SOMERSET MIDDLE SCHOOL

SMS

SMS Community Forum #7

Ai3 Architects, LLC
CGA Project Management

March 24, 2021

School Committee

Christopher Godet, Chair
Michael McDonald, Vice Chair
Victor Machado, Jr.
Robert Gaw
Shauna Geary

School Building Committee

Michael Botelho	Resident & Former School Committee Member
Richard Brown	Town Administrator
Kathleen Byers	Middle School Teacher
Dr. Pauline Camara	Middle School Principal
Carlos Campos	Supervisor of Buildings and Grounds
Chris Godet	Chairman of School Committee
Elizabeth Haskell	Director of Curriculum and Assessment
Robert Lima	Resident & Former Water Department Superintendent
Victor Machado, Jr.	Chairman of Building Committee & School Committee Member
Holly McNamara	Chairperson of Board of Selectmen
Steven Medeiros	Resident & Project Architect
Nicole Mello	Middle School Content Coordinator
Cassey Monte	Middle School Special Education Coordinator
Nick Raffa	Member at Large
Kevin Scanlon	Resident & Licensed Massachusetts Construction Supervisor
Ira Schaefer	Middle School Assistant Principal
Jeffrey Schoonover	Vice Chairman of Building Committee & Superintendent of Schools
Ronald Tarro	Director of Business and Finances
James Teixeira	Advisory and Finance Committee Member

Board of Selectmen

Holly McNamara, Chair
Steven Moniz
Lorne Lawless

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Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Districts

Construction Professionals

MSBA Building Process

Module 1
ELIGIBILITY PERIOD

Module 2
FORMING THE PROJECT TEAM

Module 3
FEASIBILITY STUDY

Module 4
SCHEMATIC DESIGN

Module 5
FUNDING THE PROJECT

Module 6
DETAILED DESIGN

Module 7
CONSTRUCTION

Module 8
COMPLETING THE PROJECT

Over the past 18 months

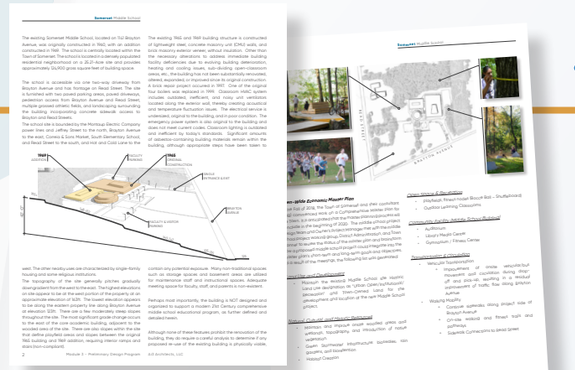
The Town of Somerset & its professional team has been completing a comprehensive Feasibility Study & Schematic Design with **VERY SPECIFIC guidance from the Massachusetts School Building Authority** (MSBA).

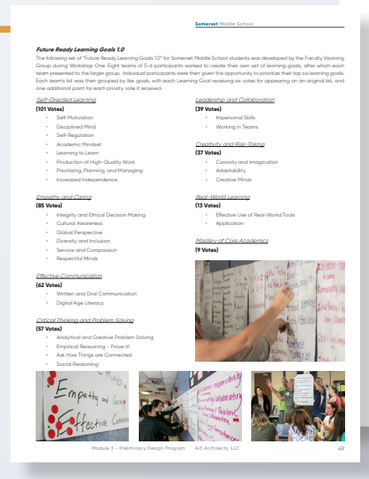
Over 15,000 Collective Hours

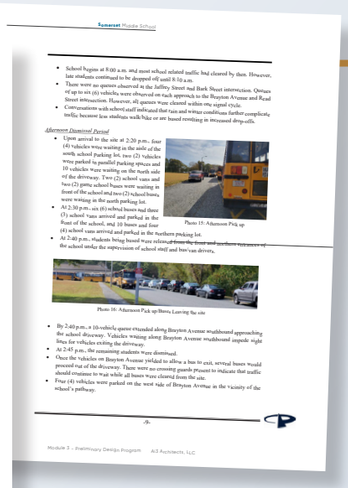
Analysis, investigation, reporting, planning, meetings, design, discussion, and educational visioning & brainstorming discussions.

Over 1,600 Pages of Reports & Documentation

- Haz-Mat Inspection & Report
- Phase 1 Environmental Assessment
- Plumbing Evaluation
- Fire Protection Evaluation
- Electrical Evaluation
- Heating & Ventilation Evaluation
- Technology Systems Evaluation
- Structural Evaluation
- Educational Program Analysis
- Educational Visioning Program
- Building Evaluation
  - Accessibility Review
  - Energy Code Review
  - Building Code Review
  - Historical Analysis
  - Department of Elementary & Secondary Education (DESE) Review
- Space Summary Spreadsheets
- Site Evaluation
- Existing Conditions Site Survey
- Phase I: Traffic Study Impact Analysis
- Geotechnical Investigations
- Site Utility Review
- Permitting Review
- Comparison Matrix
- Sustainable Design Review







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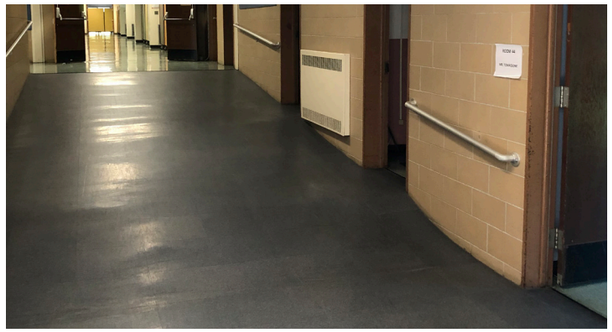
Feasibility Study & Schematic Design



Educational Deficiencies

Exterior Envelope Deficiencies

Code Compliance Deficiencies

Building Systems Deficiencies

For more information related to the current deficiencies, *visit our Website:* **http://bit.ly/SMSbuildingproject**

And Follow us on for related videos, podcasts, and images

SMS_BuildingCommittee

Improvements & Repairs to SMS

Roof Projects

2004	Roof replacement
2019	Replace five rooftop exhaust units
2015	*Solar array installation*

Auditorium

2014	Curtain replaced with the curtain from SBRHS
2016	Ceiling was repainted and mold removed
2016	Seats refurbished
2014	PA system replaced with the SBRHS PA

Media Center

2018	Carpet replaced, New air & heat conditioners installed, walls painted
2020	All new ceiling tiles in library
2020	*Mold remediation*

Technology/Security

2016	Technology infrastructure updates
2012	Installation/upgrade of security cameras
2018	*Main office relocated along with safety vestibule installed*
2019	*Replacement of a few external doors*

Miscellaneous Indoor Projects

1995	Remove all carpet and install VCT tile
1999	*Replace boiler with aerco boiler*
2004	Install two ADA-compliant bathrooms
2015	Music room 44 renovation/wall replacement
2017	Locker replacement
2017	Wireless clock replacement
2015	Main office/ guidance suite rest rooms flooding issue resolved
2019	Student dining room tables replaced with the Somerset High School dining tables
2015	Main foyer floor tiles replaced and removal/abatement of asbestos tiles
2019	Sub separate classrooms added with various safety upgrades
2013	Electrical upgrades in 6th grade area
2010	Sinks replaced in student restrooms
Ongoing	Repainting classrooms and hallways
2013-2015	Lighting in the building changed to energy efficient lighting
2015	*Installed boiler controls*

Miscellaneous Outdoor Projects

1997	Repair all control joints on outside building
1997	Remove oil tanks in ground
2001	Resurface parking lot
2000	Install ADA-compliant ramp going to/from grade 6 area
2020	Fish pond in the courtyard was refurbished
2016, 2020	Remove rotted trees from courtyard and other areas

Maintenance & Capital Improvement Plan

*Goal: ***To provide a clean, orderly, safe, cost-effective, and instructionally supportive school environment that contributes to the school district's mission of educating our children to meet the intellectual, physical, and emotional demands of the 21st century.***

The MSBA has adopted criteria based on industry best practices as a *prerequisite for MSBA funding* and for the determination of the allocation of maintenance incentive reimbursement points on eligible projects.

