



ARROWSTREET

SQUANTUM SCHOOL

SCHOOL COMMITTEE MEETING

QUINCY, MA
13 NOVEMBER 2024

PREPARED FOR
CITY OF QUINCY / MAYOR THOMAS P. KOCH
QUINCY PUBLIC SCHOOLS / KEVIN W. MULVEY, SUPERINTENDENT

PROJECT TEAM



Massachusetts School Building Authority
Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities



ARROWSTREET
ARCHITECTURE & DESIGN
ARCHITECT



QUINCY SUCCESS WITH THE MSBA
NEW SCHOOL PROJECTS - MSBA CORE BUILDING PROGRAM



CENTRAL MIDDLE SCHOOL / 2013



SOUTH-WEST MIDDLE SCHOOL / 2019



QUINCY HIGH SCHOOL / 2010

QUINCY SUCCESS WITH THE MSBA
SCHOOL REPAIR PROJECTS - MSBA ACCELERATED REPAIR PROGRAM



MERRYMOUNT
DOORS / WINDOWS / ROOF / BOILERS

BEECHWOOD
DOORS / WINDOWS / ROOF / BOILERS

NQHS
DOORS / WINDOWS / ROOF
INCLUDED HANDICAP BATHROOM UPGRADE

WOLLASTON
DOORS / WINDOWS / BOILERS
INCLUDED HANDICAP BATHROOM UPGRADE
MSBA ROOF PROJECT - NEXT YEAR

PARKER
DOORS / WINDOWS
MSBA BOILER PROJECT - NEXT YEAR

