

February 5, 2024

Ms. Carley Belfield, Sr. Project Coordinator
Ms. Christina Forde, Senior Project Manager
Massachusetts School Building Authority
40 Broad Street; Suite 500
Boston, MA 02109

RE: Canton Public Schools; William H. Galvin Middle School Feasibility Study
Preferred Schematic Report Submission

Dear Ms. Belfield and Ms. Forde,

Leftfield hereby certifies that we have reviewed and coordinated the materials contained in this submission and that the submittal is complete. We also confirm that the District, Town and the Galvin Middle School Building Committee (SBC) have reviewed the Preferred Schematic Report (PSR). The SBC unanimously voted to approve the submittal of the PSR Submission to MSBA at their January 24, 2024 SBC Meeting.

PSR Clarifications:

- 1- A certified copy of the January 24, 2024, School Building Committee Meeting Minutes will be forwarded separately as an addendum to this PSR, once approved by the Building Committee at their February meeting.
- 2- Under separate cover, an original, fully executed Local Action Letter will be mailed to the attention of Carley Belfield at the MSBA.
- 3- Under separate cover, an original, fully executed Grade Configuration Certification Letter will be mailed to the attention of Carley Belfield at the MSBA.
- 4- A printed, bound copy of the PSR will be delivered to your attention later this week.

Please feel free to contact me with any questions you may have regarding the enclosed information. On behalf of the Canton Public Schools District, Canton School Committee, the Galvin Middle School Building Committee, and the project team, we look forward to discussing any questions you may have.

Sincerely,
Leftfield, LLC



Jennifer Carlson
Project Director

Attachments: Preferred Schematic Report
Live files of required documents sent under separate cover [email]

cc: Superintendent Derek Folan – Canton Public Schools, SBC Chair



Galvin Middle School

Module 3: Preferred Schematic Report

February 5, 2024



Canton Public School District

Derek Folan
960 Washington St
Canton, MA 02021

Ai3 Architects, LLC



W. W. CALVIN
MIDDLE SCHOOL
55

W. W. CALVIN
MIDDLE SCHOOL

ROGGER
17

Galvin Middle School

Module 3: Preferred Schematic Report

February 5, 2024

Ai3 Architects, LLC
111 Speen Street
Framingham, MA 01701



ACKNOWLEDGMENTS

School Committee

Kendall O'Halloran *Chair*
Maureen Moran *Vice Chair*
Laura Arboleda *Clerk*
Kristian Merenda
Kimberley McCourt

Town Select Board

Thomas W. Theodore *Chair*
John J. Connolly *Vice Chair*
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Christopher M. Albert
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Kristian Merenda
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Andrea Stuart
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Thomas Theodore
Amy Tom

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Derek Folan *Superintendent of Schools*
Sarah Shannon *Assistant Superintendent of Schools*
Stephen Marshall *Assistant Superintendent of Finance & Operations*

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End of Report

This report was prepared for:

Canton Public Schools

Derek Folan, Superintendent
960 Washington Street
Canton, MA 02021



3.3.1 | INTRODUCTION

Overview of Process

Selection of the Preferred Schematic Option

The Town of Canton and the School Building Committee submitted the Preliminary Design Program (PDP) to the MSBA on October 27, 2023. Subsequent to the submittal of the PDP, the Designer and the Owner's Project Manager have been working collaboratively with the

Owner to further refine the proposed Space Summary, review and update the Educational Program, develop multiple building and site options for consideration, and establish an Evaluation Criteria Matrix for the selection of a preferred schematic option by the District and SBC.

Notable Past Dates from MSBA Module 3:

- JUL 27, 2023** ▶ Visioning Session #1 with core leadership
- AUG 21-
SEPT 11, 2023** ▶ Visioning Sessions 02, 03, 04 with students & staff
- SEP 27, 2023** ▶ Community Forum #1
- OCT 27, 2023** ▶ Preliminary Design Program Report (PDP) Submitted to the MSBA
- OCT 25, 2023** ▶ Community Forum #2
- NOV 13, 2023** ▶ Community Forum #3
- NOV 29, 2023** ▶ Community Forum #4
- DEC 20, 2023** ▶ SC voted on grade configuration; SBC voted on performance space
- JAN 24, 2024** ▶ SBC voted to select the preferred schematic option (Option 9e) and to submit the Preferred Schematic Report (PSR) to MSBA; also voted to utilize CMr (Construction Manager at Risk) project delivery method
- FEB 1, 2024** ▶ School Committee voted to approve Final Educational Program; endorsed preferred schematic option (Option 9e) and the PSR submission

INTRODUCTION

GALVIN MIDDLE SCHOOL

HANSEN ELEMENTARY SCHOOL



The existing Galvin Middle School was built in 1971 on a site of approximately 33.8 acres. The site is accessed from Pecunit Street to the southwest and is shared with one of the three elementary schools in Canton, the Hansen Elementary School. The site includes a combination of relatively flat areas where the play fields are located, as well as sloped areas, especially at the southwest side of the site. It is bordered by a combination of open space, wetlands, and residential neighborhoods. The existing middle school building and site conditions were revisited during this phase of the project in order to verify previous assumptions and reports.

In addition, the site survey was finalized. These additional site visits confirmed the accuracy of the information in the previous reports submitted within the PDP.

At the conclusion of the PDP phase, there were four new construction options (4, 5, 8, and 9) and four addition / renovation options (2, 3, 6, and 7) that were deemed viable. Moving into the PSR phase, the number of options under study increased from eight to sixteen by exploring new plan variations. For new construction schemes, these variations explored different strategies for arranging grade-level teams. For the add / reno schemes, the additional option

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variations explored the possibilities of plan layouts based on preserving the existing gymnasium or preserving the majority of the existing school building.

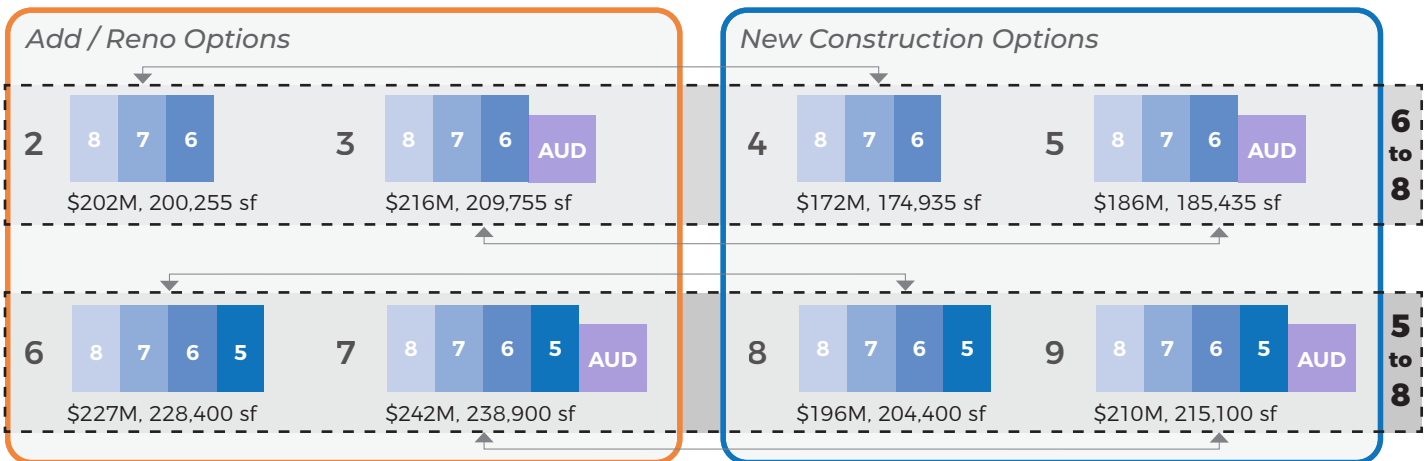
PDP Phase: 9 Options

To appreciate the options development of the PSR phase, a brief review of the PDP options is helpful.

During the PDP phase, in addition to the base repair option, four add / reno and four new construction options were investigated. These options are shown below diagrammatically for comparison purposes. These options were developed to gain insight into overall building footprint, site layout, impact on open space, cost, construction duration and phasing, and response to educational program goals.

PDP Phase: 9 Building Options

Versus Option 1 (base repair option) for existing building of 131,903 sf, costing approximately 129M in the PDP estimate.



Note: all estimates are approximate +/- 5%

Options Pairs Comparison - PDP	Approximate Cost Savings of New Construction	Approximate Square Footage Savings of New Construction
Option 2 (add / reno) vs. Option 4 (new construction) - Grades 6-8	\$ 30.4M	25,300 sf
Option 3 (add / reno) vs. Option 5 (new construction) Grades 6-8, with auditorium	\$ 29.6M	24,300 sf
Option 6 (add / reno) vs. Option 8 (new construction) Grades 5-8	\$ 30.8M	24,000 sf
Option 7 (add / reno) vs. Option 9 (new construction) Grades 5-8, with auditorium	\$ 31.4M	23,800 sf

INTRODUCTION

Even at this early phase, it was clear that the base repair option, at approximately 129M, was an expensive investment to bring the building up to current building codes. It would cost ~ 75% as much as Option 4 (~ 172M), a grade 6-8 new construction option, yet it would not address any of the serious spatial deficiencies that limit the delivery of educational programming. In contrast, the new construction Option 4, which, like the Base Option, serves grades 6-8 with no auditorium, would cost approximately 1/3rd more than the Base Option, yet provide a completely new building that fully meets the educational program goals, providing 21st century educational spaces for collaborative learning, social / emotional support spaces, and significantly greater building envelope performance, resulting in lower operating costs.

Comparing the other PDP options, it is helpful to compare add / reno and new construction options that have similar grade configurations and performance space amenities. For example, Option 2 and Option 4 are both grade 6-8 options without an auditorium. Because Option 2 is an add / reno, it is less spatially efficient, resulting in a building that is more than 25,000 sf larger. In addition, the add / reno option is approximately \$30M more expensive.

While it is not surprising that designing a new building from scratch provides the opportunity to create an efficient building footprint and the most functional yield of educational space per square foot, it can feel counterintuitive to find that in many circumstances, add / reno options are more costly than new construction options. For the existing Galvin Middle School, the need to reconfigure spaces and features to meet accessibility requirements, the cost to reconfigure existing spaces to meet educational program needs, and the extra

cost of additional construction phases and longer construction durations all conspire to drive up the cost of add / reno options and make them less cost-effective. In addition, because the add / reno options are typically less spatially efficient, the larger building costs more to operate every year for the life of the building. The increased life cycle cost of a larger building with a less thermally efficient envelope is not captured by the construction cost estimate, but it is a factor to weigh when comparing options.

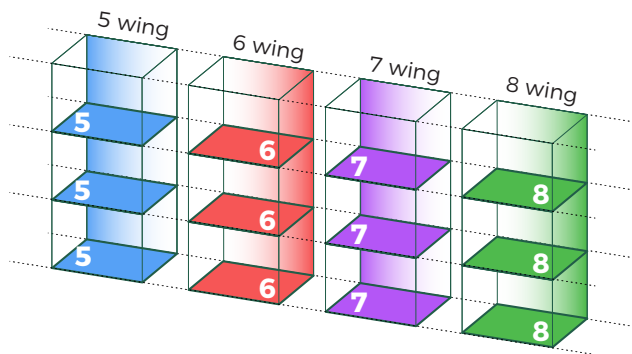
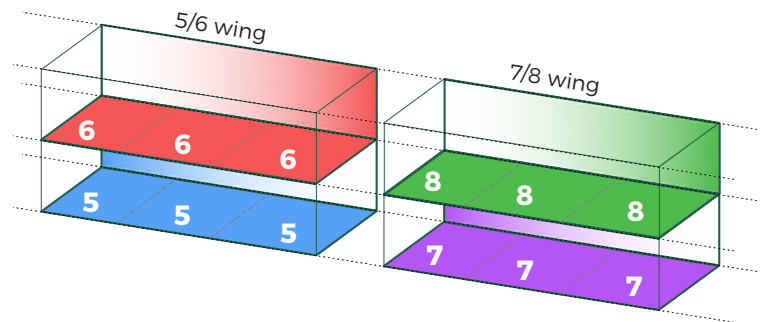
PSR Phase: Academic Team Organization to Achieve Grade-level Separation

Knowing there was the possibility of a grade 5-8 configuration for the middle school, district and school administration, the owner's project manager, and the design team (the "working group") studied options for building organization to support the desired separation of grade levels.

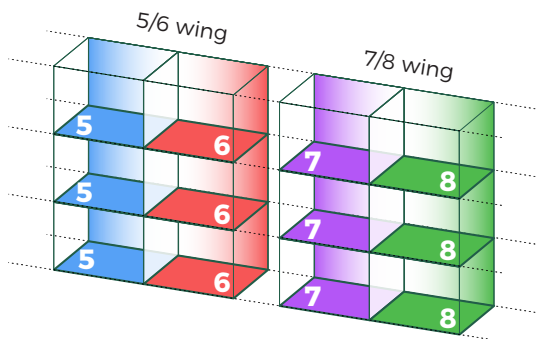
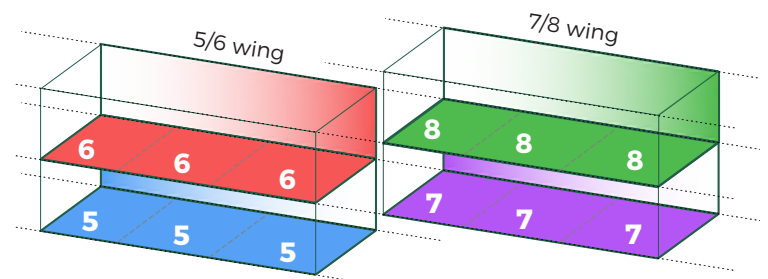
The basic starting point for academic team organization typically originates with either a vertical stack or horizontal plate configuration; which can be seen in the first two diagrams on the following page. The premise is that each grade-level would be divided into three teams. Within each team, students would experience a small neighborhood feel with a group of about 85 grade-level peers in each team sharing a cluster of classrooms where all academic subjects are offered, traveling outside of the team zone for lunch, athletics, and specials. Note that for 5th graders, who utilize a co-teaching model for general academics, the grade would be divided into six smaller teams of about 42 students each. Spatially, the six fifth-grade teams would occupy a similar footprint in the building as the three teams of a team-teaching model of grades 6, 7, and 8.

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▼ Basic Academic Team Organization Strategies

**Vertical Stacks - 4 wings****Horizontal Plates - 2 wings**

▼ Project - Specific Academic Team Organization Strategies

**Vertical Stacks - combined
- 2 wings****Horizontal Plates - staggered -
2 wings**

The project team utilized the basic configurations as a starting point and began modifying based upon project specific goals. The vertical stacks were combined to group grades 5 and 6 together and grades 7 and 8 together. This adjustment was in response to reducing the footprint of the project to maximize green space. The horizontal plate option was modified

to respond to the sites topographical elements, stepping grades 7 and 8 up a level in an effort to reduce excavation. This would locate the youngest students on the first floor of the building adjacent to student dining and administration / support services. Older students would be on upper floors, with only the 8th graders on the third floor.

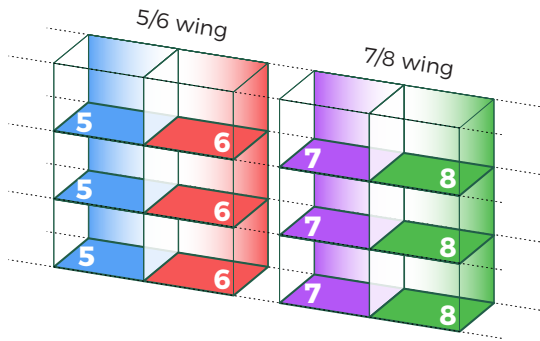
INTRODUCTION

The working group identified a concern with the vertical stacking strategy: staff would need to travel as much as two floors up or down to collaborate with other staff in their cohort. This concern led to the development of a new strategy that combined elements of the vertical stacking and horizontal plates.

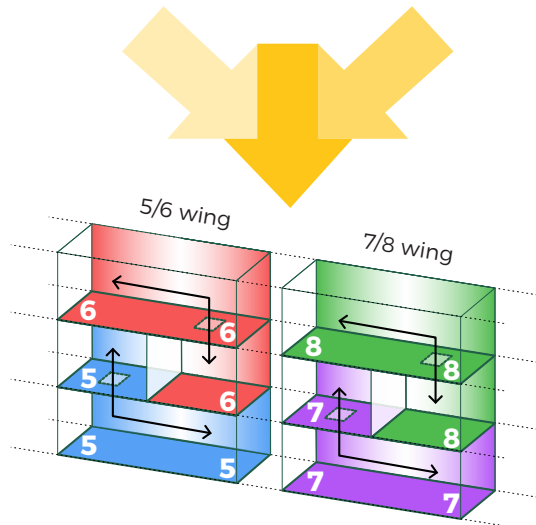
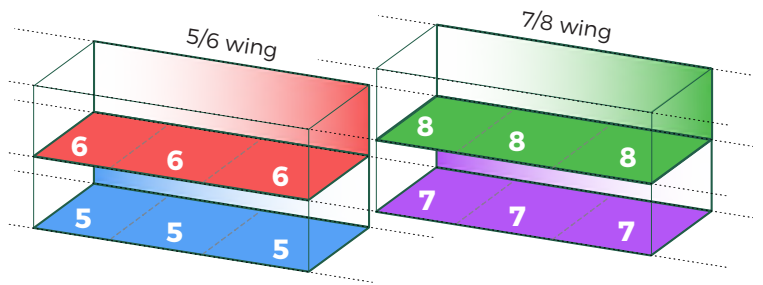
In this "hybrid stacked" grade level teaming layout, students and staff in each grade level would not need to travel more

than one floor up or down to collaborate with others in their grade cohort. This hybrid stacking also created some 5/6 and 7/8 grade adjacencies which staff considered to be a desirable feature. The hybrid stacking model also generated ideas about greater opportunities to increase vertical connections among and across teams through both circulation and sight lines. These exciting ideas spurred the development of more options variations.

Vertical Stacks - combined



Horizontal Plates - staggered



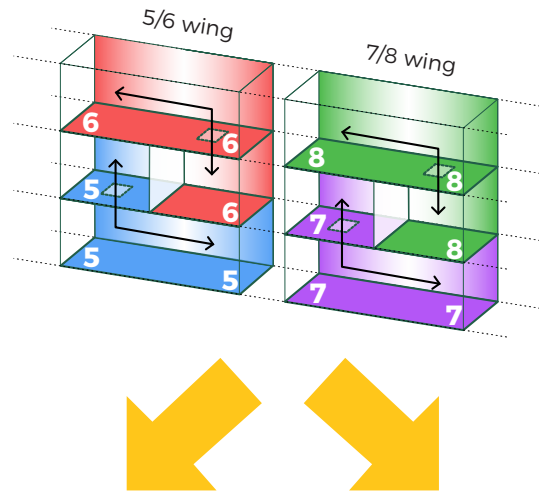
Hybrid Stacks - combined vertical and horizontal team organization

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PSR Phase: 16 Options

The ultimate goal of options development during this PSR phase was to delve into more detail about each option in order to provide the SBC with the information needed to evaluate and rank options with the Options Criteria Matrix, which is further documented at the end of this introduction. The team used the weekly working group meetings, multiple community forums, school committee, and

school building committee meetings to gather valuable input ultimately leading to adjustments within these options. Both add / reno and new construction options included studies of the hybrid stacking model for grade level team configurations. These included add / reno Options 2B, 3B, 6B, and 7B, and new construction Options 4E, 5E, 8E, and 9E.



Add / reno options with hybrid stacked grade level teams

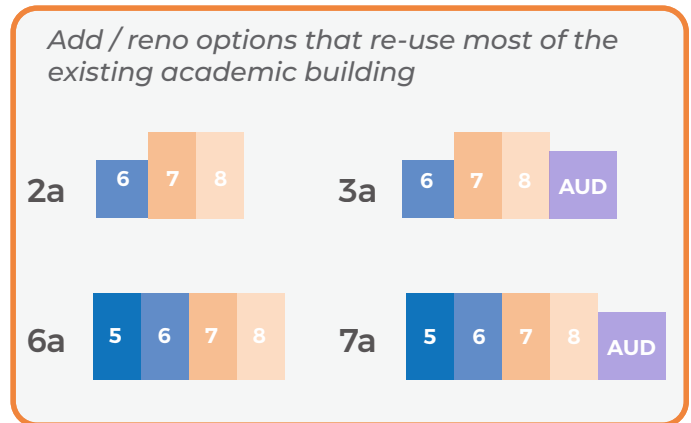
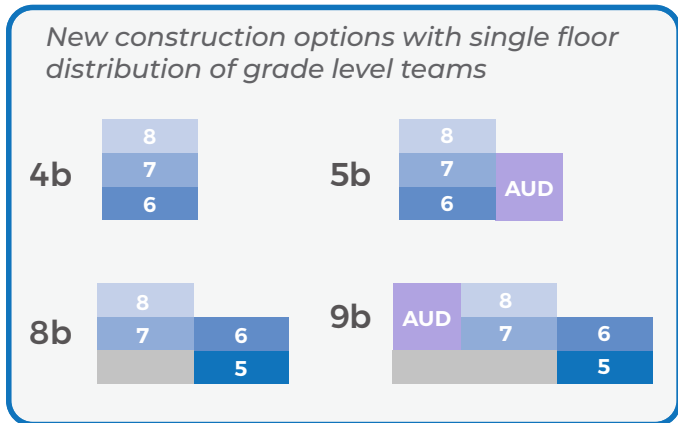
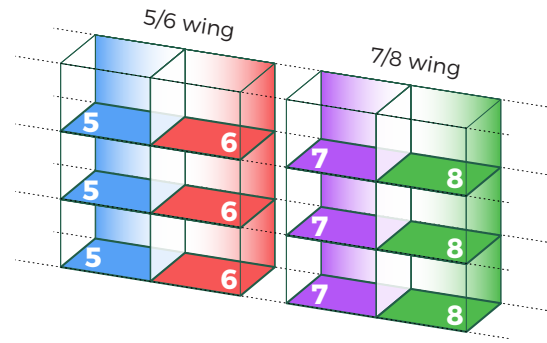
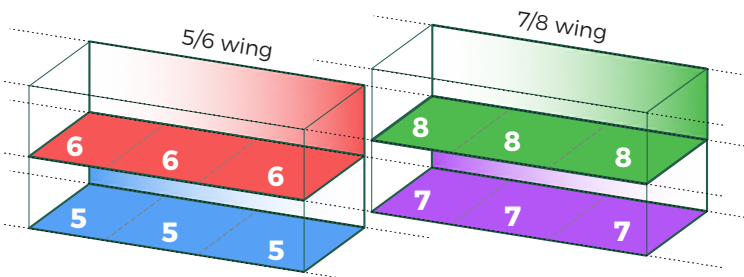
2b		3b	
6b		7b	

New construction options with hybrid stacked grade level teams

4e		5e	
8e		9e	

INTRODUCTION

The project team also studied options that grouped grade level teams together by floor level. The clean slate of new construction options yielded the best layouts to explore these configurations. These options include 4B, 5B, 8B, and 9B:



The high cost of add / reno options estimates identified during the PDP phase spurred the design team to aggressively look for ways to make the add / reno schemes more cost-competitive with the new construction schemes. For the PSR phase, the team added 4 options that evaluated the potential of not just preserving the existing gym and surrounding spaces, but also a majority of the existing academic building. This approach generated four add / reno options, 2A, 3A, 6A, and 7A:

Not shown are over fourteen study options. These options were studied in various program adjacencies that were reviewed with the district. These reviews yielded fruitful discussions that generated the more desirable programmatic adjacencies seen in Options 4b, 5b, 8b, and 9b; and Options 4e, 5e, 8e, and 9e.

A diagrammatic summary of all building options studied in detail during the PSR phase is provided on the facing page. These diagrams are for options comparison purposes. They highlight the grade level organization and team adjacencies as

INTRODUCTION

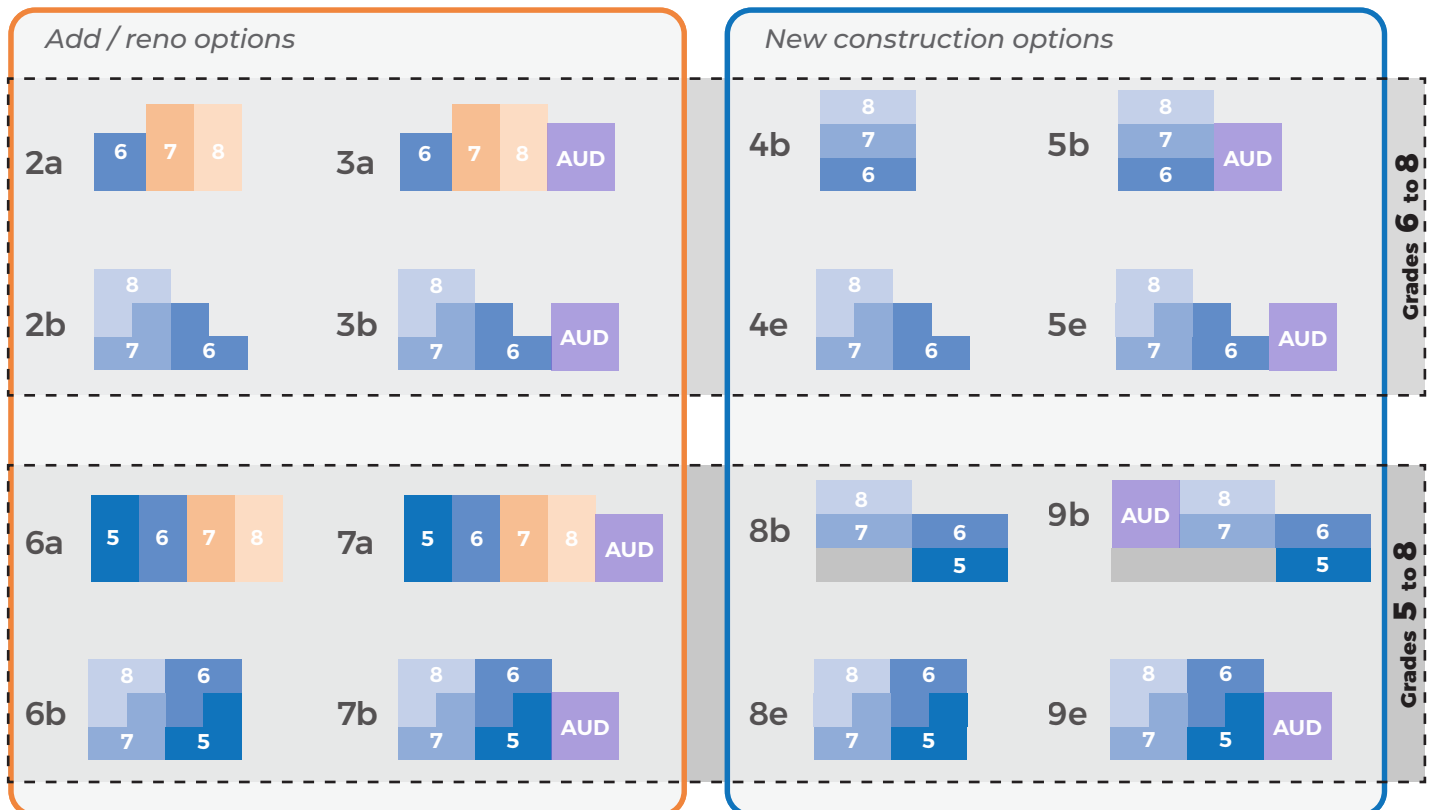
well as the presence or absence of an auditorium, but they are not to be taken as literal building sections. They do not show the gymnasium or any other program features beyond the academic clusters and the auditorium, if present. To better understand and compare all of the options, the PSR Building Options plan diagrams on pages 10-11 provide a more spatially realistic sense of the building footprints of these options at each floor level.

The District wanted to ensure an appropriate amount of time was given to the final grade configuration decision, so as noted in the previous submission, this critical decision would be determined

during the PSR phase with the submission reflecting the path forward. Therefore, of the sixteen options investigated during the PSR phase, eight options fulfill a 6-8 enrollment model and eight options fulfill a 5-8 enrollment model.

The thoughtful evaluation process, extensive community engagement, and rationale for the district's decision to move to a 5-8 grade configuration is described in greater detail in Section 3.3.4, PREFERRED SOLUTION.

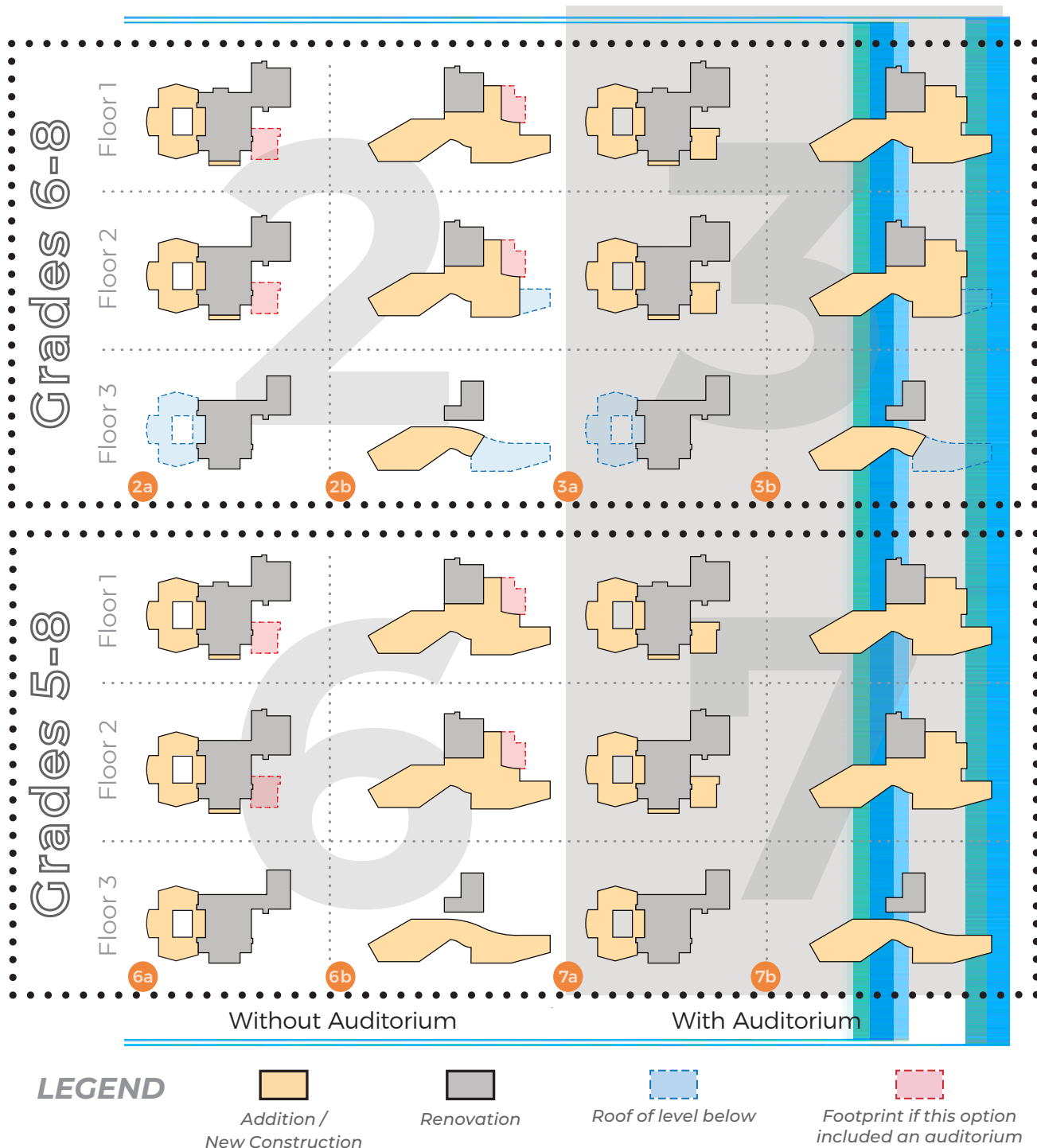
All Building Options - PSR Phase



Not shown: all add / reno options include renovation of the existing gymnasium

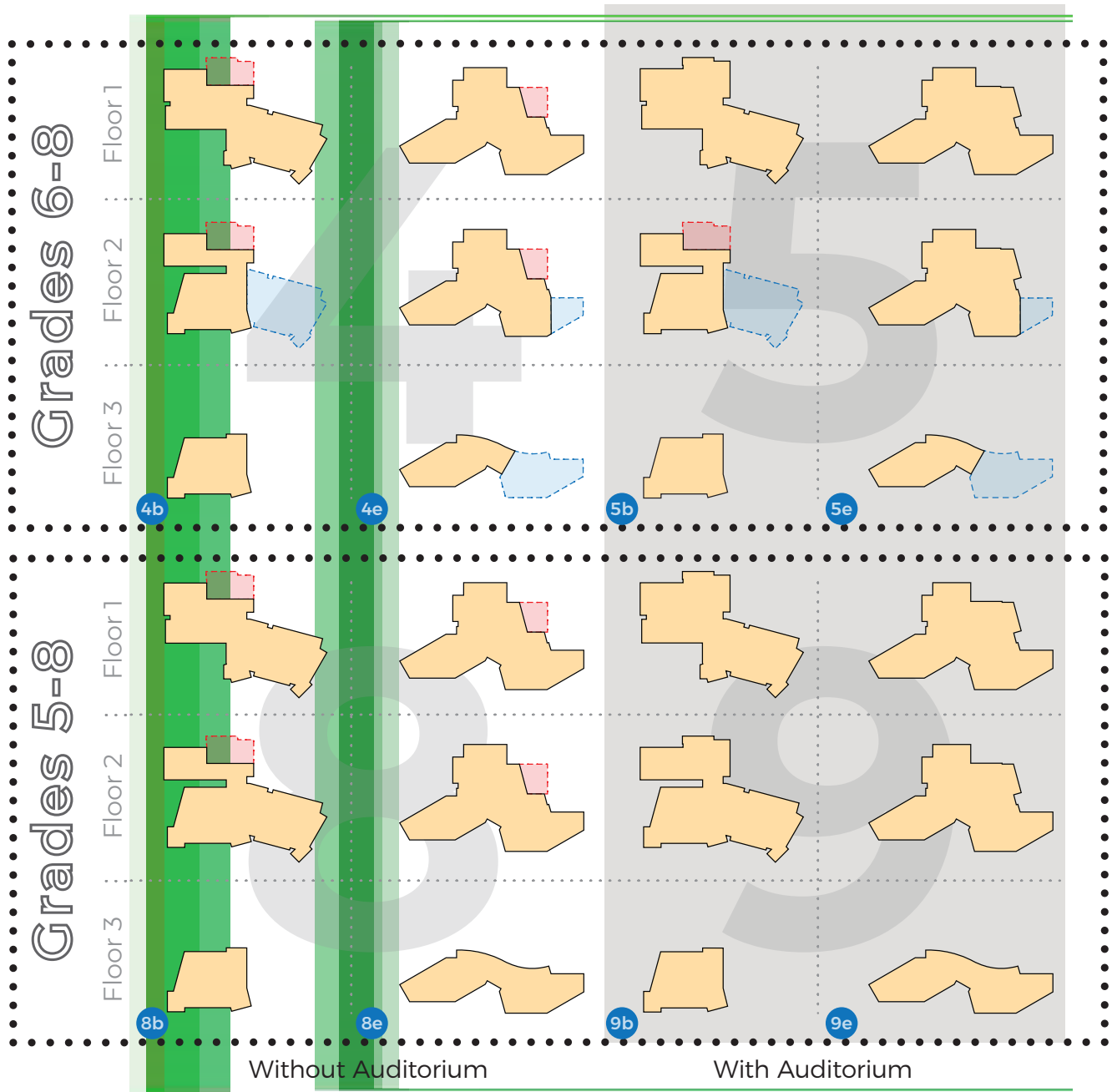
INTRODUCTION

PSR Building Options Plan Diagrams - Add / Reno



INTRODUCTION

PSR Building Options Plan Diagrams - New Construction



INTRODUCTION

PSR Phase: Performance Space Selection and Grade Configuration

Concurrent to these studies which explored and refined the design options, the project team has also continued to host community forums to promote discussion and gather input from a variety of stakeholders regarding both grade-level configuration and performance space options for the middle school (cafetorium, gymnasium, or auditorium). The selection of grade level configuration and type of performance space are critical components that informed the School Building Committee's selection of the preferred schematic option for this submission.

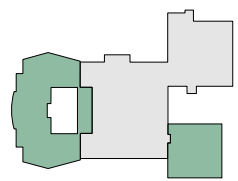
These important decisions would significantly impact both add / reno and new construction options, so the project team sought to maximize public engagement, information gathering, and the sharing of ideas and concerns. In addition to the regularly scheduled School Committee and School Building Committee meetings, four televised public community forums were held from September to November of 2023 in order to inform both the School Committee's vote to decide the grade-level configuration and the SBC's vote to determine the performance space typology. These two votes were held on December 20, 2023 at a joint SC / SBC meeting. The School Committee voted unanimously to adopt a grade 5-8 configuration for the town's middle school students. The SBC voted unanimously to include an auditorium in the middle school project, and of the two options presented (600 seat or 800 seat), the SBC selected the 800 seat auditorium for the project team to proceed incorporating into the preferred schematic option.

These two votes effectively narrowed the field of design options from 16 to 4,

Final Options Alternatives

Option 7a

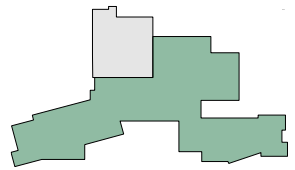
5	6	7	8	AUD
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Add / reno with reuse of most of the existing building and stacked grade-level teams

Option 7b

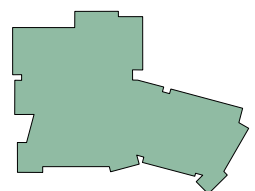
8	6	AUD
7	5	



Add / reno with reuse of just the existing gym only and hybrid stacked grade-level teams

Option 9b

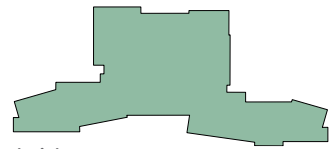
AUD	8	6
7	5	5



New construction with grade level teams co-located on the same floor

Option 9e

8	6	AUD
7	5	



New construction with hybrid stacked grade-level teams

enabling the SBC to focus on evaluating two add / reno options (7a & 7b) and two new construction options (9b & 9e) for the selection of the Preferred Solution. A detailed analysis for each of these four options is provided Section 3.3.3, FINAL EVALUATION OF ALTERNATES.

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Performance Space Considerations Compared

To meet the district’s Educational Program, the Middle School shall include:

Considerations	SELECT 1		
	Auditorium	“Cafetorium”	“Gymatorium”
Size?	7,000 sf	7,030-7,150 sf	9,000-12,000 sf
Seating Capacity	600 seats	468-476	600-800
Includes stage?	YES	YES	YES
Accommodates enrollment? (up to 50%)	YES	PARTIALLY (6-8 grades)	YES
Available throughout entire school day?	YES	NO (not during lunch)	NO (not during gym)
Includes fixed seating?	YES	NO	NO
Allows for flexibility?	NO (only on stage)	YES	YES
Includes ideal lighting for performances?	YES	NO (not during lunch)	NO (not during gym)
Includes ideal acoustics for performances?	YES	NO	NO
Doubles as community resource?	YES	YES	YES
Reimbursable by MSBA funding?	NO	PARTIALLY	PARTIALLY
Provides income opportunities for Town?	YES	YES	YES

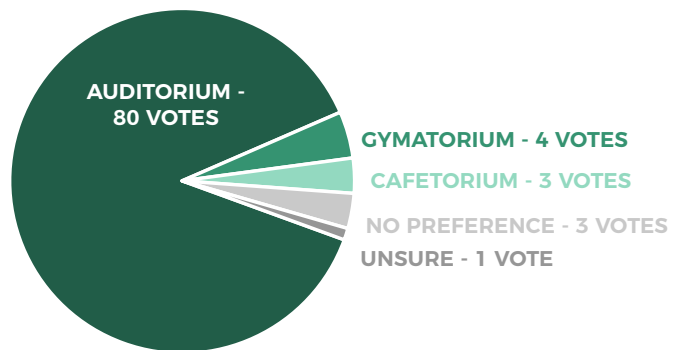
- Cafetorium capacity at existing GMS is 320 seats for current enrollment (740 students)
- Cafetorium capacity above is approximately the student dining area ÷ 15 sf/student
- Canton HS auditorium capacity is 834 seats

- Auditorium capacity above is approximately 1/2 enrollment + staff for the larger student (1070) population
- Auditorium is considered non-reimbursable by the MSBA; it is fully funded by the district
- Est. cost approx. \$12M - \$15M (including markups & soft costs)

Virtual Poll

Should Canton invest in an **auditorium**, include the partially reimbursed "**cafetorium**", or the partially reimbursed "**gymatorium**" in the project?

- 88.0% **a) INVEST IN AN AUDITORIUM**
- 4.4% **b) INCLUDE GYMATORIUM ONLY**
- 3.3% **c) INCLUDE CAFETORIUM ONLY**
- 3.3% **d) NO PREFERENCE**
- 1% **e) UNSURE AT THIS TIME**



of Respondents: 91, as of poll closing (11/20/2023)

Virtual polling was used at the community forum to gauge the participants opinion on whether to invest in an auditorium at the middle school. Results illustrate the participants favored including an auditorium in the project.

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All meeting materials presented to the SBC and at the community forums are available at www.galvinmsproject.com, the website of the Galvin Middle School Building Project. During Schematic Design, the project team will continue to share presentations on this website to maintain community interest and involvement. In addition, videos of meetings can be streamed from the Government Station at the Canton Community TV website: cantoncommunitytv.org.

For the Galvin Middle School students, parent, staff, district leadership, and design team, the PSR phase has yielded a productive, collaborative process that has not only explored new details and elements that will contribute to the achievement of the vision for the Galvin Middle School, but it has also successfully defined the key criteria against which to measure these design options in order to choose the Preferred Solution.

Building Options Criteria Matrix

Ranking Criteria

<i>Categories</i>	<i>Statement</i> - DOES THE OPTION...
Educational Program	01 ...provide a sufficient 21 st century educational environment for middle school students?
	02 ...create the necessary adjacencies, program areas, transparency, exhibit space, and other key aspects identified during visioning?
	03 ...allow for grade level team teaching and collaboration?
	04 ...include the necessary resources for special education and student support?
	05 ...provide expanded access to school-based athletic education space and increased formal after-school use?
	06 ...have connections to the outdoors and opportunities for outdoor learning?
Community & Access	07 ...optimize community use around the site and improve access to the site?
	08 ...optimize resources for community use within the building?
	09 ...enhance safety and security on site?
	10 ...improve service / delivery / custodial access & operations?
Construction Phasing	11 ...require phased-occupied construction?
	12 ...minimize impact to athletic fields during construction?
	13 ...allow for on site parking during construction?
	14 ...include adequate space for construction staging?
	15 ...minimize construction duration?
Sustainability	16 ...provide the most energy efficient solution, thus minimizing long-term operating costs?
	17 ...provide the best opportunity for a net-zero energy building design?
	18 ...orient academic wings in the most ideal orientation to capitalize on natural daylight?
Cost	19 ...maximize the available MSBA grant reimbursement funding?
	20 ...maximize utility rebates & incentives?
	21 ...satisfy the educational program and spatial requirements cost effectively (no excess)?
	22 ...avoid the need to immediately fund a future elementary school building project
	23 ...provide the highest potential success at both the Town Meeting vote & ballot vote?

INTRODUCTION

This key criteria is expressed in the Building Options Matrix. This matrix was developed by the committee as a tool to inform the selection of the Preferred Solution. The criteria in the matrix was distilled from the many ideas and priorities expressed during the four visioning sessions conducted from July through September 2023 ongoing meetings with all stakeholders, and weekly working sessions with a core group of representatives. The overarching goal of the visioning sessions is to create a middle-schooler focused building, and these options criteria were all developed to support this goal.

With the decisions of grade level configuration and performance space complete, the SBC focused on selecting the preferred building option for Galvin Middle School.

To select the preferred schematic option from the four options investigated, the SBC utilized the Building Options Matrix. The matrix compared each option across categories such as: educational program, community use and access, construction phasing, sustainability, and cost. The design team presented detailed information about each option including floor plans, site plans, cost estimates, construction duration and phasing, and the responsiveness of each option to educational program goals. All members of the SBC reviewed this matrix at the January 24, 2024 meeting, evaluating how successfully the option met each criteria on a 5-point scale from Best (green) to Worst (red). **Option 9e**, the construction of an all-new Galvin Middle School for grades 5-8 with an auditorium and hybrid stacked grade-level teams, received the highest overall ranking.

Building Options - Matrix

		Grades 5-8			
Categories	Option 1 Base Repair	Option 7A Minor Add / Major Reno	Option 7B Major Add / Minor Reno	Option 9B New Construction Horizontal	Option 9E New Construction Vertical
Educational Program					
Community & Access					
Construction Phasing		60 months	64 months	48 months	36 months
Sustainability					
Cost		\$225 mil	\$248 mil	\$237 mil	\$232 mil

BEST	GOOD	FAIR	POOR	WORST

The Evaluation Criteria Matrix used by the SBC and results identifying Option 9e as the preferred solution.

INTRODUCTION

The relative opportunities and challenges of each option are identified in greater detail in Section 3.3.3, FINAL EVALUATION OF ALTERNATIVES. The following brief comparative summaries are provided here as context for the voting selection outcome:

Option 1: This base repair / code upgrade option does not address the educational deficiencies within the existing building, has one of the longest construction timelines, does not add any additional area needed even to support the current 6-8 grade configuration, and does not support the addition of 5th grade.

Addition / Renovation Options

Options 7a & 7b are addition / renovation options. They both have a significantly longer and more complex construction timeline with more phases, increased probability for student disruption, and multiple student relocations throughout the project than the new construction options.

Option 7a: Due to the constraints of the existing academic building, this option does not achieve many of the educational program goals. Student collaboration spaces have poor adjacency, and in some cases, no visibility from classrooms, making their use impractical. The existing long, dark corridors have become even longer and darker with awkward corners, jogs, and angles. Circulation is inefficient and navigation is challenging, with some classrooms located quite far from student services such as the Nurse's suite. Notably, the layout does not support the separation of grades that was stated to be a requirement to successfully implement a 5-8 grade level configuration. It is true that different grades are in different locations, but the grade-level adjacencies, location of Art, Technology Engineering, Media, and

overall circulation patterns do not address the town's concerns for the supervision of 5th and 8th graders and how they would mix and interact in the same building.

Several classrooms and support spaces remain landlocked and lack natural daylight or views to the outdoors. Many administrative areas are undersized, including those that provide direct student support, perpetuating a cramped, unwelcoming environment that has been identified as a challenge to students' social / emotional wellbeing. Existing undersized classrooms remain, and new spaces are shoehorned into locations where their use and program goals are compromised by the constraints of the existing building; for example, the performance technology studio is a single story space, when ideally it should be at least 1.5 stories. Similarly, adaptive PE is a single story space that should be taller to support a standard offering of physical activities and fitness equipment. Band, chorus and orchestra are located far from the auditorium, creating logistical challenges and limiting the best use of the stage area for educational instruction in addition to performance. This option did succeed in presenting an add / reno option that is cost competitive with new construction options; at \$225M, it is \$7M less expensive than the least expensive new construction option (9e). However, it succeeds in cost competitiveness because it maintains a number of undersized program spaces, resulting in a lower overall building square footage than the other options. It may be a poor economy to save 3% in project costs to build a school that does not meet the educational program goals. It is also less resource-efficient, because at the end of the day, the existing building portion envelope is less thermally efficient than new construction, requiring higher annual operation and maintenance costs for the life of the building.

INTRODUCTION

Option 7b: The main shortcomings of this option for students are the limitations to program spaces that are placed in the existing gymnasium, such as the single-story portion of the adaptive PE program and the poor connection of the gymnasium to the outdoor fields because it is on the second floor. However, one of the biggest disadvantages of this option occurs outside the building: its central placement on the site, necessary to locate the new construction adjacent to the existing gym, does not use the site as efficiently as the new construction options.

New Construction Options

Option 9b: This option meets some of the goals of the educational program, but it does not meet all of the goals of the visioning sessions, especially with regards to daylighting of spaces. The student commons / dining, student collaboration spaces, media center, and resource rooms do not enjoy natural views to the exterior. Some of these do achieve daylighting from clerestories, but the student commons and resource rooms experience no natural daylight.

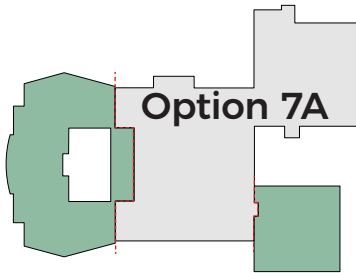
A fundamental challenge to this scheme is the grade-level organization. The allocation of all classrooms into just four academic zones creates spatial inefficiencies that are avoided in the six zone option strategies (options 7b and 9e). With only four academic zones, circulation distances increase. Groupings of team classrooms in this option are elongated and linear instead of short and clustered, making for a less connected team layout and fewer sight lines between classrooms and collaboration spaces. The spatial challenges of these four larger academic zones and the resulting larger overall building footprint is a significant shortcoming to this scheme.

Option 9e: This scheme provides a direct response to the goals of the educational program and the visioning sessions. Because it is all new construction, it does not have to compromise desired program goals or adjacencies in order to fit into the constraints of an existing building. It is able to achieve the desired programs, adjacencies, and spatial qualities such as ample natural light, an efficient layout, innovative media spaces, and functional, activated circulation that supports student collaboration. This option also provides the desired grade-level separation in its layout so that in a school with a four year age spread, students spend more time with similar-aged peers, but also have opportunities to appropriately mix with other grade levels during supervised activities such as musical and theater performances and clubs. Unlike the other three options, the Option 9e building footprint is able to pull closer to Pecunit Street, opening up the site with unobstructed views and access to the rear fields, creating a true campus experience for students and the community.

Selection of Preferred Solution

Following these discussions and ranking exercises, each member of the SBC was asked to provide a verbal vote for their preferred option. **Option 9e** was unanimously selected, thereby establishing the preferred schematic option for the Galvin Middle School Project. The criteria and categories evaluated were selected in response to the Educational Program and priorities identified in the Statement of Interest. Refer to Section 3.3.4 PREFERRED SOLUTION for additional information related to the preferred schematic option, Option 9e.

INTRODUCTION



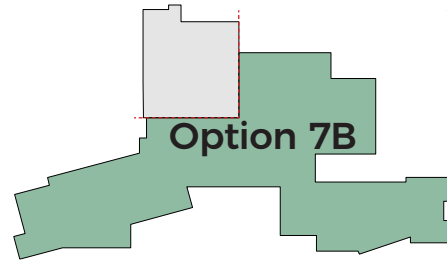
Renovation: 131,903 sf
New Construction: 81,570 sf
Total Project Size:
 213,473 sf

- Correct quantity of program spaces
- 5th grade to move to GMS
- Clearly defined grade configuration between 5/6 and 7/8
- Large footprint/roof area for possible photovoltaic arrays (PV Panels)

Advantages

Obstacles

- Large % of program spaces are undersized
- Building organization does not support 7/8 grade level teaming
- Long construction duration
- Large building footprint
- Some windowless classrooms remain
- 1.5 court gymnasium



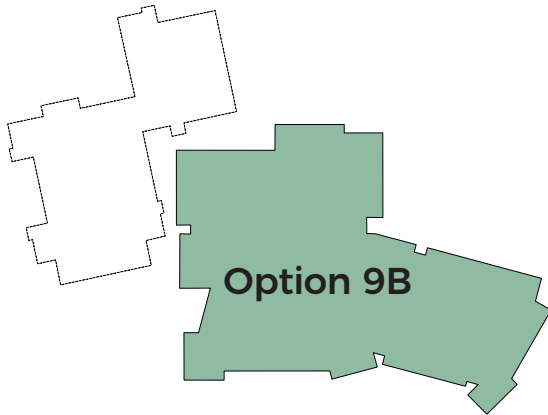
Renovation: 36,600 sf
New Construction: 186,030 sf
Total Project Size:
 222,630 sf

- Correct quantity and size of program spaces (minus gym)
- 5th grade to move to GMS
- Grade level teaming and collaboration is supported in organization
- Clearly defined grade configuration between 5/6 and 7/8
- Easily identifiable entry point
- Maximizes solar benefits

Advantages

Obstacles

- Long construction duration
- Footprint location isolates site access to rear field
- 1.5 court gymnasium
- Public access to the auditorium is not ideal
- Small footprint/roof area for possible photovoltaic arrays (PV Panels)



Demolition: 131,903 sf
New Construction: 218,350 sf
Total Project Size:
 218,350 sf

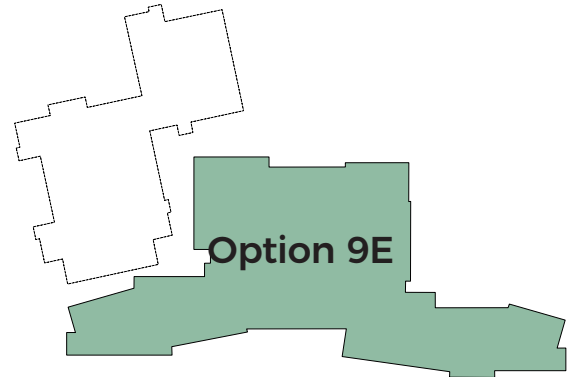
- Correct quantity and size of program spaces
- 5th grade to move to GMS
- Clearly defined grade configuration between 5/6 and 7/8
- Organization supports grade level teaming and collaboration
- Limited existing building unknowns
- Large footprint/roof area for possible photovoltaic arrays

Advantages

Obstacles

- Large footprint limits open space & site access opportunities
- Expansive footprint limits daylight opportunities to interior spaces
- Phased construction
- Academic core not conducive to solar orientation benefits

SBC VOTED UNANIMOUSLY



Demolition: 131,903 sf
New Construction: 218,350 sf
Total Project Size:
 218,350 sf

- Correct quantity and size of program spaces
- 5th grade to move to GMS
- Smallest footprint maximizing site and open space
- Clearly defined grade configuration between 5/6 and 7/8
- Organization supports grade level teaming and collaboration
- Limited existing building unknowns
- Linear footprint to provide daylight opportunities to interior spaces
- Maximizes solar benefits

Advantages

Obstacles

- Smallest footprint/roof area for possible roof mounted photovoltaic arrays (PV Panels)

INTRODUCTION

School Committee

On February 1, 2024, the project team gave a brief presentation to update the SC on the project's schedule, the preferred building option selected including the reasoning, the preferred site plan, and floor plans. A portion of the discussion was focused on the educational program including a description on what updates have occurred, reasoning for these, and ultimately how the educational program supports the District's vision. The School Committee unanimously endorsed the updated Educational Program as the final version to submit as part of the PSR package to the MSBA for the Galvin Middle School project

Constant communications and updates between the School Building Committee and the School Committee have been ongoing throughout the PSR phase, and this presentation summarized the work that has occurred over the past three months. It also provided an opportunity for questions and discussion by the School Committee members and community members present. After the brief presentation, the School Committee voted unanimously to endorse the final Educational Program and Option 9e, newly constructed middle school for grades 5-8 with an auditorium. ♦

Project Directory

ORGANIZATION	NAME	TITLE	PHONE	EMAIL
SCHOOL BUILDING COMMITTEE				
School Building Committee	Derek Folan	Canton Public Schools Superintendent, SBC Chair		foland@cantonma.org
School Building Committee	Bob Benedetti	Building Renovations Committee Member		bobbenedetti@verizon.net
School Building Committee	David Buccelli	Canton Public Schools		buccellid@cantonma.org
School Building Committee	John Connolly	Town of Canton Select Board		jconnolly@town.canton.ma.us
School Building Committee	Charles Doody	Town of Canton - Town Manager		cdoody@town.canton.ma.us
School Building Committee	Mary Graziano	Building Renovations Committee		marypgraziano@gmail.com
School Building Committee	Tom Keleher	Canton Police Department - Deputy Chief		tkeleher@town.canton.ma.us
School Building Committee	Mike Loughran	Town of Canton Select Board		mloughran@town.canton.ma.us
School Building Committee	Brian Lynch	Canton Public Schools - Director of Facilities		lynchb@cantonma.org
School Building Committee	Stephen Marshall	Canton Public Schools - Director of Finance and Operations		marshalls@cantonma.org
School Building Committee	Bob McCarthy	Building Renovations Committee Chair		bobmccarthy2@verizon.net
School Building Committee	Kristian Merenda	School Committee		merendak@cantonma.org
School Building Committee	Jonathan Mulhern	Galvin Middle School Principal		mulhernj@cantonma.org
School Building Committee	Tina Perez	Community Member		tina.perez11@gmail.com
School Building Committee	Randy Scollins	Town of Canton - Finance Director		rscollins@town.canton.ma.us

INTRODUCTION

ORGANIZATION	NAME	TITLE	PHONE	EMAIL
School Building Committee	Sarah Shannon	Canton Public Schools - Assistant Superintendent		shannons@cantonma.org
School Building Committee	Andrea Stuart	Canton Public Schools - Teacher		stuarta@cantonma.org
School Building Committee	Lou Tarmy	Community Member		ltarmy@chacompanies.com
School Building Committee	Thomas Theodore	Town of Canton Select Board Chair		ttheodore@town.canton.ma.us
School Building Committee	Amy Tom	Community Member		amy.tom109@gmail.com
CANTON SCHOOL COMMITTEE				
School Committee	Kendall O'Halloran	Chair		ohallorank@cantonma.org
School Committee	Maureen Moran	Vice Chair		moranm@cantonma.org
School Committee	Laura Arboleda	Clerk		arboledal@cantonma.org
School Committee	Kristian Merenda	Member		merendak@cantonma.org
School Committee	Kimberly McCourt	Member		mccourt_k@cantonma.org
CANTON SELECT BOARD				
Town of Canton	Thomas W. Theodore	Chair		ttheodore@town.canton.ma.us
Town of Canton	John J. Connolly	Vice Chair		jconnolly@town.canton.ma.us
Town of Canton	Michael C. Loughran	Clerk		mloughran@town.canton.ma.us
Town of Canton	Christopher M. Albert	Member		calbert@town.canton.ma.us
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MASSACHUSETTS SCHOOL BUILDING AUTHORITY				
MSBA	Christina Ford	Project Manager FS/SD	617-720-4466	Christina.Forde@massschool-buildings.org
MSBA	Carley Belfield	Sr. Project Coordinator	617-720-4466	Carley.Belfield@massschool-buildings.org
OWNER'S PROJECT MANAGER				
LeftField Project Management, LLC	Jim Rogers	Principal-In-Charge	617-593-0661	jrogers@leftfieldpm.com
LeftField Project Management, LLC	Jen Carlson	Project Director	774-262-9448	jcarlson@leftfieldpm.com
LeftField Project Management, LLC	Linda Liporto	Sr. Project Manager	617-224-8684	lliporto@leftfieldpm.com

INTRODUCTION

ORGANIZATION	NAME	TITLE	PHONE	EMAIL
LeftField Project Management, LLC	Adele Sands	Educational Liaison	774-301-1352	asands@leftfieldpm.com
LeftField Project Management, LLC	Jay Faxon	Mechanical Systems Specialist	978-891-7280	jfaxon@leftfieldpm.com
ARCHITECT				
Ai3 Architects, LLC	Troy Randall	Partner-in-Charge	508-358-0790	randall@ai3architects.com
Ai3 Architects, LLC	Justin P. Thibeault	Principal-in-Charge	508-358-0790	thibeault@ai3architects.com
EDUCATIONAL PLANNING				
My Learning Place Integrated Design	Mike Pirolo	Principal		mike@mlpid.com
SITE SURVEY				
Welch Associates Land Surveyors, Inc.	Pamela Welch, PLS	President	(508) 580-4696	pwelch@welchinc.com
LANDSCAPE ARCHITECT				
Traverse Landscape Architects	Ashley Iannuccilli Cullion	Principal	(401) 383-4950	aiannuccilli@traversela.com
DATA / COMMUNICATIONS / TECHNOLOGY / AUDIO VISUAL				
Ai3 Architects, LLC	John Jordan	Principal	508-358-0790	john@ai7architects.com
MEP-FP ENGINEER				
Griffith & Vary, Inc.	Wayne Mattson, PE	Mechanical Engineer	(508) 295-0050	wmattson@griffithandvary.com
Griffith & Vary, Inc.	Robert Bravo, PE	Electrical Engineer	(508) 295-0050	rbravo@griffithandvary.com
Griffith & Vary, Inc.	Adrian Delima, PE	Plumbing / Fire Protection Engineer	(508) 295-0050	adelima@griffithandvary.com
GEOENVIRONMENTAL ENGINEER				
FS Engineers, Inc.	Farooq Siddique, PE, LSP	Principal	(978) 274-2830	fsiddique@fsengrs.com
SUSTAINABILITY / GREEN DESIGN / RENEWABLE ENERGY CONSULTING				
Andelman & Lelek Engineering, Inc.	Magda Lelek, PE	Principal	(781) 769-8773	magda@andelmanlelek.com
ACOUSTICAL ENGINEER				
Acentech, Inc.	Kristen Murphey	Principal	(617) 499-8000	kmurphy@acentech.com
COST ESTIMATING				
PM&C	Peter Bradley	President	(781) 740-8007	peterbradley@pmc-ma.com
SPECIFICATIONS				
Wil-Spec, LLC	Robert Wilkinson	Principal	(781) 598-6789	robbw@wil-spec.com

INTRODUCTION

ORGANIZATION	NAME	TITLE	PHONE	EMAIL
LIBRARY / MEDIA / LABORATORY / FF&E CONSULTANT				
Integrated Contract Design, Inc.	Nancy Lohrer, IIDA	Principal	(978) 609-4220	nlohrer@icdinc.com
KITCHEN / FOOD SERVICE CONSULTANT				
Crabtree McGrath Associates	John Sousa	President	(987) 352-8500	jsousa@crabtree-mcgrath.com
CIVIL ENGINEER / ENVIRONMENTAL PERMITTING				
The Vertex Companies	Andrew Chagnon, PE	Vice President, Civil Engineering	(781) 952-6022	achagnon@vertexeng.com
GEOTECHNICAL ENGINEER				
Lahlaf Geotechnical Consulting, Inc.	Abdelmadjid Lahlaf, Ph.D., PE	Principal Engineer	(781) 771-1933	madjid.lahlaf@lgcinc.net
ACCESSIBILITY CONSULTANT				
KMA, LLC	Josh Safdie, RA, AIA	Principal	(617) 641-2802	jsafdie@kmaccess.com
TRAFFIC CONSULTANT				
Pare Corporation	Amy Archer, PE	Traffic Engineer	(401) 334-4100	aarcher@parecorp.com
STRUCTURAL ENGINEER				
Engineers Design Group, Inc.	Mehul Dhruv, PE	Principal	(781) 396-9007	mdhruv@edginc.com
SECURITY CONSULTANT				
Introba	Phil Santore, CPTED	Managing Principal, Security	(800) 404-7677	phil.santore@introba.com
CODE CONSULTANT				
Cosentini Associates, Inc.	Rockwood Edwards, PE	Vice President	(617) 748-7800	redwards@cosentini.com
THEATRICAL CONSULTANT				
Act One Theater Consulting	Scott Stipetic	Principal	(561) 307-0618	scott@actoneconsulting.co
HAZARDOUS MATERIALS CONSULTANT				
Universal Environmental Consultants	Ammar Dieb	President	(508) 628-5486	adieb@uec-env.com

Updated Project Schedule

The following proposed project schedule was assembled by the OPM, LeftField Project Management, with input from the Designer, Ai3 Architects, and the School Building Committee. The proposed schedule aligns with the targeted dates established in the RFS.

