

# The Whitman Middle School Project

School Building Committee // April 30, 2024



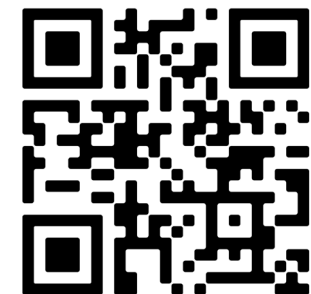
## Agenda

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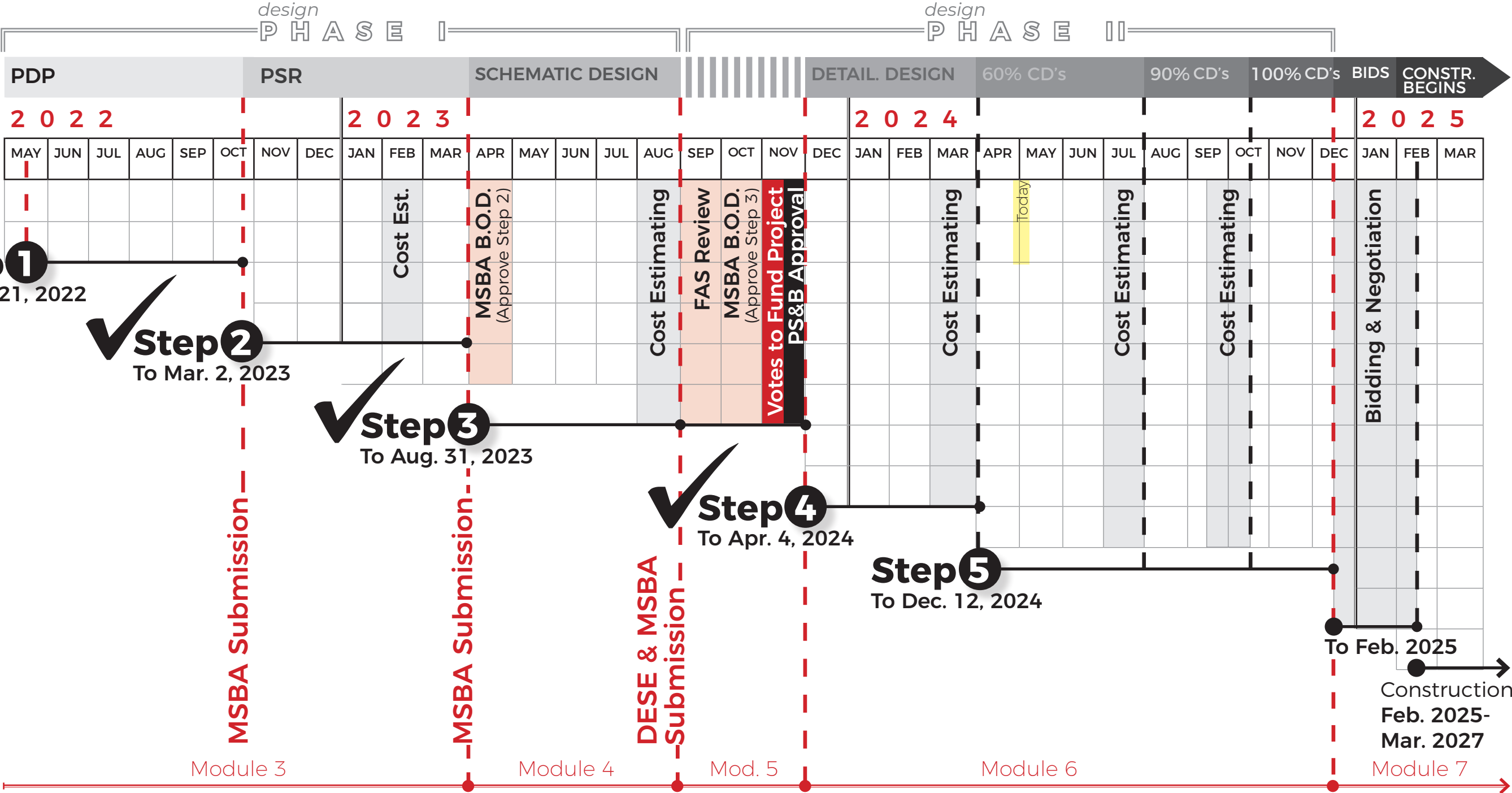
- // Schedule Overview
- // Design Update
  - / Construction Phasing
  - / Intro to Renewable Energy Systems
- // Next Steps & Upcoming Milestones