Eligibility Period
(Module 1)

District was asked to submit documentation that demonstrates that the district is actively performing routine and capital maintenance to its school facilities. Strategy for maintenance and capital planning and budgeting to ensure the long-term operation of school facilities

1.22%

Additional MSBA Reimbursement

1. Staffing
2. Written Maintenance Manual
3. **Predictive/Preventative Maintenance**
4. **Work Order System**
5. Budgeting
6. Facilities Condition Index (FCI)
7. Building Inspections Plan
8. **Long-Term Ten-Year Facility Capital Improvement Plan**
9. Facility Staff participation in Capital Projects
10. Segregated Local Capital Projects Fund
11. Commissioning, re-commissioning and retro-commissioning
12. Energy Conservation and Indoor Environmental Quality
13. Performance

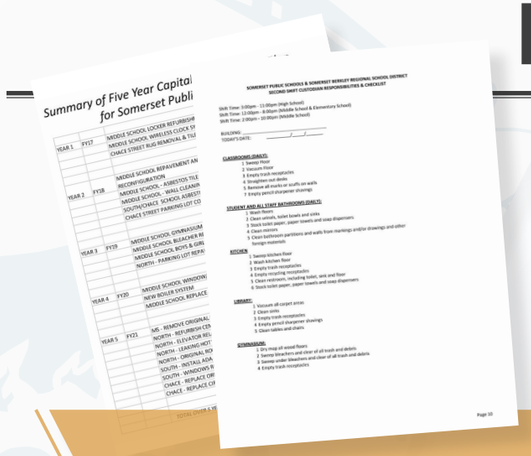
A component of effective maintenance typically includes preventive maintenance which is defined by activities that are performed at regularly scheduled intervals to prevent premature failure or to maximize the useful life of a building system and/or facility

A work-order system is a way of systematically tracking planned and completed maintenance activities, including scheduled preventive maintenance and emergencies

A long term (5-10 year) capital improvement plan is a systematic approach to addressing deferred maintenance and the replacement of building components that have reached the end of their useful life

**Planning Guide for Maintaining School Facilities*

Maintenance & Capital Improvement Plan



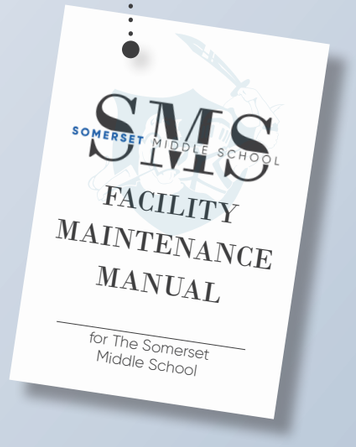
This plan will be used to safeguard, as best as can be predicted, the larger needs associated with maintaining the building and all of it's components, and ensuring proper maintenance is performed.

Building Systems & Equipment

- HVAC (boilers, chiller, AHU's, pumps, motors, fans, belts, etc)
- Plumbing
- Digital Temp. Controls
- Roof Membrane
- Electrical
- Elevator
- Fire Protection
- Technology
- Fire Alarm
- Security
- PV Arrays

Building Envelope & Materials

- Roof Membrane & Flashing
- Flooring (carpet/ sheet goods, tile, athletic)
- Window sealants & mechanical components
- Wall tiles
- Exterior masonry & flashings
- Mats & Grates



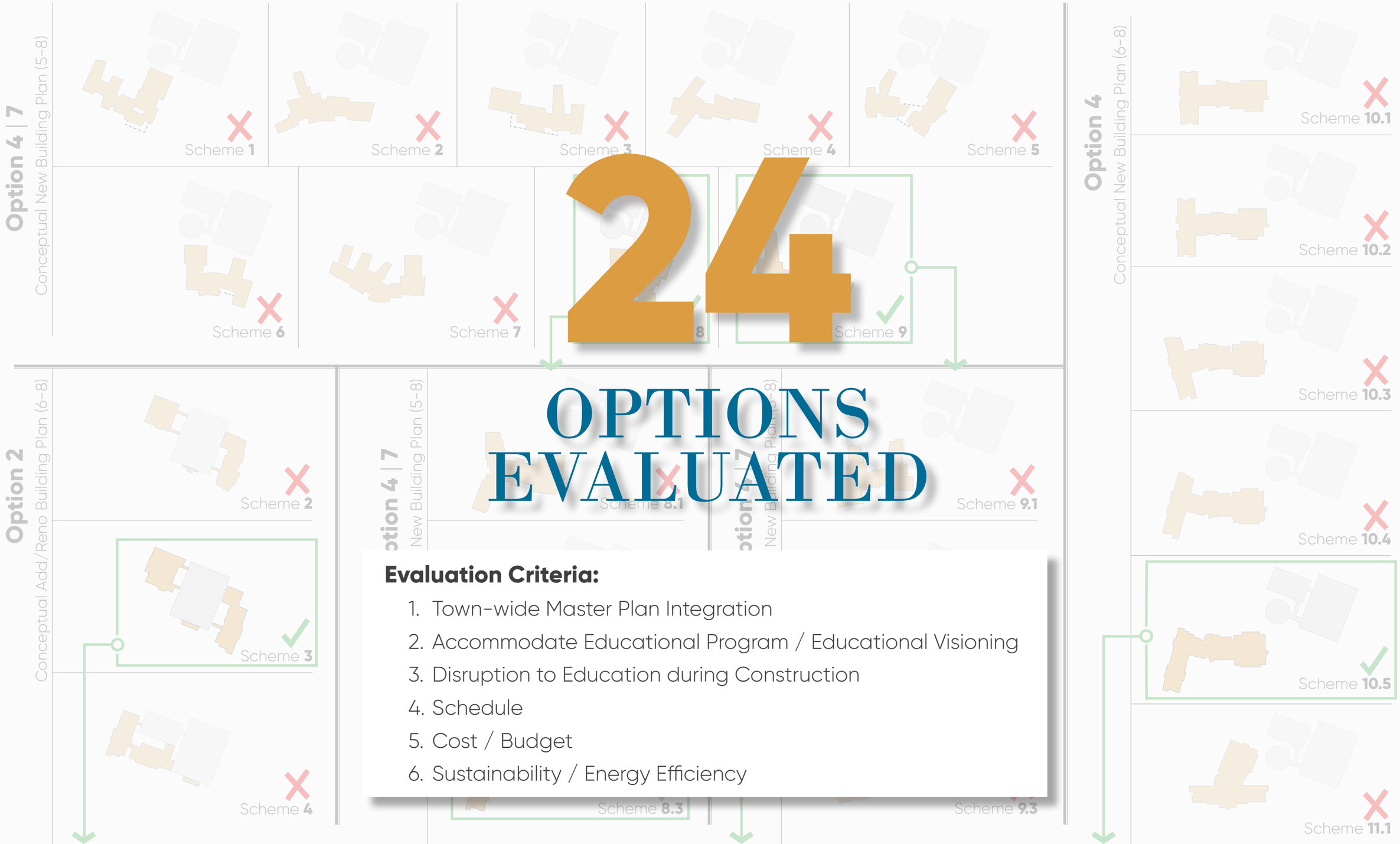
Effective planning doesn't stop at MSBA review, it continues through the design phases (DD and CD) as an essential component of the process...