ATHERTON HOUGH
BOILERS

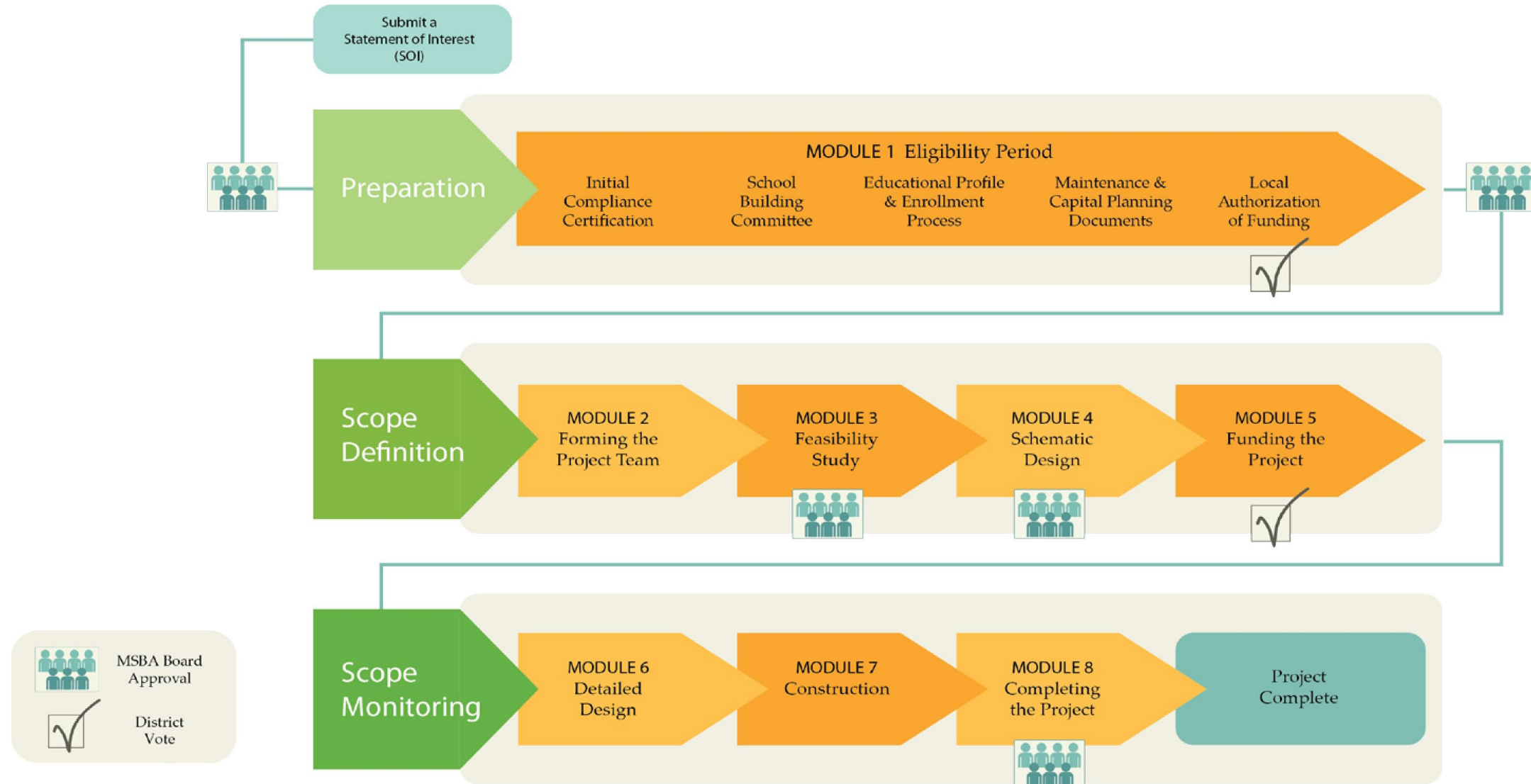
LINCOLN-HANCOCK
DOORS / WINDOWS





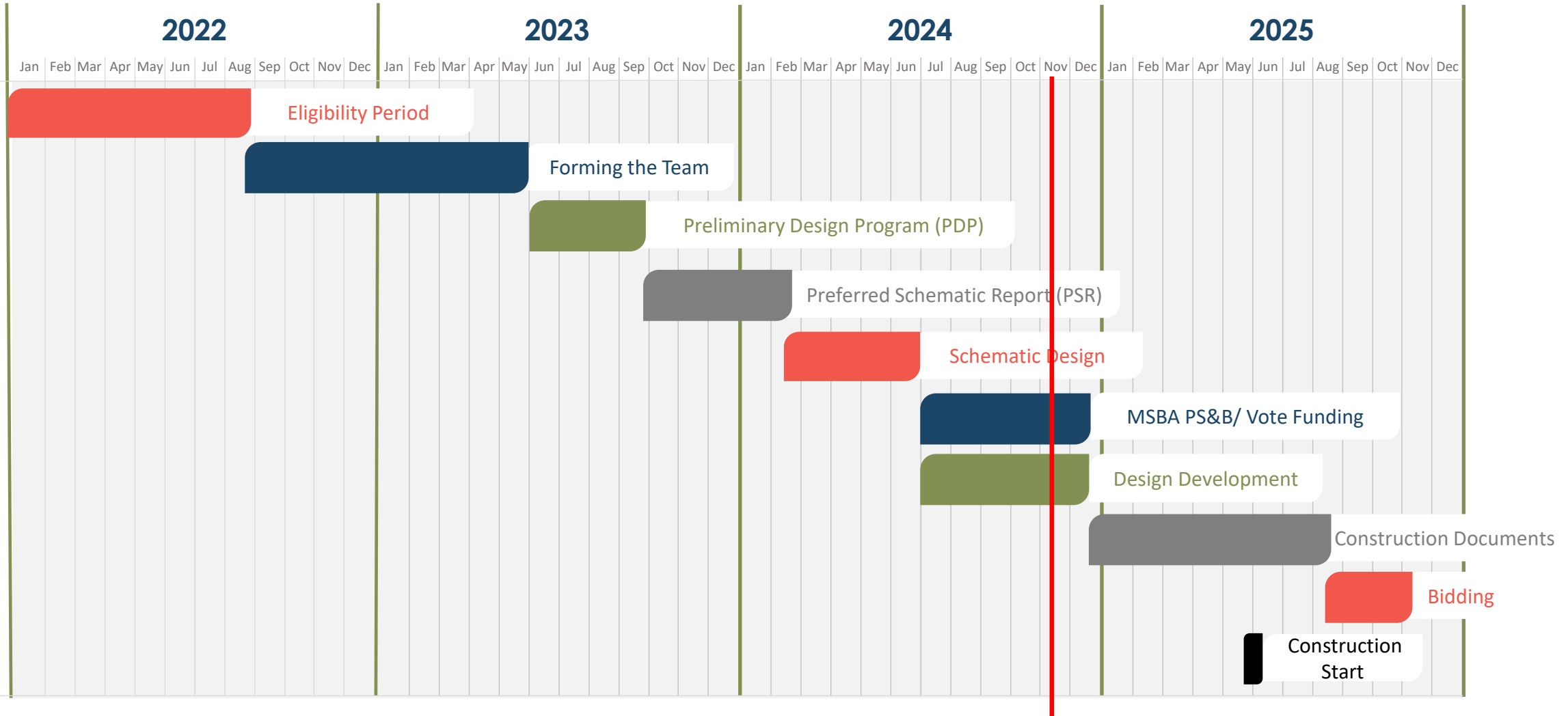
MSBA Process

Modules

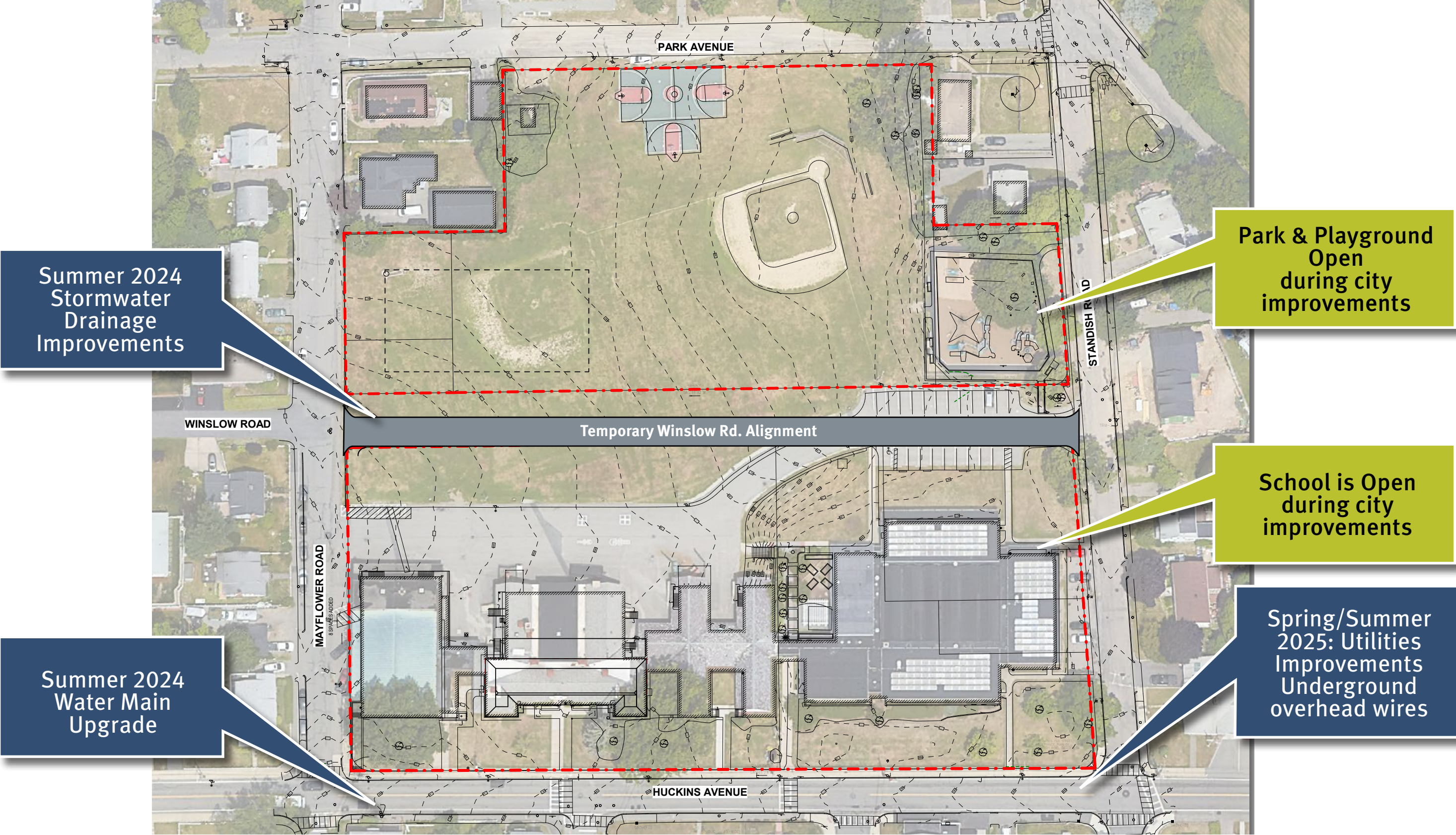




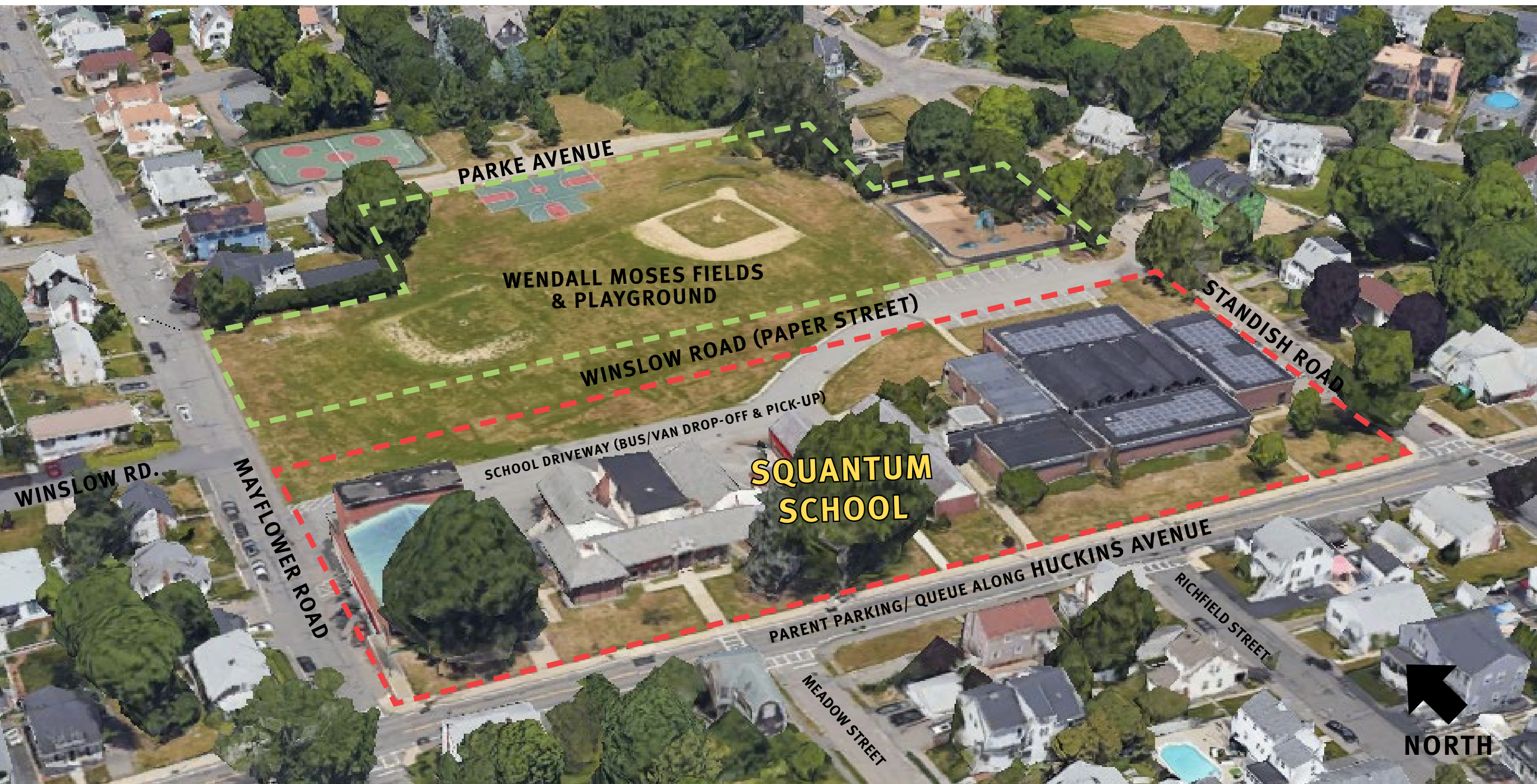
Project Timeline



CITY IMPROVEMENTS



EXISTING SITE AND PROPERTY BOUNDARIES



SITE PLAN



FLOOR PLAN
FIRST FLOOR

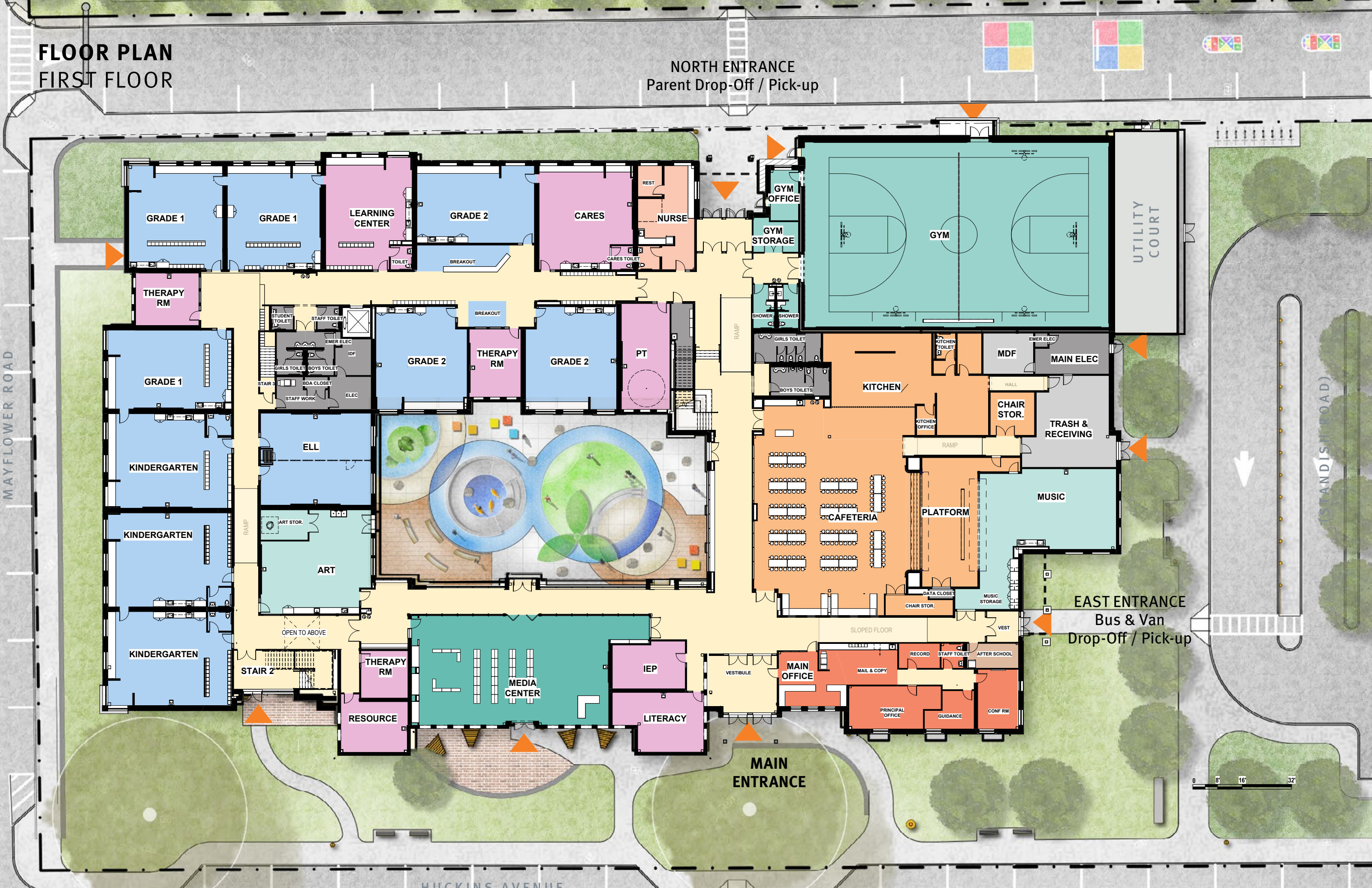
NORTH ENTRANCE
Parent Drop-Off / Pick-up