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

Whitman Middle School  
Project Website

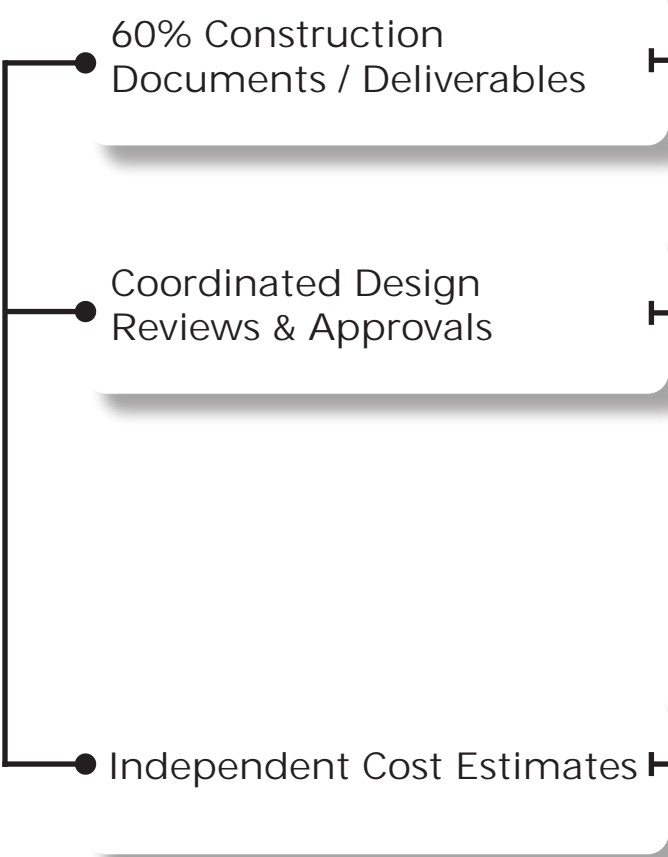


# WMS Project Schedule Overview



Step 5 Construction Documents Submission

60% CDs Apr. - Aug. 2024



2024 Notable Dates (Proposed):

- Apr. 30 // Building Committee
- Jun. ?? // Building Committee
- Jun. 11 // Community Forum
- July 23 // Building Committee
- Aug. 01 // MSBA CD Submission

- Completed
- Initiated
- Pending

	APR	MAY	JUN	JUL	AUG	SEP
+ 60% Construction Documents (CDs)						
+ Architectural Documents						
+ Site/Landscape Documents						
+ Engineering & Consultant Documents						
+ 60% CDs Project Manual & Proprietary Items						
+ 60% CDs Narratives & Calculations						
- Systems/Energy Life Cycle Cost Analysis						
- Acoustic, ADA, & Code Reviews + Reports						
- Security & Visual Oversight Review						
- Facility & Maintenance Review						
- Commissioning Agent Review						
- Structural Design Peer Review						
- Zoning Board of Approvals						
- MA Architectural Access Board Review						
+ 60% CDs for Cost Estimating						
- Designer's Construction Cost Estimate						
- OPM Construction Cost Estimate						
- Reconciliation & Comparative Analysis						
- Value Engineering						

Today (Apr. 30)

