



# Somerville High School

## Project Information Presentation



September 28, 2016



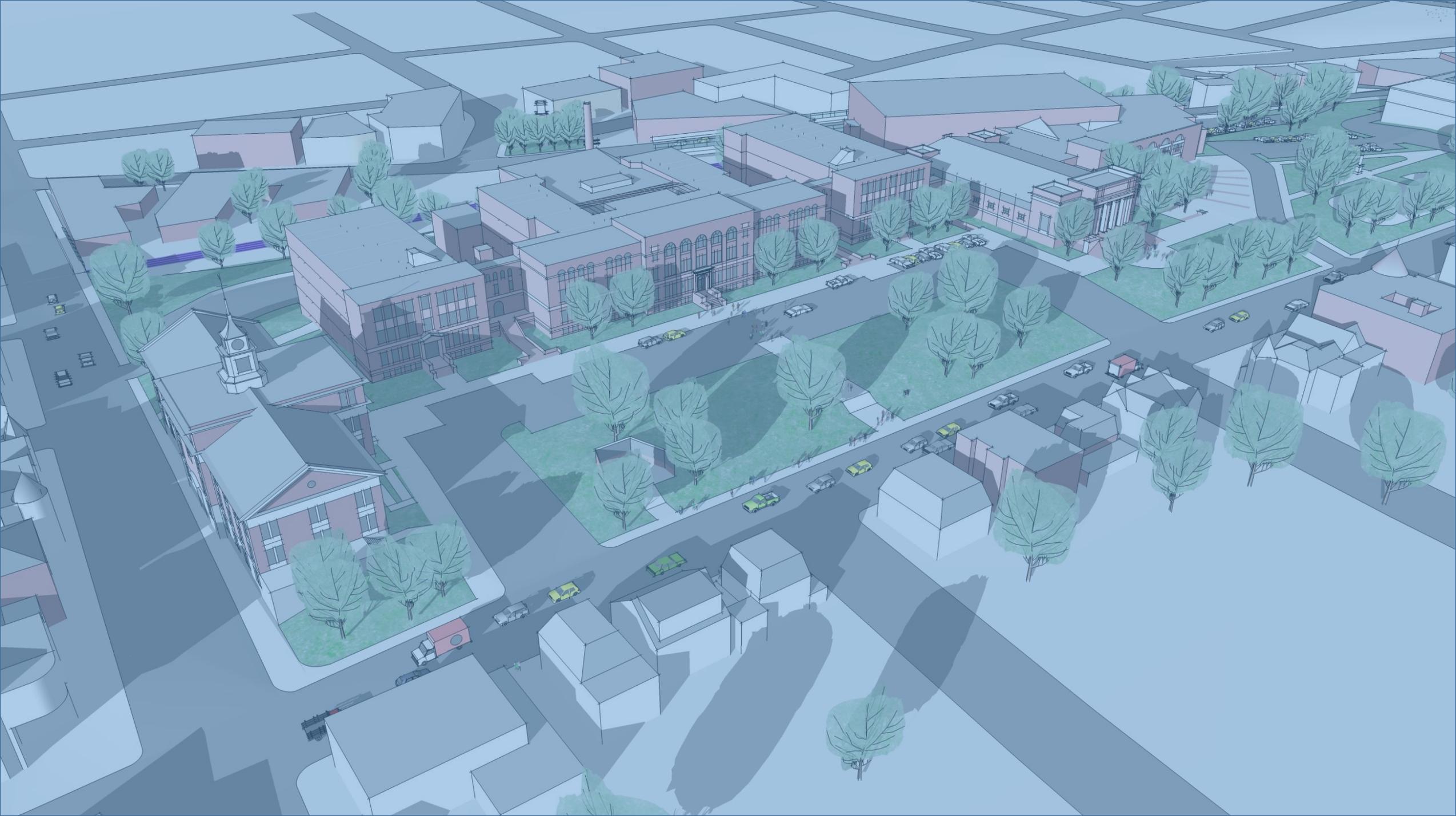




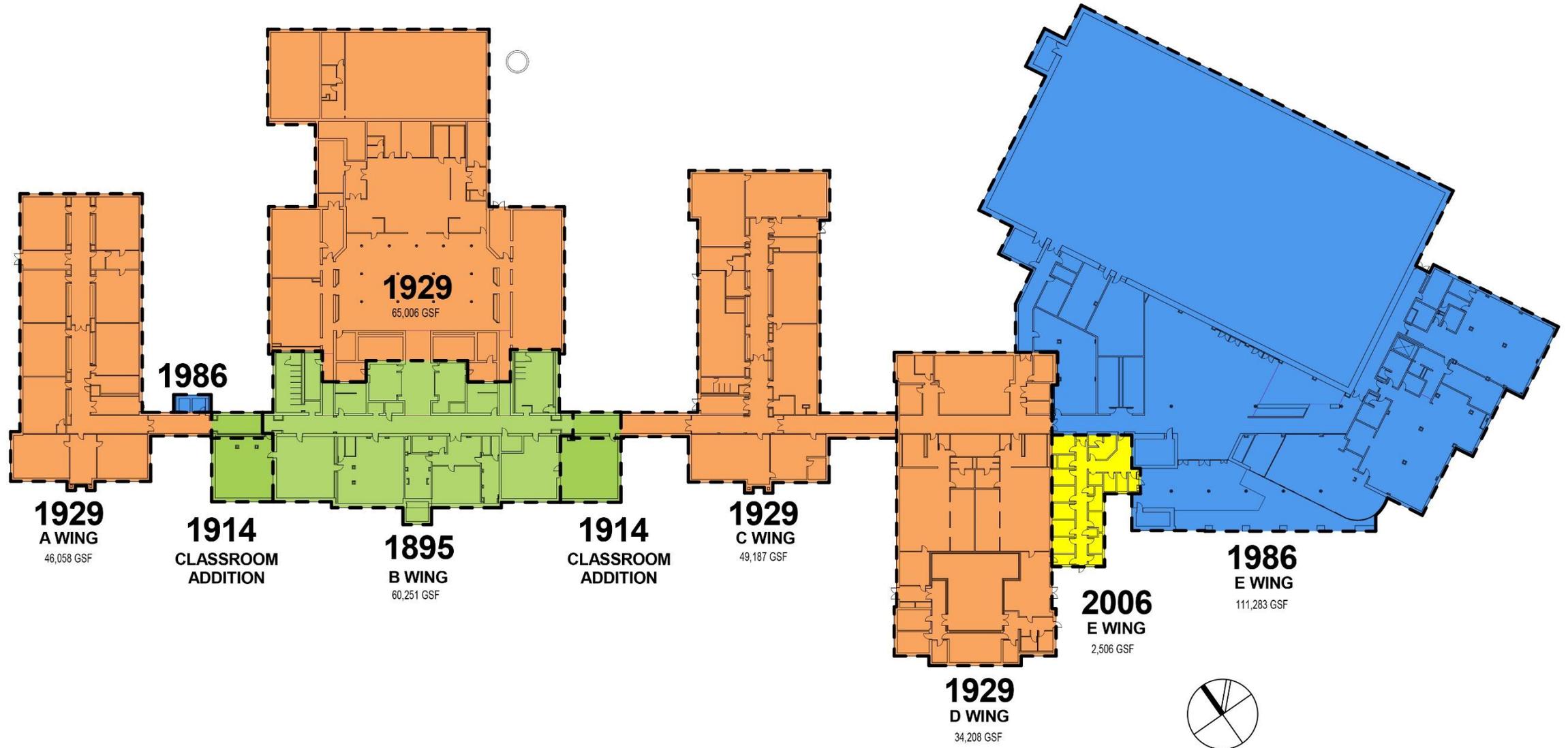
# Somerville High School

## Tonight's Agenda:

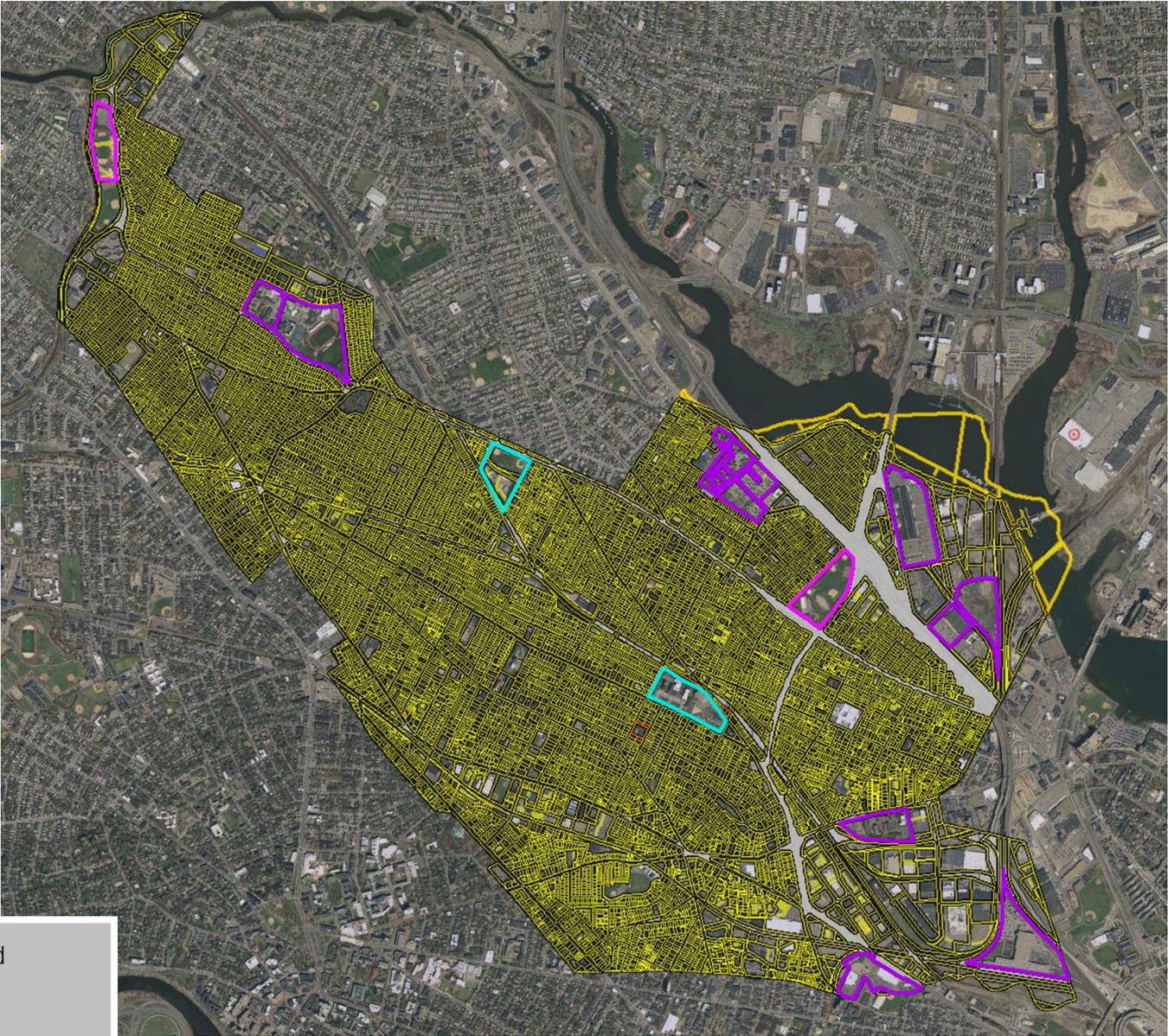
- Why SHS? & Why Now?
- Project Overview
- Educational Vision and Planning Considerations
- Project Cost History, Market and Next Steps
- Closing Remarks



# Building History of Construction



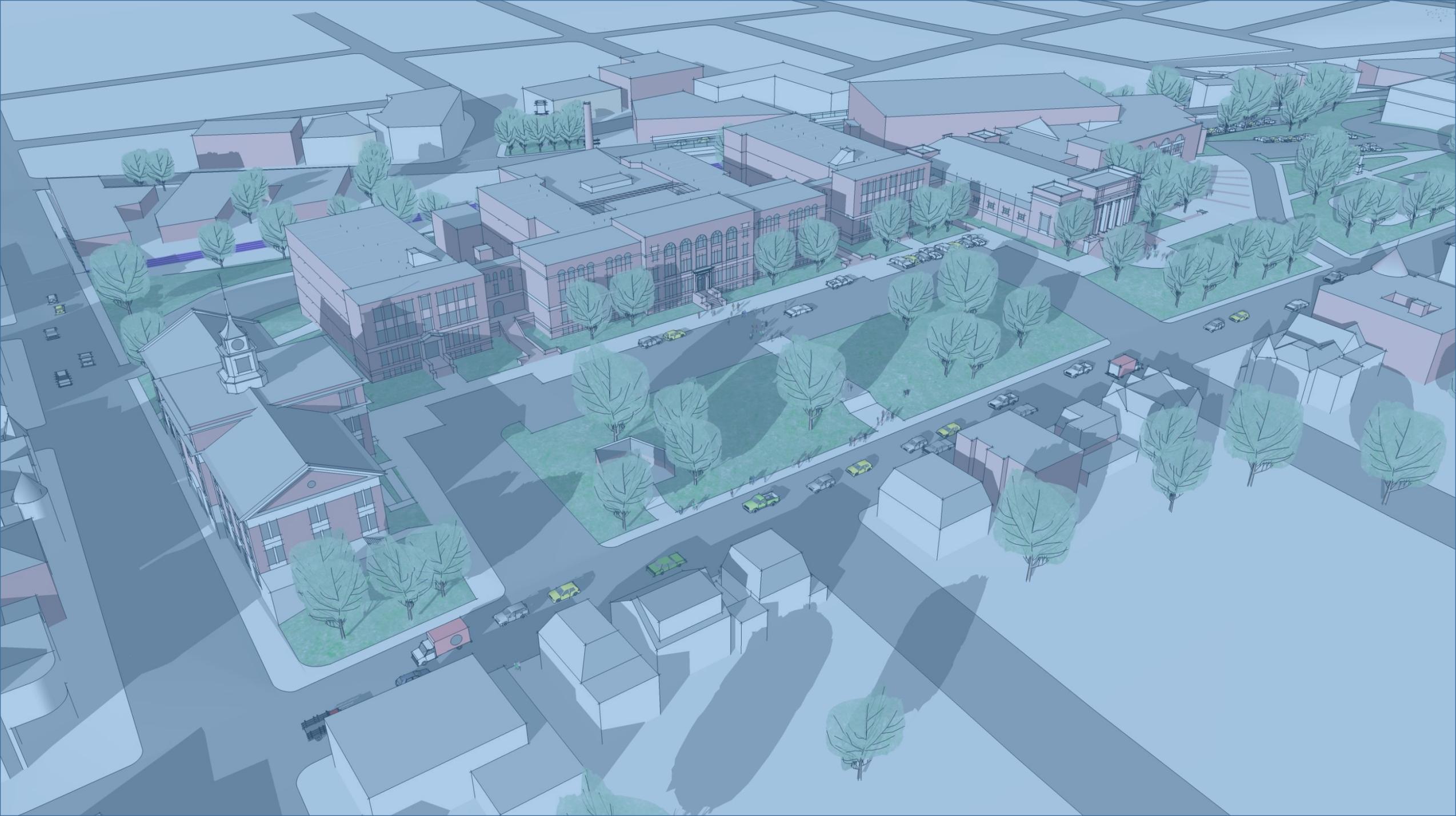
# City of Somerville: Parcels Greater Than 10 Acres