SOMERSET MIDDLE SCHOOL

SMS

Why did the School Building Committee, School Committee, & Board of Selectmen decide on the Grades 6-8 New Construction Option?

- Base Repair (Code Required Upgrades)
- 6-8 Addition / Renovation
- 6-8 New Construction



24 OPTIONS EVALUATED

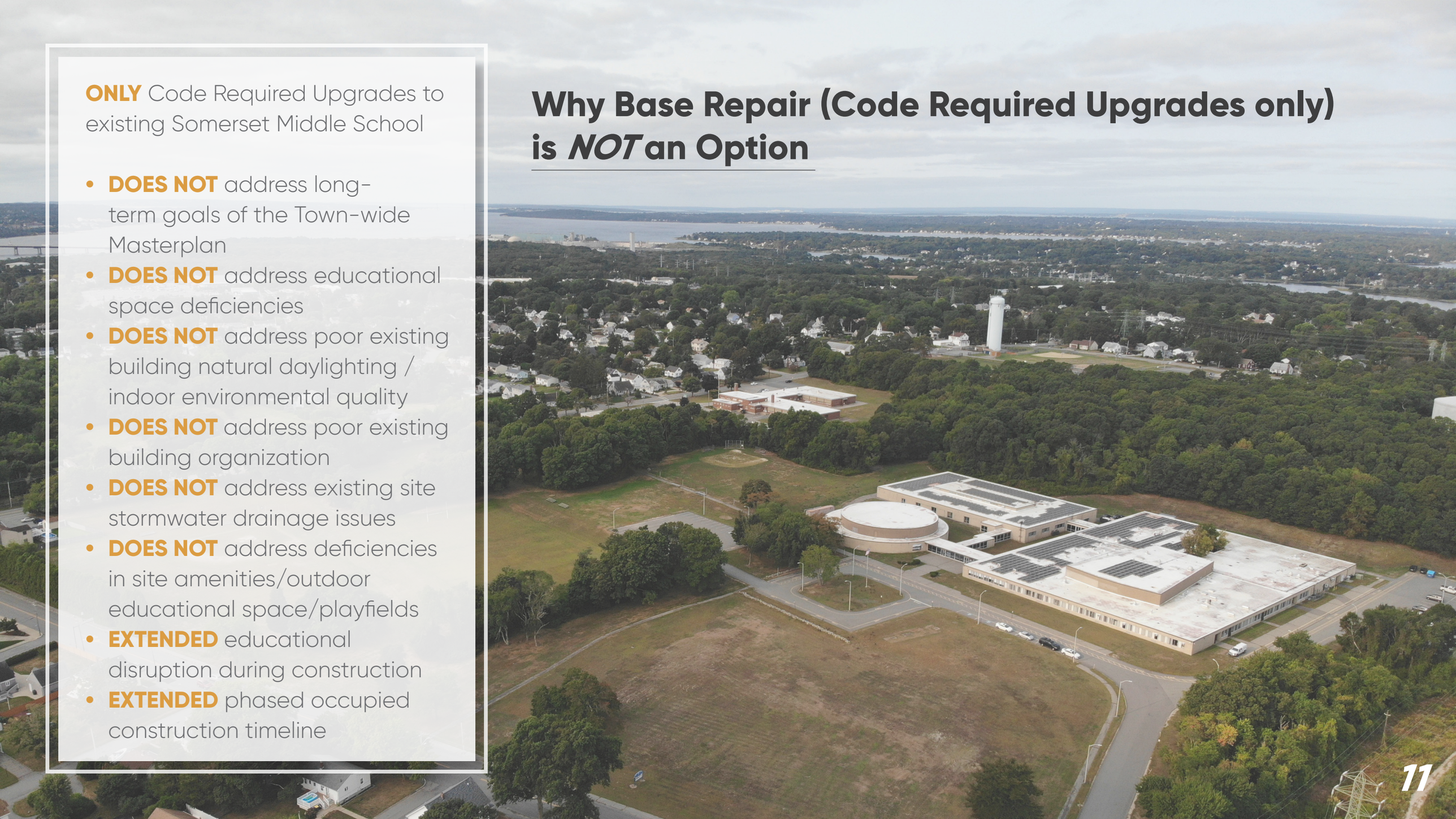
Evaluation Criteria:

1. Town-wide Master Plan Integration
2. Accommodate Educational Program / Educational Visioning
3. Disruption to Education during Construction
4. Schedule
5. Cost / Budget
6. Sustainability / Energy Efficiency

Why Base Repair (Code Required Upgrades only) is *NOT* an Option

ONLY Code Required Upgrades to existing Somerset Middle School

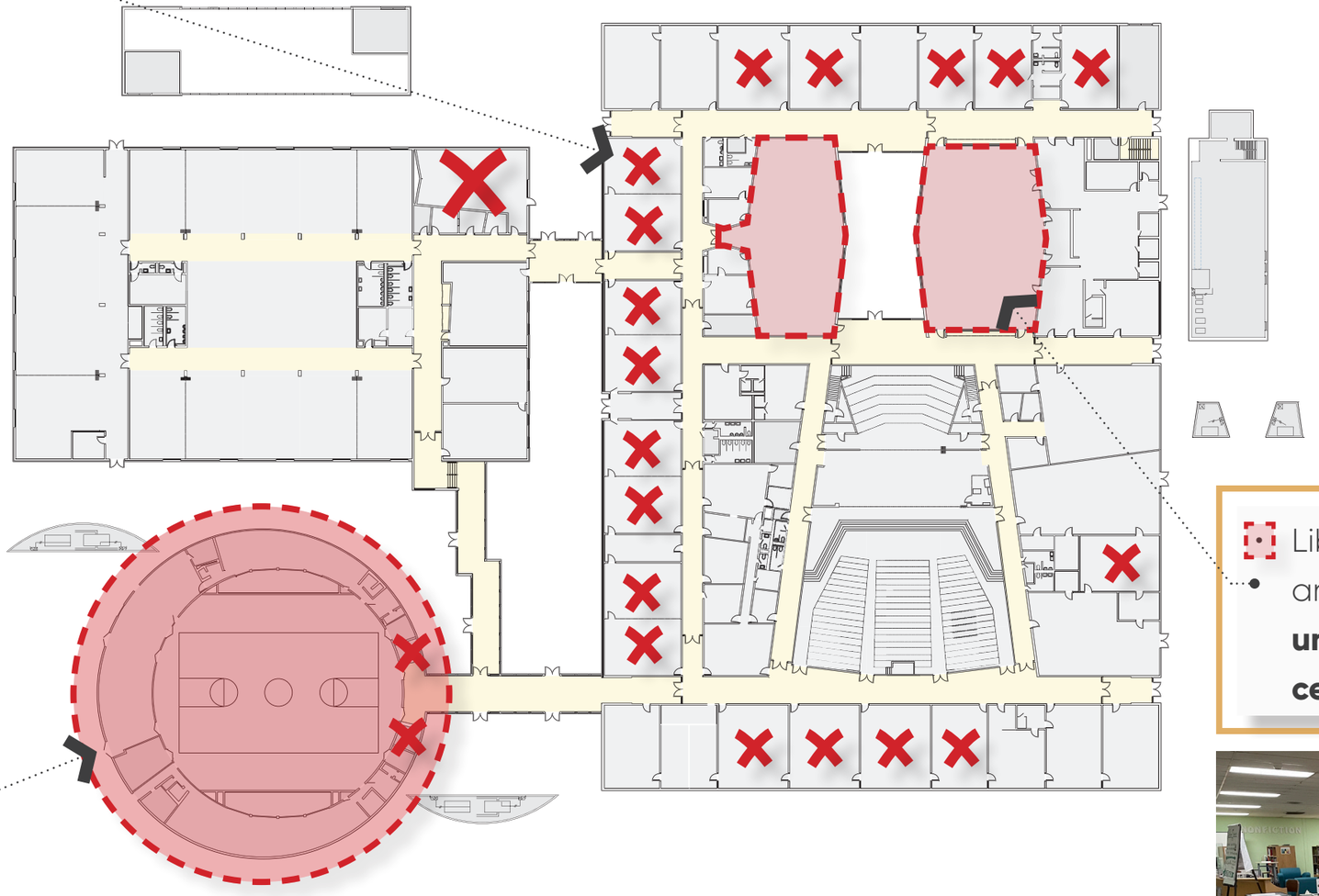
- **DOES NOT** address long-term goals of the Town-wide Masterplan
- **DOES NOT** address educational space deficiencies
- **DOES NOT** address poor existing building natural daylighting / indoor environmental quality
- **DOES NOT** address poor existing building organization
- **DOES NOT** address existing site stormwater drainage issues
- **DOES NOT** address deficiencies in site amenities/outdoor educational space/playfields
- **EXTENDED** educational disruption during construction
- **EXTENDED** phased occupied construction timeline