Aug. 1  
60% CDs Completed

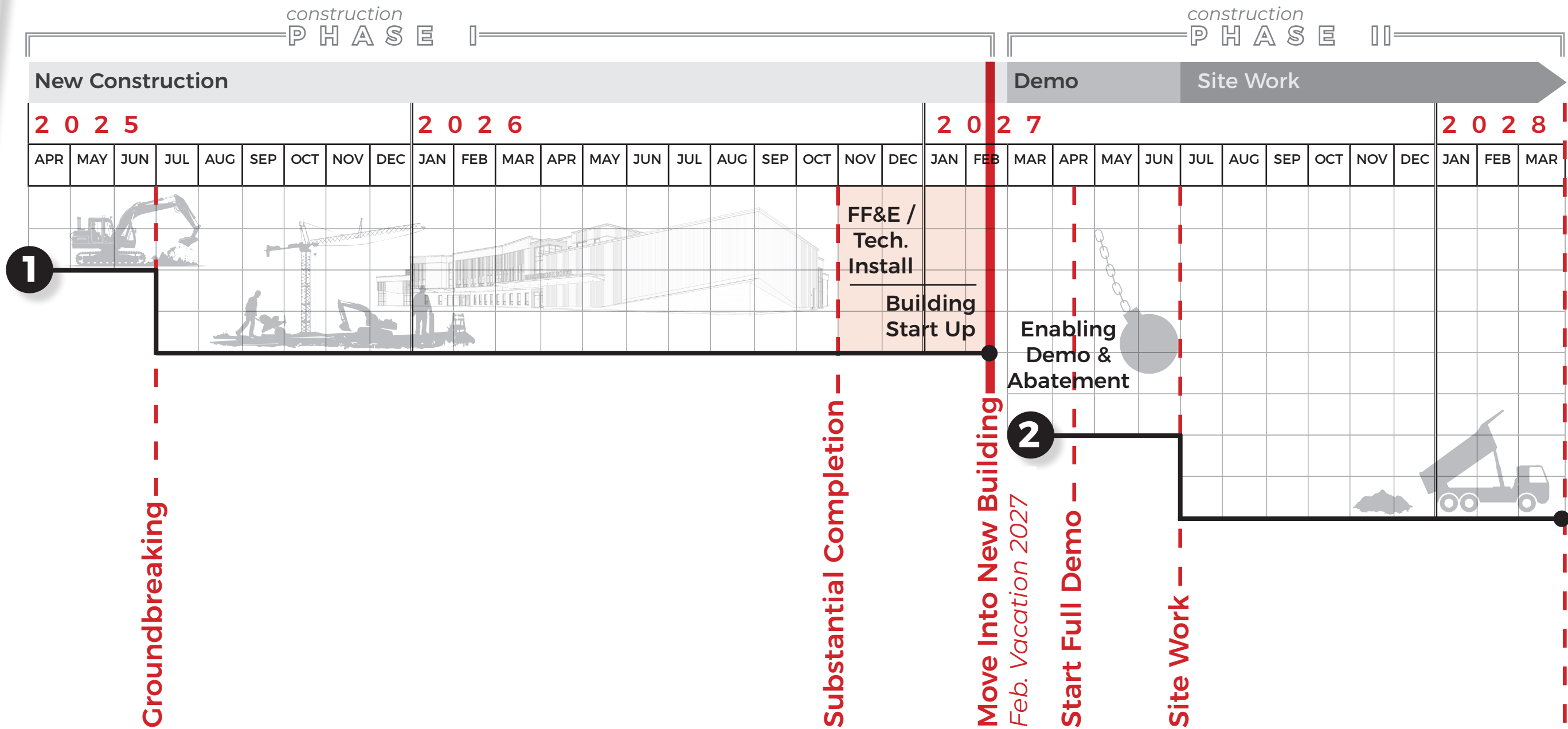
MSBA Submission

# Construction Phasing





# WMS Construction Schedule Overview



# Phase 1 **DRAFT**

Spring 2025 - February 2027

## // Phase 1a

Spring 2025 - Summer 2025

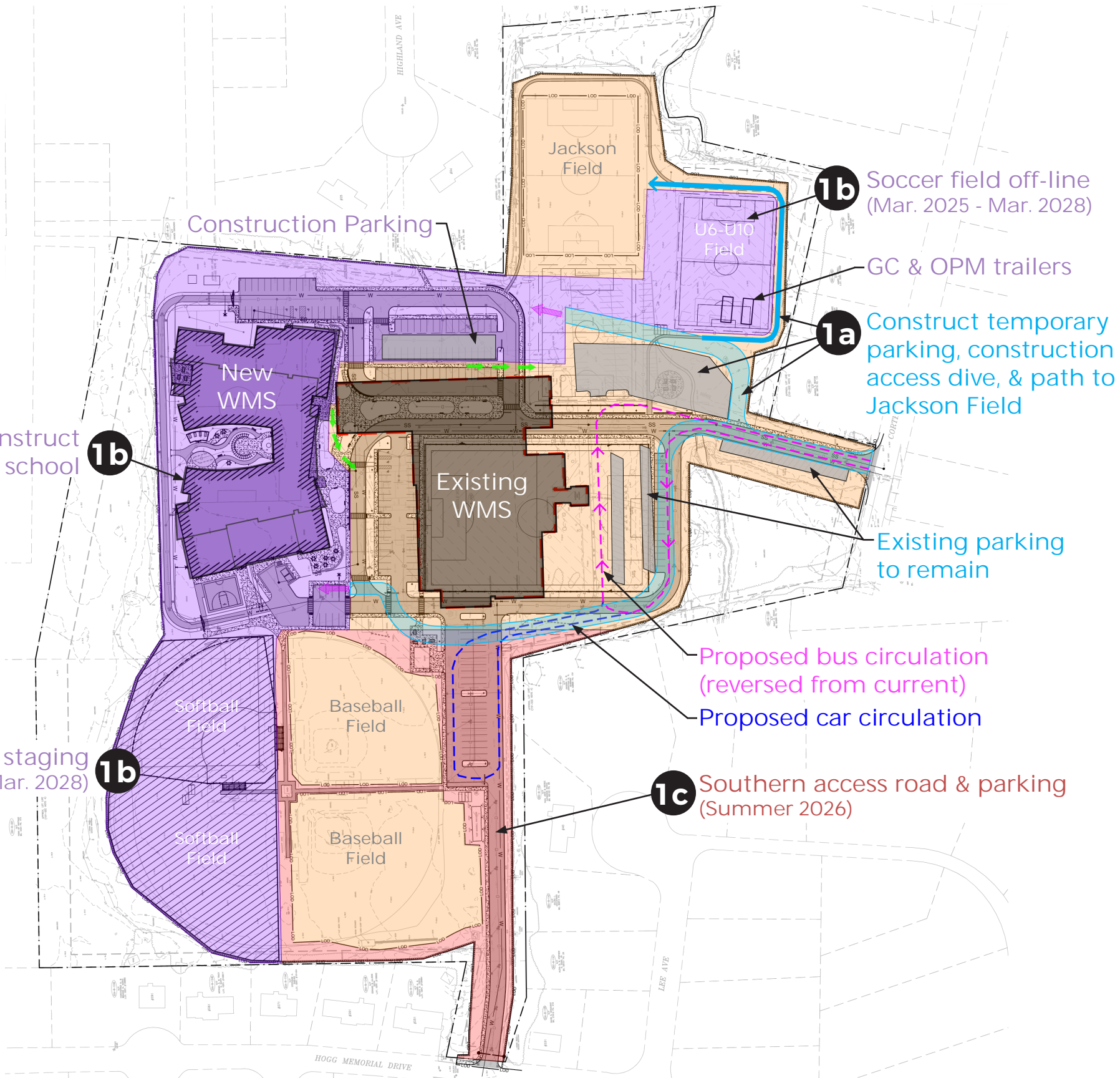
- / Establish constuction boundary
- / Establish new bus/vehicle temporary access drive, parking, and utilities
- / Building groundbreaking