- Commonwealth Owned
- Privately Owned
- City Owned

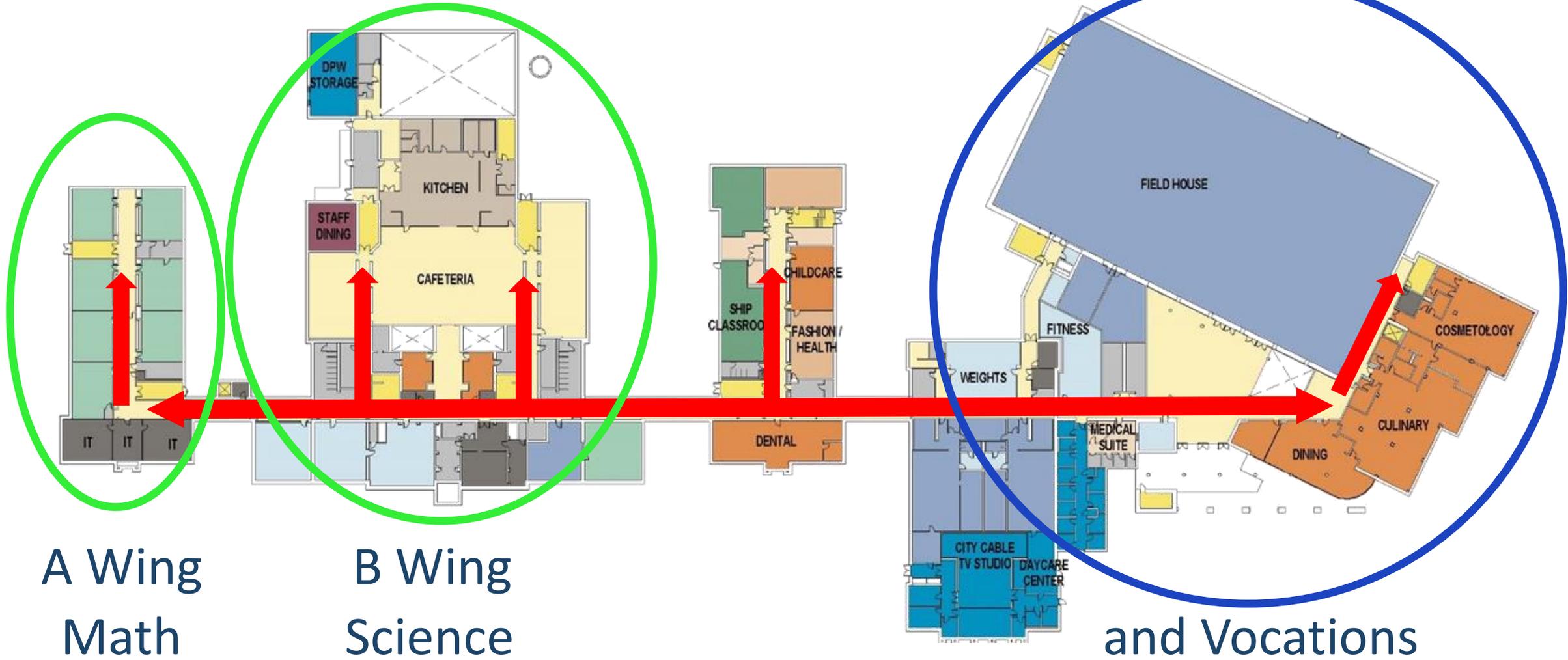






# Existing High School: Program Plan

E Wing



# Existing Building Deficiencies

- Lacking Spaces for 21<sup>ST</sup> CENTURY TEACHING & LEARNING
  - Differentiated Learning
  - Comprehensive School w/o Proper Adjacencies
  - None/Poor Common Areas
- Sustainability and Poor Building Performance
- Long Term Viability of 1929 Classroom Wings
- Substantial Additions and Renovations Required
- School Safety & Security
- Science Facilities
- Building Organization & Travel Distances

# EDUCATIONAL BENEFITS & CRITERIA

## STRENGTHS

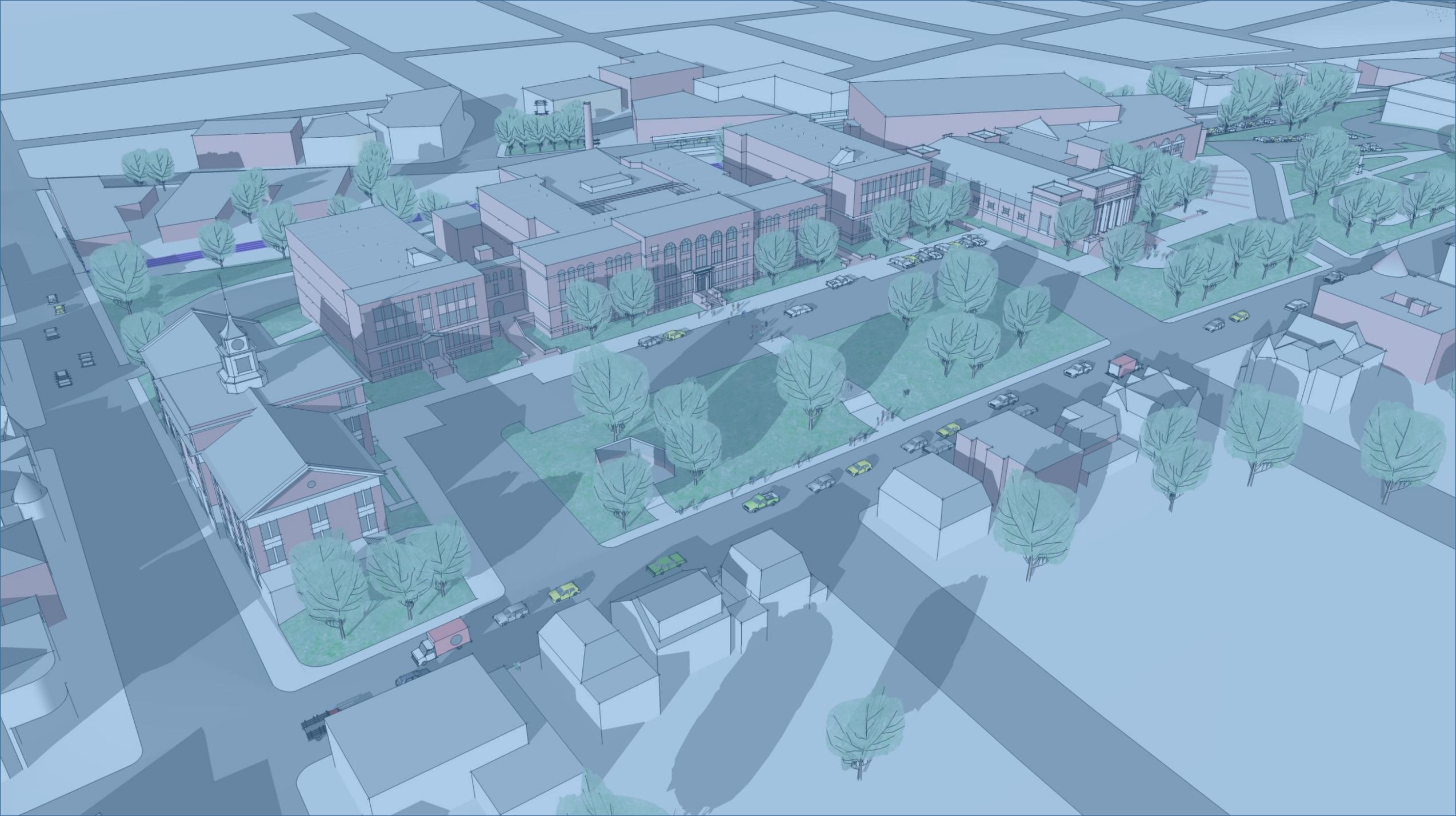
**Organizational Plan for STEM and STEAM**  
**Integration of Academic and Vocational Programs**  
**Project Based Learning Configurations/Environments**  
**Use of Site & Hillside**  
**Arts Integration**  
**Preserves Critical Historic structures**  
**Community Relationships & Uses**  
**Usable Outdoor Athletic Space**  
**Indoor/outdoor connectivity**

## OPPORTUNITY

**Potential to expand City/Civic programs**  
**Accommodates Next Wave/Full Circle Program**  
**Easy recognition of Commons Areas**  
**Urban Relationships Connecting Gilman & Union Squares**  
**Outdoor learning spaces & environments – Creates Identity for Students**  
**Community Field Use**  
**Parking Clarity**

## CHALLENGES

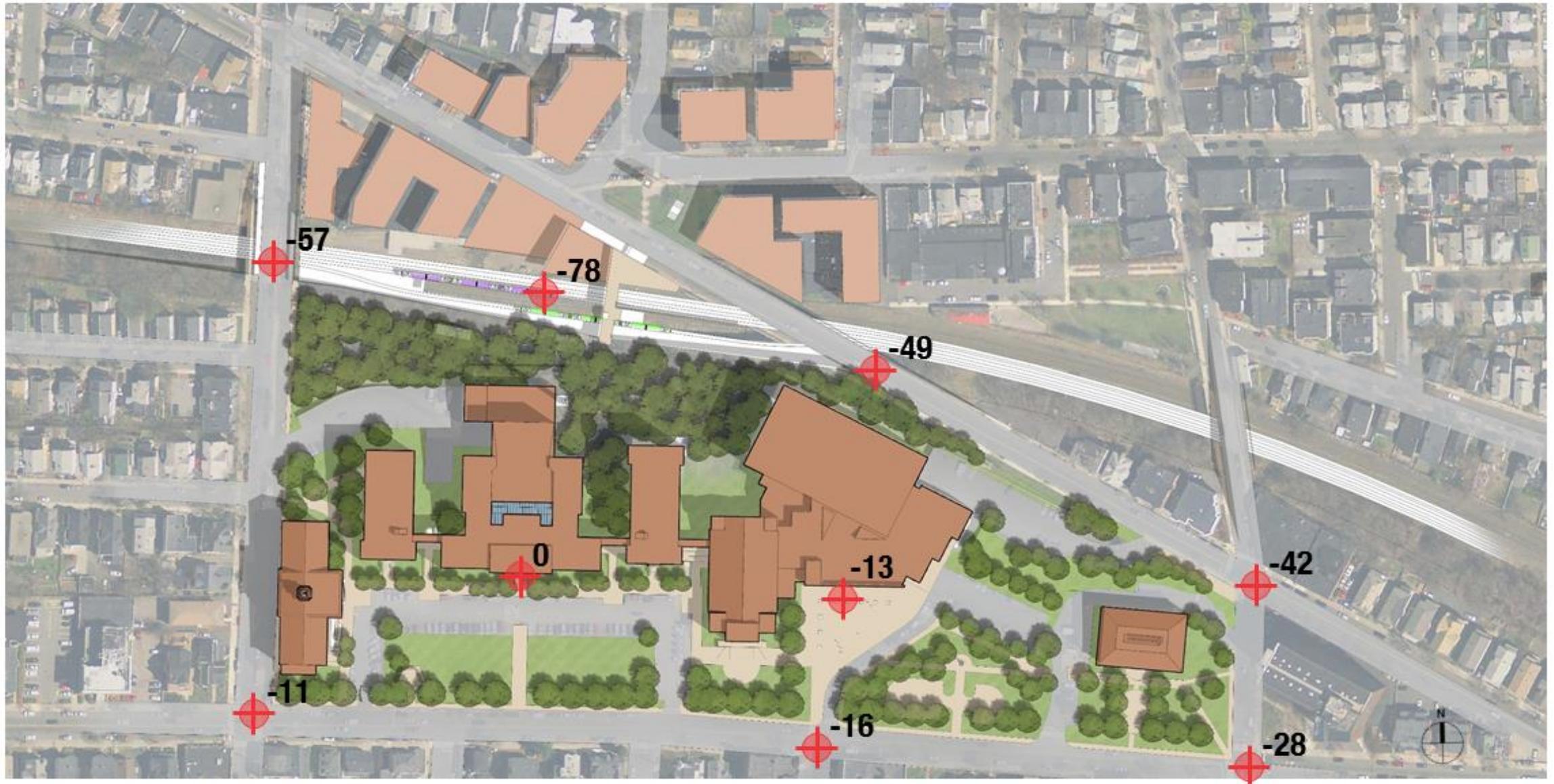
**Phasing & Working Around Existing Buildings**  
**Building Height**  
**Concentrates Students on Tight Site**  
**Physical Relationship to Historic Central Library**  
**Relationship to Highland Ave**  
**Service access**  
**Project Cost**



# Somerville High School – 1986 to 2015



# Somerville High School - Spot Grades



# Porter Square Steps – 116 steps to first platform





**Field Above  
Parking**

**Loading**

**1**

**GLX Gilman Sq.  
Station**

**Community Path**

**Service  
Exit  
Parking  
Entrance**

**2**

**Vocational & Auto-shop  
Entrance and Loading**

**Service  
Entrance**

**3**

**Civic  
Entrance**

**Community  
Entrance**

**Auditorium  
Entrance**

**4**

**Main School  
Entrance**

**Drop-off**

# 1<sup>st</sup> Floor Plan

Major Public Event Spaces

Academic Zones

Commons & Core Areas as Bridge/Link

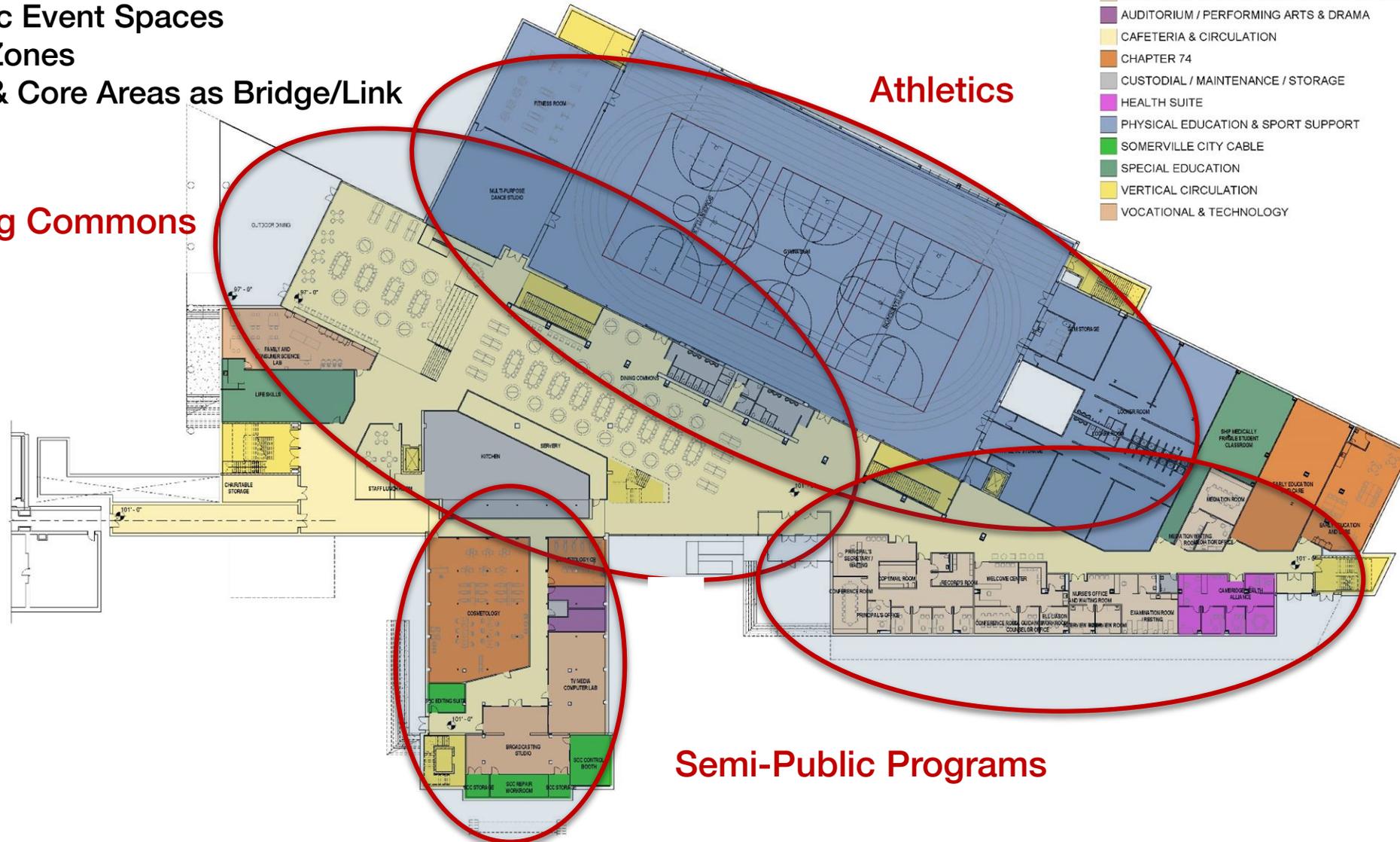
Dining Commons

Athletics

Semi-Public Programs

## PROGRAM PLAN LEGEND

- ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE
- AUDITORIUM / PERFORMING ARTS & DRAMA
- CAFETERIA & CIRCULATION
- CHAPTER 74
- CUSTODIAL / MAINTENANCE / STORAGE
- HEALTH SUITE
- PHYSICAL EDUCATION & SPORT SUPPORT
- SOMERVILLE CITY CABLE
- SPECIAL EDUCATION
- VERTICAL CIRCULATION
- VOCATIONAL & TECHNOLOGY