The Project Team, District, and the Town have been working closely to ensure that sufficient time is being taken to review the data and options effectively and sufficiently. Throughout the process, the Project Team will notify the MSBA promptly if additional time is needed for any phase, and the Project Schedule will be modified as necessary. ♦

Notable Proposed Dates for MSBA Modules 3 - 8:

- | | |
|--------------------------------|---|
| OCT 27, 2023 | ▶ Module 3, Preliminary Design Program Submission |
| DEC 22, 2023 | ▶ MSBA Review of PDP |
| FEB 5, 2024 | ▶ Module 3, Preferred Schematic Report Submission |
| FEB 16, 2024 | ▶ MSBA Review of PSR |
| MAR 13, 2024 | ▶ MSBA Facilities Assessment Subcommittee |
| JUN 26, 2024 | ▶ Module 4, Schematic Design Submission |
| AUG 28, 2024 | ▶ MSBA Board of Directors Review of SD |
| <hr/> | |
| OCT 2024
- NOV 2024 | ▶ Module 5, Vote to Fund Project |
| JUN, 2026 | ▶ Module 6, Construction Documents completed |
| JUL, 2026 | ▶ Module 7, Anticipated start of construction |
| DEC, 2029 | ▶ Module 8, Anticipated construction closeout |



**WILLIAM H GALVIN MIDDLE SCHOOL
Preliminary Project Schedule**

2/5/2024

Task Name	Duration (days)	Start	Finish
Procure OPM [MOD 2]	36	Monday, January 30, 2023	Monday, March 6, 2023
OPM interviews	1	Monday, January 30, 2023	Monday, January 30, 2023
OPM fee review & approval	36	Tuesday, January 31, 2023	Tuesday, March 7, 2023
MSBA OPM meeting approval	1	Tuesday, March 7, 2023	Tuesday, March 7, 2023
MSBA OPM letter issued	1	Thursday, February 2, 2023	Thursday, February 2, 2023
OPM contract executed	1	Monday, March 6, 2023	Monday, March 6, 2023
Procure Architect [MOD 2]	107	Wednesday, March 15, 2023	Thursday, June 29, 2023
Committee reviews & approves issuance RFS to the MSBA	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
LF issues RFS to the MSBA	1	Thursday, March 16, 2023	Thursday, March 16, 2023
MSBA-RFS review period	15	Thursday, March 16, 2023	Thursday, March 30, 2023
Finalize RFS with MSBA/BC	1	Monday, April 3, 2023	Monday, April 3, 2023
Ad submitted in Central Register & local newspaper	1	Thursday, March 30, 2023	Thursday, March 30, 2023
Select 3 members for DSP team / Assign DSP subcommittee	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
Ad appears in Central Register	1	Wednesday, April 5, 2023	Wednesday, April 5, 2023
On-Site RFS briefing	1	Thursday, April 13, 2023	Thursday, April 13, 2023
Receive RFS designer submissions	1	Thursday, May 11, 2023	Thursday, May 11, 2023
Review RFS & check references	1	Wednesday, May 24, 2023	Wednesday, May 24, 2023
Submit initial RFS packets to the MSBA DSP	1	Wednesday, May 24, 2023	Wednesday, May 24, 2023
Submit reference check data to the MSBA DSP [MSBA deadline]	1	Tuesday, May 30, 2023	Tuesday, May 30, 2023
Designer Selection Panel Dry Run	1	Monday, June 5, 2023	Monday, June 5, 2023
Attend MSBA 1st DSP Meeting [assume rank and interview option is selected]	1	Tuesday, June 6, 2023	Tuesday, June 6, 2023
Attend MSBA 2nd DSP Meeting for Interviews	1	Tuesday, June 20, 2023	Tuesday, June 20, 2023
MSBA DSP issues official ranking and letter Re: Top Ranked Design Firm	1	Tuesday, June 20, 2023	Tuesday, June 20, 2023
Negotiate Designer Fee	9	Tuesday, June 20, 2023	Wednesday, June 28, 2023
Designer contract - approval by BC	1	Wednesday, June 28, 2023	Wednesday, June 28, 2023
Execute Designer contact	1	Thursday, June 29, 2023	Thursday, June 29, 2023
Develop schedule/work plan	15	Thursday, June 29, 2023	Thursday, July 13, 2023
BC approves work plan	1	Thursday, August 3, 2023	Thursday, August 3, 2023
MSBA/District kick off meeting	1	Tuesday, August 1, 2023	Tuesday, August 1, 2023
FEASIBILITY STUDY [MOD 3]	285	Friday, July 14, 2023	Wednesday, April 24, 2024
Preliminary Design Program (PDP)	120	Thursday, June 29, 2023	Friday, October 27, 2023
Educational Programming	78	Friday, July 14, 2023	Friday, September 29, 2023
Ed. Visioning kick off meeting	1	Friday, July 14, 2023	Friday, July 14, 2023
Educational Visioning Galvin Walkthrough	1	Friday, July 21, 2023	Friday, July 21, 2023
Educational Visioning Group Workshop #1	1	Thursday, July 27, 2023	Thursday, July 27, 2023
Educational Visioning School Tours	2	Wednesday, August 2, 2023	Thursday, August 3, 2023
Educational Visioning Group Workshop #2 & #3	1	Wednesday, August 16, 2023	Wednesday, August 16, 2023
Educational Visioning Workshop #4 - Community Meeting	1	Sunday, August 20, 2023	Sunday, August 20, 2023
Educational Programming Verification Session #1	1	Friday, August 18, 2023	Friday, August 18, 2023
Educational Programming Verification Session #2	1	Thursday, September 14, 2023	Thursday, September 14, 2023
EDUCATIONAL PLAN; Ed plan statement of teaching philosophy, methods and goals.	78	Thursday, June 29, 2023	Thursday, September 14, 2023
Initial space summary ("ISS")	1	Thursday, September 14, 2023	Thursday, September 14, 2023
Evaluation of existing conditions	121	Thursday, June 29, 2023	Friday, October 27, 2023

Meetings	254	Tuesday, March 7, 2023	Wednesday, November 15, 2023
SBC #1 OPM Kickoff	1	Tuesday, March 7, 2023	Tuesday, March 7, 2023
SBC #2 Designer Selection Process	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
SBC #3	1	Wednesday, June 14, 2023	Wednesday, June 14, 2023
SBC #4	1	Wednesday, June 28, 2023	Wednesday, June 28, 2023
SBC #5	1	Wednesday, September 20, 2023	Wednesday, September 20, 2023
SBC #6	1	Wednesday, October 18, 2023	Wednesday, October 18, 2023
SBC #7	1	Wednesday, November 15, 2023	Wednesday, November 15, 2023
** Submit PDP to the MSBA **	1	Friday, October 27, 2023	Friday, October 27, 2023
MSBA PDP Review	22	Monday, October 30, 2023	Monday, November 20, 2023
Receive MSBA PDP comments	1	Wednesday, December 20, 2023	Wednesday, December 20, 2023
District returns responses to MSBD PDP comments	27	Wednesday, December 20, 2023	Monday, January 15, 2024
Preferred Schematic Report (PSR)	178	Monday, October 30, 2023	Wednesday, April 24, 2024
Prepare and Submit Project Notification to Mass Historical Commission and Receive MHC Response	36	Friday, December 1, 2023	Friday, January 5, 2024
SBC Vote to Submit PSR	1	Wednesday, January 24, 2024	Wednesday, January 24, 2024
*** Submit PSR to the MSBA ***	1	Monday, February 5, 2024	Monday, February 5, 2024
MSBA Review Period	22	Tuesday, February 6, 2024	Tuesday, February 27, 2024
Respond to MSBA PSR review comments	15	Tuesday, February 27, 2024	Tuesday, March 12, 2024
MSBA Facilities Assessment Committee (FAS) review (3/13 or 3/27)	15	Wednesday, March 13, 2024	Wednesday, March 27, 2024
Respond to MSBA FAS Comments	29	Wednesday, March 13, 2024	Wednesday, April 10, 2024
★★MSBA BOD Mtg - PSR - Proceed to Schematic★★	1	Wednesday, April 24, 2024	Wednesday, April 24, 2024
Schematic Design [MOD 4]	325	Tuesday, February 6, 2024	Thursday, December 26, 2024
DESE submittal	22	Thursday, June 6, 2024	Thursday, June 27, 2024
MSBA Review of DESE Submittal	22	Friday, June 28, 2024	Friday, July 19, 2024
DESE Review and Approval	22	Monday, July 22, 2024	Monday, August 12, 2024
Schematic Design Submittal	65	Wednesday, April 24, 2024	Thursday, June 27, 2024
SD Cost Estimates and Reconciliation	29	Friday, May 10, 2024	Friday, June 7, 2024
MSBA and Bond Counsel to Review Vote Language	15	Thursday, June 27, 2024	Thursday, July 11, 2024
SBC Vote to Approve SD Submission to MSBA	1	Wednesday, June 26, 2024	Wednesday, June 26, 2024
MSBA Schematic Design Notification	1	Thursday, June 13, 2024	Thursday, June 13, 2024
** Schematic Submitted to the MSBA **	1	Thursday, June 27, 2024	Thursday, June 27, 2024
MSBA Project Scope and Budget meeting	15	Wednesday, July 17, 2024	Wednesday, July 31, 2024
MSBA Review Comments Issued	22	Thursday, June 27, 2024	Thursday, July 18, 2024
Respond to MSBA Comments	15	Friday, July 19, 2024	Friday, August 2, 2024
★★MSBA BOD Meeting - SD Approval★★ (TBD - 2024 dates not released)	1	Wednesday, August 28, 2024	Wednesday, August 28, 2024
120-day duration to secure funding authorization	121	Wednesday, August 28, 2024	Thursday, December 26, 2024
District executes PSBA	8	Saturday, August 31, 2024	Saturday, September 7, 2024
★★Town Approvals★★ (exact dates TBD)	23	Monday, November 18, 2024	Tuesday, December 10, 2024
★★Execute PFA★★	17	Tuesday, December 10, 2024	Thursday, December 26, 2024
CM PROCUREMENT [applicable if committee decides to utilize CM-R methodology]	82	Wednesday, January 24, 2024	Monday, April 15, 2024
SBC Approves Use of CM at Risk Delivery & Selection Committee	1	Wednesday, January 24, 2024	Wednesday, January 24, 2024
CM at Risk Award / Notice to Proceed	1	Monday, April 15, 2024	Monday, April 15, 2024
SD Preconstruction	784	Monday, April 15, 2024	Monday, June 8, 2026

Design Development	177	Thursday, January 2, 2025	Friday, June 27, 2025
Design Development Documents	106	Thursday, January 2, 2025	Friday, April 18, 2025
DD Cost Estimate	21	Friday, April 18, 2025	Friday, May 9, 2025
DD Value Engineering and Reconciliation	14	Saturday, May 10, 2025	Friday, May 23, 2025
** Submit DD package to MSBA **	1	Friday, May 23, 2025	Friday, May 23, 2025
MSBA Issues Comments	22	Friday, May 23, 2025	Friday, June 13, 2025
Response to MSBA Comments	14	Friday, June 13, 2025	Friday, June 27, 2025
CD 60% Phase_MSBA Submission	160	Friday, June 27, 2025	Thursday, December 4, 2025
Develop CD 60% Documents	91	Friday, June 27, 2025	Thursday, September 25, 2025
CD 60% Cost Estimate	21	Thursday, September 25, 2025	Thursday, October 16, 2025
CD 60% VE and Reconciliation	14	Thursday, October 16, 2025	Thursday, October 30, 2025
** Submit 60% CD MSBA submission **	1	Thursday, October 30, 2025	Thursday, October 30, 2025
MSBA Issues Comments	21	Thursday, October 30, 2025	Thursday, November 20, 2025
Response to MSBA Comments	14	Thursday, November 20, 2025	Thursday, December 4, 2025
CD 90% Phase_MSBA Submission	133	Thursday, December 4, 2025	Thursday, April 16, 2026
Develop CD 90% Documents	63	Thursday, December 4, 2025	Thursday, February 5, 2026
CD 90% Cost Estimate	21	Thursday, February 5, 2026	Thursday, February 26, 2026
CD 90% VE and Reconciliation	14	Thursday, February 26, 2026	Thursday, March 12, 2026
** Submit 90% CD MSBA submission **	1	Thursday, March 12, 2026	Thursday, March 12, 2026
MSBA Issues Comments	21	Thursday, March 12, 2026	Thursday, April 2, 2026
Response to MSBA Comments	14	Thursday, April 2, 2026	Thursday, April 16, 2026
Final 100% CD MSBA submission - for record only	41 days		
100% CD drawings developed	45	Thursday, April 16, 2026	Sunday, May 31, 2026
Prepare 100% CDs for Final Bidding	8	Sunday, May 31, 2026	Monday, June 8, 2026
** Submit 100% CD (Bid) drawings/specs/GMP to MSBA ** FOR RECORD	1	Monday, June 8, 2026	Monday, June 8, 2026
PERMITTING - STATE and LOCAL JURISDICTIONAL APPROVALS	459	Thursday, October 30, 2025	Monday, February 1, 2027
Zoning Board of Appeals	98	Thursday, December 4, 2025	Thursday, March 12, 2026
Notice of Intent to Conservation Commission (Review based on Preliminary Site Design w/ Final Site Design due at 60% CDs)	1	Thursday, October 30, 2025	Thursday, October 30, 2025
NPDS Construction General Permit	45	Thursday, April 16, 2026	Sunday, May 31, 2026
EPA-NPDES / SWPPP	25	Sunday, May 31, 2026	Thursday, June 25, 2026
Permits from Town Engineering Dept.	45	Thursday, April 16, 2026	Sunday, May 31, 2026
Special Permit to Planning Dept.	35	Thursday, September 25, 2025	Thursday, October 30, 2025
Building Permit	246	Sunday, May 31, 2026	Monday, February 1, 2027
Bidding			
Early Site Work Bid Period (after 60% CDs, if possible)	28	Thursday, November 20, 2025	Thursday, December 18, 2025
Award Early Package Contract	1	Thursday, December 18, 2025	Thursday, December 25, 2025
Main Bid Period	30	Monday, June 8, 2026	Wednesday, July 8, 2026
Final GMP	28	Wednesday, July 8, 2026	Wednesday, August 5, 2026
Construction	1342	Thursday, December 25, 2025	Tuesday, August 28, 2029
Early Mobilization	28	Thursday, December 25, 2025	Thursday, January 22, 2026
Early Site Work Construction (if possible)	167	Thursday, January 22, 2026	Wednesday, July 8, 2026
Main Construction	730	Wednesday, July 8, 2026	Friday, July 7, 2028
Building Substantial Completion	1	Friday, July 7, 2028	Friday, July 7, 2028
FFE Installation	31	Friday, July 7, 2028	Monday, August 7, 2028
Punchlist	31	Friday, July 7, 2028	Monday, August 7, 2028
Final Completion of New School	1	Monday, August 7, 2028	Monday, August 7, 2028
Teacher Move-In	21	Monday, August 7, 2028	Monday, August 28, 2028

School Opening	1	Monday, August 28, 2028	Monday, August 28, 2028
Building Demo and Field Construction (if applicable)	365	Monday, August 28, 2028	Tuesday, August 28, 2029

Project Closeout Phase	118	Tuesday, August 28, 2029	Monday, December 24, 2029
Prepare and Submit Closeout Documents	90	Tuesday, August 28, 2029	Monday, November 26, 2029
Final Application for Payment	1	Monday, November 26, 2029	Monday, November 26, 2029
Submit 100% DCAMM Contractor Evaluations	7	Monday, November 26, 2029	Monday, December 3, 2029
Final Reimbursement Request	1	Monday, December 3, 2029	Monday, December 3, 2029
MSBA Closeout Documents Submitted	21	Monday, December 3, 2029	Monday, December 24, 2029
LEED	1604	Thursday, January 2, 2025	Friday, May 25, 2029
LEED Registration	21	Thursday, January 2, 2025	Thursday, January 23, 2025
LEED Kick-Off Meeting	1	Thursday, January 30, 2025	Thursday, January 30, 2025
Submit Design Submittal to USGBC	1	Monday, June 8, 2026	Monday, June 8, 2026
Final LEED 10-Month Cx Report	300	Friday, July 7, 2028	Thursday, May 3, 2029
Final Cx Report, Cx Completion Certificate	7	Friday, May 4, 2029	Friday, May 11, 2029
Construction Submittal to USGBC	14	Friday, May 11, 2029	Friday, May 25, 2029
Targeted Date of LEED Certification Letter	1	Friday, May 25, 2029	Friday, May 25, 2029
DCAMM Documentation	833	Monday, June 8, 2026	Monday, September 18, 2028
Designer evaluation for Design Phase	21	Monday, June 8, 2026	Monday, June 29, 2026
Designer evaluation for CA Phase	21	Friday, July 7, 2028	Friday, July 28, 2028
Contractor 50% evaluation	21	Thursday, September 2, 2027	Thursday, September 23, 2027
Contractor 100% evaluation	21	Monday, August 28, 2028	Monday, September 18, 2028

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Summary of Final Evaluation of Existing Conditions

Since the submission of the Preliminary Design Program, the existing conditions have been further reviewed. The final aerial survey has identified one additional wetland area on the project site. It is roughly 1000 sf in size and therefore eligible for mitigation. It is located adjacent to the northwest edge of the larger of the two existing middle school parking lots. (Refer to sheet 2 of 9 of the aerial survey in Section 3.3.2, EVALUATION OF EXISTING CONDITIONS) Because this small wetland is located in the general area of proposed construction, the design team has identified potential areas of mitigation which will be defined in greater detail in the civil and landscape plans for the Schematic Design submission.

Except for the addition of this additional wetland to the survey, there are no substantive changes to any of the original conclusions and observations at the existing Galvin Middle School building.

Additional testing to be performed shall be as follows:

Geotechnical Analysis

A Phase I Preliminary Geotechnical Analysis for the Galvin Middle School site was performed by the design team's consultant, Lahlaf Geotechnical Consulting, Inc. in September 2023; Refer to the Preliminary Design Program (PDP) submission (Appendix E, page 677). The Phase I Geotechnical investigations included 20 borings and one groundwater observation well. The data collected from these provided the geotechnical engineer, structural engineer, and cost estimator the information needed to develop a proposed foundation design for the Schematic Design narratives and construction cost estimates to support an accurate project scope and budget.

The preliminary geotechnical analysis report recommends additional borings to further analyze the variable existing fill in proposed foundation locations. This information will be used to estimate the quantity of existing fill that will need to be removed and replaced with structural fill. The Phase II geotechnical investigation will include these activities to supplement the information gathered in the Phase I investigations, specifically in the area identified as the proposed project's new foundations and playfield area. The Phase II investigation shall be performed during the Design Development phase.

Hazardous Materials Investigation

A Hazardous Materials Identification Study for the Galvin Middle School building was completed in July 2023; refer to page 369 in the Preliminary Design Report (PDP) submission for the complete report.

To ensure an accurate scope and budget following the next design phase, the cost estimate included in the initial hazardous materials study assumed that all suspect materials identified in the study are hazardous and will require abatement unless proven otherwise by additional testing and investigation. This testing shall be performed in the Design Development phase of the project.

The additional testing will involve exploration (controlled destructive testing) for potential asbestos-containing materials in concealed spaces.

Refer to the Appendices at the end of this document for a full evaluation of the existing conditions by all trades. ♦

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Summary of Final Evaluation of Alternatives

Upon review of the options presented, the School Building Committee (SBC), with the endorsement of the School Committee, determined that the base repair option (Option 1) was not a viable solution. The SBC determined that the estimated cost of Option 1 would not provide a return on investment financially or educationally. It would not address the spatial deficiencies in the existing building that are so detrimental to the proposed educational program.

The SBC determined that both add / reno and new construction options had some validity and would be investigated during the Preferred Schematic Report (PSR) phase. These include the following:

Option 7a - Grades 5-8, Academic Addition / Major Renovation

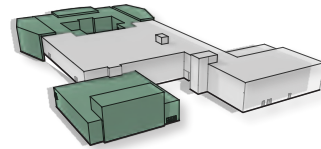
Option 7b - Grades 5-8, New Academic Building / Gymnasium Renovation

Option 9b - Grades 5-8, New Construction, clustered grade-level teams

Option 9e - Grades 5-8, New Construction, hybrid stacked grade-level teams

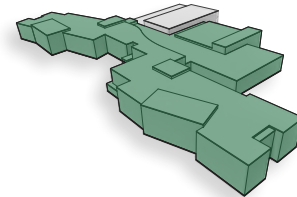
A thorough evaluation of each of these four options has been provided in this report, including the option's construction phasing, anticipated use of and impact on utilities, conceptual site and building plans, diagrams that explore how successfully each option meets district goals, and narratives related to the major building systems.

ADD / RENO



Option 7a

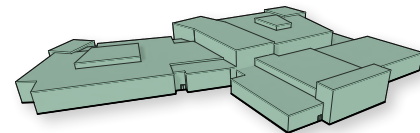
Academic Addition / Major Renovation



Option 7b

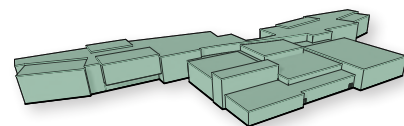
New Academic Building / Gymnasium Renovation

NEW CONSTRUCTION



Option 9b

New Construction, Grade - Level Teams by Floor



Option 9e

New Construction, Hybrid Stacked Grade - Level Teams

INTRODUCTION

Many variables were taken into account to determine the most appropriate option that would meet both the key aspirations of the visioning sessions and the academic requirements of the District's proposed educational program.

This included careful consideration of the criteria included in the Building Options Matrix, as well as the following key goals identified during Visioning Sessions 1 and 2:

- Middle-schooler focused building (students as heart of the school)
- Spaces, curriculum, and opportunities to support teaming and experiential, project-based learning
- Spaces to support a wealth of specials programs
- Flexible learning environment
- Outdoor space for academic and social-emotional needs
- Calming spaces throughout
- Maximize inclusion and integration of all students and programs
- Building and site as a community resource, even beyond school hours
- Safety and security
- Structures, instructional practices, and design features to support collaboration
- Welcoming and inspiring facilities
- Visible learning beyond display cases
- Sustainability
- Maximize natural light

INTRODUCTION

Site Analysis

Further refinement of the site analysis since the PDP phase has revised the potential buildable area on the site. The buildable area identified in the diagram below shows the plan north edge avoiding the dotted floodplain line in addition to the dashed wetlands buffer.

Because there is no viable swing space elsewhere in the town for the middle school to occupy during construction, all four options required strategies that maintained a fully operational and safe middle school setting throughout. Among the options

footprints, (see diagrams on facing page), only Option 7a was able to be located in the smaller buildable area to the northwest of the existing building because the expansion of the existing academic building required the smallest new construction footprint. The other three options utilize the larger buildable area located to the southeast of the existing school. Fortunately, locating the options in this area of the site met the goals for site access, circulation, and preservation of open space, which will be explored in greater detail. In addition, all options footprints are coordinated with site topography.



INTRODUCTION



All options preserve the existing site access points from Pecunit Street. The detailed construction phasing strategies for each option are shown in Section 3.3.3, FINAL EVALUATION OF ALTERNATIVES. ◆

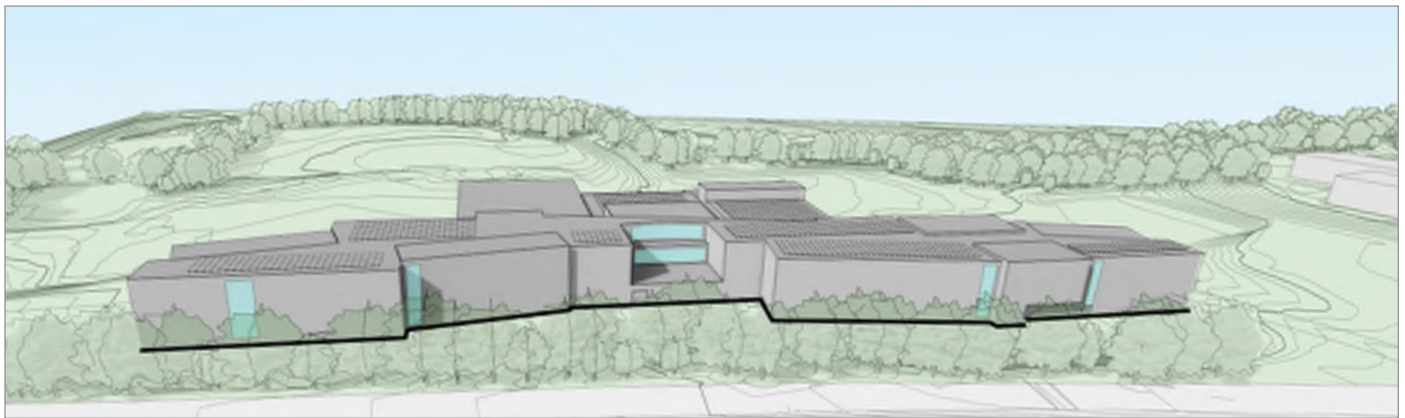
Summary of the District’s Preferred Solution

Preferred Solution: Option 9e

On January 24, 2024, the School Building Committee voted to submit Option 9e as the Preferred Solution that will continue to be developed and refined through the Schematic Design phase. Option 9e received the highest total score on the Building Options Matrix and was selected as the best option to fulfill the priorities of

the Educational Program and Statement of Interest.

The base repair / code upgrade option (Option 1) and the addition / renovation options (7a and 7b) were not preferred due to their extended construction phasing timelines that included phased-occupied construction. They also did not offer the most efficiency in terms of program



Option 9e

Student Collaboration & Hands-on Learning

PROVIDE
strong academic teams adjacent to flexible learning environments for interdisciplinary activities and hands-on “Project Based Learning”

Student at the Heart of the School

SUPPORT
the whole student, including physical, academic, and social-emotional development through strong connections to specials programs, athletics, and outdoor spaces

Ideal Learning Environment for the Whole Student

CREATE
space types with design features that empower students to express and connect with their peers, experience choice, and connect visually and physically with nature in a building that highlights sustainability

Welcoming School Community

INCLUDE
and integrate all students and programs with a positive, inclusive, and diverse school culture that accommodates all student needs in a welcoming building that also supports the community as a whole

Priorities of the Educational Program captured by the District's Preferred Solution

INTRODUCTION

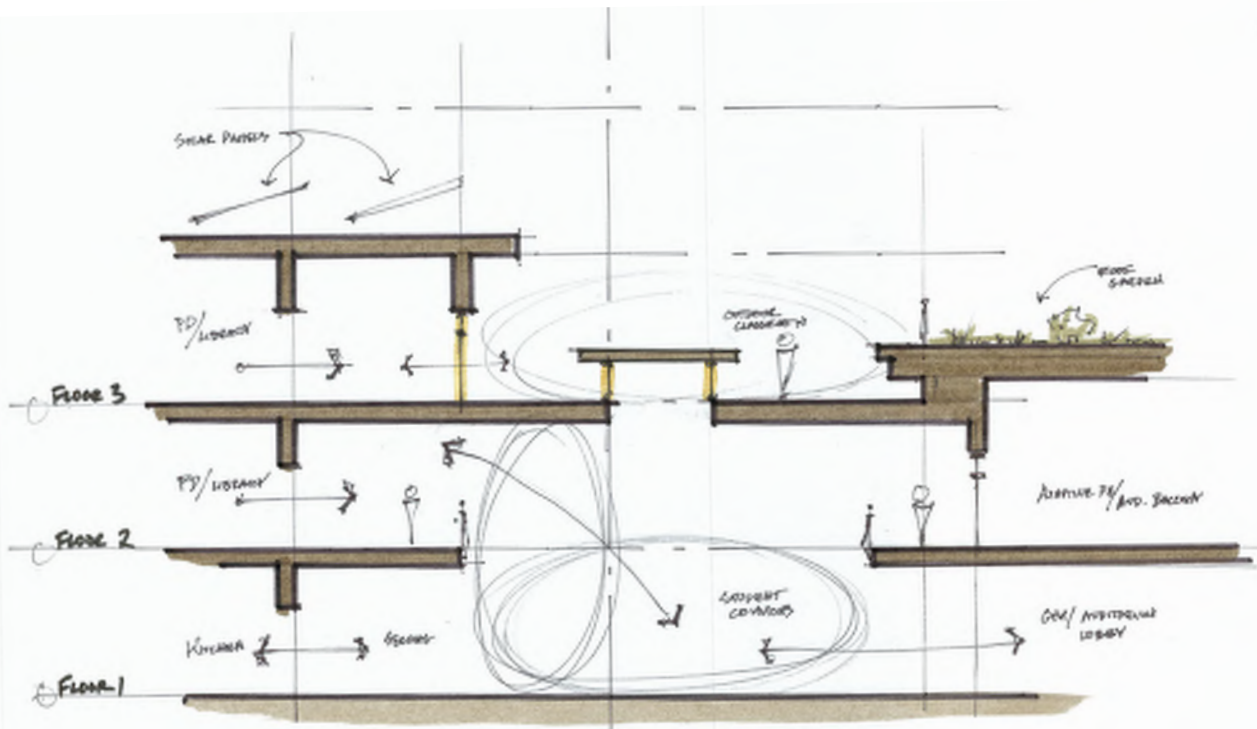
organization, site efficiency, and energy usage given the constraints of the existing building.

The two new construction options (9b and 9e) studied different grade team organization strategies. Option 9b placed an entire grade on the same level while Option 9e utilized a hybrid approach of distributing a grade both horizontally on the same level and vertically on an adjacent level. Both options sought to provide strong team neighborhoods with excellent collaboration space adjacency, efficient footprints to maximize open space, flexible and secure community spaces after hours, and a layout to enjoy natural light and views to the greatest extent possible.

The greater success of Option 9e in achieving these goals and its more effective team organization secured its selection as the preferred solution.

Option 9e is a new construction option that includes a grade 5-8 enrollment and 800 seat auditorium. Its organization stems from two academic wings that grow from a flowing central student commons. Between the two wings, shared programming such as media, art, and technology / engineering rooms are located for central accessibility to all grades. The gymnasium, auditorium, and music programs are located across the commons from the academic wings, creating a strong community side for the building while maintaining an efficient footprint.

The core layout of Option 9e is very compact to achieve optimal site efficiency as well as cost and energy savings for the building. Despite the density of the core zone, innovative design in both plan and section provide natural daylight and views to the exterior for these spaces. The



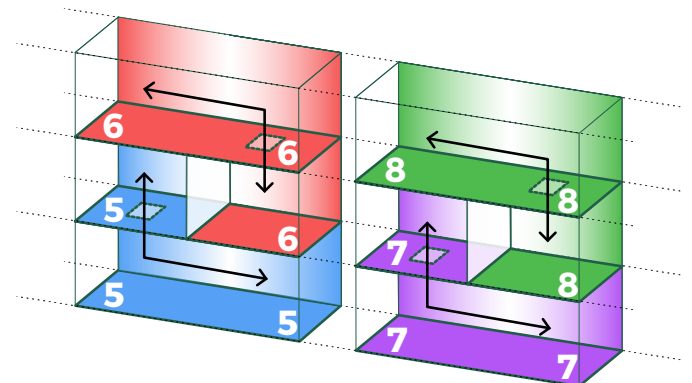
Preliminary study of daylighting the central areas of the building

INTRODUCTION



academic wings extend outward from this core, providing even more daylight and views of nature to student program spaces.

Shared or "public" spaces in the school such as student dining, the performance technology studio, auditorium, and gymnasium are located within the community core near both the main and after hours entrances for easy access by both the student community and greater community after hours. Administration, guidance, the nurse's suite, and special education resources are grouped for ease of access and to enhance school security near the main entry.

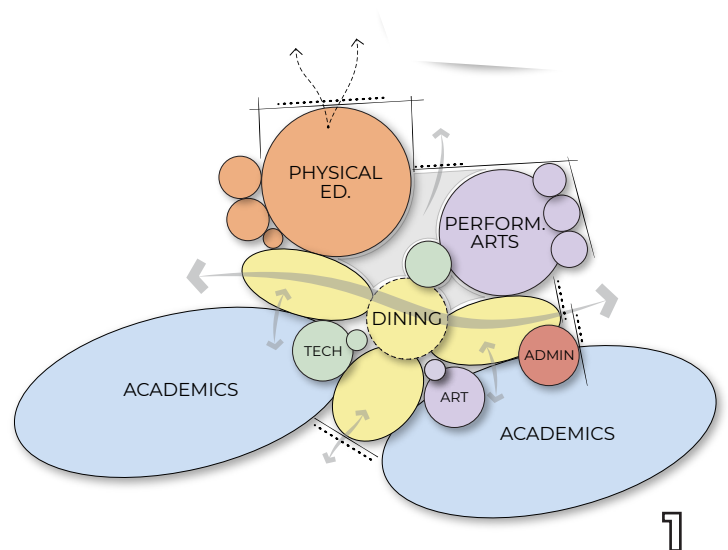
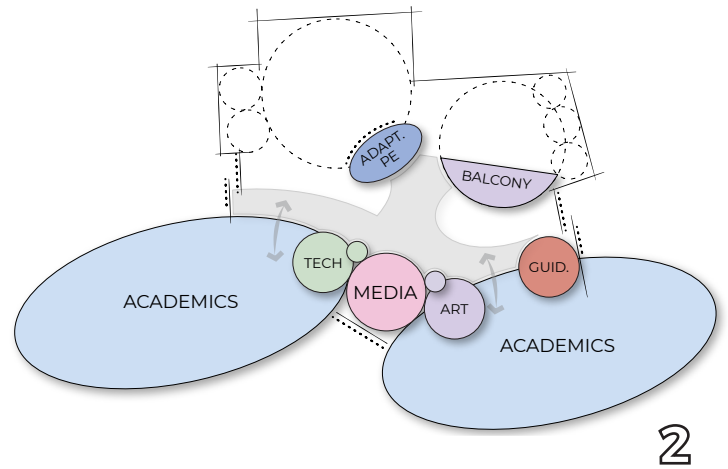
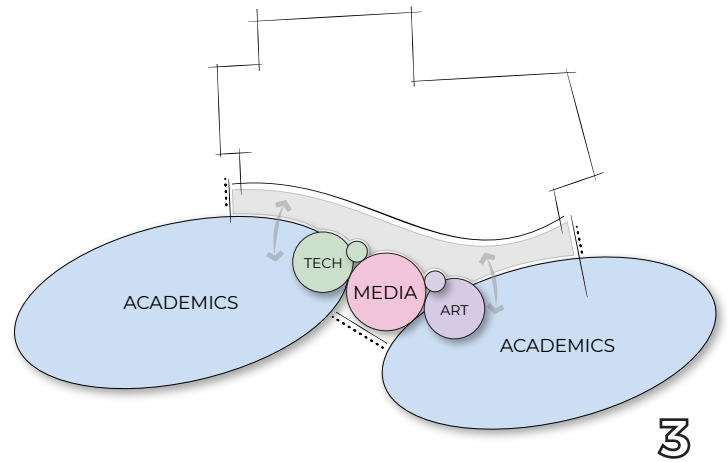


Hybrid stacked grade level teams with strong vertical connections between stacked teams in a layout with two academic wings, three levels, and four grades.

INTRODUCTION

On the academic or "private" side of the school, the academic wings spring from a central cluster of program spaces used by all grades including the media center, art, technology engineering, and world languages. The grade level teams are organized in a hybrid stacked manner preferred by the district for its combined vertical and horizontal adjacencies. Educationally, this option is efficiently organized, with collaborative spaces for both students and staff directly adjacent to each team cluster. Additional small group collaboration spaces would exist between pairs of classrooms within the academic wings. This layout provides opportunities for flexibility and an overlapping of space use as necessary. Programs used by all grades would be accessible without interruption to any academic neighborhood.

Refer to Section 3.3.4 PREFERRED SOLUTION for more detailed information regarding Option 9e. This section also provides detailed information regarding the 5-8 grade configuration and its impact on both the middle school and the elementary schools. ♦



Option 9e Whole Building Bubble Diagrams

MSBBA Review & District Response to PDP Report

Refer to the following pages for a copy of the Module 3 - Preliminary Design Program Review Comments provided by the MSBA with responses from Canton Public Schools and the professional team.

Comments were received on December 22, 2023 and returned to the MSBA on January 16, 2024 with attachments. ♦

INTRODUCTION

ATTACHMENT A MODULE 3 – PRELIMINARY DESIGN PROGRAM REVIEW COMMENTS

District: Town of Canton
School: William H. Galvin Middle School
Owner’s Project Manager: Leftfield, LLC
Designer Firm: Ai3 Architects, LLC
Submittal Due Date: December 7, 2023
Submittal Received Date: October 27, 2023
Review Date: October 27, 2023 – December 20, 2023
Reviewed by: M. Esdale, C. Forde, J. Jumpe

MSBA REVIEW COMMENTS

The following comments¹ on the Preliminary Design Program (“PDP”) submittal are issued pursuant to a review of the project submittal document for the proposed project presented as a part of the Feasibility Study submission in accordance with the MSBA Module 3 Guidelines.

3.1 PRELIMINARY DESIGN PROGRAM

Overview of the Preliminary Design Program Submittal	Complete	Provided; <i>Refer to comments following each section</i>	Not Provided; <i>Refer to comments following each section</i>	Receipt of District’s Response; <i>To be filled out by MSBA Staff</i>
OPM Certification of Completeness and Conformity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Table of Contents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.1 Introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.2 Educational Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.3 Initial Space Summary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.4 Evaluation of Existing Conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.5 Site Development Requirements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.6 Preliminary Evaluation of Alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.7 Local Actions and Approvals Certification(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.8 Appendices	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹ The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA’s guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project’s planning process or plans and specifications.

INTRODUCTION

3.1.1 INTRODUCTION

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Summary of the Facility Deficiencies and Current S.O.I.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Date of invitation to conduct a Feasibility Study and MSBA Board Action Letter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Executed Design Enrollment Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Narrative of the Capital Budget Statement and Target Budget	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Project Directory with contact information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Updated Project Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

3) *In response to these review comments, please note and acknowledge the District will be required to execute a Design Enrollment Certification based on its Preferred Schematic. The MSBA will prepare a certification to be forwarded for signature upon approval by the MSBA Board of Directors for its Preferred Schematic.*

RESPONSE:

Acknowledged.

4) *The information provided indicates that the District's estimated total project budget for this project ranges from \$163-254 million. For reference, the OPM Request for Services ("RFS") indicated an estimated total project cost range of \$60-150 million, and the Designer RFS indicated an estimated construction cost range of \$120-160 million. In response to these review comments, please review and respond to the following:*

- Describe this variation and provide information that indicates that the District has discussed and acknowledged the increase in estimated costs.*
- Indicate how the District and design team intend to maintain the District's project budget through schematic design.*

RESPONSE:

The cost range indicated in the OPM Request for Services did not adequately reflect project soft costs nor did it reflect the current construction market. Price increases in labor, materials and operations have occurred since the original cost projections were made. The construction cost range for the Designer Request for Services was based on the design enrollments and MSBA Guidelines for square footage. Existing conditions related to the site and to the renovation/addition and increased program square footage account for the delta in the construction cost range as the project has progressed. The current cost projections submitted in the PDP were reviewed with the Town, District and School Building Committee and the cost deltas were explained. All parties acknowledged the cost projections contained in the PDP Submission and voted to approve its submission to MSBA. Barring economic factors and market conditions outside of our control, the project team will continue to refine the project and costs and continually look for opportunities to contain and reduce total costs.

No further review comments for this section.

INTRODUCTION

3.1.2 EDUCATIONAL PROGRAM

Provide a summary and description of the existing educational program, and the new or expanded educational vision, specifications, process, teaching philosophy statement, as well as the District’s curriculum goals and objectives of the program. Include description of the following items:

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
1	Grade and School Configuration Policies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Class Size Policies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	School Scheduling Method	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Teaching Methodology and Structure				
	a) Administrative and Academic Organization/Structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Curriculum Delivery Methods and Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) English Language Arts/Literacy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Mathematics	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Science	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) Social Studies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g) World Languages	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h) Academic Support Programming Spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	i) Student Guidance and Support Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Teacher Planning and Professional Development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Pre-kindergarten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Kindergarten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Lunch Programs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Technology Instruction Policies and Program Requirements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Media Center/Library	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Visual Arts Programs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Performing Arts Programs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Physical Education Programs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Special Education Programs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Vocation and Technology Programs				
	a) Non-Chapter 74 Programming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Chapter 74 Programming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Transportation Policies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Functional and Spatial Relationships	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Security and Visual Access Requirements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MSBA Review Comments:

In response to these review comments, please review and respond to the following:

- *Provide a response to the comments below.*
- *As part of the District's Preferred Schematic Report ("PSR") submittal include (2) copies of the updated educational program, (1) redlined copy and (1) clean copy.*
- *Please note and acknowledge the updated educational program must address the comments below, include District updates, provide a Designer response for each component of the educational program, and align with the District's Preferred Schematic.*

RESPONSE:

Acknowledged.

4d) Please confirm whether the District has considered allowing students themselves to petition for inclusion or opt out of the 7th and 8th grade advance math program.

RESPONSE:

On the Galvin Middle School program of studies website, there is a page dedicated to the placement review process which outlines for students and families that though an educator may recommend a student for a particular math level or course, we encourage them to make a decision based on what's right for the student and family. We encourage students to have conversations with their parents/guardians if they disagree with the recommendation for enrollment or opt out of the advanced math program. Ultimately, we believe this is an important decision for students to make with the support of their families.

4e) The information provided states:

"In grade five, the grade 5 teachers would use common planning time to outline the Science pacing and plan, allowing classes to "swap spaces" as needed in order for students to use the lab facilities for those Science classes that need a larger space and access to a sink. At grade five, Science is daily but involves less intense lab activities than grade 6 through 8 where lab space is needed several times per week. "

In response to these review comments, please review and respond to the following:

- *Confirm the proposed size of the 5th grade classrooms is sufficient to deliver the science curriculum.*

RESPONSE:

The proposed 850 square foot classrooms provide adequate space to fully support the delivery of the 5th grade science curriculum.

Further describe the design features required in the 5th grade classrooms to support and reinforce the delivery of the science curriculum.

RESPONSE:

Each 5th grade classroom will incorporate design features that support the District's vision and allow for flexibility for curriculum not yet envisioned. Fixed architectural elements will be located around the perimeter maximizing open floor space for individual or group work. All 5th grade classrooms will include two sinks, supporting hands on and inquiry and project-based learning. Storage amenities will be thoughtfully sized to provide the space for the required curriculum material, but not overly zealous reducing floor area of the room. Writing and display surfaces will be strategically located around the perimeter to foster interactions and learning at all scales.

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The 5th grade science units will be undergoing a curriculum review process in the next two years. That process will allow us to shift our curriculum units so they are more aligned with the new DESE science MCAS assessments. We are looking to provide more phenomenon, performance and project based units around the current fifth grade standards which include driving questions such as: How do living things make in our world? "Water" you doing for your community? Sunshine, Earth-shine, Moon-shine, How do you shine? and What does it "matter"? Our 5th grade teachers are also collaborating with the Museum of Science to provide an engineering unit and receive grant funding through the Youth Engineering Solutions to do a unit on engineering plastic filters.

- *Confirm whether the District has considered including (2) sinks in the general classrooms for grade 5 to allow for flexibility to support hands on project-based learning.*

RESPONSE:

The design plan includes two sinks in each of the 5th grade classrooms - both science specific and general education classrooms to support hands-on and project-based learning.

4g) Please confirm whether English Language Learners ("ELL") are permitted to participate in the proposed World Language program, especially if their native language is coincident with the World Language program language. Please note this would provide ELL students with an opportunity of leadership and permit students to share their experiences and support others in learning a second language, which could support their acquisition of English Language Skills.

RESPONSE:

Multilingual learners participate in the World Language Program across grades 6-8, regardless of native language; in incidences where their native language is coincident with World Language course offerings, students have the option to improve their native language skills, or learn a new language. With the proposed addition of World Language in grade 5, multilingual learners would also participate in grade 5 world language classes. Across all grades, participation in the World Language program provides multilingual learners with leadership opportunities in sharing their experiences and supporting others in learning a second language; this in turn could support their acquisition of English Language Skills.

Additionally, the District and project team should consider the design and equipment for the proposed language lab that is consistent with fast-changing technology to ensure that the facility is designed with flexibility as new equipment and technology emerges.

RESPONSE:

The proposed Galvin Middle School lab design and equipment would mirror the forward-thinking build at Canton High School. The CHS World Languages Lab is one of the most robust technology spaces utilized by large numbers of students on a daily basis to build language proficiency and cultural understanding in the target language. The flexible interface for synchronous and asynchronous learning allows for both personalization and collaboration in the same space. The technology (software and hardware) drives the lab. It is highly efficient and quick, as paired instructional materials – text, audio, video, etc. – are sent to individual students, pairs, and/or students in a matter of seconds. Similarly, audio and video recording and collection of student work are quick and effective because of the hardwired network connection. The Canton High School lab space was built for changes in fast-changing technology, and is monitored and updated regularly as new technology emerges. The GMS language lab will follow this path and utilize the CHS lab as a model. Flexibility will be integral in the design to ensure that as technology evolves, the space can flex to support the advancements.

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5) Please describe whether the District has considered providing additional professional and curricular development opportunities outside the regular school year that would enable teachers extended times to prepare for changes in the curriculum and structure as a result of the proposed project.

RESPONSE:

A core value of the Canton Public Schools is to provide high quality learning experiences for all. This includes our adult staff. As such, the district provides opportunities for professional development outside the regular school year, including an expansive professional development catalog with virtual and in-person offerings, based on district and school goals, curricular changes, and opportunities related to the maintenance and advancement of licensure and degree status. Examples of additional professional development opportunities provided by the district in the 2023-2024 school year include Restorative Justice training, Reveal math training, Wade Institute for Science Learning courses, Engaging All Students with Differentiated Learning, and Strategies to Enhance Instruction for English Language Learners in the Classroom. Additionally, the District invites staff to submit proposals to do paid curriculum work over the summer and funds multiple teacher-driven endeavors. The district also engages in cyclical program reviews and curricular development and provides opportunities for staff input, review, and professional development as necessary. Staff may also pursue self-initiated professional learning through Novak Education, PBLWorks, IDEAS, Massachusetts Partnership for Youth and Teachers as Scholars, and content-specific programs. Canton Public Schools has also established partnerships with local colleges and universities for staff to earn a Bachelors, Masters, or Doctoral Degree in education and education-related fields at a reduced rate, including programs at Curry College, William James College, Regis College, and Merrimack College. Furthermore, Canton Public Schools provides course reimbursement for Unit A members of up to \$2,500, per staff member, per year, with an aggregate cap of \$125,000 per year across the district; for Unit E members the district provides \$350 per staff member, per year, with an aggregate cap of \$5,000 per year; these funds are available on a first-come, first serve basis for outside professional development opportunities and graduate credit acquisition. Finally, with the vote to move to a 5-8 building, the District is committed to creating a professional learning community to study best practices for grade reconfiguration and for being a 5-8 middle school, including learning from those already following that model.

8) The information provided suggests that student-grown foods could be integrated into lesson plans and the school lunch programs. Please confirm and acknowledge that all foods incorporated in the student lunches conform to food-service and health standards.

RESPONSE:

The district confirms that all food incorporated in student breakfasts and lunches conform to food-service and health standards as set forth in 105 CMR 590.000: State Sanitary Code Chapter X - Minimum Sanitation Standards For Food Establishments, as well as comply with the National Child Nutrition Act, National School Lunch Program, and Mass. General Laws c.69 § 1C. All competitive foods and beverages, such as those sold at the school snack bar and in vending machines, comply with nutritional standards and laws, including but not limited to MA law Title XVI, Chapter 111, Section 223.

Accordingly, student-grown foods could be integrated into lesson plans, with guidance from the school nurse and in consideration of student allergies, dietary restrictions, and student health/safety concerns. All food used in the curriculum must meet requirements set forth by the Canton Public Schools Food Allergy Management Policy and Plan, including:

- reviewing acceptable foods set forth by the Massachusetts Nutrition Evaluation Tool for Schools,*
- identifying students in the classroom with allergies,*
- discussing the allergy and reviewing the allergy with the nurse and reviewing the student's individual health care plan,*
- safeguarding students with food-related issues, before, during, and after this activity,*
- notifying parents/guardians at least 7 days in advance of the intended lesson using the Food in the Curriculum Parent Notification/Approval form ,*

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- *providing parent/guardian access to all food labels,*
- *and providing parents/guardians the opportunity to provide an alternative for the child or class.*

Additionally, the use of student-grown foods would align to curricular objectives and state standards. In wellness classes, student grown foods could connect to nutrition education topics, identifying the foods that are grown, what nutritional benefits they bring, and how they compare to other popular food choices that students in this age group tend to make. In science classes, a garden could provide opportunities for further standards-aligned project-based learning, including the study of: environmental factors which affect plant growth rates, specialized structures which support plant reproduction, and photosynthesis and respiration.

Additionally, please describe the proposed methods of ensuring safety and security of the gardens and their plantings, as well as how the gardens will be maintained during school vacations and inclement weather conditions.

RESPONSE:

We would follow the current practices we use for ensuring safety and security as well as the maintenance of our gardens. Every year, students replenish gardens at the Galvin that have been planted as a result of a project-based learning unit, with plants and flowers that are native to the region. To secure the gardens, we are careful about where the garden is located and use our security cameras to monitor access. Additionally, when students are out working in the garden, they always have adult supervision. Finally, we have staff committed to maintaining the outdoor garden spaces over the summer and during school vacations. Moving forward, we would also like to include a schedule of students who volunteer time during these breaks. We will consider our summer programming for additional help maintaining the garden.

9) *Please describe if the District has a regular program to ensure that all students have access to internet at home.*

RESPONSE:

We refer students and families to their cable company or the town library for access to internet services, on a need-based basis. Our home school interventionists also help families apply for internet access, occasionally accessing Title 1 or McKinney-Vento funding.

10) *Describe the proposed staffing levels for the Library/Media Center and indicate who will oversee, schedule, and maintain the proposed space. Additionally, describe the skills and training that will be required of Library/Media Center staff. Also describe the proposed staffing associated with technology repair and support.*

RESPONSE:

The Library/Media Center is currently and will continue to be overseen, scheduled, and maintained by a certified Library Media Specialist, holding a professional library license for grades K-12, with a Master's Degree in Library and Information Science. The Library Media Specialist will continue to attend school-based and self-initiated professional development, state conferences, and meet in professional learning communities with other Canton school librarians to align on district library and book policies. The Library Media Specialist also curates collection development, including selecting appropriate, quality, and diverse books in the library and keeping the library current, and provides reader advisory in order to guide book selection for students. As a classroom teacher, the Library Media Specialist also maintains a safe, welcoming space for all for classes, and provides a space for testing, reading, separate teaching, emotionally safe spaces, and provides flexibility and adaptability to support diverse needs. The Library Media Specialist also designs classroom materials and delivering and assessing instruction, and attends associated professional development opportunities. Finally, the Library Media Specialist attends curricular development sessions and collaborates with classroom teachers during the school day and in professional learning community meetings to co-design and ultimately co-teach classes.

The district will maintain current staffing associated with technology support and repair:

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- 1 Director of Technology and Data Analytics oversees all technology across the district
- 1 network administrator provides security, contracting, and networking support across the district
- 1 Instructional Technology Coordinator provides classroom software support at across the district
- 1 IT specialist provides chromebook repair across the district, located at GMS
- 1 IT specialist provides classroom hardware support at GMS

11) Please note art storage should include secure and appropriately ventilated space for toxic and hazardous materials as well as an accessible file of MSDS (materials safety data sheets). Additionally, safety equipment such as safety goggles should be provided and utilized. Please acknowledge.

RESPONSE:
Acknowledged.

12) Please note that the MSBA does not reimburse formal auditoriums at the middle-school level. In response to these review comments, please describe how the project team has been working with the District to incorporate multi-purposed spaces that will support a robust performance and presentation program that includes dance, musical, and dramatic presentations.

RESPONSE:
It is acknowledged that the MSBA does not reimburse formal auditoriums at the middle-school level. Canton’s robust performing arts offerings were identified early in the process allowing multiple conversations to occur discussing multi-purpose spaces to support the District’s needs. Discussions have occurred at varying levels including current GMS staff, department coordinators, and administration. Band, choral, and orchestra rooms primarily support music curriculum and performances while the performance technology studio offers maximum flexibility for dance, drama, or musical presentations. The types and quantities of spaces identified in the space summary provides the flexibility to support the current array of offerings. The auditorium is a critical component in supporting the current offerings and vision, which is why the School Building Committee unanimously voted to include an 800 seat auditorium as part of the project.

18) Please confirm that the first responding emergency representatives will be consulted in the planning process and associated requirements will be incorporated into the Preferred Schematic.

RESPONSE:
The first responding emergency representatives have been and will continue to be consulted in the planning and design process. Their safety requirements and feedback, in conjunction with our safety plans and protocols, will be incorporated into the Preferred Schematic. We have a safety representative on the School Building Committee, and we will have a standing safety group for consultancy through design and build.

No further review comments for this section.

3.1.3 INITIAL SPACE SUMMARY

Provide the following Items		Complete; No response required	Provided; District’s response required	Not Provided; District’s response required	Receipt of District’s Response; To be filled out by MSBA Staff
1	Space summary; one per approved design enrollment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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2	Floor plans of the existing facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Narrative description of reasons for all variances (if any) between proposed net and gross areas as compared to MSBA guidelines	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

1) The MSBA has performed a preliminary review of the space summaries for new construction for the two study enrollment options (Space summaries referred to as “Option 5” and “Option 9”) and offers the following:

- **Study Enrollment Options:**
 - Enrollment 1: 760 students in grades 6-8
 - Enrollment 2: 1,020 students in grades 5-8
- **Core Academic** – The overall proposed square footage for this category exceeds the MSBA guidelines by 10,940 net square feet (“nsf”) for Enrollment 1 and 8,790 nsf for Enrollment 2. Based on the information provided, the following spaces have been proposed in order for the District to deliver its educational program:

Core Academic Spaces	Enrollment 1: Grades 6-8 for 760 students			Enrollment 2: Grades 5-8 for 1020 students		
	Proposed No. Rooms	MSBA Guidelines No. Rooms	Variance	Proposed No. Rooms	MSBA Guidelines No. Rooms	Variance
General Classrooms	27	29	-2	39	42	-3
Small Group Seminar	0	2	-2	0	3	-3
STE Rooms	3	3	0	3	5	-2
STE Storage Room	3	3	0	3	5	-2
Science Classrooms/Labs	6	5	+1	6	5	+1
Prep Rooms	6	5	+1	6	5	+1
Central Chemical Storage Room	1	1	0	1	1	0
Multi Language Classroom	2	0	+2	2	0	+2
World Language Classroom	6	0	+6	6	0	+6
World Language Lab	1	0	+1	1	0	+1
Teacher Collaboration	9	0	+9	12	0	+12
Student Collaboration	9	0	+9	12	0	+12

The District is proposing the following spaces:

- **General Classrooms** – The District is proposing (27) 850 nsf General Classrooms for grades 6-8, totaling 22,950 nsf for Enrollment 1, which is below the MSBA guidelines by (2) General Classrooms and 3,150 nsf. For Enrollment 2, the District is proposing (39) 850 nsf General Classrooms for grades 5-8, totaling 33,150 nsf, which is below MSBA guidelines by (3) General Classrooms and 4,650 nsf. Based on the grade configuration and the number of classrooms required for each grade as described in the educational program, the MSBA does not object to the proposed number of General Classrooms for each study enrollment option. In response to these review comments, please note and acknowledge, as the project further develops, 850 nsf is the minimum size for all newly constructed General Classrooms in a middle school.

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RESPONSE:*Acknowledged.*

- **Small Group Seminar (20-30 seats)** – The District is not proposing Small Group Seminar areas for either enrollment option, which is below the MSBA guidelines by (2) rooms and 1,000 nsf for Enrollment 1 and (3) rooms and 1,500 nsf for Enrollment 2. No further preliminary comments.
- **Science Technology Engineering (“STE”) Rooms** – The District is proposing (3) 1,080 nsf STE Rooms totaling 3,240 nsf for 6th grade science for each enrollment option, which meets the MSBA guidelines for Enrollment 1; and is below the MSBA guidelines by (2) STE Rooms and 2,160 nsf for Enrollment 2. Based on the grade and team configuration for each grade, the MSBA does not object to the proposed number of STE classrooms for each enrollment option. For additional information, please refer to the MSBA’s STE Guidelines.
- **STE Storage Room** – The District is proposing (3) 120 nsf STE Storage Rooms totaling 360 nsf associated with the STE Rooms for grade 6 for each enrollment option, which meets the MSBA guidelines for Enrollment 1; and is below MSBA guidelines by (2) STE Storage Rooms and 240 nsf for Enrollment 2. As noted above, based on the grade and team configuration, the MSBA does not object to the proposed number of STE Storage Rooms associated with each STE Room for 6th grade science for each enrollment option. No further preliminary comments.
- **Science Classrooms/Labs (Grades 7-8)** – The District is proposing (6) 1,440 nsf Science Classrooms / Labs totaling 8,640 nsf for each enrollment option, which exceeds the MSBA guidelines by (1) Science Classroom/Lab and 1,440 nsf for Enrollment 1 and Enrollment 2. Based on the grade and team configuration for each grade, the MSBA does not object to the proposed number of Science Classrooms for 7th and 8th grade for each study enrollment option. In response to these review comments, please note and acknowledge, as the project further develops, 1,440 nsf is the minimum size for all newly constructed Science Classrooms/Labs for grades 7-8 per MSBA’s STE Guidelines.

RESPONSE:*Acknowledged.*

- **Prep Rooms** – The District is proposing (6) 150 nsf Prep Rooms totaling 900 nsf for each enrollment option, which exceeds MSBA guidelines by (1) Prep Room but is below guidelines by 100 nsf for Enrollment 1 and 2. In response to these review comments, please note and acknowledge that (1) 200 nsf Prep Room is required for each Science Classroom/Lab. As the project further develops the Prep Rooms will need to increase in size to a minimum of 200 nsf.

RESPONSE:*Acknowledged.*

- **Central Chemical Storage Room** – The District is proposing (1) 200 nsf Central Chemical Storage Room, which exceeds the MSBA guidelines by 50 nsf for each enrollment option. In response to these review comments, please note and acknowledge that the MSBA does not object to the additional square footage, however; square

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footage exceeding the MSBA guidelines will be considered ineligible for reimbursement.

RESPONSE:

Acknowledged.