## // Phases 1b, 1c

Spring 2025 - February 2027

- / Construct new school
- / Softball fields as staging areas
- / Southern access road & parking
- / Move into new school (Feb. 2027)

-  PARENT & FACULTY ACCESS
-  SHARED ACCESS
-  CONTRACTOR ACCESS ONLY
-  CONTRACTOR ACCESS (1C ONLY)
-  CONTRACTOR ACCESS POINT
-  EXISTING BUILDING EGRESS








# Phase 2 **DRAFT**

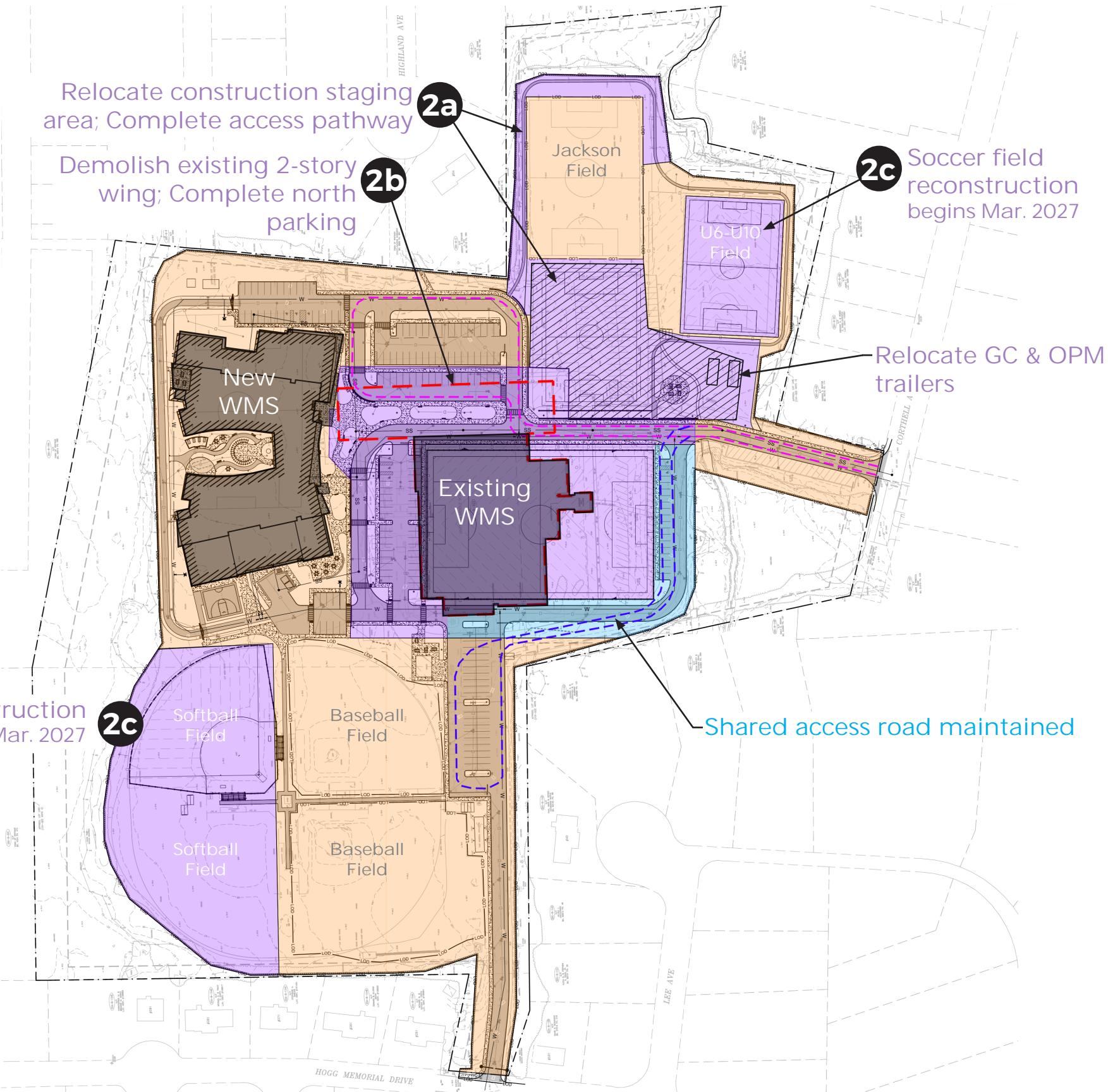
February 2027 - Spring 2028

// **Phase 2a, 2b, 2c**

February 2027 - Spring 2028

- / Relocate staging area
- / Hazmat and abatement of existing
- / Demo 2-story academic wing of existing school
- / Complete north parking lots and circulation loop
- / Begin field reconstruction