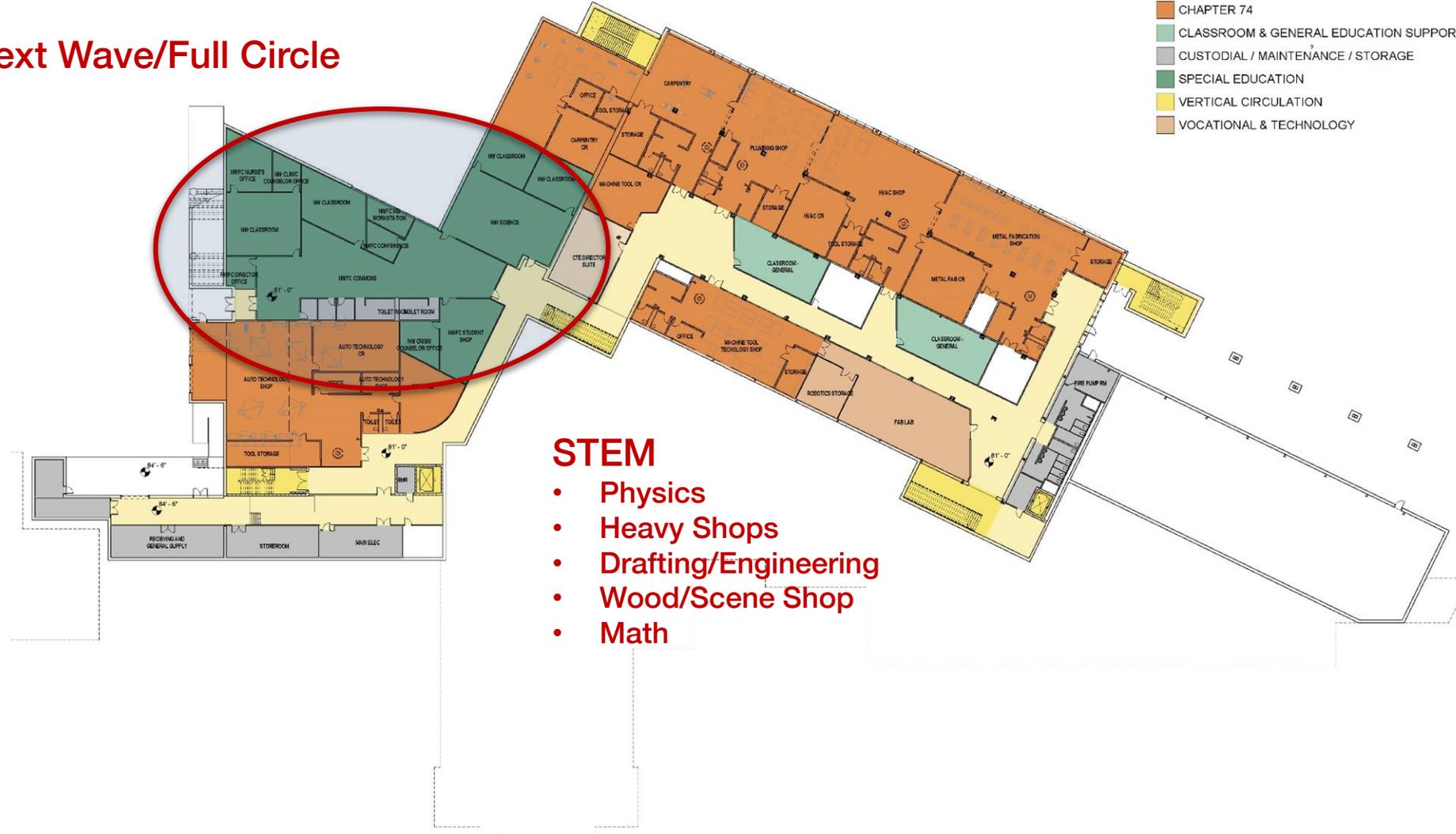


# Lower Level Floor Plan

Next Wave/Full Circle

## PROGRAM PLAN LEGEND

- ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE
- CAFETERIA & CIRCULATION
- CHAPTER 74
- CLASSROOM & GENERAL EDUCATION SUPPORT
- CUSTODIAL / MAINTENANCE / STORAGE
- SPECIAL EDUCATION
- VERTICAL CIRCULATION
- VOCATIONAL & TECHNOLOGY



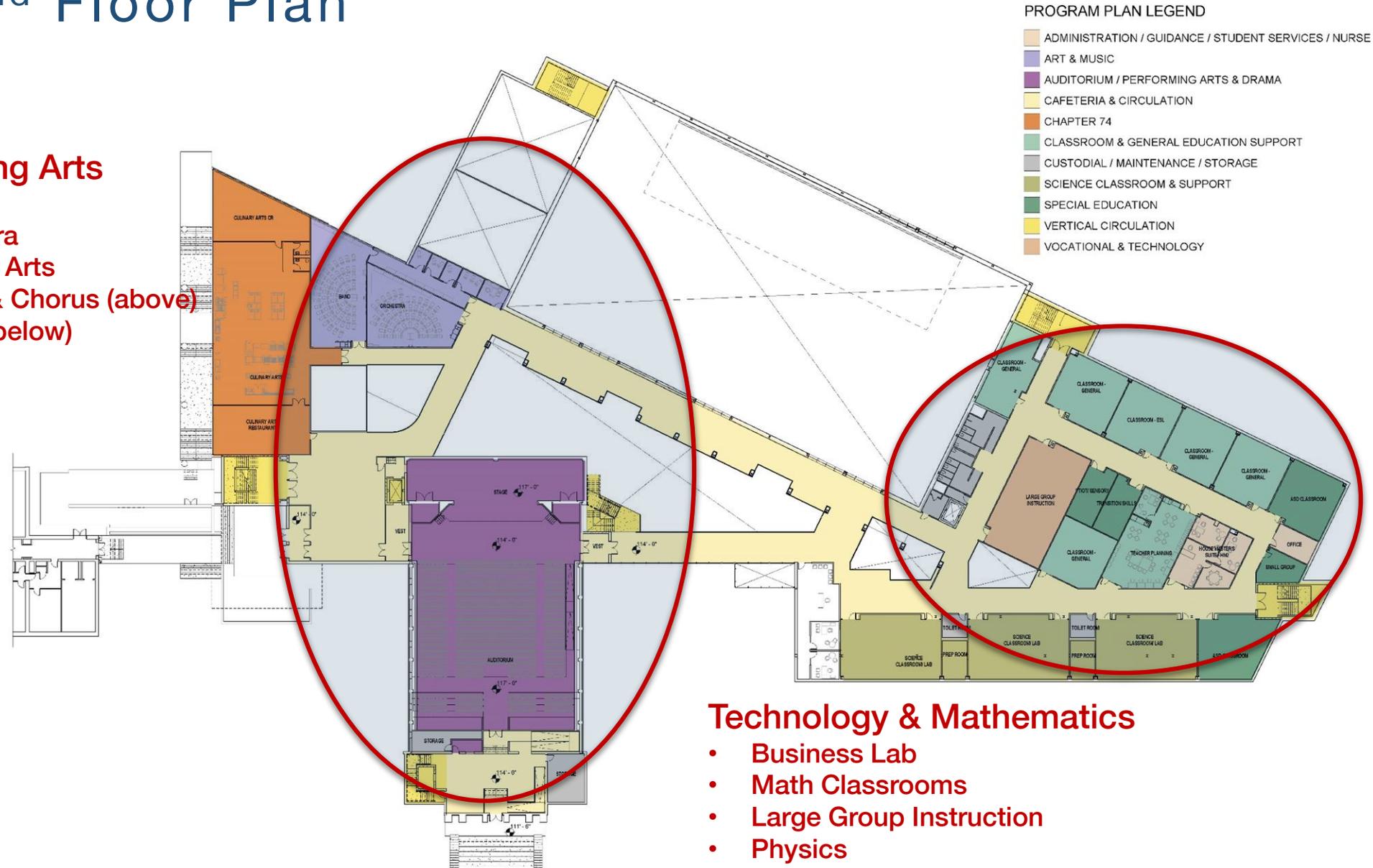
## STEM

- Physics
- Heavy Shops
- Drafting/Engineering
- Wood/Scene Shop
- Math

# 2<sup>nd</sup> Floor Plan

## Performing Arts

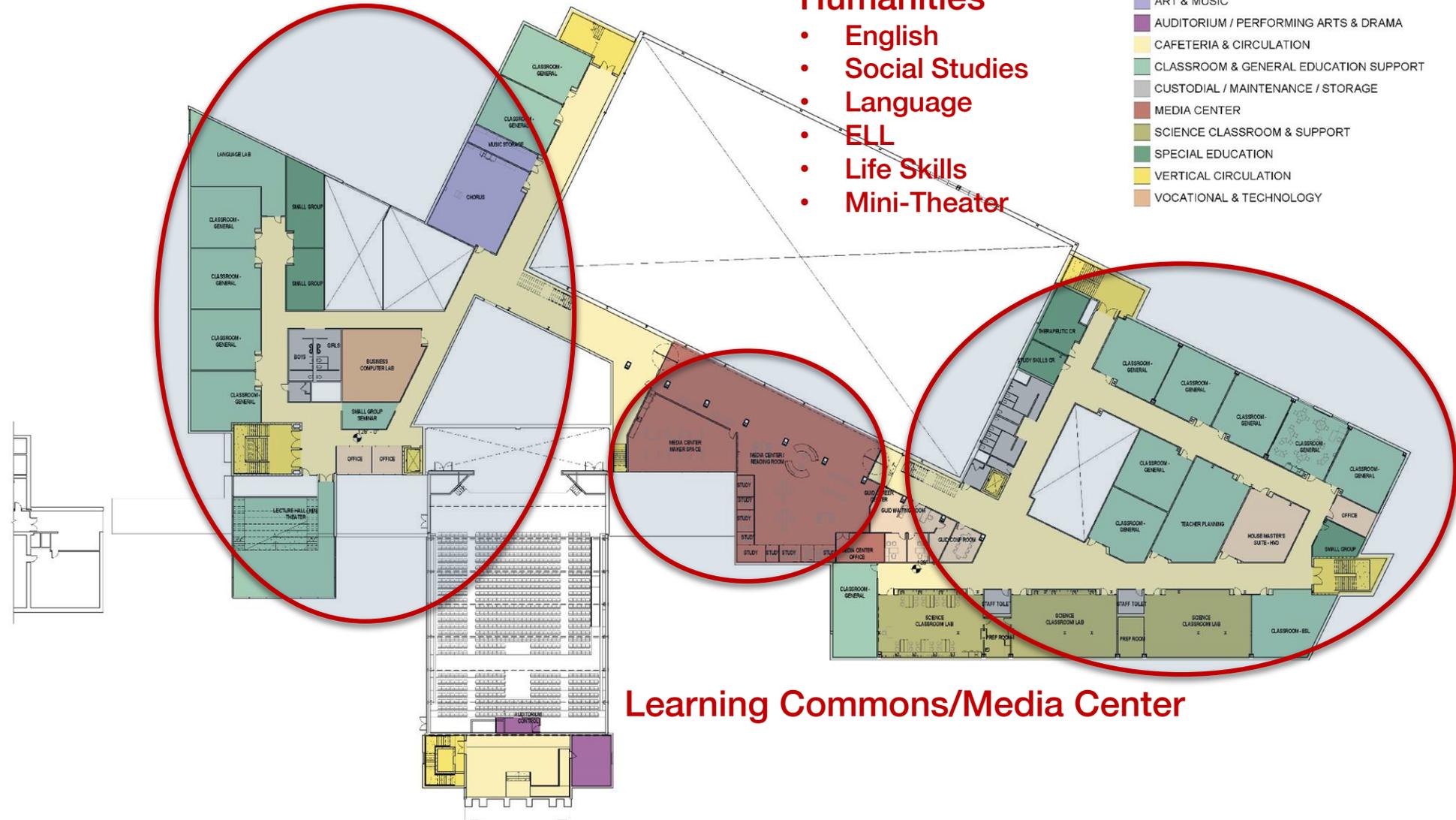
- Band
- Orchestra
- Culinary Arts
- Drama & Chorus (above)
- Dance (below)



## Technology & Mathematics

- Business Lab
- Math Classrooms
- Large Group Instruction
- Physics

# 3<sup>rd</sup> Floor Plan



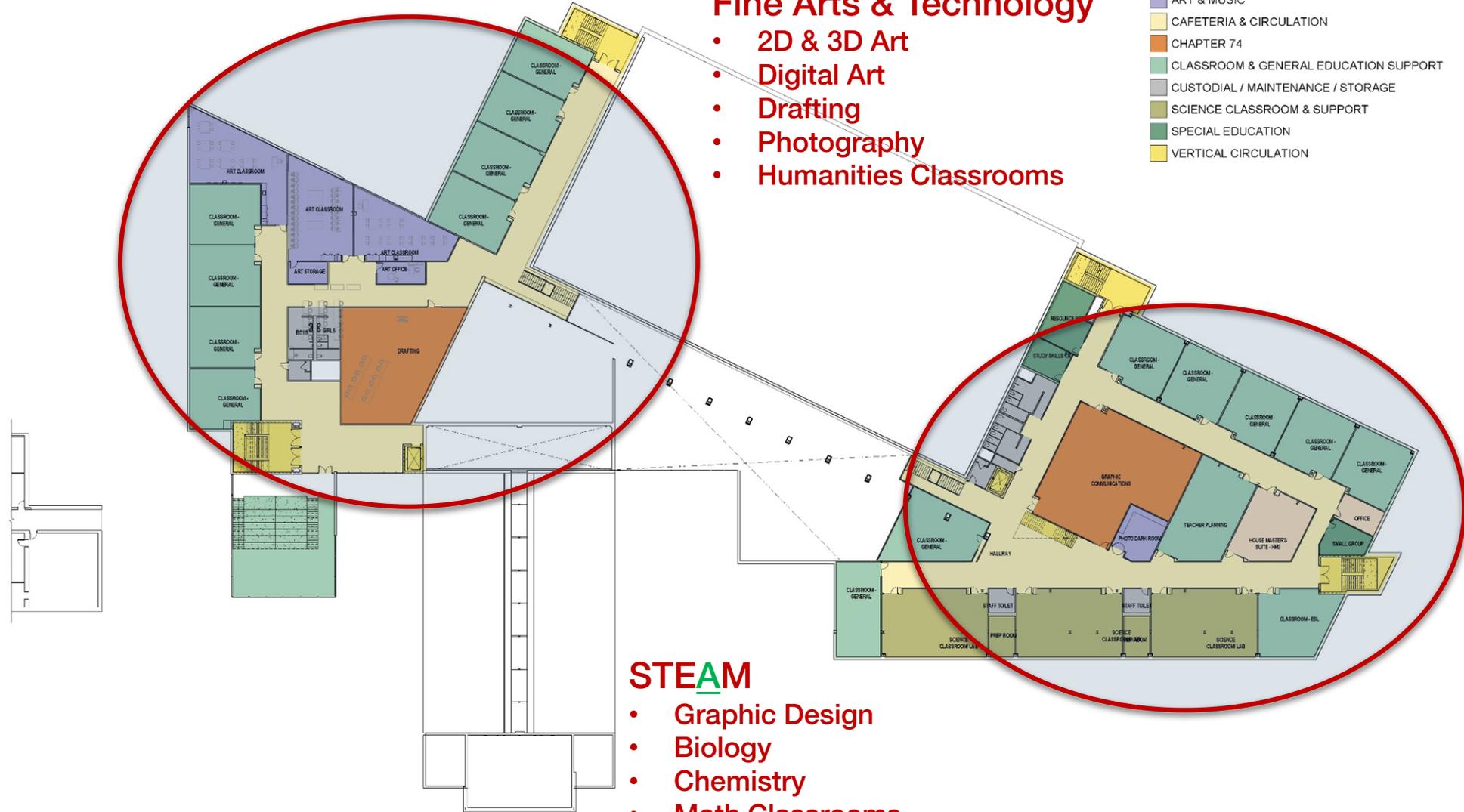
- ## Humanities
- English
  - Social Studies
  - Language
  - ELL
  - Life Skills
  - Mini-Theater