- **Multi Language Classroom** – *The District is proposing (2) 500 nsf Multi Language Classrooms totaling 1,000 nsf, which exceeds the MSBA guidelines for each enrollment option. In response to these review comments, please provide additional information that describes how this space will be scheduled and staffed during the school day.*

RESPONSE:

The need for ML services has grown exponentially in Canton, specifically at the Galvin. We began the year with a 1.0 ML teacher and had to add a second 1.0 ML teacher to meet our student needs. Given the current trends, we only see the numbers in this population as well as their required services increasing. Our teachers provide both push-in and pull-out services for students. Based on student need, we would utilize both spaces a majority of the school day.

World Language Classroom – *The District is proposing (6) 850 nsf World Language Classrooms totaling 5,100 nsf, which exceeds the MSBA guidelines for each enrollment option. In response to these review comments, please provide additional information that describes how this space will be scheduled and staffed during the school day.*

RESPONSE:

The Galvin Middle School currently has a staff of six 1.0 FTE world language teachers. World Language classes are part of our core academic curriculum and educational programming. With the expansion of the Galvin to a 5-8 model, we envision World Language teachers each having their own classroom with a full schedule. We also intend for World Language teachers to be incorporated into our grade level groups and attaching these classrooms to specific grade levels.

- **World Language Lab** – *The District is proposing (1) 850 nsf World Language Lab, which exceeds the MSBA guidelines for each enrollment option. In response to these review comments, please provide additional information that describes how this space will be scheduled and staffed during the school day.*

RESPONSE:

The proposed Galvin Middle School lab follow a similar schedule to the World Language Lab at Canton High School. At Canton High School, every World Language teacher rotates through the World Language lab one day per cycle in order to provide immersive language experiences to students using the cutting-edge software available only in the lab. The chart below shows usage of the language lab at the high school; at the middle school, each full-time teacher would be assigned to the language lab one day per cycle for immersive language practice, with one day open per cycle for proficiency testing.

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LANGUAGE LAB SCHEDULE	<i>Drop G</i> Day 1	<i>Drop F</i> Day 2	<i>Drop E</i> Day 3	<i>Drop D</i> Day 4	<i>Drop C</i> Day 5	<i>Drop B</i> DAY 6	<i>Drop A</i> DAY 7
PERIOD 1	A1 block	G1 block	F2 block	E3 block	D4 block	C5 block	B6 block
8:00-8:53 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 2	B1 block	A2 block	G2 block	F3 block	E4 block	D5 block	C6 block
8:57-9:50 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 3	C1 block	B2 block	A3 block	G3 block	F4 block	E5 block	D6 block
9:54-10:47 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 3	TEACHER 7	TEACHER 8
PERIOD 4	D1 block	C2 block	B3 block	A4 block	G4 block	F5 block	E6 block
10:51-11:14 AM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
2nd LUNCH 11:18-11:45-12:08	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
12:12-12:35 PM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 5	E1 block	D2 block	C3 block	B4 block	A5 block	G5 block	F6 block
12:39-1:32 PM	TEACHER 3	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 6	F1 block	E2 block	D3 block	C4 block	B5 block	A6 block	G6 block
1:36-2:29 PM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 2	TEACHER 6	TEACHER 3	TEACHER 8
AFTER SCHOOL	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7

Additionally, please describe the differences between the proposed World Language Lab and World Language Classroom.

RESPONSE:

World Language classrooms would be used to provide primary instruction for world language; these classrooms would also maintain an element of flexibility in case other courses need to be scheduled into them. Just as the World Language Lab is currently used at Canton High School, the GMS World Language Lab would provide a more immersive world language experience, using state of the art software to provide rigorous opportunities for proficiency practice in the target language. Additionally, the lab would provide opportunities for proficiency testing on the ACTFL, in order for students to advance towards the Massachusetts State Seal of Biliteracy.

- **Teacher Collaboration** – *The District is proposing (9) 600 nsf Teacher Collaboration rooms totaling 5,400 nsf for Enrollment 1, which exceeds the MSBA guidelines. For Enrollment 2, the District is proposing (12) 600 nsf Teacher Collaboration rooms totaling 7,200 nsf, which exceeds MSBA guidelines. In response to these review comments, please provide the following information:*
 - *Describe the anticipated adjacencies.*

RESPONSE:

The Galvin is organized into a teaming structure, which provides opportunities for community building among smaller groups of students, collaboration among teachers, and organization of classes to provide differentiated instruction based on student profiles. Ultimately, these teams make a large school feel smaller and increase connection and communication among students and staff. Currently, there are three teams per grade level - "G teams" support multilingual learners, "M teams" support students in our ACCESS program, and "S teams" support students in our Therapeutic Classroom. All teams provide inclusion services to students on IEPs. Currently, the Galvin has only two staff rooms, one of which is located in the office, and one is located next to the library. These workrooms are not nearly large enough to accommodate the 120 staff members which currently work at Galvin Middle School, and are

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additionally located far away from many teams. At the new Galvin Middle, staff collaboration rooms would be located within grade level teams to facilitate teacher collaboration and communication, as well as provide quiet work spaces on prep periods. These rooms provide a multipurpose space for the following:

- *team meetings twice per cycle,*
- *professional learning community meetings once per cycle*
- *department meetings once per month*
- *collaboration space during teacher prep periods, particularly when "home" classrooms are being used*
- *individual work areas during teacher prep periods, particularly when "home" classrooms are being used*
- *IEP meeting spaces*
- *family meeting spaces*
- *private areas for sensitive or confidential communication with families*

- *Describe the scheduling and utilization of the proposed areas.*

RESPONSE:

The teacher collaboration spaces will be utilized at least four out of six periods per day with teacher team and department meetings as well as prep time. The other periods, the room will be available for individual meetings between teachers and students and/or families.

- **Student Collaboration** – *The District is proposing (9) 150 nsf Student Collaboration rooms totaling 1,350 nsf for Enrollment 1, which exceeds the MSBA guidelines. For Enrollment 2, the District is proposing (12) 150 nsf Student Collaboration rooms totaling 1,800 nsf, which exceeds MSBA guidelines. In response to these review comments, please provide the following information:*

- *Describe the anticipated adjacencies.*

RESPONSE:

The student collaboration rooms will be directly adjacent to classrooms within each teaching team's "neighborhood."

- *Describe the scheduling and utilization of the proposed areas.*

RESPONSE:

The Student Collaboration rooms will serve to support the regular incorporation of project-based learning experiences for GMS students. The room will be scheduled by the teachers on a given team in order to facilitate independent work time for students. They will also be used by students for group work. Special educators and educational assistants will also be able to utilize these rooms to provide small group instruction time during the general education session. These spaces may also be utilized for after school activities.

- *Describe how these areas will be supervised and staffed.*

RESPONSE:

Staffing and supervision of the collaborative spaces will be provided by the teachers on the team located in the "neighborhood" associated with a particular collaborative space. Through the design, there will be direct lines of sight into/out of the collaboration spaces for supervision purposes by teachers on the team and in adjacent classrooms.

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- Provide examples of activities that will occur in these areas.

RESPONSE:

The collaborative spaces would support a wide range of student learning activities. Currently, students often use hallway spaces to collaborate on activities. These activities include poster and tri-fold board projects such as the Civic Action project, group videos such as public service announcements for wellness class, math practice and activities on vertical hallway whiteboards based on recent published research by Peter Liljedahl, group essays, technology projects and project testing such as skimmers and towers, world language skits, and group presentation practice and peer feedback. Additionally, special education teachers often provide small group and individual student support in hallways, due to lack of available open space, either nearby or even throughout the building. These groups impede flowing hallway traffic, and may also be easily distracted by students leaving class to use the restroom, nurse, alternative settings, and other needs. New student collaboration spaces would support further hands-on, collaborative, and project based learning activities in designated spaces which would be monitored by team teachers and educational assistants. Separate collaboration rooms would also provide a secondary area for small group and individual support for students with disabilities, or to catch up students that are absent and make up work in a quiet area; these activities would again be monitored by special education teachers and educational assistants.

- Describe why these activities are better suited in a separate area rather than in a larger General Classroom.

RESPONSE:

The innumerable examples of project-based learning opportunities are better suited in a separate area than in a larger general classroom because they provide further opportunity for differentiation as well as the quiet space necessitated for activities such as creating videos and practicing skits. They also provide a more private space for special education teachers and educational assistants to provide unique small group and individual support students with disabilities.

- **Special Education** – *The overall proposed square footage for this category exceeds the MSBA guidelines by 7,745 nsf for Enrollment 1 and 8,110 nsf for Enrollment 2. In response to these review comments, please review and respond to the following:*
 - *Please note and acknowledge that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (“DESE”). The District should provide the required information required with the Schematic Design submittal. Formal approval of the District’s proposed Special Education program by the DESE is a prerequisite for executing a Project Funding Agreement with the MSBA.*

RESPONSE:

Acknowledged.

- *As the project further develops, please note and acknowledge that 850 nsf is the minimum size for all newly constructed sub-separate or self-contained special education classrooms in a middle school.*

RESPONSE:

Acknowledged.

- **Art & Music / Vocations & Technology** – *The overall proposed square footage for the combined categories exceeds the MSBA guidelines by 4,350 nsf for Enrollment 1, and 2,850 nsf for Enrollment 2. The MSBA encourages the District and its consultants to continue to seek opportunities to increase efficiencies and align with MSBA guidelines. In response to these review comments, please note and acknowledge that square footage exceeding MSBA guidelines will be considered ineligible for reimbursement.*

INTRODUCTION

RESPONSE:

Acknowledged.

- **Health & Physical Education** – *The overall proposed square footage for this category exceeds the MSBA guidelines by 6,000 nsf for each enrollment option. For Enrollment 1, please note and acknowledge that square footage exceeding this amount will be considered ineligible for reimbursement.*

RESPONSE:

Acknowledged.

For Enrollment 2, please note that based on the enrollment of 1,020 students and the information provided in the educational program the MSBA would accept an additional (1) 3,000 nsf physical education station beyond guidelines. This results in the remaining 3,000 nsf being considered ineligible for reimbursement.

RESPONSE:

Acknowledged.

Please refer to the attached memo regarding the MSBA’s policy on physical education square footage in excess of the MSBA guidelines. Note the District may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium exceed 12,000 nsf. Additionally, areas in excess of the MSBA guidelines will be at the sole expense of the District; and the MSBA will exclude from its grant the cost of the total gross square foot in excess of the guidelines for these areas.

RESPONSE:

Acknowledged.

- **Media Center** – *The overall proposed square footage for this category meets the MSBA guidelines for each enrollment option. The information provided includes (1) 190 nsf Media Center Storage area for Enrollment 1 and (1) 200 nsf Media Storage area for Enrollment 2. In future submittals please include square footage associated with storage beyond that included in the guidelines in the ‘Non-Programmed Spaces’ category.*

RESPONSE:

Acknowledged.

- **Dining & Food Service** – *The overall proposed square footage for this category is below the MSBA guidelines by 1,600 nsf for each enrollment option. No further preliminary comments.*
- **Medical** – *The overall proposed square footage for this category meets the MSBA guidelines for each enrollment option. No further preliminary comments.*
- **Administration & Guidance** – *The overall proposed square footage for this category meets the MSBA guidelines for Enrollment 1 and is 450 nsf below MSBA guidelines for Enrollment 2. No further preliminary comments.*
- **Custodial & Maintenance** – *The overall proposed square footage for this category meets the MSBA guidelines for each enrollment option. The information provided includes (3) 100 nsf Satellite Storage areas for Enrollment 1 and (4) 100 nsf Satellite Storage areas for Enrollment*

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2. In response to these review comments, please provide additional information that further describes the proposed location of the Satellite Storage areas.

RESPONSE:

The satellite storage areas identified in the space summary are smaller storage closets to store the equipment and supplies utilized on a daily basis. These satellite spaces would be located adjacent to each grade level where the equipment is being used, rather than in the central storage room in the custodial area.

- **Other** – *The District is proposing 9,400 nsf for each enrollment option, which exceeds the MSBA guidelines. This includes the following spaces:*
 - *(1) 7,000 nsf Auditorium;*
 - *(1) 2,000 nsf Stage; and,*
 - *(1) 400 nsf of Storage for the Auditorium program.*

It should be noted that the MSBA guidelines do not include square footage associated with auditoriums for elementary or middle school projects, and all costs associated with an auditorium will be considered ineligible for reimbursement. Also, community support must be demonstrated prior to MSBA approval of the District's proposed project scope and budget; and the MSBA will exclude from its grant the cost of the total gsf in excess of the MSBA guidelines for these areas. Refer to the attached memorandum which outlines MSBA's policy regarding auditorium and gym spaces beyond those included in the guidelines.

RESPONSE:

Acknowledged.

Please describe why a cafetorium could not be designed to meet the needs of the District's middle school curriculum. Provide examples of the types of educational activities intended for the auditorium, and anticipated utilization rates for the proposed auditorium as part of the District's response to these review comments.

RESPONSE:

Currently the Galvin Middle School maintains a cafetorium which is woefully inadequate to support the district's expansive middle school performing arts curriculum. Currently, GMS offers drama courses to grades 7 and 8, and music ensemble to students in grades 5, 6, 7, and 8; hundreds of students are currently enrolled across these performing arts programs. While drama and large musical ensembles are best suited to practice and performance on the stage, the cafeteria is used for both breakfast and lunch, as well as school assemblies, team and grade level meetings, and other curricular and extracurricular programming. These activities render the cafetorium unusable for drama and music ensemble practice in a shared space, due to the large volume of students and noise level associated with these activities. In many instances, drama classes are displaced to other areas of an already overcrowded building, while multigrade music ensembles are unable to meet due to scheduling conflicts with meals or other large student meetings. This causes disruption to student routines, and also impedes drama class, as regular classrooms are not set up for acting, improv, and movement and theater games. A separate auditorium would allow an intentional and important opportunity for drama classes to meet in a space specifically designed for practice and performance, and provide space for the Galvin's three large musical ensembles (band, choir, and orchestra) to practice together during the school day. This space would also offer expanded opportunities for GMS to offer drama classes in grades 5 and 6.

Historically, the GMS cafetorium is used for an average of 233 nights per year, while the high school auditorium is used for an average of 261 nights per year. More specifically, the GMS cafetorium is currently used afterschool for student clubs, step team, play rehearsal, and talent show rehearsal, all of which compete for space; an auditorium would also allow for expanded after school opportunities for

INTRODUCTION

students, including the addition of a musical theater performance, a capella and glee club groups, and additional musical ensembles. Elementary and middle school plays also have an average of 502 attendees per night - this is a far larger audience than any cafeteria option would allow. An auditorium would allow for students to perform at their home school in front of large audiences of parents and community members in an appropriately sized and designed space with ideal lighting, acoustics and seating. The auditorium also doubles as a community resource, providing a beautiful space for town events, meetings, and performances.

A gymnasium is also woefully inadequate for many of the same reasons as stated above. Additionally, with the amount of usage our gymnasiums are far too great to also put our drama course in the same space. We could not have both physical education and drama classes happen simultaneously in the same physical space.

At the third community forum on November 20th, hosted about the GMS building project, of 91 participants, 80 participants voted that Canton Public Schools should invest in an auditorium over other options. The Canton Public School Committee and Building Committee are both fully supportive of a separate auditorium, and unanimously voted at a joint School Committee and Building Committee meeting on December 20, 2023 to move forward with the building of an 800 seat auditorium and stage. This vote included full understanding and recognition that this auditorium would be paid for by the Town of Canton, with an additional associated project cost at a centerpoint of \$16,790,670, and is not eligible for reimbursement by MSBA funding.

Please note that upon selection of a preferred solution, the District may be required to adjust spaces/square footage that exceeds the MSBA guidelines and is not supported by the Educational Program provided.

No further review comments for this section.

3.1.4 EVALUATION OF EXISTING CONDITIONS

	Provide the following Items	Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Confirmation of legal title to the property.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Determination that the property is available for development.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Existing historically significant features and any related effect on the project design and/or schedule.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Determination of any development restrictions that may apply.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Initial Evaluation of building code compliance for the existing facility.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Initial Evaluation of Architectural Access Board rules and regulations and their application to a potential project.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Preliminary evaluation of significant structural, environmental, geotechnical, or other physical conditions that may impact the cost and evaluations of alternatives.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INTRODUCTION

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
8	Determination for need and schedule for soils exploration and geotechnical evaluation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Environmental site assessments minimally consisting of a Phase I: Initial Site Investigation performed by a licensed site professional.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Assessment of the school for the presence of hazardous materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Previous existing building and/or site reports, studies, drawings, etc. provided by the district, if any.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

3) *The information provided indicates a Project Notification Form (“PNF”) will be submitted to the Massachusetts Historical Commission (“MHC”) during the Schematic Design phase. In response to these review comments, please note and acknowledge MHC approval is required prior to construction bids. Additionally, the District should keep the MSBA informed of any decisions and/or proposed actions and should confirm that the proposed project is in conformance with Massachusetts General Law 950, CRM 71.00.*

RESPONSE:
Acknowledged.

5) *Please note that although the 2015 International Building Code (“IBC”) and 2018 International Energy Conservation Code (“IECC”) are in effect as the basis for the current 9th edition of the Massachusetts Building Code, a 10th edition of the Massachusetts Building Code based on the 2021 IBC and 2021 IECC (including any MA amendments) is pending. In response to these review comments, please confirm the design team will review the project’s anticipated permit date based on the project schedule and verify coordination with the code analysis and all systems basis of design in subsequent phases.*

RESPONSE:
The design team will review the project’s anticipated permit date based on the project schedule and verify coordination with the code analysis and all systems’ basis of design in subsequent phases.

9) *In response to these review comments, please note and acknowledge that costs associated with the removal of fuel storage tanks and associated contaminated soil are considered ineligible for reimbursement.*

RESPONSE:
Acknowledged.

INTRODUCTION

10) In response to these review comments, please note and acknowledge that all costs associated with the removal of asbestos containing floor materials and ceiling tiles are considered ineligible for reimbursement.

RESPONSE:
Acknowledged.

No further review comments for this section.

3.1.5 SITE DEVELOPMENT REQUIREMENTS

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	A narrative describing project requirements related to site development to be considered during the preliminary and final evaluation of alternatives.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Existing site plan(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

As part of the District's PSR submittal, provide site section(s) that illustrates how the Preferred Schematic sits on the site and how the proposed location impacts access and circulation. Please acknowledge in response to these review comments.

No further review comments for this section.

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Analysis of school district student school assignment practices and available space in other schools in the district	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Tuition agreement with adjacent school districts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Rental or acquisition of existing buildings that could be made available for school use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Code Upgrade option that includes repair of systems and/or scope required for purposes of code compliance; with no modification of existing spaces or their function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Renovation(s) and/or addition(s) of varying degrees to the existing building(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Construction of new building and the evaluation of potential locations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INTRODUCTION

7	List of 3 distinct alternatives (including at least 1 renovation and/or addition option) are recommended for further development and evaluation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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MSBA Review Comments:

7) As part of the Preliminary Evaluation of Alternatives, the District explored the following (9) options at the existing Galvin Middle School site. The submittal indicates that the District intends to further evaluate all (9) options provided as part of its PSR submittal:

- **Option 1:** Code upgrade / base repair only to the existing Galvin Middle School facility with an estimated total project cost ranging from \$122.8 million to \$135.5 million.
- **Option 2:** Addition / renovation for 760 students in grades 6-8 at the existing Galvin Middle School facility (no auditorium), with an estimated total project cost ranging from \$192.1 million to \$212.3 million.
- **Option 3:** Addition / renovation for 760 students in grades 6-8 at the existing Galvin Middle School facility (includes an auditorium), with an estimated total project cost ranging from \$204.9 million to \$226.5 million.
- **Option 4:** New construction for 760 students in grades 6-8 at the existing Galvin Middle School site (no auditorium), with an estimated total project cost ranging from \$163.2 million to \$180.4 million.
- **Option 5:** New construction for 760 students in grades 6-8 at the existing Galvin Middle School site (includes an auditorium), with an estimated total project cost ranging from \$176.8 million to \$195.5 million.
- **Option 6:** Addition / renovation for 1,020 students in grades 5-8 at the existing Galvin Middle School facility (no auditorium), with an estimated total project cost ranging from \$215.2 million to \$237.8 million.
- **Option 7:** Addition / renovation for 1,020 students in grades 5-8 at the existing Galvin Middle School facility (includes an auditorium), with an estimated total project cost ranging from \$229.7 million to \$253.9 million.
- **Option 8:** New construction for 1,020 students in grades 5-8 at the existing Galvin Middle School site (no auditorium), with an estimated total project cost ranging from \$185.9 million to \$205.5 million.
- **Option 9:** New construction for 1,020 students in grades 5-8 at the existing Galvin Middle School site (includes an auditorium), with an estimated total project cost ranging from \$199.9 million to \$220.9 million.

In response to these review comments, please note and acknowledge that the District's PSR submittal must include the following information:

- The District must provide detailed narratives that clearly describe the rationale for why options were eliminated from further consideration.

RESPONSE:
Acknowledged.

INTRODUCTION

- As the designs further develop, continue to describe and illustrate the separation, safety provisions, and possible construction laydown areas that will be applied during construction on the occupied site.

RESPONSE:
Acknowledged.

- Continue to use the same naming convention of options that was provided in the PDP submittal.

RESPONSE:
Acknowledged.

No further review comments for this section.

3.1.7 LOCAL ACTIONS AND APPROVAL

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Signed Local Actions and Approvals Certification: (original)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Certified copies of the School Building Committee meeting notes showing specific submittal approval vote language and voting results, and a list of associated School Building Committee meeting dates, agenda, attendees and description of the presentation materials	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

1) Please provide the original signed Local Actions and Approvals Certification when available. Please acknowledge.

RESPONSE:
An updated Local Actions and Approvals Certification was mailed directly to the MSBA's office to Carley Belfield's attention on December 15, 2023 with an electronic copy submitted via email the same day. A copy has been attached here for convenience.

2) Please provide a certified copy of the October 18, 2023, School Building Committee meeting minutes when available. Please acknowledge.

RESPONSE:
A certified copy of the October 18, 2023 School Building Committee meeting minutes were submitted to the MSBA via email to Carley Belfield's attention on November 28, 2023 and have been attached here for convenience.

No further review comments for this section.

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3.1.8 APPENDICES

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Current Statement of Interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	MSBA Board Action Letter including the invitation to conduct a Feasibility Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Design Enrollment Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

3) Please see comment above in Section 3.1.1, Item 3.

No further review comments for this section.

Additional Comments:

- Please note that as part of the upcoming Preferred Schematic submittal process, districts and their consultants are required to provide a summary overview of the proposed project to the MSBA Facilities Assessment Subcommittee ("FAS"). In preparation, the MSBA requests that the District submit a complete PowerPoint of the FAS presentation with the PSR submittal. For your reference, the guidance memorandum for preparing an FAS presentation is attached.

RESPONSE:

Acknowledged.

- The MSBA issues project advisories from time to time, as informational updates for Districts, Owner's Project Managers ("OPM"), and Designers in an effort to facilitate the efficient and effective administration of proposed projects currently pending review by the MSBA. The advisories can be found on the MSBA's website. In response to these review comments, please confirm that the District's consultants have reviewed all project advisories and they have been incorporated into the proposed project as applicable.

RESPONSE:

The District's consultants have reviewed all project advisories and they have been incorporated into the proposed project as applicable.

Regarding Past Projects:

Both the MSBA's enabling legislation, M.G.L. c. 70B, and the MSBA's regulations, 963 CMR 2.00 et seq. specifically address the issue of past projects. MSBA records show a total MSBA payment of \$480,168 for the William H. Galvin Middle School Roof Replacement Project # 201200500305 completed on September 2, 2014.

Pursuant to these requirements and depending on the School District's ultimate plan for the School, the MSBA may recover a pro-rated portion of the financial assistance that the School District has received for previous renovation grants. The exact amount recovered will be established at the conclusion of the Schematic Design. Please see the MSBA website to view the MSBA's regulations, statute and closed school bulletin for additional information.

End

INTRODUCTION



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Derek F. Folan, M.Ed.
Superintendent of Schools

An exceptional education that develops innovative thinkers, curious and empowered learners, and compassionate citizens.

**William H. Galvin Middle School (GMS)
Canton Public School District
GMS School Building Committee**

December 5, 2023

Mr. Mike McGurl
Director of Capital Planning
40 Broad Street
Boston, Massachusetts 02109

Re: GMS Feasibility Study
Module 3 – Local Actions and Approval Certification

Dear Mr. McGurl:

The GMS School Building Committee ("SBC") has completed its review of the Feasibility Study – Preliminary Design Program for the William H. Galvin Middle School Project (the "Project"), and on October 18, 2023, the SBC voted to approve and authorize the Designer and the Owner's Project Manager to submit the Feasibility Study related materials to the MSBA for its consideration. A certified copy of the SBC meeting minutes from November 2, 2022 through September 20, 2023 is attached for record. The certified copy of the October 18, 2023 meeting minutes which includes the specific language of the vote and the number of votes in favor, opposed, and abstained will be sent along after their approval at the SBC's next meeting.

Since the MSBA's Board of Directors invited the District to conduct a Feasibility Study on October 26, 2022, the SBC has held 8 meetings regarding the proposed project, in compliance with the state Open Meeting Law.

The following is a summary of GMS SBC meetings held to discuss and/or present to the public material related to the Project since the Committee's inception. Where no action was required or taken, or where discussion is noted, please refer to the attached meeting minutes for additional detail. Notice for each meeting was posted at the GMS School Department office and on the GMS website.

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11/02/2022 6:00pm GMS School Building Committee Meeting –
In Person Meeting @ Rodman Building

Call to Order	No action required/taken.
Introductions	No action required/taken.
Owner's Project Manager Selection process	No action required/taken.
Review timelines for the Feasibility Phase	No action required/taken.
Future meeting schedule	No action required/taken.
Adjourn	No action required/taken.

12/07/2022 6:00pm GMS School Building Committee Meeting -
In Person @ Rodman Building

Call to Order	No action required/taken.
Review OPM RFS Draft	No action required/taken.
Review OPM RFS Selection Timeline	No action required/taken.
Vote to Appoint: OPM Selection Committee	Motion taken/approved.
Vote to approve meeting minutes	Motion taken/approved.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

02/15/2023 6:00pm GMS School Building Committee Meeting -
In Person @ Rodman Building

Call to Order	No action required/taken.
Membership update	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Review OPM selection package sent to MSBA	No action required/taken.
Review designer selection process	No action required/taken.
Feasibility Phase next steps and timeline	No action required/taken.
Schedule upcoming meeting	No action required/taken.
Adjourn	No action required/taken.

03/15/2023 6:00pm GMS School Building Committee Meeting -
Remote Meeting

Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
OPM Introductions	No action required/taken.
Review/Vote on Designer Selection RFS	Motion taken/approved
Schedule upcoming meeting	No action required/taken.
Adjourn	No action required/taken.

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INTRODUCTION

06/14/2023 6:00pm

GMS School Building Committee Meeting - Remote Meeting

Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved
Vote to approve invoices	Motion taken/approved
Feasibility Study Budget Update	No action required/taken.
Project Timeline	No action required/taken.
Designer Procurement Update	No action required/taken.
Public Comment	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

06/28/2023 5:00pm

GMS School Building Committee Meeting - Remote Meeting

Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Designer Selection Process & Contract Review	Motion taken/approved.
Next Steps	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

09/20/2023 5:30pm

GMS School Building Committee Meeting - Remote Meeting

Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Vote to approve invoices	Motion taken/approved.
Project Budget Update	No action required/taken.
Schedule Review	No action required/taken.
MSBA Process Update	No action required/taken.
Next Steps	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

10/18/2023 5:30pm

GMS School Building Committee Meeting - Remote Meeting

Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Vote to approve invoices	Motion taken/approved.
Feasibility Study Budget Update	No action required/taken.
Schedule Overview	No action required/taken.
Preliminary Design Program (PDP) Summary	No action required/taken.
Vote to submit PDP to MSBA	Motion taken/approved.

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Public Comment	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

In addition to the SBC meetings listed above, the District held two community meetings, at which the Project was discussed. Formal meeting notes were not kept for this community meeting.

GMS Community Forum #1

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

09/27/2022 7:00pm

GMS Community Forum #1
In Person @ Canton High School Library

Team Introductions
The MSBA Process
Project Timeline / Project Milestones
Work To Date
Next Steps
Site Plan Community Use Charette
Questions & Answers

GMS Community Forum #2

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

10/25/2022 7:00pm

GMS Community Forum #2
In Person @ Galvin Middle School Library

Grade Configuration
Student Centered Design
Existing Elementary School Analysis
Massachusetts Middle School Configurations
Social Emotional Learning Aspects
Case Study Interviews with Natick & Quincy
Building Organization Options
Questions & Answers
Community Engagement / Live Polling

Agendas, meeting minutes, and presentation materials for each of the above listed meetings are available for public viewing electronically via the following links:

For SBC information: <https://galvinmsproject.com/>

For School Committee

Information: <https://www.cantonma.org/school-committee/school-committee-minutes-agendas>

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INTRODUCTION

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§ 18-25 and 940 CMR 29 *et seq.*

If you have any questions or require any additional information, please contact Jen Carlson via e-mail at jcarlson@leftfieldpm.com.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.



By: Thomas Theodore

Title: Chair of the Select Board

Date: 12/13/23



By: Derek Folan

Title: Superintendent of Schools

Date: 12/1/23



By: Kendall O'Halloran

Title: Chair of the School Committee

Date: 12-1-23

The Canton Public Schools does not discriminate on the basis of race, color, religion, national origin, sex, gender identity, sexual orientation, age, disability or homelessness.

INTRODUCTION

October 18, 2023
5:30 PM
Via Zoom

Purpose / Agenda

1. Call the Meeting to Order
2. Project Approvals
 - September 20, 2023 Meeting Minutes
 - LeftField and Ai3 Invoices
3. Feasibility Study Budget Update
4. Schedule Overview
5. Preliminary Design Program (PDP) Summary
 - Options Review
 - Estimated Cost and Duration
 - Vote to authorize submission of the Preliminary Design Program to the MSBA pending School Committee approval of the Educational Plan
6. Public Comment
7. Next Meeting
8. Adjourn

Join Zoom Meeting

<https://cantonma-org.zoom.us/j/87435965286?pwd=NmhJT1M3L1NwWnNjN0p1N0VDNUpaUT09>

Meeting ID: 874 3596 5286

Passcode: 611643

One tap mobile

+13017158592,,87435965286#,,,,*611643# US (Washington DC)

+13052241968,,87435965286#,,,,*611643# US

INTRODUCTION

Canton School Building Committee

October 18, 2023

Via Zoom

Minutes

1. Call the Meeting to Order: Superintendent Folan called for a motion to convene the Wednesday, October 18, 2023 Canton School Building Committee meeting at 5:36 pm. Mr. Benedetti made the motion; Mr. Marshall seconded. As the meeting was virtual, roll call attendance was taken and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charles Doody	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea
7 yeas	0 nays

Attendees: Bob Benedetti
John Connolly
Charles Doody
Derek Folan
Brian Lynch
Stephen Marshall
Bob McCarthy
Jonathan Mulhern
Tina Perez
Randy Scollins
Andrea Stuart
Amy Tom
Joanne Campbell, Recording Secretary

INTRODUCTION

Absent: Kristian Merenda
Sarah Shannon
Lou Tarmy

Guests: Troy Randall-Ai3
Justin Thibeault-Ai3
Jen Carlson-LeftField
Jim Rogers-LeftField
Lynn Stapleton-LeftField

2. Project Approvals:

• Approval of September 20, 2023 Meeting Minutes: Chair Folan asked for a motion to enter into discussion and possible approval of the September 20, 2023 minutes as written and presented. The motion was made by Mr. Benedetti and seconded by Mr. Folan. Hearing no requests for discussion, Mr. Folan called for a vote for approval of minutes as written and presented. Roll Call vote was unanimous at 7-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charies Doody	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea

7 yeas 0 nays

• **LeftField and Ai3 Invoices:** Jen Carlson, LeftField Project Manager, gave a Budget overview and presented 1 LeftField invoice for September 2023 services and 3 Ai3 invoices for continued Feasibility studies totalling \$115,437.19. Chair Folan asked for a motion to enter into discussion and possible approval of these invoices. Mr. Marshall made the motion; Mr. Scollins seconded. Mr. Marshall noted that he had reviewed all invoices and found them to match contractual obligations. Hearing no questions or requests for discussion, Mr. Folan called for a vote of approval for all September 2023 invoices as presented. Roll Call vote was unanimous at 7-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charies Doody	yea

INTRODUCTION

Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea
7 yeas	0 nays

3. Feasibility Study Budget Update: Ms. Carlson reviewed budget commitments for the GMS project indicating that 96% of the budget has been committed with 25% of that commitment spent. \$66,140 remains uncommitted. The MSBA reimbursement process has begun; Ms. Carlson expects to submit expenditures to the MSBA for reimbursement this week.

Ms. Carlson submitted a Budget Revision Request (BRR) to the committee asking for approval to allow LeftField to align their contract and scope of services to MSBA's online budget system, ProPay. Ms. Carlson noted that this system is the standard for reimbursement processing for MSBA. However, LeftField does need the BRR approved by the committee to move the process forward. Hearing no questions or requests for further discussion, Mr. Folan asked for a motion to approve the request as presented. Mr. Benedetti made the motion; Mr. Marshall seconded. Roll Call vote was unanimous at 7-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charles Doody	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea
7 yeas	0 nays

4. Schedule Overview: Ms. Carlson then reported that the project is currently in the middle of the Feasibility Study stage of the PDP (Preliminary Design Program) and is on schedule for submission to the MSBA by Friday, October 27, 2023. She reviewed other submission dates for the committee's awareness. The PSR (Preferred Schematic Report) is also expected to meet the targeted MSBA submission date of January 25, 2024 followed by the Schematic Design submission by June 27, 2024.

5. Preliminary Design Program (PDP) Summary: Justin Thibeault reviewed the Education Program. This document includes all of the requirements by the MSBA for a complete submission. Mr. Thibeault noted that the Educational Program Summary identifies the existing education delivery in the District and then thinks beyond all current constraints of the facility and educational delivery. Goals and vision of the District were influenced and defined through conversations, meetings, discussions, activities within the district and the Canton community.

INTRODUCTION

The Educational Program was developed in conjunction with the Space Summary. Designed by MSBA guidelines, this document includes an inventory of all existing spaces and every space needed for educational delivery and/or to support the building. 8 different Space Summaries must be submitted to the MSBA as part of the GMS project as each option is a different size based on grade configuration (5-8 or 6-8) and whether or not an auditorium is included.

By comparing categories of new construction options with an auditorium at two grade level configurations, Mr. Thibeault reviewed some of the eight options and each one's cost deviation (the delta between what the MSBA numbers and what is being proposed in the project). He did note that the MSBA is historically lower on Special Education costs than what is ultimately constructed because every district handles Special Education differently based on specific requirements and programs offered. The MSBA also considers an auditorium at the middle school level categorically eligible. The District may opt to include an auditorium in the new building, but cannot expect and MSBA will not support the funding. Mr. Thibeault cautioned that being over is not abnormal within most projects.

Mr. McCarthy spoke of a concern regarding reimbursement percentages for the project. Mr. Thibeault noted that the MSBA ultimately determines final reimbursement numbers on a line-by-line basis in conjunction with the Educational Plan. Mr. Folan suggested that consideration might be given to intentionally build usage of spaces to meet MSBA defined requirements.

Mr. Thibeault indicated that the Educational Plan submission in January 2024 is really a preview to the MSBA. They will review, provide feedback and comments. The document will be then updated by the team in response to the MSBA comments in hopes of gaining additional reimbursement. A "boldness" in the submission was discussed; however, there was sentiment to be aware that the submission should be reasonable enough to present to the Canton constituency and support an override.

• **Estimated Cost and Duration:** Mr. Thibeault reviewed the 8 options of the MSBA submission—renovation options and a new build option—all with and without an auditorium. All estimates make assumptions and are a range. Mr. Thibeault did note there is a \$12-15 million swing for an auditorium and that the addition/renovation options are more expensive with a longer construction duration.

There was sentiment to choose an option that included an auditorium, but concern that the costs associated with that build are exorbitant. Priority criteria will be discussed in the near future. A request was made to build an executive summary of the Educational Plan highlighting changes in document for easier review by the committee. Ai3 representatives reminded the committee that MSBA will be looking for a vote for Grade configuration in December.

INTRODUCTION

• Vote to authorize submission of the Preliminary Design Program to the MSBA pending School Committee approval of the Educational Plan as written and presented:

Hearing no further questions or requests for discussion, Mr. Folan asked for a motion to authorize submission of the Preliminary Design Program to the MSBA contingent upon the full School Committee vote. Mr. McCarthy made the motion; Mr. Benedetti seconded. Roll Call vote was unanimous at 7-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charles Doody	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea
7 yeas	0 nays

6. Public Comment: None

7. Next Meeting: The next SBC Meeting is scheduled for Wednesday, November 15, 2023 at 5:30pm

8. Adjourn: Hearing no questions or requests for any further discussion, Chair Folan called for a motion to adjourn the Wednesday, October 18, 2023 Galvin Building Committee meeting at 6:46 pm. Mr. McCarthy made the motion; Mr. Marshall seconded. Mr. Folan called for a roll call vote. Vote was unanimous at 7-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Charles Doody	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Randy Scollins	yea
7 yeas	0 nays

3.3.2 | EVALUATION OF EXISTING CONDITIONS

Existing Conditions Evaluations & Floor Plans

The existing Galvin Middle School is a three story steel, concrete, and masonry unit structure originally constructed in 1971. Today, it is the only middle school for the Town of Canton and serves 740 students across grades 6-8.

As described in the “Summary of Final Evaluation of Existing Conditions” in Section 3.3.1, INTRODUCTION, the existing conditions were further reviewed, but there are no substantive changes to any of the original conclusions and observations made in the Preliminary Design Program (PDP) submission from October 25, 2023, with the exception of the identification of one additional small wetland (~ 1000 sf) on the site.

This chapter includes facts about and graphics of the existing building for reference, including existing utility information and the site survey.

Evaluations

Existing conditions reports were conducted in the summer of 2023. Refer to the Appendices at the end of this document for the following evaluations:

- Evaluation of Building Code Compliance
- Accessibility Evaluation
- Architectural Evaluation
- Structural Evaluation
- Electrical Evaluation
- Mechanical Evaluation
- Plumbing Evaluation
- Fire Protection Evaluation

- Technology Evaluation
- Evaluation of Energy Code Compliance
- Hazardous Materials Identification Study

Floor Plans

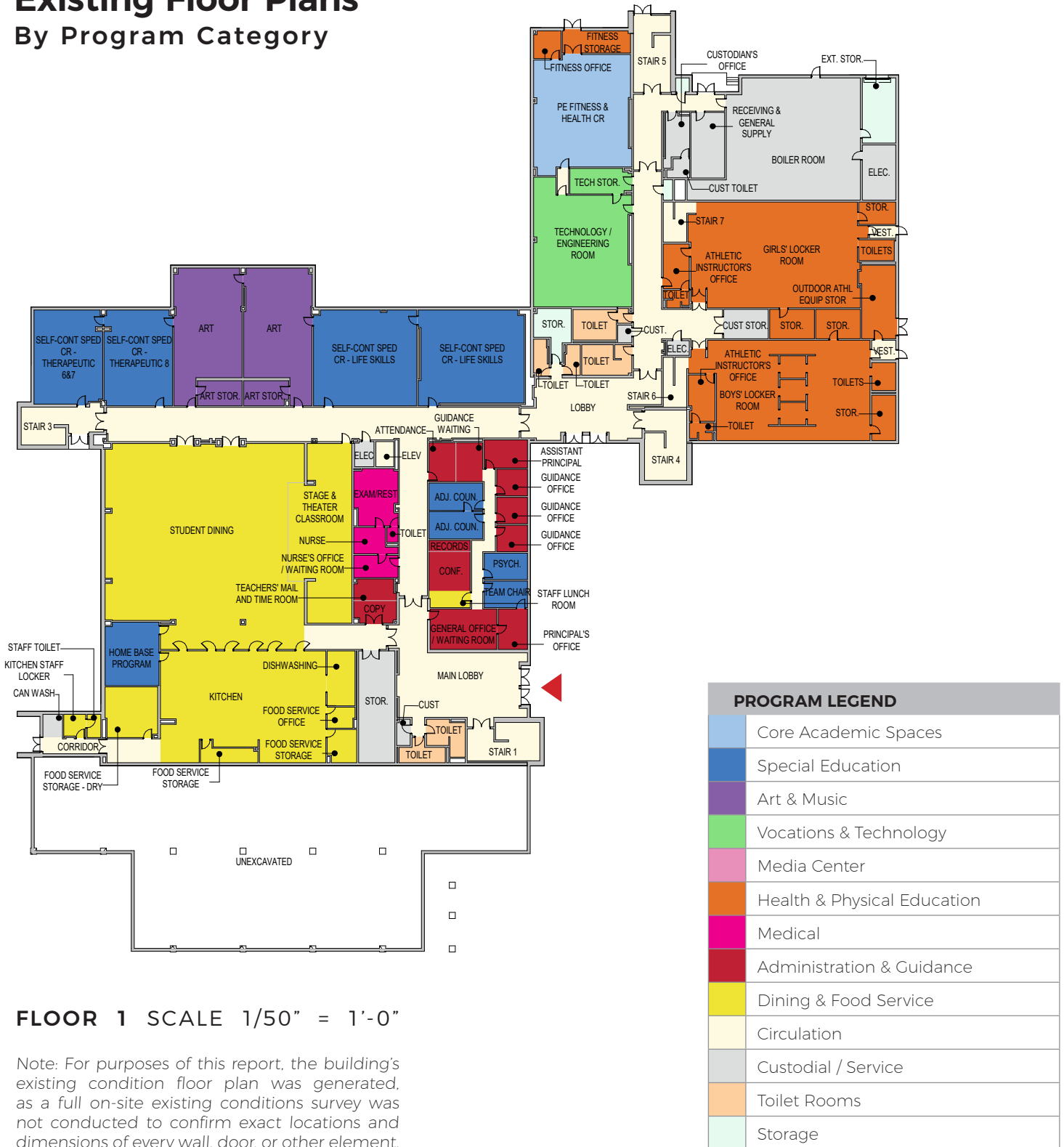
As included in the PDP submission, the following floor plans represent Galvin Middle School today with a 6-8 grade configuration. Two plan versions have been provided: the first color codes per program category identified in the MSBA Space Summary Template, and the second compares the area of each existing space to the recommended area identified in the MSBA Space Summary Template. Program not identified in the MSBA space summary guidelines remains unshaded. District administration and staff of Galvin Middle School assisted in the identification of each space.

Galvin Middle School (Current)

ADDRESS	▶ 55 Pecunit Street, Canton MA 02021
CONSTRUCTED	▶ 1971
GRADES	▶ 6-8
ENROLLMENT	▶ 740 students
AREA	▶ 131,903 GSF
FLOORS	▶ 3
FEATURES	▶ Gymnasium, athletic fields

EVALUATION OF EXISTING CONDITIONS

Existing Floor Plans By Program Category



FLOOR 1 SCALE 1/50" = 1'-0"

Note: For purposes of this report, the building's existing condition floor plan was generated, as a full on-site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element.

EVALUATION OF EXISTING CONDITIONS



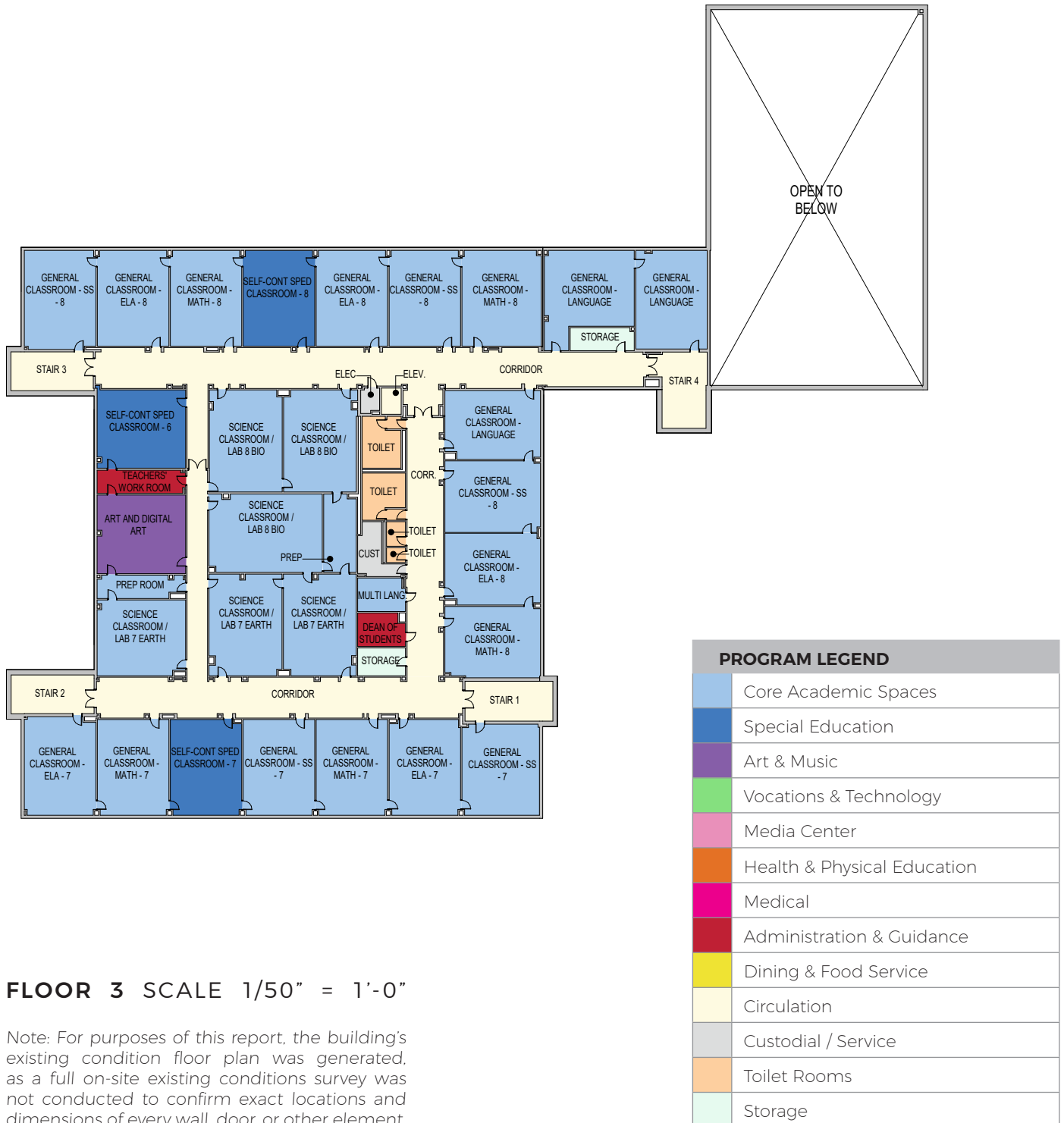
PROGRAM LEGEND	
[Light Blue]	Core Academic Spaces
[Dark Blue]	Special Education
[Purple]	Art & Music
[Light Green]	Vocations & Technology
[Pink]	Media Center
[Orange]	Health & Physical Education
[Magenta]	Medical
[Red]	Administration & Guidance
[Yellow]	Dining & Food Service
[Light Yellow]	Circulation
[Grey]	Custodial / Service
[Light Orange]	Toilet Rooms
[Light Green]	Storage

FLOOR 2 SCALE 1/50" = 1'-0"

Note: For purposes of this report, the building's existing condition floor plan was generated, as a full on-site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element.

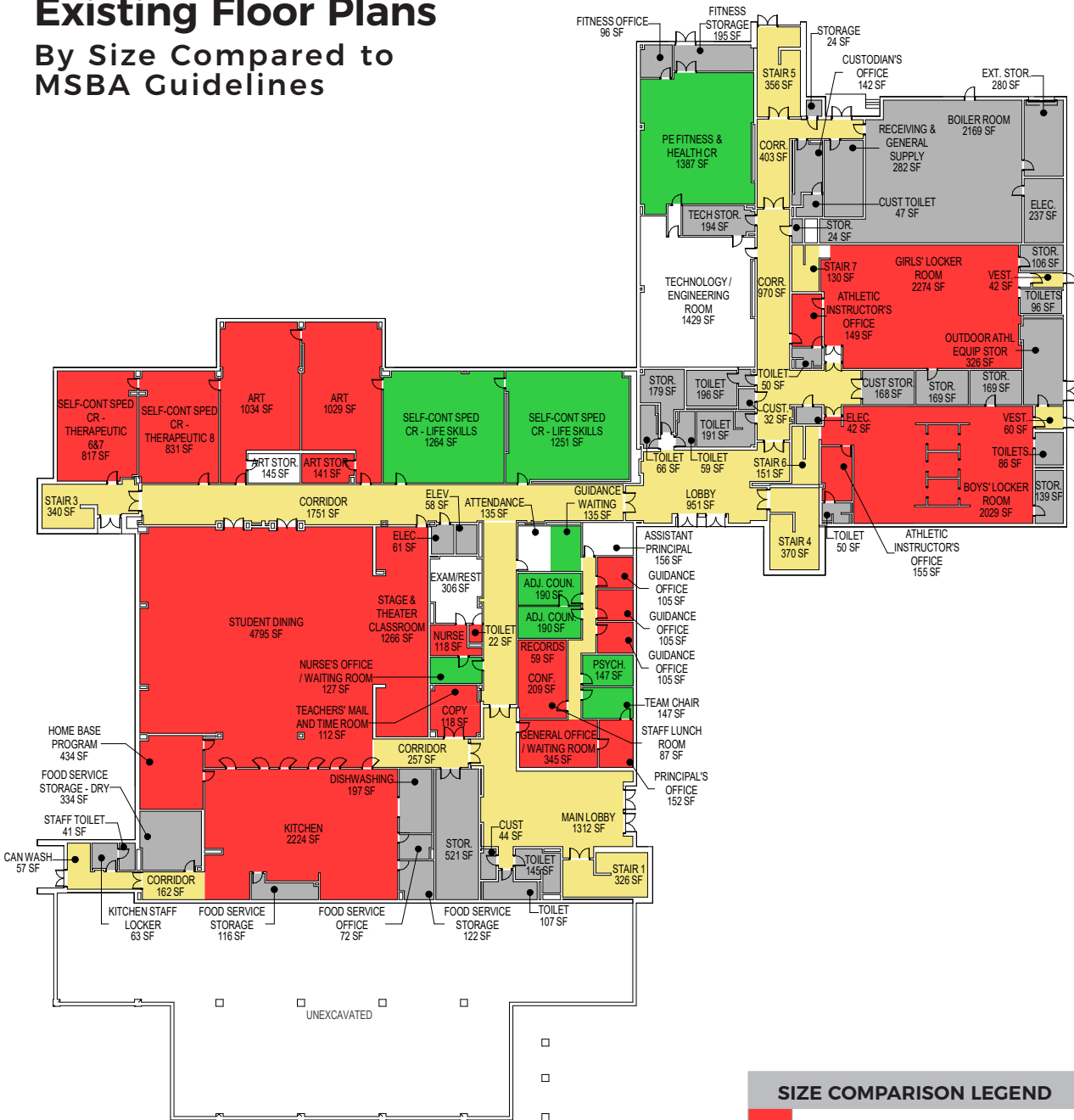
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EVALUATION OF EXISTING CONDITIONS



EVALUATION OF EXISTING CONDITIONS

Existing Floor Plans By Size Compared to MSBA Guidelines



FLOOR 1 SCALE 1/50" = 1'-0"

Note: For purposes of this report, the building's existing condition floor plan was generated, as a full on-site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element.

SIZE COMPARISON LEGEND	
	>5% Less than MSBA Guidelines
	<5% Greater than MSBA Guidelines
	Acceptable per MSBA Guidelines
	Circulation
	Space Accounted in Crossing Factor
	Not included in MSBA Guidelines

EVALUATION OF EXISTING CONDITIONS



FLOOR 2 SCALE 1/50" = 1'-0"

Note: For purposes of this report, the building's existing condition floor plan was generated, as a full on-site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element.

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EVALUATION OF EXISTING CONDITIONS

Existing Floor Plans By Size Compared to MSBA Guidelines



SIZE COMPARISON LEGEND

	>5% Less than MSBA Guidelines
	<5% Greater than MSBA Guidelines
	Acceptable per MSBA Guidelines
	Circulation
	Space Accounted in Crossing Factor
	Not included in MSBA Guidelines

FLOOR 3 SCALE 1/50" = 1'-0"

Note: For purposes of this report, the building's existing condition floor plan was generated, as a full on-site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element.

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EVALUATION OF EXISTING CONDITIONS

Existing Site Analysis

The existing Galvin Middle School building was constructed in 1971.

The site, located in the Ponkapoag neighborhood, is approximately 33.8 acres in size and contains the William H. Galvin Middle School, Cole-Harrington Kindergarten Enrichment Center, and the Lieutenant Peter M Hansen Elementary School. The building is located at 55 Pecunit Street (Tax Map 64 Lot 9) in Canton, Massachusetts and is bounded by wooded areas to the north and west and grassed play fields to the east and south. Paved surface parking areas are located south of the school building and to the west of the building. Two driveway connections to Pecunit Street provide access to the site.

The site is bounded by Pecunit Street to the south, residential properties to the east and west, and wooded areas to the north. The Galvin Middle School structure is located in the western portion of the site, Cole-Harrington is adjacent to the northern portion of the Middle School, and the Hansen Elementary School is in the eastern part of the site. In addition to the on-site playing fields, the site also contains an outdoor skating rink, baseball field, two basketball courts, outdoor play space, and sidewalks connecting to Pecunit Street.

Zoning Regulations

According to the “Zoning Map of Town of Canton Massachusetts” with revisions through March of 2002, the majority of the site, and the entirety of the Galvin School assumed development area, is located in the Single Residence A district (SRA) zoning district. Educational facilities require a special permit from the Board of Appeals in this district. Portions of the site are also within the Town’s Groundwater Protection Overlay District (GPOD) and the Flood Hazard Overlay District (FHOD). The GPOD is associated with the buffer zone

extending from the municipal well located on Charles Drive. The FHOD is associated with flood hazard areas identified on the FEMA flood maps. The eastern portion of the site, which is presumed to be beyond the limits of the middle school project, is in the Single Residence B (SRB) zoning district. Educational uses in this zone require a special permit from the Board of Appeals as well.

Single Residence A District	
Min. Lot Size in Sq. Ft.	30,000
Min. Non-wetland Area in Sq. Ft.	20,000
Lot width in Ft.	150
Frontage & frontage lot width in Ft.	100
Max. Height in Stories	N/A
Max. % of Lot Coverage	25%
Min. Front Yard Depth in Ft.	40
Min. Side Yard Depth in Ft.	20
Min. Rear Yard Depth in Ft.	35

Single Residence B District	
Min. Lot Size in Sq. Ft.	15,000
Min. Non-wetland Area in Sq. Ft.	12,000
Lot width in Ft.	115
Frontage & frontage lot width in Ft.	100
Max. Height in Stories	N/A
Max. % of Lot Coverage	25%
Min. Front Yard Depth in Ft.	30
Min. Side Yard Depth in Ft.	15
Min. Rear Yard Depth in Ft.	35

The parking capacity requirements for schools as a “place of public assembly” in the Canton Zoning By-Laws are one (1) parking space for each two (2) seats; where

EVALUATION OF EXISTING CONDITIONS

no fixed seats are used (as in a terminal or dance hall) each twenty (20) square feet of public floor area shall equal one seat. "Place of public assembly" is the most applicable principal use category in the Zoning By-Laws, however, additional coordination with the Town is required to confirm the appropriate required parking capacity. The current Middle School has parking for approximately 148 vehicles within two (2) parking areas. Seven (7) spaces are either designated as accessible spaces or adjacent to striped accessible loading zones. Four (4) spaces are in close proximity to entrances on the western side of the building. Three (3) spaces are located along the bus loop near the main entrance.

The Canton Zoning By-Laws includes dimensional requirements for parking areas including parking space sizes, aisle widths, etc. For parking areas with twenty (20) or more spaces, a landscaped area of at least five (5) percent of the total interior parking lot area shall be provided. For parking areas with fifty (50) or more spaces, access drives bounded by granite or concrete curbing shall be provided.

Natural Environment

Topography:

The site generally slopes from Pecunit Street towards the northeast portion of the site. The highest elevation (elevation +/-130) is in the southeast corner of the property. The lowest elevation (elevation +/-55) is in the northeast corner of the parcel. In front of the school, the site slopes steeply from Pecunit Street onto the property. This characteristic could indicate the presence of rock and ledge.

Soils:

Existing soils were evaluated based on the USDA Natural Resource Conservation

Service Web Soil Survey. Below is a description of the soils that are shown throughout the Site as shown on the NRCS Soil Survey. Test pits and final geotechnical borings will be required to determine soil conditions and groundwater elevations below proposed structures prior to final design.

The majority of the on-site soils in the assumed development are classified as either Urban land (Map Unit 602) or Udorthents, sandy (Map Unit 653). Both soil types indicate the presence of fill material. Minor components of Freetown much, 0 to 1 percent slopes (Map Unit 52), Hinckley loamy sand, 3 to 8 percent slopes (Map Unit 245B), Hinckley loamy sand, 15 to 35 percent slopes, and Canton fine sandy loam, 3 to 8 percent slopes are also present. The minor components are primarily in the wooded areas beyond developed portion of the site.

For purposes of stormwater infiltration, we recommend soil evaluations along the north and east side of the existing Middle School building where areas are available for typical infiltration practices.

Per the Town's Master Plan, portions of the site are classified as farmland of statewide importance. This does not cause any use restrictions or additional permitting. This classification is a potential indicator of good on-site soils.

Wetlands:

Record documents indicate the presence of wetlands in the northeast corner of the parcel. On-site wetland flagging performed by a wetland scientist identified wetland resource areas in the northern portion of the site as well in the east (beyond the assumed limits of development). Buffer zones associated with the eastern wetland could extend

EVALUATION OF EXISTING CONDITIONS

into the assumed development area. A small pocket of wetland area was also identified in front of the existing school adjacent to the main parking area. Any work in the wetlands or within 100-ft of the wetlands will fall in the jurisdiction of the Conservation Commission and DEP. Local regulations do not impose more stringent buffer zones than the State regulations.

The northern portion of the site is also within the floodplain. Work within the floodplain falls within the jurisdiction of the Conservation Commission and DEP. Filling in the floodplain results in a loss of available flood storage. The site design would need to include compensation for this loss should filling occur. The floodplain has been studied, meaning that the flood elevations have been determined. On-site field survey will verify the true extents of the floodplain.

Rare Species & Cultural Resources:

After review of the MassGIS certified and potential vernal pools layers, the Site does not appear to have potential or certified vernal pools as defined by the Natural Heritage and Endangered Species Program (NHESP). If it is determined in an environmental review that a vernal pool exists, the local regulations require a 100-foot No-Disturbance Zone around the upland area edge or the wetland area edge that encompasses the vernal pool.

Infrastructure

Roadways and Parking Lots:

The existing Galvin Middle School is accessible via two (2) two-way driveways from Pecunit Street. The southern driveway serves as primary access to the main parking area and it also used for vehicular drop-off and pickup. The northern driveway serves as primary access

to the secondary parking area, the Cole-Harrington Kindergarten, and maintenance area in the rear of the building. Painted arrows provide site circulation for portions of the site. Bus drop-off and pickup occurs via the northern driveway as well.

Pecunit Street has paved sidewalks along the frontage in southern portion of the site in front of the Hansen School, but these walks do not extend along the frontage of the presumed development area from the southern access driveway to the northern access driveway. On-site sidewalks extend from Pecunit Street to doorways at the Galvin Middle School and Cole-Harrington Kindergarten. Crosswalks with exits across both driveways along Pecunit Street. The southern driveway has accessible ramps with warning panels on either side. Crosswalks also exist from the main parking area to the sidewalk leading to the school, near the bus loop, and across an internal driveway from a northern on-site sidewalk to the school. None of the interior crosswalks have accessible ramps with warning panels.