Existing Middle School Deficiencies

- **Classrooms are undersized** and do not provide access to modern day technology
- **Classrooms *DO NOT* meet State standards**

- Toilet rooms do not have code required fixture counts for assembly requirements
- Locker rooms **do not comply with MAAB** requirements
- **No accessible seating is provided** in the Gymnasium

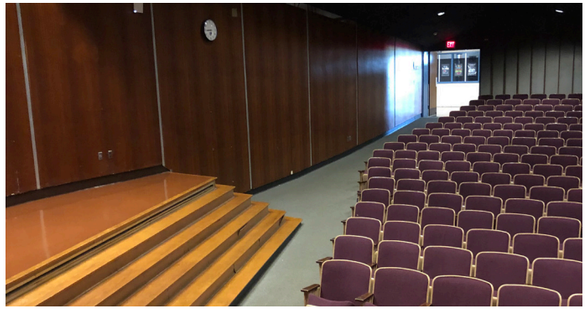


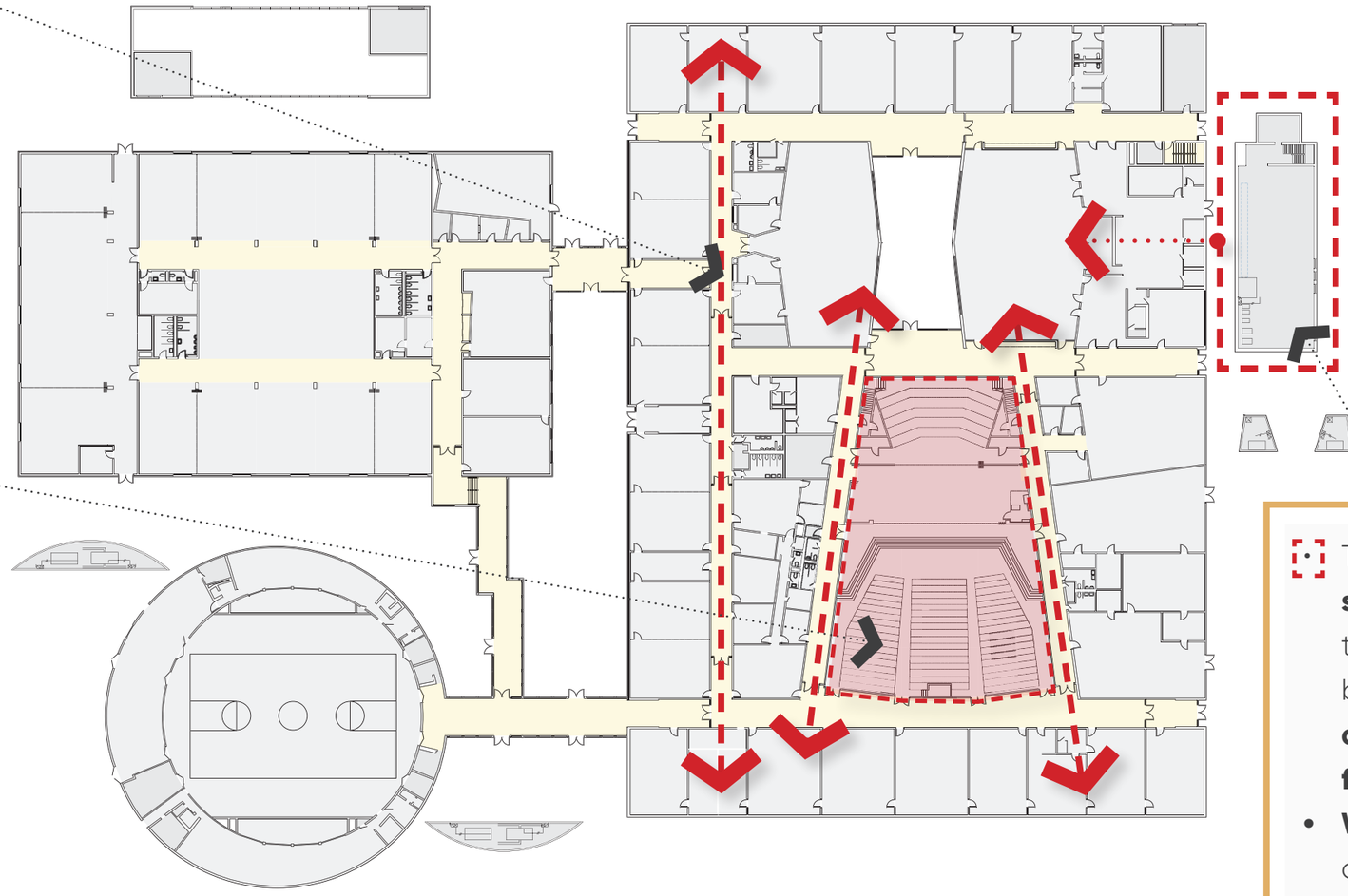
- Library Media Center and Student Dining are **undersized and lacks 21st century interconnectivity**

Existing Middle School Deficiencies

- Corridors are too narrow and **do not provide sufficient egress width**
- Approximate corridor width: **7'-0" clear**