-  PARENT & FACULTY ACCESS
-  SHARED ACCESS
-  CONTRACTOR ACCESS ONLY



# Phase 2 (cont.) **DRAFT**

February 2027 - Spring 2028

## // Phase 2d

Spring 2027 - Summer 2028

- / Hazmat and abatement
- / Demo remaining school
- / Begin remaining field construction

## // Phase 2e

Summer 2027 - Fall 2028

- / Complete Site Work
- / Fields complete after growing seasons (exp. Spring 2028)

-  PARENT & FACULTY ACCESS
-  SHARED ACCESS
-  CONTRACTOR ACCESS ONLY
-  CONTRACTOR ACCESS (2E ONLY)
-  RECONSTRUCTED FIELDS

Softball fields on-line  
Mar. 2028

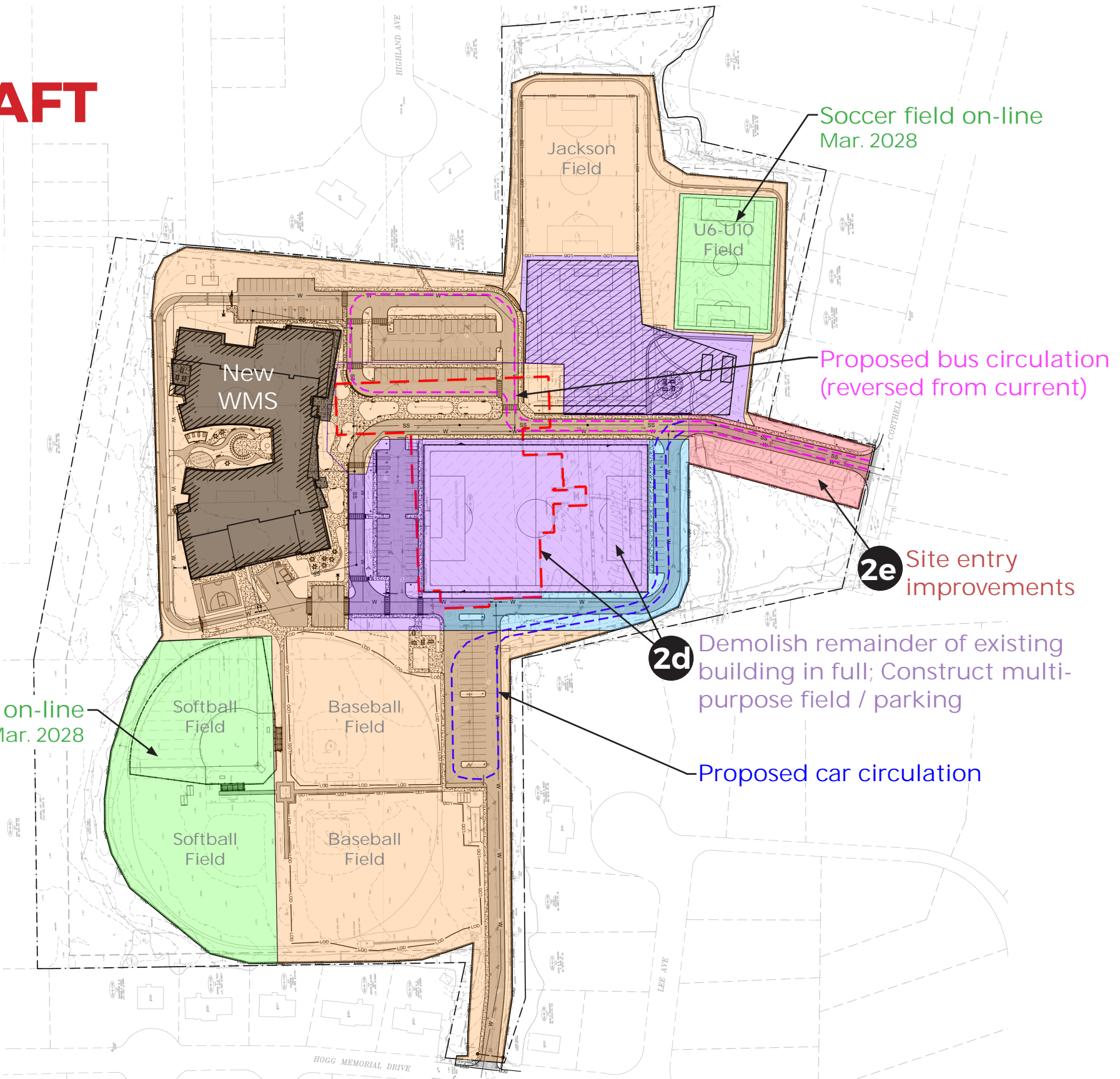
Soccer field on-line  
Mar. 2028

Proposed bus circulation  
(reversed from current)