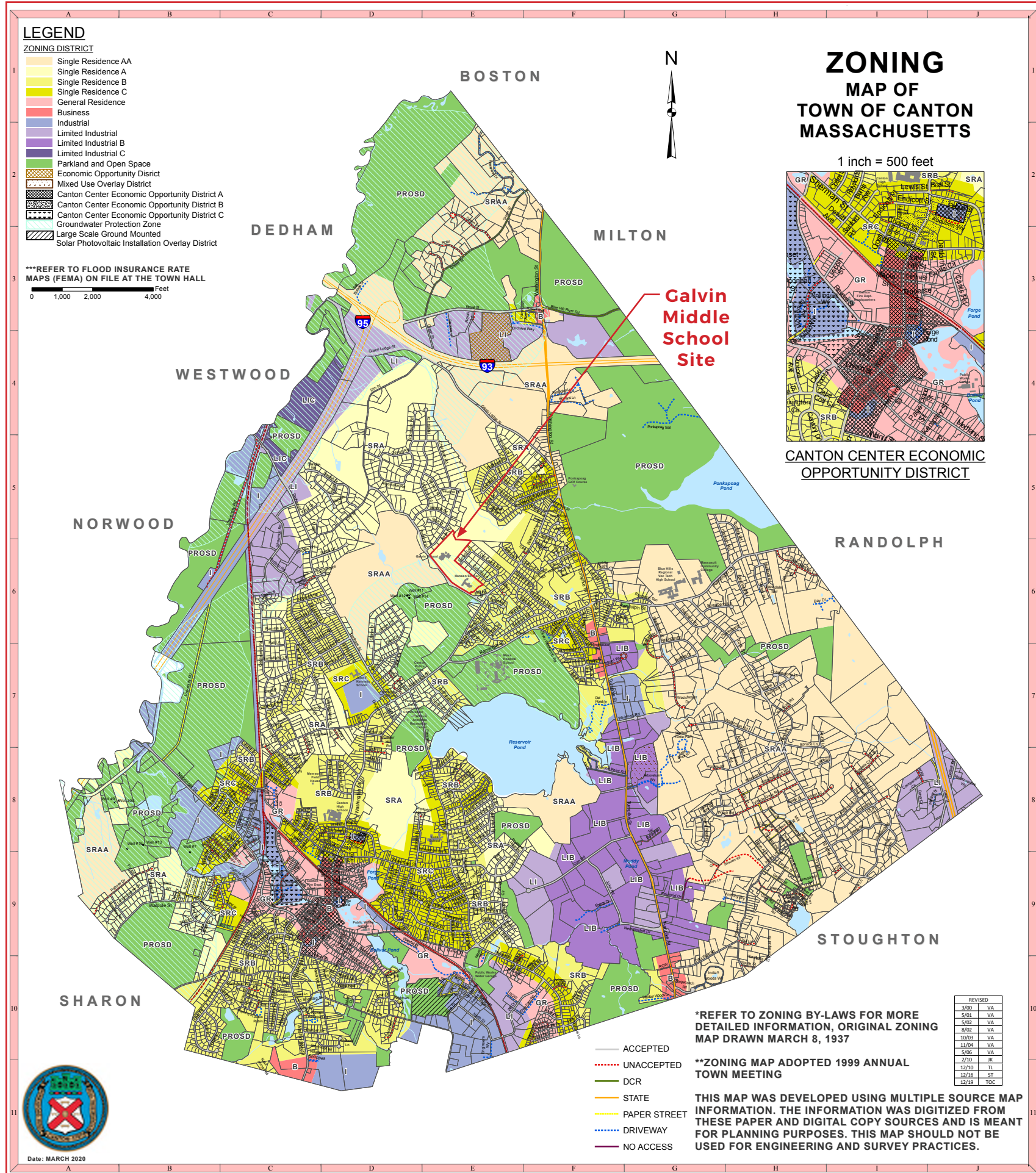
Location	Parking Stalls Count
Main Lot (west)	129
North Lot	16
Bus Loop	3
TOTAL	148

The site has a total count of 148 vehicles in 2 parking areas, Distribution is shown in the table above. ◆

EVALUATION OF EXISTING CONDITIONS

Zoning Map

Town of Canton, *March 2020*



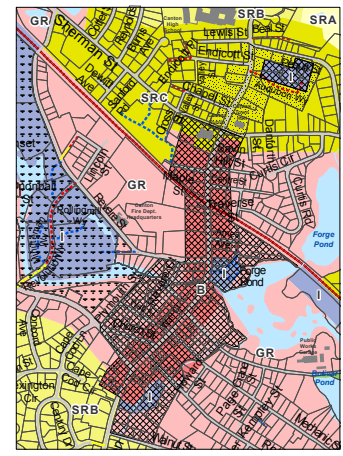
- LEGEND**
- ZONING DISTRICT**
- Single Residence AA
 - Single Residence A
 - Single Residence B
 - Single Residence C
 - General Residence
 - Business
 - Industrial
 - Limited Industrial
 - Limited Industrial B
 - Limited Industrial C
 - Parkland and Open Space
 - Economic Opportunity District
 - Mixed Use Overlay District
 - Canton Center Economic Opportunity District A
 - Canton Center Economic Opportunity District B
 - Canton Center Economic Opportunity District C
 - Groundwater Protection Zone
 - Large Scale Ground Mounted Solar Photovoltaic Installation Overlay District

***REFER TO FLOOD INSURANCE RATE MAPS (FEMA) ON FILE AT THE TOWN HALL

0 1,000 2,000 4,000 Feet

ZONING MAP OF TOWN OF CANTON MASSACHUSETTS

1 inch = 500 feet



CANTON CENTER ECONOMIC OPPORTUNITY DISTRICT

Galvin Middle School Site

*REFER TO ZONING BY-LAWS FOR MORE DETAILED INFORMATION, ORIGINAL ZONING MAP DRAWN MARCH 8, 1937

**ZONING MAP ADOPTED 1999 ANNUAL TOWN MEETING

- ACCEPTED
- UNACCEPTED
- DCR
- STATE
- PAPER STREET
- DRIVEWAY
- NO ACCESS

REVISED	DATE	BY
3/00	VA	
5/01	VA	
5/02	VA	
8/02	VA	
10/03	VA	
11/04	VA	
5/06	VA	
2/10	JK	
12/10	TL	
12/16	ST	
12/19	TOC	

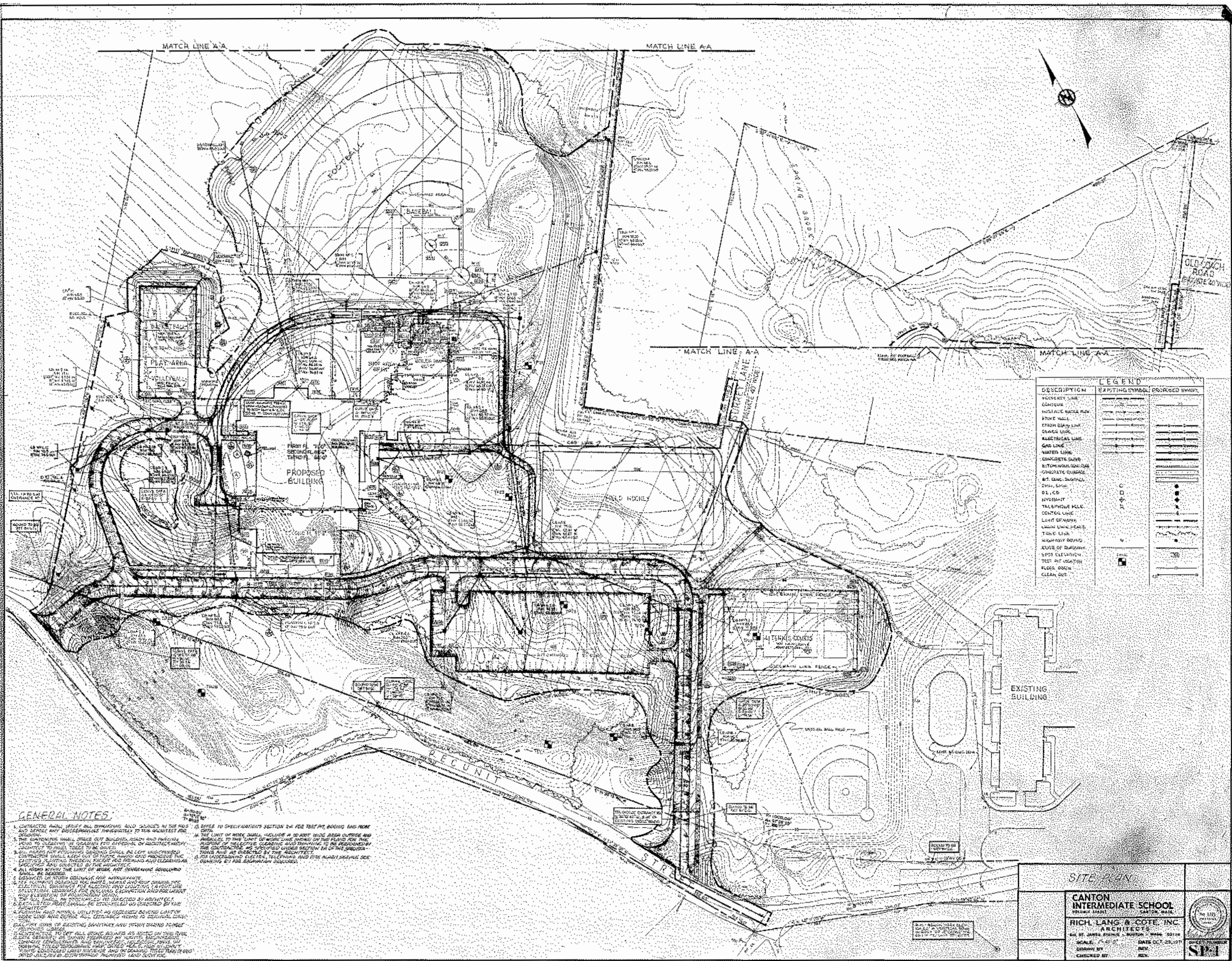
THIS MAP WAS DEVELOPED USING MULTIPLE SOURCE MAP INFORMATION. THE INFORMATION WAS DIGITIZED FROM THESE PAPER AND DIGITAL COPY SOURCES AND IS MEANT FOR PLANNING PURPOSES. THIS MAP SHOULD NOT BE USED FOR ENGINEERING AND SURVEY PRACTICES.



Date: MARCH 2020

EVALUATION OF EXISTING CONDITIONS

**Existing Site Plan
SP-1 from Original 1971
Drawing Set**



DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
PROPERTY LINE	---	---
CONTOUR	---	---
EXISTING WATER FLOW	---	---
STONE WALL	---	---
EXISTING GRASS LINE	---	---
GRASS LINE	---	---
BASE FENCE LINE	---	---
GAS LINE	---	---
WATER LINE	---	---
CONCRETE GUY	---	---
BOTTOM WIRE SIGN-OUT	---	---
CONCRETE GUY	---	---
BT. GUY, SHOTGUN	---	---
2" DIA. PIPE	---	---
O.L. CD	---	---
STANDARD	---	---
TRAILER/STORAGE	---	---
CENTER LINE	---	---
LINE OF WORK	---	---
GRADE MARK - ELEV.	---	---
TRUCK LINE	---	---
ADJACENT BOUND.	---	---
ROUTE OF SURVEY	---	---
SPOT ELEVATION	---	---
TEST PIT LOCATION	---	---
FLOOR DRAIN	---	---
CLEAN OUT	---	---

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ARCHITECT FOR CORRECTION.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK SHALL BE ACCORDING TO THE LATEST EDITIONS OF THE CANADIAN NATIONAL BUILDING CODE AND ALL APPLICABLE REGULATIONS AND ORDINANCES.
4. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME AND SHALL BE SUBJECT TO INSPECTION BY THE ARCHITECT.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.
7. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS OF THE PROJECT AND SHALL PROVIDE THEM TO THE ARCHITECT UPON COMPLETION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.
9. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS OF THE PROJECT AND SHALL PROVIDE THEM TO THE ARCHITECT UPON COMPLETION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.

SITE PLAN

CANTON INTERMEDIATE SCHOOL
 RICH LANG & COTE INC. ARCHITECTS
 445 ST. JAMES AVENUE, BOSTON, MASS 02116
 PHONE: 781-552-1100 DATE: OCT 23, 1978
 DRAWN BY: REV. CHECKED BY: REV.



EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

page 1

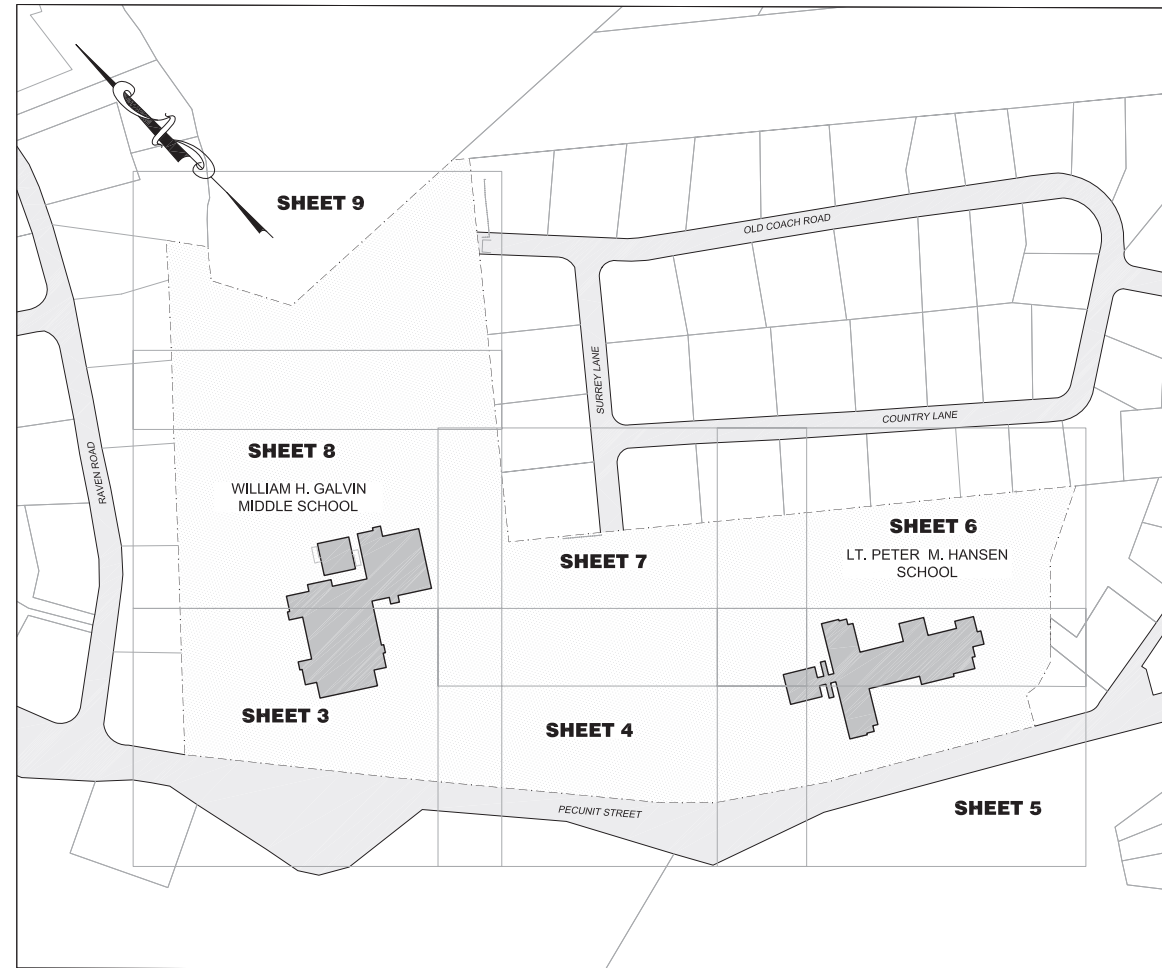
Summary

The preliminary site aerial survey was included in the PDP submission. Since then, the final survey has been completed and is included herein.

Ai3 Architects, LLC secured the services of Welch Associates Land Surveyors, Inc., in association with the Vertex Companies, to conduct a digital mapping survey of the Galvin Middle School site located on 55 Pecunit Street in Canton, Massachusetts. Surveying of the building and its materials occurred in September of 2023.

Given its acreage (33.8 acres), the site is divided into eight parcels of varying data. Refer to the following foldout pages for the full survey. ♦

LIEUTENANT PETER M. HANSEN SCHOOL & WILLIAM H. GALVIN MIDDLE SCHOOL 25 & 55 PECUNIT STREET



KEY MAP
SCALE: 1" = 150'

- NOTES:**
- THE ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD 88 DATUM AND WERE GENERATED VIA RTK GPS SURVEY MEASUREMENTS MADE USING LEICA GS18 RECEIVERS (AND SUPPLEMENTED WITH ON-THE-GROUND INSTRUMENT SURVEY) IN CONJUNCTION WITH THE SMARTNET NORTH AMERICA RTK NETWORK.
 - THE COORDINATES SHOWN ON THIS SURVEY ARE BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM - MAINLAND ZONE 2001 AS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83). THE COORDINATES WERE GENERATED VIA RTK GPS SURVEY MEASUREMENTS MADE USING LEICA GS18 RECEIVERS (AND SUPPLEMENTED WITH ON-THE-GROUND INSTRUMENT SURVEY) IN CONJUNCTION WITH THE SMARTNET NORTH AMERICA RTK NETWORK.
 - SITE IMPROVEMENTS & TOPOGRAPHY SHOWN HEREON ARE BASED ON AERIAL MAPPING (MAGERY CAPTURED IN JULY 2023, MARCH 1995, AND APRIL 1991) PREPARED BY EASTERN TOPOGRAPHICS USING DIGITAL TERRAIN MODELING (DTM) METHODS WITH KLT ATLAS SOFTWARE. BUILDING OUTLINES REPRESENT PERMETER ROOF LINES. WITH THE EXCEPTION OF LABELING OF SITE FEATURES, NO FIELD EDITING OF THE AERIAL MAPPING WAS PERFORMED BY WELCH ASSOCIATES LAND SURVEYORS, INC..
 - PROPERTY & STREET LINES SHOWN HEREON ARE TAKEN FROM MASS GIS, ARE APPROXIMATE, AND ARE SHOWN FOR REFERENCE/ORIENTATION ONLY. WELCH ASSOCIATES LAND SURVEYORS, INC. HAS NOT PERFORMED A PROPERTY LINE RETRACEMENT AS PART OF THIS SURVEY.
 - SUBJECT PROPERTY APPEARS TO BE:
 - SUBJECT TO EASEMENTS (E-1 & SW-2) AS DESCRIBED IN TAKING RECORDED IN BOOK 29035 AT PAGE 1 AND SHOWN ON PLAN NO. 64 OF 2011 IN PLAN BOOK 609.
 - BENEFITED BY NOTICE OF SITE PLAN APPROVAL & SPECIAL PERMIT (5,000 S.F. MODULAR UNIT BEHIND GALVIN MIDDLE SCHOOL) RECORDED IN BOOK 16891 AT PAGE 422.
 - BENEFITED BY NOTICE OF SITE PLAN AND SPECIAL PERMIT (8 CLASSROOM ADDITION TO HANSEN SCHOOL) RECORDED IN BOOK 33562 AT PAGE 428.
 - CIRCLED LOT NUMBERS ARE TOWN OF CANTON ASSESSOR'S LOT IDENTIFICATION NUMBERS.
 - AS DELINEATED ON F.E.M.A. FLOOD INSURANCE RATE MAP NUMBER 25021C0192F & 25021CP184F, DATED AS "REVISED PRELIMINARY 4/27/2023" (MAY NOT YET BE APPROVED AS FINAL), SUBJECT PROPERTY IS PARTIALLY LOCATED WITHIN:
 - SPECIAL FLOOD HAZARD AREA - ZONE AE (BASE FLOOD ELEVATIONS DETERMINED) SPECIAL FLOOD HAZARD AREA
 - OTHER AREAS OF FLOOD HAZARD - ZONE X (0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE)
 - OTHER AREAS OF FLOOD HAZARD - ZONE X (AREAS OF MINIMAL FLOOD HAZARD)
 - FLOOD ZONE LINES SHOWN HEREON ARE SCALED FROM REFERENCED MAPS.
 - PER ON-LINE TOWN OF CANTON MAPS, SUBJECT PROPERTY:
 - IS PARTIALLY LOCATED WITHIN A ZONE II WATER SUPPLY PROTECTION DISTRICT
 - HAS A PUBLIC WALKING TRAIL LOCATED ON IT
 - IS LOCATED PARTIALLY WITHIN THE SINGLE RESIDENCE A & SINGLE RESIDENCE C ZONING DISTRICTS
 - WETLAND RESOURCE AREAS WERE DELINEATED AND SURVEYED (VIA GPS) BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON SEPTEMBER 12, 2023. WETLAND FLAG LOCATIONS WERE SUPPLIED IN CSV FORMAT VIA NOVEMBER 27, 2023 EMAIL FROM THE VERTEX CORPORATION.
 - THIS PLAN IS COPYRIGHT PROTECTED. IT IS A VIOLATION OF COPYRIGHT LAWS TO EDIT THIS PLAN AND CONTINUE TO REPRESENT IT AS THE ORIGINAL WORK OF WELCH ASSOCIATES LAND SURVEYORS, INC.. IT IS ALSO A VIOLATION OF COPYRIGHT LAWS FOR ANYONE TO REPRESENT THIS PLAN AS THEIR OWN ORIGINAL WORK, WITH OR WITHOUT EDITING.

LEGEND	
APPROX	APPROXIMATE
BCB	BITUMINOUS CONCRETE BERM
BCC	BITUMINOUS CONCRETE CURB
BCD	BITUMINOUS CONCRETE DRIVE
BCW	BITUMINOUS CONCRETE WALK
BIT CONC	BITUMINOUS CONCRETE
CBBLSTN	COBBLESTONE
CLF	CHAIN LINK FENCE
CNC	CONCRETE
CNCR	CONCRETE RAMP
CNCS	CONCRETE STEP
CNCW	CONCRETE WALK
CPS	CONCRETE PAD
CRW	CONCRETE RETAINING WALL
DMH	DRAIN MANHOLE
DYL	DOUBLE YELLOW LINE
ELEC	ELECTRIC
EHH	ELECTRIC HAND HOLE
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
GRNT	GRANITE
GW	GUY WIRE
ICB	IRRIGATION CONTROL BOX
ICV	IRRIGATION CONTROL VALVE
MHR	METAL HANDRAIL
OHANG	OVERHANG
OHW	OVERHEAD WIRES
OBS	OBSOURED
PA	PLANTED AREA
SRW	STONE RETAINING WALL
S	SIGN
SMH	SEWER MANHOLE
SWL	SINGLE WHITE LINE
SYL	SINGLE YELLOW LINE
TRNS	TRANSFORMER
TWS	TACTILE WARNING STRIP
TYP	TYPICAL
UG	UNDERGROUND
UGC	UNDERGROUND CONDUIT
UGE	UNDERGROUND ELECTRIC
UNK	UNKNOWN
UP	UTILITY POLE
XX" C	CONIFEROUS TREE
XX" D	DECIDUOUS TREE

LEGEND	
CB	CATCH BASIN
FH	HYDRANT
FP	FLAG POLE
LP	LIGHT POLE
MH	MANHOLE
S	SIGN
UP	UTILITY POLE
MN	TRAVERSE POINT (MAG NAIL)
RBP	TRAVERSE POINT (REBAR W/PUNCH)
TS	TRAFFIC SIGNAL
SBDH(FD)	STONE BOUND DRILL HOLE(FOUND)
SBBC(FD)	STONE BOUND/BACK CENTER(FOUND)
RRS(FD)	RAILROAD SPIKE(FOUND)
CBDH(FD)	CONCRETE BOUND DRILL HOLE(FOUND)

PROJECT BENCHMARK "A":
RAILROAD SPIKE SET 1' ABOVE GRADE IN SOUTHEAST FACE OF UTILITY POLE (NO NUMBER VISIBLE)
ELEVATION=118.11 (DATUM: NAVD88)

PROJECT BENCHMARK "D":
XCUT SET ON SOUTHEAST BONNET BOLT OF HYDRANT
ELEVATION=75.95 (DATUM: NAVD88)

PROJECT BENCHMARK "B":
RAILROAD SPIKE SET 1' ABOVE GRADE IN SOUTHEAST FACE OF UTILITY POLE #212
ELEVATION=97.57 (DATUM: NAVD88)

PROJECT BENCHMARK "E":
XCUT SET ON WESTERLY BONNET BOLT OF HYDRANT
ELEVATION=84.28 (DATUM: NAVD88)

PROJECT BENCHMARK "C":
SQUARE CUT SET ON SOUTHEAST CORNER OF CONCRETE TRAFFIC SPEED SIGNAL BASE
ELEVATION=89.82 (DATUM: NAVD88)

PROJECT BENCHMARK "F":
XCUT SET ON SOUTHEAST BONNET BOLT OF HYDRANT
ELEVATION=65.82 (DATUM: NAVD88)

TRAVERSE TABLE				
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1	2891850.9877	756538.9254	109.04	MN-SET
2	2891852.8900	756935.5433	130.81	MN-SET
8	2892490.9193	756988.6889	---	MN-SET
9	2892874.1549	756611.5084	---	MN-SET
10	2892659.4607	756467.2908	82.77	MN-SET
11	2892343.2732	756154.4570	88.29	MN-SET
12	2892851.4385	756191.3758	68.65	PM-SET
13	2891963.5734	756277.0457	100.17	MN-SET
15	2893257.2290	756311.1930	---	RBP-SET
16	2893646.8923	756186.4452	---	RBP-SET
20	2893239.1414	755353.0886	96.72	MN-SET
21	2892961.3594	755453.1606	92.88	MN-SET
22	2892702.4649	755705.0315	89.17	MN-SET
23	2892319.3929	755992.5633	94.75	MN-SET

PARCEL DATA	
ASSESSOR'S PARCEL ID:	64/08 & 64/09
CURRENT OWNER OF RECORD:	TOWN OF CANTON
DEED REFERENCE:	BK. 4475 PG. 557 (TAKING FOR SCHOOL PURPOSES)
PLAN REFERENCE:	PLAN NO. 1018 OF 1967 (PLAN BOOK 223)
AREA:	35 ACRES (+/-)

November 30, 2023
DATE



PAMELA M. WELCH AS AGENT FOR WELCH ASSOCIATES LAND SURVEYORS, INC.
REGISTRATION NUMBER 36129

SHEET 1 OF 9

WELCH
Associates Land Surveyors, Inc.
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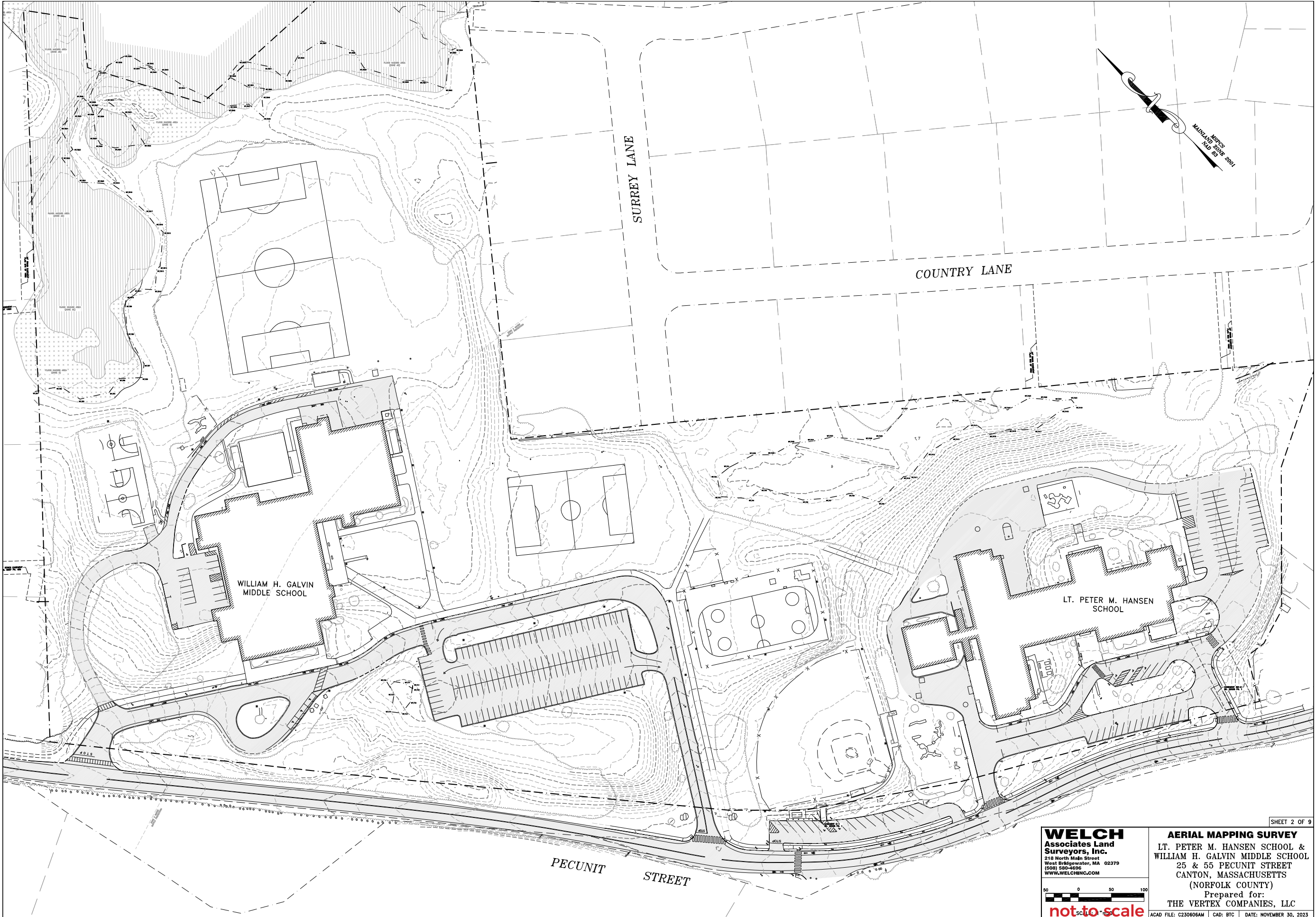
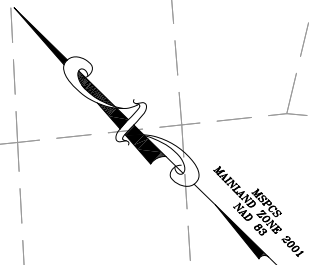
AERIAL MAPPING SURVEY
LT. PETER M. HANSEN SCHOOL &
WILLIAM H. GALVIN MIDDLE SCHOOL
25 & 55 PECUNIT STREET
CANTON, MASSACHUSETTS
(NORFOLK COUNTY)
Prepared for:
THE VERTEX COMPANIES, LLC

AS-NOTED
ACAD FILE: C230606AM CAD: BTC DATE: NOVEMBER 30, 2023

EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

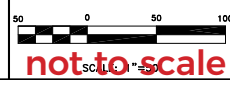
page 2



SHEET 2 OF 9

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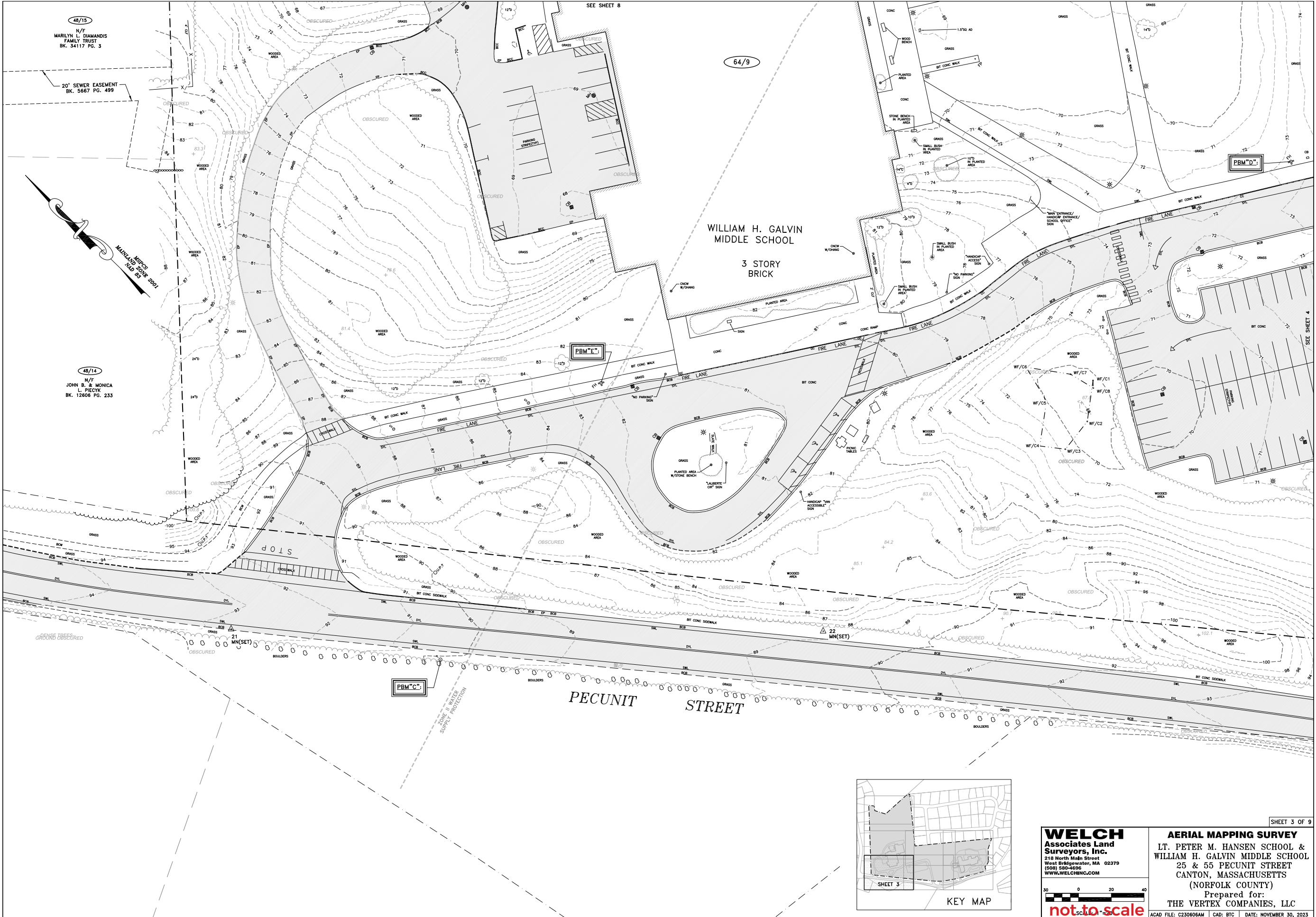


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EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

page 3



48/15
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FAMILY TRUST
BK. 34117 PG. 3

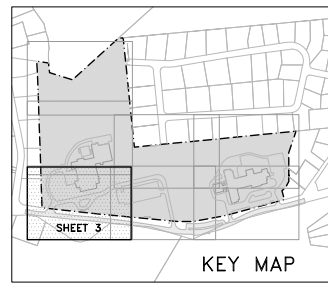
48/14
N/A
JOHN B. & MONICA
L. PIECYK
BK. 12606 PG. 233

64/9

WILLIAM H. GALVIN
MIDDLE SCHOOL
3 STORY
BRICK

PECUNIT STREET

SHEET 3 OF 9



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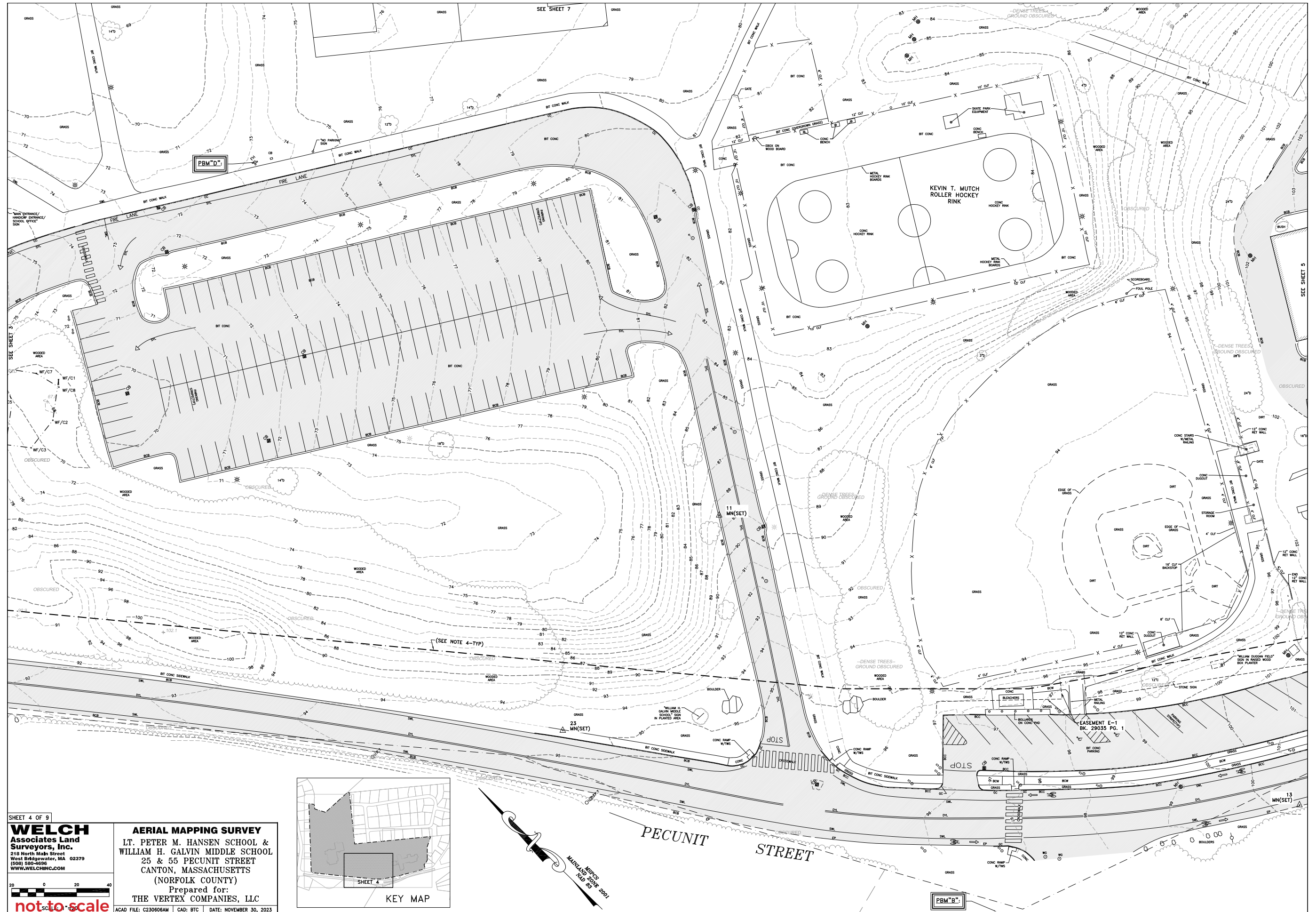
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EVALUATION OF EXISTING CONDITIONS

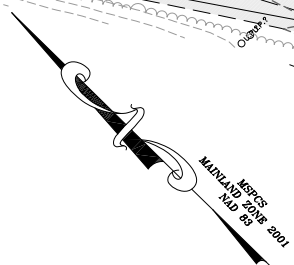
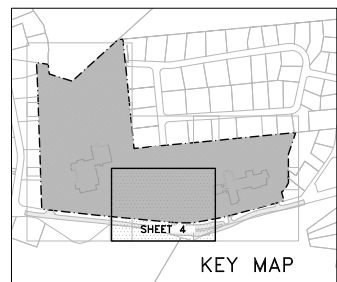
Existing Site Aerial Survey

page 4



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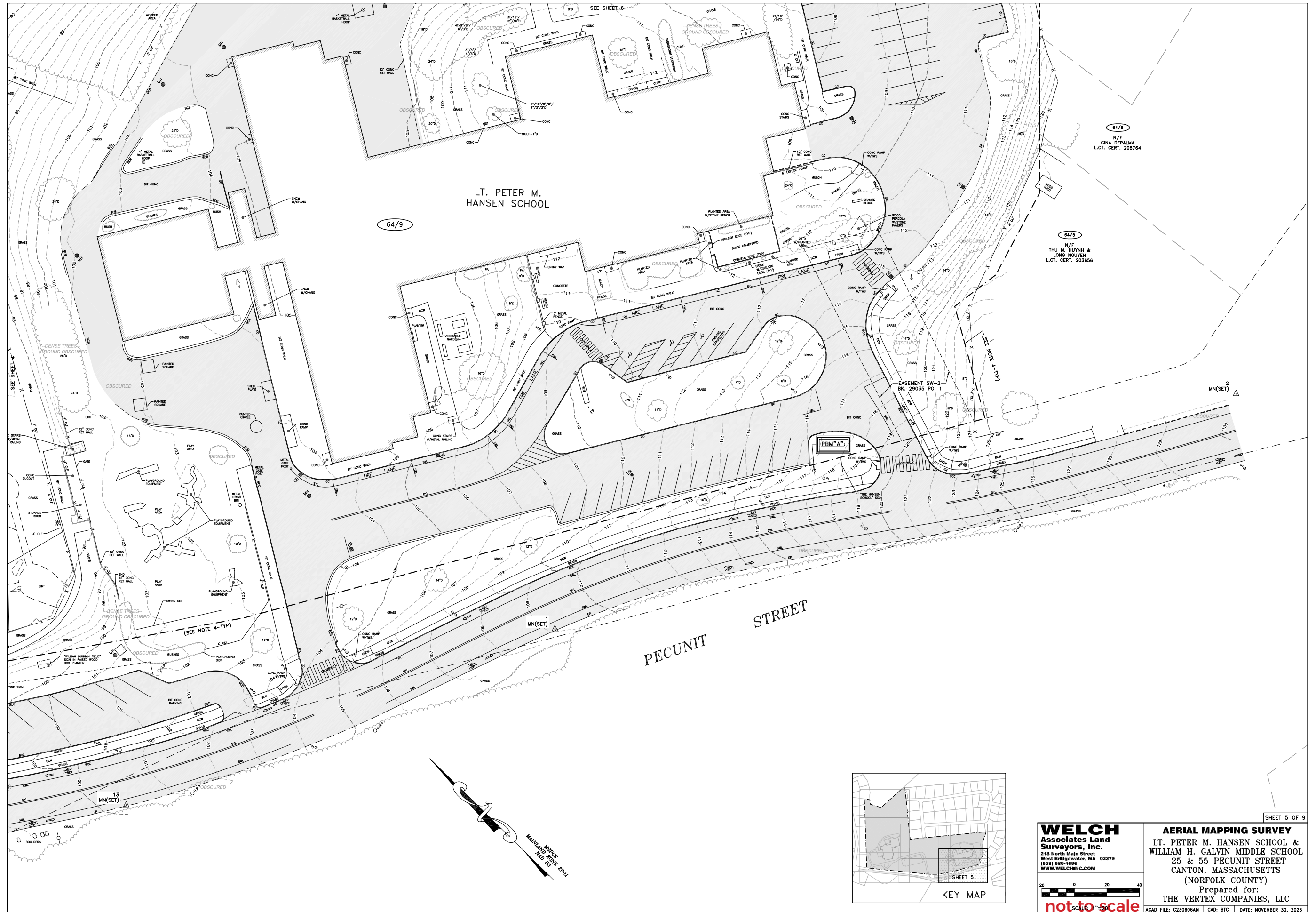
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EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

page 5



LT. PETER M. HANSEN SCHOOL

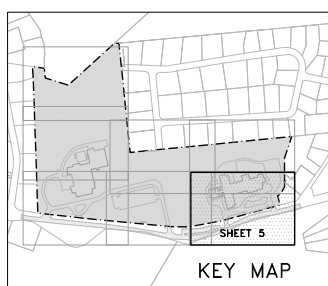
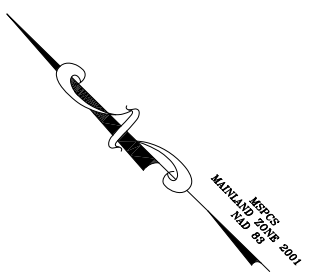
64/9

64/6
N/F
GINA DEPALMA
L.C.T. CERT. 208764

64/5
N/F
THU M. HUYNH &
LONG NGUYEN
L.C.T. CERT. 203656

EASEMENT SW-2
BK. 29035 PG. 1

PECUNIT STREET



SHEET 5 OF 9

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EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

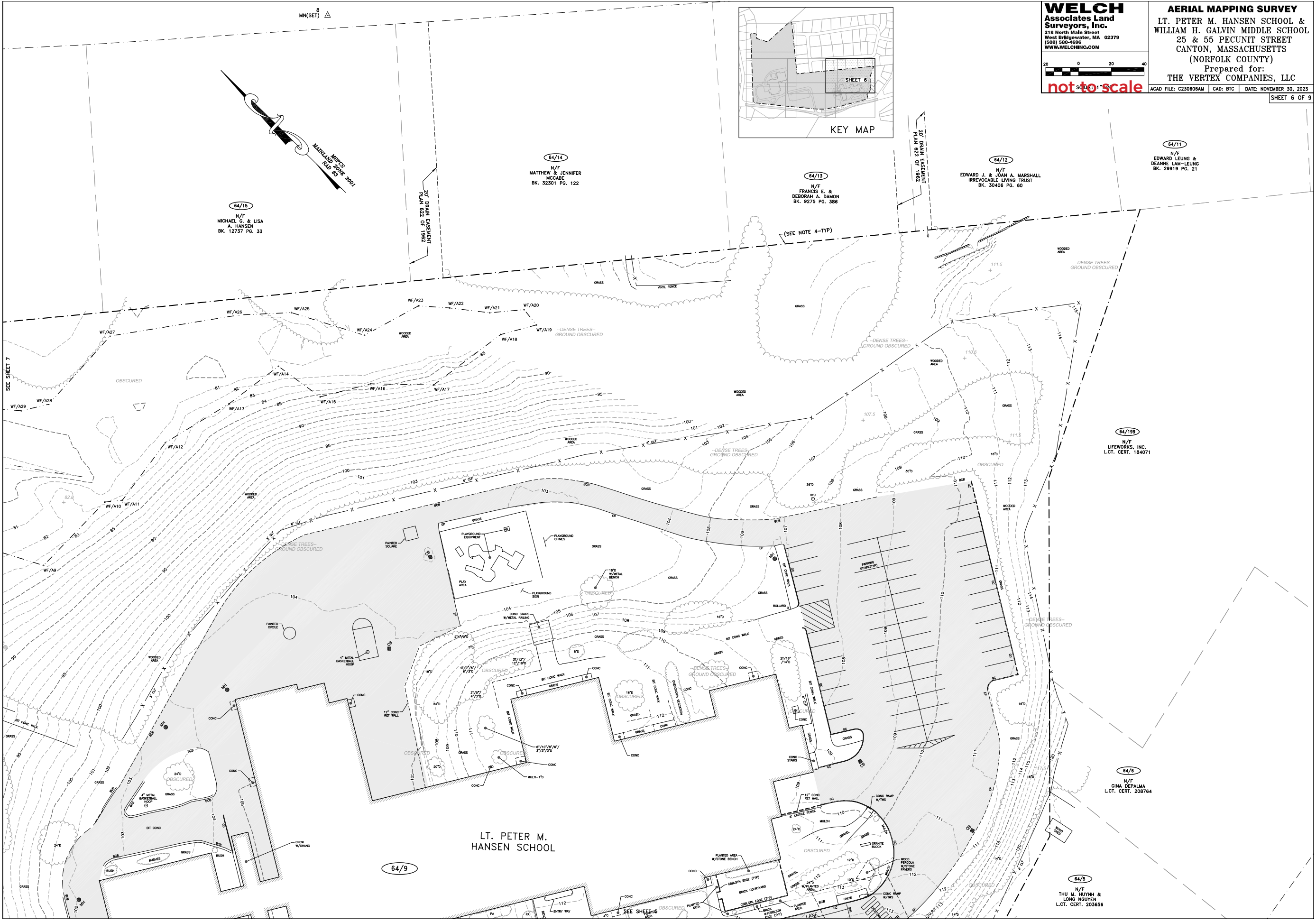
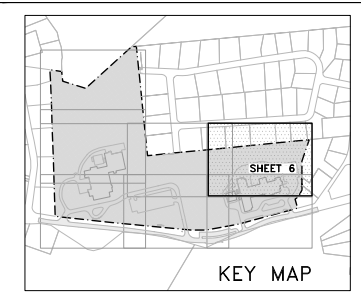
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MN(SET) 
 NOV 2018
 AUG 2018

64/15
 N/F
 MICHAEL G. & LISA
 A. HANSEN
 BK. 12737 PG. 33

64/14
 N/F
 MATTHEW & JENNIFER
 MCCABE
 BK. 32301 PG. 122

64/13
 N/F
 FRANCIS E. &
 DEBORAH A. DAMON
 BK. 9275 PG. 386

64/12
 N/F
 EDWARD J. & JOAN A. MARSHALL
 IRREVOCABLE LIVING TRUST
 BK. 30406 PG. 60

64/11
 N/F
 EDWARD LEUNG &
 DEANNE LAM-LEUNG
 BK. 29919 PG. 21

64/19
 N/F
 LIFEWORKS, INC.
 L.C.T. CERT. 184071

64/8
 N/F
 GINA DEPALMA
 L.C.T. CERT. 208764

64/5
 N/F
 THU M. HUYNH &
 LONG NGUYEN
 L.C.T. CERT. 203656

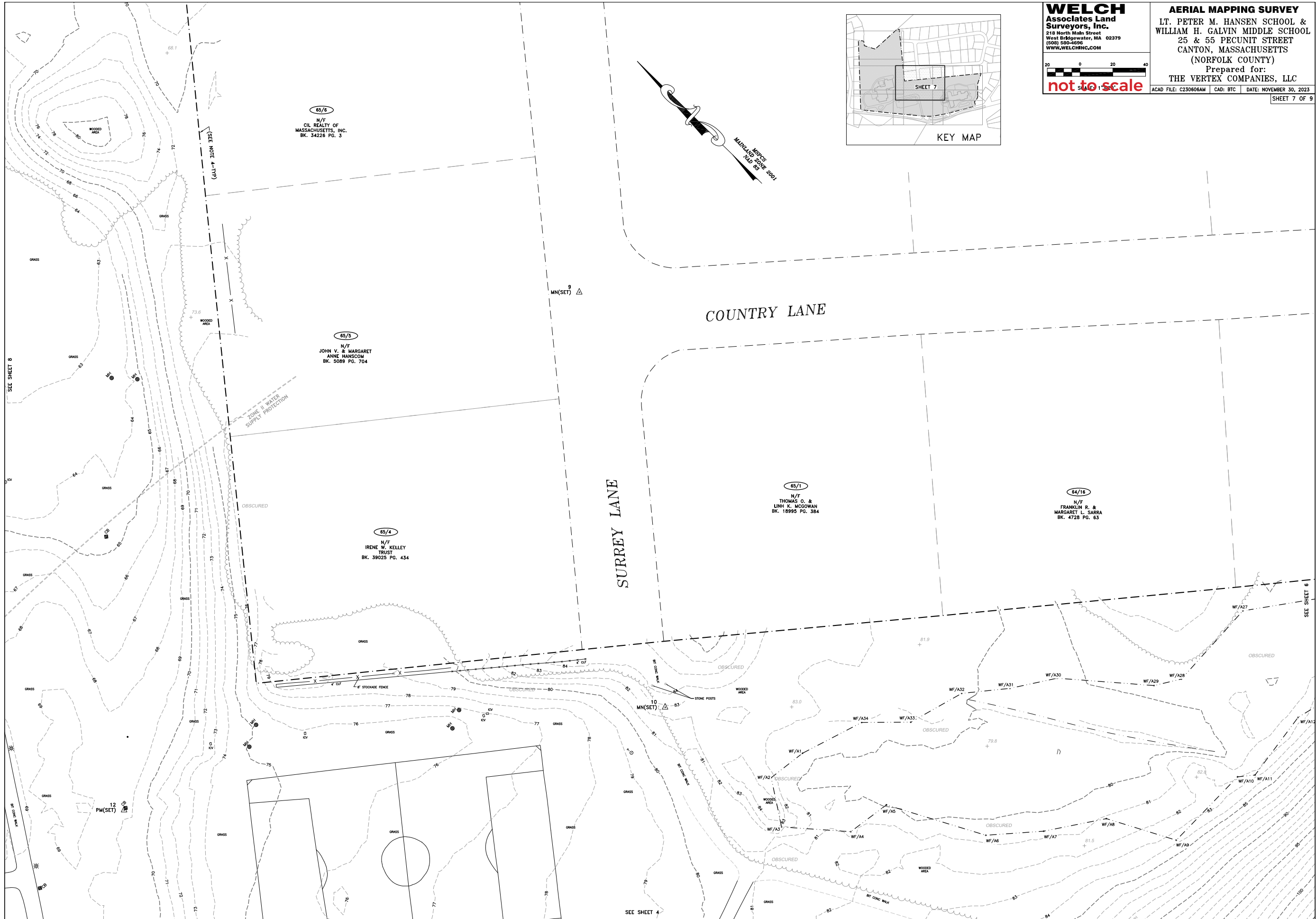
LT. PETER M.
 HANSEN SCHOOL

64/9

EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

page 7



EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

page 8

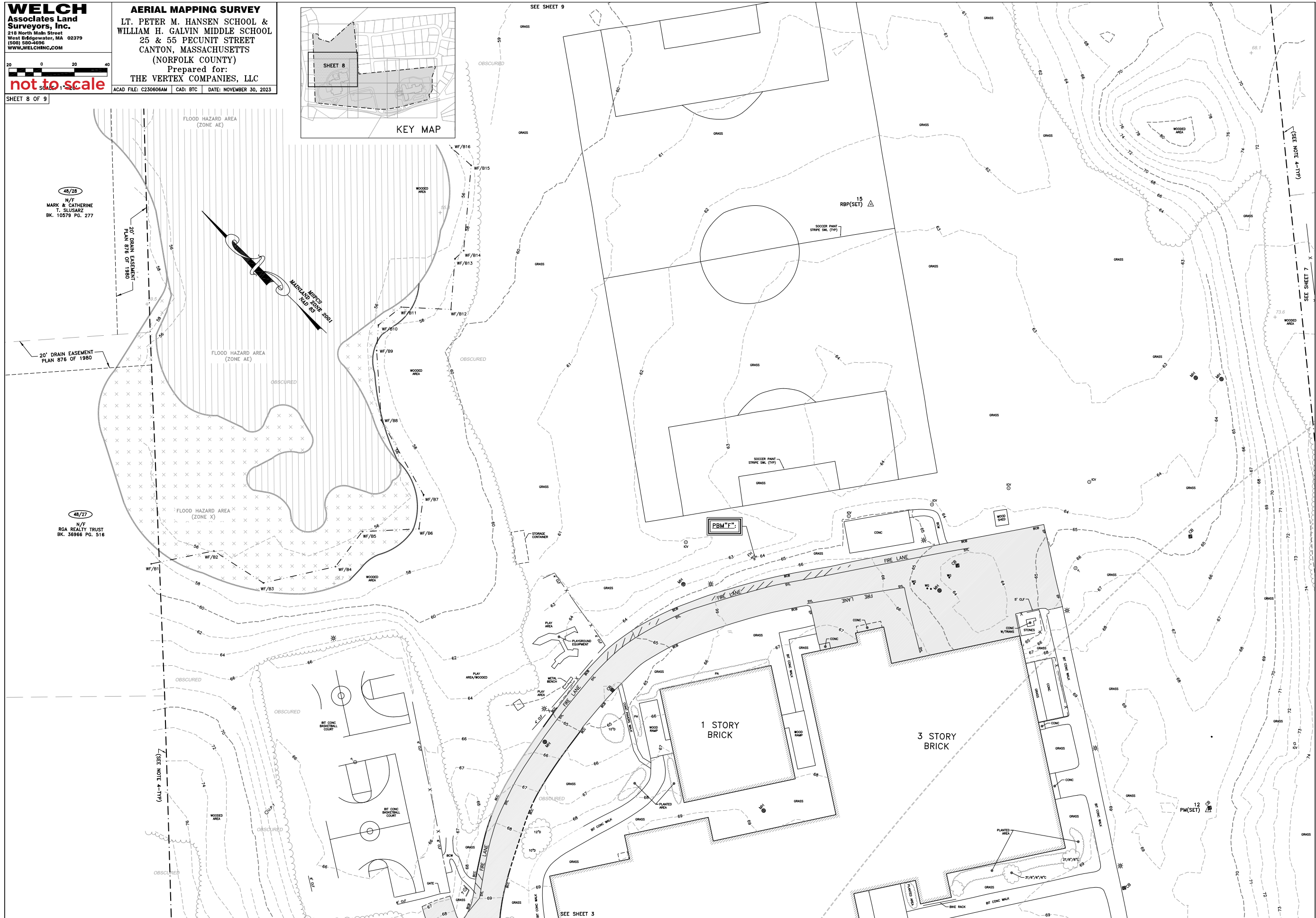
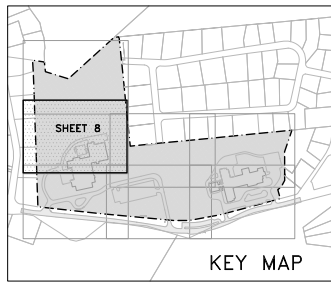
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SHEET 8 OF 9



EVALUATION OF EXISTING CONDITIONS

Existing Site Aerial Survey

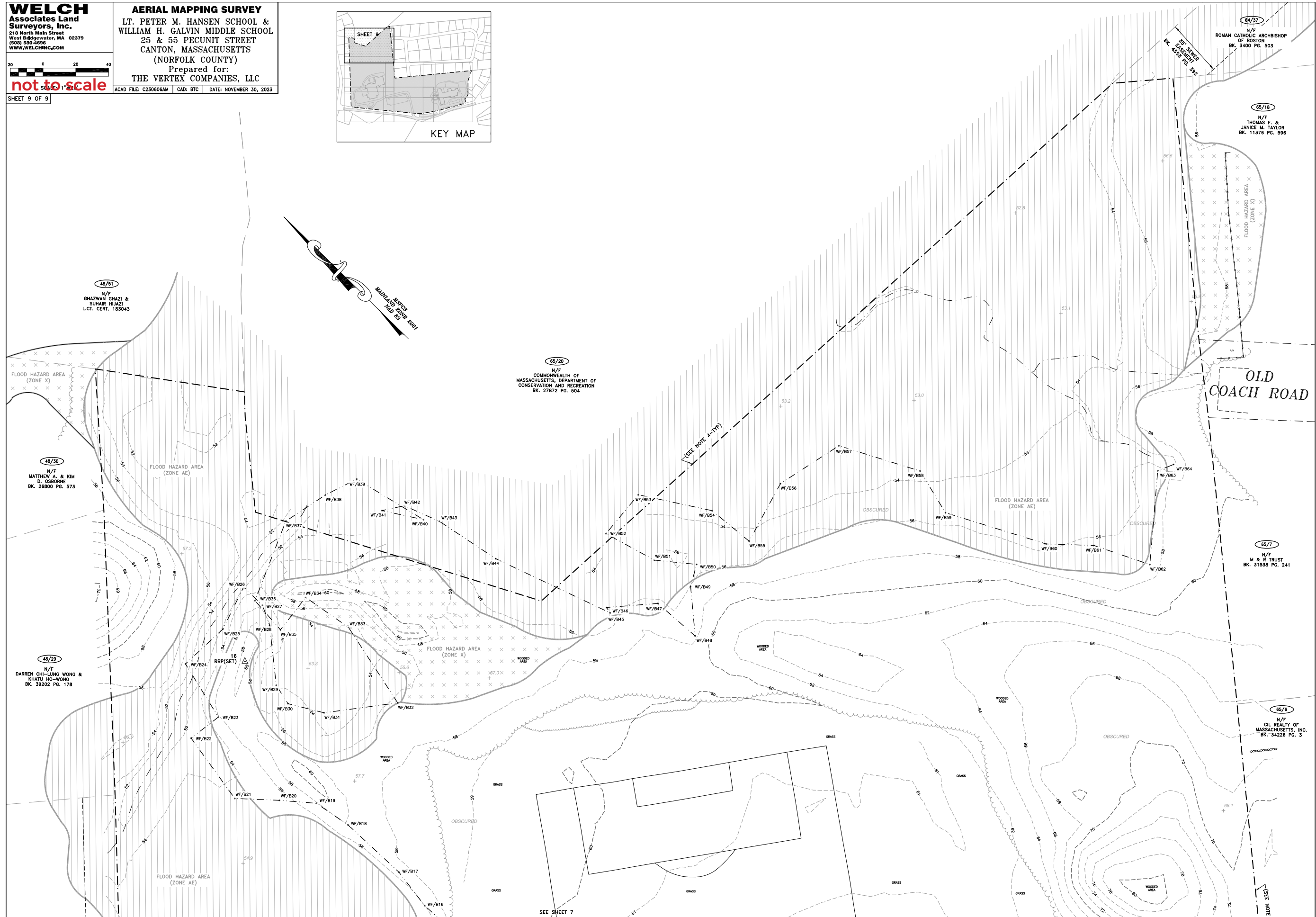
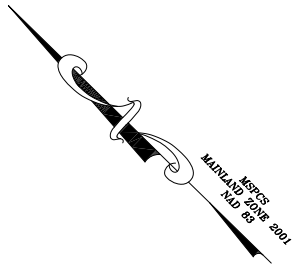
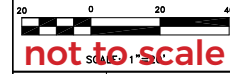
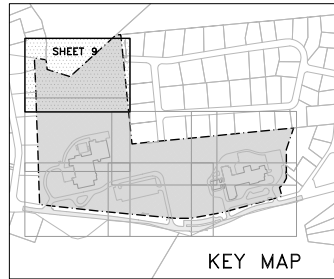
page 9

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SHEET 9 OF 9



48/51
 N/F
 GHAZWAN GHAZI &
 SUHAIL HIJAZI
 L.C.T. CERT. 183043

48/50
 N/F
 MATTHEW A. & KIM
 D. OSBORNE
 BK. 28600 PG. 573

48/23
 N/F
 DARREN CHI-LUNG WONG &
 KHATU HO-WONG
 BK. 39202 PG. 178

65/20
 N/F
 COMMONWEALTH OF
 MASSACHUSETTS, DEPARTMENT OF
 CONSERVATION AND RECREATION
 BK. 27872 PG. 504

64/57
 N/F
 ROMAN CATHOLIC ARCHBISHOP
 OF BOSTON
 BK. 3400 PG. 503

65/18
 N/F
 THOMAS F. &
 JANICE M. TAYLOR
 BK. 11376 PG. 596

65/7
 N/F
 M & B TRUST
 BK. 31538 PG. 241

65/6
 N/F
 CIL REALTY OF
 MASSACHUSETTS, INC.
 BK. 34226 PG. 3

SEE SHEET 7

(SEE NOTE)

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3.3.3 | FINAL EVALUATION OF ALTERNATIVES

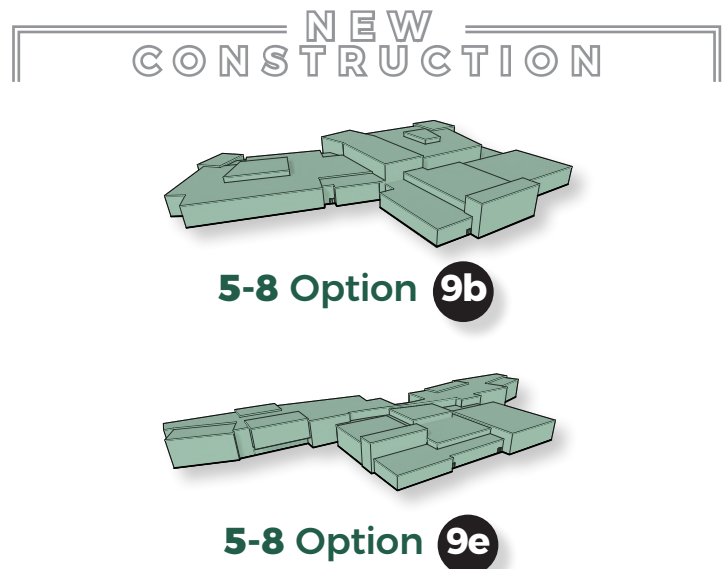
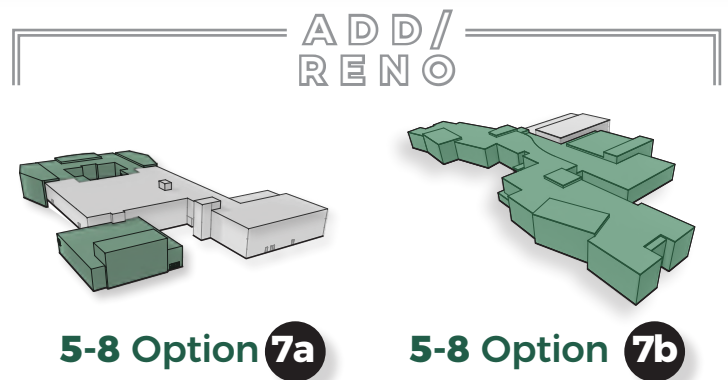
Overview

Eight (8) preliminary design options were included in the PDP submission. Further design explorations expanded these 8 options to 16. As described in greater detail in the Preferred Solution chapter of this document, after extensive district inquiry and engagement with staff, students, and parents regarding the 5-8 vs. 6-8 grade configuration for the middle school, the district voted to proceed with a 5-8 grade level configuration. This eliminated 8 of the 16 options because they were designed for grades 6-8.