PROGRAM PLAN LEGEND

Administration / Guidance / Student Services / Nurse
Art & Music
Auditorium / Performing Arts & Drama
Cafeteria & Circulation
Classroom & General Education Support
Custodial / Maintenance / Storage
Media Center
Science Classroom & Support
Special Education
Vertical Circulation
Vocational & Technology

Learning Commons/Media Center

# 4<sup>th</sup> Floor Plan



## Fine Arts & Technology

- 2D & 3D Art
- Digital Art
- Drafting
- Photography
- Humanities Classrooms

## STEAM

- Graphic Design
- Biology
- Chemistry
- Math Classrooms

### PROGRAM PLAN LEGEND

- ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE
- ART & MUSIC
- CAFETERIA & CIRCULATION
- CHAPTER 74
- CLASSROOM & GENERAL EDUCATION SUPPORT
- CUSTODIAL / MAINTENANCE / STORAGE
- SCIENCE CLASSROOM & SUPPORT
- SPECIAL EDUCATION
- VERTICAL CIRCULATION

# 5<sup>th</sup> Floor Plan

## PROGRAM PLAN LEGEND

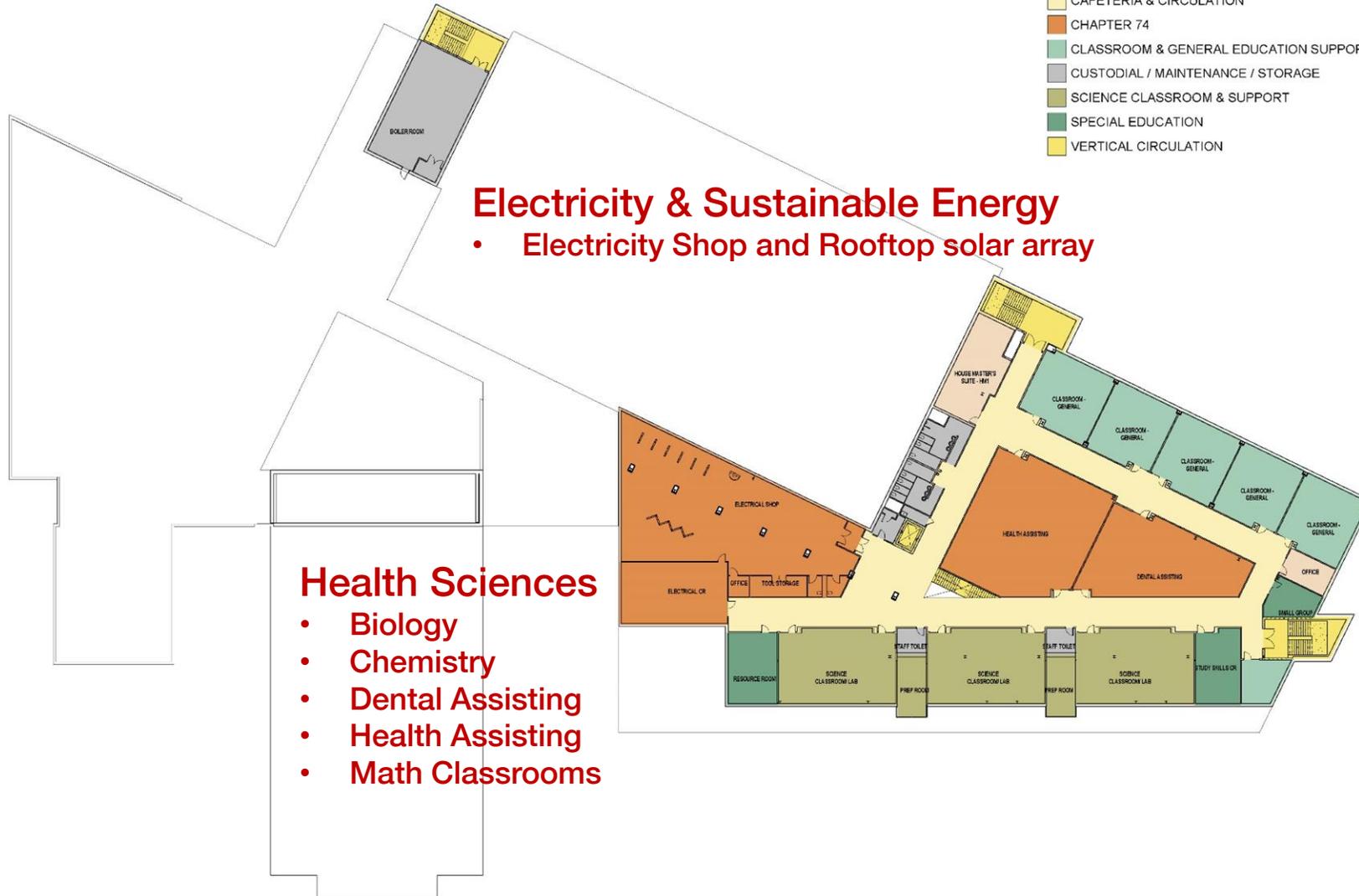
- ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE
- CAFETERIA & CIRCULATION
- CHAPTER 74
- CLASSROOM & GENERAL EDUCATION SUPPORT
- CUSTODIAL / MAINTENANCE / STORAGE
- SCIENCE CLASSROOM & SUPPORT
- SPECIAL EDUCATION
- VERTICAL CIRCULATION