**2e** Site entry  
improvements

**2d** Demolish remainder of existing  
building in full; Construct multi-  
purpose field / parking

Proposed car circulation





# Completed Project

Spring 2028





# 2<sup>nd</sup> Softball Field Reconstruction

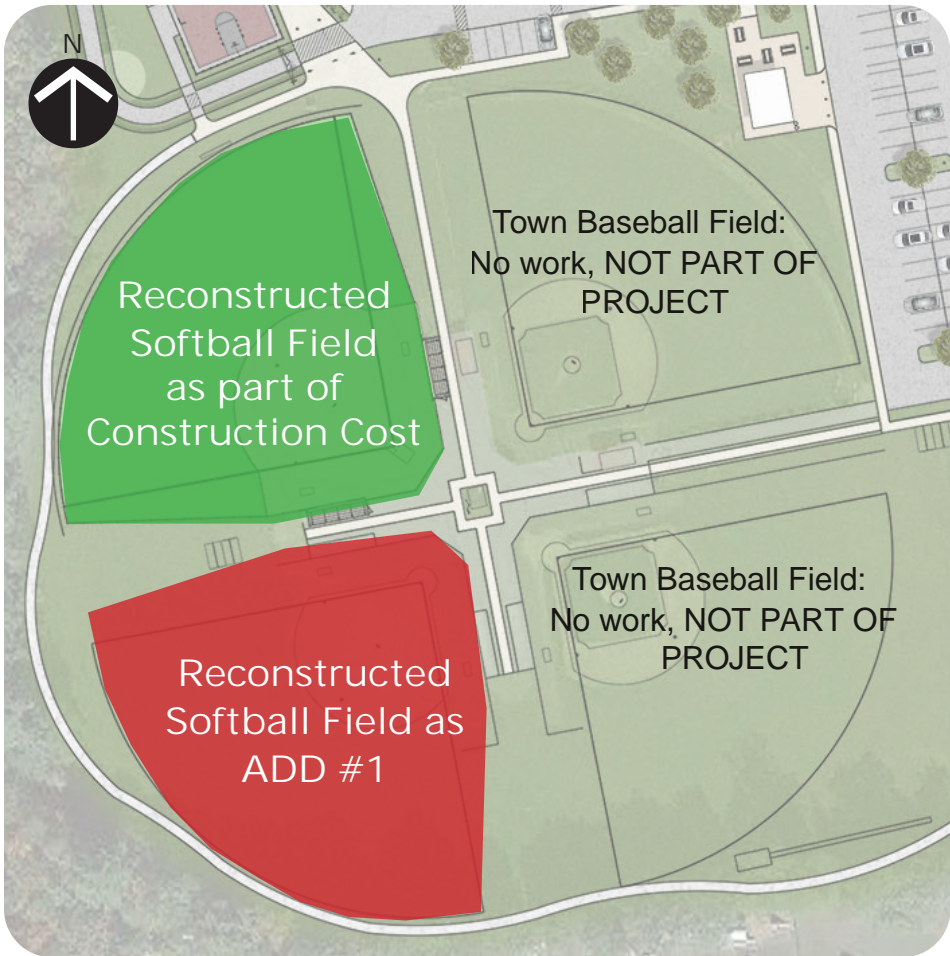
## Add-Alternate #1

// At the 3/26 SBC Mtg, the Professional Team recommended including reconstruction of the 2<sup>nd</sup> softball field as part of the project's base construction cost, instead of as ADD #1

ADD #1 Cost	\$ 654,187
(-) Costs for transporting soil	<u>(\$ 499,219)</u>
Net increase to est. construction cost by including ADD #1 now	\$ 154,968

The 100% DD Cost Estimates carried \$499,219 for transporting soil on/off site

\*Costs based on 100% DD Cost Estimate



	Est. Increase to Construction Cost*	Advantages	Disadvantages
<b>CURRENT:</b> Reconstruct 2 <sup>nd</sup> Softball Field as <b>Add-Alternate #1</b>	\$654,187	// Field remains in use throughout project construction	// Limits area available on site for construction staging & storage of materials  // Requires soils and materials to be stored off site and transported when needed  // Higher cost
<b>PROPOSED:</b> Reconstruct 2 <sup>nd</sup> Softball Field as part of <b>Construction Cost</b> <b>RECOMMENDED</b>	\$154,968	// Provides additional area on site for construction staging & storage of materials // Lower cost than Add-Alternate // Town receives a "new" field	// Field unavailable for use throughout project construction