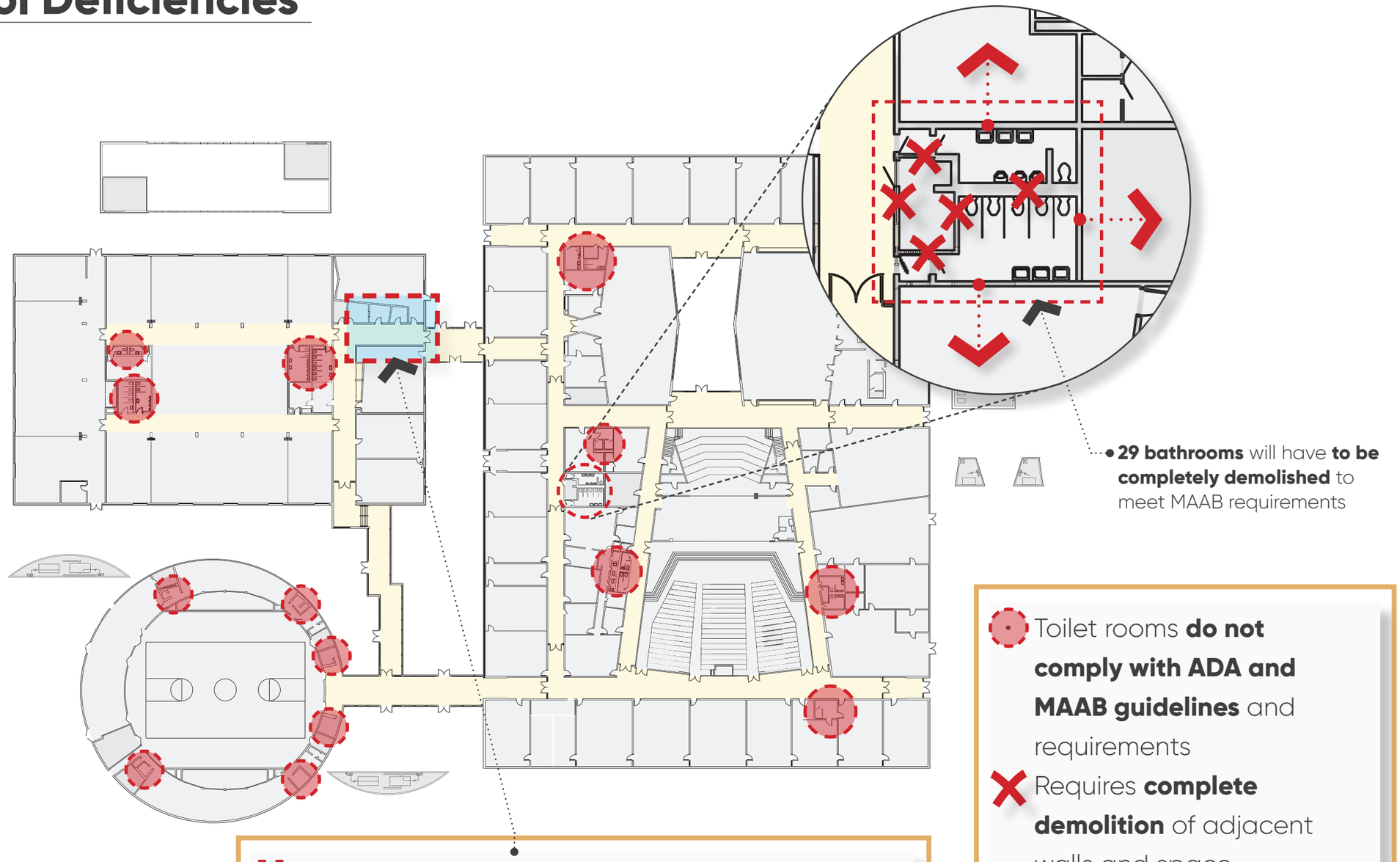
- **No accessible seating is provided** in the Auditorium and Lecture Hall
- The ramp in the auditorium **does not comply with ADA and MAAB requirements**
  - No intermediate landing
  - Starts at entry door
- **Stage is not accessible** from within the Auditorium





- The **Boiler Room is subterranean**, located below the kitchen, and the existing building **does not have under drain system or perimeter foundation drain system**
- **Water infiltration** has caused deterioration of the electrical conduit
- Systems are antiquated and **beyond the end of their service life**

Existing Middle School Deficiencies



- **29 bathrooms** will have **to be completely demolished** to meet MAAB requirements

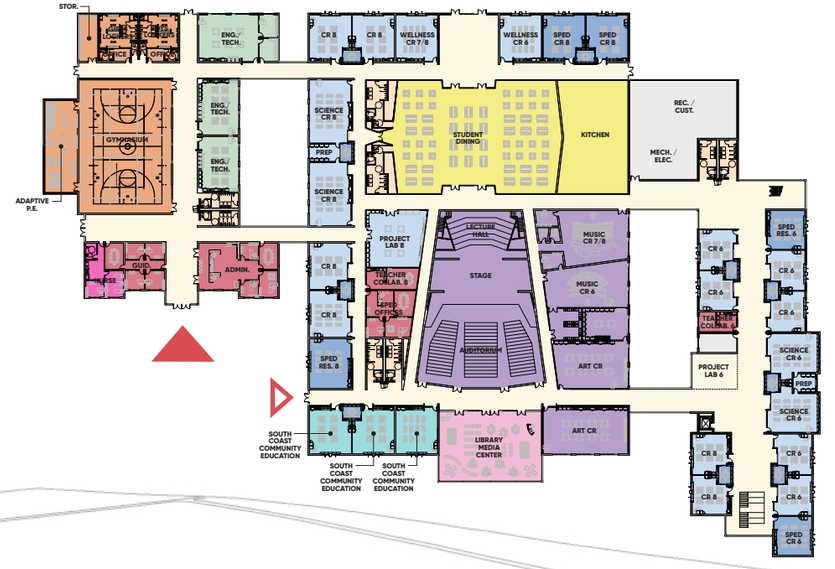
- **Ramp does not comply with ADA guidelines**
  - Ramp will require **complete reconstruction**
  - Adjacent spaces will need **complete reconfiguring**

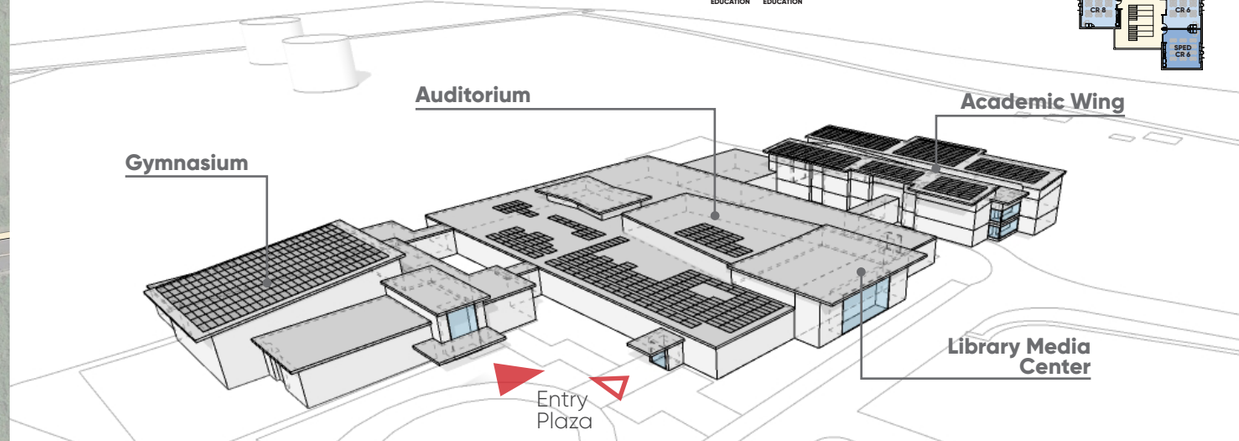
- Toilet rooms **do not comply with ADA and MAAB guidelines** and requirements
- Requires **complete demolition** of adjacent walls and space
- **Fixture quantities are not currently met**