## Electricity & Sustainable Energy

- Electricity Shop and Rooftop solar array

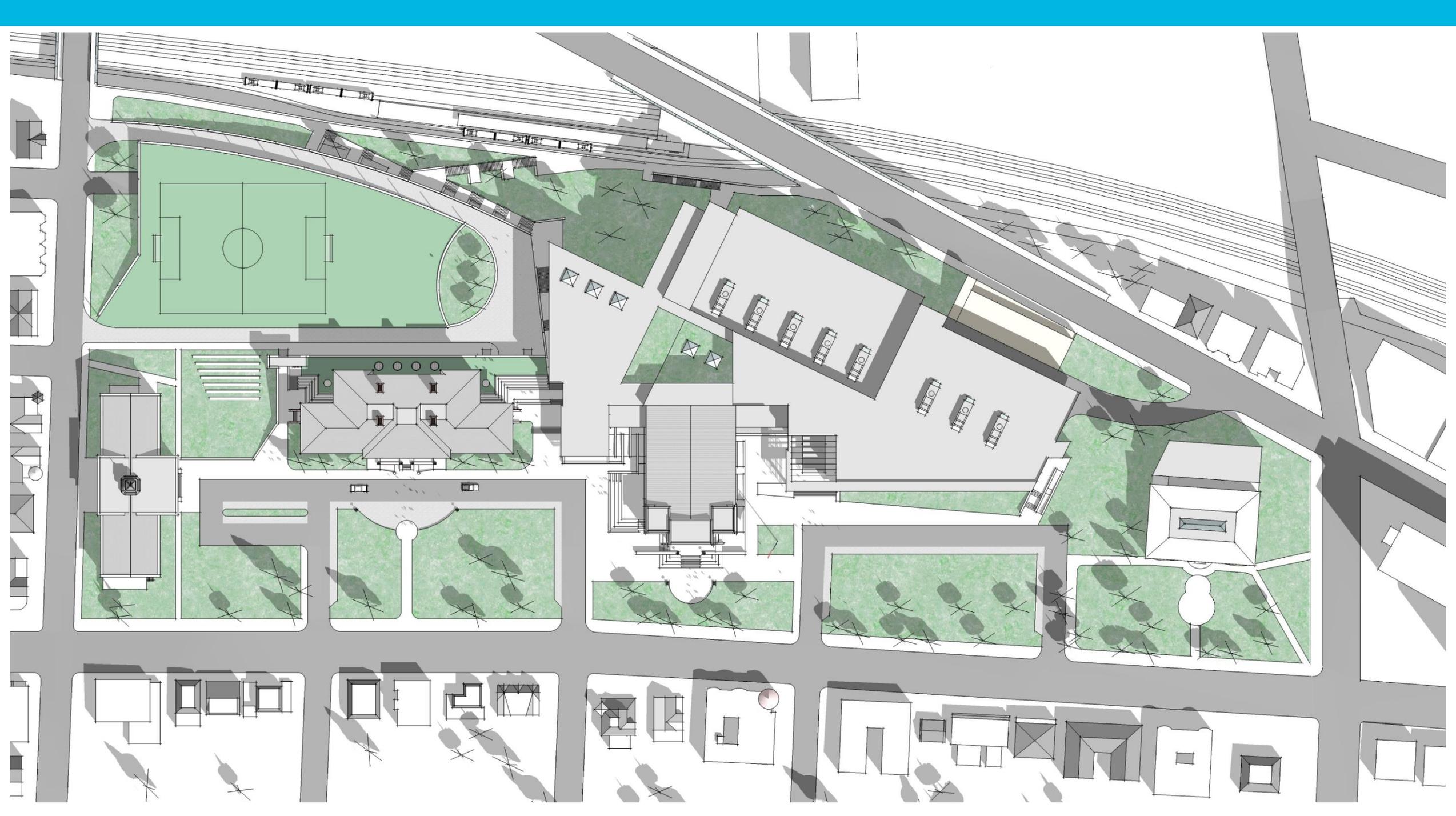
## Health Sciences

- Biology
- Chemistry
- Dental Assisting
- Health Assisting
- Math Classrooms





# Fab Lab



# Existing Conditions



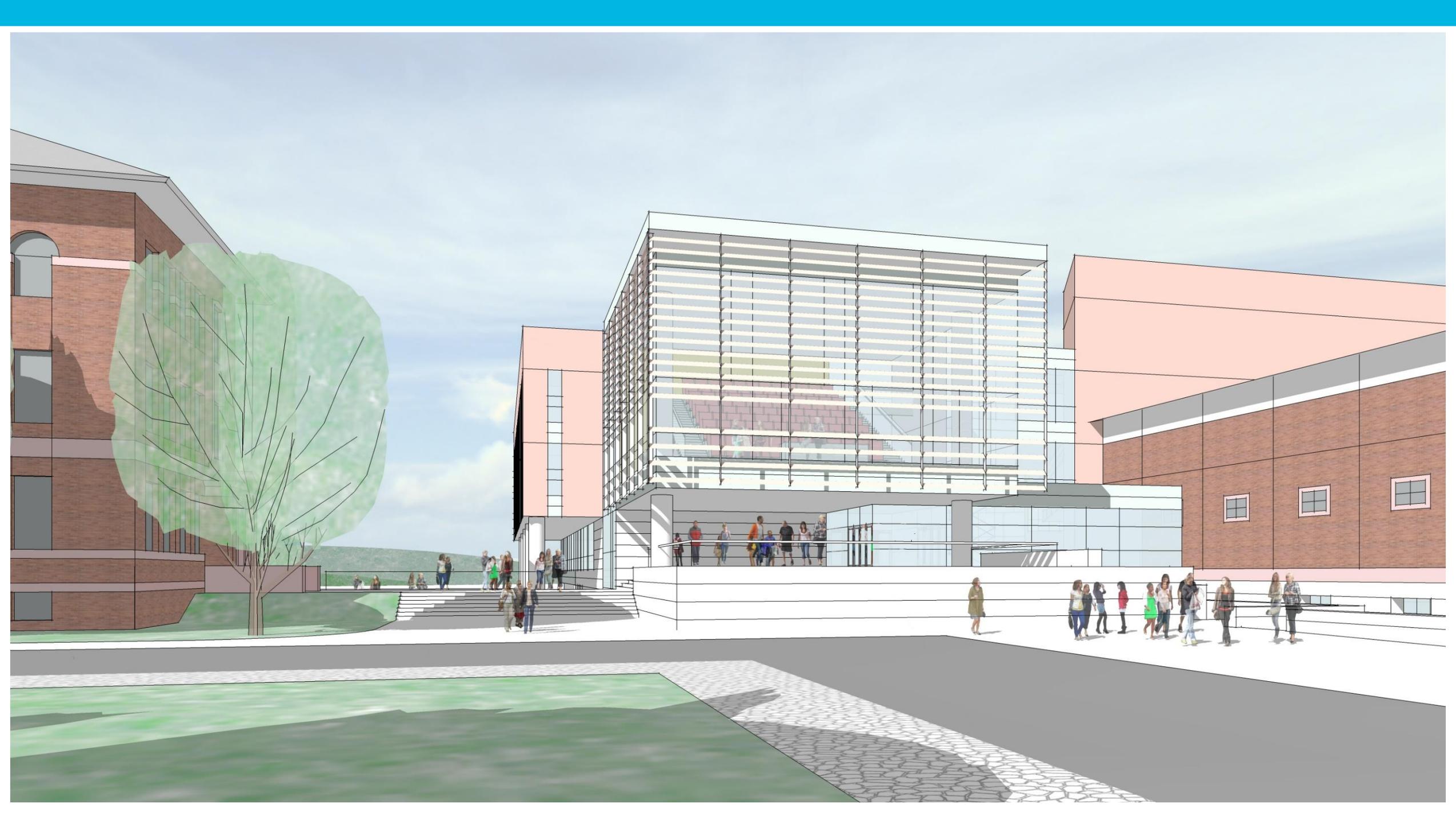




SOMERVILLE  
HIGH  
SCHOOL



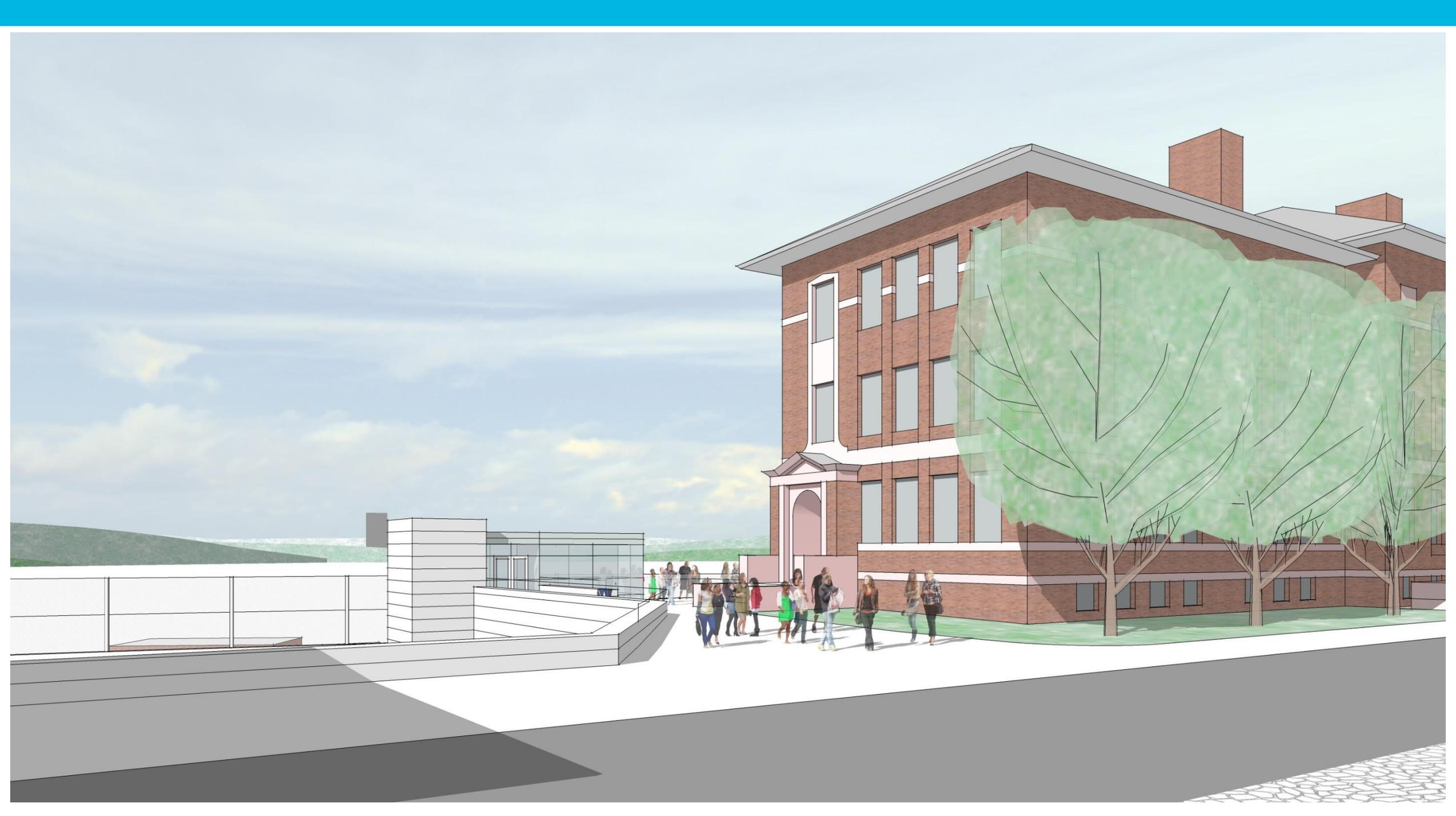




















# Field and Venue Inventory



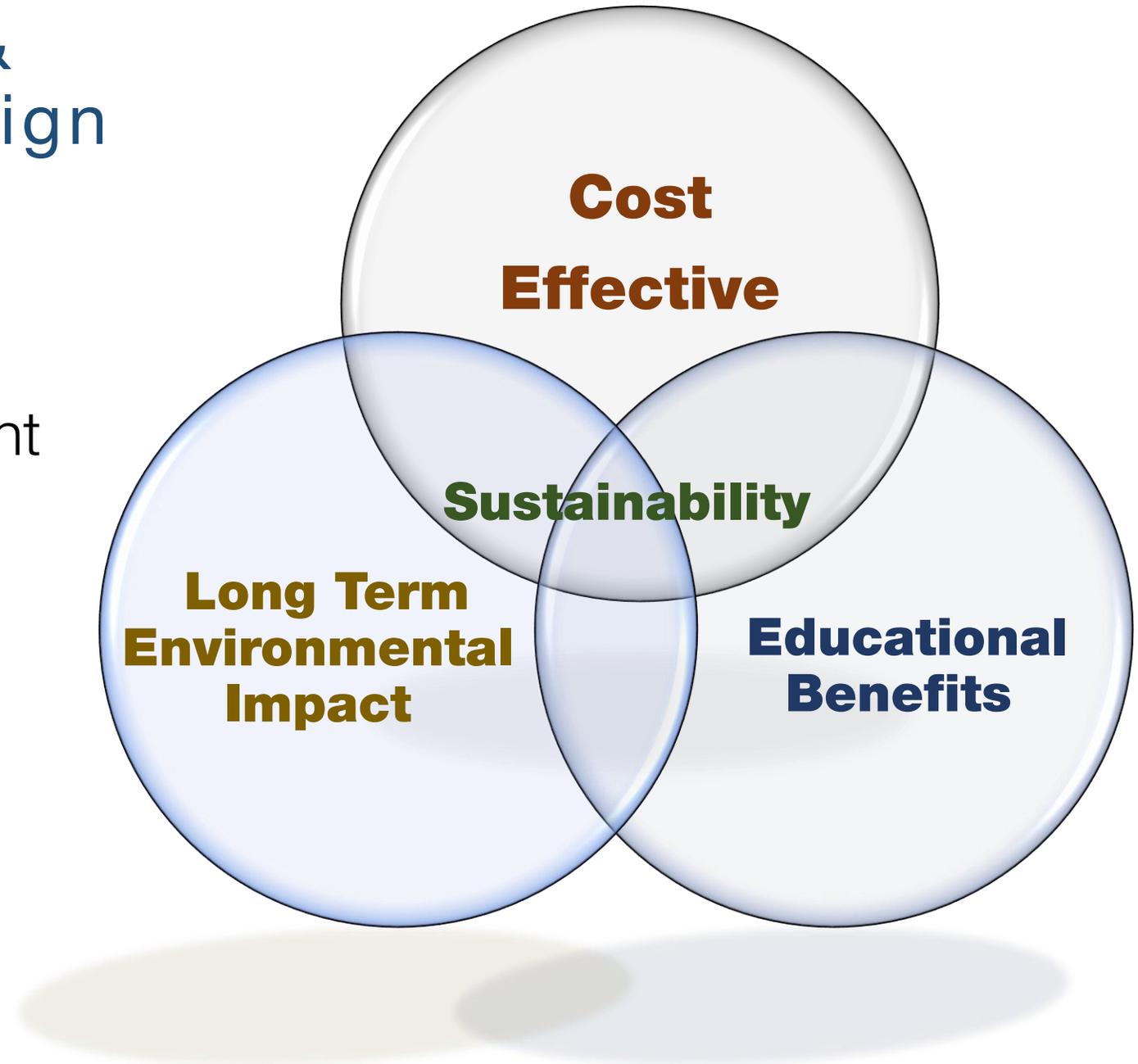
Somerville High School Field House		Blessing of the Bay Boathouse	
Veterans Memorial Hockey Rink		Crew	
Conway Park		Kennedy School	
Fall: Football Practice		J.V. Basketball	
Spring: Little League		Argenziano School Field	
Dilboy Stadium		Girl's Soccer Practice	
Fall: Football		Ultimate Frisbee	
Spring: Track		East Somerville Community School	
Trum Field		Freshman Basketball	
Spring: Baseball & Softball		Soccer Practice	
Foss Park (DCR)		Capuano Early Education center	
Fall: Soccer Practice		Soccer Practice	
Spring: Softball, Ultimate Frisbee		Draw Seven	
		Soccer Field	

