cost Analysis**

**Will be provided at a future SBC meeting;  
required determination of EUI goals**

\*The above sample project uses values from 2021. A comparative analysis would be conducted specific to WMS using current values.

# Introduction to Proprietary Items

## WHAT ARE PROPRIETARY ITEMS?

// Descriptions of materials that cite a **specific brand name** such that only one vendor or manufacturer can supply the desired items

// Per M.G.L. c.30, §39M(b), a governmental body must document the reasons [for proprietary items] and provide them in writing (*Refer to the next slide for reference*)

## REASONS TO USE:

// The item is **currently used throughout the District** and deviating would create a hardship in the maintenance, training, or use of spare parts inventory currently stored

// Extensive **time, effort, and training** has been invested by the District in the education of staff and personnel on the use of such specific items

// An item has been **deployed as a standard** throughout the District and other Town offices and is required for the seamless integration of other components

// The item offers unique and unmatched advantages for the District in the deployment of **technology** or educational delivery

// It is determined that **no other equal products exist** after the investigation, research, and testing of the selected product was conducted

## DISADVANTAGES:

// Can limit competition which can lead to increased prices

## Typical Proprietary Items for School Projects:

### Door Hardware & Security items:

- // Locks & Key Systems
- // Door Closers
- // Egress Components, like panic devices

### Technology items:

- // Security related components such as cameras, access control, and intrusion detection items
- // Video recorders and management system

### Life Safety items:

- // Fire Alarm Panel

*...any other Items requested by the District?*

## NEXT STEPS

Proprietary Items will need a **VOTE** by the SBC at a future meeting to be included in the project and SD Submission

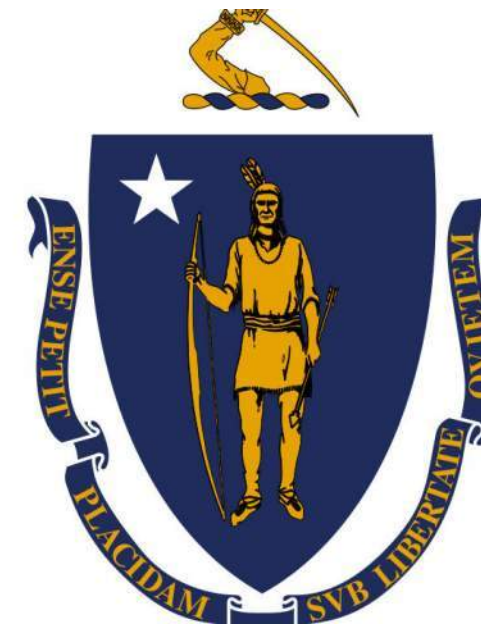
# Introduction to Proprietary Items

## Language from Massachusetts General Law for Reference

### **PROPRIETARY SPECIFICATIONS UNDER M.G.L. c.149, §§44A-M**

- // M.G.L. c.30, §39M(b) requires that proprietary specifications for public construction projects, including buildings, shall only be used "... for sound reasons in the public interest stated in writing in the public records of the awarding authority ... such writing to be prepared after reasonable investigation." A governmental body must document the reasons and provide them in writing to anyone making a written request for the information. M.G.L. c.30, §39M(b) expressly applies to construction contracts procured under M.G.L. c.149, §§44A-M as well as to construction contracts procured under M.G.L. c. 30, §39M.
- // The governmental body therefore has the responsibility for ensuring that a reasonable investigation is conducted before proprietary specifications can be used in an invitation for bids (IFB) for a public construction project.
- // Proprietary specifications, while permitted by Massachusetts construction law, may be used only after careful consideration and proper documentation that the use is justified by sound reasons in the public interest.

- // There are cases where, after a reasonable investigation, a governmental body concludes that only one acceptable brand of product exists, or that technology has advanced so rapidly that fewer than three brands or manufacturers of a particular material are available in the commercial marketplace.
- // The proprietary specifications must still include an "or equal" clause.