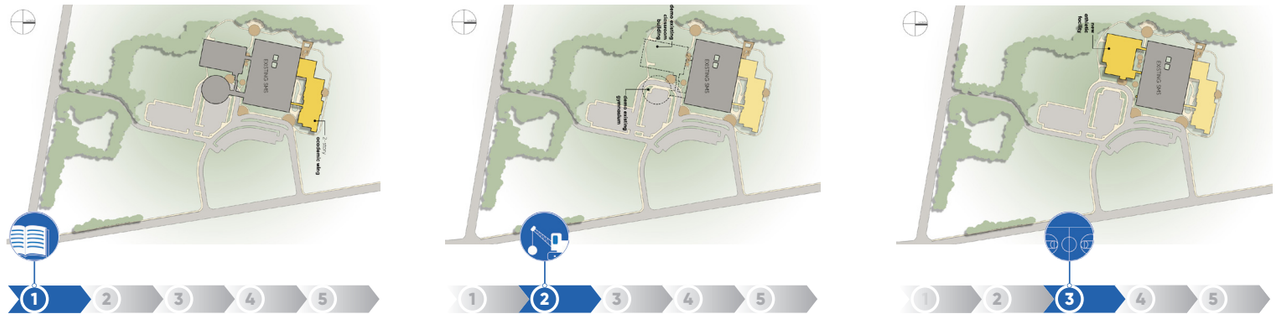
Option **2** | Scheme 3 **Addition / Renovation**

Conceptual Add/Reno Site, Building, & Phasing Plans (Grades 6-8)

- Most Expensive long-term solution
- Educationally disruptive
- Complicated construction process
- 42 month long construction timeline
- Many unknowns with renovation of existing building
- Demo existing 1969 open classroom building & Existing Gymnasium







Construction Phasing:

Total Duration

+/- 42

Addition / Renovation

Conceptual Add/Reno Site, Building, & Phasing Plans (Grades 6-8)

$91 million
Estimated Total Project Cost

Preferred Schematic Report
Conceptual Cost Estimate Comparison

Somerset Middle School

Option	Type	Size	PM&C Cost Estimate	DAEDALUS Cost Estimate
Option 2 | Scheme 3	Add/ Reno (6/8)	139,000 SF	$73,825,000	$73,741,0
Option 4 | Scheme 8.4	New (6-8)	131,900 SF	$68,782,000	$70,437,0
Option 4 | Scheme 10.5	New (6-8)	131,900 SF	$68,100,000	$68,824,(
Option 7 | Scheme 8.3	New (5-8)	154,800 SF	$76,300,000	$74,608

Add Alternates	PM&C Cost	DAEDA Cost
Cost to Reinstall Existing 300kW Photovoltaic (PV) System	$1,008,000	$1,0
Cost to Increase Auditorium by Approx. 3,000 SF (200 Seats)	$1,650,000	$1

1. The costs the variou costs as i costs ma
2. Estimate
3. Estimate

SMS SOMERSET MIDDLE SCHOOL
Conceptual Cost Projections: Somerset Middle School
Preferred Schematic Report Cost Estimate Comparison

Conceptual Preferred Schematic Report Cost Estimates

For comparative purposes only

	PDP Preliminary Design Program	PSR Preferred Schematic Report	PDP Preliminary Design Program	PSR Preferred Schematic Report	PSR Preferred Schematic Report	PDP Preliminary Design Program	PSR Preferred Schematic Report
	Option 2 6-8 Add/Reno	Option 2 Scheme 3	Option 4 6-8 New Construction	Option 4 Scheme 8.4	Option 4 Scheme 10.5	Option 7 5-8 New Construction	Option 7 Scheme 8.3
New Construction GSF	75,000 SF	59,500 SF	133,481 SF	131,900 SF	131,900 SF	158,205 SF	154,800 SF
Renovation GSF	74,000 SF	79,500 SF	0 SF	0 SF	0 SF	0 SF	0 SF
Total GSF	149,000 SF	139,000 SF	133,481 SF	131,900 SF	131,900 SF	158,205 SF	154,800 SF
Hard Costs (Approx.)	$71,000,000	$73,800,000	$66,500,000	$68,500,000	$68,000,000	$79,500,000	$76,500,000
Soft Costs (Approx.)	$16,000,000	$16,500,000	$15,500,000	$15,500,000	$15,500,000	$18,500,000	$17,500,000
Occupied Phase Construction Premium	$3,500,000	included above	$0	$0	$0	$0	$0
Subtotal Individual Project Cost (Range)	$88 - $93 million	$88 - $93 million	$80 - $85 million	$82 - $87 million	$81.5 - $86.5 million	$95 - $100 million	$95 - $100 million
Anticipated total **INELIGIBLE** costs	$26,800,000		$24,900,000			#$36,000,000	
Individual Project **ELIGIBLE COSTS**	$64,000,000		$57,000,000			$62,000,000	
MSBA Reimbursement on **ELIGIBLE** costs (56.89%)	$36,500,000		$32,500,000			$35,200,000	
Anticipated total **ADDITIONAL MSBA REIMBURSEMENT**	$2,800,000		$1,200,000			$1,300,000	
Adjusted anticipated **TOTAL MSBA REIMBURSEMENT**	$39,000,000	$37,000,000	$33,700,000	$34,000,000	$34,000,000	$36,500,000	$35,000,000
Estimated Cost to Town of Somerset (Middle School Project)	$48.5 - $54.5 million	$50 - $56 million	$45.5 - $51.5 million	$48.5 - $53.5 million	$48 - $53 million	$58 - $64 million	$57 - $63 million
		PSR Option 2 Scheme 3		PSR Option 4 Scheme 8.4	PSR Option 4 Scheme 10.5		PSR Option 7 Scheme 8.3

SMS SOMERSET MIDDLE SCHOOL
Conceptual Cost Projections: Somerset Middle School
Estimated Cost to Town of Somerset (Middle School)

*# Includes +/-30,000 GSF of 5th grade Program Space and associated Soft Costs - **Approx. $11,500,000***

Construction Phasing:
Total Duration
+/- 42 Months

Addition / Renovation vs New Construction

6-8 Addition /Renovation

MOST EXPENSIVE long-term solution.

$91 million (estimated total project cost)

MOST educationally disruptive solution.

MOST complicated construction process – multi-phased, & occupied

LONGEST construction timeline due to the complex phased occupied construction process (42 months + site development).

MOST financial unknowns and exposure during construction due to the nature of renovating an existing building.

DOES NOT result in the most ideal building organization related to security, sightlines, wayfinding, and natural oversight.

DOES NOT result in the most ideal solution for natural daylighting.

DOES NOT provide the most energy efficient solution.