The district also conducted extensive engagement and study regarding the desired type of performance space for the middle school, exploring cafeteria, gymnasium, and auditorium options. This process was documented in the introductory chapter of this document. The vote to proceed with an auditorium determined the design team's focus on the 4 remaining design options that include an auditorium. The merits and details of these options will be investigated in this section. Options 7a, 7b, 9b, and 9e were selected by the School Building Committee and endorsed by the School Committee for further investigation within this Preferred Schematic Report (PSR).

Option 7a - Academic Addition / Major Renovation

Option 7b - New Academic Building / Gymnasium Renovation



Option 9b - New Construction, Grade-Level Teams by Floor

Option 9e - New Construction, Hybrid Stacked Grade-Level Teams

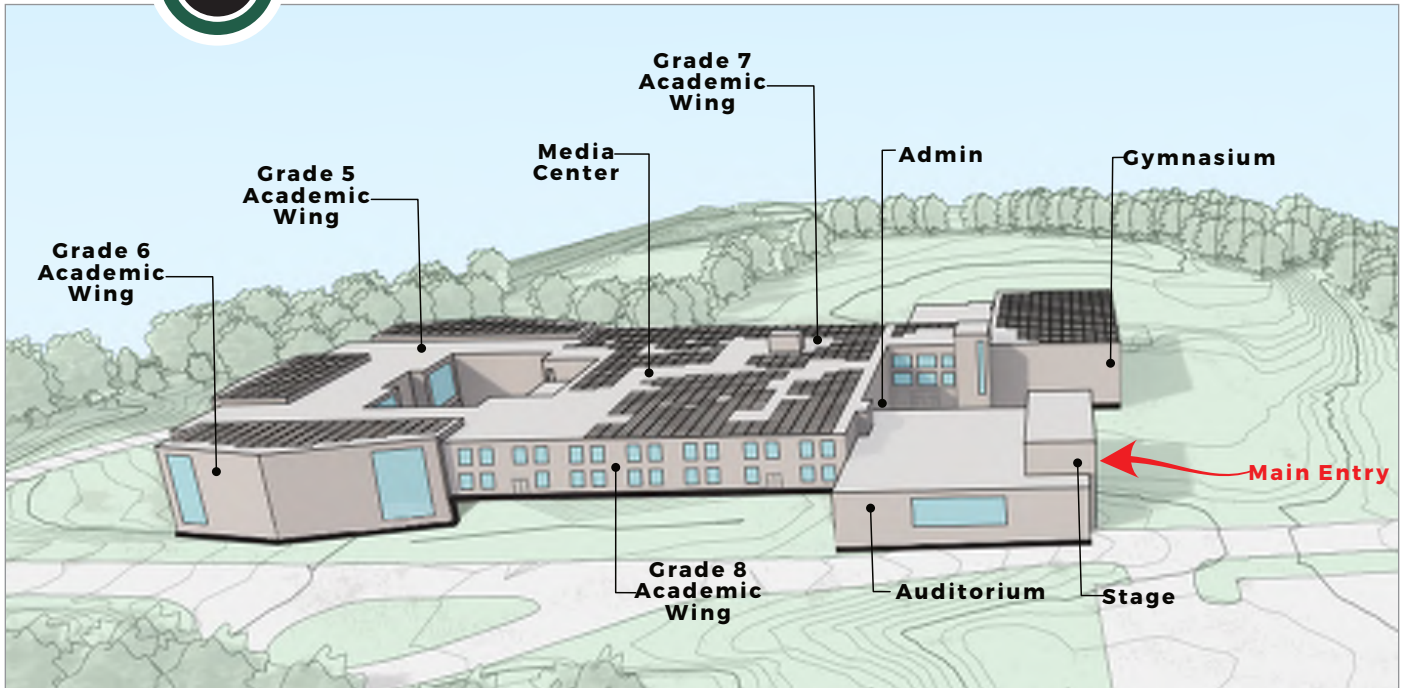


Numerous iterations of Options 7 and 9 were generated. These variations explored program organization, grade level team organization, overall form, site impact, community use opportunities, and other variables. Options 9a, 9c, and 9d were discarded; Options 9b and 9e were selected for further study.

FINAL EVALUATION

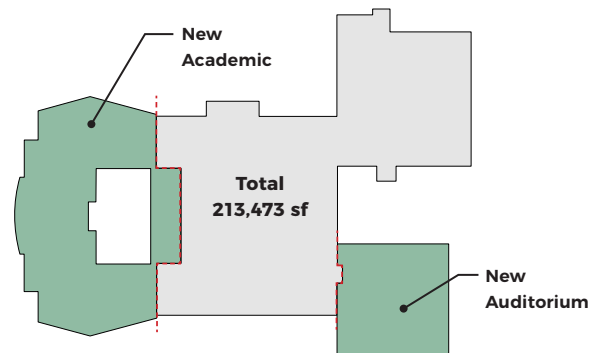
7a

Academic Addition / Major Renovation



Option 7a is an add / reno option that renovates the existing academic building and gymnasium. To address the program space deficiencies of the current building and provide the additional space needed to accommodate the 5-8 enrollment, a new three-story classroom wing is added to the existing academic building. A new auditorium is also built adjacent to the main entrance of the existing academic building.

In the original building, renovations would include both code and accessibility upgrades similar to the base repair option. In addition, some spaces would be reconfigured to reflect current program needs. For example, the locker rooms below the gym would be relocated to the same level as the gym. However, because of the constraints of working with the existing building layout, not all program spaces can meet the recommended program area, and not all desired spatial adjacencies can be achieved.



Option 7a: Summary

GRADE LEVELS	▶ 5-8
ENROLLMENT	▶ 1020 students
AUDITORIUM	▶ YES
FLOORS	▶ 3
ADD / NEW SF	▶ 81,570 SF
RENOVATED SF	▶ 131,903 SF
TOTAL SF	▶ 213,473 SF
EST. DURATION	▶ ± 60 Months

FINAL EVALUATION

Site Plan

The site organization for Option 7a provides increased recreational fields, a new playground to support the 5th grade recess, and multiple new outdoor learning areas. The current full size and U12 recreation fields are maintained, and space for an additional U10 field is provided. Sight lines to the rear fields are limited by the location of the existing building. The two existing basketball courts are replicated in the new site layout.

To improve vehicular circulation, the existing parking lot is expanded with an adjacent lot and drop off zone, allowing for separation between buses, service vehicles, and visitors. Additional parking would be provided behind the building for those utilizing the rear fields. Overall site work would also enhance bicycle and pedestrian safety and accessibility, improve drainage, reduce site runoff, and include attractive rain gardens, bioretention areas, and other stormwater management features.

Outdoor learning opportunities are provided in several locations including the courtyard in the new academic addition and two plazas adjacent to the existing building. An additional outdoor classroom is located near the woods and wetlands to the east of the school, capitalizing on the learning opportunities of the site's rich and varied ecology.

Existing Site Features

The proposed option is located at the existing Middle School site at 55 Pecunit Street, Canton Massachusetts. The site design is integrated into the existing site including buildings and features such as Lieutenant Peter M Hansen School, athletic spaces and all vehicular and pedestrian connections. Environmental constraints are considered in the design including

7a

Conceptual Site Plan

SCALE 1" = approx. 175'-0"

the existing wooded areas, floodplain, wetlands and their respective setbacks in order to sustain the natural appearance and function. The existing topography forms multiple levels across the site. Steeper slopes work down from Pecunit Street to a gradually graded open space towards the north.









Building Footprint

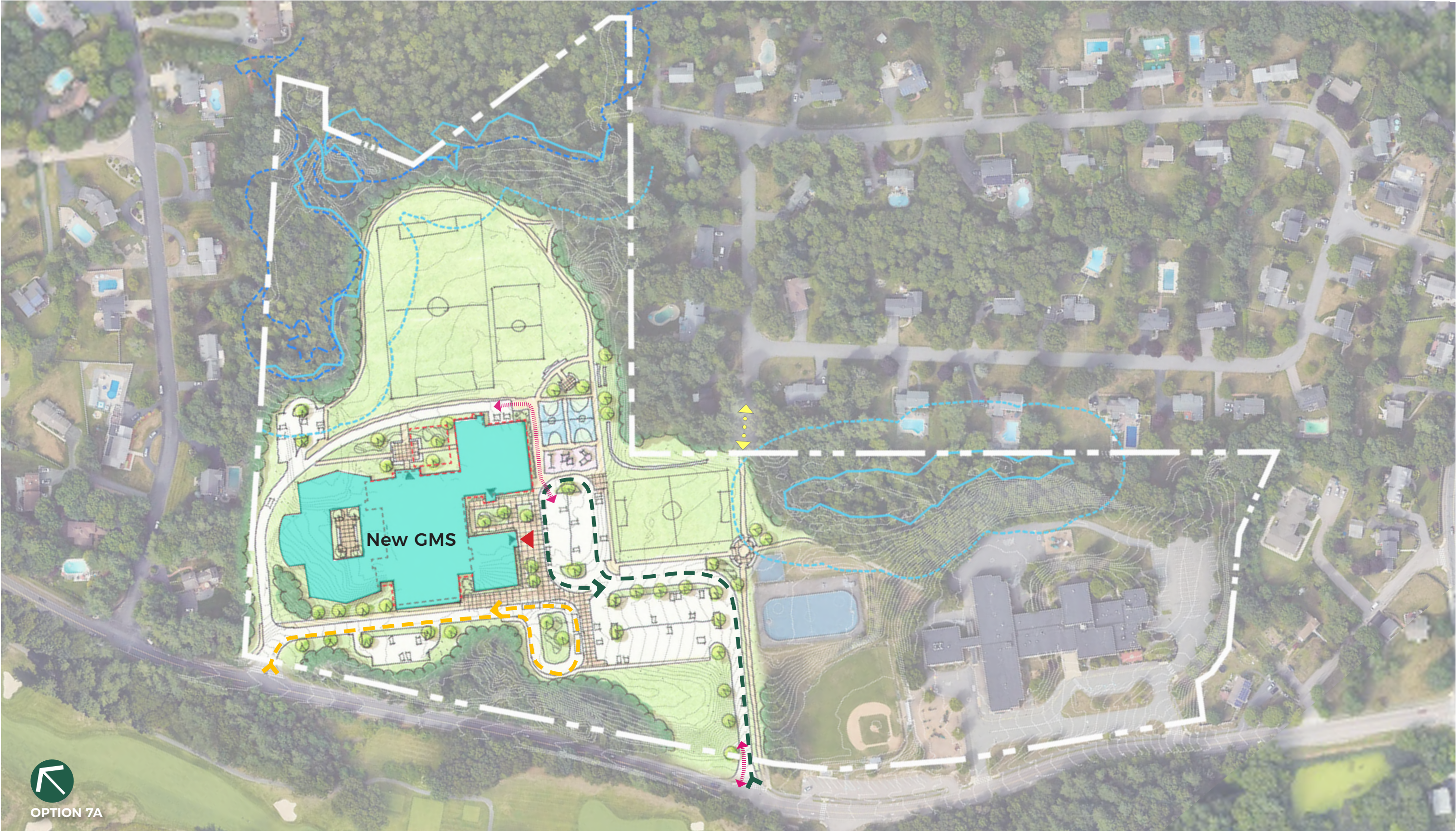
The new footprint will include an addition and renovation onto the existing Middle School. The main entrance remains on the east side adjacent to the gym entrance. The addition expands to the west and includes a courtyard and an auditorium to the east. Additional egress allows easy access to surrounding outdoor spaces. The school's location allows for the preservation of existing vegetation and natural features, as well as existing infrastructure.

Site Access & Circulation

The existing vehicular entrances located off Pecunit are utilized in this option for Buses and Car drop off as well as access for staff and visitors. Pedestrian access

Legend

-  Main Entry
-  Bus Drop-off
-  Parent Drop-off
-  Walking Path to neighborhood
-  Emergency Access
-  Outline of Existing
- 
- 



OPTION 7A

FINAL EVALUATION

plays a major role for the site's connectivity. New walkways will meet existing walkways leading from Pecunit street, to the school. Connections to the Elementary school, open space, activity areas and surrounding neighborhoods are also provided.

Each access point leads to a parking lot and drop off plaza location at the building entrance. The drop off areas are interchangeable between bus and car to work with changing traffic patterns. A separate access matches an existing road layout and leads to the lower open field space. The building service loading dock is located in the rear of the building at its existing location and includes an existing access service road layout. The southern access drive can accommodate approximately 40 cars or 15 buses. The northern access drive can accommodate up to approximately 54 cars or 20 buses.

Drop off areas are designed for two-way traffic. There are three total parking lots on this site including one a main parking lot at the building entrance, one on the south side, and one closer to the fields to the west. Total parking is approximately 188 spaces, which exceeds the existing amount of parking spaces. Rain gardens and bioretention are also utilized to implement sustainable design.

Open Space

The site layout is designed to provide ample open space for recreation and athletics used by the school and town. Currently there are two main open spaces areas (upper and lower Galvin). This design sustains a similar approach. The layout can be flexible, designed to accommodate multi-use fields ranging in size from 330'x195' to 141'x90' depending on the age group and sport. Rain gardens and bioretention are also utilized to implement sustainable design where applicable.

Activity Spaces

Activity spaces are designed into the site in the form of sport courts, playgrounds, and gathering spaces that can be utilized for outdoor classrooms, Art, or music. These spaces may include permanent and flexible seating along with additional associated amenities. ♦



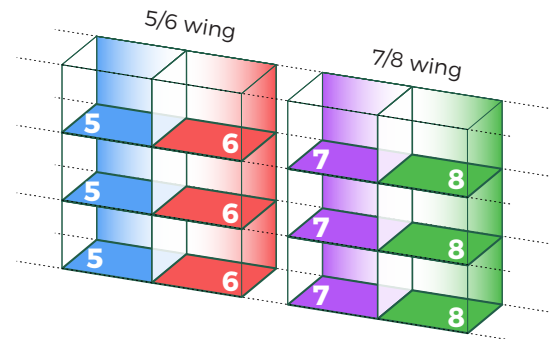
Existing 2nd floor gymnasium and fields

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7a**Conceptual Floor Plans****Program Organization**

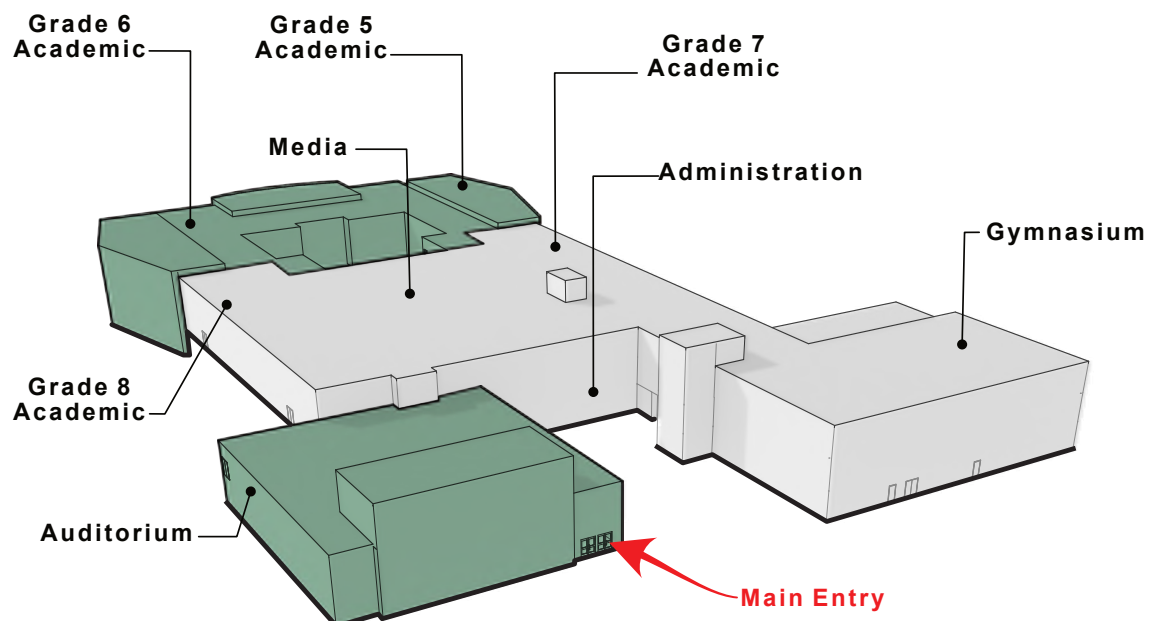
This option preserves the existing main entrance, administration, and nurse's suite layout. It relocates the locker rooms to the same level as the gymnasium. The existing single-story locker rooms are reconfigured to provide a choral room, performance technology studio, and adaptive PE space. In the original academic building, an entire wing of the first floor is reconfigured to locate the SPED Life Skills programs close to all support services, while the SPED therapeutic classrooms are adjacent to academic classrooms and collaboration spaces. Student dining and the kitchen remain in place, with dining expanded to support the larger student population.

The seventh and eighth grade classrooms and two world language classrooms are located in the original academic building. Some reconfiguration has taken place to provide prep rooms for every science classroom as well as student and teacher



Option 7a Grade Level Organization

collaboration spaces. However, the distributed media presentation spaces could not be located in this wing without sacrificing classroom spaces, which would adversely impact the grouping of classrooms for academic teams. In addition, the toilet rooms are reconfigured to meet accessibility codes. The exterior facade at what was the media center is modified to allow more second floor classrooms to have exterior windows and views.



Option 7a Program Organization

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The new academic wing provides classrooms for grades 5 and 6 as well as the remaining world language classrooms, Art and Technology Engineering classrooms, student and teacher collaboration spaces, and media presentation spaces. All academic wings incorporate resource rooms throughout the general classroom areas to support SPED programming and inclusion.

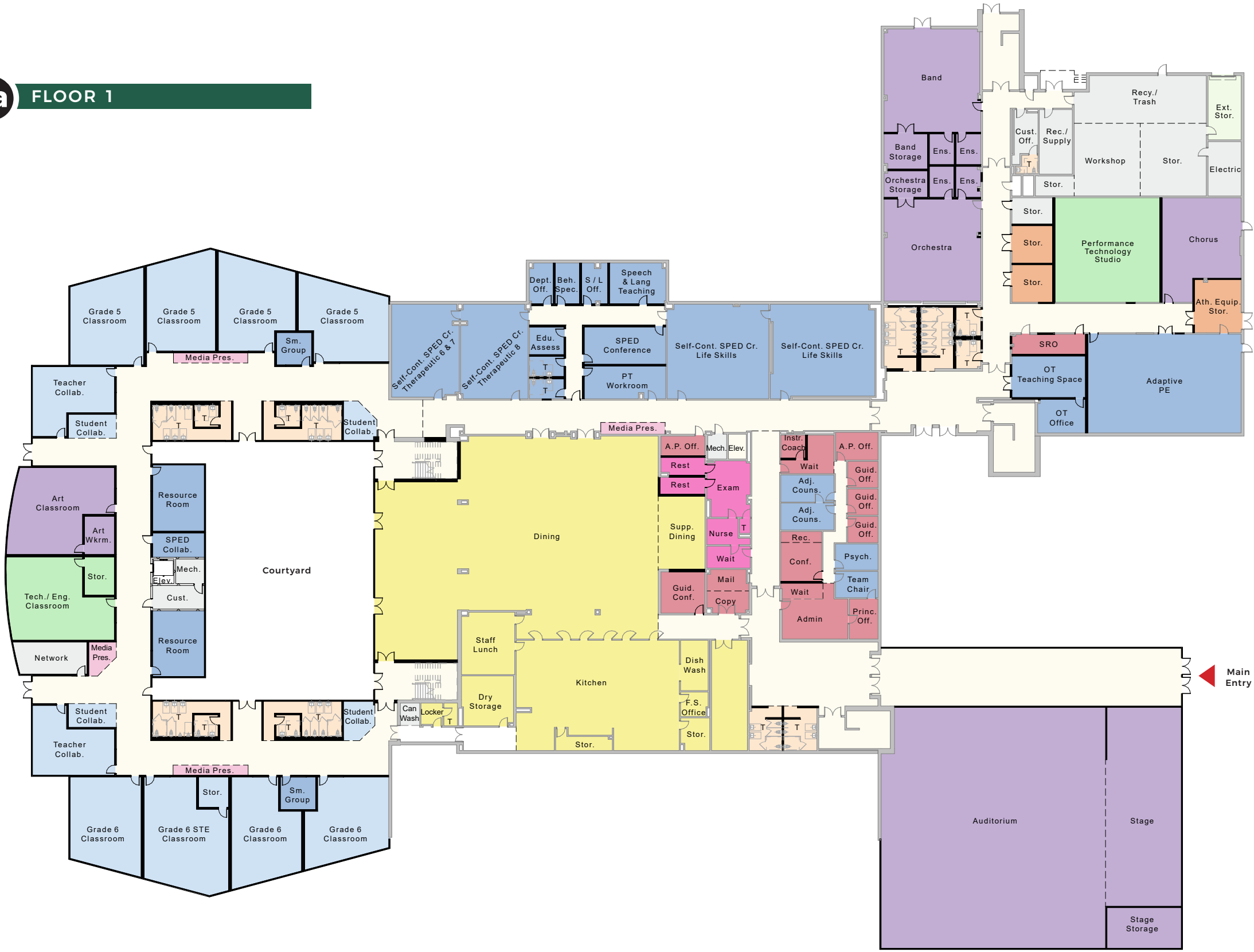
The motivation behind Option 7a, which is to conserve resources by re-using as much of the existing building as possible, is commendable. However, study shows that it is not a resource-efficient option, nor does it successfully achieve the educational program goals. Student collaboration spaces have poor adjacency, and in many cases, no visibility from classrooms, making their use impractical. The existing long, dark corridors have become even longer and darker with awkward corners, jogs, and angles. Circulation is inefficient and navigation is challenging, with some classrooms located quite far from student services such as the Nurse's suite.

Notably, the layout does not support the separation of grades that was stated to be a requirement to successfully implement a 5-8 grade level configuration. It is true that different grades are in different locations, but the grade-level adjacencies, location of Art, Technology Engineering, Media, and overall circulation patterns do not address the town's concerns for the supervision of 5th and 8th graders and how they would mix and interact in the same building.

Several classrooms, other learning spaces, and even the Media center have no natural daylight or views to the outdoors. Many administrative areas are undersized, including those that provide direct student support, perpetuating a cramped, unwelcoming environment that has been identified as a challenge to students' social

/ emotional wellbeing. Existing undersized classrooms remain, and new spaces are shoehorned into locations where their use and program goals are compromised by the constraints of the existing building; for example, the performance technology studio is a single story space, when ideally it should be at least 1.5 stories. Similarly, adaptive PE is a single story space that should be taller to support a standard offering of physical activities and fitness equipment. Band, chorus and orchestra are located far from the auditorium, creating logistical challenges and limiting the best use of the stage area for educational instruction in addition to performance. This option did succeed in presenting an add / reno option that is cost competitive with new construction options; at \$225M, it is \$7M less expensive than the least expensive new construction option (Option 9e). However, it succeeds in cost competitiveness because it maintains a number of undersized program spaces, resulting in a lower overall building square footage than the other options. It would be a poor economy to save 3% in project costs to build a school that does not meet the educational program goals. It is also less resource-efficient, because at the end of the day, the existing building portion envelope is less thermally efficient than new construction, requiring higher annual operation and maintenance costs for the life of the building. ♦

7a FLOOR 1



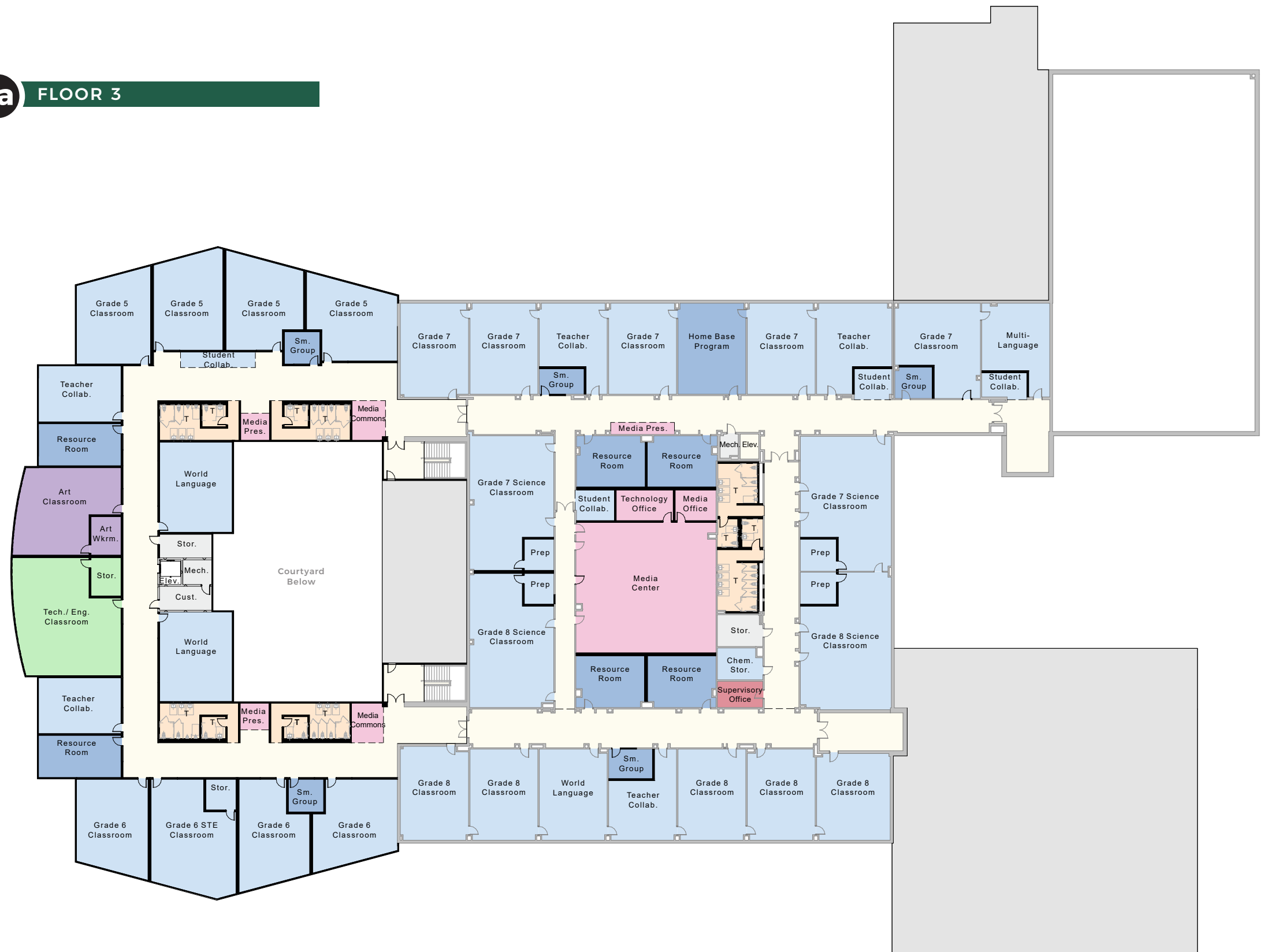
PROGRAM LEGEND	
[Light Blue Box]	Core Academic Spaces
[Dark Blue Box]	Special Education
[Purple Box]	Art & Music
[Green Box]	Vocations & Technology
[Pink Box]	Media Center
[Orange Box]	Health & Physical Education
[Magenta Box]	Medical
[Red Box]	Administration & Guidance
[Yellow Box]	Dining & Food Service
[Light Yellow Box]	Circulation
[Grey Box]	Custodial / Service
[Light Orange Box]	Toilet Rooms
[Light Green Box]	Storage

7a FLOOR 2



PROGRAM LEGEND	
	Core Academic Spaces
	Special Education
	Art & Music
	Vocations & Technology
	Media Center
	Health & Physical Education
	Medical
	Administration & Guidance
	Dining & Food Service
	Circulation
	Custodial / Service
	Toilet Rooms
	Storage

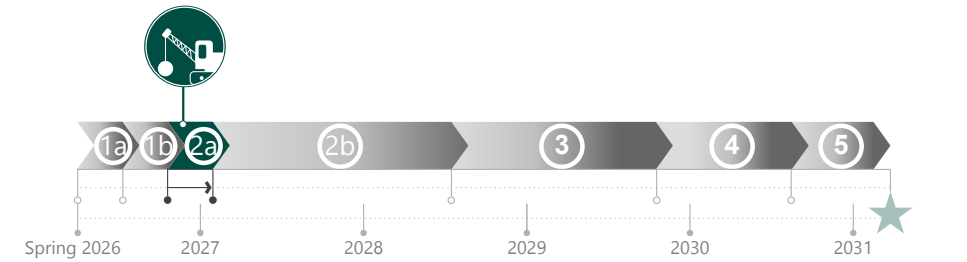
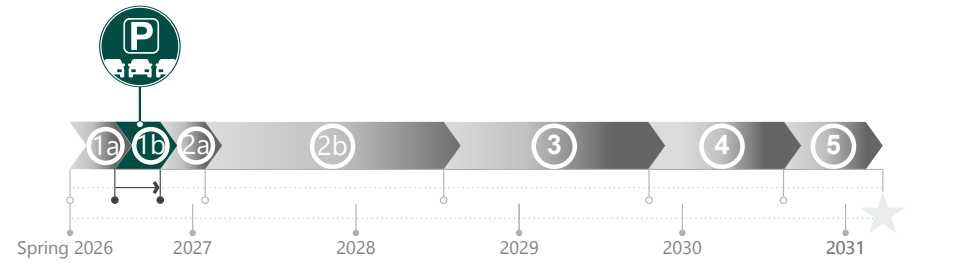
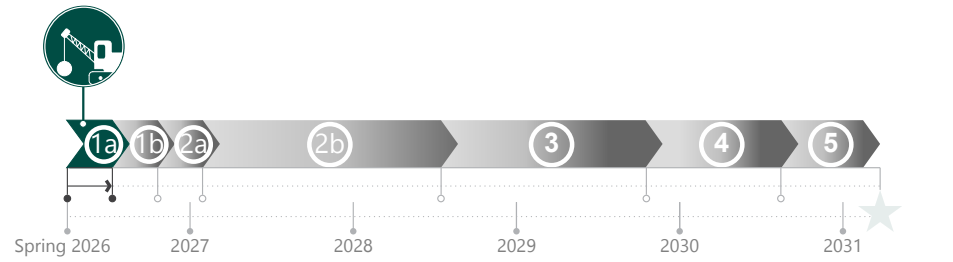
7a FLOOR 3



PROGRAM LEGEND	
[Light Blue]	Core Academic Spaces
[Dark Blue]	Special Education
[Purple]	Art & Music
[Green]	Vocations & Technology
[Pink]	Media Center
[Orange]	Health & Physical Education
[Red]	Medical
[Dark Red]	Administration & Guidance
[Yellow]	Dining & Food Service
[Light Yellow]	Circulation
[Grey]	Custodial / Service
[Light Orange]	Toilet Rooms
[Light Green]	Storage

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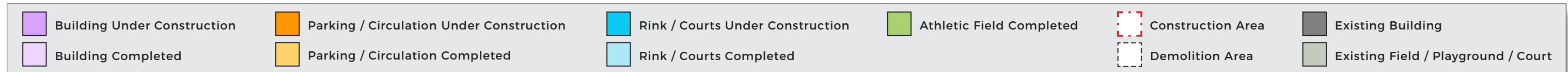
Conceptual Phasing & Construction Impact **7a**



Phase 1a
Spring 2026: Contractor mobilization; abate and demolish selected parking lot and accompanying circulation.

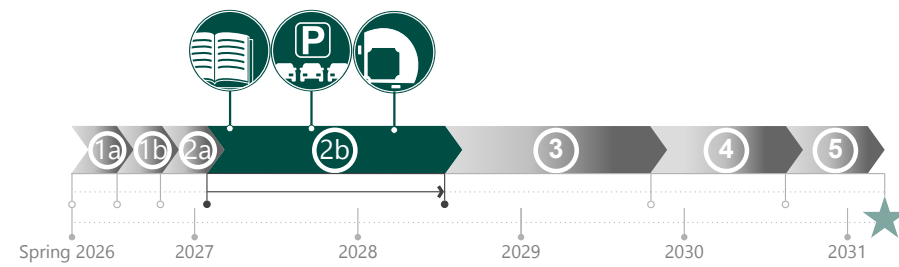
Phase 1b
Summer 2026: Creation of new circulation and parking for existing Galvin Middle School.

Phase 2a
August 2026: Demolish existing preschool, basketball courts, and indicated parking / circulation. Prepare the site for future construction.



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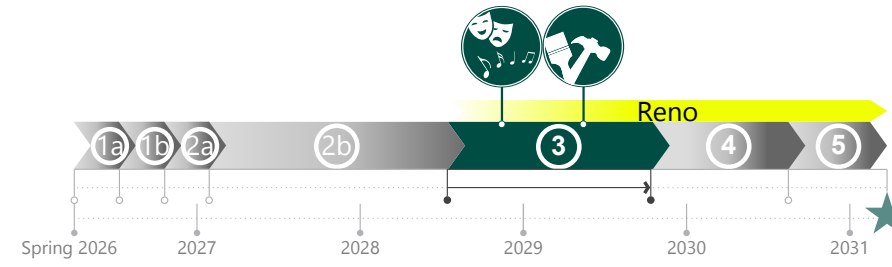
7a Conceptual Phasing & Construction Impact



Phase 2b

Fall 2026: Begin construction of new 3 story academic wing addition, adjacent parking / circulation, and athletic field.

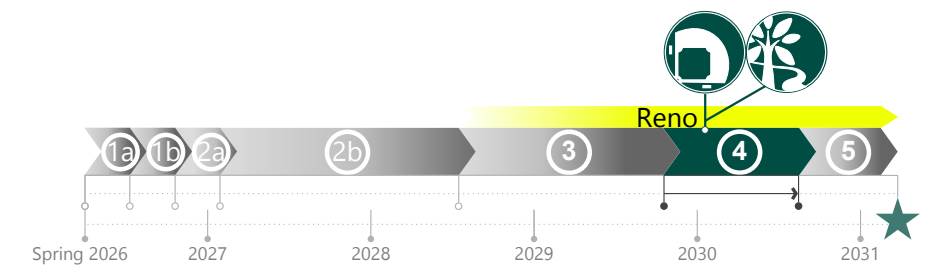
Spring 2028: Substantial completion of 3 story academic wing. Occupancy of new building for 2 grade levels.



Phase 3

Spring 2028: Begin construction of new auditorium addition and new building facade. Begin renovation of existing Galvin Middle School.

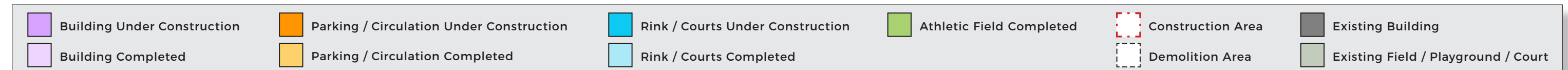
Spring 2029: Substantial completion of auditorium and facade.



Phase 4

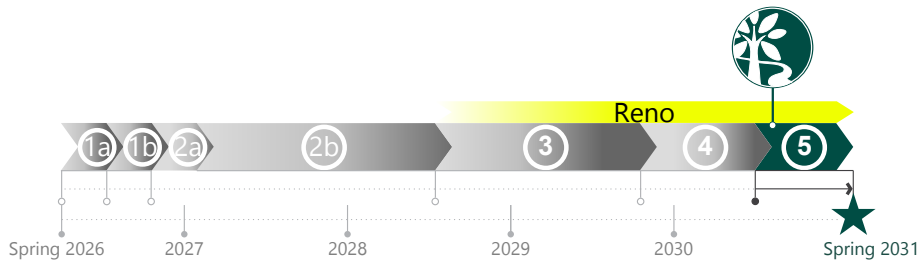
Spring 2029: Begin construction of athletic field, outdoor activity spaces and final site work.

Fall 2029: Complete work on athletic field and outdoor activity space.



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Conceptual Phasing & Construction Impact **7a**



Phase 5

Fall 2029: Continued construction of final site work.

Spring 2030: Complete site work.

TOTAL ESTIMATED DURATION:
±60 months



7a Site & Utilities Analysis

Utilities

The existing conditions utility information was found using aerial imagery and record documents that were available. Future development options would require that the existing utilities to be located and verified on site and included in the design plans.

Sewer

According to readily available Town sewer maps, sewer pipes enter the site from the west, collecting sewage from the schools and neighborhoods to the east and west of the site and continues to flow north through the wetlands to the north. There is no sewer in Pecunit Street. Pipe sizes transition between 8", 10" and 18" mains as the pipes travel from south to north. Preferably, pipe sizes do not reduce and then increase in size further downstream again. DPW should be consulted to determine if there are any known sewer issues. The Town does not have a sewer treatment facility and is on the MWRA system. In this option, the existing sanitary infrastructure may need to be rerouted to avoid the new school building.

Water

Readily available water maps are not available. The Site Plan of Land for the school property does show existing water service within the service access road north of the existing building. MassDOT Construction Documents for the Middle School show an existing water line within Pecunit Street along the southern access driveway to the school, however there is no indication this is a main. The Town's Master Plan indicates that the Town has seven groundwater wells, two booster pump stations, five water storage facilities, and two water treatment facilities. The nearest well

is located on Charles Drive approximately 0.25-miles from the site. Based on hydrant locations it does not appear that water mains are located in Pecunit Street. In 2018, the last year listed in the Master Plan, Canton received 62% of its water from the MWRA with the remainder supplied from the Town wells.

Drainage

Record documents and survey show approximately ten (10) catch basins throughout the developed portion of the Galvin Middle School site. The closed drainage system appears to discharge into the onsite wetland areas delineated in front of the school and to the north and northwest of the school building. It is unknown if the current drainage system provides any treatment for total suspended solids (TSS). The proposed drainage system will generally follow the existing drainage patterns. In addition to providing adequate stormwater conveyance for the proposed development, the drainage system will implement measures to attenuate the site runoff and match existing peak runoff values. The system will need to address water quality by removing 80% of total suspended solids, which can be accomplished with a combination of deep sump catch basins, hydrodynamic separators, and bioretention. All site drainage will be designed to meet the Massachusetts Department of Environmental Protection stormwater standards and any Town of Canton drainage requirements.

Gas

Eversource Energy is the supplier of natural gas to the Town of Canton. At this time, the location of existing gas facilities has not been confirmed. Based on the design intent for HVAC systems, appliances, and other elements, this design option will require no gas service. Should the design

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intent change to require gas service, the availability of gas service, capacity of existing service, and required demand of the proposed new school will need to be confirmed as the design progresses. All improvements will be coordinated with Eversource.

Electric

Eversource Energy is the supplier of electricity to the Town of Canton. Electricity appears to be supplied below ground. Future development options would require that the existing system be located and analyzed for capacity and the need for a new transformer should be evaluated prior to finalizing site plans. Coordination should occur with Eversource Energy regarding any service improvements.

Telecommunications

At this time, the location of existing telecommunications lines are unknown and will need to be confirmed as the design progresses. Future development options would require that the existing system be located and analyzed for applicability to current needs. Coordination should occur with the Canton Public Schools Information Technology Officer and the relevant telecommunication companies regarding any service improvements.

Proposed Infrastructure

It is anticipated that the addition / renovation Option 7a will require new water, sanitary sewer, and electrical services for the proposed additions. Existing capacities for services connecting to the public mainlines will need to be verified and possibly upgraded. It is also anticipated that new drainage infrastructure will need to be installed in order to provide adequate conveyance for the proposed roof flows and site improvements. Underground facilities

and stormwater quality treatment will also need to be provided for the proposed additions and site improvements. ♦

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7a Structural Systems Narrative

Structural Overview

The following narrative is in accordance with the 9th Edition of The Massachusetts State Building Code and incorporating IBC 2015 with Massachusetts amendments.

The proposed scheme requires renovation of the entire school with demolition of the standalone Preschool structure. The scheme requires construction of a new three story Academic Wing to the west of the existing school, an addition to the east that would house the Auditorium. The renovations and the construction of the additions will be phased.

Primary Structural Code Issues Related to the Existing Structure

Due to the extent of the proposed renovations and additions to the existing structure, the existing structure will have to be upgraded by the addition of some masonry shear walls. All of the existing masonry walls will be required to be clipped at the top to the floor and roof structure.

Proposed Structural Scheme

Due to the extent of the proposed renovations and reconfiguration of the interior spaces, additional reinforced masonry shear walls or braced frames of structural steel will be required. The proposed shear walls or braced frames would be located at the existing column lines. An allowance for 12, 20 ft. long, full height shear walls should be made in the project budget. These new shear walls will be supported on new 2 ft. - 0 in. wide x 1 ft. - 0 in. deep reinforced concrete foundations. Allow for replacement of 5 ft. - 0 in. width of existing slab-on-grade along the length of the proposed shear wall.

Due to the replacement of the entire mechanical and HVAC system, an allowance should be made for reinforcement of the

existing roof framing to support the new units. This cost should be carried as a percentage cost of the mechanical units in the budget.

All of the existing masonry walls will be required to be clipped at the top to the existing floor and roof structure with steel angle clips at 4 ft. - 0 in. on center.

Proposed Additions

Substructure

- Foundations

Based on the foundations of the existing structure, the columns of the proposed addition would bear on reinforced concrete footings and the perimeter foundation walls would bear on continuous reinforced concrete strip footings extending at least 4 ft. - 0 in. below grade. With the assumed bearing capacity of the soil of 2 tons/sf, a typical interior footing would be 9 ft. - 0 in. x 9 ft. - 0 in. x 24 in. deep and a typical exterior footing would be 8 ft. - 0 in. x 8 ft. 0 in. x 24 in. in the three story addition. The exterior footings for the columns supporting the Auditorium roof would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep. The exterior foundation walls would be 14 to 16 in. thick, reinforced cast-in-place concrete walls on 24 to 36 in. wide x 12 in. deep continuous reinforced concrete strip footings around the perimeter of the additions extending a minimum of 4 ft. - 0 in. below finished grade.

- Slabs-on-Grade

Based on the existing school construction, the lowest level of the proposed additions would be a 5 in. thick concrete slab-on-grade reinforced with welded wire fabric over a vapor barrier on 2 in. thick rigid insulation on 8 in. of compacted granular structural fill and a base course of 8 in. of compacted gravel.

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Superstructure***- Typical Floor Construction***

A 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. The weight of the structural steel is estimated to be 14 psf for the typical framing.

- Typical Roof Construction

The roof construction would be galvanized, corrugated 3 in. deep, Type 'N' metal roof deck spanning between wide flange steel beams and girders connected to the existing steel beams. The weight of the structural steel is estimated to be 14 psf.

- Vertical Framing Elements

Columns will be hollow structural steel columns. Typical columns would be HSS 8 x 8 columns and the columns at the double height spaces at the Lobby would be HSS 12 x 12.

- Lateral Load-Resisting System

The proposed Additions will be separated by way of expansion joints from the existing structure. The typical lateral load resisting system for the Additions would be ordinary concentric braced frames (as defined in the International Building Code) comprised of HSS structural steel members.

- Expansion Joints

The additions will be separated from the existing structures by way of expansion joints. ♦

FINAL EVALUATION

7a

Major Building Systems Narratives

Mechanical Systems**Design Criteria**

Interior environmental conditions will be based on Massachusetts Code 780 CMR 12 and ASHRAE *Standard 55-2010*.

Ventilation of spaces will be designed to meet or exceed the requirements of the latest edition of the Massachusetts State Building Code, the ICC International Mechanical Code and ASHRAE Standard 62-2010, *Ventilation for Acceptable Indoor Air Quality*.

HVAC equipment will be selected to comply with the 2021 edition of the International Energy Conservation Code and ASHRAE 90.1-2016.

The HVAC systems will be designed to meet the acoustical requirements of ANSI S12.60-2002. The American National Standards Institute developed this standard specification and design guideline to help eliminate acoustical problems in the design stage of a project. Essentially, the steady background noise level in core learning areas should not exceed an NC of 35.

Heating and Cooling System

Heating and cooling will be provided by all-electric heat pump systems. The systems will be comprised of Variable Refrigerant Flow (VRF), roof mounted Heat pump Energy Recover Ventilators (ERV) and heat pump roof top units (RTU).

The VRF system shall be made up of indoor evaporators, branch control boxes (BC) and roof or grade mounted air-cooled condensers. The system utilizes refrigerant as the heat/cooling medium. The refrigerant shall flow from the condensers to the branch control boxes. The branch control boxes are used as control devices directing

the liquid refrigerant or gas refrigerant to the indoor evaporators depending on the space heating or cooling needs. This type of VRF system is known as a heat-recovery system. The branch control boxes can take the heat recovered from the cooling zone and use it to warm up the room in heating mode. This way, the compressor cooling or heating requirements are reduced, which saves energy.

Five (5) heat pump ERVs shall be used to provide minimum outdoor air ventilation to all spaces utilizing a VRF system for heating and cooling. The ERV shall be comprised of supply fan, exhaust fan, desiccant wheel or fixed plate energy recover exchanger, and a DX heat pump w/ hot gas reheat. The ERV will either preheat or precool / dehumidify the incoming ventilation air before being distributed to the spaces. The ventilation air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Heat pump RTUs shall provide heating and cooling to the large air spaces such as the student commons, Media Center, Gymnasium and Cafeteria / Stage. The RTUs shall be comprised of supply fan, exhaust fan, and a DX heat pump condenser. The RTUs will either heat or cool supply air before being distributed to the spaces. The supply air shall be made up of return air and outdoor air. The supply air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Air Conditioning System

As part of the base design the following spaces will be provided with air conditioning:

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- Student Commons.
- Administration area including Principal's Office, Assistant Principal's Office, School Psychologist's Office, Counselor's Office, Adjustment Counselor's Office, Nurse's Office and conference rooms.
- Teacher's planning / work rooms.
- Multipurpose rooms.
- Sped PT / OT spaces.
- Library / Media center.
- Gymnasium.
- Classrooms.
- Music / performing arts areas.
- Cafeteria and Kitchen
- Auditorium

Summary of HVAC Systems

Classrooms, Administration, Multi-purpose Rooms, Music Rooms, and Teachers' Workrooms:

VRF system with decoupled ventilation from ERVs. The energy recovery ventilation units will supply the classrooms with tempered air via a system of ductwork. Energy recovery rooftop units are an effective way of reducing the overall energy consumption of a building. Energy recovery rooftop units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.
- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- Energy recovery wheel or fixed plate.
- DX heating / cooling coil.
- Hot gas reheat coil.
- Condensing unit.

- Pre-heat electric coil.
- Variable frequency drives.

Each classroom will be furnished with two (2) indoor evaporators. Small type spaces shall be furnished with one (1) indoor evaporator. The evaporators shall maintain space setpoint temperatures independently of the ERVs. This air circulates throughout the rooms and is drawn back up to the return grille of the evaporators. This air circulation produces even and consistent temperatures throughout the room.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the ERV units. This energy of the exhaust air leaving the classrooms is recovered at the energy recovery rooftop units.

The room thermostats control the operation of the evaporators to maintain space temperature setpoints.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space. CO₂ sensors shall modulate the position of the terminal boxes located in the ventilation supply ductwork prior to discharge in the space.

Learning Commons, Media Center, Gymnasium, Cafeteria and Auditorium:

Heat pump roof top units will supply these spaces with conditioned air. The conditioned air will be distributed via a system of ductwork and ceiling diffusers or sidewall high throw grilles. The roof top units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.

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- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- DX heating / cooling coil.
- Condensing unit.
- Hot gas reheat.
- Pre-heat electric coil.
- Variable frequency drives.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the indoor air handling units.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space.

Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

Kitchen:

The kitchen areas will be handled by the cafeteria ERV. The ERV, thru controls, will provide tempered make-up air to the kitchen in order to offset the amount of air being exhausted through the kitchen hood.

The kitchen hood exhaust system shall be provided with a Mellink kitchen hood exhaust control system, which is designed to vary the speed of the kitchen hood exhaust fan in response to the intensity of the cooking operations taking place. Essentially, the fan will operate at higher speeds when higher heat and smoke producing cooking is taking place. The Mellink system will also modulate the outside air damper and fan speed of the make-up air unit.

Controls

Griffith & Vary, Inc. recommends this facility be furnished with a Building Management System. This system will feature full Digital Direct Controls (DDC). This system will be capable of controlling the following:

- Space temperature set point.
- Start and stop of all energy recovery rooftop units and air-handling units.
- Start and stop heat pumps.
- Schedule occupied / unoccupied times for various spaces.
- Optimization of plant efficiency.
- Monitoring of mechanical equipment (fans, pumps, chiller, etc.) and indication of any alarms, which may result from equipment failures.

To save energy required to heat or cool outdoor air, carbon dioxide sensors will be employed in the gymnasium, auditorium, and Student Commons to allow a reduction of outdoor air during periods of low occupancy and motion sensors will also be utilized to allow closure of outdoor air dampers when assembly areas are unoccupied. Classrooms will also have occupancy sensors to modulate dampers in the supply air duct branches as a means of saving energy during periods when the classrooms are unoccupied.

HVAC Life-Cycle Cost Estimate

Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the HVAC systems in this particular school project. It should be noted that the following estimates are based on schematic level

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plans and system sizes and will most likely change as the project design develops more completely.

The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated with the aid of the latest version of the Hourly Analysis Program published by the Carrier Corporation, which utilized typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

Summary of Costs:

- HVAC Construction Cost: \$8,822,940
- HVAC Systems Annual Electric Energy Cost: \$43,938
- HVAC Systems Annual Gas Energy Cost: \$0
- HVAC Systems Annual Maintenance Cost: \$14,704

Electric Service

The building will be provided with two electric services via two pad mounted transformers located on the site as provided by the electric utility company. Primary service conduits in two concrete duct banks will be provided from two electric utility poles to the two transformers via electric utility company standard manholes. Secondary service feeders and conduits in two concrete duct banks will be provided from the two transformers to the two switchboards. The electric utility company meters will be mounted on the transformers.

The building fire pump electric service will be provided via one of the pad mounted transformers located on site as provided by the electric utility company. Secondary service feeders and conduits in concrete duct bank will be provided from the transformer to the fire pump.

Telephone Service

Telephone service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Cable TV Service

Cable TV service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Power Distribution

Preliminary load calculations indicate that the two switchboards will each be rated at 3000 amperes at 277/480 volt, three phase, four wire. The switchboards will be provided with surge protection devices. Switchboard distribution sections will feed 277/480 volt panelboards and major Mechanical and Plumbing equipment. Panelboards will be dedicated to specific receptacle, lighting, mechanical loads, parking / exterior lighting, and Electric Vehicle Charging Stations, with each panelboard provided with an Owner meter for monitoring. A dedicated meter will be provided for on-site generation. Dry-type transformers will be provided to distribute 120/208 volt power for branch circuit panelboards and the Kitchen panelboards. One of the kitchen panelboards will be provided with a shunt trip circuit breaker which will trip if fire suppression under hoods is initiated, shutting down all circuits under hoods. Panelboards with surge protection devices for computers will be provided, fed from computer grade K-rated transformers. Zero sequence harmonic filters connected

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to the computer panelboards will be provided to reduce neutral currents. Shops with equipment will be provided with panelboards including shunt trip main circuit breakers and mushroom type shut off switches which can be pushed to shut down power to the panelboards in event of an emergency. Other shops will be provided with dedicated panelboards.

Emergency Power System

Two diesel fuel generators with sound attenuated, weatherproof enclosures will be provided. Preliminary load calculations indicate that the generators will each be rated at 750kW at 277/480 volt, three phase, four wire. Four automatic transfer switches (ATS's) will be provided to separate emergency from optional standby loads. The two emergency ATS's and associated emergency panelboards will be located in two hour rated closets with two hour rated feeders. The two optional standby ATS's and associated panelboards will be located in normal electric rooms. Emergency and optional standby panelboards will be provided with surge protection devices as required by the National Electrical Code. The generators will supply loads as selected by the Owner, as follows:

Lighting:

- Exterior building mounted lighting
- Mechanical Room lighting
- Electrical rooms lighting
- Egress Corridors and Stairs lighting
- IDF and MDF lighting
- Main Office lighting
- Principal Office lighting
- Nurse Office lighting
- Phys Ed Office lighting
- Elevator Machine Room lighting
- Gymnasium lighting
- Custodian's Office lighting
- Custodian's Receiving and General Supply lighting
- Interior windowless spaces lighting
- Elevator lighting and pit lighting
- Kitchen lighting
- Student Dining lighting
- Toilet rooms lighting
- Make-up Air Unit lighting
- Emergency Control Center lighting

Power:

- Fire Alarm System
- Heating System including Roof Top Heat Pump Units for the Gymnasium, Student Dining, Kitchen, Emergency Control Center, and associated receptacles and controls, and Electric Unit Heaters
- Entire Main Kitchen
- Bidirectional amplifier
- Toilet Room Flush Valves and Sink Sensors
- Custodians Office, a receptacle at work station
- Custodians Receiving and General Supply, a receptacle at work station
- Phys Ed Office, a receptacle at work station
- P.O.S. at Student Dining
- Gymnasium receptacles
- Student Dining receptacles
- General Office, a receptacle at work station
- Principal Office, a receptacle at work station
- Nurse Office, a receptacle at work station

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- One Elevator power, Machine Room receptacle, pit receptacles, and dampers
 - Water Heaters and Circulation pumps
 - Generator block heater and battery charger
 - Technology equipment including:
 - Two IDF's each with Two Technology Racks, Two 120 volt, 20 amp, single phase receptacles per Rack, Four Receptacles per IDF = 24 receptacles, includes telephone system
 - MDF Technology Rack Receptacles, 8 racks each with two 120 volt, 20 amp, single phase receptacles = 16 receptacles, includes telephone system, and 1 rack with one 120 volt, 20 amp, single phase receptacle
 - VRF unit for MDF and IDF's with condensate pump receptacle
 - Security System including plywood backboard security circuits (2 IDF's and MDF), electrified door power supplies, and CCTV cameras (powered by switches in MDF and IDF's)
 - Plywood backboard clock circuits (2 IDF's and MDF)
 - Security Office receptacles
 - Fire Pump
 - Domestic Water Pump (if applicable)
- Emergency Control Center receptacles

Fire Alarm System

An addressable manual and automatic fire alarm system will be provided. The fire alarm system will call the Fire Department or a Central Station via master box and / or telephone dialer. The fire alarm control panel will be located in the Main Electric Room or an area as so directed by the Fire Department. A remote annunciator panel will be provided in the Vestibule at the Main Lobby and where required by the Fire Department. A map of the entire building will be framed and mounted adjacent

to the annunciator. Keyed boxes will be provided outside the Fire Department entries. Manual pull stations will be located within five feet (5') of each egress door and at the entrance to each Stair. Additional pull stations will be provided as required by Code. Heat detectors will be provided at the top of the elevator shaft and any other areas not provided with protection by the fire suppression system. Smoke detectors will be provided in the Corridors, in Stairs at each floor level, in the Elevator Machine Room, and at all elevator landings for early detection of smoke for recall. All devices including tamper, flow, pressure switches, and PIV, associated with the fire suppression system will be connected to the fire alarm system. Audio / visual appliances will be provided in the Corridors, Classrooms and all large areas such as the Gymnasium, Media Center, Auditorium, and Student Dining. Visual devices will be provided in Toilet and Conference rooms. Mechanical equipment shall be shut down by the fire alarm system as required by code.

Lighting:***- Interior:***

In general, highly efficient LED lighting fixtures will be provided throughout the building. Lighting levels will be in accordance with I.E.S. (Illuminating Engineering Society of North America) recommendations and the Massachusetts State Building Code energy requirements.

- Exterior:

Wall and pole mounted site lighting fixtures will be LED type.

- Lighting Controls:

Lighting fixtures will be controlled primarily by room occupancy sensors and local low voltage dimmers. Lighting fixtures within side lighted areas as defined by the 2021 IECC and ASHRAE 90.1 2016 will be

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daylight harvested via dimming drivers and photosensors. Lighting control relay panels will be provided to control exterior lighting and control interior lighting where time of day control is required.

- Devices:

General convenience receptacles will be located throughout the building as required. Receptacles provided in Toilet rooms, near sinks, the Kitchen, and outdoors will be provided with ground fault protection. Circuiting will be provided to Kitchen, Mechanical, and Plumbing equipment, and miscellaneous loads as required.

Automatic receptacle control for at least 50% of all 120 volt 15 and 20 amp receptacles in Private Offices, Conference Rooms, rooms used primarily for Printing and / or copying functions, Break Rooms, Classrooms, and individual Workstations will be provided as required by 2021 IECC and ASHRAE 90.1 2016. These receptacles will be controlled via the room lighting occupancy sensors, however receptacles and lighting will be separately metered by the Owner meters as attached to the panelboards which they are fed from.

Bi-directional Amplifier System

A bi-directional amplifier with coaxial cabling above accessible ceilings will be provided to amplify Fire Department and Police frequencies to ensure that there are no “dead” spots in the building for communication within building.

Technology Systems Back Box and Conduit System

A telephone / data / video / security / clock / speaker conduit system consisting of empty back boxes and conduit with pull strings to above accessible ceilings will be provided for technology. Cable tray will

be provided in MDF and IDF rooms for low voltage wiring.

PV System Conduit System

An empty conduit system with pull strings will be provided for the PV system consisting of photovoltaic panels and an inverter. Conduits will be provided from the switchboard to an exterior mounted disconnect switch for shutting down the PV system if needed. Conduits will also be provided from the exterior disconnect switch to the inverter and from the inverter to the roof.

Electric Vehicle Charging Stations

Electric vehicle charging stations will be provided in accordance with LEED Green Vehicles Credit.

Destratification Fans

Destratification fans will be provided in the Gymnasium.

Mass Notification System

A mass notification system will be provided including control panel, info alarm graphic annunciation and control, addressable speakers, and amber lenses.