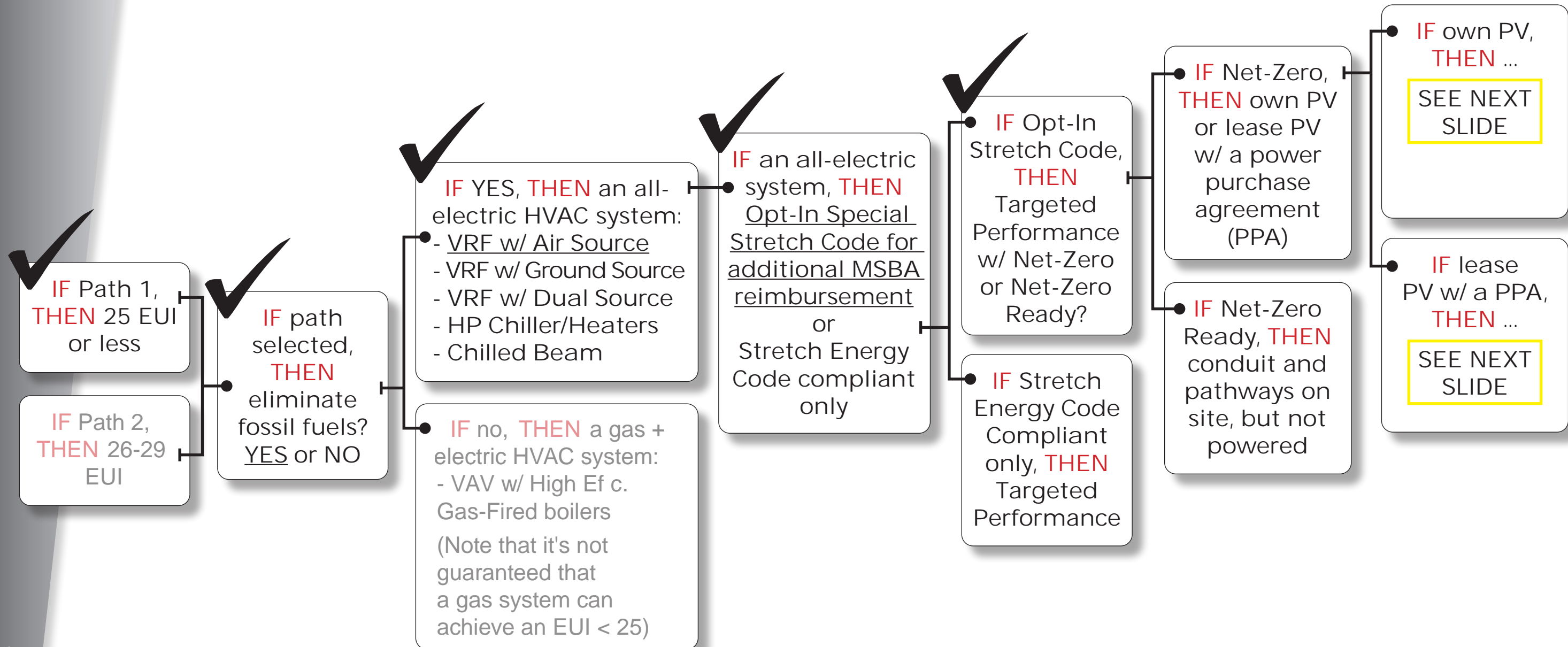
# Intro to Renewable Energy Systems



# Energy Goals: Decision Making Tree

CONSTRUCTION DOCUMENTS

BIDDING





# Solar Renewable Energy (PV) System

Add-Alternate #2

## SRECs

"Solar renewable energy credits" show that a certain amount of electricity was produced using solar energy; can be bought or sold

## PV Ownership

### Pro's

- // Own 100% of energy production and SRECs
- // Earns the LEED renewable energy credits
- // Direct benefit from incentive/grant programs:
  - / [MA Energy Rebates & Incentives](#)
  - / [DOER energyCENTS Tool](#)
  - / [Inflation Reduction Act for Schools](#)
  - / [SMART Program](#)

### Con's

- // Pay capital cost to install upfront
- // District responsible for maintenance or replacement of panels or system components

## Power Purchase Agreement (PPA)

### Pro's\*

- // Not responsible for maintenance or replacement of panels/system
- // No upfront capital costs to install

### Con's\*

- // Does not earn the LEED renewable energy credits
- // If the panels are removed during the lease term, District would owe damages for any lost solar production from the array
- // The District would still be responsible for any necessary site/utility upgrades
- // The District would not own the energy production or SRECs

## Partial Own/PPA

### Pro's

- // Contributes to LEED compliance for renewable energy credits (if production covers at least 20% of annual energy consumption)
- // Partial ownership of energy production and SRECs

### Con's

- // All of the Con's associated with a PPA still apply
- // All of the Con's associated with ownership still apply

\* Subject to final language of PPA between provider and the Town of Whitman / WHRSD





Rooftop Solar as  
Add-Alternate #2

## Add-Alt. #2

### ENERGY PRODUCTION


// **Roof Solar (PV)**  
apx. 558,000 kWh/yr (56%)

// **Canopy Solar (PV)**  
apx. 436,000 kWh/yr (44%)



Solar Canopy as  
ADD #2

Solar Canopy as  
ADD #2

 Included as an Add-Alternate  
(Increase to Total Project Budget)

Designed Total Energy Production = **994,000 kWh/yr**  
Anticipated Energy Consumption = **1,056,000 kWh/yr**  
Baseline Energy Production Goal = **1,113,800 kWh/yr**

← Coordination will continue to achieve net-zero!