MAYFLOWER ROAD

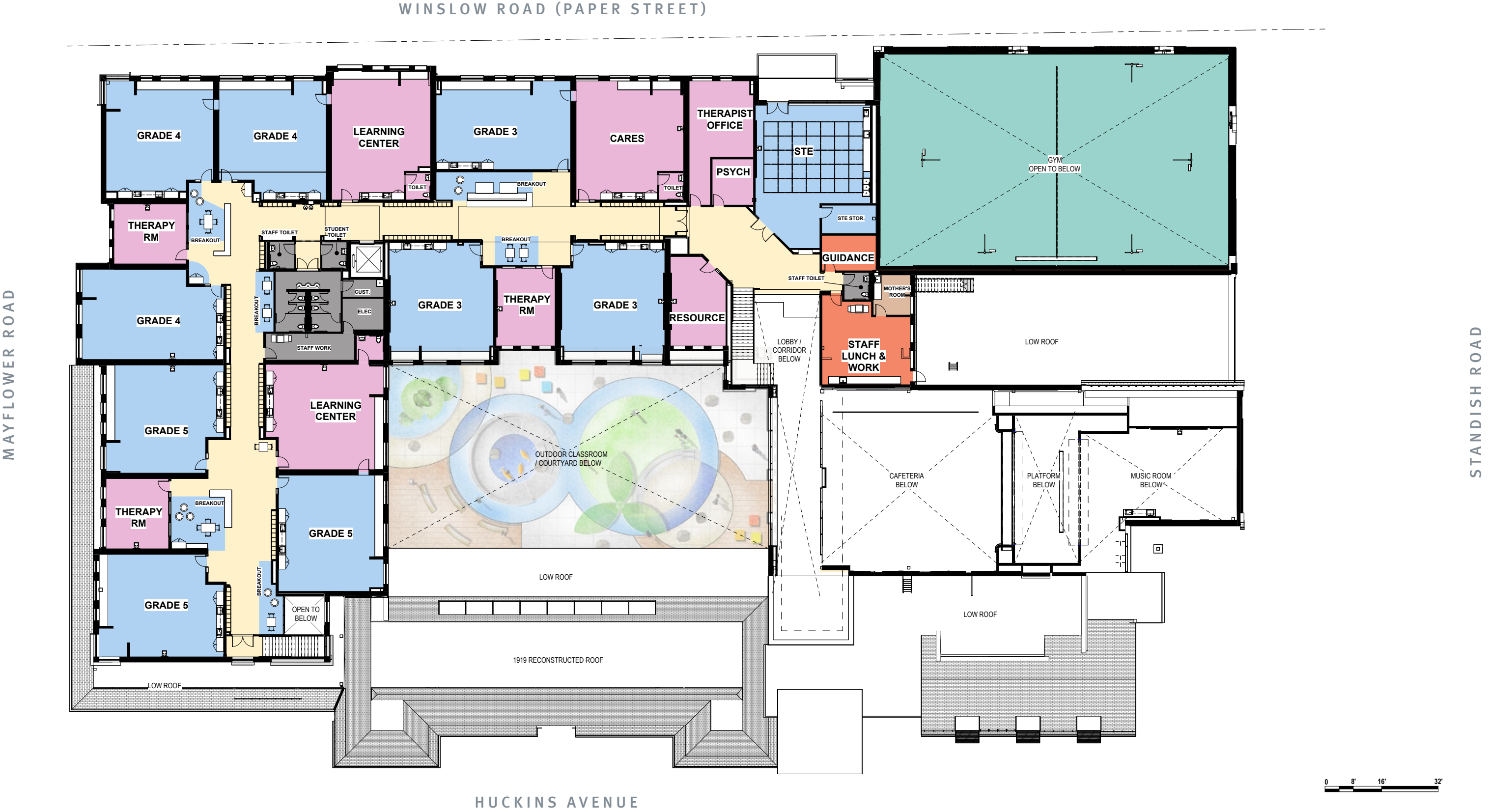
(STANDISH ROAD)

HUCKINS AVENUE

0 8' 16' 32'



FLOOR PLAN
SECOND FLOOR



FLOOR PLAN
BASEMENT FLOOR





EXTERIOR DESIGN STUDIES
SOUTH FACADE / HUCKINS AVENUE



EXTERIOR DESIGN STUDIES
SOUTHEAST CORNER



EXTERIOR DESIGN STUDIES
NORTHWEST CORNER / WINSLOW RD. & MAYFLOWER RD.



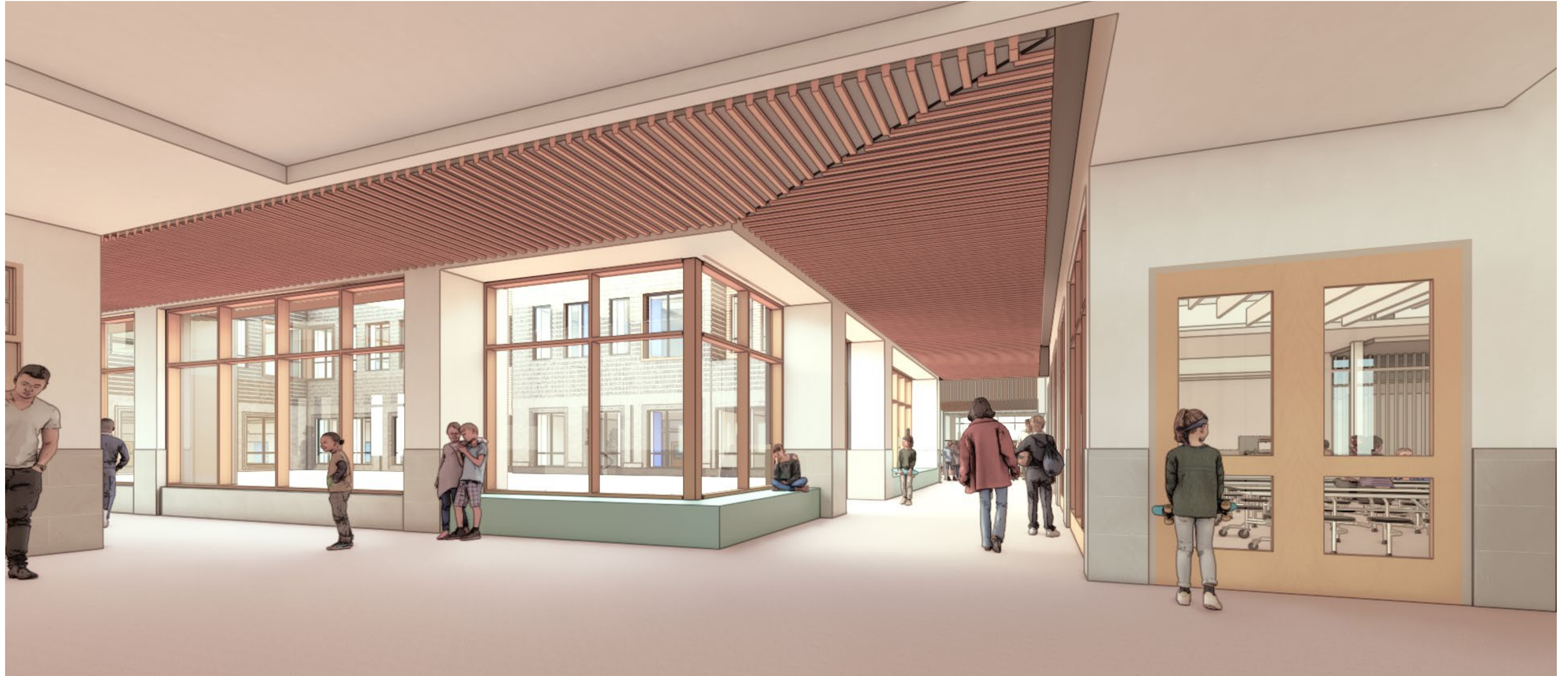
EXTERIOR DESIGN STUDIES
SOUTHWEST CORNER / MAYFLOWER RD. & HUCKINS AVE.