Lightning Protection

The building will be provided with a lightning protection system made up of air terminals on the roof with downlead conductors to ground.

Plumbing Systems

The following is the Plumbing system narrative, which defines the scope of work and capacities of the Plumbing system as well as the Basis of Design.

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Codes

All work installed under Section 220000 shall comply with the MA Building Code, MA Plumbing Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Plumbing work and all items incidental thereto, including commissioning and testing.

General

The Plumbing Systems that will serve the project are cold water, hot water, tepid water, sanitary waste and vent system, Garage waste & Vent, grease waste system and storm drain system. The building will be serviced by Municipal water and Municipal sewer system. All Plumbing in the building will conform to Accessibility codes and to water conserving sections of the Plumbing Code.

Drainage System

Soil, waste, and vent piping system is provided to connect to all fixtures and equipment. System runs from 10 feet outside building and terminates with stack vents through the roof. A separate grease waste system starting with connection to an exterior grease interceptor running thru the Kitchen and Served area fixtures and terminating with a vent terminal through the roof. Point of use grease interceptors are to be provided at grease laden kitchen fixtures per the plumbing code. Storm drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building. Drainage system piping will be

service weight cast iron piping; hub and spigot with gaskets for below grade; no hub with gaskets, bands and clamps for above grade 2 in. and larger. Waste and vent piping 1-1/2 in. and smaller will be type 'L' copper.

Water System

New 6-inch domestic water service from the municipal water system will be provided for the New Building. A meter and backflow preventer will be provided. Cold water distribution main is provided. Non-freeze wall hydrants with integral back flow preventers are provided along the exterior of the building. Two (2) Non-potable water systems will be provided for science classrooms, with a dedicated electric water heater, recirculation pump, & mixing valve. A pump will re-circulate hot water from the piping system. Water temperature will be 120 deg. to serve general use fixtures. Water piping will be type 'L' copper with wrought copper sweat fittings, silver solder or press-fit system. All piping will be insulated with 1 in. thick high-density fiberglass.

Fixtures

Furnish and install all fixtures, including supports, connections, fittings, and any incidentals to make a complete installation. Fixtures shall be the manufacturer's guaranteed label trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material. Vitreous china and acid resisting enameled fixtures, including stops, supplies and traps shall be of one manufacturer by Kohler, American Standard, or TOTO. Supports shall be Zurn, Smith or Watts. All fixtures shall be white. Faucets shall be American Standard, T&S or Chicago. Fixtures shall be as scheduled on drawings.

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- Water Closet: High efficiency toilet, 1.11 gallon per flush, wall hung, vitreous china, siphon jet. Sensor operated 1.11 gallon per flush-flush valve.
- Urinal: High efficiency 0.125 gallon per flush urinal, wall hung, vitreous china. Sensor operated 0.125 gallon per flush-flush valve.
- Lavatory: Wall hung / countertop ADA lavatory with 0.5 GPM mixing faucet with sensor programmed for 10 second run-time cycle.
- Shower: Tile shower by others. Shower head with 1.5 GPM flow rate, with Shower mixing valve, and Floor drain.
- Sink: ADA stainless steel countertop sink 1.5 GPM faucet and aerator.
- Drinking Fountain / Bottle Filler: Hi-low wall mounted electric water cooler, stainless steel basin with bottle filling stations.
- Janitor Sink: 30 x 30 Terrazzo mop receptor

Drains

Drains are cast iron, caulked outlets, nickaloy strainers, and in waterproofed areas and roofs shall have galvanized iron clamping rings with 6 lb. lead flashings to bond 9 in. in all directions. Drains shall be Smith, Zurn or Watts.

Valves

Locate all valves so as to isolate all parts of the system. Shutoff valves 3 in. and smaller shall be ball valves, solder end or screwed, Apollo, Watts or Milwaukee.

Insulation

All water piping shall be insulated with snap-on fiberglass insulation Type ASJ-SSL, equal to Johns Manville Micro-Lok HP.

Cleanouts

Cleanouts shall be full size up to 4 in. threaded bronze plugs located as indicated on the drawings and / or where required in soil and waste pipes. Cleanouts for Special Waste System shall be Zurn #Z9A-C04 polypropylene cleanout plug with Zurn #ZANB-1463-VP nickel bronze scoriated floor access cover.

Access Doors

Furnish access doors for access to all concealed parts of the plumbing system that require accessibility. Coordinate types and locations with the Architect.

Water Heaters

Domestic water heating will be supplied through duplex electric resistant type water heaters. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures. Dedicated water heating will be provided for Non-Potable water, (1) electric water heater per looped system. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures.

Fire Protection

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system as well as the Basis of Design.

Codes

All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

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Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.

General

In accordance with the provisions of the Massachusetts Building Code, a school building of greater than 12,000 s.f. must be protected with an automatic sprinkler system.

Description

The building will be served by a new 8-inch fire service, Double check valve assembly, wet alarm valve complete with electric bell, and fire department connection meeting local thread standards. System will be an automatic sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2013. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain.

All areas of the building, including all finished and unfinished spaces and combustibles concealed spaces will be sprinklered. All sprinkler heads will be quick response, pendant in hung ceiling areas and upright in unfinished and spaces without ceilings.

Basis of Design

The mechanical rooms, kitchen, science classrooms, and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all other areas are considered light hazard.

Required Design Densities:

- Light Hazard Areas 0.10 GPM over 1,500 s.f.
- Ordinary Hazard Group 1 0.15 GPM over 1,500 s.f.
- Ordinary Hazard Group 2 0.20 GPM over 1,500 s.f.

Sprinkler spacing (max.):

- Light Hazard Areas: 225 s.f.
- Ordinary Hazard Areas: 130 s.f.

Piping

Sprinkler piping 2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler / standpipe piping 3 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

Fittings

Fittings on fire service piping, 2 1/2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

Joints

Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints on piping, 2 1/2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron

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and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

Double Check Valve Assembly

Double check valve assembly shall be MA State approved, U.L. / F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

Double check valve detector assembly shall be of one of the following:

- Watts Series
- Wilkins
- Conbraco Series

Technology Systems

The design of the technology infrastructure for a renovated Galvin Middle School will include the systems and components listed below, which are organized according to CSI Specification sections.

271000 Structured Cabling

The new network design will support up to 10GHz over Category 6A to the desktop.

Twelve pairs of single mode OS2 fiber and twelve pairs of multi-mode OM4 fiber will be provided from the MDF to each IDF in the building. All fiber shall be terminated with duplex LC connectors. Two APC / Dell server cabinets with mounting hardware shall be provided in the MDF for Owner servers. Two post racks shall be provided for network switches in the MDF and IDFs.

Cat 6A cabling will be provided for data, voice, security video (CCTV), and wireless access points (four data drops at

each wireless access point location above classroom ceiling spaces). Wireless access point outlet placements are intended to provide the capability for complete wireless coverage throughout the school.

Administrative locations shall be provided two data ports and one voice port per desk location.

Each teacher location will be wired with two data ports and a voice port if a voice port is not provided on the wall of the classroom. Two data ports shall be provided opposite the teaching location in each room. Category 6A cabling will be provided for the owner provided phone system (support for Voice over IP). Classrooms will also have three data ports located behind each interactive display (see 274000 below for display).

The science / technology labs will be cabled as a typical classroom, with wireless access for student use. Four ceiling data ports for a wireless access point shall be provided. In addition, the equipment specified below in 274000 for a typical classroom shall be included in each lab.

272100 Network Electronics

Network electronics (switches) shall be programmed and installed by the owner. The Owner shall furnish, install and program all switches. Reuse of existing switches shall be determined by the Owner.

272133 Wireless Access Points

Wireless access points shall be reused, with supplemental access points furnished and installed by the owner.

273000 Voice Communications

The phone system, handsets, installation and programming shall be provided and installed by the Owner. The building shall

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be cabled to support a voice over IP phone system using Cat 6A. Reuse of any phone system equipment shall be determined by the Owner.

274000 Audio-Video Technology

Classrooms and Science Labs: video and audio presentation equipment (wall mounted 75" 4k interactive LCD / LED display with wireless option, voice lift system with microphones and amplifier, and up to four ceiling speakers) will be permanently installed in classrooms, labs and designated rooms. A presentation camera (minimum 5MP), shall be provided in each classroom / Lab. The PC / laptop in each classroom shall be provided by the Owner.

Any audio and video equipment for the gym renovation shall be provided by the Theater Section

Any audio and video equipment in the student dining area shall be provided by the Theater Section.

One 86" 4k display for local presentation of material shall be provided.

A portable sound system shall be provided.

Various office spaces (principal, vice principals, SROs, custodial) may have displays, ranging from 50" to 70" with local HDMI input for presentation of content.

Designated hallways may receive digital signage displays. Any digital signage devices and software shall be furnished and installed by the owner.

Any Band and Chorus audio and recording equipment shall be provided by the Theater Section.

275000 PA System

A new master clock shall be provided to address the time drift of the current clock system. The PA system will be replaced by a network based system to include a call button with plastic guard cover in each classroom opposite the phone location for emergency notification purposes. The call switch shall allow for a normal page and an emergency page. If the classroom speakers do not allow for two way communication to the front office, they will be replaced.

277000 Video Communications

Digital signage devices and software for the displays mentioned above and software shall be provided and installed by the Owner. An IPTV system shall not be provided.

280000 Electronic Safety & Security

An access control system shall be provided. Card readers shall be located as designated on the drawings. The main entry and library shall be equipped with a new video entry system. All door contacts shall be replaced with double pole double throw contacts, and wired to both the access control system and the intrusion detection system. With all door contacts being monitored by the access control system, a higher level of situational awareness is provided to the staff regarding entrances and exits of the building while the building is occupied. Traditionally, the intrusion detection system only monitored and reported door alarms during unoccupied times when the system is armed. Leveraging the access control system to also monitor the door contacts allows the staff to receive door alarms during occupied times when the intrusion detection system is typically disarmed. An enrollment station with dual sided laminating color badge printer,

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card reader, camera, tripod, back drop and PC with monitor shall be provided. 500 printable proximity cards shall be provided.

Exterior doors and entry vestibule doors shall be replaced. New door hardware shall not have mechanical dogging. New door hardware shall have built in request to exit function and latch monitoring, both tied into the access control system, for monitoring door latches during occupied times of the building.

The intrusion detection system and related components shall be expanded to include the addition of motion sensors in every first floor room with a window, near stairwells on all floors, inside at all door vestibules and outside the elevator.

An indoor / outdoor Video Surveillance System (IP based) will be provided. Coverage shall include entrances, hallways, stairwells, large group areas, administration and the building perimeter. Other areas, such as the gym and café shall be included. Bathroom entrances shall be visible, and pixels per foot shall be designed to 60ppf. All cameras shall be mounted at 8' to 9' above finished floor wherever possible. The video entry system camera shall be included as a camera recording to the Network Video Recorder. All interior and exterior cameras (but not the video entry cameras) will have IR for better low light visibility. Network Video Recorders will be provided for recording (for a minimum of 30 days) these cameras.

260000 Mass Notification System

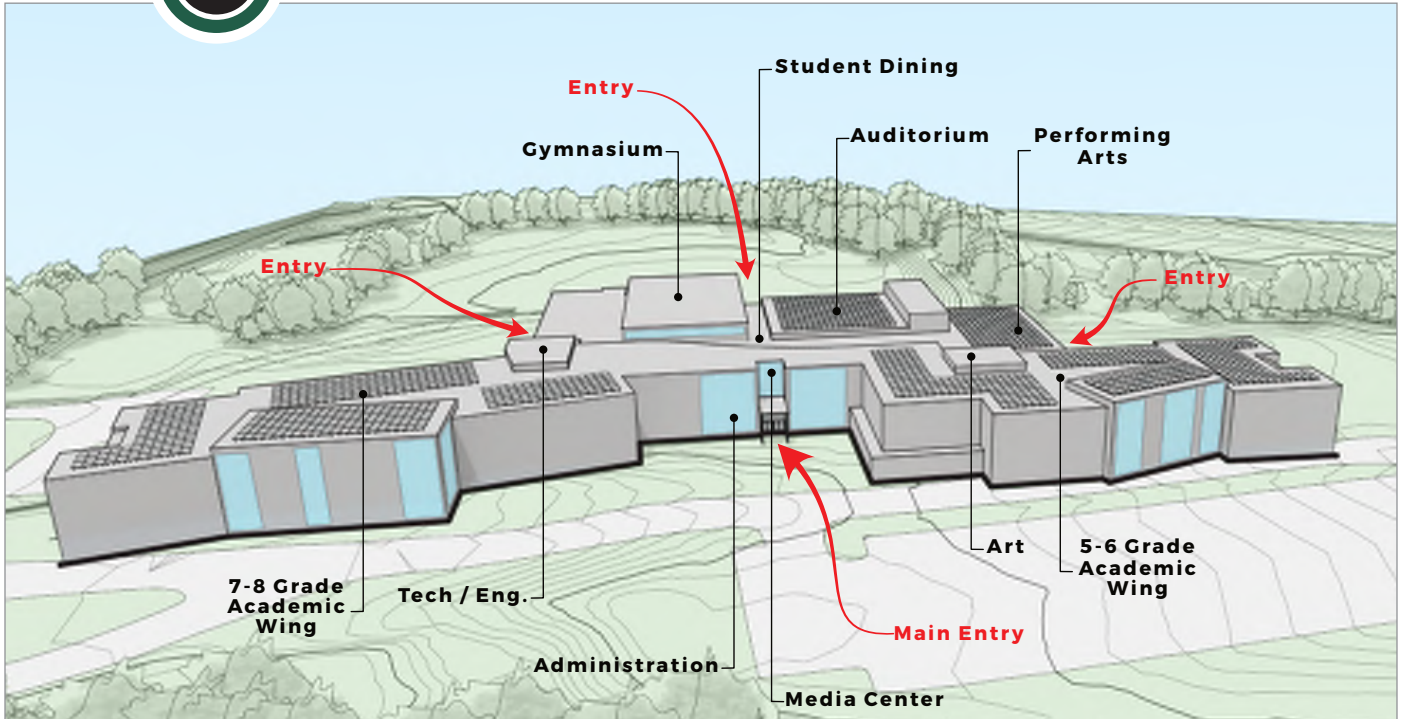
A Mass Notification System, to include handheld microphone and amber strobes to indicate a security threat / event, shall be furnished and installed by the electrical subcontractor.

A Bi-Directional radio antenna system shall be furnished and installed by the electrical subcontractor for police and fire radio use within the building. ♦

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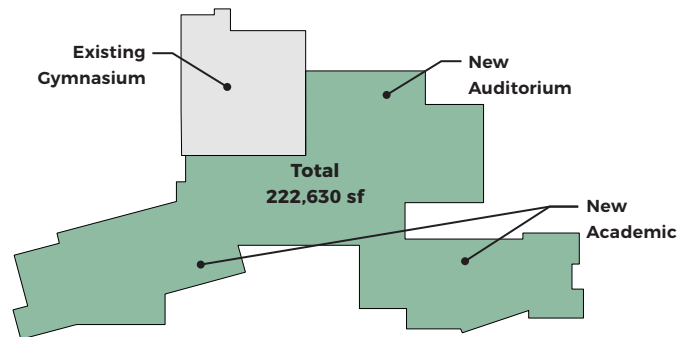


New Academic Building / Gymnasium Renovation



Option 7b is an add / reno option that demolishes most of the existing middle school building and builds a new administration and academic wing, and auditorium. Only the existing gymnasium and surrounding spaces are maintained and renovated.

This option successfully addresses many of the shortcomings identified in the 7a add / reno scheme. Because the academic wings are new construction, they provide a clean slate to achieve the desired programs, adjacencies, and desired spatial qualities such as ample natural light, an efficient layout, innovative media spaces, and functional, activated circulation that supports student collaboration. Importantly, this option provides the desired grade-level separation in its layout.



Option 7b: Summary

GRADE LEVELS	▶ 5-8
ENROLLMENT	▶ 1020 students
AUDITORIUM	▶ YES
FLOORS	▶ 3
ADD / NEW SF	▶ 186,030 SF
RENOVATED SF	▶ 36,600 SF
TOTAL SF	▶ 222,630 SF
EST. DURATION	▶ ± 64 Months

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Site Plan

The site organization for Option 7b provides increased recreational fields, a new playground to support the 5th grade recess, and multiple new outdoor learning areas. The current full size and U12 recreation fields are maintained, and space for an additional U10 field is provided. Sight lines to the rear fields are limited by the location of the existing building. The two existing basketball courts are replicated in the new site layout.

To improve vehicular circulation, the existing staff parking lot is separated from parent drop off and visitor parking. Buses and parents use separate vehicular entrances to the site. Additional parking would be provided behind the building for those utilizing the rear fields. Overall site work would also enhance bicycle and pedestrian safety and accessibility, improve drainage, reduce site runoff, and include attractive rain gardens, bioretention areas, and other stormwater management features.

Outdoor learning spaces are located in several areas adjacent to both academic wings. An outdoor amphitheater is provided adjacent to the auditorium and music classrooms.

Existing Site Features

The proposed option is located at the existing Middle School site at 55 Pecunit Street, Canton Massachusetts. The site design is integrated into the existing site including buildings and features such as Lieutenant Peter M Hansen School, athletic spaces and all vehicular and pedestrian connections. Environmental constraints are considered in the design including the existing wooded areas, floodplain, wetlands and their respective setbacks in order to sustain the natural appearance and

7b

Conceptual Site Plan

SCALE 1" = approx. 175'-0"

function. The existing topography forms multiple levels across the site. Steeper slopes work down from Pecunit Street to a gradually graded open space towards the north.









Building Footprint

The new footprint will include an addition and renovation onto the existing Middle School. The main entrance is located at the south side of the school, with a secondary entrance on the northwest side. The addition expands to the west and east, while the existing gym remains. Additional egress allows easy access to surrounding outdoor spaces. The school's location allows for the preservation of existing vegetation and natural features, as well as existing infrastructure.

Site Access & Circulation

The existing vehicular entrances located off Pecunit are utilized in this option for Buses and Car drop off as well as access for staff and visitors. Pedestrian access plays a major role for the site's connectivity. New walkways will meet existing walkways

Legend

-  Main Entry
-  Bus Drop-off
-  Parent Drop-off
-  Walking Path to neighborhood
-  Emergency Access
-  Outline of Existing
- 
-  0 50 100 200



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leading from Pecunit street, to the school. Connections to the Elementary school, open space, activity areas and surrounding neighborhoods are also provided. Each access point leads to a parking lot and drop off plaza location at the building entrance. The drop off areas are interchangeable between bus and car to work with changing traffic patterns. A separate access matches an existing road layout and leads to the lower open field space. The building service loading dock is located in the rear of the building at its existing location and includes an existing access service road layout. The southern access drive can accommodate approximately 50 cars or 19 buses. The northern access drive can accommodate up to approximately 40 cars or 15 buses. Drop off areas are designed for two-way traffic. There are three total parking lots on this site including one located at the existing main parking lot, one on the southwest side at the buildings main entrance, and one at the secondary building entrance. Total parking is approximately 177 spaces, which exceeds the existing amount of parking spaces.

Open Space

The site layout is designed to provide ample open space for recreation and athletics used by the school and town. Currently there are two main open spaces areas (Upper and lower Galvin). This design sustains a similar approach. The layout can be flexible, designed to accommodate multi-use fields ranging in size from 330'x195' to 141'x90' depending on the age group and sport. Rain gardens and bioretention are also utilized to implement sustainable design where applicable.

Activity Spaces

Activity spaces are designed into the site in the form of sport courts, playgrounds, and gathering spaces that can be utilized for outdoor classrooms, Art, or music. These spaces may include permanent and flexible seating along with additional associated amenities. ♦



Existing outdoor seating areas will be replaced with significantly expanded and enhanced seating and outdoor learning areas in the new site plan.

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7b**Conceptual Floor Plans****Program Organization**

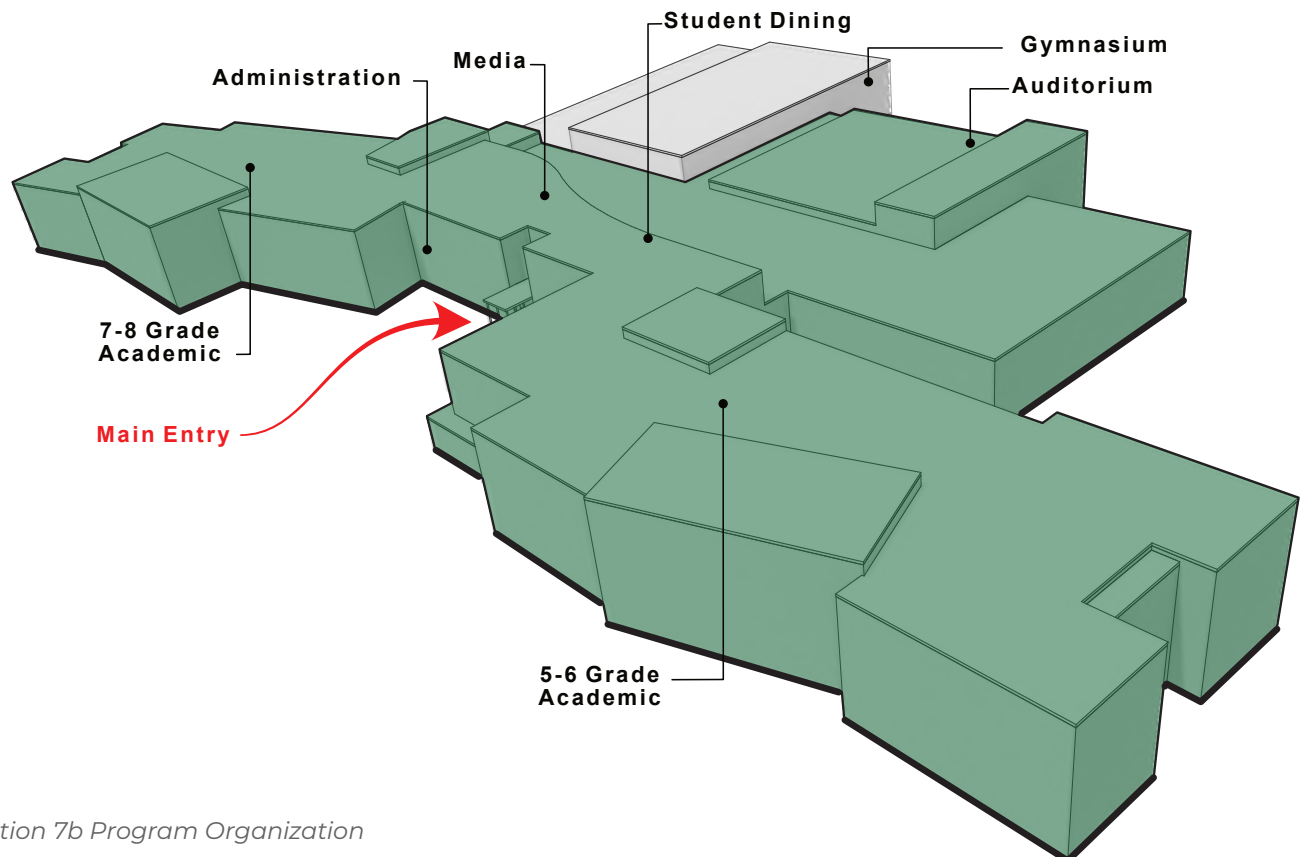
As part of the renovation of the existing gymnasium, this option relocates the locker rooms onto the same level as the gym, creating needed space for the kitchen below. Adaptive PE is placed on the same level as the gym in the existing gymnasium building. While this is an improvement over the placement of adaptive PE in Option 7a, it still suffers from being a single-story height space that typically hosts activities and equipment that require a greater height. The SPED life skills program is also placed in the existing gymnasium building to achieve the desired proximity to administration and the nurse's suite.

The existing gym is on an upper floor which poses some challenges for after hours

use. It is not as straightforward to access or secure as in the new construction options, which place the gym and auditorium on the same level with strategic access for separation of "public" after hours areas with "private" academic areas of the school.

The new addition includes the student dining commons at the heart of the school. It is a double height space with many clerestories as well as outdoor connections and views at each end. This large, welcoming, flexible space is grouped with the gym, performance technology studio, and auditorium to create a cluster of "public" spaces in the building.

The auditorium is located with the stage adjacent to the band, orchestra, and chorus classrooms.

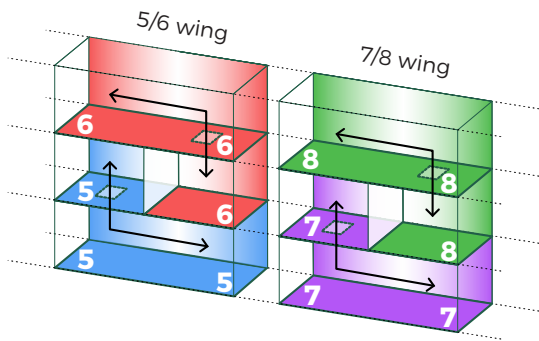


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Two academic wings extend from the student commons, bracketing administration and the nurse's suite on the first floor, guidance, media center and media commons spaces on the second floor, and additional media commons spaces on the third floor.

To understand the teaming layout, it is important to note that grades 6-8 consist of three teams, while grade 5 consists of six smaller teams, because 5th grade students utilize a co-teaching model with two general academic classrooms to cover multiple subjects instead of moving to a separate classroom for each subject, as 6th-8th graders do. Spatially, the six 5th grade teams comprise a similar building area to three 6th grade teams.

Option 7b groups teams in a hybrid stacked grade level team layout. One academic wing hosts grades 5 and 6, with four 5th grade teams sharing the first floor and two 5th grade teams and



Option 7b Grade Level Organization

one 6th grade team sharing the second floor. Two 6th grade teams share the third floor. A similar layout is repeated in the other academic wing for grades 7 and 8: two 7th grade teams on the first floor, one of each team for grades 7 and 8 on the second floor, and two 8th grade teams on the third floor. Notably, there are open stairs placed to vertically connect the stacked teams, creating a dynamic, linear vertical flow through the academic wing

and strengthening connections between teams. Every team space includes flexible student and teacher collaboration spaces, a media presentation space, and small group rooms for project team collaboration with excellent sight lines from classrooms to collaboration spaces. On all 3 levels, each wing greets students with a special program; technology engineering classrooms for the 5/6 wing, and art classrooms for the 7/8 wing. This placement celebrates and showcases these programs while supporting the desired grade level separation, because students from either wing can access these programs without entering another academic wing.

Some of the details of the form and layout of the new academic wings in this option are deliberately different from Option 9e in order to maximize the exploration of possibilities to carry forward for discussion into the schematic design phase. This option has a stronger connection of circulation and collaboration spaces between the two teams on each level, while Option 9e has a more defined separation of the two teams' collaboration zones. Further discussions with the district during schematic design will explore the pros and cons of these differences.

The main shortcomings of this option for students are the limitations to program spaces that are placed in the existing gymnasium area, such as the single-story portion of the adaptive PE program and the poor connection of the gymnasium to the outdoor fields because it is on the second floor. However, one of the biggest disadvantages of this option occurs outside the building: its central placement on the site, necessary to locate the new construction adjacent to the existing gym, does not use the site as efficiently as the new construction options. The building location isolates the lower field, and does not provide the opportunity to modify the site for a true total campus feel. ♦

7b FLOOR 1



PROGRAM LEGEND	
	Core Academic Spaces
	Special Education
	Art & Music
	Vocations & Technology
	Media Center
	Health & Physical Education
	Medical
	Administration & Guidance
	Dining & Food Service
	Circulation
	Custodial / Service
	Toilet Rooms
	Storage

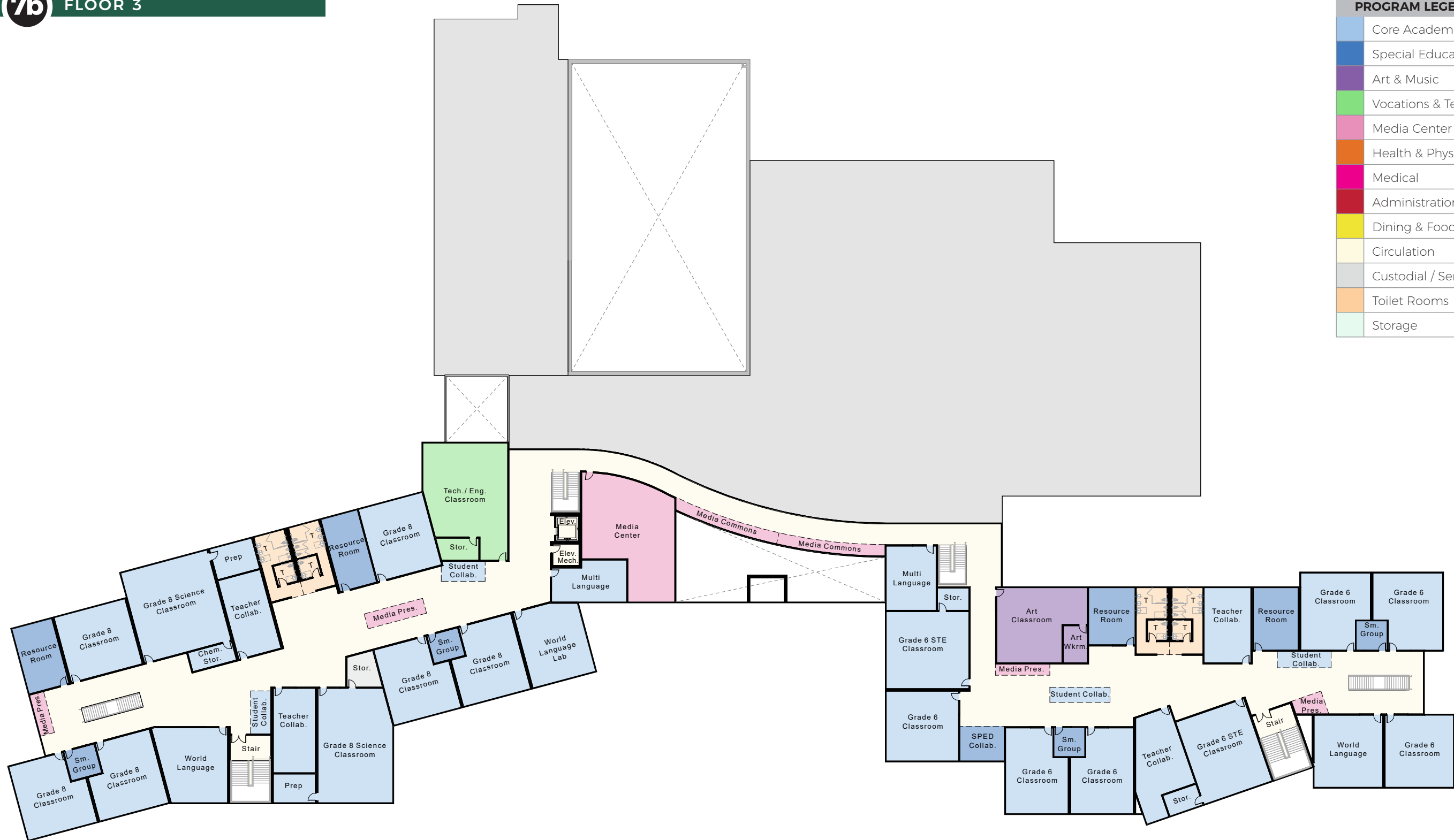
7b FLOOR 2



PROGRAM LEGEND	
	Core Academic Spaces
	Special Education
	Art & Music
	Vocations & Technology
	Media Center
	Health & Physical Education
	Medical
	Administration & Guidance
	Dining & Food Service
	Circulation
	Custodial / Service
	Toilet Rooms
	Storage

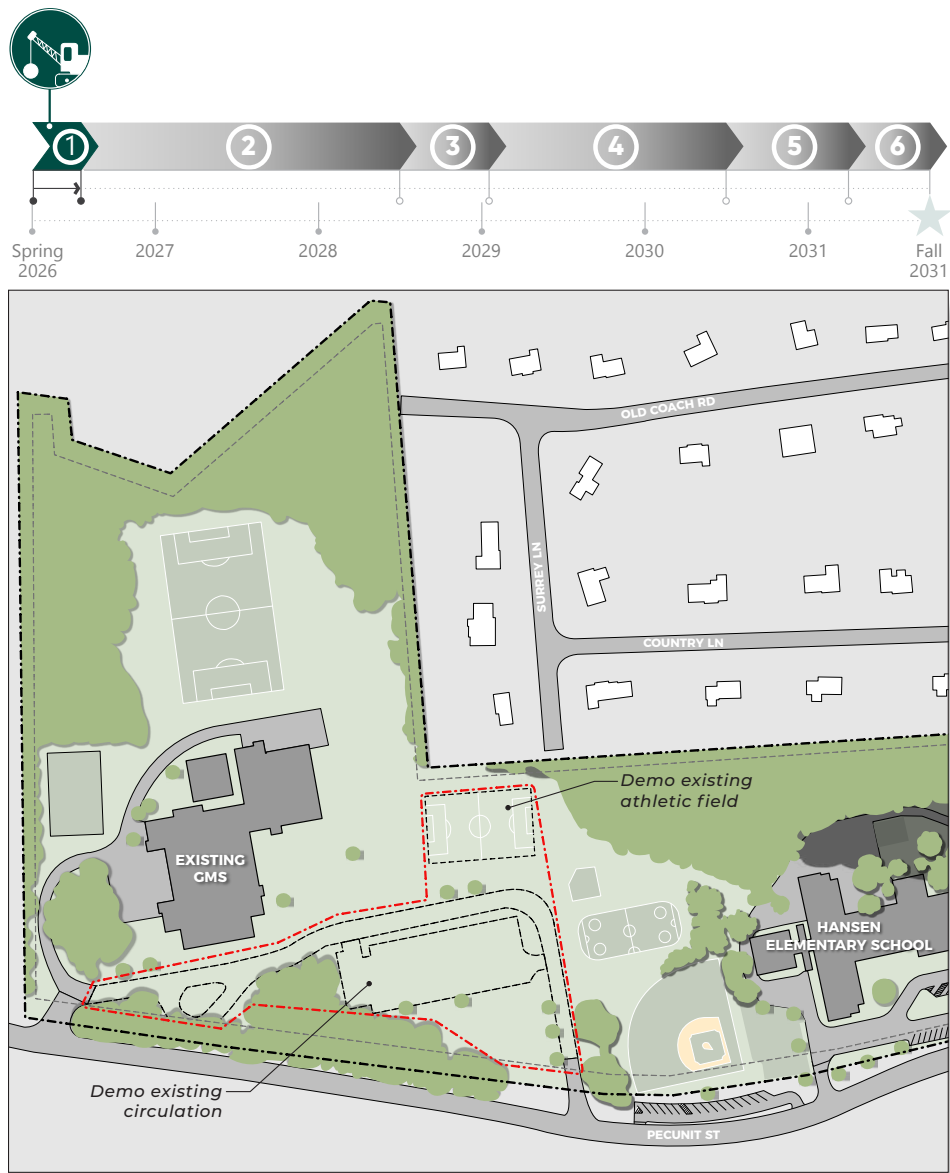
7b FLOOR 3

PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Circulation
■	Custodial / Service
■	Toilet Rooms
■	Storage

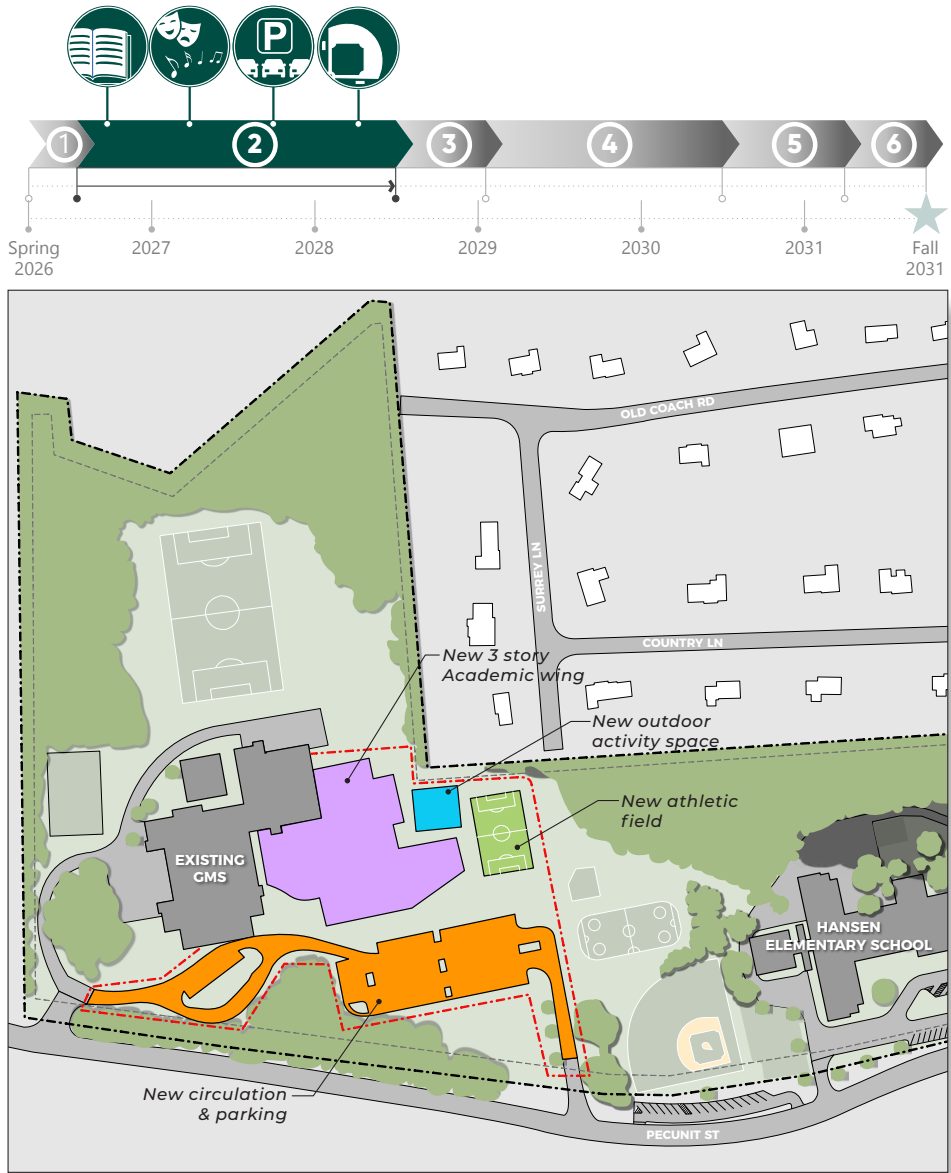


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Conceptual Phasing & Construction Impact **7b**



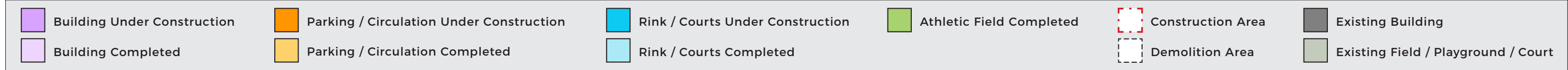
Phase 1
Spring 2026: Contractor mobilization; abate and demolish parking / circulation, small athletic field and associated equipment.
 Prepare site for new construction.



Phase 2
June 2026: Begin construction of new parking / circulation, 3 story academic wing auditorium, outdoor activity space, and athletic field.
August 2026: Substantial completion of new parking / circulation, outdoor activity space, and athletic space.
June 2028: Substantial completion of 3 story school.
August 2028: Occupancy of new building for 2 grade levels.

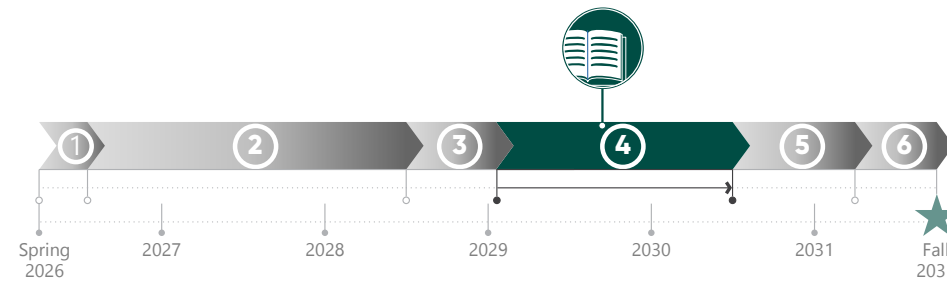


Phase 3
July 2028: Demolition of portion of existing Galvin Middle School academic wing, preschool, outdoor activity space and associated parking & circulation.
 Temporary shore existing building to remain occupied - cut, cap, and make safe all utilities and install temporary exterior cladding.

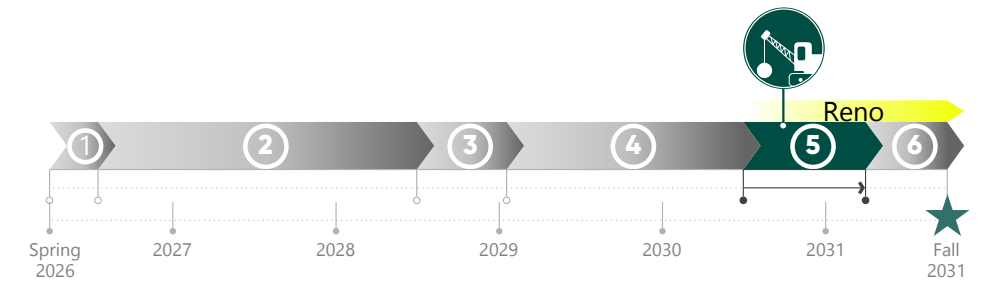


FINAL EVALUATION

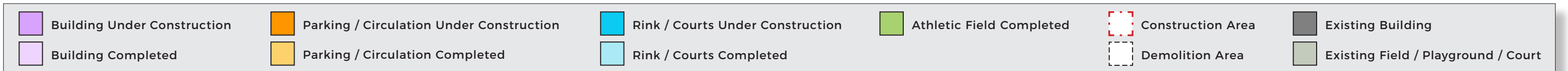
7b Conceptual Phasing & Construction Impact



Phase 4
February 2029: Begin construction new 3 story academic wing.
June 2030: Substantial completion new academic wing.
August 2030: Occupancy of new building for 2 grade levels.

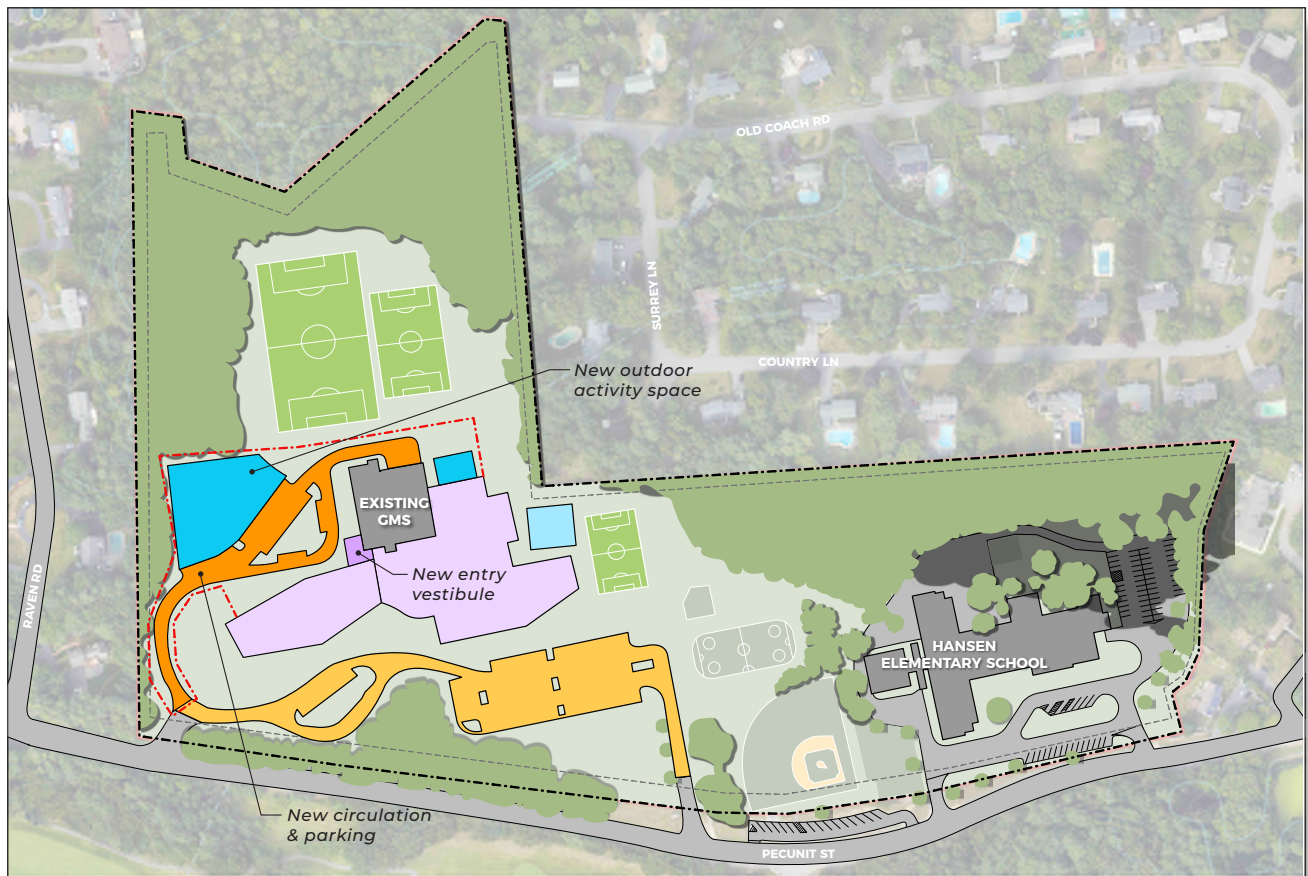
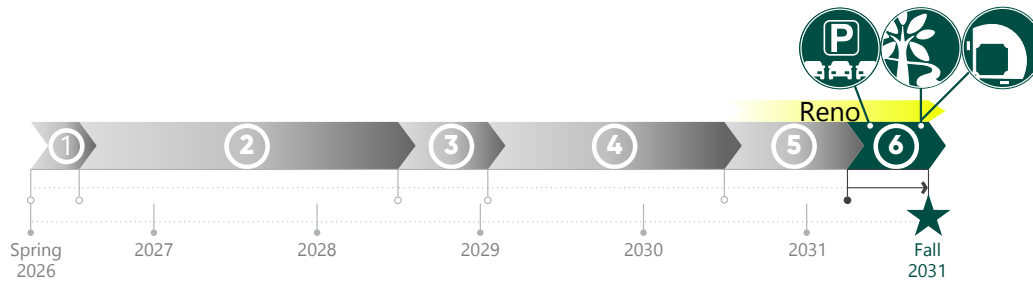


Phase 5
June 2030: Demolish existing academic wing. Demolish existing athletic field and begin construction on new athletic fields. Begin renovation of existing gymnasium.
June 2031: Prepare site for construction. Completion of new athletic field.



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Conceptual Phasing & Construction Impact **7b**



Phase 6

June 2031: Construct new entry vestibule, associated parking / circulation, and outdoor activity space. Begin work on final site improvements.

Fall 2031: Complete site work and renovation of gymnasium.

TOTAL ESTIMATED DURATION:
±64 months

CONSTR	DONE	New Building	CONSTR	DONE	New Rink / Courts		Existing Building
CONSTR	DONE	New Parking / Circulation			New Athletic Field		Construction Area

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7b Site & Utilities Analysis

Utilities

The existing conditions utility information was found using aerial imagery and record documents that were available. Future development options would require that the existing utilities to be located and verified on site and included in the design plans.

Sewer

According to readily available Town sewer maps, sewer pipes enter the site from the west, collecting sewage from the schools and neighborhoods to the east and west of the site and continues to flow north through the wetlands to the north. There is no sewer in Pecunit Street. Pipe sizes transition between 8", 10" and 18" mains as the pipes travel from south to north. Preferably, pipe sizes do not reduce and then increase in size further downstream again. DPW should be consulted to determine if there are any known sewer issues. The Town does not have a sewer treatment facility and is on the MWRA system. In this option, the existing sanitary infrastructure may need to be rerouted to avoid the new school building.

Water

Readily available water maps are not available. The Site Plan of Land for the school property does show existing water service within the service access road north of the existing building. MassDOT Construction Documents for the Middle School show an existing water line within Pecunit Street along the southern access driveway to the school, however there is no indication this is a main. The Town's Master Plan indicates that the Town has seven groundwater wells, two booster pump stations, five water storage facilities, and two water treatment facilities. The nearest well

is located on Charles Drive approximately 0.25-miles from the site. Based on hydrant locations it does not appear that water mains are located in Pecunit Street. In 2018, the last year listed in the Master Plan, Canton received 62% of its water from the MWRA with the remainder supplied from the Town wells.

Drainage

Record documents and survey show approximately ten (10) catch basins throughout the developed portion of the Galvin Middle School site. The closed drainage system appears to discharge into the onsite wetland areas delineated in front of the school and to the north and northwest of the school building. It is unknown if the current drainage system provides any treatment for total suspended solids (TSS). The proposed drainage system will generally follow the existing drainage patterns. In addition to providing adequate stormwater conveyance for the proposed development, the drainage system will implement measures to attenuate the site runoff and match existing peak runoff values. The system will need to address water quality by removing 80% of total suspended solids, which can be accomplished with a combination of deep sump catch basins, hydrodynamic separators, and bioretention. All site drainage will be designed to meet the Massachusetts Department of Environmental Protection stormwater standards and any Town of Canton drainage requirements.

Gas

Eversource Energy is the supplier of natural gas to the Town of Canton. At this time, the location of existing gas facilities has not been confirmed. Based on the design intent for HVAC systems, appliances, and other elements, this design option will require no gas service. Should the design

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intent change to require gas service, the availability of gas service, capacity of existing service, and required demand of the proposed new school will need to be confirmed as the design progresses. All improvements will be coordinated with Eversource.

Electric

Eversource Energy is the supplier of electricity to the Town of Canton. Electricity appears to be supplied below ground. Future development options would require that the existing system be located and analyzed for capacity and the need for a new transformer should be evaluated prior to finalizing site plans. Coordination should occur with Eversource Energy regarding any service improvements.

Telecommunications

At this time, the location of existing telecommunications lines are unknown and will need to be confirmed as the design progresses. Future development options would require that the existing system be located and analyzed for applicability to current needs. Coordination should occur with the Canton Public Schools Information Technology Officer and the relevant telecommunication companies regarding any service improvements.

Proposed Infrastructure

It is anticipated that the addition / renovation Option 7b will require new water, sanitary sewer, and electrical services for the proposed addition. Existing capacities for services connecting to the public mainlines will need to be verified and possibly upgraded. It is also anticipated that new drainage infrastructure will need to be installed in order to provide adequate conveyance for the proposed roof flows and site improvements. Underground facilities

and stormwater quality treatment will also need to be provided for the proposed addition and site improvements. ♦

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7b Structural Systems Narrative**Structural Overview**

The following narrative is in accordance with the 9th Edition of The Massachusetts State Building Code and incorporating IBC 2015 with Massachusetts amendments.

The proposed scheme requires phased demolition of majority of the school except for the existing Gymnasium and the ancillary spaces and renovation of the existing Gymnasium. The scheme requires construction of a new three Addition to the east of the existing school that would house Grades 5 and 6 Academic programs, Student Dining and the Auditorium in the first phase, followed by demolition of the existing Academic Wing and the standalone Preschool structure in the next phase and finally the construction of a three story Academic wing to the west that would house Grades 7 and 8 Academic programs. The renovations and the construction of the additions will be phased construction.

Primary Structural Code Issues Related To The Existing Structure

Due to the extent of the proposed renovations and additions to the existing structure, the existing structure will have to be upgraded by the addition of some masonry shear walls. All of the existing masonry walls will be required to be clipped at the top to the floor and roof structure.

Proposed Structural Scheme

Due to the extent of the proposed renovations and reconfiguration of the interior spaces, additional reinforced masonry shear walls or braced frames of structural steel will be required. The proposed shear walls or braced frames would be located at the existing column lines. An allowance for 6, 20 ft. long, full height shear walls should be made in the project budget. These new shear walls will

be supported on new 2 ft. - 0 in. wide x 1 ft. - 0 in. deep reinforced concrete foundations. Allow for replacement of 5 ft. - 0 in. width of existing slab-on-grade along the length of the proposed shear wall.

Due to the replacement of the entire mechanical and HVAC system, an allowance should be made for reinforcement of the existing roof framing to support the new units. This cost should be carried as a percentage cost of the mechanical units in the budget.

All of the existing masonry walls will be required to be clipped at the top to the existing floor and roof structure with steel angle clips at 4 ft. - 0 in. on center.

Proposed Additions**Substructure*****- Foundations***

Based on the foundations of the existing structure, the columns of the proposed addition would bear on reinforced concrete footings and the perimeter foundation walls would bear on continuous reinforced concrete strip footings extending at least 4 ft. - 0 in. below grade. With the assumed bearing capacity of the soil of 2 tons/sf, a typical interior footing would be 9 ft. - 0 in. x 9 ft. - 0 in. x 24 in. deep and a typical exterior footing would be 8 ft. - 0 in. x 8 ft. 0 in. x 24 in. in the three story addition. The exterior footings for the columns supporting the Auditorium roof would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep. The exterior foundation walls would be 14 to 16 in. thick, reinforced cast-in-place concrete walls on 24 to 36 in. wide x 12 in. deep continuous reinforced concrete strip footings around the perimeter of the additions extending a minimum of 4 ft. - 0 in. below finished grade.

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- Slabs-on-Grade

Based on the existing school construction, the lowest level of the proposed additions would be a 5 in. thick concrete slab-on-grade reinforced with welded wire fabric over a vapor barrier on 2 in. thick rigid insulation on 8 in. of compacted granular structural fill and a base course of 8 in. of compacted gravel.

Superstructure**- Typical Floor Construction**

A 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. The weight of the structural steel is estimated to be 14 psf for the typical framing.

- Typical Roof Construction

The roof construction would be galvanized, corrugated 3 in. deep, Type 'N' metal roof deck spanning between wide flange steel beams and girders connected to the existing steel beams. The weight of the structural steel is estimated to be 14 psf.

- Vertical Framing Elements

Columns will be hollow structural steel columns. Typical columns would be HSS 8 x 8 columns and the columns at the double height spaces at the Lobby would be HSS 12 x 12.

- Lateral Load-Resisting System

The proposed Additions will be separated by way of expansion joints from the existing structure. The typical lateral load resisting system for the Additions would be ordinary concentric braced frames (as defined in the International Building Code) comprised of HSS structural steel members.

- Expansion Joints

The additions will be separated from the existing structures by way of expansion joints. ♦

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Major Building Systems Narratives

Mechanical Systems**Design Criteria**

Interior environmental conditions will be based on Massachusetts Code 780 CMR 12 and ASHRAE *Standard 55-2010*.

Ventilation of spaces will be designed to meet or exceed the requirements of the latest edition of the Massachusetts State Building Code, the ICC International Mechanical Code and ASHRAE Standard 62-2010, *Ventilation for Acceptable Indoor Air Quality*.

HVAC equipment will be selected to comply with the 2021 edition of the International Energy Conservation Code and ASHRAE 90.1-2016.

The HVAC systems will be designed to meet the acoustical requirements of ANSI S12.60-2002. The American National Standards Institute developed this standard specification and design guideline to help eliminate acoustical problems in the design stage of a project. Essentially, the steady background noise level in core learning areas should not exceed an NC of 35.

Heating and Cooling System

Heating and cooling will be provided by all-electric heat pump systems. The systems will be comprised of Variable Refrigerant Flow (VRF), roof mounted Heat pump Energy Recover Ventilators (ERV) and heat pump roof top units (RTU).

The VRF system shall be made up of indoor evaporators, branch control boxes (BC) and roof or grade mounted air-cooled condensers. The system utilizes refrigerant as the heat/cooling medium. The refrigerant shall flow from the condensers to the branch control boxes. The branch control boxes are used as control devices directing the liquid refrigerant or gas refrigerant to

the indoor evaporators depending on the space heating or cooling needs. This type of VRF system is known as a heat-recovery system. The branch control boxes can take the heat recovered from the cooling zone and use it to warm up the room in heating mode. This way, the compressor cooling or heating requirements are reduced, which saves energy.

Five (5) heat pump ERVs shall be used to provide minimum outdoor air ventilation to all spaces utilizing a VRF system for heating and cooling. The ERV shall be comprised of supply fan, exhaust fan, desiccant wheel or fixed plate energy recover exchanger, and a DX heat pump w/ hot gas reheat. The ERV will either preheat or precool / dehumidify the incoming ventilation air before being distributed to the spaces. The ventilation air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Heat pump RTUs shall provide heating and cooling to the large air spaces such as the student commons, Media Center, Gymnasium and Cafeteria / Stage. The RTUs shall be comprised of supply fan, exhaust fan, and a DX heat pump condenser. The RTUs will either heat or cool supply air before being distributed to the spaces. The supply air shall be made up of return air and outdoor air. The supply air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Air Conditioning System

As part of the base design the following spaces will be provided with air conditioning:

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- Student Commons.
- Administration area including Principal's Office, Assistant Principal's Office, School Psychologist's Office, Counselor's Office, Adjustment Counselor's Office, Nurse's Office and conference rooms.
- Teacher's planning / work rooms.
- Multipurpose rooms.
- Sped PT / OT spaces.
- Library / Media center.
- Gymnasium.
- Classrooms.
- Music / performing arts areas.
- Cafeteria and Kitchen
- Auditorium

Summary of HVAC Systems

Classrooms, Administration, Multi-purpose Rooms, Music Rooms, and Teachers' Workrooms:

VRF system with decoupled ventilation from ERVs. The energy recovery ventilation units will supply the classrooms with tempered air via a system of ductwork. Energy recovery rooftop units are an effective way of reducing the overall energy consumption of a building. Energy recovery rooftop units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.
- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- Energy recovery wheel or fixed plate.
- DX heating / cooling coil.
- Hot gas reheat coil.
- Condensing unit.

- Pre-heat electric coil.
- Variable frequency drives.

Each classroom will be furnished with two (2) indoor evaporators. Small type spaces shall be furnished with one (1) indoor evaporator. The evaporators shall maintain space setpoint temperatures independently of the ERVs. This air circulates throughout the rooms and is drawn back up to the return grille of the evaporators. This air circulation produces even and consistent temperatures throughout the room.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the ERV units. This energy of the exhaust air leaving the classrooms is recovered at the energy recovery rooftop units.

The room thermostats control the operation of the evaporators to maintain space temperature setpoints.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space. CO₂ sensors shall modulate the position of the terminal boxes located in the ventilation supply ductwork prior to discharge in the space.

Learning Commons, Media Center, Gymnasium, Cafeteria and Auditorium:

Heat pump roof top units will supply these spaces with conditioned air. The conditioned air will be distributed via a system of ductwork and ceiling diffusers or sidewall high throw grilles. The roof top units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.

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- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- DX heating / cooling coil.
- Condensing unit.
- Hot gas reheat.
- Pre-heat electric coil.
- Variable frequency drives.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the indoor air handling units.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space.

Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

Kitchen:

The kitchen areas will be handled by the cafeteria ERV, The ERV, thru controls, will provide tempered make-up air to the kitchen in order to offset the amount of air being exhausted through the kitchen hood.

The kitchen hood exhaust system shall be provided with a Mellink kitchen hood exhaust control system, which is designed to vary the speed of the kitchen hood exhaust fan in response to the intensity of the cooking operations taking place. Essentially, the fan will operate at higher speeds when higher heat and smoke producing cooking is taking place. The Mellink system will also modulate the outside air damper and fan speed of the make-up air unit.

Controls

Griffith & Vary, Inc. recommends this facility be furnished with a Building Management System. This system will feature full Digital Direct Controls (DDC). This system will be capable of controlling the following:

- Space temperature set point.
- Start and stop of all energy recovery rooftop units and air-handling units.
- Start and stop heat pumps.
- Schedule occupied / unoccupied times for various spaces.
- Optimization of plant efficiency.
- Monitoring of mechanical equipment (fans, pumps, chiller, etc.) and indication of any alarms, which may result from equipment failures.

To save energy required to heat or cool outdoor air, carbon dioxide sensors will be employed in the gymnasium, auditorium, and Student Commons to allow a reduction of outdoor air during periods of low occupancy and motion sensors will also be utilized to allow closure of outdoor air dampers when assembly areas are unoccupied. Classrooms will also have occupancy sensors to modulate dampers in the supply air duct branches as a means of saving energy during periods when the classrooms are unoccupied.

HVAC Life-Cycle Cost Estimate

Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the HVAC systems in this particular school project. It should be noted that the following estimates are based on schematic level

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plans and system sizes and will most likely change as the project design develops more completely.

The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated with the aid of the latest version of the Hourly Analysis Program published by the Carrier Corporation, which utilized typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

Summary of Costs:

- HVAC Construction Cost: \$8,822,940
- HVAC Systems Annual Electric Energy Cost: \$43,938
- HVAC Systems Annual Gas Energy Cost: \$0
- HVAC Systems Annual Maintenance Cost: \$14,704

Electrical Systems

Electric Service

The building will be provided with two electric services via two pad mounted transformers located on the site as provided by the electric utility company. Primary service conduits in two concrete duct banks will be provided from two electric utility poles to the two transformers via electric utility company standard manholes. Secondary service feeders and conduits in two concrete duct banks will be provided from the two transformers to the two switchboards. The electric utility company meters will be mounted on the transformers.