# Design Update



# Round 1 of WMS Staff Programming

## Overview of Meetings on March 7-9, 2023

### Purpose of Meetings

- // To provide an overview of the current building plan, design, and site layout
- // To understand how the existing educational spaces are being used
- // To understand how to meet occupant needs in the new building
- // To hear directly from staff, educators, and administrators

### ADMINISTRATORS:

- // Administration
  - / Administrative Assistant
  - / Assistant Principal
  - / Principal
- // Guidance Counselors
- // School Adjustment Counselor
- // School Nurse

### BUILDING PERSONNEL:

- // Kitchen & Food Service Staff
- // Custodial Staff
- // Student Resource Officer

### EDUCATORS:

- // Grade-Level Teachers
  - / Math
  - / Science
  - / English Language Arts
  - / Social Studies
  - / Grade 5 Teachers
- // English-Language (EL) Teacher
- // Related Arts Teachers
  - / Art
  - / C.I.T.Y.
  - / Physical Education
  - / Music & Band
  - / Intervention
- // S.T.E.A.M. & Tech. Apps. Teachers
- // Special Education Staff and Liasons



*Plans used during programming with arrows indicating resulting program shifts*

# MSBA Review Comments for PSR

Space Summary Impacts per Comments Received on April 3, 2023

Whitman Middle School	Existing Conditions			New			Total			Difference to MSBA Guidelines			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Teacher Planning/Collaboration				600	4	2,400		4	2,400							

// Of the 2,400 nsf proposed for Teacher Planning/  
Collaboration, the MSBA will participate in 2,060 nsf

// Therefore, the 340 nsf in excess will be considered  
ineligible for reimbursement

Whitman Middle School	Existing Conditions			New			Total			Difference to MSBA Guidelines			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)				
<b>NON-PROGRAMMED SPACES</b>				% of GFA	<b>46,201</b>	% of GFA	<b>46,201</b>										
Other Occupied Rooms (list separately)				0%		0%											
Music Storage				0%		0%											
Town Bball Storage				0%		0%											
Toilet rooms for changing				0%		0%											
Unoccupied MEP/FP Spaces				0%		0%											
Unoccupied Closets, Supply Rooms & Storage Rooms				0%		0%											
Toilet Rooms				0%		0%											
Circulation (corridors, stairs, ramps & elevators)				0%		0%											
Remaining <sup>3</sup>				33%	<b>46,201</b>	33%	<b>46,201</b>										
Total Building Gross Floor Area (GFA) <sup>2</sup>			105,004		<b>138,604</b>		<b>138,604</b>			<b>26,264</b>						<b>112,339</b>	
Grossing factor (GFA/NFA)			1.37		1.50		1.50									1.48	

// Categorize Music Storage, Town Bball Storage,  
and Toilet Rooms for Changing (for Auditorium  
use) as Non-Programmed Spaces

// The resulting shift in the space summary reduces  
the overall GSF of the new building



# Site & Recreation Coordination

## Overview of Meeting on April 13, 2023

### REPRESENTATION:

- // Recreation Commission Chairperson
- // Recreation Director
- // Whitman Little League Baseball
- // Whitman-Hanson Softball
- // Whitman-Hanson Youth Soccer
- // Professional Team & SBC Representation

### OUTCOME:

// The Rec. Dept. will begin reviewing options for alternative softball (& potentially baseball) fields while WMS is under construction, such as:

1. Robinson Field
2. LZ Thomas Field
3. Conley ES (using CPC grant funds to reno.)

// As design progresses & phasing is refined, the professional team will coordinate with the Rec. Dept. on when fields will be unavailable