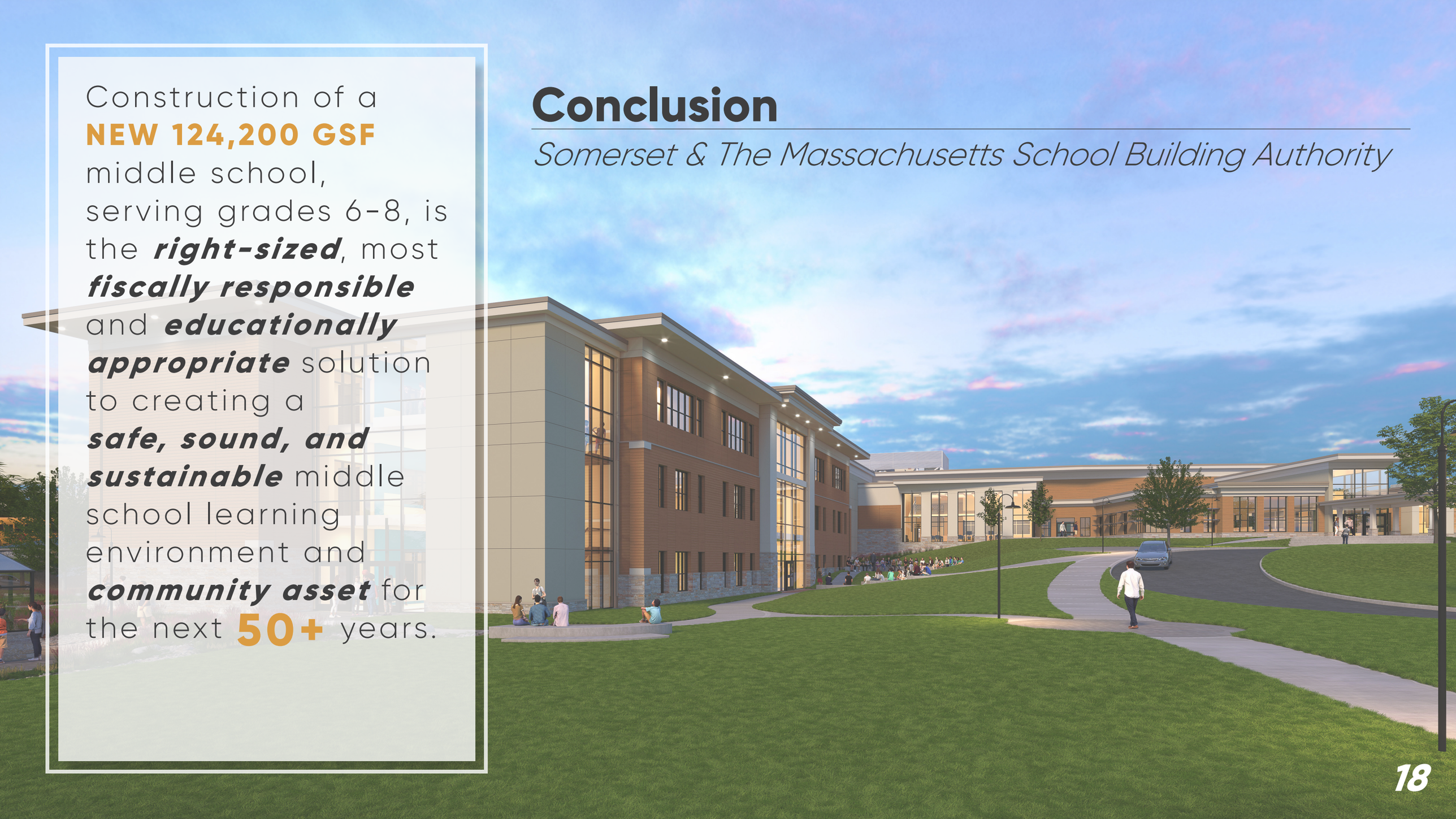
6-8 New Construction

- **MOST COST EFFECTIVE** long-term solution.
- **$85** million (estimated total project cost)
- **LEAST** educational disruption to students.
- **LEAST** complicated construction process.
- **SHORTEST** construction timeline.
  24 months + site development
- **LEAST** financial unknowns and exposure during construction.
- **PROVIDES** the most ideal building organization related to security, sightlines, wayfinding, and natural oversight.
- **PROVIDES** the most ideal solution for natural daylighting.
- **PROVIDES** the most energy efficient solution.

Conclusion

Somerset & The Massachusetts School Building Authority

Construction of a **NEW 124,200 GSF** middle school, serving grades 6-8, is the ***right-sized***, most ***fiscally responsible*** and ***educationally appropriate*** solution to creating a ***safe, sound, and sustainable*** middle school learning environment and ***community asset*** for the next **50+** years.



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Existing *(East)*


South Elementary School site
Fitness & Cross Country trails
Multi-use Playfield
Softball Field
Baseball Field
Overlapping Multi-use Playfield
Existing Middle School
Read Street
Loading Area
Utility Easement
New 6-8 Middle School
124,200 GSF
Secondary Entry Plaza
Multi-use Playfield
Secondary Entry
Bus drop-off zone
Parent drop-off zone
Main Entry Plaza
South Coast bikeway
Brayton Avenue
Existing single site entry point
NORTH
East-West Site Section
Building FFE
Parent Drop-Off
Parking
Brayton Ave

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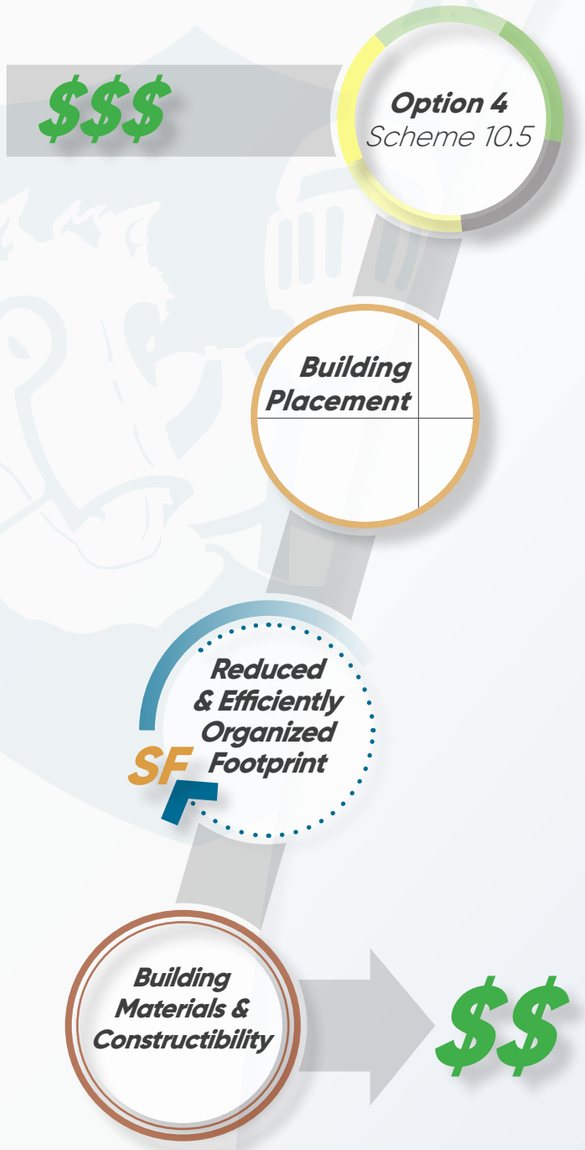
***Aerial** (East)*

Cost Conscious Design Approach:



Throughout the Feasibility Study and Schematic Design process, the School Building Committee, School Committee, and Board of Selectmen have been **mindful of the financial impact the project** will have on the Somerset taxpayers, while planning a school that will serve the town for the next 50+ years. The Committee's have explored multiple ways to reduce the cost of the project, all resulting in a lower project cost to taxpayers.

- Selection of Option 4 - Scheme 10.5 (**6-8 New Construction** vs phased occupied renovation)
- **Energy Efficiency Partnerships** with local utility programs (NGRID, Liberty Gas): Energy Efficiency Rebates
- **Proactive Building Maintenance Program** (Additional 1.22% MSBA Reimbursement
- Sustainability / Energy Efficient Project (**Additional 2% MSBA Reimbursement**)
    - LEED (Leadership in Energy and Environmental Design) Certification

- Strategic positioning of the new building:
    - Building placement optimizing the existing topography
    - Building organization and orientation based on solar path (**maximize natural daylighting while minimizing operating costs**)
    - **Building placement** to reduce gas, electrical, and water services from Brayton Avenue and Read Street.
    - Away from the existing building to reduce potential educational disruption during construction.
    - Away from the existing building to reduce occupied construction phasing and construction timeline.

- **Simplified and efficient organization** of the new building floor plan
- **Reduced footprint** of the new building (via 3-story building)
- Stacked academic floor plan to **simplify building structure and building constructibility**
- Minimize Roof Transitions
- Use of cost effective, long lasting, durable, low maintenance materials. (Natural Stone, brick, cementitious panels, glass fiber reinforced panels (GFRP)

What is the ESTIMATED COST of the Proposed Project?