GYM DESIGN (FROM AUGUST)



INTERIOR STUDIES

MAIN LOBBY & MAIN STREET HALLWAY



INTERIOR STUDIES

MAIN STAIRS & MAIN STREET HALLWAY



INTERIOR MEDIA CENTER



INTERIOR DAYLIGHT STUDY

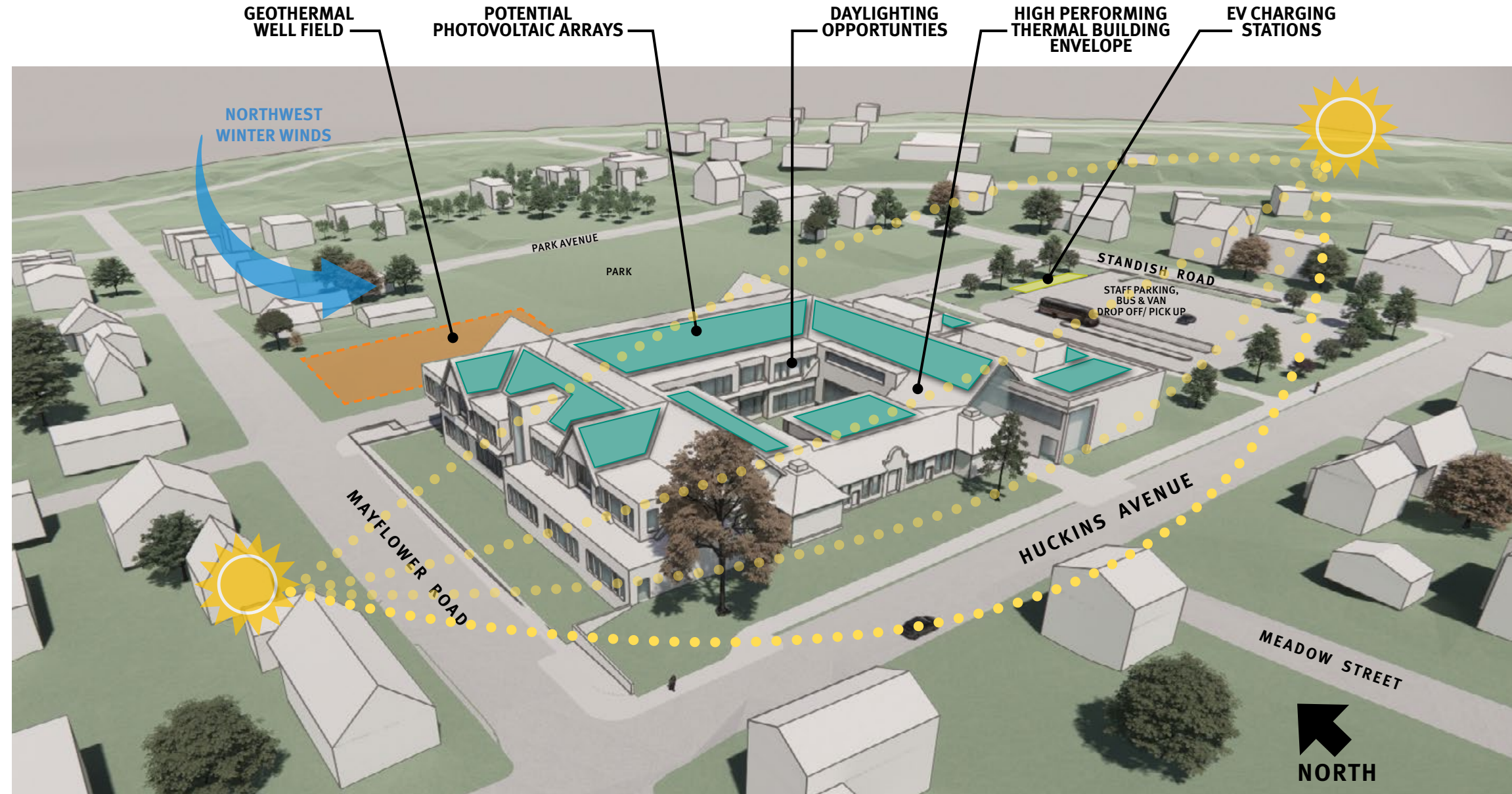
CAFETERIA VIEW 2



GYM INTERIOR



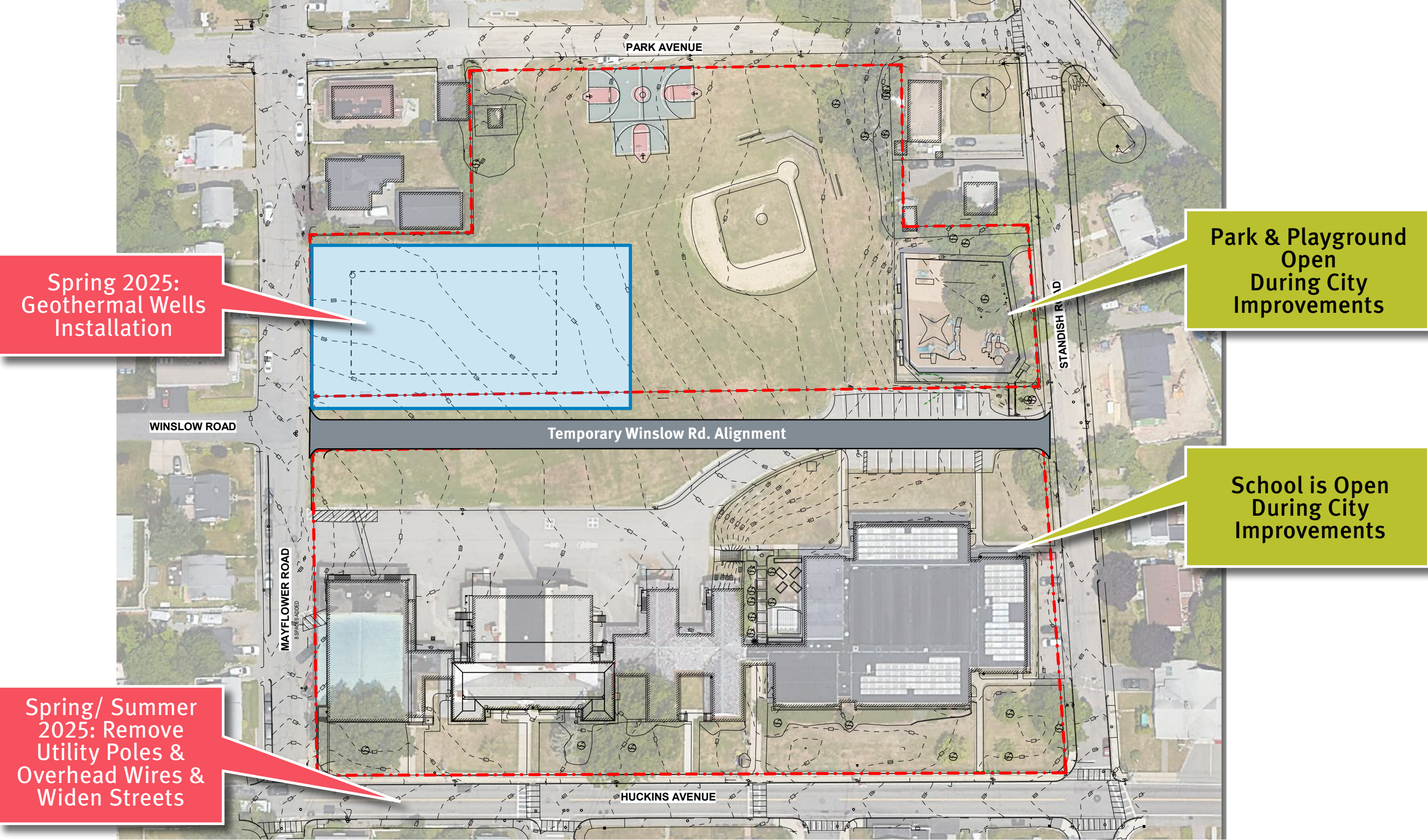
SUSTAINABILITY



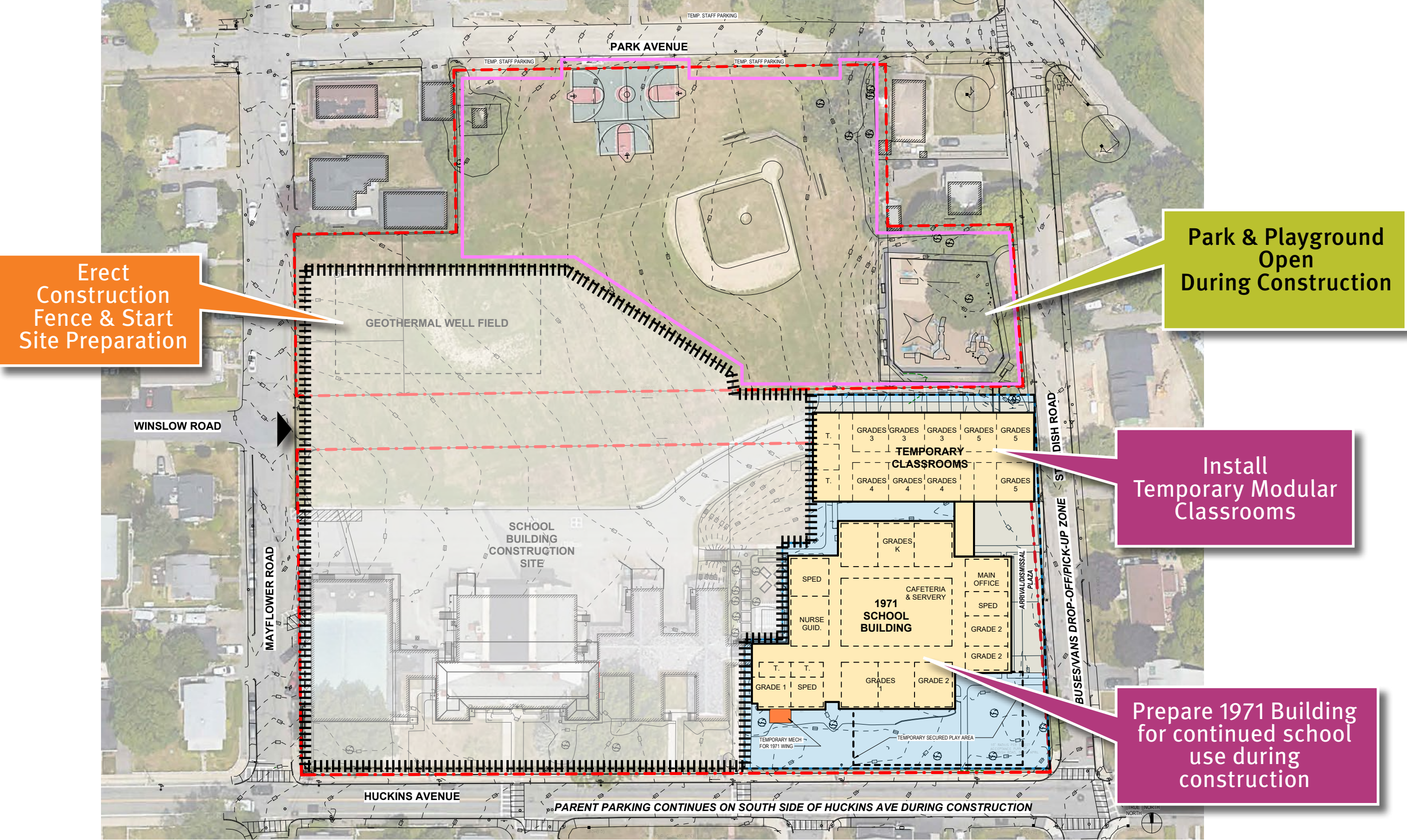
- Net Zero Energy
- All Electric
- Geothermal/Groundsource Heat Pump System
- Solar Photovoltaic Arrays
- EV Charging Stations
- LEED Gold Certification

- Green Schools Program
- Goals were identified for the project:
 - Equity and Universal Design
 - Healthy indoor environment
 - Connection with nature
 - Low energy use building
- MassSave and Federal Incentives