# LEED Goal: Silver Certification

## DRAFT LEED Scorecard

// LEED Silver Certification is required by MSBA

// Currently, still possible with or without renewable energy on site

Y ? N				
1			C Integrative Process	1
Y ? N				
2	1	12	Location and Transportation	15
1			C Sensitive Land Protection	1
		2	C High Priority Site	2
		5	C Surrounding Density and Diverse Uses (v4.1)	5
		4	C Access to Quality Transit	4
		1	C Bicycle Facilities	1
	1		C Reduced Parking Footprint (v4.1)	1
1			C Electric Vehicles (v4.1)	1
Y ? N				
5	4	3	Sustainable Sites	12
Y			P Construction Activity Pollution Prevention	Req
Y			P Environmental Site Assessment	Req
1			C Site Assessment	1
		2	C Protect or Restore Habitat (v4.1)	2
1			C Open Space	1
	3		C Rainwater Management (v4.1)	3
2			C Heat Island Reduction	2
	1		C Light Pollution Reduction	1
		1	C Site Master Plan	1
1			C Joint Use of Facilities	1
Y ? N				
6	1	5	Water Efficiency	12
Y			P Outdoor Water Use Reduction	Req
Y			P Indoor Water Use Reduction	Req
Y			P Building-Level Water Metering	Req
2			C Outdoor Water Use Reduction	2
3	1	3	C Indoor Water Use Reduction (v4.1)	7
		2	C Cooling Tower Water Use	2
1			C Water Metering	1

Y ? N				
21	9	1	Energy and Atmosphere	31
Y			P Fundamental Commissioning & Verification	Req
Y			P Minimum Energy Performance	Req
Y			P Building-Level Energy Metering	Req
Y			P Fundamental Refrigerant Management	Req
6			C Enhanced Commissioning	6
14	2		C ACP: Alternative Energy Performance Metric	16
1			C Advanced Energy Metering	1
	2		C Demand Response	2
		1	C Enhanced Refrigerant Management	1
5			C Renewable Energy (v4.1)	5

5 points for Renewable Energy in the "?" column

Y ? N				
8	2	3	Materials and Resources	13
Y			P Storage & Collection of Recyclables	Req
Y			P Constr. & Demolition Waste Mngmt Planning	Req
1	1	3	C Building Life-Cycle Impact Reduction (v4.1)	5
2			C Environmental Product Declarations (v4.1)	2
1	1		C Sourcing of Raw Materials (v4.1)	2
2			C Material Ingredients (v4.1)	2
2			C Construction & Demolition Waste Management	2

Projected target to achieve "Silver" minimum

60 points →

Y ? N				
10	1	5	Indoor Environmental Quality	16
Y			P Minimum Indoor Air Quality Performance	Req
Y			P Environmental Tobacco Smoke Control	Req
Y			P Minimum Acoustic Performance (v4.1)	Req
2			C Enhanced Indoor Air Quality Strategies	2
3			C Low-Emitting Materials (v4.1)	3
1			C Construction IAQ Management Plan	1
1	1		C Indoor Air Quality Assessment	2
1			C Thermal Comfort	1
2			C Interior Lighting	2
		3	C Daylight	3
		1	C Quality Views	1
		1	C Acoustic Performance	1
Y ? N				
5	1	0	Innovation <sup>1</sup>	6
1			C IN: LEED O+M Starter Kit	1
1			C IN: Green Building Education	1
1			C IN: Design for Active Occupants	1
	1		C EP: Optimize Energy Performance	1
1			C EP: EPDs	1
1			C LEED Accredited Professional	1
Y ? N				
2	2	0	Regional Priority	4
1			C RP: Optimize Energy Performance	1
	1		C RP: Renewable Energy	1
	1		C RP: Building Life-Cycle Impact Reduction	1
1			C RP: Outdoor Water Use Reduction	1
Y ? N				
60	21	29	Totals	110

Certified: 40 to 49 points, Silver: 50 to 59 points,  
Gold: 60 to 79 points, Platinum: 80 to 110  
P: Prerequisite | C: Credit | EP: Exemplary Performance |  
RP: Regional Priority

# Next Steps & Upcoming Milestones

Whitman Middle School Project

## Community Forum #7

TUESDAY

**JUN 11, 2024\***

**Whitman Middle School  
Cafeteria @ 6:30 pm**

For all interested Community Members



Topics would include:  
// Schedule Overview  
// Design Update  
// Overview of Construction  
Phasing/Sequencing

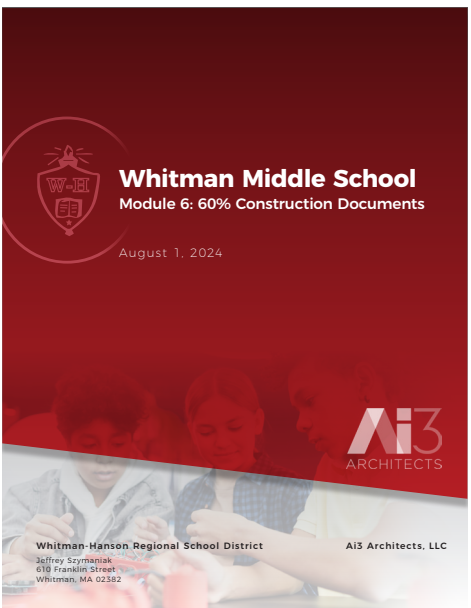
\* To be confirmed

## 60% CDs Submission

THURSDAY

**AUG 01, 2024**

**Due to the MSBA**



Submission of the  
60% Construction  
Documents (CDs),  
Project Manual,  
and Report





# Questions?

Thank you

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