Project Design Phase	100% Schematic Design February 2021 Grades 6-8
	124,200 GSF
Estimated Construction Cost	$**69,956,365** million
Estimated Total Project Cost	$**85,020,490** million
Estimated Town Share	$**52,067,785** million

Estimates assume a construction start of Summer 2022

Approximately **$563 / square foot** Construction Cost (Including Add Alt #**1** PV reinstall)

1. *Third party cost estimates are not represented as the final construction costs, as the information they are based on are Schematic Design Drawings.*
2. *Estimates assume public bidding under Chapter 149 (Design - Bid - Build) of the MGL.*

Preliminary Tax Impact Analysis

20 YEARS		3% INTEREST RATE			
		$100,000 Property Value		$311,000 Property Value	
CATEGORY	BASE	Per Year	Per Month	Per Year	Per Month
TOTAL	$85.0M	$120	$10	$371	$31
FSA	$800K [1]				
MSBA	$32.9M				
TOWN	$51.3M				

25 YEARS		3.25% INTEREST RATE			
		$100,000 Property Value		$311,000 Property Value	
CATEGORY	BASE	Per Year	Per Month	Per Year	Per Month
TOTAL	$85.0M	$105	$9	$328	$27
FSA	$800K [1]				
MSBA	$32.9M				
TOWN	$51.3M				

30 YEARS		3.5% INTEREST RATE			
		$100,000 Property Value		$311,000 Property Value	
CATEGORY	BASE	Per Year	Per Month	Per Year	Per Month
TOTAL	$85.0M	$97	$8	$302	$25
FSA	$800K [1]				
MSBA	$32.9M				
TOWN	$51.3M				

[1] *Feasibility study was paid with cash appropriation.*

Assumptions:

**** Estimated Interest rates ranges are subject to change.***

** Tax rate impact assumes no growth in assessed value over the life of the bonds.*

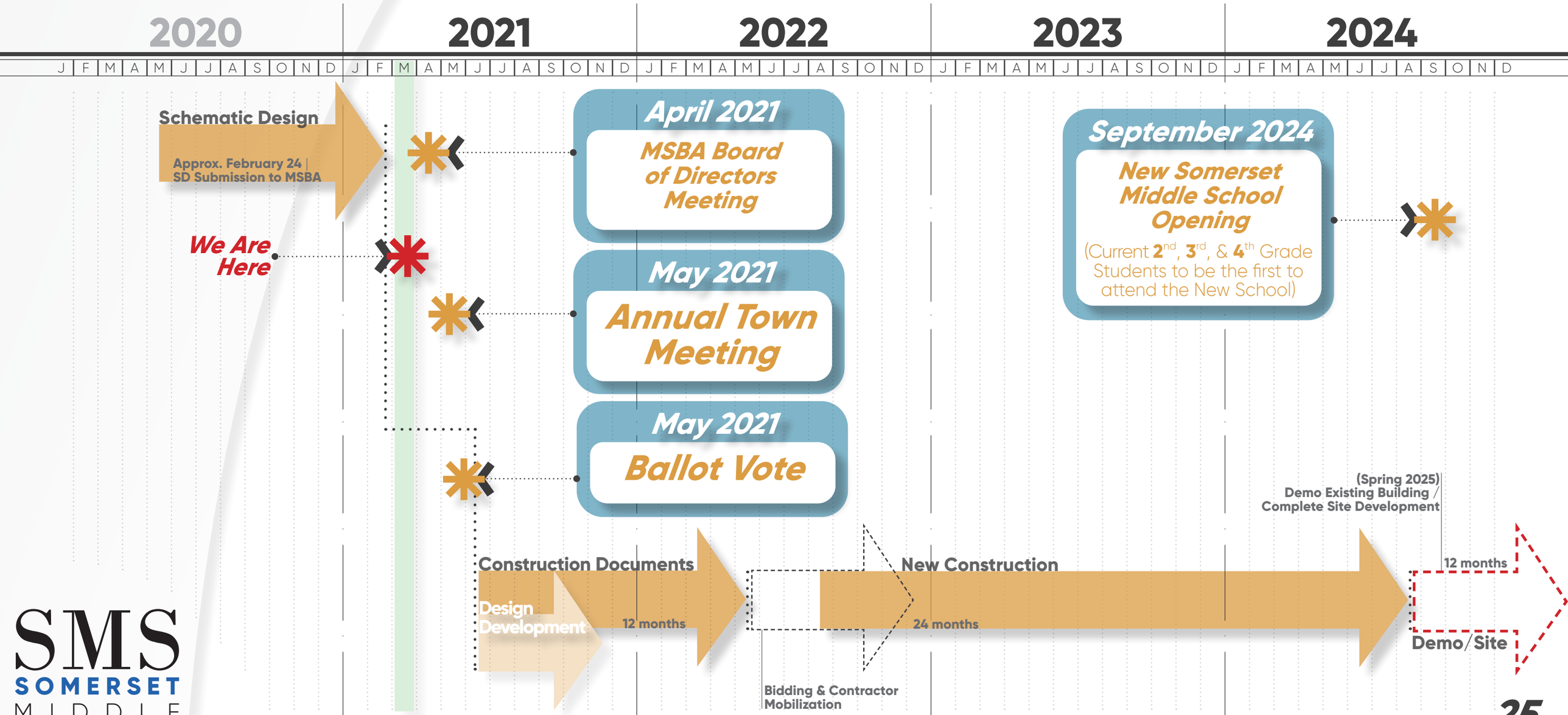
** Tax rate impact assumes the residential to commercial/industrial/personal property tax rate shift will ren*

** Tax rate impact assumes the average home value will remain constant over the life of the bonds.*

** Bonds issued on a level debt service basis.*

** Data based on information provided by Hilltop Securities, Inc.*

SMS | Project Timeline



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Vote #1

Town Meeting

May 17, 2021

Vote #2

Ballot Vote

May 22, 2021

Vote #1
Town Meeting Article

FAILED VOTE

PASS VOTE

Somerset **will forfeit** the opportunity to receive the $**30-35** million in state aid offered by the MSBA

The Town of Somerset will be required to **withdraw** from the MSBA Grant Program

The Town of Somerset will have to **submit another Statement of Interest** (SOI) and receive an invitation into the Eligibility Period Phase of the MSBA Process

an invitation that took more than four years for the initial round

Vote #2
Ballot Vote

If eligible, Somerset will enter into the feasibility study again

PASS VOTE

The Town of Somerset will enter into the MSBA's Module 6: Project Scope and Budget Phase

The Design Team will proceed with Design Development and Construction Documents

The Project will go out to Bid and will enter into the Construction Phase

September 2024

New Somerset Middle School Opening

(Current **2**nd, **3**rd, & **4**th Grade Students to be the first to attend the New School)

Frequently Asked Questions

I. What is the role of the Massachusetts School Building Authority (MSBA)?

II. Why did the SMS SBC/SC/BOS all endorse the construction of a new 6-8 Middle School instead of proposing to expand & renovate the existing building?

III. What are some of the existing building challenges?

IV. What are the safety & security measures included in the proposed project?

V. What is the project timeline?

VI. What happens if the debt exclusion vote DOES or DOES NOT pass in May 2021?

VII. What are the educational & community benefits associated with the new middle school?

VIII. What is the estimated cost of the project & what does it include?

SOMERSET MIDDLE SCHOOL

SMS

Thanks for Participating!

Continued Communications

For project related questions, *please Email:*

- Email: smsbuildingproject@somersetschools.org

For more info, *visit our Website:*

- Somerset Middle School Building Project
- Visit: http://bit.ly/SMSbuildingproject

Follow us on:

SMS_BuildingCommittee