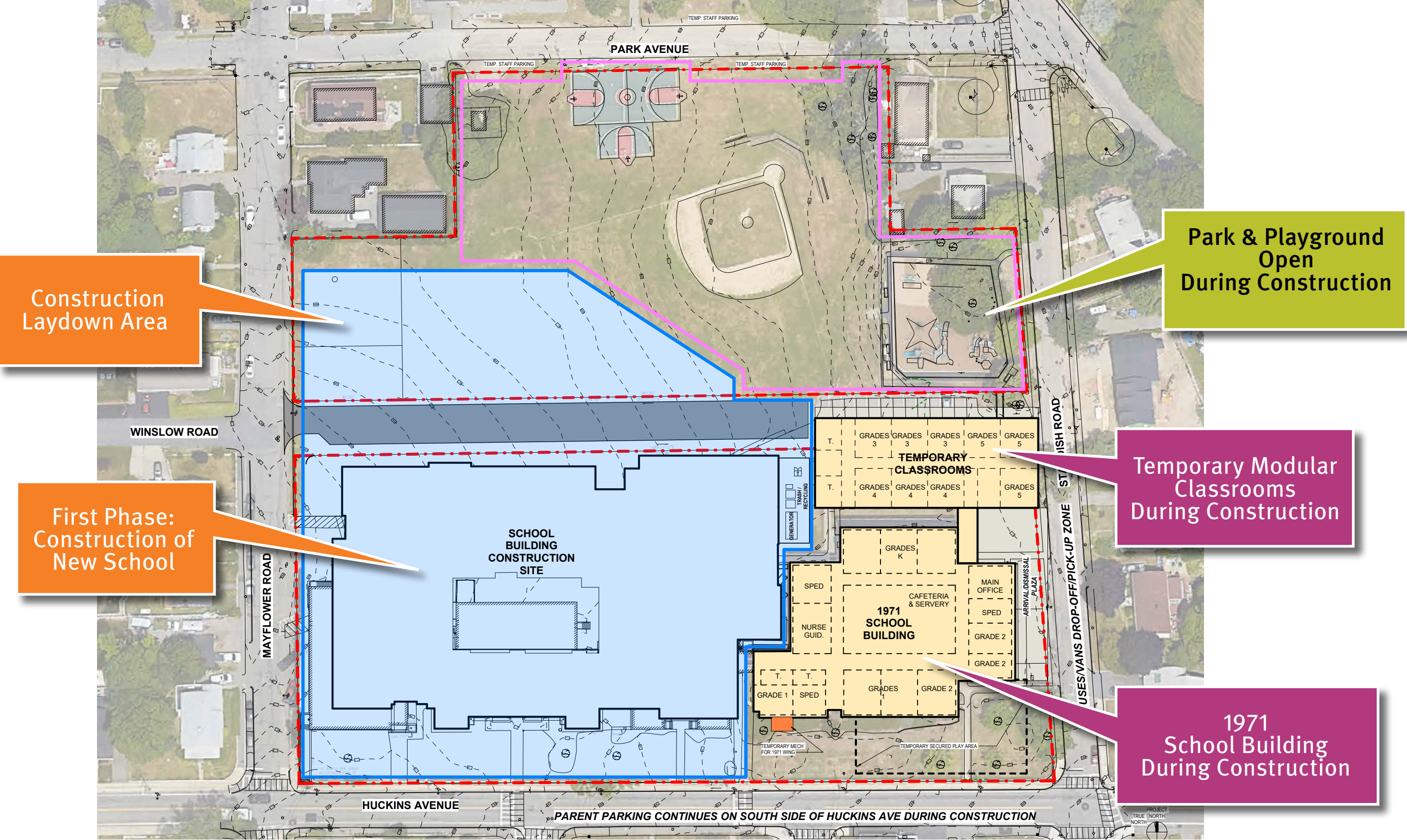
EARLY CONSTRUCTION WORK



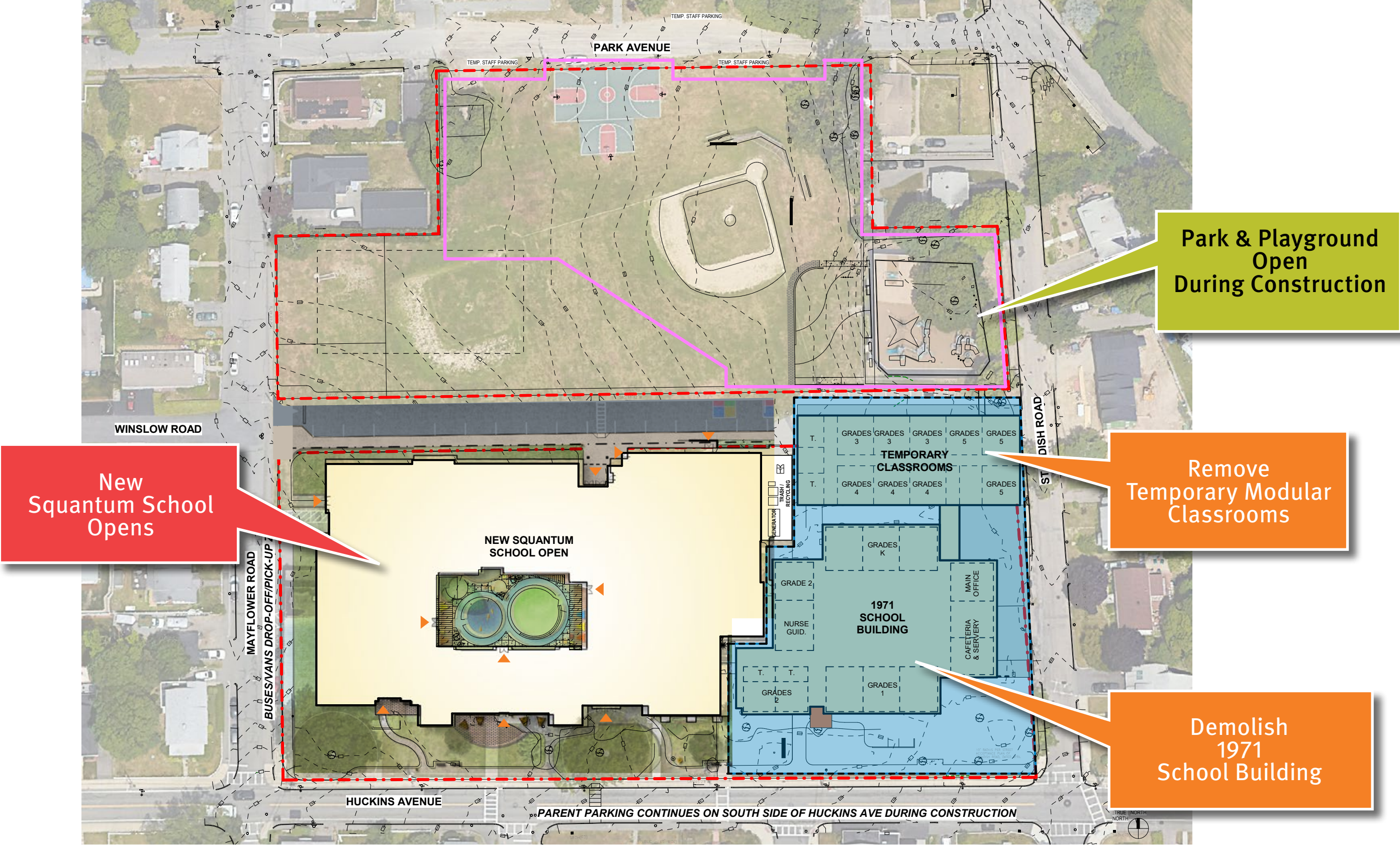
PHASED CONSTRUCTION: SUMMER 2025



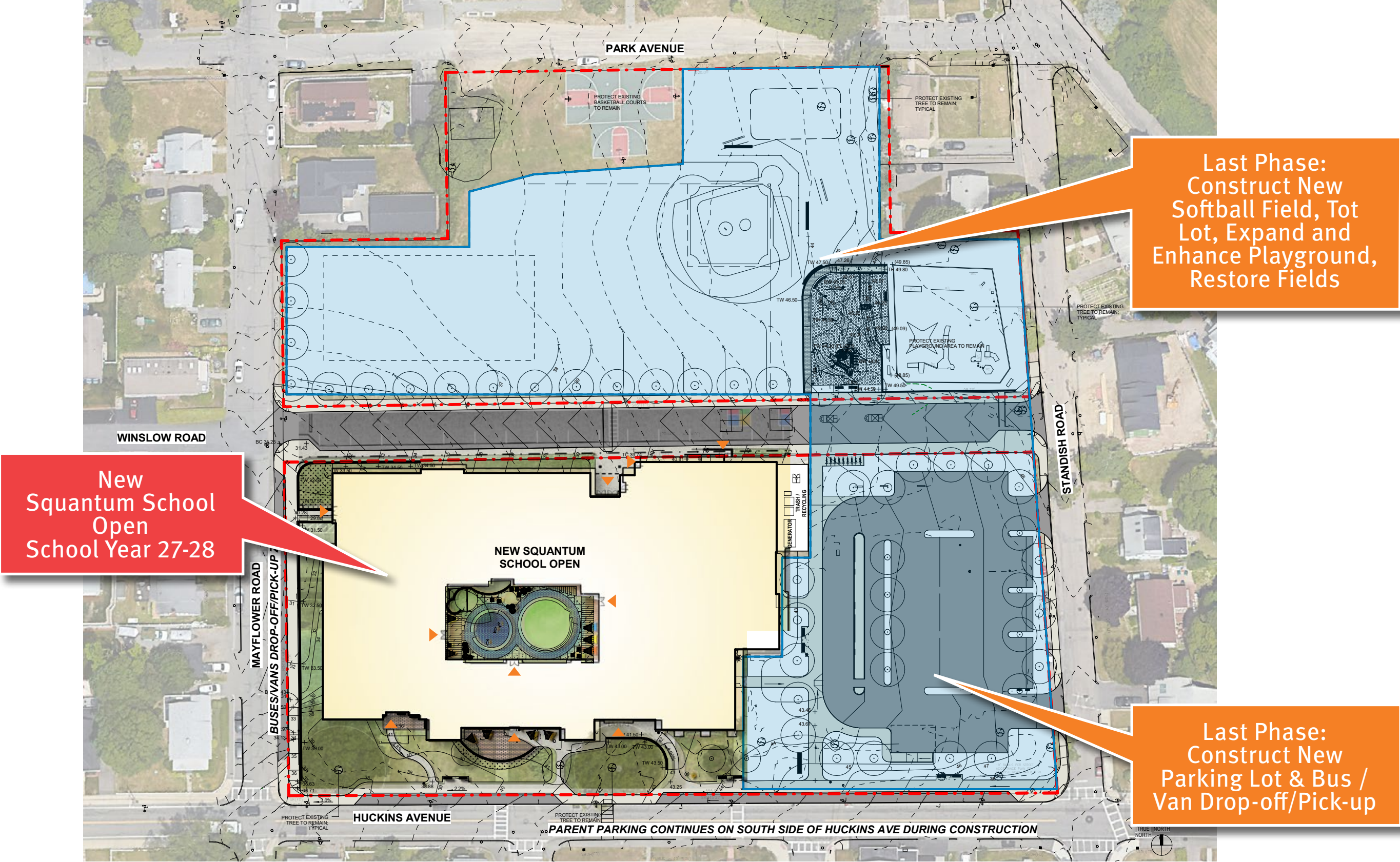
PHASED CONSTRUCTION: SUMMER 2025 TO SUMMER 2027



PHASED CONSTRUCTION: FALL 2027



PHASED CONSTRUCTION: FALL 2027 TO SPRING 2028





MSBA Total Project Budget

Budget Overview

Feasibility Study	\$	1,511,036
Project Management	\$	2,872,900
Other Administrative	\$	90,000
Architecture / Engineering	\$	8,695,800
Pre-Construction	\$	225,000
Construction	\$	81,196,053
Other Project Costs	\$	6,017,098
Furnishings and Equipment	\$	3,150,779
Construction Contingency	\$	4,059,803
Owner's Contingency	\$	894,363
	\$	108,712,832

Detailed Budget Breakdown (December 2023)			
Total Project Budget: All costs associated with the project are subject to MSBA CMO 1.1 (2023)			
Estimated Budget	Estimated Basis of Maximum Facilities Cost	Estimated Basis of Maximum Total Facilities Cost	Estimated Maximum Total Facilities Cost
Design & Construction	\$1,511,036	\$1,511,036	\$1,511,036
Construction	\$81,196,053	\$81,196,053	\$81,196,053
Other Project Costs	\$6,017,098	\$6,017,098	\$6,017,098
Furnishings & Equipment	\$3,150,779	\$3,150,779	\$3,150,779
Construction Contingency	\$4,059,803	\$4,059,803	\$4,059,803
Owner's Contingency	\$894,363	\$894,363	\$894,363
Total Project Budget	\$108,712,832	\$108,712,832	\$108,712,832
Detailed Budget Breakdown (December 2023)			
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Estimated Budget	Estimated Basis of Maximum Facilities Cost	Estimated Basis of Maximum Total Facilities Cost	Estimated Maximum Total Facilities Cost
Design & Construction	\$1,511,036	\$1,511,036	\$1,511,036
Construction	\$81,196,053	\$81,196,053	\$81,196,053
Other Project Costs	\$6,017,098	\$6,017,098	\$6,017,098
Furnishings & Equipment	\$3,150,779	\$3,150,779	\$3,150,779