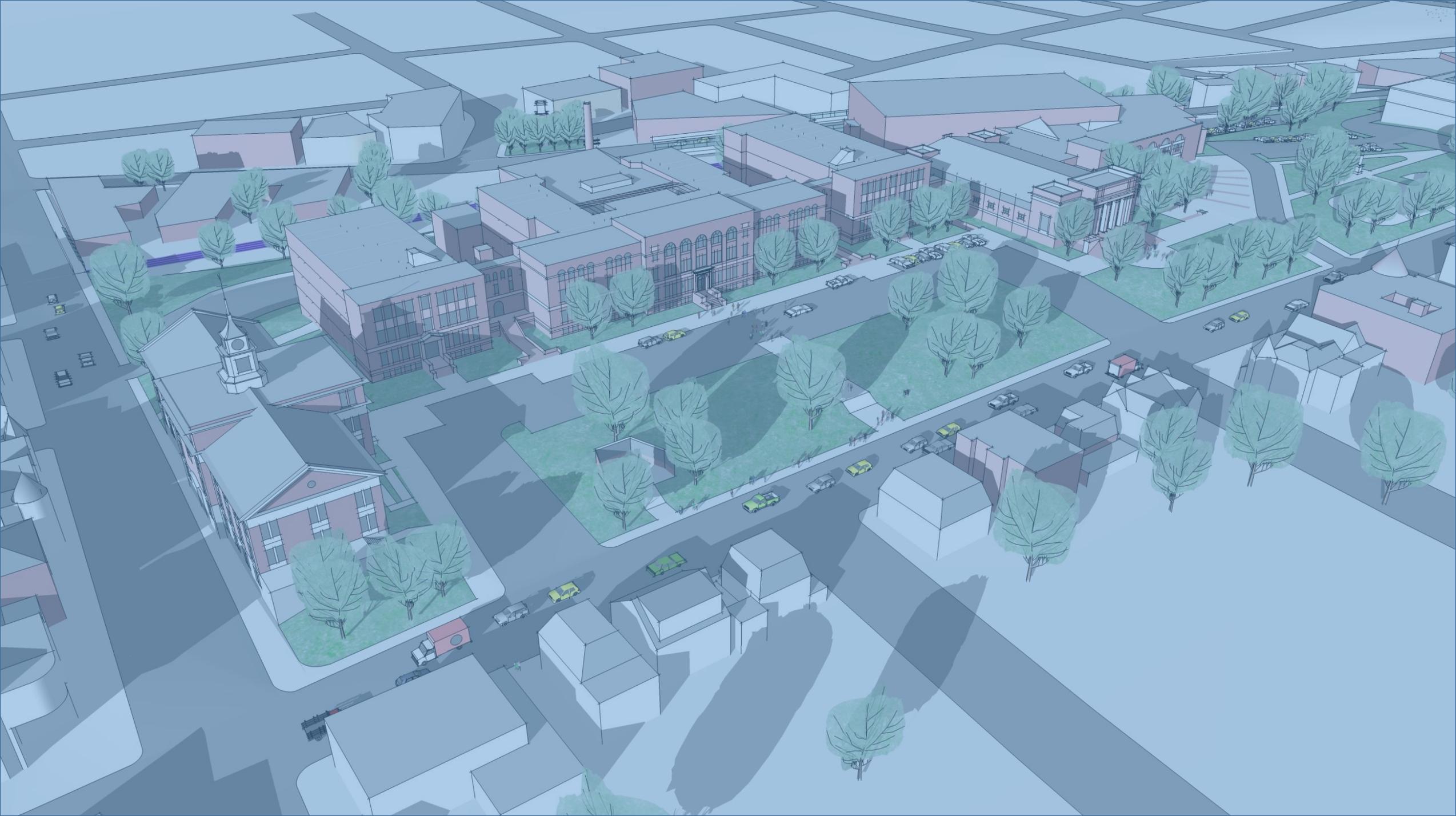


# Highly Sustainable & Energy Efficient Design

LEED v4 Silver Rating

2% Additional Reimbursement

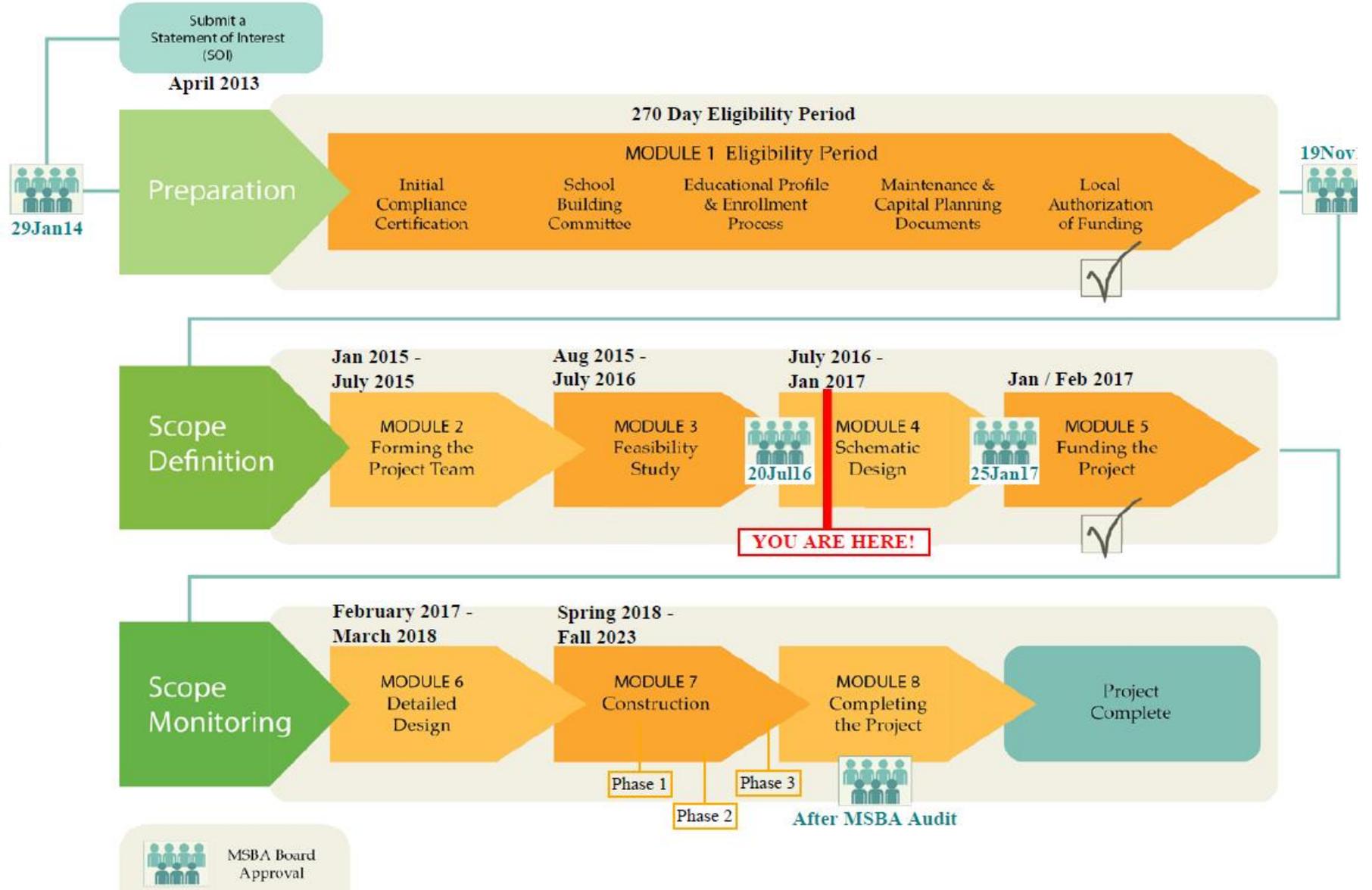




# MSBA Process– Somerville HS Timeline



Massachusetts School Building Authority

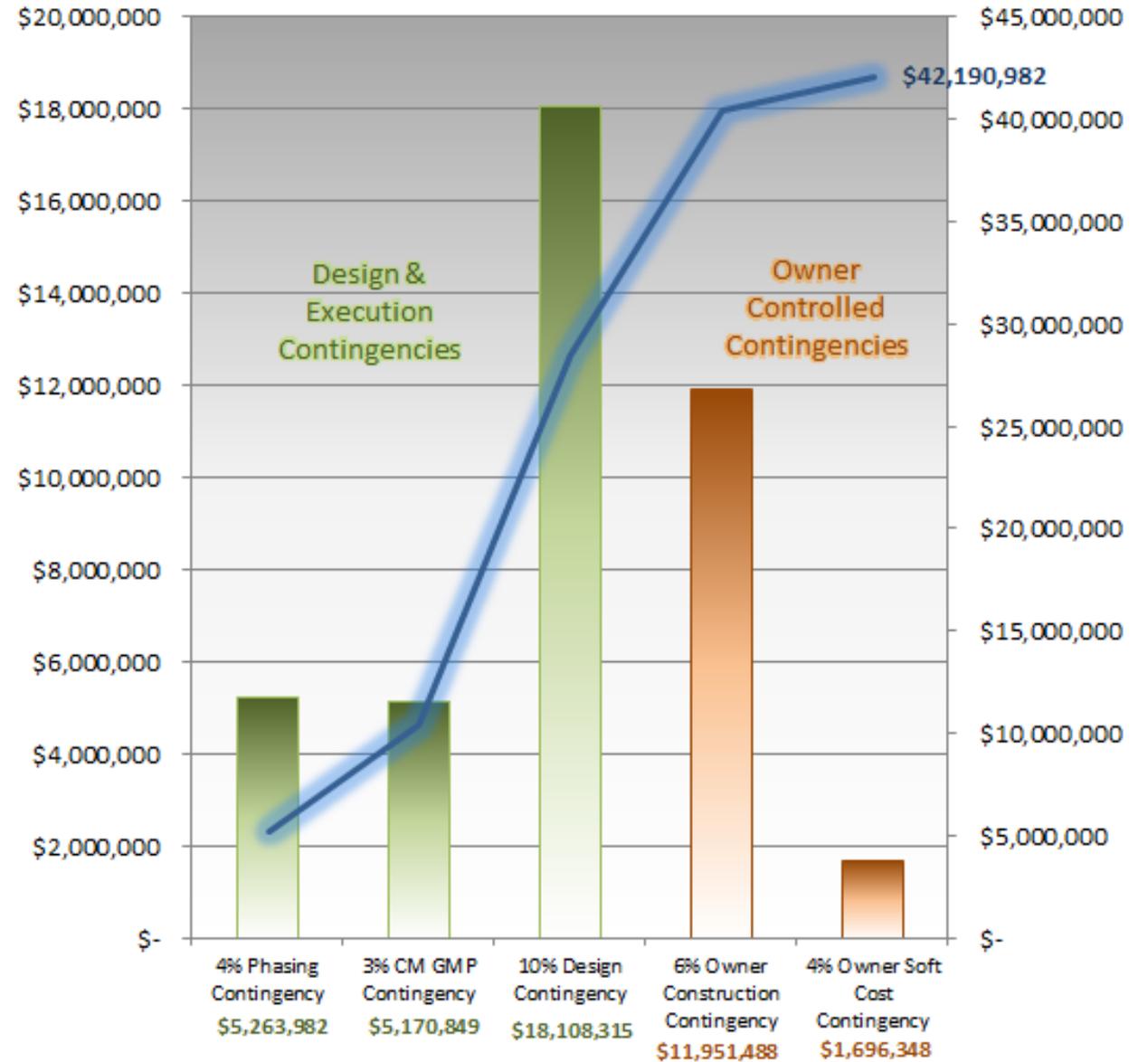
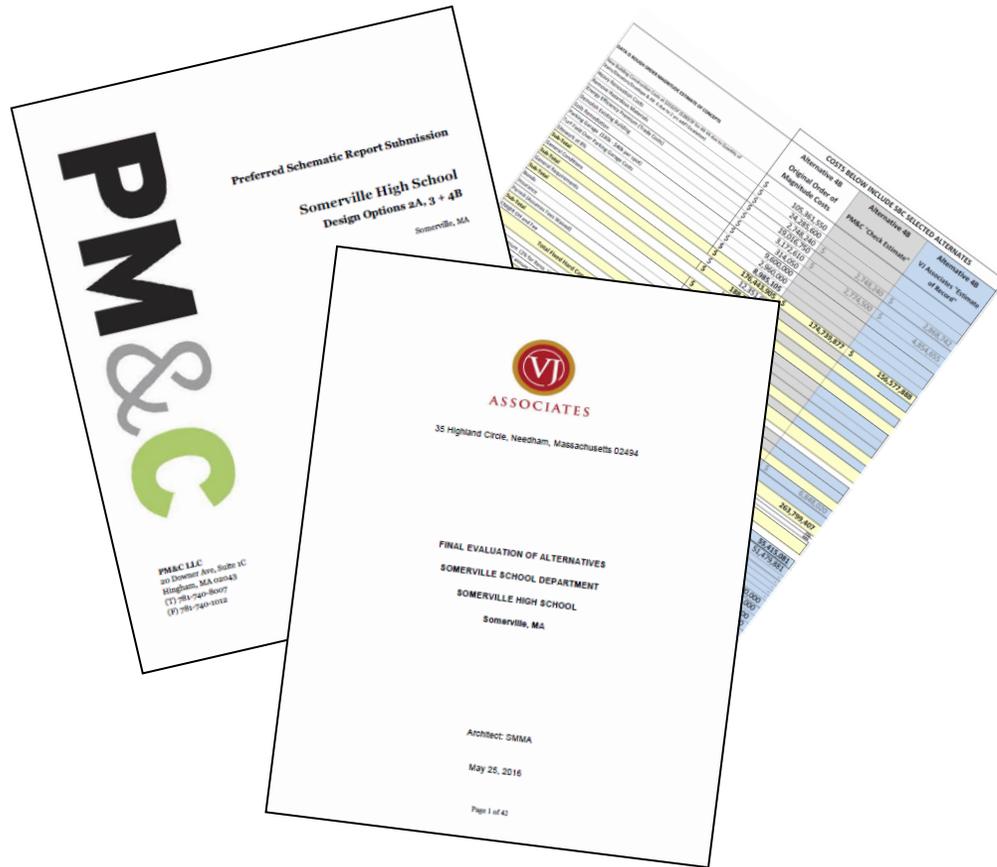


## Recent Critical Milestones

- **July 6, 2016** – Board of Aldermen Financial Presentation
- **July 14, 2016** – Board of Aldermen Approval of Project for Ballot Submission
- **July 20, 2016** - Massachusetts School Building Authority Approves Preferred Schematic Option 4B

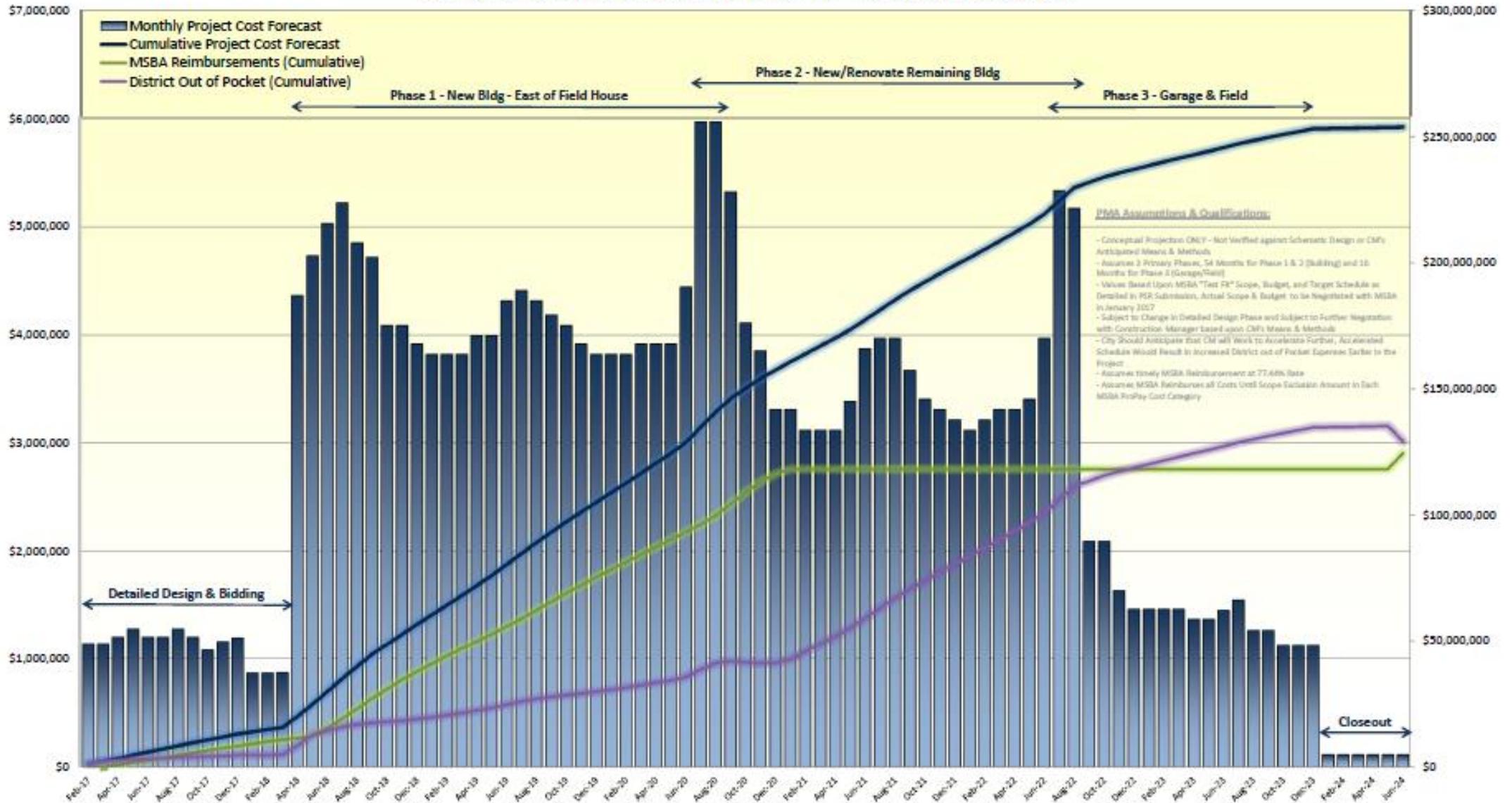
# Budget Development

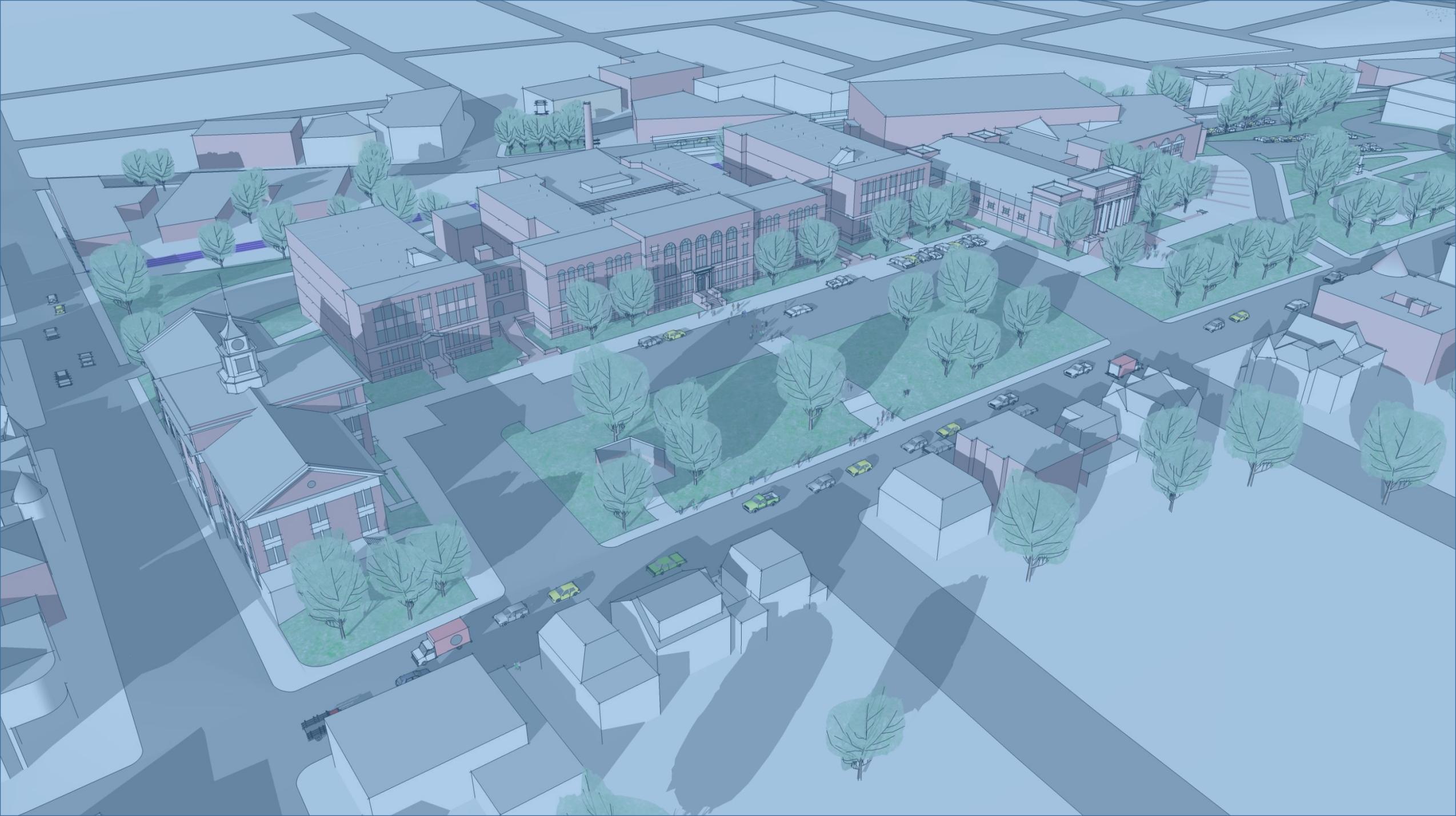
- THREE Estimating efforts (Two of those performed by 3<sup>rd</sup> party independent estimating firms)
- THREE Unique methodologies
- ALL Reconciled to within 0.8%



# Phasing & Early Cashflow Projections

Somerville Conceptual Cashflow (29Jun16 - Pre-Schematic Design)