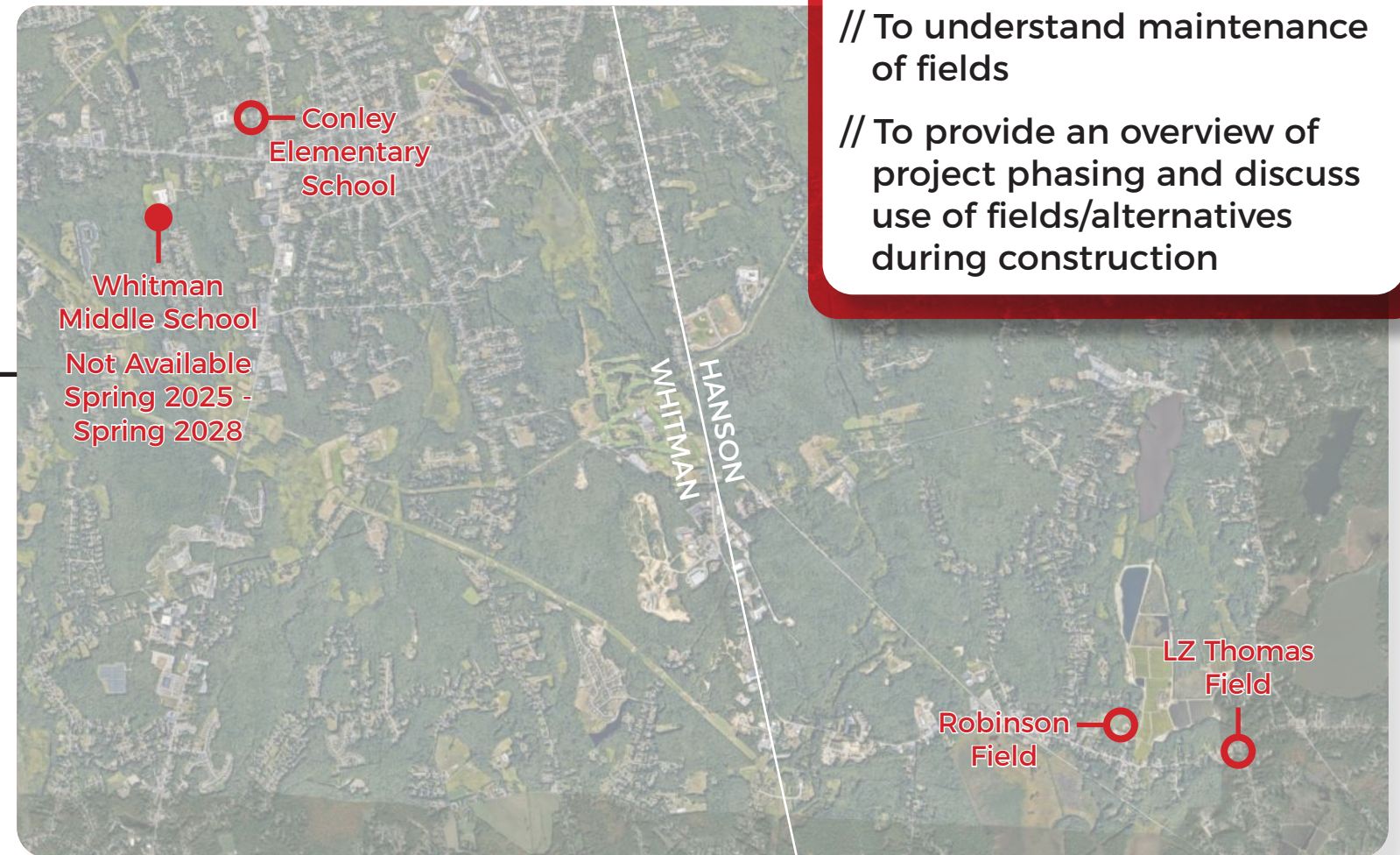
// Other than replacement of the field(s) required during construction, the existing Town athletic fields **do not require** scope within the new WMS project budget

// The SBC should consider action for the existing concession stand:

- / Moving allowance: apx. \$30,000  
(included in PSR Estimate)
- / Replacement allowance: apx. \$800,000  
(included as an add-alternate in PSR Estimate)

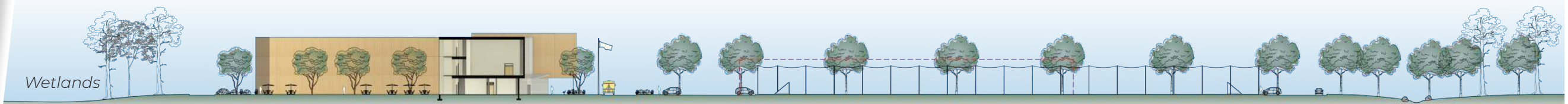
### Purpose of Meeting

- // To understand who uses the recreation/athletic fields on the current WMS site and frequency of use
- // To understand maintenance of fields
- // To provide an overview of project phasing and discuss use of fields/alternatives during construction



(3) Alternative Fields for Whitman-Hanson Softball (or Baseball) Use during Project Construction

**Whitman MS  
Preferred  
Schematic**



- Add-Alternate Scope
- Outline of Existing
- Emergency Access
- Parent Drop-off
- Bus Drop-off
- Main Entry



Re-do (3) Town fields as add-alternate

(1) field included in base bid (space will be needed during construction)

Dumpster w/ enclosure

Outdoor dining w/ fixed tables & chairs

Re-located concessions stand

220' x 330'

Field parking

**(1) Multi-use field:**  
 •sod turf, 6" sandy loam soil mix, sand gravel; base to meet grades  
 •2" sand silt drains with perforated piping drainage system  
 •irrigation included