Construction Contingency	\$4,059,803	\$4,059,803	\$4,059,803
Owner's Contingency	\$894,363	\$894,363	\$894,363
Total Project Budget	\$108,712,832	\$108,712,832	\$108,712,832



MSBA Total Project Budget

Reimbursement Rate

Base Reimbursement Rate	60.40%
Inventive Points – Maintenance	1.53%
Inventive Points – Reno / Reuse	0.31%
Inventive Points – Energy Efficiency	3.00%
Inventive Points – Indoor Air Quality	1.00%
Total Reimbursement Rate	66.24%



MSBA Total Project Budget

Reimbursement Exclusions

- OPM and Designer fees associated with excluded scope
- OPM and Designer fees beyond MSBA funding limits – 20% cap
- Costs associated with ACM floor and ceiling abatement
- Construction costs for building & sitework beyond MSBA funding limits
- Scope associated with ineligible building area
- Costs associated with swing space and temporary modular
- Costs associated with moving
- Cost exceeding \$1,200 per student allowance for FF&E
- Cost exceeding \$1,200 per student allowance for technology
- Cost associated with commissioning of ineligible building area
- Owner and Construction contingency costs beyond MSBA cap (1% & 2%)



MSBA Total Project Budget

Effective Reimbursement Rate

Total Project Budget	\$108,712,832
Total Scope Exclusions	(\$45,860,680)
Maximum Total Grant	\$38,346,953
Total Local Share	\$70,365,879
Effective Reimbursement Rate	35.27%



MSBA Total Project Budget

Other Potential Funding Sources

	Technology	Cost	Rate ¹	Estimated Value
Sec 48 Alternative Energy Investment Tax Credit	Solar, Wind	\$1,400,000	25.5%	\$357,000
	Ground Source Heat Pump	\$9,210,485	25.5%	\$2,348,674
Mass Save	Path 1			\$1,055,822
MA EVIP Public Access ²	EV charging	\$42,000	100%	\$42,000

Potential Total

\$3,803,496

1. Assumed using tax-exempt bonds

2. Assumes supplying EVSE for 10% of parking count



THANK YOU!

Quantum School
Project Website:
QR Code



<https://quantumschool.com>