The building fire pump electric service will be provided via one of the pad mounted transformers located on site as provided by the electric utility company. Secondary service feeders and conduits in concrete duct bank will be provided from the transformer to the fire pump.

Telephone Service

Telephone service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Cable TV Service

Cable TV service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Power Distribution

Preliminary load calculations indicate that the two switchboards will each be rated at 4000 amperes at 277/480 volt, three phase, four wire. The switchboards will be provided with surge protection devices. Switchboard distribution sections will feed 277/480 volt panelboards and major Mechanical and Plumbing equipment. Panelboards will be dedicated to specific receptacle, lighting, mechanical loads, parking / exterior lighting, and Electric Vehicle Charging Stations, with each panelboard provided with an Owner meter for monitoring. A dedicated meter will be provided for on-site generation. Dry-type transformers will be provided to distribute 120/208 volt power for branch circuit panelboards and the Kitchen panelboards. One of the kitchen panelboards will be provided with a shunt trip circuit breaker which will trip if fire suppression under hoods is initiated, shutting down all circuits under hoods. Panelboards with surge protection devices for computers will be provided, fed from computer grade K-rated transformers. Zero sequence harmonic filters connected

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to the computer panelboards will be provided to reduce neutral currents. Shops with equipment will be provided with panelboards including shunt trip main circuit breakers and mushroom type shut off switches which can be pushed to shut down power to the panelboards in event of an emergency. Other shops will be provided with dedicated panelboards.

Emergency Power System

Two diesel fuel generators with sound attenuated, weatherproof enclosures will be provided. Preliminary load calculations indicate that the generators will each be rated at 800kW at 277/480 volt, three phase, four wire. Four automatic transfer switches (ATS's) will be provided to separate emergency from optional standby loads. The two emergency ATS's and associated emergency panelboards will be located in two hour rated closets with two hour rated feeders. The two optional standby ATS's and associated panelboards will be located in normal electric rooms. Emergency and optional standby panelboards will be provided with surge protection devices as required by the National Electrical Code. The generators will supply loads as selected by the Owner, as follows:

Lighting:

- Exterior building mounted lighting
- Mechanical Room lighting
- Electrical rooms lighting
- Egress Corridors and Stairs lighting
- IDF and MDF lighting
- Main Office lighting
- Principal Office lighting
- Nurse Office lighting
- Phys Ed Office lighting
- Elevator Machine Room lighting
- Gymnasium lighting
- Custodian's Office lighting
- Custodian's Receiving and General Supply lighting
- Interior windowless spaces lighting
- Elevator lighting and pit lighting
- Kitchen lighting
- Student Dining lighting
- Toilet rooms lighting
- Make-up Air Unit lighting
- Emergency Control Center lighting

Power:

- Fire Alarm System
- Heating System including Roof Top Heat Pump Units for the Gymnasium, Student Dining, Kitchen, Emergency Control Center, and associated receptacles and controls, and Electric Unit Heaters
- Entire Main Kitchen
- Bidirectional amplifier
- Toilet Room Flush Valves and Sink Sensors
- Custodians Office, a receptacle at work station
- Custodians Receiving and General Supply, a receptacle at work station
- Phys Ed Office, a receptacle at work station
- P.O.S. at Student Dining
- Gymnasium receptacles
- Student Dining receptacles
- General Office, a receptacle at work station
- Principal Office, a receptacle at work station
- Nurse Office, a receptacle at work station

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- One Elevator power, Machine Room receptacle, pit receptacles, and dampers
- Water Heaters and Circulation pumps
- Generator block heater and battery charger
- Technology equipment including:
 - Two IDF's each with Two Technology Racks, Two 120 volt, 20 amp, single phase receptacles per Rack, Four Receptacles per IDF = 24 receptacles, includes telephone system
 - MDF Technology Rack Receptacles, 8 racks each with two 120 volt, 20 amp, single phase receptacles = 16 receptacles, includes telephone system, and 1 rack with one 120 volt, 20 amp, single phase receptacle
 - VRF unit for MDF and IDF's with condensate pump receptacle
 - Security System including plywood backboard security circuits (2 IDF's and MDF), electrified door power supplies, and CCTV cameras (powered by switches in MDF and IDF's)
 - Plywood backboard clock circuits (2 IDF's and MDF)
- Security Office receptacles
- Fire Pump
- Domestic Water Pump (if applicable)
- Emergency Control Center receptacles

Fire Alarm System

An addressable manual and automatic fire alarm system will be provided. The fire alarm system will call the Fire Department or a Central Station via master box and / or telephone dialer. The fire alarm control panel will be located in the Main Electric Room or an area as so directed by the Fire Department. A remote annunciator panel will be provided in the Vestibule at the Main Lobby and where required by the Fire Department. A map of the entire building

will be framed and mounted adjacent to the annunciator. Keyed boxes will be provided outside the Fire Department entries. Manual pull stations will be located within five feet (5') of each egress door and at the entrance to each Stair. Additional pull stations will be provided as required by Code. Heat detectors will be provided at the top of the elevator shaft and any other areas not provided with protection by the fire suppression system. Smoke detectors will be provided in the Corridors, in Stairs at each floor level, in the Elevator Machine Room, and at all elevator landings for early detection of smoke for recall. All devices including tamper, flow, pressure switches, and PIV, associated with the fire suppression system will be connected to the fire alarm system. Audio / visual appliances will be provided in the Corridors, Classrooms and all large areas such as the Gymnasium, Media Center, Auditorium, and Student Dining. Visual devices will be provided in Toilet and Conference rooms. Mechanical equipment shall be shut down by the fire alarm system as required by code.

Lighting:***- Interior:***

In general, highly efficient LED lighting fixtures will be provided throughout the building. Lighting levels will be in accordance with I.E.S. (Illuminating Engineering Society of North America) recommendations and the Massachusetts State Building Code energy requirements.

- Exterior:

Wall and pole mounted site lighting fixtures will be LED type.

- Lighting Controls:

Lighting fixtures will be controlled primarily by room occupancy sensors and local low voltage dimmers. Lighting fixtures within side lighted areas as defined by the

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2021 IECC and ASHRAE 90.1 2016 will be daylight harvested via dimming drivers and photosensors. Lighting control relay panels will be provided to control exterior lighting and control interior lighting where time of day control is required.

- Devices:

General convenience receptacles will be located throughout the building as required. Receptacles provided in Toilet rooms, near sinks, the Kitchen, and outdoors will be provided with ground fault protection. Circuiting will be provided to Kitchen, Mechanical, and Plumbing equipment, and miscellaneous loads as required.

Automatic receptacle control for at least 50% of all 120 volt 15 and 20 amp receptacles in Private Offices, Conference Rooms, rooms used primarily for Printing and / or copying functions, Break Rooms, Classrooms, and individual Workstations will be provided as required by 2021 IECC and ASHRAE 90.1 2016. These receptacles will be controlled via the room lighting occupancy sensors, however receptacles and lighting will be separately metered by the Owner meters as attached to the panelboards which they are fed from.

Bi-directional Amplifier System

A bi-directional amplifier with coaxial cabling above accessible ceilings will be provided to amplify Fire Department and Police frequencies to ensure that there are no “dead” spots in the building for communication within building.

Technology Systems Back Box and Conduit System

A telephone / data / video / security / clock / speaker conduit system consisting of empty back boxes and conduit with pull strings to above accessible ceilings will be

provided for technology. Cable tray will be provided in MDF and IDF rooms for low voltage wiring.

PV System Conduit System

An empty conduit system with pull strings will be provided for the PV system consisting of photovoltaic panels and an inverter. Conduits will be provided from the switchboard to an exterior mounted disconnect switch for shutting down the PV system if needed. Conduits will also be provided from the exterior disconnect switch to the inverter and from the inverter to the roof.

Electric Vehicle Charging Stations

Electric vehicle charging stations will be provided in accordance with LEED Green Vehicles Credit.

Destratification Fans

Destratification fans will be provided in the Gymnasium.

Mass Notification System

A mass notification system will be provided including control panel, info alarm graphic annunciation and control, addressable speakers, and amber lenses.

Lightning Protection

The building will be provided with a lightning protection system made up of air terminals on the roof with downlead conductors to ground.

Plumbing Systems

The following is the Plumbing system narrative, which defines the scope of work and capacities of the Plumbing system as well as the Basis of Design.

FINAL EVALUATION

Codes

All work installed under Section 220000 shall comply with the MA Building Code, MA Plumbing Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Plumbing work and all items incidental thereto, including commissioning and testing.

General

The Plumbing Systems that will serve the project are cold water, hot water, tepid water, sanitary waste and vent system, Garage waste & Vent, grease waste system and storm drain system. The building will be serviced by Municipal water and Municipal sewer system. All Plumbing in the building will conform to Accessibility codes and to water conserving sections of the Plumbing Code.

Drainage System

Soil, waste, and vent piping system is provided to connect to all fixtures and equipment. System runs from 10 feet outside building and terminates with stack vents through the roof. A separate grease waste system starting with connection to an exterior grease interceptor running thru the Kitchen and Served area fixtures and terminating with a vent terminal through the roof. Point of use grease interceptors are to be provided at grease laden kitchen fixtures per the plumbing code. Storm drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building. Drainage system piping will be

service weight cast iron piping; hub and spigot with gaskets for below grade; no hub with gaskets, bands and clamps for above grade 2 in. and larger. Waste and vent piping 1-1/2 in. and smaller will be type 'L' copper.

Water System

New 6-inch domestic water service from the municipal water system will be provided for the New Building. A meter and backflow preventer will be provided. Cold water distribution main is provided. Non-freeze wall hydrants with integral back flow preventers are provided along the exterior of the building. Two (2) Non-potable water systems will be provided for science classrooms, with a dedicated electric water heater, recirculation pump, & mixing valve. A pump will re-circulate hot water from the piping system. Water temperature will be 120 deg. to serve general use fixtures. Water piping will be type 'L' copper with wrought copper sweat fittings, silver solder or press-fit system. All piping will be insulated with 1 in. thick high-density fiberglass.

Fixtures

Furnish and install all fixtures, including supports, connections, fittings, and any incidentals to make a complete installation. Fixtures shall be the manufacturer's guaranteed label trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material. Vitreous china and acid resisting enameled fixtures, including stops, supplies and traps shall be of one manufacturer by Kohler, American Standard, or TOTO. Supports shall be Zurn, Smith or Watts. All fixtures shall be white. Faucets shall be American Standard, T&S or Chicago. Fixtures shall be as scheduled on drawings.

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- Water Closet: High efficiency toilet, 1.11 gallon per flush, wall hung, vitreous china, siphon jet. Sensor operated 1.11 gallon per flush-flush valve.
- Urinal: High efficiency 0.125 gallon per flush urinal, wall hung, vitreous china. Sensor operated 0.125 gallon per flush-flush valve.
- Lavatory: Wall hung / countertop ADA lavatory with 0.5 GPM mixing faucet with sensor programmed for 10 second run-time cycle.
- Shower: Tile shower by others. Shower head with 1.5 GPM flow rate, with Shower mixing valve, and Floor drain.
- Sink: ADA stainless steel countertop sink 1.5 GPM faucet and aerator.
- Drinking Fountain / Bottle Filler: Hi-low wall mounted electric water cooler, stainless steel basin with bottle filling stations.
- Janitor Sink: 30 x 30 Terrazzo mop receptor

Drains

Drains are cast iron, caulked outlets, nickaloy strainers, and in waterproofed areas and roofs shall have galvanized iron clamping rings with 6 lb. lead flashings to bond 9 in. in all directions. Drains shall be Smith, Zurn or Watts.

Valves

Locate all valves so as to isolate all parts of the system. Shutoff valves 3 in. and smaller shall be ball valves, solder end or screwed, Apollo, Watts or Milwaukee.

Insulation

All water piping shall be insulated with snap-on fiberglass insulation Type ASJ-SSL, equal to Johns Manville Micro-Lok HP.

Cleanouts

Cleanouts shall be full size up to 4 in. threaded bronze plugs located as indicated on the drawings and / or where required in soil and waste pipes. Cleanouts for Special Waste System shall be Zurn #Z9A-C04 polypropylene cleanout plug with Zurn #ZANB-1463-VP nickel bronze scoriated floor access cover.

Access Doors

Furnish access doors for access to all concealed parts of the plumbing system that require accessibility. Coordinate types and locations with the Architect.

Water Heaters

Domestic water heating will be supplied through duplex electric resistant type water heaters. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures. Dedicated water heating will be provided for Non-Potable water, (1) electric water heater per looped system. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures.

Fire Protection

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system as well as the Basis of Design.

Codes

All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

FINAL EVALUATION

Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.

General

In accordance with the provisions of the Massachusetts Building Code, a school building of greater than 12,000 s.f. must be protected with an automatic sprinkler system.

Description

The building will be served by a new 8-inch fire service, Double check valve assembly, wet alarm valve complete with electric bell, and fire department connection meeting local thread standards. System will be an automatic sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2013. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain.

All areas of the building, including all finished and unfinished spaces and combustible concealed spaces will be sprinklered. All sprinkler heads will be quick response, pendent in hung ceiling areas and upright in unfinished and spaces without ceilings.

Basis of Design

The mechanical rooms, kitchen, science classrooms, and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all other areas are considered light hazard.

Required Design Densities:

- Light Hazard Areas 0.10 GPM over 1,500 s.f.
- Ordinary Hazard Group 1 0.15 GPM over 1,500 s.f.
- Ordinary Hazard Group 2 0.20 GPM over 1,500 s.f.

Sprinkler spacing (max.):

- Light Hazard Areas: 225 s.f.
- Ordinary Hazard Areas: 130 s.f.

Piping

Sprinkler piping 2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler / standpipe piping 3 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

Fittings

Fittings on fire service piping, 2 1/2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

Joints

Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints on piping, 2 1/2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron

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and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

Double Check Valve Assembly

Double check valve assembly shall be MA State approved, U.L. / F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

Double check valve detector assembly shall be of one of the following:

- Watts Series
- Wilkins
- Conbraco Series

Technology Systems

The design of the technology infrastructure for a renovated Galvin Middle School will include the systems and components listed below, which are organized according to CSI Specification sections.

271000 Structured Cabling

The new network design will support up to 10GHz over Category 6A to the desktop.

Twelve pairs of single mode OS2 fiber and twelve pairs of multi-mode OM4 fiber will be provided from the MDF to each IDF in the building. All fiber shall be terminated with duplex LC connectors. Two APC / Dell server cabinets with mounting hardware shall be provided in the MDF for Owner servers. Two post racks shall be provided for network switches in the MDF and IDFs.

Cat 6A cabling will be provided for data, voice, security video (CCTV), and wireless access points (four data drops at

each wireless access point location above classroom ceiling spaces). Wireless access point outlet placements are intended to provide the capability for complete wireless coverage throughout the school.

Administrative locations shall be provided two data ports and one voice port per desk location.

Each teacher location will be wired with two data ports and a voice port if a voice port is not provided on the wall of the classroom. Two data ports shall be provided opposite the teaching location in each room. Category 6A cabling will be provided for the owner provided phone system (support for Voice over IP). Classrooms will also have three data ports located behind each interactive display (see 274000 below for display).

The science / technology labs will be cabled as a typical classroom, with wireless access for student use. Four ceiling data ports for a wireless access point shall be provided. In addition, the equipment specified below in 274000 for a typical classroom shall be included in each lab.

272100 Network Electronics

Network electronics (switches) shall be programmed and installed by the owner. The Owner shall furnish, install and program all switches. Reuse of existing switches shall be determined by the Owner.

272133 Wireless Access Points

Wireless access points shall be reused, with supplemental access points furnished and installed by the owner.

273000 Voice Communications

The phone system, handsets, installation and programming shall be provided and installed by the Owner. The building shall

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be cabled to support a voice over IP phone system using Cat 6A. Reuse of any phone system equipment shall be determined by the Owner.

274000 Audio-Video Technology

Classrooms and Science Labs: video and audio presentation equipment (wall mounted 75" 4k interactive LCD / LED display with wireless option, voice lift system with microphones and amplifier, and up to four ceiling speakers) will be permanently installed in classrooms, labs and designated rooms. A presentation camera (minimum 5MP), shall be provided in each classroom / Lab. The PC / laptop in each classroom shall be provided by the Owner.

Any audio and video equipment for the gym renovation shall be provided by the Theater Section

Any audio and video equipment in the student dining area shall be provided by the Theater Section.

One 86" 4k display for local presentation of material shall be provided.

A portable sound system shall be provided.

Various office spaces (principal, vice principals, SROs, custodial) may have displays, ranging from 50" to 70" with local HDMI input for presentation of content.

Designated hallways may receive digital signage displays. Any digital signage devices and software shall be furnished and installed by the owner.

Any Band and Chorus audio and recording equipment shall be provided by the Theater Section.

275000 PA System

A new master clock shall be provided to address the time drift of the current clock system. The PA system will be replaced by a network based system to include a call button with plastic guard cover in each classroom opposite the phone location for emergency notification purposes. The call switch shall allow for a normal page and an emergency page. If the classroom speakers do not allow for two way communication to the front office, they will be replaced.

277000 Video Communications

Digital signage devices and software for the displays mentioned above and software shall be provided and installed by the Owner. An IPTV system shall not be provided.

280000 Electronic Safety & Security

An access control system shall be provided. Card readers shall be located as designated on the drawings. The main entry and library shall be equipped with a new video entry system. All door contacts shall be replaced with double pole double throw contacts, and wired to both the access control system and the intrusion detection system. With all door contacts being monitored by the access control system, a higher level of situational awareness is provided to the staff regarding entrances and exits of the building while the building is occupied. Traditionally, the intrusion detection system only monitored and reported door alarms during unoccupied times when the system is armed. Leveraging the access control system to also monitor the door contacts allows the staff to receive door alarms during occupied times when the intrusion detection system is typically disarmed. An enrollment station with dual sided laminating color badge printer,

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card reader, camera, tripod, back drop and PC with monitor shall be provided. 500 printable proximity cards shall be provided.

Exterior doors and entry vestibule doors shall be replaced. New door hardware shall not have mechanical dogging. New door hardware shall have built in request to exit function and latch monitoring, both tied into the access control system, for monitoring door latches during occupied times of the building.

The intrusion detection system and related components shall be expanded to include the addition of motion sensors in every first floor room with a window, near stairwells on all floors, inside at all door vestibules and outside the elevator.

An indoor / outdoor Video Surveillance System (IP based) will be provided. Coverage shall include entrances, hallways, stairwells, large group areas, administration and the building perimeter. Other areas, such as the gym and café shall be included. Bathroom entrances shall be visible, and pixels per foot shall be designed to 60ppf. All cameras shall be mounted at 8' to 9' above finished floor wherever possible. The video entry system camera shall be included as a camera recording to the Network Video Recorder. All interior and exterior cameras (but not the video entry cameras) will have IR for better low light visibility. Network Video Recorders will be provided for recording (for a minimum of 30 days) these cameras.

260000 Mass Notification System

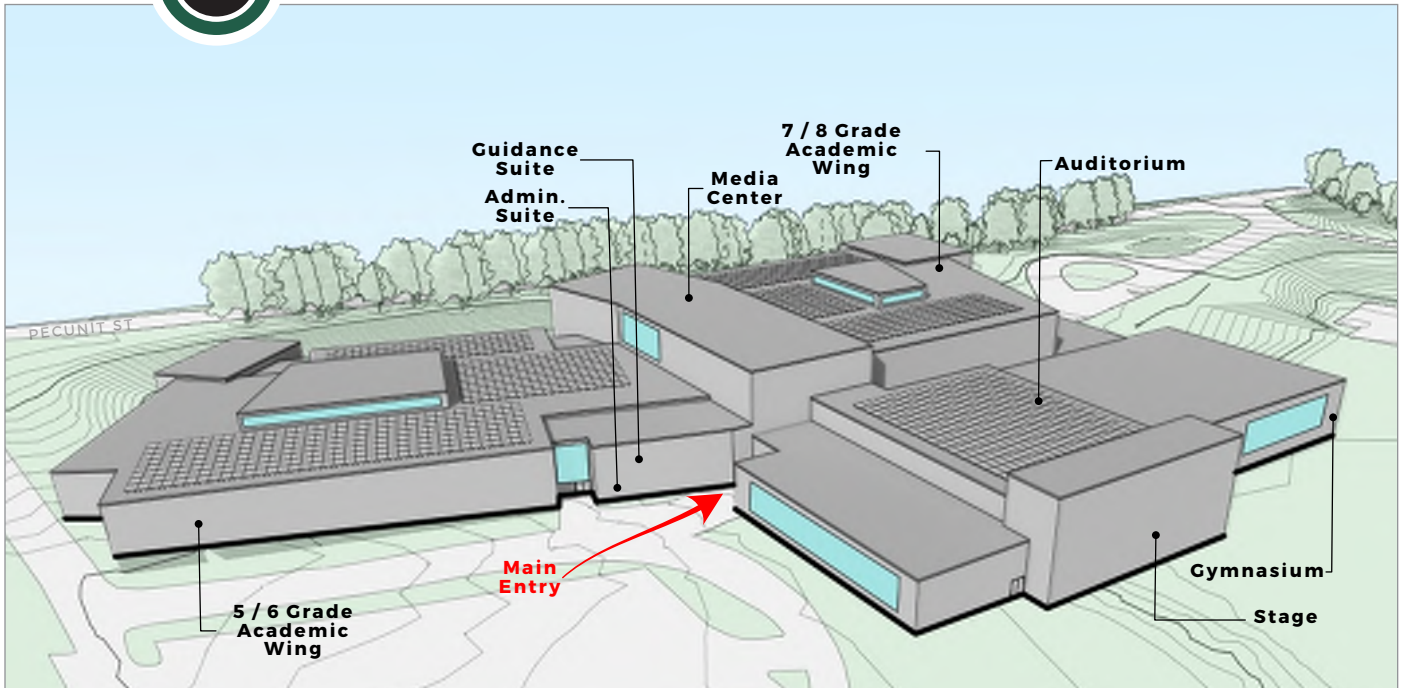
A Mass Notification System, to include handheld microphone and amber strobes to indicate a security threat / event, shall be furnished and installed by the electrical subcontractor.

A Bi-Directional radio antenna system shall be furnished and installed by the electrical subcontractor for police and fire radio use within the building. ♦

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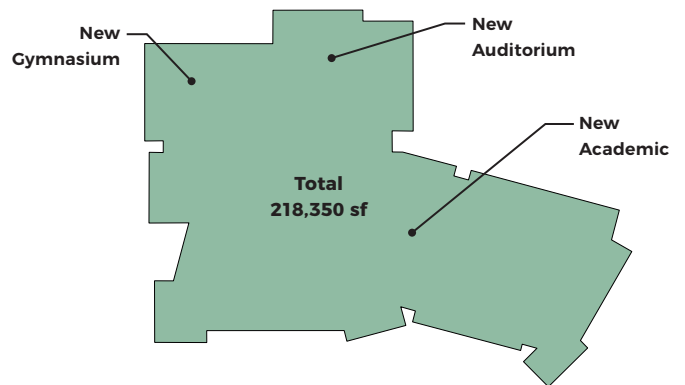


New Construction with Grade-Level Teams by Floor



Option 9b is a new construction option that groups grade level teams by floor. Unlike the add / reno options that keep the existing 1-1/2 court second floor gymnasium, this option provides a new 2 court gymnasium optimally located on the first floor to provide excellent connections between the indoor athletic programming and the adjacent outdoor fields.

Although the stakeholders felt that the hybrid stacked grade configuration option might offer the most advantageous layout and program adjacencies, they also felt it was important to explore the potential of organizing grade level teams by floor. Option 9b investigates this horizontal configuration..



Option 9b: Summary

GRADE LEVELS	▶ 5-8
ENROLLMENT	▶ 1020 students
AUDITORIUM	▶ YES
FLOORS	▶ 3
ADD / NEW SF	▶ 218,350 SF
RENOVATED SF	▶ 0 SF
TOTAL SF	▶ 218,350 SF
EST. DURATION	▶ ± 48 Months

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9b

Conceptual Site Plan

SCALE 1" = approx. 175'-0"

Site Plan

The site organization for Option 9b provides increased recreational fields, a new playground to support the 5th grade recess, and multiple new outdoor learning areas. The current full size and U12 recreation fields are maintained, and space for an additional U10 field is provided. The two existing basketball courts are replicated in the new site layout. The two existing basketball courts and outdoor rink are replicated in the new site layout. While the site layout is an improvement over options 7a and 7b, there is still poor connection and visibility to the rear fields from the elementary school and the baseball field due to the massing and layout of the new school.

To improve vehicular circulation, buses and parents use separate vehicular entrances to the site. Visitor parking is located near the main entrance and administration, while the larger staff parking lot is situated for best access to the gymnasium to support after hours community use. Additional parking would be provided behind the building for those utilizing the rear fields. Overall site work would also enhance bicycle and pedestrian safety and accessibility, improve drainage, reduce site runoff, and include attractive rain gardens, bioretention areas, and other stormwater management features.

Outdoor learning spaces are located adjacent to both academic wings.

Existing Site Features

The proposed option is located at the existing Middle School site at 55 Pecunit Street, Canton Massachusetts. The site design is integrated into the existing site including buildings and features such as Lieutenant Peter M Hansen School, athletic spaces and all vehicular and pedestrian

connections. Environmental constraints are considered in the design including the existing wooded areas, floodplain, wetlands and their respective setbacks in order to sustain the natural appearance and function. The existing topography forms multiple levels across the site. Steeper slopes work down from Pecunit Street to a gradually graded open space towards the north.









Building Footprint

The new footprint is situated south of the existing Middle School. The main entrance is located at the east side of the school, with a secondary entrance on the west side. Additional egress allows easy access to surrounding outdoor spaces. The school's location allows for the preservation of most of the existing vegetation and natural features, as well as existing infrastructure.

Site Access & Circulation

The existing vehicular entrances located off Pecunit are utilized in this option for Buses and Car drop off as well as access for staff and visitors. Pedestrian

Legend

-  Main Entry
-  Bus Drop-off
-  Parent Drop-off
-  Walking Path to neighborhood
-  Emergency Access
-  Outline of Existing
- 
-  0 50 100 200



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access plays a major role for the site's connectivity. New walkways will meet existing walkways leading from Pecunit street, to the school. Connections to the Elementary school, open space, activity areas and surrounding neighborhoods are also provided. Each access point leads to a parking lot and drop off plaza location at the building entrance. The drop off areas are interchangeable between bus and car to work with changing traffic patterns. A separate access matches an existing road layout and leads to the lower open field space. The building service loading dock is located in the rear of the building on the south side and includes a separate access service road. The southern access drive can accommodate approximately 26 cars or 10 buses. The northern access drive can accommodate up to approximately 26 cars or 9 buses. Drop off areas are designed for two-way traffic. There are three total parking lots on this site including one located at the east side building entrance, west side building entrance, and at the lower fields to the northwest. Total parking is approximately 175 spaces, which exceeds the existing amount of parking spaces.

Open Space

The site layout is designed to provide ample open space for recreation and athletics used by the school and town. Currently there are two main open spaces areas (Upper and lower Galvin). This design consolidates all the open space to one area. The layout can be flexible, designed to accommodate multi-use fields ranging in size from 330'x195' to 141'x90' depending on the age group and sport. Rain gardens and bioretention are also utilized to implement

sustainable design. Rain gardens and bioretention are also utilized to implement sustainable design where applicable.

Activity Spaces

Activity spaces are designed into the site in the form of sport courts, playgrounds, and gathering spaces that can be utilized for outdoor classrooms, Art, or music. These spaces may include permanent and flexible seating along with additional associated amenities. ♦



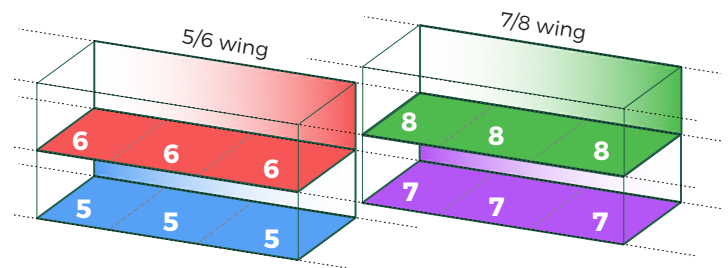
FINAL EVALUATION

9b Conceptual Floor Plans

Program Organization

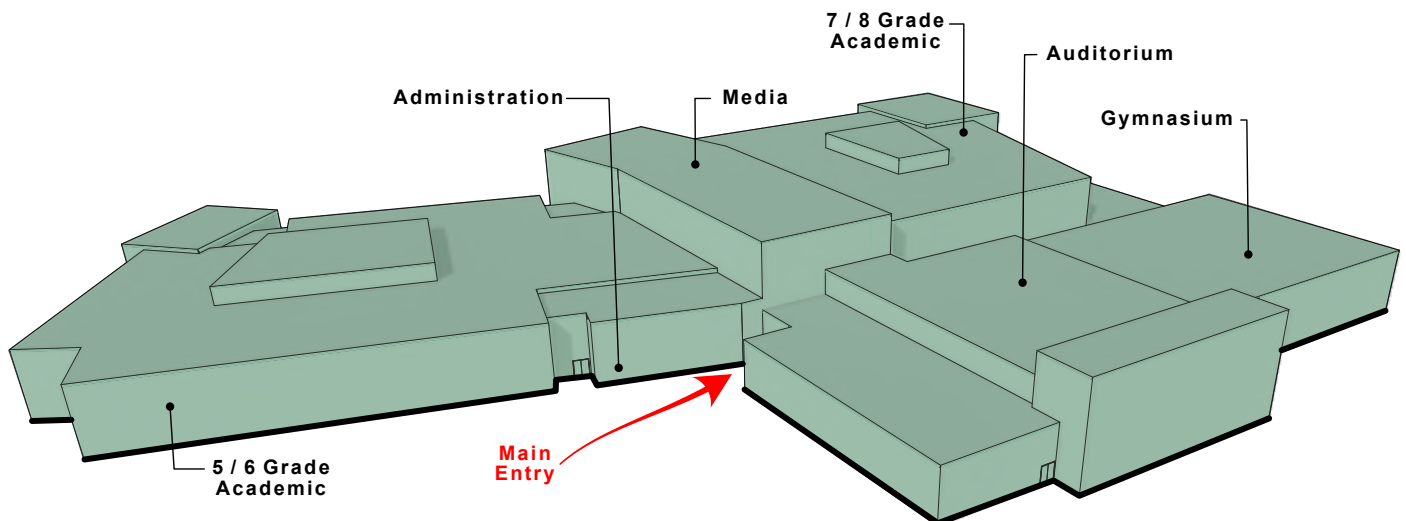
The gymnasium, auditorium, and performance technology studio are located favorably for program adjacencies and for the public / private separation of building spaces to provide the best experience for students during the day, while adding significant value as a community resource for after hours use. The auditorium stage is located adjacent to the band, orchestra, and chorus classrooms. The student dining commons is not as connected to the other public areas compared to Options 7b and 9e, but it is still possible to isolate and utilize this space for after hours use.

The student dining commons is the heart of the school that serves as a bridge between the public and private zones of the building. Students circulate through it to reach both academic wings. It is a partial double height space with views looking up into the media center.



Option 9b Grade Level Organization

One academic wing includes the 5th and 6th grades stacked on the first and second floors respectively, while the other academic wing includes the 7th and 8th grades stacked on the second and third floors. Every team space includes flexible student and teacher collaboration spaces, a media presentation space, and small group rooms for project team collaboration. In this option, academic teams enjoy a light-filled, double height space for student collaboration, but unlike Option 9e, these spaces do not enjoy exterior views to the school site. The media center is centrally located between the 6th



Option 9b Program Organization

FINAL EVALUATION

and 7th grade wings on the second floor, minimizing travel distance to media for all grades. It is also a double height space, with a full wall of windows in the upper half of the space to maximize daylighting while providing ample walls for stacks and display.

Administration, guidance, the nurse's suite, art, and engineering technology are centrally located and near the entrance to the academic wings. This option successfully supports the desire for grade level separation, because students from either wing can access these shared programs without entering the other academic wing.

In some ways this scheme provides a favorable response to the goals of the educational program, but it does not meet all of the goals of the visioning sessions, especially with regards to daylighting of spaces. The student commons / dining, student collaboration spaces, media center, and resource rooms are not provided with views to the exterior. Some of these spaces do benefit from borrowed light from clerestories, but the student commons and resource rooms experience no natural daylight. The SPED life skills program is located far from student support services, although it is well integrated into the academic wing.

A fundamental challenge to this scheme is the grade-level organization. The proposal to place one grade level on each floor sounds both intuitive and elegant, but in reality, allocating all of the classrooms into just four academic zones creates spatial inefficiencies that are avoided in a six zone strategy (Options 7b and 9e). With four academic zones, circulation distances increase. Groupings of team classrooms in this option are elongated and linear instead of short and clustered, making for a less connected team layout and fewer sight lines between classrooms and collaboration spaces. Even though the placement of some program elements is successful, the spatial challenges of these four larger academic zones is a significant shortcoming to this scheme.

Because this is a new construction option, it is more efficiently located on the site than the add / reno options. The entire building is shifted closer to Pecunit Street. This increases open space on the site, but the building footprint is larger than option 9e due to the grade configuration. In this scheme, the main open field space to adjacent to the gymnasium is large enough to support an additional play field compared to the add / reno schemes. ♦

9b FLOOR 1



PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Custodial / Service
■	Toilet Rooms
■	Storage

9b FLOOR 2



PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Circulation
■	Custodial / Service
■	Toilet Rooms
■	Storage

9b FLOOR 3



PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Circulation
■	Custodial / Service
■	Toilet Rooms
■	Storage

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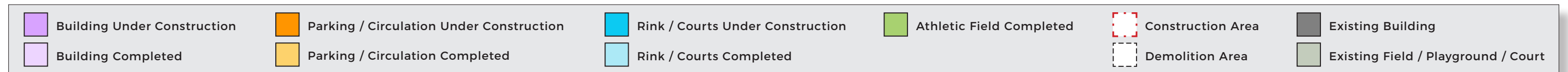
Conceptual Phasing & Construction Impact **9b**



Phase 1
Spring 2026: Contractor mobilization; construct temporary parking areas for existing Galvin Middle School.
June 2026: Demolish existing parking / circulation and existing athletic field with associated equipment. Prepare site for new construction.

Phase 2
June 2026: Begin construction of new 3 story school.
June 2028: Substantial completion of 3 story school.
August 2028: Occupancy of new building.

Phase 3
July 2028: Demolition of existing Galvin Middle School, preschool, associated parking / circulation, and athletic field.
Fall 2028: Completion of demolition.



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9b Conceptual Phasing & Construction Impact



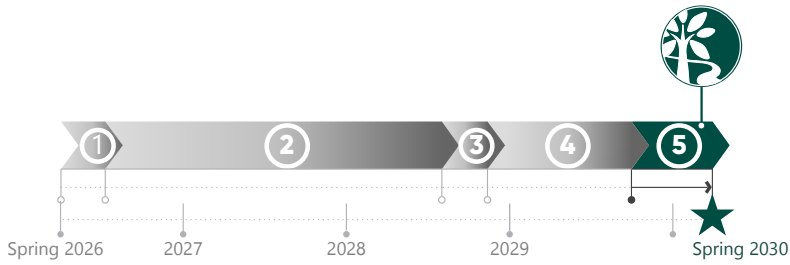
Phase 4

- September 2028:** Begin construction of new auditorium and gymnasium.
- Fall 2028:** Begin construction of athletic fields, outdoor activity spaces, and parking / circulation.
- June 2029:** Substantial completion of auditorium / gymnasium.
- Fall 2029:** Full occupancy of new building.

Building Under Construction	Parking / Circulation Under Construction	Rink / Courts Under Construction	Athletic Field Completed	Construction Area	Existing Building
Building Completed	Parking / Circulation Completed	Rink / Courts Completed	Existing Field / Playground / Court	Demolition Area	

FINAL EVALUATION

Conceptual Phasing & Construction Impact **9b**



Phase 5

Fall 2029: Begin final site work.

Spring 2030: Complete site work.

**TOTAL ESTIMATED DURATION:
±48 months**



FINAL EVALUATION

9b Site & Utilities Analysis

Utilities

The existing conditions utility information was found using aerial imagery and record documents that were available. Future development options would require that the existing utilities to be located and verified on site and included in the design plans.

Sewer

According to readily available Town sewer maps, sewer pipes enter the site from the west, collecting sewage from the schools and neighborhoods to the east and west of the site and continues to flow north through the wetlands to the north. There is no sewer in Pecunit Street. Pipe sizes transition between 8", 10" and 18" mains as the pipes travel from south to north. Preferably, pipe sizes do not reduce and then increase in size further downstream again. DPW should be consulted to determine if there are any known sewer issues. The Town does not have a sewer treatment facility and is on the MWRA system. In this option, the existing sanitary infrastructure may need to be rerouted to avoid the new school building.

Water

Readily available water maps are not available. The Site Plan of Land for the school property does show existing water service within the service access road north of the existing building. MassDOT Construction Documents for the Middle School show an existing water line within Pecunit Street along the southern access driveway to the school, however there is no indication this is a main. The Town's Master Plan indicates that the Town has seven groundwater wells, two booster pump stations, five water storage facilities, and two water treatment facilities. The nearest well

is located on Charles Drive approximately 0.25-miles from the site. Based on hydrant locations it does not appear that water mains are located in Pecunit Street. In 2018, the last year listed in the Master Plan, Canton received 62% of its water from the MWRA with the remainder supplied from the Town wells.

Drainage

Record documents and survey show approximately ten (10) catch basins throughout the developed portion of the Galvin Middle School site. The closed drainage system appears to discharge into the onsite wetland areas delineated in front of the school and to the north and northwest of the school building. It is unknown if the current drainage system provides any treatment for total suspended solids (TSS). The proposed drainage system will generally follow the existing drainage patterns. In addition to providing adequate stormwater conveyance for the proposed development, the drainage system will implement measures to attenuate the site runoff and match existing peak runoff values. The system will need to address water quality by removing 80% of total suspended solids, which can be accomplished with a combination of deep sump catch basins, hydrodynamic separators, and bioretention. All site drainage will be designed to meet the Massachusetts Department of Environmental Protection stormwater standards and any Town of Canton drainage requirements.

Gas

Eversource Energy is the supplier of natural gas to the Town of Canton. At this time, the location of existing gas facilities has not been confirmed. Based on the design intent for HVAC systems, appliances, and other elements, this design option will require no gas service. Should the design

FINAL EVALUATION

intent change to require gas service, the availability of gas service, capacity of existing service, and required demand of the proposed new school will need to be confirmed as the design progresses. All improvements will be coordinated with Eversource.

Electric

Eversource Energy is the supplier of electricity to the Town of Canton. Electricity appears to be supplied below ground. Future development options would require that the existing system be located and analyzed for capacity and the need for a new transformer should be evaluated prior to finalizing site plans. Coordination should occur with Eversource Energy regarding any service improvements.

Telecommunications

At this time, the location of existing telecommunications lines are unknown and will need to be confirmed as the design progresses. Future development options would require that the existing system be located and analyzed for applicability to current needs. Coordination should occur with the Canton Public Schools Information Technology Officer and the relevant telecommunication companies regarding any service improvements.

Proposed Infrastructure

It is anticipated that Option 9b will require new water, sanitary sewer, and electrical services for the proposed new building. Existing capacities for services connecting to the public mainlines will need to be verified and possibly upgraded. It is also anticipated that new drainage infrastructure will need to be installed in order to provide adequate conveyance for the proposed roof flows and site improvements. Underground facilities and

stormwater quality treatment will also need to be provided for the proposed new building and site improvements. ♦

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9b Structural Systems Narrative

Structural Overview

The following narrative is in accordance with the 9th Edition of The Massachusetts State Building Code and incorporating IBC 2015 with Massachusetts amendments.

The proposed scheme will consist of construction of a new, 3-story structure on the existing school Site constructed in two phases. The main school will be constructed in Phase 1 and after demolition of the existing school Gymnasium and the Auditorium will be constructed in Phase 2.

Substructure

- Foundations

Based on the foundations of the existing school, the columns of the proposed structure would bear on reinforced concrete spread footings and the perimeter foundation walls would bear on continuous reinforced concrete strip footings extending at least 4 ft. - 0 in. below grade. With the assumed bearing capacity of the soil of 2 tons / sf, a typical interior footing would be 9 ft. - 0 in. x 9 ft. - 0 in. x 24 in. deep and the typical exterior footings would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep in the three story areas. In the double story areas, typical interior footings would be 8 ft. - 0 in. x 8 ft. - in. x 24 in. deep and typical exterior footings would be 7 ft. - 0 in. x 7 ft. - 0 in. x 24 in. deep. In the single story areas, typical interior footings would be 7 ft. - 0 in. x 7 ft. - in. x 24 in. deep and typical exterior footings would be 6 ft. - 0 in. x 6 ft. - 0 in. x 24 in. deep. Typical interior and exterior footings at the Auditorium and the Gymnasium would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep. The exterior foundation walls would be 14 to 16 in. thick, reinforced cast-in-place concrete walls on 24 to 36 in. wide continuous reinforced concrete strip footings around the perimeter of the building extending a minimum of 4 ft. - 0 in. below finished grade.

- Slabs-on-Grade

Based on the recommendations of the Geotechnical Engineer, the lowest level of the proposed structure would be a 5 in. thick concrete slab-on-grade reinforced with welded wire fabric over a vapor barrier on 2 in. thick rigid insulation on 8 in. of compacted granular structural fill and a base course of 8 in. of compacted gravel.

Superstructure

- Typical Floor Construction

A 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. The weight of the structural steel is estimated to be 14 psf for the typical framing. The second floor structure will support the Auditorium floor.

- Typical Roof Construction

The roof construction would be galvanized, corrugated 3 in. deep, Type 'N' metal roof deck spanning between wide flange steel beams and girders. At locations of roof supported mechanical equipment, a concrete slab will be provided similar to the typical supported slab. The weight of the structural steel is estimated to be 14 psf.

- Low Roof Structure

The roof would be a continuation of the adjacent floor and would be similar to the typical floor construction of 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. This roof will be supporting the mechanical units. The units would be screened by a screen comprised of structural steel posts and beams. The weight of the structural steel is estimated to be 15 psf.

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- Gymnasium and Auditorium Roof Framing

The roof construction would be acoustic, galvanized, corrugated 3 in. deep, Type 'NA" metal roof deck at the Gymnasium and the Auditorium, spanning between long span steel joists. The weight of the steel joists and structural steel framing is estimated to be 14 psf.

- Vertical Framing Elements

Columns will be hollow structural steel columns. Typical columns would be HSS 8 x 8 columns and the columns at the double height spaces would be HSS 12 x 12.

- Lateral Load-Resisting System

The proposed structure will be divided in to two or three parts by way of one or two expansion joints. The typical lateral load resisting system for the school would be ordinary concentric braced frames comprised of HSS structural steel members.

- Expansion Joints

The school structure will be divided in to two or three parts separated by way of expansion joints. ◆

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9b Major Building Systems Narratives

Mechanical Systems

Design Criteria

Interior environmental conditions will be based on Massachusetts Code 780 CMR 12 and ASHRAE *Standard 55-2010*.

Ventilation of spaces will be designed to meet or exceed the requirements of the latest edition of the Massachusetts State Building Code, the ICC International Mechanical Code and ASHRAE Standard 62-2010, *Ventilation for Acceptable Indoor Air Quality*.

HVAC equipment will be selected to comply with the 2021 edition of the International Energy Conservation Code and ASHRAE 90.1-2016.

The HVAC systems will be designed to meet the acoustical requirements of ANSI S12.60-2002. The American National Standards Institute developed this standard specification and design guideline to help eliminate acoustical problems in the design stage of a project. Essentially, the steady background noise level in core learning areas should not exceed an NC of 35.

Heating and Cooling System

Heating and cooling will be provided by all-electric heat pump systems. The systems will be comprised of Variable Refrigerant Flow (VRF), roof mounted Heat pump Energy Recover Ventilators (ERV) and heat pump roof top units (RTU).

The VRF system shall be made up of indoor evaporators, branch control boxes (BC) and roof or grade mounted air-cooled condensers. The system utilizes refrigerant as the heat/cooling medium. The refrigerant shall flow from the condensers to the branch control boxes. The branch control boxes are used as control devices directing the liquid refrigerant or gas refrigerant to

the indoor evaporators depending on the space heating or cooling needs. This type of VRF system is known as a heat-recovery system. The branch control boxes can take the heat recovered from the cooling zone and use it to warm up the room in heating mode. This way, the compressor cooling or heating requirements are reduced, which saves energy.

Five (5) heat pump ERVs shall be used to provide minimum outdoor air ventilation to all spaces utilizing a VRF system for heating and cooling. The ERV shall be comprised of supply fan, exhaust fan, desiccant wheel or fixed plate energy recover exchanger, and a DX heat pump w/ hot gas reheat. The ERV will either preheat or precool / dehumidify the incoming ventilation air before being distributed to the spaces. The ventilation air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Heat pump RTUs shall provide heating and cooling to the large air spaces such as the student commons, Media Center, Gymnasium and Cafeteria / Stage. The RTUs shall be comprised of supply fan, exhaust fan, and a DX heat pump condenser. The RTUs will either heat or cool supply air before being distributed to the spaces. The supply air shall be made up of return air and outdoor air. The supply air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Air Conditioning System

As part of the base design the following spaces will be provided with air conditioning:

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- Student Commons.
- Administration area including Principal's Office, Assistant Principal's Office, School Psychologist's Office, Counselor's Office, Adjustment Counselor's Office, Nurse's Office and conference rooms.
- Teacher's planning / work rooms.
- Multipurpose rooms.
- Sped PT / OT spaces.
- Library / Media center.
- Gymnasium.
- Classrooms.
- Music / performing arts areas.
- Cafeteria and Kitchen
- Auditorium

Summary of HVAC Systems***Classrooms, Administration, Multi-purpose Rooms, Music Rooms, and Teachers' Workrooms:***

VRF system with decoupled ventilation from ERVs. The energy recovery ventilation units will supply the classrooms with tempered air via a system of ductwork. Energy recovery rooftop units are an effective way of reducing the overall energy consumption of a building. Energy recovery rooftop units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.
- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- Energy recovery wheel or fixed plate.
- DX heating / cooling coil.
- Hot gas reheat coil.
- Condensing unit.

- Pre-heat electric coil.
- Variable frequency drives.

Each classroom will be furnished with two (2) indoor evaporators. Small type spaces shall be furnished with one (1) indoor evaporator. The evaporators shall maintain space setpoint temperatures independently of the ERVs. This air circulates throughout the rooms and is drawn back up to the return grille of the evaporators. This air circulation produces even and consistent temperatures throughout the room.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the ERV units. This energy of the exhaust air leaving the classrooms is recovered at the energy recovery rooftop units.

The room thermostats control the operation of the evaporators to maintain space temperature setpoints.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space. CO₂ sensors shall modulate the position of the terminal boxes located in the ventilation supply ductwork prior to discharge in the space.

Learning Commons, Media Center, Gymnasium, Cafeteria and Auditorium:

Heat pump roof top units will supply these spaces with conditioned air. The conditioned air will be distributed via a system of ductwork and ceiling diffusers or sidewall high throw grilles. The roof top units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.

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- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- DX heating / cooling coil.
- Condensing unit.
- Hot gas reheat.
- Pre-heat electric coil.
- Variable frequency drives.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the indoor air handling units.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space.

Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

Kitchen:

The kitchen areas will be handled by the cafeteria ERV, The ERV, thru controls, will provide tempered make-up air to the kitchen in order to offset the amount of air being exhausted through the kitchen hood.

The kitchen hood exhaust system shall be provided with a Mellink kitchen hood exhaust control system, which is designed to vary the speed of the kitchen hood exhaust fan in response to the intensity of the cooking operations taking place. Essentially, the fan will operate at higher speeds when higher heat and smoke producing cooking is taking place. The Mellink system will also modulate the outside air damper and fan speed of the make-up air unit.

Controls

Griffith & Vary, Inc. recommends this facility be furnished with a Building Management System. This system will feature full Digital Direct Controls (DDC). This system will be capable of controlling the following:

- Space temperature set point.
- Start and stop of all energy recovery rooftop units and air-handling units.
- Start and stop heat pumps.
- Schedule occupied / unoccupied times for various spaces.
- Optimization of plant efficiency.
- Monitoring of mechanical equipment (fans, pumps, chiller, etc.) and indication of any alarms, which may result from equipment failures.

To save energy required to heat or cool outdoor air, carbon dioxide sensors will be employed in the gymnasium, auditorium, and Student Commons to allow a reduction of outdoor air during periods of low occupancy and motion sensors will also be utilized to allow closure of outdoor air dampers when assembly areas are unoccupied. Classrooms will also have occupancy sensors to modulate dampers in the supply air duct branches as a means of saving energy during periods when the classrooms are unoccupied.

HVAC Life-Cycle Cost Estimate

Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the HVAC systems in this particular school project. It should be noted that the following estimates are based on schematic level plans and system sizes and will most likely

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change as the project design develops more completely.

The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated with the aid of the latest version of the Hourly Analysis Program published by the Carrier Corporation, which utilized typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

Summary of Costs:

- HVAC Construction Cost: \$7,156,175
- HVAC Systems Annual Electric Energy Cost: \$36,550
- HVAC Systems Annual Gas Energy Cost: \$0
- HVAC Systems Annual Maintenance Cost: \$11,009

Electrical Systems

Electric Service

The building will be provided with two electric services via two pad mounted transformers located on the site as provided by the electric utility company. Primary service conduits in two concrete duct banks will be provided from two electric utility poles to the two transformers via electric utility company standard manholes. Secondary service feeders and conduits in two concrete duct banks will be provided from the two transformers to the two switchboards. The electric utility company meters will be mounted

on the transformers.

The building fire pump electric service will be provided via one of the pad mounted transformers located on site as provided by the electric utility company. Secondary service feeders and conduits in concrete duct bank will be provided from the transformer to the fire pump.

Telephone Service

Telephone service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Cable TV Service

Cable TV service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Power Distribution

Preliminary load calculations indicate that the two switchboards will each be rated at 3000 amperes at 277/480 volt, three phase, four wire. The switchboards will be provided with surge protection devices. Switchboard distribution sections will feed 277/480 volt panelboards and major Mechanical and Plumbing equipment. Panelboards will be dedicated to specific receptacle, lighting, mechanical loads, parking / exterior lighting, and Electric Vehicle Charging Stations, with each panelboard provided with an Owner meter for monitoring. A dedicated meter will be provided for on-site generation. Dry-type transformers will be provided to distribute 120/208 volt power for branch circuit panelboards and the Kitchen panelboards. One of the kitchen panelboards will be provided with a shunt trip circuit breaker which will trip if fire suppression under hoods is initiated, shutting down all circuits under hoods. Panelboards with surge protection devices for computers will be provided, fed from computer grade K-rated transformers.

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Zero sequence harmonic filters connected to the computer panelboards will be provided to reduce neutral currents. Shops with equipment will be provided with panelboards including shunt trip main circuit breakers and mushroom type shut off switches which can be pushed to shut down power to the panelboards in event of an emergency. Other shops will be provided with dedicated panelboards.

Emergency Power System

Two diesel fuel generators with sound attenuated, weatherproof enclosures will be provided. Preliminary load calculations indicate that the generators will each be rated at 750kW at 277/480 volt, three phase, four wire. Four automatic transfer switches (ATS's) will be provided to separate emergency from optional standby loads. The two emergency ATS's and associated emergency panelboards will be located in two hour rated closets with two hour rated feeders. The two optional standby ATS's and associated panelboards will be located in normal electric rooms. Emergency and optional standby panelboards will be provided with surge protection devices as required by the National Electrical Code. The generators will supply loads as selected by the Owner, as follows:

Lighting:

- Exterior building mounted lighting
- Mechanical Room lighting
- Electrical rooms lighting
- Egress Corridors and Stairs lighting
- IDF and MDF lighting
- Main Office lighting
- Principal Office lighting
- Nurse Office lighting
- Phys Ed Office lighting
- Elevator Machine Room lighting
- Gymnasium lighting
- Custodian's Office lighting
- Custodian's Receiving and General Supply lighting
- Interior windowless spaces lighting
- Elevator lighting and pit lighting
- Kitchen lighting
- Student Dining lighting
- Toilet rooms lighting
- Make-up Air Unit lighting
- Emergency Control Center lighting

Power:

- Fire Alarm System
- Heating System including Roof Top Heat Pump Units for the Gymnasium, Student Dining, Kitchen, Emergency Control Center, and associated receptacles and controls, and Electric Unit Heaters
- Entire Main Kitchen
- Bidirectional amplifier
- Toilet Room Flush Valves and Sink Sensors
- Custodians Office, a receptacle at work station
- Custodians Receiving and General Supply, a receptacle at work station
- Phys Ed Office, a receptacle at work station
- P.O.S. at Student Dining
- Gymnasium receptacles
- Student Dining receptacles
- General Office, a receptacle at work station
- Principal Office, a receptacle at work station
- Nurse Office, a receptacle at work station

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- One Elevator power, Machine Room receptacle, pit receptacles, and dampers
 - Water Heaters and Circulation pumps
 - Generator block heater and battery charger
 - Technology equipment including:
 - Two IDF's each with Two Technology Racks, Two 120 volt, 20 amp, single phase receptacles per Rack, Four Receptacles per IDF = 24 receptacles, includes telephone system
 - MDF Technology Rack Receptacles, 8 racks each with two 120 volt, 20 amp, single phase receptacles = 16 receptacles, includes telephone system, and 1 rack with one 120 volt, 20 amp, single phase receptacle
 - VRF unit for MDF and IDF's with condensate pump receptacle
 - Security System including plywood backboard security circuits (2 IDF's and MDF), electrified door power supplies, and CCTV cameras (powered by switches in MDF and IDF's)
 - Plywood backboard clock circuits (2 IDF's and MDF)
 - Security Office receptacles
 - Fire Pump
 - Domestic Water Pump (if applicable)
- Emergency Control Center receptacles

Fire Alarm System

An addressable manual and automatic fire alarm system will be provided. The fire alarm system will call the Fire Department or a Central Station via master box and / or telephone dialer. The fire alarm control panel will be located in the Main Electric Room or an area as so directed by the Fire Department. A remote annunciator panel will be provided in the Vestibule at the Main Lobby and where required by the Fire Department. A map of the entire building will be framed and mounted adjacent

to the annunciator. Keyed boxes will be provided outside the Fire Department entries. Manual pull stations will be located within five feet (5') of each egress door and at the entrance to each Stair. Additional pull stations will be provided as required by Code. Heat detectors will be provided at the top of the elevator shaft and any other areas not provided with protection by the fire suppression system. Smoke detectors will be provided in the Corridors, in Stairs at each floor level, in the Elevator Machine Room, and at all elevator landings for early detection of smoke for recall. All devices including tamper, flow, pressure switches, and PIV, associated with the fire suppression system will be connected to the fire alarm system. Audio / visual appliances will be provided in the Corridors, Classrooms and all large areas such as the Gymnasium, Media Center, Auditorium, and Student Dining. Visual devices will be provided in Toilet and Conference rooms. Mechanical equipment shall be shut down by the fire alarm system as required by code.

Lighting:***- Interior:***

In general, highly efficient LED lighting fixtures will be provided throughout the building. Lighting levels will be in accordance with I.E.S. (Illuminating Engineering Society of North America) recommendations and the Massachusetts State Building Code energy requirements.

- Exterior:

Wall and pole mounted site lighting fixtures will be LED type.

- Lighting Controls:

Lighting fixtures will be controlled primarily by room occupancy sensors and local low voltage dimmers. Lighting fixtures within side lighted areas as defined by the 2021 IECC and ASHRAE 90.1 2016 will be

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daylight harvested via dimming drivers and photosensors. Lighting control relay panels will be provided to control exterior lighting and control interior lighting where time of day control is required.

- Devices:

General convenience receptacles will be located throughout the building as required. Receptacles provided in Toilet rooms, near sinks, the Kitchen, and outdoors will be provided with ground fault protection. Circuiting will be provided to Kitchen, Mechanical, and Plumbing equipment, and miscellaneous loads as required.

Automatic receptacle control for at least 50% of all 120 volt 15 and 20 amp receptacles in Private Offices, Conference Rooms, rooms used primarily for Printing and / or copying functions, Break Rooms, Classrooms, and individual Workstations will be provided as required by 2021 IECC and ASHRAE 90.1 2016. These receptacles will be controlled via the room lighting occupancy sensors, however receptacles and lighting will be separately metered by the Owner meters as attached to the panelboards which they are fed from.

Bi-directional Amplifier System

A bi-directional amplifier with coaxial cabling above accessible ceilings will be provided to amplify Fire Department and Police frequencies to ensure that there are no “dead” spots in the building for communication within building.

Technology Systems Back Box and Conduit System

A telephone / data / video / security / clock / speaker conduit system consisting of empty back boxes and conduit with pull strings to above accessible ceilings will be provided for technology. Cable tray will

be provided in MDF and IDF rooms for low voltage wiring.

PV System Conduit System

An empty conduit system with pull strings will be provided for the PV system consisting of photovoltaic panels and an inverter. Conduits will be provided from the switchboard to an exterior mounted disconnect switch for shutting down the PV system if needed. Conduits will also be provided from the exterior disconnect switch to the inverter and from the inverter to the roof.

Electric Vehicle Charging Stations

Electric vehicle charging stations will be provided in accordance with LEED Green Vehicles Credit.

Destratification Fans

Destratification fans will be provided in the Gymnasium.

Mass Notification System

A mass notification system will be provided including control panel, info alarm graphic annunciation and control, addressable speakers, and amber lenses.

Lightning Protection

The building will be provided with a lightning protection system made up of air terminals on the roof with downlead conductors to ground.

Plumbing Systems

The following is the Plumbing system narrative, which defines the scope of work and capacities of the Plumbing system as well as the Basis of Design.

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Codes

All work installed under Section 220000 shall comply with the MA Building Code, MA Plumbing Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Plumbing work and all items incidental thereto, including commissioning and testing.

General

The Plumbing Systems that will serve the project are cold water, hot water, tepid water, sanitary waste and vent system, Garage waste & Vent, grease waste system and storm drain system. The building will be serviced by Municipal water and Municipal sewer system. All Plumbing in the building will conform to Accessibility codes and to water conserving sections of the Plumbing Code.

Drainage System

Soil, waste, and vent piping system is provided to connect to all fixtures and equipment. System runs from 10 feet outside building and terminates with stack vents through the roof. A separate grease waste system starting with connection to an exterior grease interceptor running thru the Kitchen and Served area fixtures and terminating with a vent terminal through the roof. Point of use grease interceptors are to be provided at grease laden kitchen fixtures per the plumbing code. Storm drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building. Drainage system piping will be

service weight cast iron piping; hub and spigot with gaskets for below grade; no hub with gaskets, bands and clamps for above grade 2 in. and larger. Waste and vent piping 1-1/2 in. and smaller will be type 'L' copper.

Water System

New 6-inch domestic water service from the municipal water system will be provided for the New Building. A meter and backflow preventer will be provided. Cold water distribution main is provided. Non-freeze wall hydrants with integral back flow preventers are provided along the exterior of the building. Two (2) Non-potable water systems will be provided for science classrooms, with a dedicated electric water heater, recirculation pump, & mixing valve. A pump will re-circulate hot water from the piping system. Water temperature will be 120 deg. to serve general use fixtures. Water piping will be type 'L' copper with wrought copper sweat fittings, silver solder or press-fit system. All piping will be insulated with 1 in. thick high-density fiberglass.

Fixtures

Furnish and install all fixtures, including supports, connections, fittings, and any incidentals to make a complete installation. Fixtures shall be the manufacturer's guaranteed label trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material. Vitreous china and acid resisting enameled fixtures, including stops, supplies and traps shall be of one manufacturer by Kohler, American Standard, or TOTO. Supports shall be Zurn, Smith or Watts. All fixtures shall be white. Faucets shall be American Standard, T&S or Chicago. Fixtures shall be as scheduled on drawings.

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- Water Closet: High efficiency toilet, 1.11 gallon per flush, wall hung, vitreous china, siphon jet. Sensor operated 1.11 gallon per flush-flush valve.
- Urinal: High efficiency 0.125 gallon per flush urinal, wall hung, vitreous china. Sensor operated 0.125 gallon per flush-flush valve.
- Lavatory: Wall hung / countertop ADA lavatory with 0.5 GPM mixing faucet with sensor programmed for 10 second run-time cycle.
- Shower: Tile shower by others. Shower head with 1.5 GPM flow rate, with Shower mixing valve, and Floor drain.
- Sink: ADA stainless steel countertop sink 1.5 GPM faucet and aerator.
- Drinking Fountain / Bottle Filler: Hi-low wall mounted electric water cooler, stainless steel basin with bottle filling stations.
- Janitor Sink: 30 x 30 Terrazzo mop receptor

Drains

Drains are cast iron, caulked outlets, nickaloy strainers, and in waterproofed areas and roofs shall have galvanized iron clamping rings with 6 lb. lead flashings to bond 9 in. in all directions. Drains shall be Smith, Zurn or Watts.