20' safety netting w/ split rail fencing

Wetlands

150' x 210'

180' x 240'

Re-do (1) Town field as add-alternate

150' x 210'

Green Space

Daylight stream

Outdoor classroom w/ boulder seating, stone dust paving, & cedar shade structure

Rain garden

Setback line

Property line

Covered outdoor classroom

Outdoor classroom w/ seating & native planting

Broom finished concrete

Existing path

**(3) Multi-use fields:**  
 •sod turf, 6" sandy loam soil mix, sand gravel; base to meet grades  
 •2" sand silt drains with perforated piping drainage system  
 •irrigation included

Existing Parking Spaces = 159

Proposed Parking Spaces = 180

# Preferred Option 9b

## New Construction // Grades 5-8 w/ Auditorium

# Floor Plan 1



Examples of protected outdoor learning environments



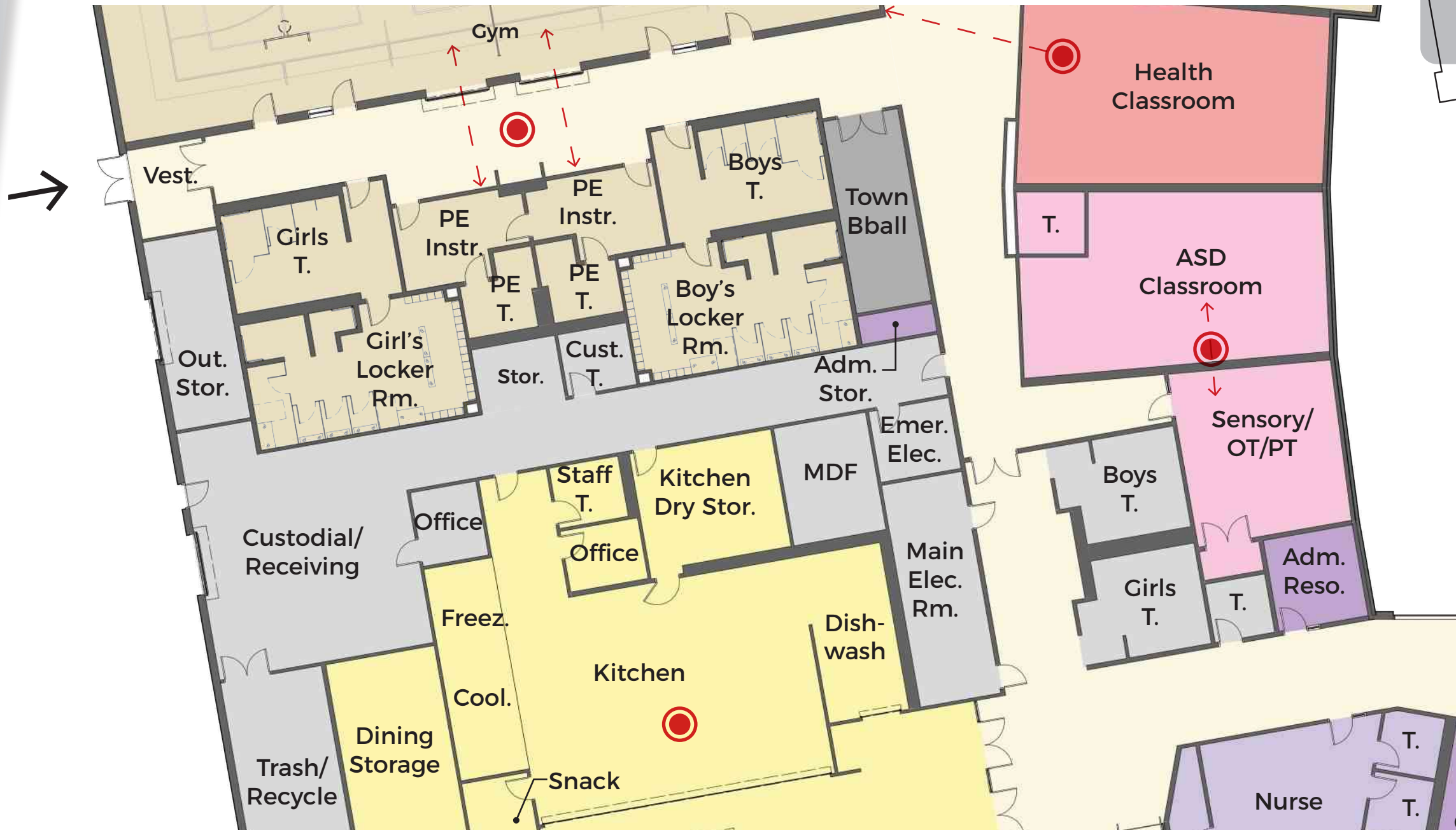
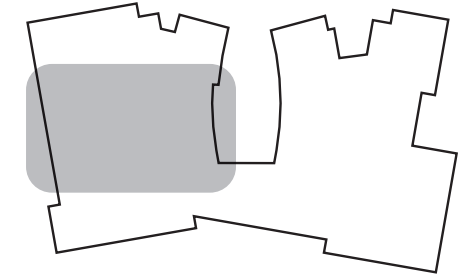
Central common space with upper bridge and direct connection to open courtyard