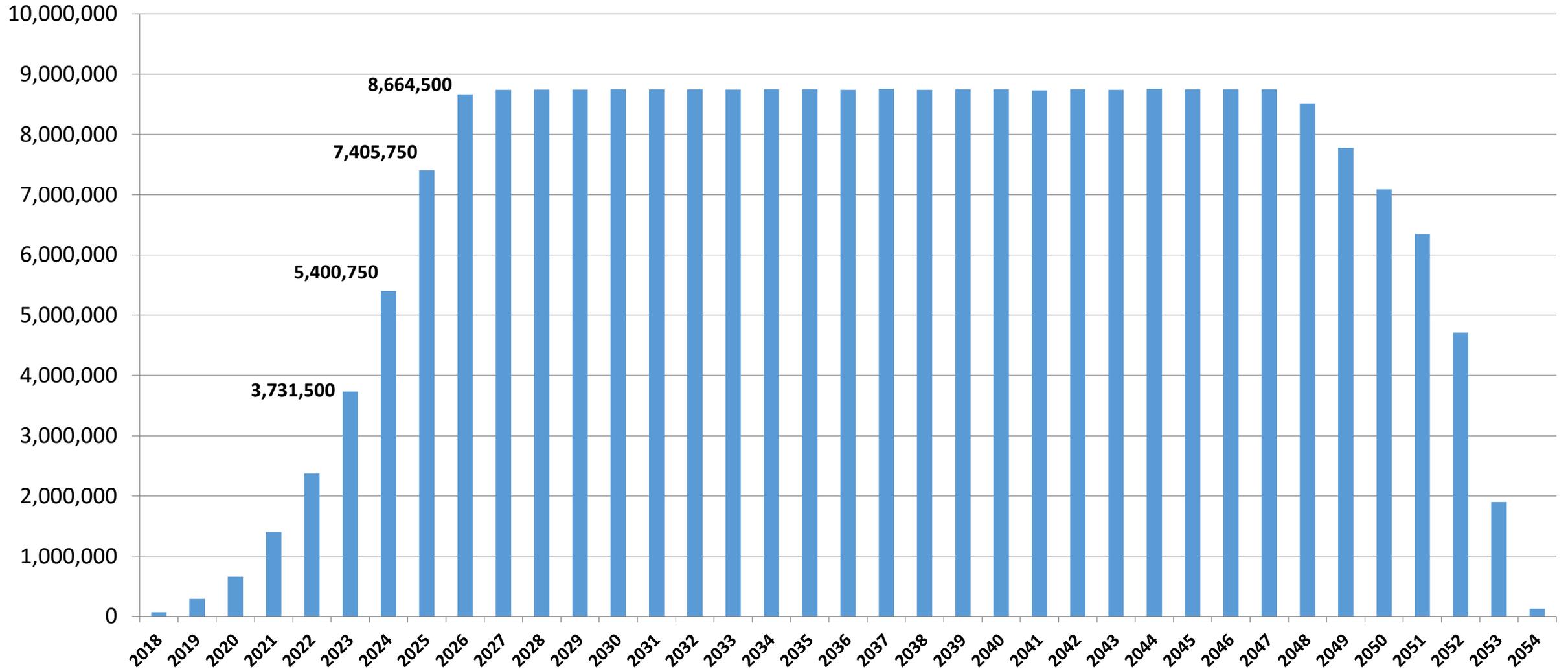
# Projected 30-Year Debt Service

## \$130,300,000 Bonds - 30 Years

	A	B	C	D	E	F	G	H	I
Fiscal Year	\$3.4M Bonds dated 6/1/2019 (BANs dated 6/1/2017)	Plus: \$11.1M Bonds dated 6/1/2020 (BANs dated 6/1/2018)	Plus: \$10.3M Bonds dated 6/1/2021 (BANs dated 6/1/2019)	Plus: \$11M Bonds dated 6/1/2022 (BANs dated 6/1/2020)	Plus: \$24.3M Bonds dated 6/1/2023 (BANs dated 6/1/2021)	Plus: \$41.9M Bonds dated 6/1/2024 (BANs dated 6/1/2022)	Plus: \$26.4M Bonds dated 6/1/2025 (BANs dated 6/1/2023)	Plus: \$1.9M Bonds dated 6/1/2026 (BANs dated 6/1/2024)	Equals: Projected Debt Service
2018	68,000	-	-	-	-	-	-	-	68,000
2019	68,000	222,000	-	-	-	-	-	-	290,000
2020	230,000	222,000	206,000	-	-	-	-	-	658,000
2021	227,000	745,000	206,000	220,000	-	-	-	-	1,398,000
2022	229,000	745,500	690,000	220,000	486,000	-	-	-	2,370,500
2023	230,750	745,500	691,250	740,000	486,000	838,000	-	-	3,731,500
2024	227,250	745,000	692,000	740,500	1,630,000	838,000	528,000	-	5,400,750
2025	228,750	744,000	692,250	735,500	1,629,250	2,810,000	528,000	38,000	7,405,750
2026	230,000	747,500	692,000	740,250	1,632,500	2,814,250	1,770,000	38,000	8,664,500
2027	226,000	745,250	691,250	739,250	1,629,500	2,811,500	1,772,500	125,000	8,740,250
2028	227,000	742,500	690,000	737,750	1,630,500	2,812,000	1,773,750	128,500	8,742,000
2029	227,750	744,250	693,250	735,750	1,630,250	2,810,500	1,773,750	126,750	8,742,250
2030	228,250	745,250	690,750	738,250	1,633,750	2,812,000	1,772,500	130,000	8,750,750
2031	228,500	745,500	692,750	740,000	1,630,750	2,811,250	1,770,000	128,000	8,746,750
2032	228,500	745,000	694,000	736,000	1,631,500	2,813,250	1,771,250	126,000	8,745,500
2033	228,250	743,750	689,500	736,500	1,630,750	2,812,750	1,771,000	129,000	8,741,500
2034	227,750	746,750	689,500	736,250	1,633,500	2,814,750	1,774,250	126,750	8,749,500
2035	227,000	743,750	693,750	740,250	1,629,500	2,814,000	1,770,750	129,500	8,748,500
2036	226,000	745,000	692,000	738,250	1,629,000	2,810,500	1,770,750	127,000	8,738,500
2037	229,750	745,250	689,500	740,500	1,631,750	2,814,250	1,774,000	129,500	8,754,500
2038	228,000	744,500	691,250	736,750	1,632,500	2,809,750	1,770,250	126,750	8,739,750
2039	226,000	742,750	692,000	737,250	1,631,250	2,812,250	1,774,750	129,000	8,745,250
2040	228,750	745,000	691,750	736,750	1,633,000	2,811,250	1,772,000	126,000	8,744,500
2041	226,000	746,000	690,500	740,250	1,632,500	2,811,750	1,772,250	128,000	8,747,250
2042	228,000	745,750	693,250	737,500	1,629,750	2,813,500	1,770,250	129,750	8,747,750
2043	229,500	744,250	689,750	738,750	1,629,750	2,811,250	1,771,000	126,250	8,740,500
2044	230,500	746,500	690,250	738,750	1,632,250	2,815,000	1,774,250	127,750	8,755,250
2045	226,000	747,250	689,500	737,500	1,632,000	2,814,250	1,769,750	129,000	8,745,250
2046	226,250	746,500	692,500	740,000	1,629,000	2,814,000	1,772,750	125,000	8,746,000
2047	231,000	744,250	689,000	736,000	1,633,250	2,814,000	1,772,750	126,000	8,746,250
2048	-	745,500	689,250	740,750	1,629,250	2,814,000	1,769,750	126,750	8,515,250
2049	-	-	693,000	738,750	1,632,250	2,813,750	1,773,750	127,250	7,778,750
2050	-	-	-	740,250	1,631,750	2,813,000	1,774,250	127,500	7,086,750
2051	-	-	-	-	1,632,750	2,811,500	1,771,250	127,500	6,343,000
2052	-	-	-	-	-	2,814,000	1,769,750	127,250	4,711,000
2053	-	-	-	-	-	-	1,774,500	126,750	1,901,250
2054	-	-	-	-	-	-	-	126,000	126,000
<b>Total</b>	<b>6,523,500</b>	<b>21,307,000</b>	<b>19,767,750</b>	<b>21,114,250</b>	<b>46,645,750</b>	<b>80,430,250</b>	<b>50,673,750</b>	<b>3,644,500</b>	<b>250,106,750</b>

# Full Debt Service Payments Start in 2026

Projected Somerville High School Debt Service - Annual Payments

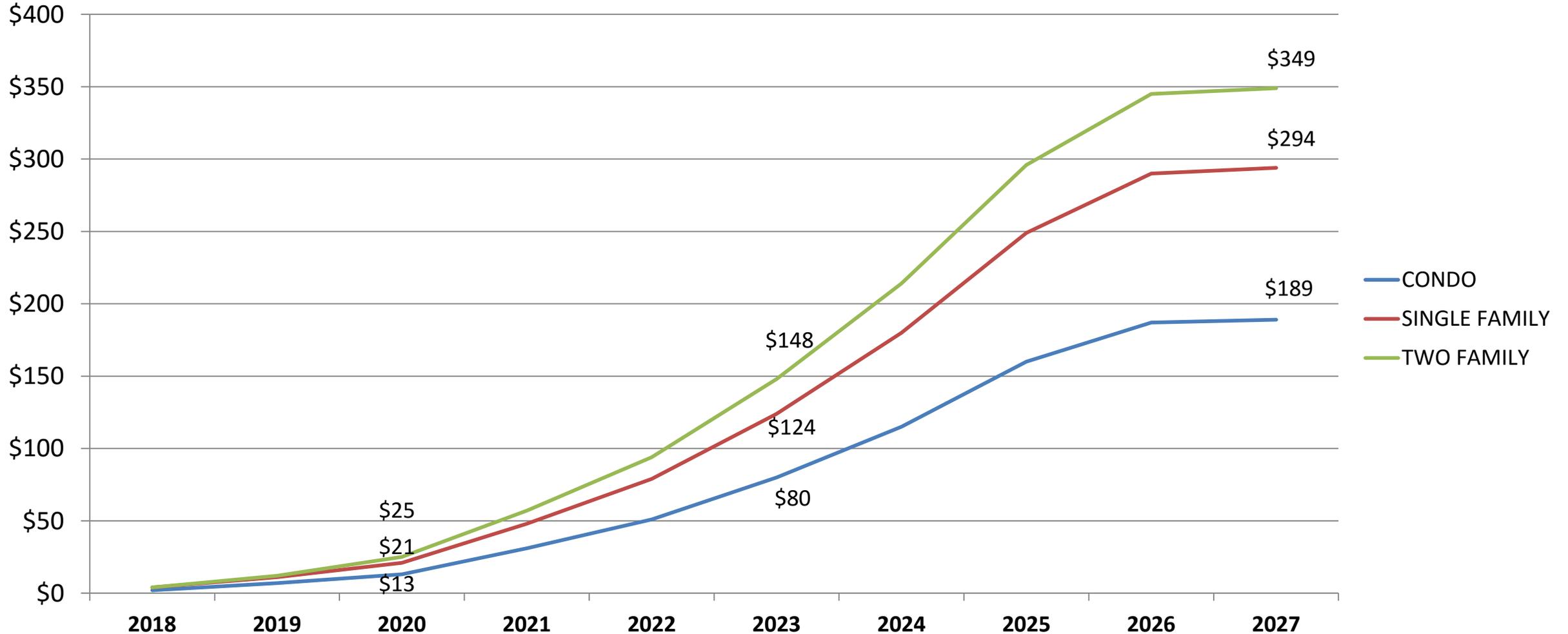


# Projected Impact of Debt Exclusion

SUMMARY IMPACT OF DEBT EXCLUSION FY 2018 - FY 2027											
ADDITIONAL PROPERTY TAX INCREASE (PROJECTED) BASED UPON FY 2016 AVERAGE VALUES*											
WITH RESIDENTIAL EXEMPTION											
	FY	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	DEBT SERVICE	\$68,000	\$290,000	\$658,000	\$1,398,000	\$2,370,500	\$3,731,500	\$5,400,750	\$7,405,750	\$8,664,500	\$8,740,250
USE											
CONDO		\$2	\$7	\$13	\$31	\$51	\$80	\$115	\$160	\$187	\$189
SINGLE FAM		\$4	\$11	\$21	\$48	\$79	\$124	\$180	\$249	\$290	\$294
TWO FAM		\$4	\$12	\$25	\$57	\$94	\$148	\$214	\$296	\$345	\$349
THREE FAM		\$5	\$15	\$30	\$70	\$116	\$181	\$262	\$362	\$423	\$428
4-8 FAM		\$7	\$21	\$41	\$96	\$158	\$248	\$358	\$495	\$578	\$585
9+ FAMILY		\$31	\$93	\$185	\$432	\$709	\$1,110	\$1,604	\$2,221	\$2,591	\$2,622
COMM. & IND.		\$19	\$95	\$190	\$418	\$703	\$1,102	\$1,615	\$2,204	\$2,584	\$2,603
ASSUMES RESIDENTIAL EXEMPTION FOR CONDO, 1, 2, 3, 4-8 UNIT USES											
WITHOUT RESIDENTIAL EXEMPTION											
CONDO		\$4	\$13	\$26	\$60	\$99	\$155	\$224	\$311	\$362	\$367
SINGLE FAM		\$6	\$17	\$33	\$78	\$128	\$200	\$289	\$400	\$466	\$472
TWO FAM		\$6	\$19	\$37	\$87	\$143	\$223	\$322	\$446	\$521	\$527
THREE FAM		\$7	\$21	\$43	\$100	\$164	\$257	\$371	\$513	\$599	\$606
4-8 FAM		\$9	\$27	\$54	\$126	\$206	\$323	\$467	\$646	\$754	\$763
9+ FAMILY		\$31	\$93	\$185	\$432	\$709	\$1,110	\$1,604	\$2,221	\$2,591	\$2,622
COMM. & IND.		\$19	\$95	\$190	\$418	\$703	\$1,102	\$1,615	\$2,204	\$2,584	\$2,603
*DEBT SERVICE CONTINUES UNTIL FY 2054 AT AN AMOUNT MORE OR LESS EQUAL TO FY 2027 NUMBER											