# Preferred Option 9b

## New Construction // Grades 5-8 w/ Auditorium

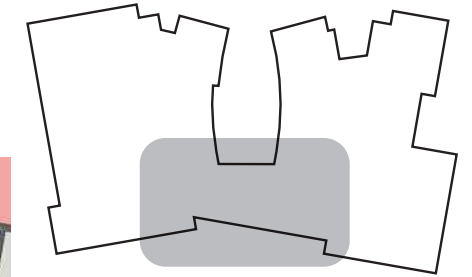
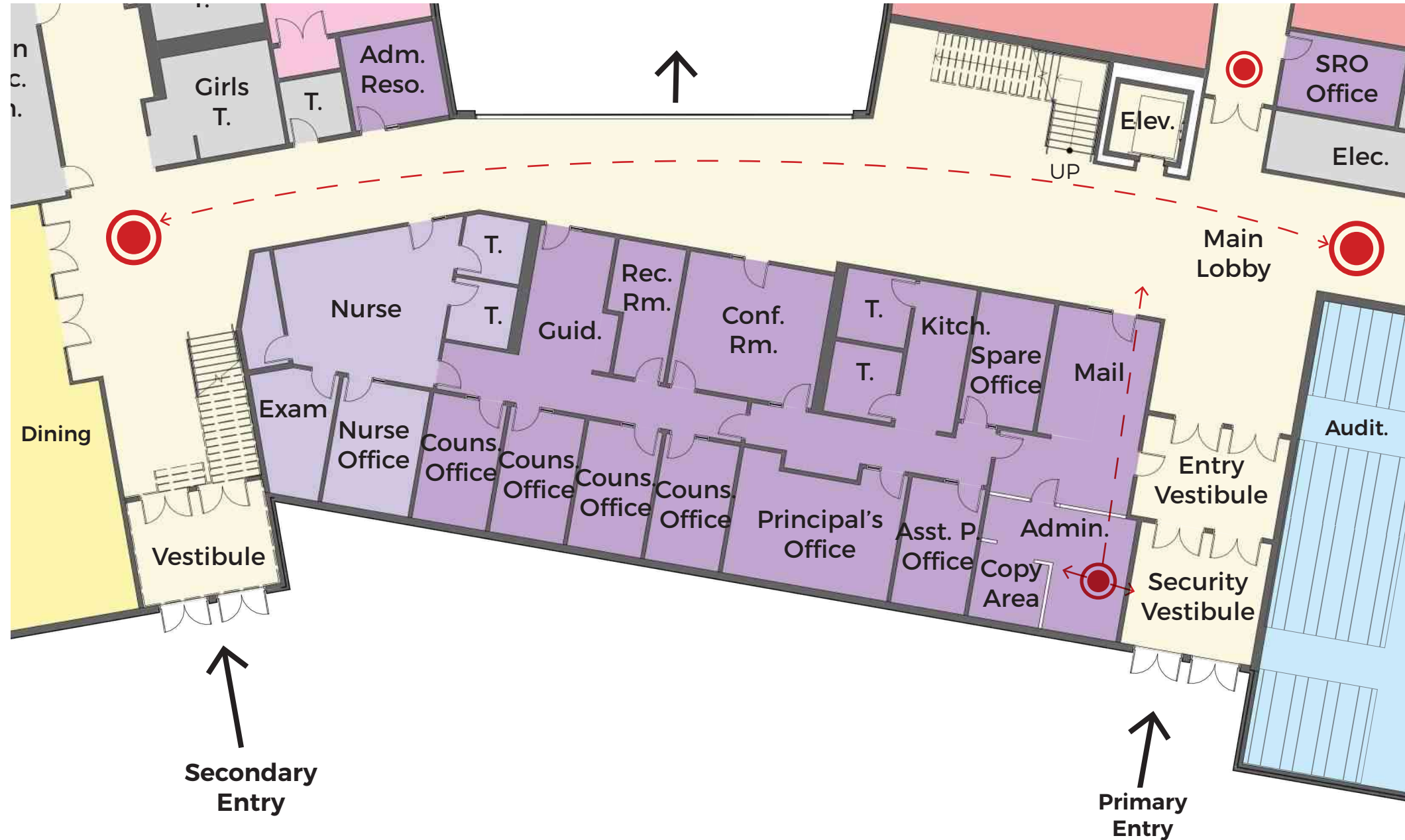
# Floor Plan 1



# Preferred Option 9b

## New Construction // Grades 5-8 w/ Auditorium

# Floor Plan 1





# Preferred Option 9b

## New Construction // Grades 5-8 w/ Auditorium

# Floor Plan 2



Examples of built-in open collaboration areas within academic neighborhoods



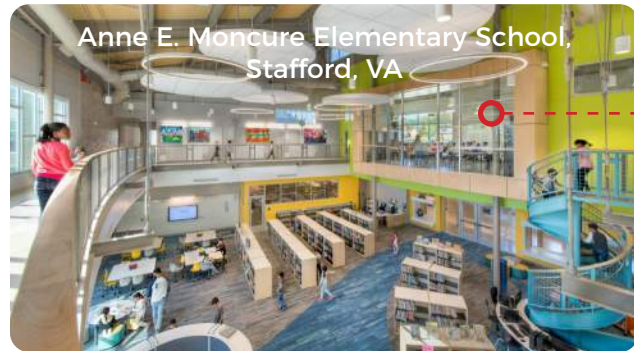
Example of occupiable roof portion



# Preferred Option 9b

## New Construction // Grades 5-8 w/ Auditorium

# Floor Plan 3



Examples of visual connections, like into the media center or centralized resource rooms



Presence and shared use of dining plaza at building corner



# Upcoming Events

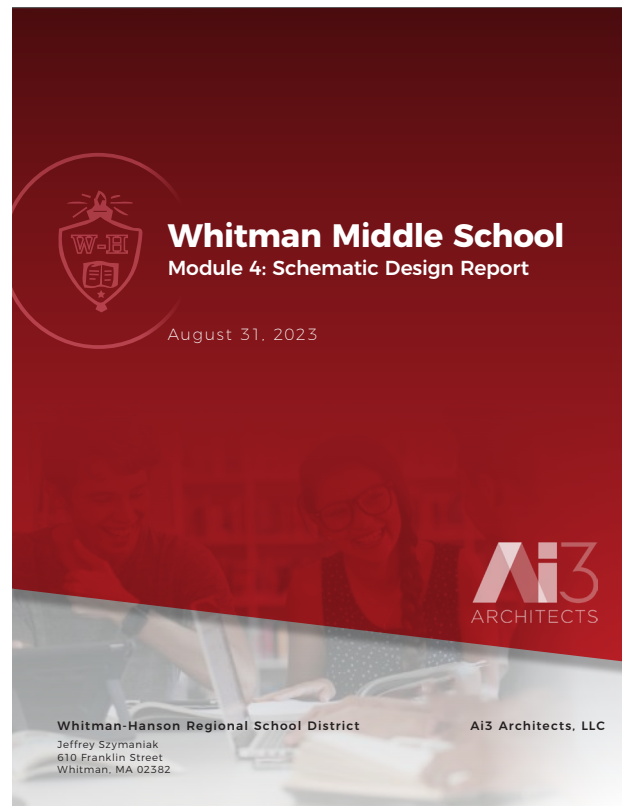
Dates & Content

## SD Submission

THURSDAY

**AUG 31, 2023**

**Due to MSBA**



Submission of  
the Schematic  
Design (SD)  
Documents,  
Project Manual,  
& Report

## Town Meeting VOTE

MONDAY

**OCT 30, 2023**

## Debt Exclusion VOTE

SATURDAY

**NOV 4, 2023**



# Questions?

Thank you

[www.wmsproject.org](http://www.wmsproject.org)

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