# Projected Impact of SHS on Property Tax

## SUMMARY IMPACT OF DEBT EXCLUSION FY2018 - FY2027 WITH RESIDENTIAL EXEMPTION



Based on FY2016 Average Values

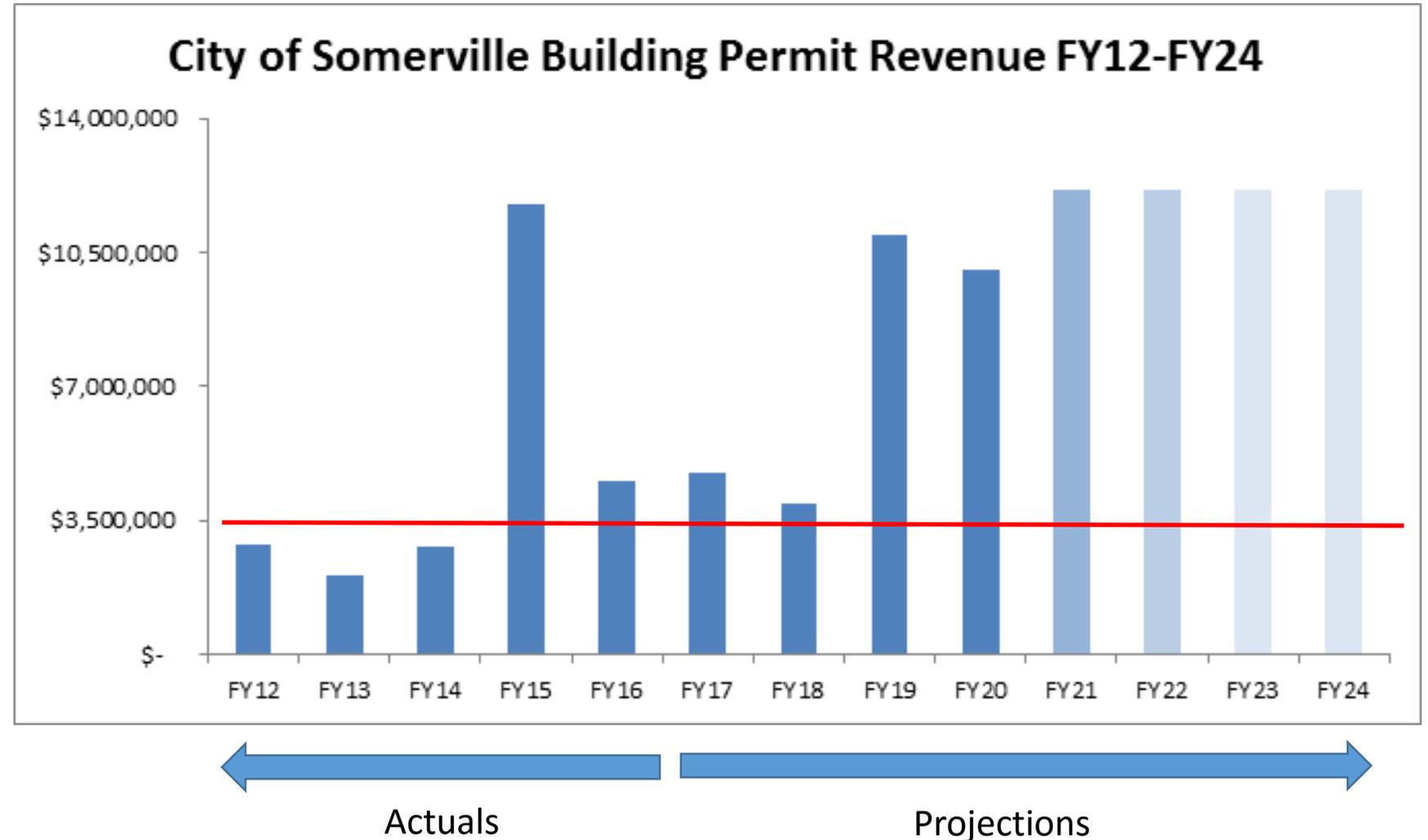
# Mitigation Options Under Review

- Building Permit Revenue
- Sale of Assets
- Reserves

# Building Permit Revenue Projections

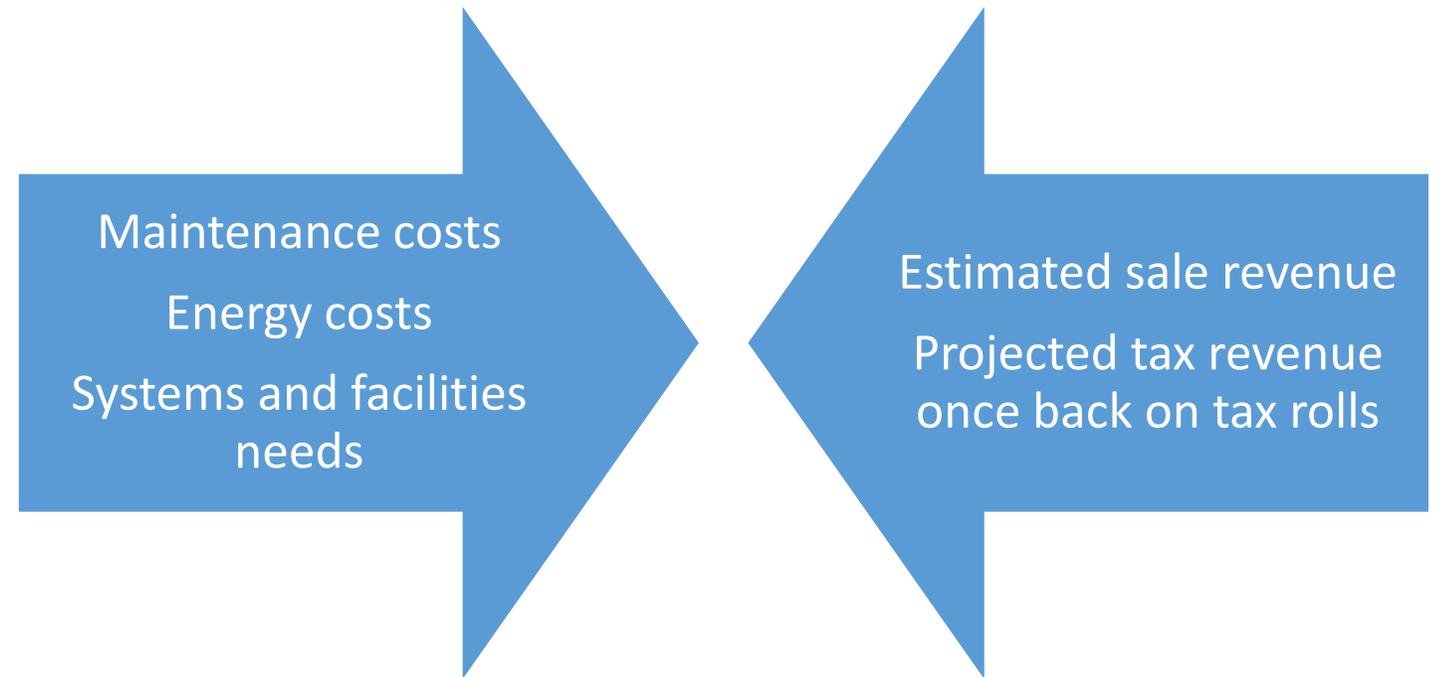
The Long-Range Forecast assumes \$3.5M in annual building permit revenue (\$35M over 10 years).

However, if development timelines are realized as currently anticipated, the actual value of building permit revenue would exceed this by \$30M+.



# Framework for Sale of Assets

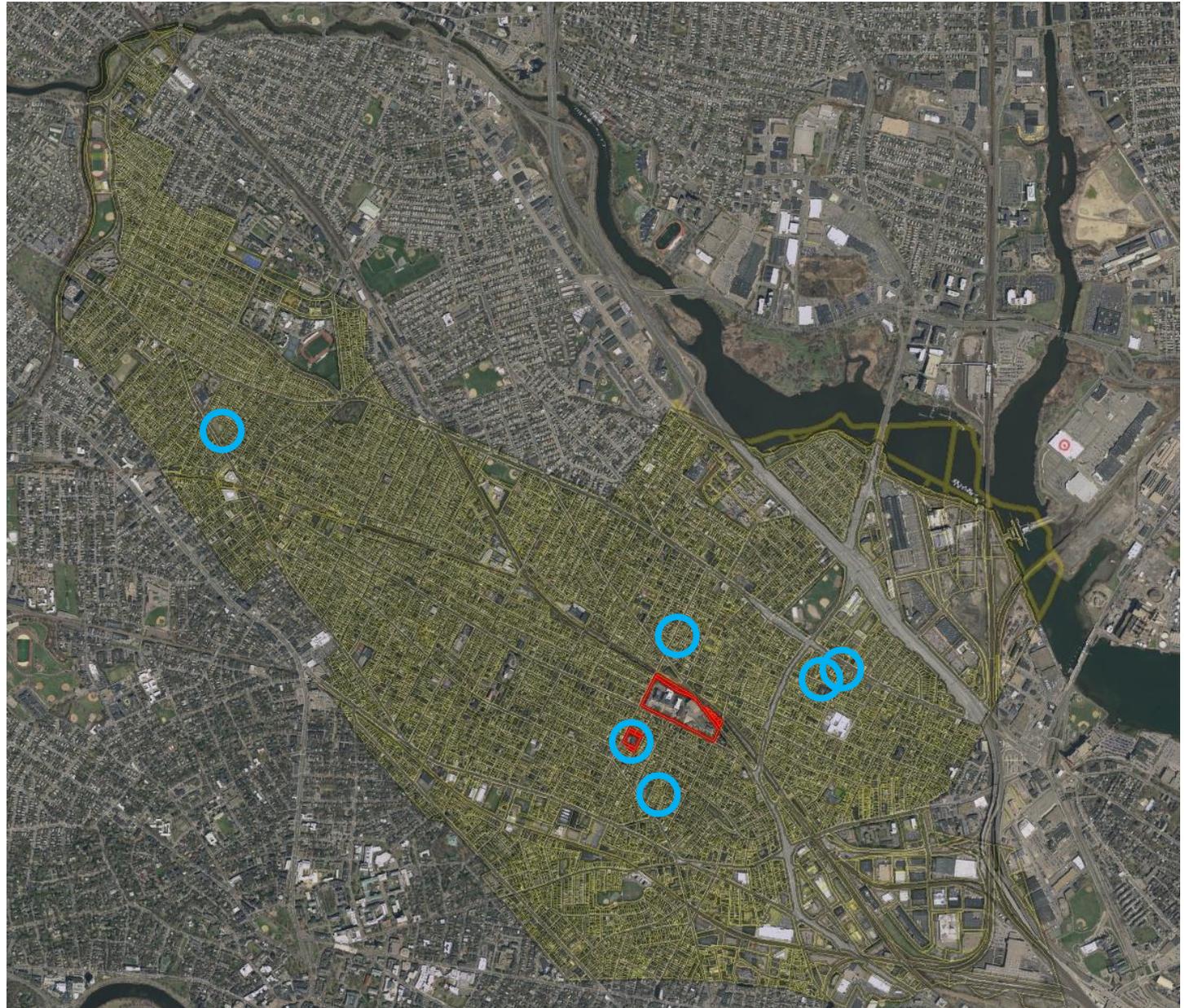
- Assess programmatic space needs
- Assess ongoing energy, maintenance, and repair costs
- Determine highest and best use options under current and proposed zoning
- Conduct cost-benefit analysis of continued use vs. sale



# City Building Assets and Consolidation Planning

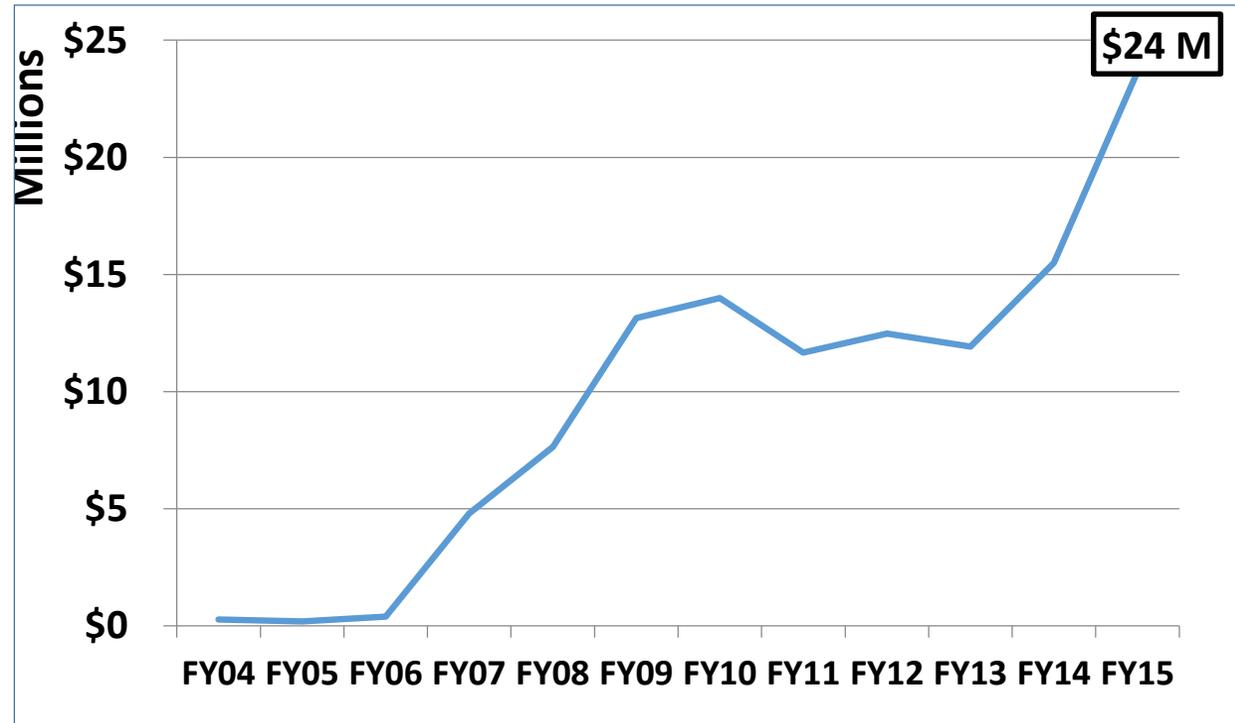
Six buildings currently under review:

- Edgerly School - 8 Bonair St.
- Cummings School - 42 Prescott St.
- School Admin Building - 42 Cross St.
- Recreation Building - 19 Walnut St.
- City Hall Annex - 50 Evergreen Ave.
- Traffic & Parking, 133 Holland St.

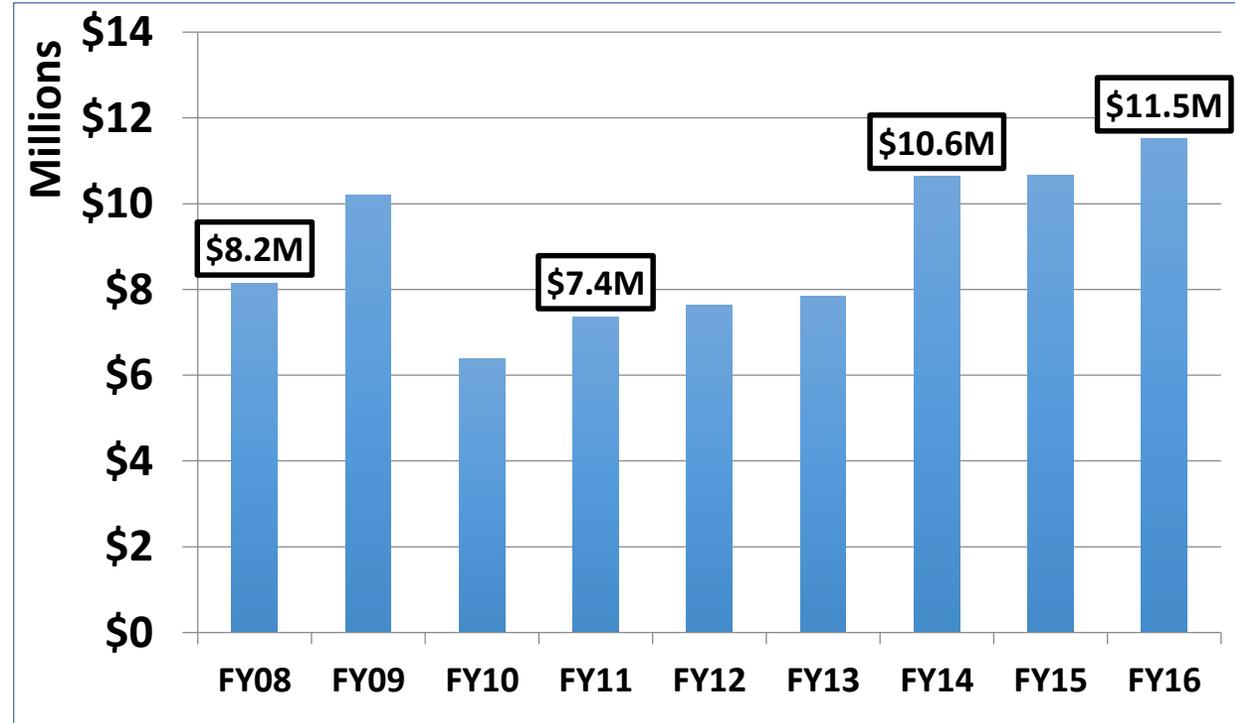


# Prioritizing Reserves for Capital Investments

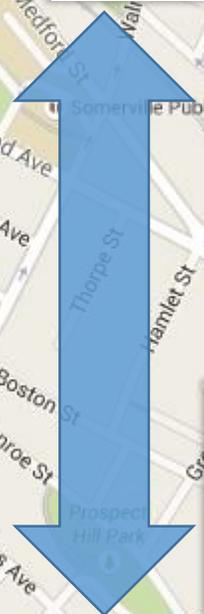
## Stabilization Fund Balance



## Annual Free Cash Certification



# Building Connections: Linking Gilman Square to Union Square via the Central Hill Civic Campus



**Somerville** *by*  
**DESIGN**

An architectural rendering of a modern school cafeteria. The space is bright and open, featuring large windows that offer a view of a suburban neighborhood. The interior is furnished with numerous round tables and orange chairs. People are depicted sitting at the tables, some talking and some looking towards the windows. A person with a backpack is walking in the foreground. The ceiling has a modern, geometric design with recessed lighting. The overall atmosphere is clean, bright, and functional.

For more information, go to  
[www.somervillema.gov/highschool/](http://www.somervillema.gov/highschool/)

Thank you!