Valves

Locate all valves so as to isolate all parts of the system. Shutoff valves 3 in. and smaller shall be ball valves, solder end or screwed, Apollo, Watts or Milwaukee.

Insulation

All water piping shall be insulated with snap-on fiberglass insulation Type ASJ-SSL, equal to Johns Manville Micro-Lok HP.

Cleanouts

Cleanouts shall be full size up to 4 in. threaded bronze plugs located as indicated on the drawings and / or where required in soil and waste pipes. Cleanouts for Special Waste System shall be Zurn #Z9A-C04 polypropylene cleanout plug with Zurn #ZANB-1463-VP nickel bronze scoriated floor access cover.

Access Doors

Furnish access doors for access to all concealed parts of the plumbing system that require accessibility. Coordinate types and locations with the Architect.

Water Heaters

Domestic water heating will be supplied through duplex electric resistant type water heaters. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures. Dedicated water heating will be provided for Non-Potable water, (1) electric water heater per looped system. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures.

Fire Protection

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system as well as the Basis of Design.

Codes

All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

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Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.

General

In accordance with the provisions of the Massachusetts Building Code, a school building of greater than 12,000 s.f. must be protected with an automatic sprinkler system.

Description

The building will be served by a new 8-inch fire service, Double check valve assembly, wet alarm valve complete with electric bell, and fire department connection meeting local thread standards. System will be an automatic sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2013. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain.

All areas of the building, including all finished and unfinished spaces and combustibles concealed spaces will be sprinklered. All sprinkler heads will be quick response, pendant in hung ceiling areas and upright in unfinished and spaces without ceilings.

Basis of Design

The mechanical rooms, kitchen, science classrooms, and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all other areas are considered light hazard.

Required Design Densities:

- Light Hazard Areas 0.10 GPM over 1,500 s.f.
- Ordinary Hazard Group 1 0.15 GPM over 1,500 s.f.
- Ordinary Hazard Group 2 0.20 GPM over 1,500 s.f.

Sprinkler spacing (max.):

- Light Hazard Areas: 225 s.f.
- Ordinary Hazard Areas: 130 s.f.

Piping

Sprinkler piping 2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler / standpipe piping 3 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

Fittings

Fittings on fire service piping, 2 1/2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

Joints

Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints on piping, 2 1/2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron

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and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

Double Check Valve Assembly

Double check valve assembly shall be MA State approved, U.L. / F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

Double check valve detector assembly shall be of one of the following:

- Watts Series
- Wilkins
- Conbraco Series

Technology Systems

The design of the technology infrastructure for a New Galvin Middle School will include the systems and components listed below, which are organized according to CSI Specification sections.

271000 Structured Cabling

The new network design will support up to 10GHz over Category 6A to the desktop.

Twelve pairs of single mode OS2 fiber and twelve pairs of multi-mode OM4 fiber will be provided from the MDF to each IDF in the building. All fiber shall be terminated with duplex LC connectors. Two APC / Dell server cabinets with mounting hardware shall be provided in the MDF for Owner servers. Two post racks shall be provided for network switches.

Cat 6A cabling will be provided for data, voice, security video (CCTV), and wireless access points (four data drops at each wireless access point location above

classroom ceiling spaces). Wireless access point outlet placements are intended to provide the capability for complete wireless coverage throughout the school.

Administrative locations shall be provided with two data ports and one voice port per desk location.

Each teacher location will be wired with two data ports and a voice port if a wall phone location in the classroom is not provided. Two data ports shall be provided opposite the teaching location in each room. Category 6A cabling will be provided for the owner provided phone system (support for Voice over IP). Classrooms will also have three data ports located behind each interactive display (see 274000 below for display).

The science / technology labs will be cabled as a typical classroom, with wireless access for student use. Four ceiling data ports for a wireless access point shall be provided. In addition, the equipment specified below in 274000 for a typical classroom shall be included in each lab.

272100 Network Electronics

New network electronics (switches) shall be furnished, programmed and installed by the owner.

272133 Wireless Access Points

New wireless access points shall be furnished and installed by the owner.

273000 Voice Communications

The phone system, handsets, installation and programming shall be provided and installed by the Owner. The building shall be cabled to support a voice over IP phone system using Cat 6A.

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274000 Audio-Video Technology

Classrooms and Science Labs: video and audio presentation equipment (wall mounted 75" 4k interactive LCD / LED display with wireless option, voice lift system with microphones and amplifier, and up to four ceiling speakers) will be permanently installed in classrooms, labs and designated rooms. A presentation camera (minimum 5MP), shall be provided in each classroom / Lab. The PC / laptop in each classroom shall be provided by the Owner.

Any audio and video presentation equipment in the auditorium shall be provided by the Theater Section.

Any audio and video equipment for the gym shall be provided by the Theater Section

Any audio and video equipment in the student dining area shall be provided by the Theater Section.

One 86" 4k display for local presentation of material shall be provided.

A portable sound system shall be provided.

Various office spaces (principal, vice principals, SROs, custodial) may have displays, ranging from 50" to 70". For these displays, a local HDMI input at the desk location shall be provided for the display of owner content if desired.

Designated hallways may receive digital signage displays. Any digital signage devices and software shall be furnished and installed by the owner.

Any Band and Chorus audio and recording equipment shall be provided by the Theater Section.

275000 PA System

A networked based public address system shall be provided. Digital clocks synchronized with a master clock shall be provided in every classroom, conference room, and in offices. The PA system shall be integrated with the owner provided phone system to allow the use of the phone system for paging within the building. A call button with plastic guard cover shall be placed in each classroom opposite the phone location for emergency notifications.

277000 Video Communications

Digital signage devices for the displays mentioned above and software shall be provided and installed by the Owner. An IPTV system shall not be provided.

280000 Electronic Safety & Security

An access control system shall be provided. Card readers shall be located as designated on the drawings. The main entry shall be equipped with a video entry system. All door contacts shall be wired to both the access control system and the intrusion detection system. With all door contacts being monitored by the access control system, a higher level of situational awareness is provided to the staff regarding entrances and exits of the building while the building is occupied. Traditionally, the intrusion detection system only monitored and reported door alarms during unoccupied times when the system is armed. Leveraging the access control system to also monitors the door contacts allows the staff to receive door alarms during occupied times when the intrusion detection system is typically disarmed. An enrollment station with dual sided laminating color badge printer, card reader, camera, tripod, back drop and PC with monitor shall be provided. 500 printable proximity cards shall be provided.

FINAL EVALUATION

Exterior doors and entry vestibule doors shall not have mechanical dogging. These doors will have latch monitoring, tied into the access control system, for monitoring door latches during occupied times of the building.

An intrusion detection system and related components shall be provided. Every first floor room with a window shall have a motion sensor. Motion sensors shall also be placed within the hallways, in vestibules and at strategic locations.

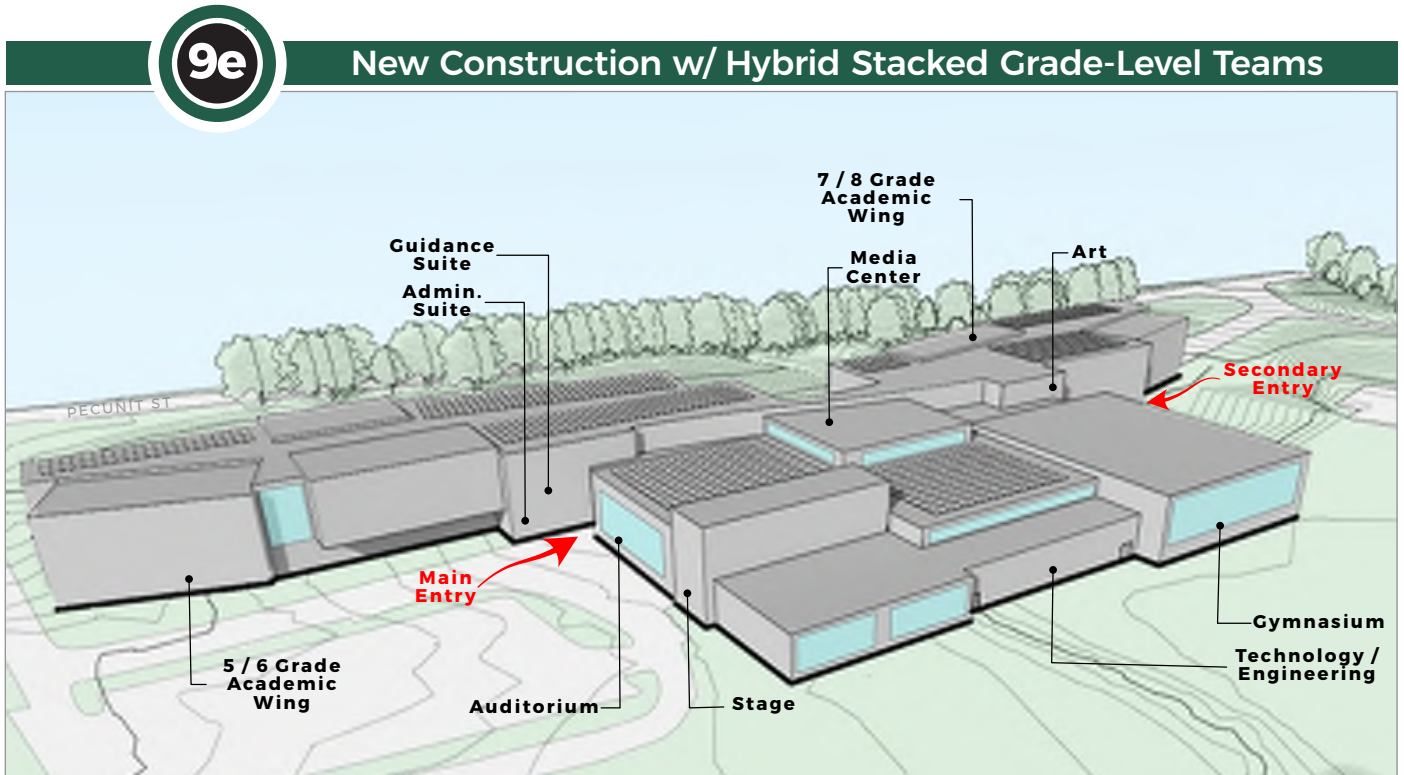
An indoor / outdoor Video Surveillance System (IP based) will be provided. Coverage shall include entrances, hallways, stairwells, building perimeter, and parking (parking surveillance shall utilize both building mounted cameras as well as pole mounted cameras). Other areas, such as the gym, auditorium, café, and administration area shall be included. Bathroom entrances shall be visible, and pixels per foot shall be designed to 60ppf. All cameras shall be mounted at 8' to 9' above finished floor wherever possible. The video entry system camera shall be included as a camera recording to the Network Video Recorder. All interior and exterior cameras (but not the video entry cameras) will have IR for better low light visibility. Network Video Recorders will be provided for recording these cameras.

260000 Mass Notification System

A Mass Notification System, to include handheld microphone and amber strobes to indicate a security threat / event, shall be furnished and installed by the electrical subcontractor.

A Bi-Directional radio antenna system shall be furnished and installed by the electrical subcontractor for police and fire radio use within the building. ♦

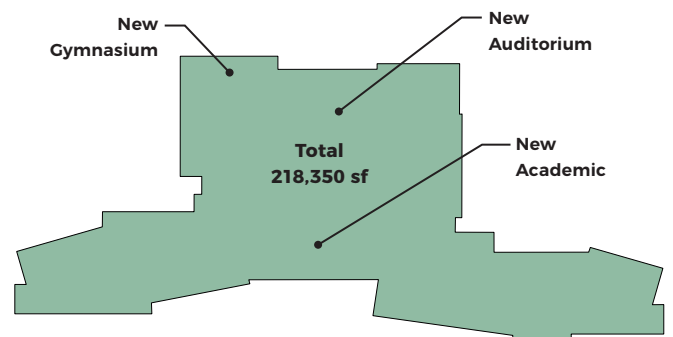
FINAL EVALUATION



Option 9e is a new construction option that groups academic teams in a hybrid stacked grade level team layout. Unlike the add / reno options that keep the existing 1-1/2 court second floor gymnasium, this option provides a new 2 court gymnasium optimally located on the first floor to provide excellent connections between the indoor athletic programming and the adjacent outdoor fields.

This option includes the student dining commons at the heart of the school serving as a fluid, organic separation between the public and private zones of the building and provides a vibrant, functional connection to the academic wings that can be used throughout the day and after hours.

Because it employs the hybrid stacked grade level team layout, there are a total of six academic zones, creating a more efficient building layout, successful adjacencies, and strong team clusters with excellent sight lines to support collaboration in each flexible student learning commons.



Option 9e: Summary

GRADE LEVELS	▶ 5-8
ENROLLMENT	▶ 1020 students
AUDITORIUM	▶ YES
FLOORS	▶ 3
ADD / NEW SF	▶ 218,350 SF
RENOVATED SF	▶ 0 SF
TOTAL SF	▶ 218,350 SF
EST. DURATION	▶ ± 36 Months

FINAL EVALUATION

9e

Conceptual Site Plan

SCALE 1" = approx. 175'-0"

Site Plan

The site organization for Option 9e provides increased recreational fields, a new playground to support the 5th grade recess, and multiple new outdoor learning areas. The current full size and U12 recreation fields are maintained, and space for an additional U10 field is provided. The two existing basketball courts and outdoor rink are replicated in the new site layout.

To improve vehicular circulation, buses and parents dropping off use separate vehicular entrances to the site. Parking is distributed between two main lots for flexibility and convenience. Additional parking would be provided behind the building for those utilizing the rear fields. Service vehicles have a dedicated access area to the building ideally located to the kitchen, and tucked into the topography for minimum visibility and disruption. Overall site work would also enhance bicycle and pedestrian safety and accessibility, improve drainage, reduce site runoff, and include attractive rain gardens, bioretention areas, and other stormwater management features.

Outdoor learning spaces are located in several areas adjacent to both academic wings.

Existing Site Features

The proposed option is located at the existing Middle School site at 55 Pecunit Street, Canton Massachusetts. The site design is integrated into the existing site including buildings and features such as Lieutenant Peter M Hansen School, athletic spaces and all vehicular and pedestrian connections. Environmental constraints are considered in the design including the existing wooded areas, floodplain, wetlands and their respective setbacks in order to sustain the natural appearance and

function. The existing topography forms multiple levels across the site. Steeper slopes work down from Pecunit Street to a gradually graded open space towards the north.









Building Footprint

The new building is situated to the south of the existing Middle School with its main entrances located on the east and west sides. Additional egress allows easy access to surrounding outdoor spaces. The school's location allows for the preservation of existing vegetation and natural features.

Site Access & Circulation

The existing vehicular entrances located off Pecunit are utilized in this option for Buses and Car drop off as well as access for staff and visitors. Pedestrian access plays a major role for the site's connectivity. New walkways will meet existing walkways leading from Pecunit street, to the school. Connections to the Elementary school, open space, activity areas and surrounding neighborhoods are also provided. Each access point leads to

Legend

-  Main Entry
-  Bus Drop-off
-  Parent Drop-off
-  Walking Path to neighborhood
-  Emergency Access
-  Outline of Existing
- 
-  0 50 100 200



OPTION 9E

FINAL EVALUATION

a parking lot and drop off plaza location at the building entrances. The drop off areas are interchangeable between bus and car to work with changing traffic patterns. A restricted access road connects both parking lots on the north side of the building and can be used for emergency or service vehicles, but is generally closed off to traffic. This allows the space to be safely used by students or visitors. A separate access matches an existing road layout and leads to the lower open field space. The building service loading dock is located in the rear of the building and includes an access service road.

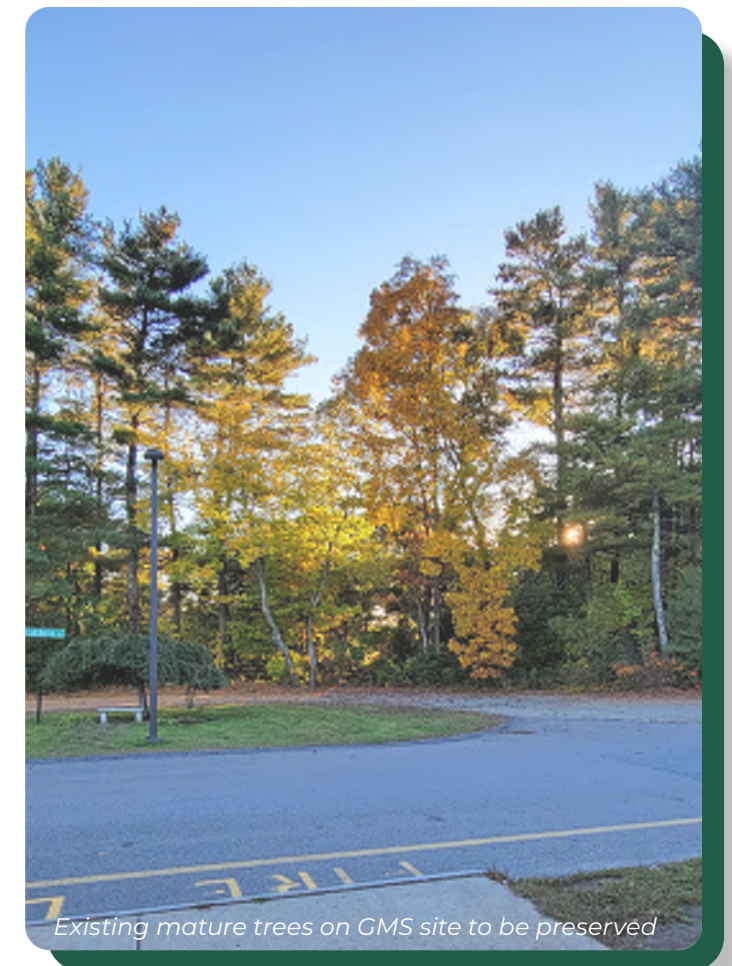
The southern access drive can accommodate approximately 26 cars or 10 buses. The northern access drive remains the same as the base site option and can accommodate up to approximately 32 cars or 12 buses. Drop off areas are designed for two-way traffic. There are three total parking lots on this site including one at each access drive, and one closer to the fields. Total parking is approximately 178 spaces, which exceeds the existing amount of parking spaces.

Open Space

The site layout is designed to provide ample open space for recreation and athletics used by the school and town. Currently there are two main open spaces areas (Upper and lower Galvin). This design consolidates all the open space to one area. The layout can be flexible, designed to accommodate multi-use fields ranging in size from 330'x195' to 141'x90' depending on the age group and sport. Rain gardens and bioretention are also utilized to implement sustainable design where applicable.

Activity Spaces

Activity spaces are designed into the site in the form of sport courts, playgrounds, and gathering spaces that can be utilized for outdoor classrooms, Art, or music. These spaces may include permanent and flexible seating along with additional associated amenities. ♦



FINAL EVALUATION

9e

Conceptual Floor Plans

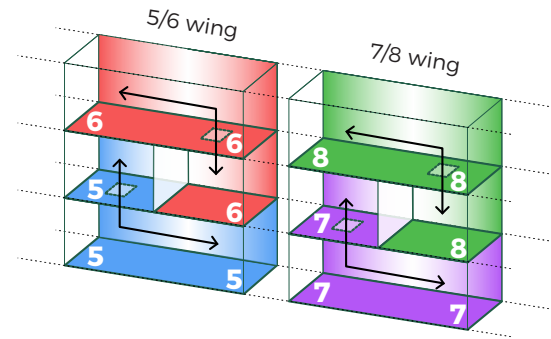
Program Organization

In Option 9e, both the gymnasium and auditorium are located for optimal adjacencies and public / private separation of building spaces to provide the best experience for students during the day, while adding significant value as a community resource for after hours use. The auditorium stage is located adjacent to the band, orchestra, and chorus classrooms.

The student dining commons is a double height space with many clerestories as well as outdoor connections and views at each end. This large, welcoming, flexible space is grouped with the gym, performance technology studio, and auditorium to create a cluster of "public" spaces in the building.

Two academic wings extend from the student commons, bracketing the kitchen and student server on the first floor, the media center and the engineering technology on second and third floors.

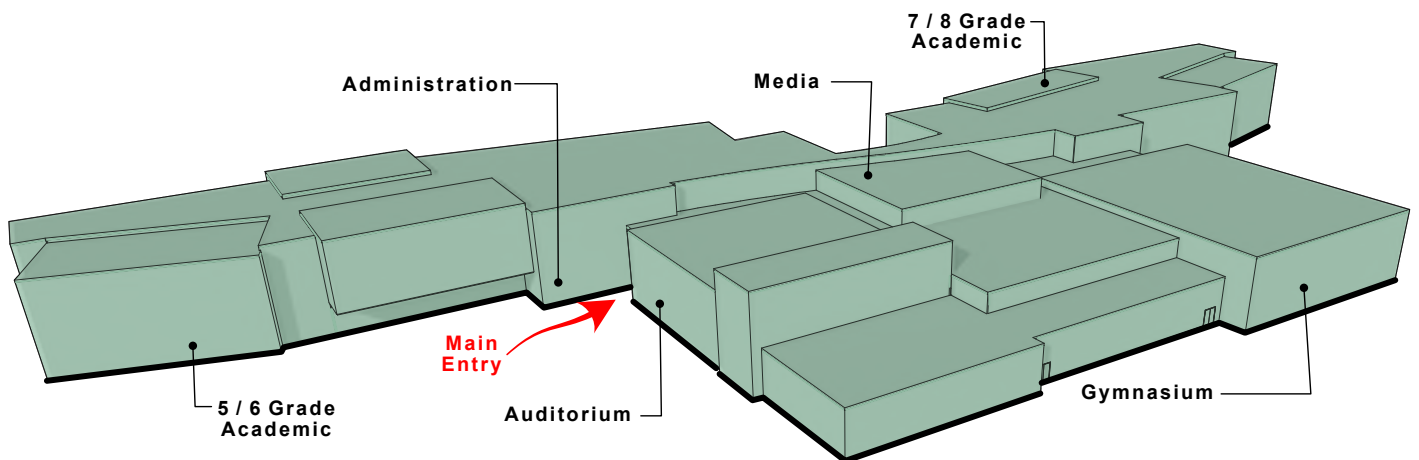
To understand the teaming layout, it is important to note that grades 6-8 consist



Option 9e Grade Level Organization

of three teams, while grade 5 consists of six smaller co-taught teams, because 5th grade students utilize two general academic classrooms to cover multiple subjects instead of moving to a separate classroom for each subject, as 6th-8th graders do. Spatially, the six 5th grade teams comprise a similar building area to three 6th grade teams.

Utilizing the hybrid stacked grade level team layout, one academic wing hosts grades 5 and 6, with four 5th grade teams sharing the first floor and two 5th grade teams and one 6th grade team sharing



Option 9e Program Organization

FINAL EVALUATION

the second floor. Two 6th grade teams share the third floor. A similar stacking is repeated in the other academic wing for grades 7 and 8. Notably, there are open stairs placed to vertically connect the stacked teams, creating a dynamic, linear vertical flow through the academic wing and strengthening connections between teams. This hybrid configuration allows students to transition through the building in a continuous and fluid nature, as they progress through their middle years of education.

Every team space includes flexible student and teacher collaboration spaces, a media presentation space, and small group rooms for project team collaboration with excellent sight lines from classrooms to collaboration spaces. On all 3 levels, each wing greets students with a special program; technology engineering classrooms for the 5/6 wing, and art classrooms for the 7/8 wing. This placement celebrates and showcases these programs while supporting the desired grade level separation, because students from either wing can access these programs without entering the other academic wing.

While the academic wings enjoy a similar layout to Option 7b, some of the details of their form and layout are deliberately different from Option 7b in order to maximize the exploration of possibilities to carry forward for discussion into the schematic design phase.

The academic teams in this option employ a different classroom clustering strategy compared to the other options (see diagrams at right); however, the classroom layout for this option might be adapted to a different layout during schematic design depending on which approach is preferred by the district upon further study. Option 7b provides the academic teams with a continuous, central collaboration space

adjacent to the classrooms, but this option uses geometry to create more niches and defined zones within the collaboration space in order to support groups of varying sizes.

This scheme has evolved to directly respond to the goals of the educational program and the visioning sessions. Because it is all new construction, it does not have to compromise desired program goals or adjacencies in order to fit into the constraints of an existing building. It is able to achieve the desired programs, adjacencies, and spatial qualities such as ample natural light, an efficient layout, innovative media spaces, and functional, activated circulation that supports student collaboration. This option also provides the desired grade-level separation in its layout so that in a school with a four-year age spread, students spend more time with similar-aged peers, but also have opportunities to appropriately mix with other grade levels during supervised activities such as musical and theater performances and clubs.

It should be noted that even though this option is somewhat similar in layout and overall footprint to add / reno Option 7b, it is more efficiently located on the site because the entire building is shifted closer to Pecunit Street. This achieves two goals from the visioning sessions: to maximize open space on the site, and to provide optimal views of the outdoors and nature from the academic wings. In this scheme, the open field space to plan north of the building is large enough to support an additional play field compared to the add / reno options. This site layout provides more unobstructed views and better access to the rear fields, creating a true campus experience for students and the community. ♦

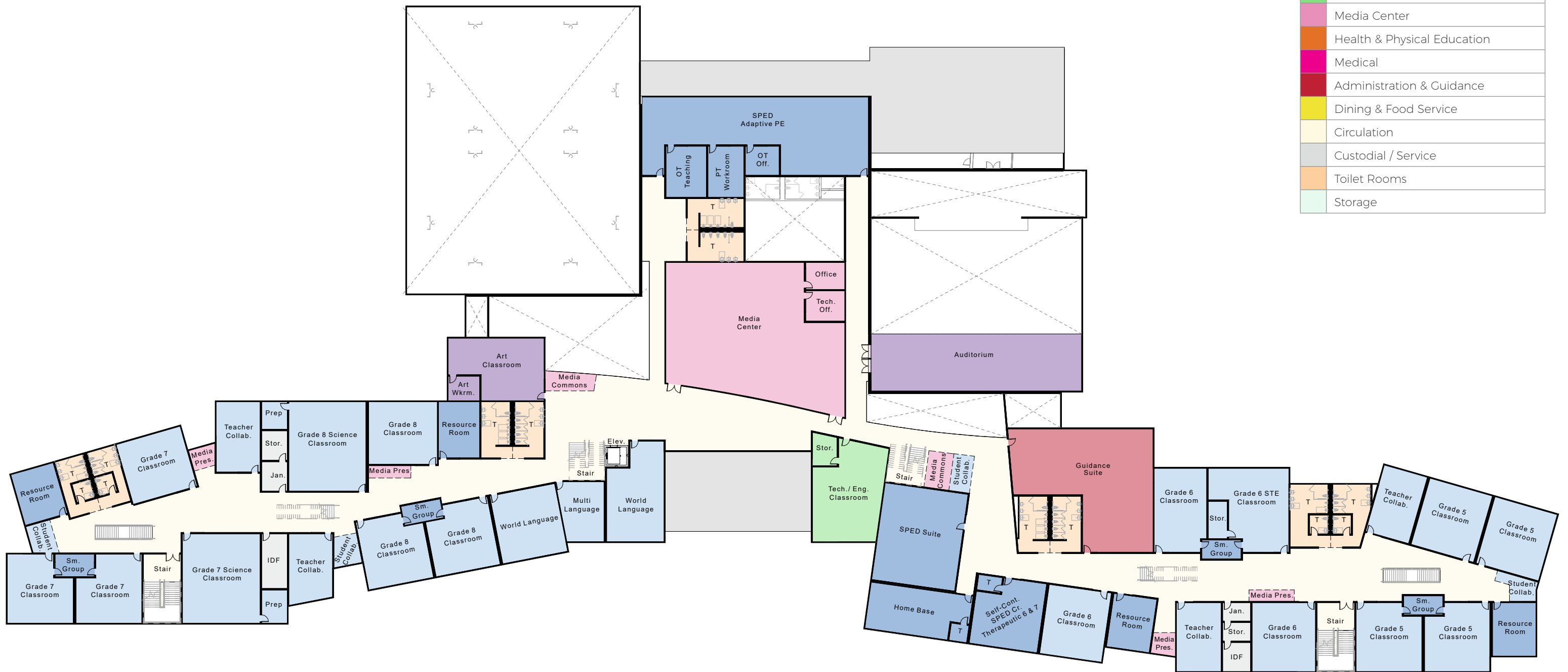
9e FLOOR 1

PROGRAM LEGEND	
	Core Academic Spaces
	Special Education
	Art & Music
	Vocations & Technology
	Media Center
	Health & Physical Education
	Medical
	Administration & Guidance
	Dining & Food Service
	Circulation
	Custodial / Service
	Toilet Rooms
	Storage



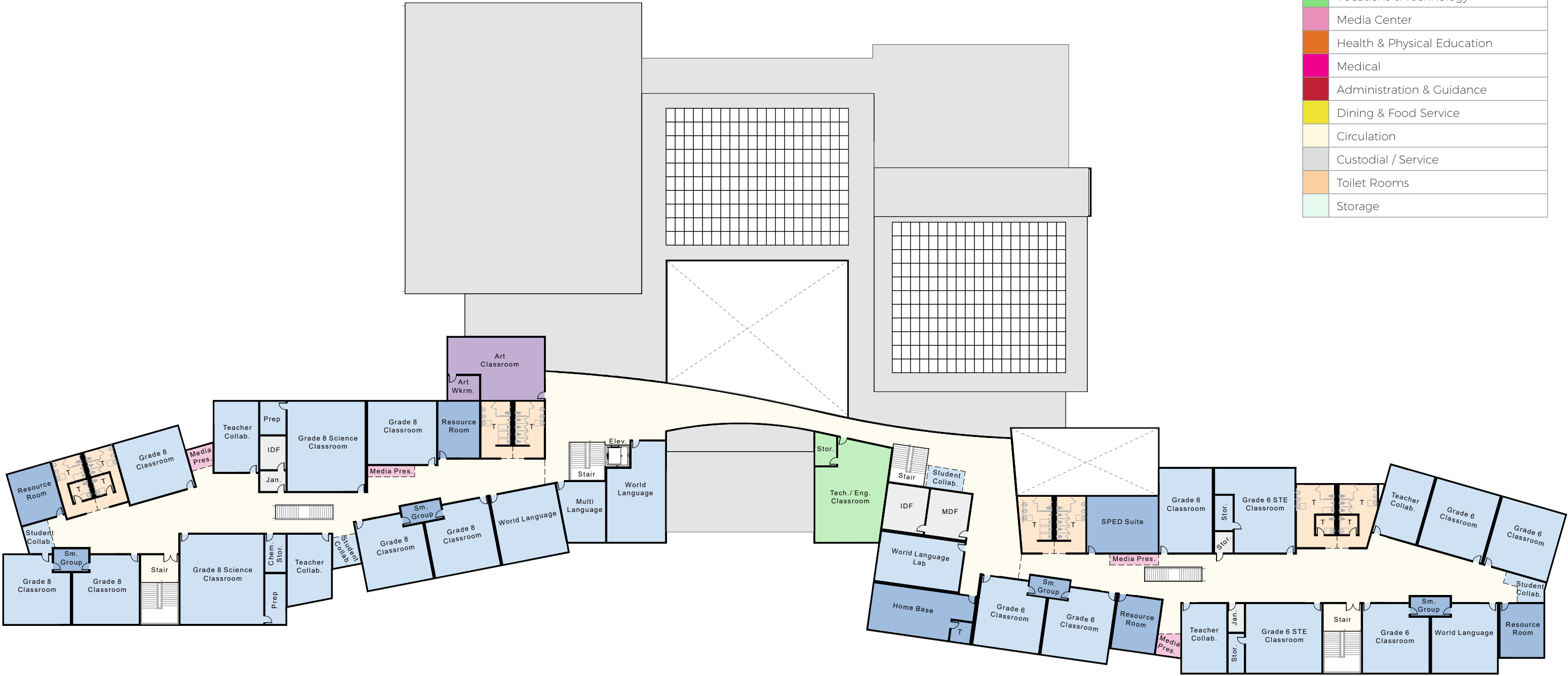
9e FLOOR 2

PROGRAM LEGEND	
	Core Academic Spaces
	Special Education
	Art & Music
	Vocations & Technology
	Media Center
	Health & Physical Education
	Medical
	Administration & Guidance
	Dining & Food Service
	Circulation
	Toilet Rooms
	Storage



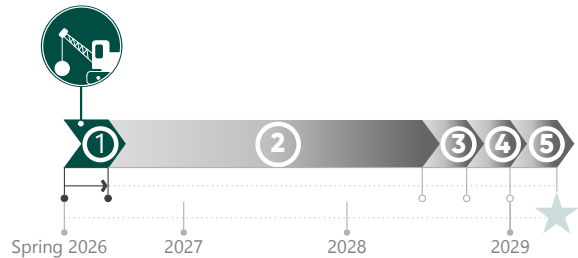
9e FLOOR 3

PROGRAM LEGEND	
[Light Blue]	Core Academic Spaces
[Dark Blue]	Special Education
[Purple]	Art & Music
[Green]	Vocations & Technology
[Pink]	Media Center
[Orange]	Health & Physical Education
[Magenta]	Medical
[Red]	Administration & Guidance
[Yellow]	Dining & Food Service
[Grey]	Custodial / Service
[Light Orange]	Toilet Rooms
[Light Green]	Storage

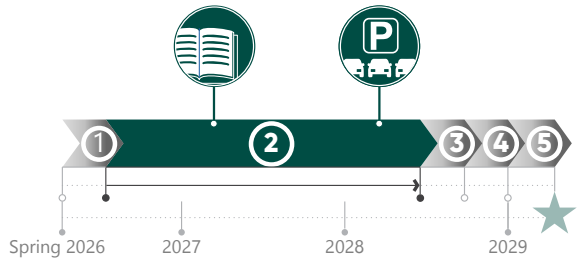


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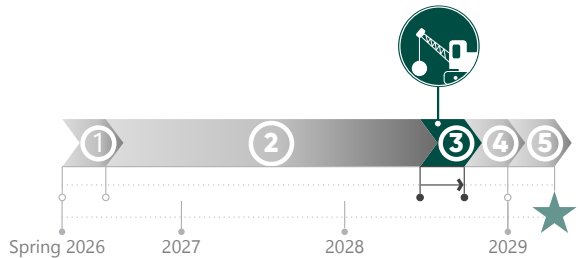
Conceptual Phasing & Construction Impact **9e**



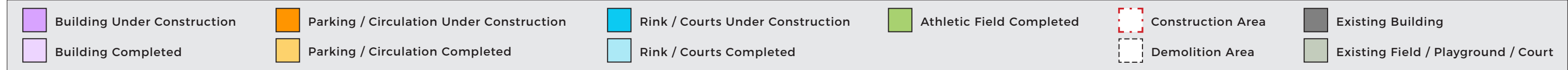
Phase 1
Spring 2026: Contractor mobilization; construct temporary parking areas for existing Galvin Middle School.
June 2026: Demolish existing parking / circulation, existing hockey rink and existing athletic field with associated equipment. Prepare site for new construction.



Phase 2
June 2026: Begin construction of new 3 story school.
June 2028: Substantial completion of 3 story school.
August 2028: Occupancy of new building.

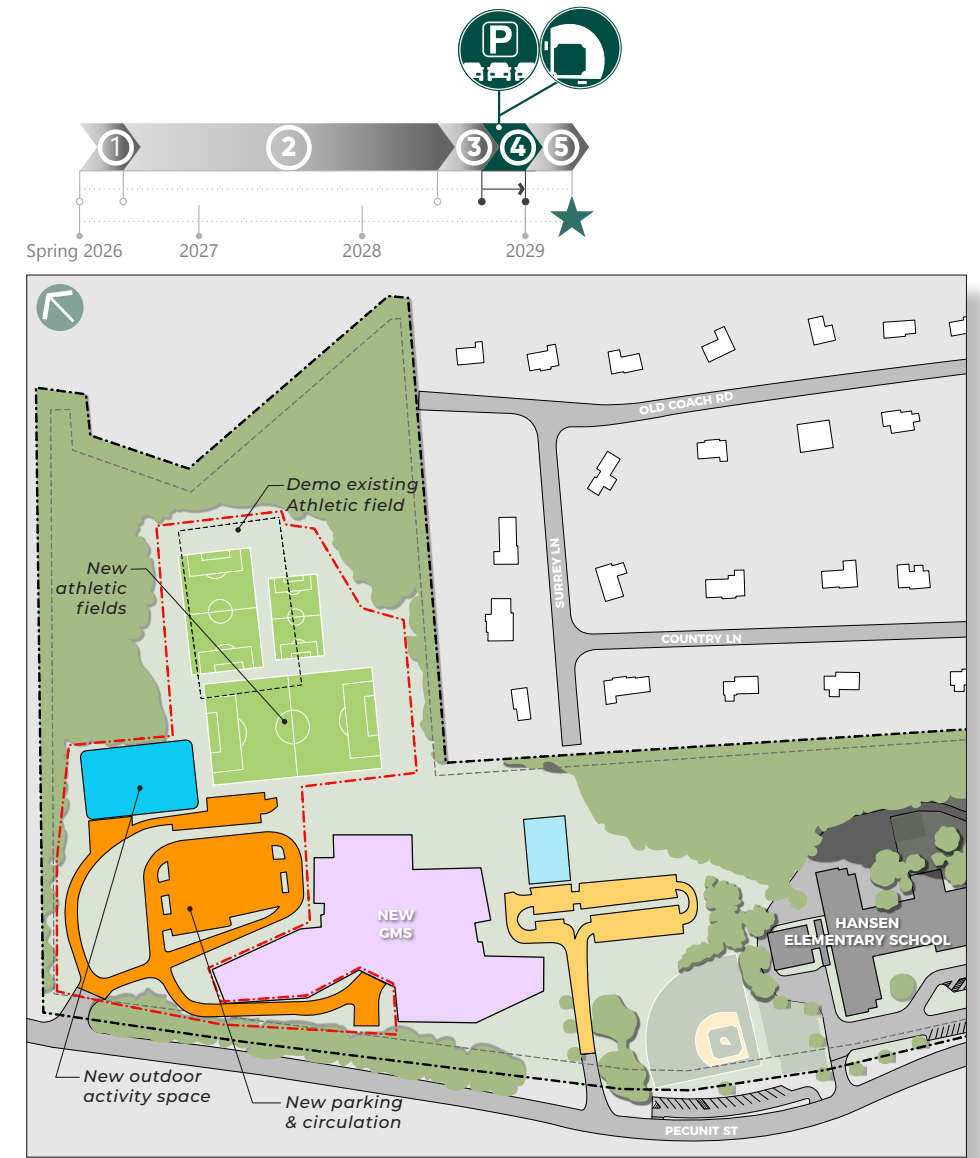


Phase 3
July 2028: Demolition of existing Galvin Middle School, preschool, and associated parking & circulation



FINAL EVALUATION

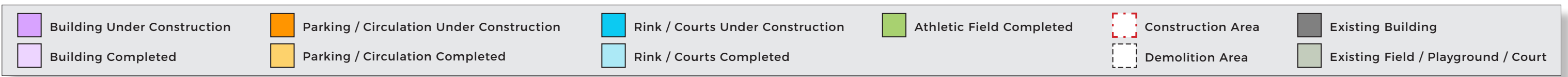
9e Conceptual Phasing & Construction Impact



Phase 4

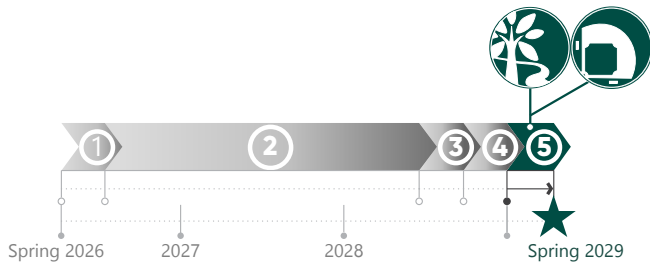
June 2028: Demolish existing athletic field & prepare for new athletic fields. Construct new parking / circulation & outdoor activity space.

Fall 2028: Completion of new athletic fields, outdoor activity space, and parking / circulation.



FINAL EVALUATION

Conceptual Phasing & Construction Impact **9e**



Phase 5

Fall 2028: Finish construction of new outdoor activity spaces.

Spring 2029: Complete site work.

TOTAL ESTIMATED DURATION:
±36 months



FINAL EVALUATION

9e

Site & Utilities Analysis***Utilities***

The existing conditions utility information was found using aerial imagery and record documents that were available. Future development options would require that the existing utilities to be located and verified on site and included in the design plans.

Sewer

According to readily available Town sewer maps, sewer pipes enter the site from the west, collecting sewage from the schools and neighborhoods to the east and west of the site and continues to flow north through the wetlands to the north. There is no sewer in Pecunit Street. Pipe sizes transition between 8", 10" and 18" mains as the pipes travel from south to north. Preferably, pipe sizes do not reduce and then increase in size further downstream again. DPW should be consulted to determine if there are any known sewer issues. The Town does not have a sewer treatment facility and is on the MWRA system. In this option, the existing sanitary infrastructure may need to be rerouted to avoid the new school building.

Water

Readily available water maps are not available. The Site Plan of Land for the school property does show existing water service within the service access road north of the existing building. MassDOT Construction Documents for the Middle School show an existing water line within Pecunit Street along the southern access driveway to the school, however there is no indication this is a main. The Town's Master Plan indicates that the Town has seven groundwater wells, two booster pump stations, five water storage facilities, and two water treatment facilities. The nearest well

is located on Charles Drive approximately 0.25-miles from the site. Based on hydrant locations it does not appear that water mains are located in Pecunit Street. In 2018, the last year listed in the Master Plan, Canton received 62% of its water from the MWRA with the remainder supplied from the Town wells.

Drainage

Record documents and survey show approximately ten (10) catch basins throughout the developed portion of the Galvin Middle School site. The closed drainage system appears to discharge into the onsite wetland areas delineated in front of the school and to the north and northwest of the school building. It is unknown if the current drainage system provides any treatment for total suspended solids (TSS). The proposed drainage system will generally follow the existing drainage patterns. In addition to providing adequate stormwater conveyance for the proposed development, the drainage system will implement measures to attenuate the site runoff and match existing peak runoff values. The system will need to address water quality by removing 80% of total suspended solids, which can be accomplished with a combination of deep sump catch basins, hydrodynamic separators, and bioretention. All site drainage will be designed to meet the Massachusetts Department of Environmental Protection stormwater standards and any Town of Canton drainage requirements.

Gas

Eversource Energy is the supplier of natural gas to the Town of Canton. At this time, the location of existing gas facilities has not been confirmed. Based on the design intent for HVAC systems, appliances, and other elements, this design option will

FINAL EVALUATION

require no gas service. Should the design intent change to require gas service, the availability of gas service, capacity of existing service, and required demand of the proposed new school will need to be confirmed as the design progresses. All improvements will be coordinated with Eversource.

Electric

Eversource Energy is the supplier of electricity to the Town of Canton. Electricity appears to be supplied below ground. Future development options would require that the existing system be located and analyzed for capacity and the need for a new transformer should be evaluated prior to finalizing site plans. Coordination should occur with Eversource Energy regarding any service improvements.

Telecommunications

At this time, the location of existing telecommunications lines are unknown and will need to be confirmed as the design progresses. Future development options would require that the existing system be located and analyzed for applicability to current needs. Coordination should occur with the Canton Public Schools Information Technology Officer and the relevant telecommunication companies regarding any service improvements.

Proposed Infrastructure

It is anticipated that Option 9e will require new water, sanitary sewer, and electrical services for the proposed new building. Existing capacities for services connecting to the public mainlines will need to be verified and possibly upgraded. It is also anticipated that new drainage infrastructure will need to be installed in order to provide adequate conveyance

for the proposed roof flows and site improvements. Underground facilities and stormwater quality treatment will also need to be provided for the proposed new building and site improvements. ♦

FINAL EVALUATION

9e

Structural Systems Narrative**Structural Overview**

The following narrative is in accordance with the 9th Edition of The Massachusetts State Building Code and incorporating IBC 2015 with Massachusetts amendments.

The proposed scheme will consist of construction of a new, 3-story structure on the existing school Site constructed in a single phase.

Substructure***- Foundations***

Based on the foundations of the existing school, the columns of the proposed structure would bear on reinforced concrete spread footings and the perimeter foundation walls would bear on continuous reinforced concrete strip footings extending at least 4 ft. - 0 in. below grade. With the assumed bearing capacity of the soil of 2 tons/sf, a typical interior footing would be 9 ft. - 0 in. x 9 ft. - 0 in. x 24 in. deep and the typical exterior footings would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep in the three story areas. In the double story areas, typical interior footings would be 8 ft. - 0 in. x 8 ft. - in. x 24 in. deep and typical exterior footings would be 7 ft. - 0 in. x 7 ft. - 0 in. x 24 in. deep. In the single story areas, typical interior footings would be 7 ft. - 0 in. x 7 ft. - in. x 24 in. deep and typical exterior footings would be 6 ft. - 0 in. x 6 ft. - 0 in. x 24 in. deep. Typical interior and exterior footings at the Auditorium and the Gymnasium would be 8 ft. - 0 in. x 8 ft. - 0 in. x 24 in. deep. The exterior foundation walls would be 14 to 16 in. thick, reinforced cast-in-place concrete walls on 24 to 36 in. wide continuous reinforced concrete strip footings around the perimeter of the building extending a minimum of 4 ft. - 0 in. below finished grade.

- Slabs-on-Grade

Based on the recommendations of the Geotechnical Engineer, the lowest level of the proposed structure would be a 5 in. thick concrete slab-on-grade reinforced with welded wire fabric over a vapor barrier on 2 in. thick rigid insulation on 8 in. of compacted granular structural fill and a base course of 8 in. of compacted gravel.

Superstructure***- Typical Floor Construction***

A 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. The weight of the structural steel is estimated to be 14 psf for the typical framing. The second floor structure will support the Auditorium floor.

- Typical Roof Construction

The roof construction would be galvanized, corrugated 3 in. deep, Type 'N' metal roof deck spanning between wide flange steel beams and girders. At locations of roof supported mechanical equipment, a concrete slab will be provided similar to the typical supported slab. The weight of the structural steel is estimated to be 14 psf.

- Low Roof Structure

The roof would be a continuation of the adjacent floor and would be similar to the typical floor construction of 5 1/4 in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. This roof will be supporting the mechanical units. The units would be screened by a screen comprised of structural steel posts and beams. The weight of the structural steel is estimated to be 15 psf.

FINAL EVALUATION

- Gymnasium and Auditorium Roof Framing

The roof construction would be acoustic, galvanized, corrugated 3 in. deep, Type 'NA" metal roof deck at the Gymnasium and the Auditorium, spanning between long span steel joists. The weight of the steel joists and structural steel framing is estimated to be 14 psf.

- Vertical Framing Elements

Columns

Columns will be hollow structural steel columns. Typical columns would be HSS 8 x 8 columns and the columns at the double height spaces would be HSS 12 x 12.

- Lateral Load-Resisting System

The proposed structure will be divided in to two or three parts by way of one or two expansion joints. The typical lateral load resisting system for the school would be ordinary concentric braced frames comprised of HSS structural steel members.

- Expansion Joints

The school structure will be divided in to two or three parts separated by way of expansion joints. ◆

FINAL EVALUATION

9e

Major Building Systems Narratives

Mechanical Systems**Design Criteria**

Interior environmental conditions will be based on Massachusetts Code 780 CMR 12 and ASHRAE *Standard 55-2010*.

Ventilation of spaces will be designed to meet or exceed the requirements of the latest edition of the Massachusetts State Building Code, the ICC International Mechanical Code and ASHRAE Standard 62-2010, *Ventilation for Acceptable Indoor Air Quality*.

HVAC equipment will be selected to comply with the 2021 edition of the International Energy Conservation Code and ASHRAE 90.1-2016.

The HVAC systems will be designed to meet the acoustical requirements of ANSI S12.60-2002. The American National Standards Institute developed this standard specification and design guideline to help eliminate acoustical problems in the design stage of a project. Essentially, the steady background noise level in core learning areas should not exceed an NC of 35.

Heating and Cooling System

Heating and cooling will be provided by all-electric heat pump systems. The systems will be comprised of Variable Refrigerant Flow (VRF), roof mounted Heat pump Energy Recover Ventilators (ERV) and heat pump roof top units (RTU).

The VRF system shall be made up of indoor evaporators, branch control boxes (BC) and roof or grade mounted air-cooled condensers. The system utilizes refrigerant as the heat/cooling medium. The refrigerant shall flow from the condensers to the branch control boxes. The branch control boxes are used as control devices directing the liquid refrigerant or gas refrigerant to

the indoor evaporators depending on the space heating or cooling needs. This type of VRF system is known as a heat-recovery system. The branch control boxes can take the heat recovered from the cooling zone and use it to warm up the room in heating mode. This way, the compressor cooling or heating requirements are reduced, which saves energy.

Five (5) heat pump ERVs shall be used to provide minimum outdoor air ventilation to all spaces utilizing a VRF system for heating and cooling. The ERV shall be comprised of supply fan, exhaust fan, desiccant wheel or fixed plate energy recover exchanger, and a DX heat pump w/ hot gas reheat. The ERV will either preheat or precool / dehumidify the incoming ventilation air before being distributed to the spaces. The ventilation air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Heat pump RTUs shall provide heating and cooling to the large air spaces such as the student commons, Media Center, Gymnasium and Cafeteria / Stage. The RTUs shall be comprised of supply fan, exhaust fan, and a DX heat pump condenser. The RTUs will either heat or cool supply air before being distributed to the spaces. The supply air shall be made up of return air and outdoor air. The supply air will be distributed to the space via galvanized ductwork system. Exposed ductwork shall not be insulated. Ductwork enclosed in chases and above concealed ceilings shall be insulated with R-5 duct wrap.

Air Conditioning System

As part of the base design the following spaces will be provided with air conditioning:

FINAL EVALUATION

- Student Commons.
- Administration area including Principal's Office, Assistant Principal's Office, School Psychologist's Office, Counselor's Office, Adjustment Counselor's Office, Nurse's Office and conference rooms.
- Teacher's planning / work rooms.
- Multipurpose rooms.
- Sped PT / OT spaces.
- Library / Media center.
- Gymnasium.
- Classrooms.
- Music / performing arts areas.
- Cafeteria and Kitchen
- Auditorium

Summary of HVAC Systems***Classrooms, Administration, Multi-purpose Rooms, Music Rooms, and Teachers' Workrooms:***

VRF system with decoupled ventilation from ERVs. The energy recovery ventilation units will supply the classrooms with tempered air via a system of ductwork. Energy recovery rooftop units are an effective way of reducing the overall energy consumption of a building. Energy recovery rooftop units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.
- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- Energy recovery wheel or fixed plate.
- DX heating / cooling coil.
- Hot gas reheat coil.
- Condensing unit.

- Pre-heat electric coil.
- Variable frequency drives.

Each classroom will be furnished with two (2) indoor evaporators. Small type spaces shall be furnished with one (1) indoor evaporator. The evaporators shall maintain space setpoint temperatures independently of the ERVs. This air circulates throughout the rooms and is drawn back up to the return grille of the evaporators. This air circulation produces even and consistent temperatures throughout the room.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the ERV units. This energy of the exhaust air leaving the classrooms is recovered at the energy recovery rooftop units.

The room thermostats control the operation of the evaporators to maintain space temperature setpoints.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space. CO₂ sensors shall modulate the position of the terminal boxes located in the ventilation supply ductwork prior to discharge in the space.

Learning Commons, Media Center, Gymnasium, Cafeteria and Auditorium:

Heat pump roof top units will supply these spaces with conditioned air. The conditioned air will be distributed via a system of ductwork and ceiling diffusers or sidewall high throw grilles. The roof top units will be furnished with the following components:

- Double-wall insulated casings.
- Supply and exhaust fans.

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- MERV 8 pre-filters and MERV 13 final filters for superior indoor air quality.
- DX heating / cooling coil.
- Condensing unit.
- Hot gas reheat.
- Pre-heat electric coil.
- Variable frequency drives.

A portion of the room air is exhausted to the outside as a relief for the primary air entering through the indoor air handling units.

The rooftop units will utilize the demand-controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO₂ in the space.

Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

Kitchen:

The kitchen areas will be handled by the cafeteria ERV, The ERV, thru controls, will provide tempered make-up air to the kitchen in order to offset the amount of air being exhausted through the kitchen hood.

The kitchen hood exhaust system shall be provided with a Mellink kitchen hood exhaust control system, which is designed to vary the speed of the kitchen hood exhaust fan in response to the intensity of the cooking operations taking place. Essentially, the fan will operate at higher speeds when higher heat and smoke producing cooking is taking place. The Mellink system will also modulate the outside air damper and fan speed of the make-up air unit.

Controls

Griffith & Vary, Inc. recommends this facility be furnished with a Building Management System. This system will feature full Digital Direct Controls (DDC). This system will be capable of controlling the following:

- Space temperature set point.
- Start and stop of all energy recovery rooftop units and air-handling units.
- Start and stop heat pumps.
- Schedule occupied / unoccupied times for various spaces.
- Optimization of plant efficiency.
- Monitoring of mechanical equipment (fans, pumps, chiller, etc.) and indication of any alarms, which may result from equipment failures.

To save energy required to heat or cool outdoor air, carbon dioxide sensors will be employed in the gymnasium, auditorium, and Student Commons to allow a reduction of outdoor air during periods of low occupancy and motion sensors will also be utilized to allow closure of outdoor air dampers when assembly areas are unoccupied. Classrooms will also have occupancy sensors to modulate dampers in the supply air duct branches as a means of saving energy during periods when the classrooms are unoccupied.

HVAC Life-Cycle Cost Estimate

Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the HVAC systems in this particular school project. It should be noted that the following estimates are based on schematic level

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plans and system sizes and will most likely change as the project design develops more completely.

The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated with the aid of the latest version of the Hourly Analysis Program published by the Carrier Corporation, which utilized typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

Summary of Costs:

- HVAC Construction Cost: \$7,156,175
- HVAC Systems Annual Electric Energy Cost: \$36,550
- HVAC Systems Annual Gas Energy Cost: \$0
- HVAC Systems Annual Maintenance Cost: \$11,009

Electrical Systems

Electric Service

The building will be provided with two electric services via two pad mounted transformers located on the site as provided by the electric utility company. Primary service conduits in two concrete duct banks will be provided from two electric utility poles to the two transformers via electric utility company standard manholes. Secondary service feeders and conduits in two concrete duct banks will be provided from the two transformers to the two switchboards. The electric utility company meters will be mounted on the transformers.

The building fire pump electric service will be provided via one of the pad mounted transformers located on site as provided by the electric utility company. Secondary service feeders and conduits in concrete duct bank will be provided from the transformer to the fire pump.

Telephone Service

Telephone service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Cable TV Service

Cable TV service (2) 4" conduits will be provided from a utility pole to the building demarcation point (MDF Room).

Power Distribution

Preliminary load calculations indicate that the two switchboards will each be rated at 3000 amperes at 277/480 volt, three phase, four wire. The switchboards will be provided with surge protection devices. Switchboard distribution sections will feed 277/480 volt panelboards and major Mechanical and Plumbing equipment. Panelboards will be dedicated to specific receptacle, lighting, mechanical loads, parking / exterior lighting, and Electric Vehicle Charging Stations, with each panelboard provided with an Owner meter for monitoring. A dedicated meter will be provided for on-site generation. Dry-type transformers will be provided to distribute 120/208 volt power for branch circuit panelboards and the Kitchen panelboards. One of the kitchen panelboards will be provided with a shunt trip circuit breaker which will trip if fire suppression under hoods is initiated, shutting down all circuits under hoods. Panelboards with surge protection devices for computers will be provided, fed from computer grade K-rated transformers. Zero sequence harmonic filters connected

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to the computer panelboards will be provided to reduce neutral currents. Shops with equipment will be provided with panelboards including shunt trip main circuit breakers and mushroom type shut off switches which can be pushed to shut down power to the panelboards in event of an emergency. Other shops will be provided with dedicated panelboards.

Emergency Power System

Two diesel fuel generators with sound attenuated, weatherproof enclosures will be provided. Preliminary load calculations indicate that the generators will each be rated at 750kW at 277/480 volt, three phase, four wire. Four automatic transfer switches (ATS's) will be provided to separate emergency from optional standby loads. The two emergency ATS's and associated emergency panelboards will be located in two hour rated closets with two hour rated feeders. The two optional standby ATS's and associated panelboards will be located in normal electric rooms. Emergency and optional standby panelboards will be provided with surge protection devices as required by the National Electrical Code. The generators will supply loads as selected by the Owner, as follows:

Lighting:

- Exterior building mounted lighting
- Mechanical Room lighting
- Electrical rooms lighting
- Egress Corridors and Stairs lighting
- IDF and MDF lighting
- Main Office lighting
- Principal Office lighting
- Nurse Office lighting
- Phys Ed Office lighting
- Elevator Machine Room lighting
- Gymnasium lighting
- Custodian's Office lighting
- Custodian's Receiving and General Supply lighting
- Interior windowless spaces lighting
- Elevator lighting and pit lighting
- Kitchen lighting
- Student Dining lighting
- Toilet rooms lighting
- Make-up Air Unit lighting
- Emergency Control Center lighting

Power:

- Fire Alarm System
- Heating System including Roof Top Heat Pump Units for the Gymnasium, Student Dining, Kitchen, Emergency Control Center, and associated receptacles and controls, and Electric Unit Heaters
- Entire Main Kitchen
- Bidirectional amplifier
- Toilet Room Flush Valves and Sink Sensors
- Custodians Office, a receptacle at work station
- Custodians Receiving and General Supply, a receptacle at work station
- Phys Ed Office, a receptacle at work station
- P.O.S. at Student Dining
- Gymnasium receptacles
- Student Dining receptacles
- General Office, a receptacle at work station
- Principal Office, a receptacle at work station
- Nurse Office, a receptacle at work station

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- One Elevator power, Machine Room receptacle, pit receptacles, and dampers
- Water Heaters and Circulation pumps
- Generator block heater and battery charger
- Technology equipment including:
- Two IDF's each with Two Technology Racks, Two 120 volt, 20 amp, single phase receptacles per Rack, Four Receptacles per IDF = 24 receptacles, includes telephone system
- MDF Technology Rack Receptacles, 8 racks each with two 120 volt, 20 amp, single phase receptacles = 16 receptacles, includes telephone system, and 1 rack with one 120 volt, 20 amp, single phase receptacle
- VRF unit for MDF and IDF's with condensate pump receptacle
- Security System including plywood backboard security circuits (2 IDF's and MDF), electrified door power supplies, and CCTV cameras (powered by switches in MDF and IDF's)
- Plywood backboard clock circuits (2 IDF's and MDF)
- Security Office receptacles
- Fire Pump
- Domestic Water Pump (if applicable)
- Emergency Control Center receptacles

Fire Alarm System

An addressable manual and automatic fire alarm system will be provided. The fire alarm system will call the Fire Department or a Central Station via master box and / or telephone dialer. The fire alarm control panel will be located in the Main Electric Room or an area as so directed by the Fire Department. A remote annunciator panel will be provided in the Vestibule at the

Main Lobby and where required by the Fire Department. A map of the entire building will be framed and mounted adjacent to the annunciator. Keyed boxes will be provided outside the Fire Department entries. Manual pull stations will be located within five feet (5') of each egress door and at the entrance to each Stair. Additional pull stations will be provided as required by Code. Heat detectors will be provided at the top of the elevator shaft and any other areas not provided with protection by the fire suppression system. Smoke detectors will be provided in the Corridors, in Stairs at each floor level, in the Elevator Machine Room, and at all elevator landings for early detection of smoke for recall. All devices including tamper, flow, pressure switches, and PIV, associated with the fire suppression system will be connected to the fire alarm system. Audio / visual appliances will be provided in the Corridors, Classrooms and all large areas such as the Gymnasium, Media Center, Auditorium, and Student Dining. Visual devices will be provided in Toilet and Conference rooms. Mechanical equipment shall be shut down by the fire alarm system as required by code.

Lighting:***- Interior:***

In general, highly efficient LED lighting fixtures will be provided throughout the building. Lighting levels will be in accordance with I.E.S. (Illuminating Engineering Society of North America) recommendations and the Massachusetts State Building Code energy requirements.

- Exterior:

Wall and pole mounted site lighting fixtures will be LED type.

- Lighting Controls:

Lighting fixtures will be controlled primarily by room occupancy sensors and local

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low voltage dimmers. Lighting fixtures within side lighted areas as defined by the 2021 IECC and ASHRAE 90.1 2016 will be daylight harvested via dimming drivers and photosensors. Lighting control relay panels will be provided to control exterior lighting and control interior lighting where time of day control is required.

- Devices:

General convenience receptacles will be located throughout the building as required. Receptacles provided in Toilet rooms, near sinks, the Kitchen, and outdoors will be provided with ground fault protection. Circuiting will be provided to Kitchen, Mechanical, and Plumbing equipment, and miscellaneous loads as required.

Automatic receptacle control for at least 50% of all 120 volt 15 and 20 amp receptacles in Private Offices, Conference Rooms, rooms used primarily for Printing and / or copying functions, Break Rooms, Classrooms, and individual Workstations will be provided as required by 2021 IECC and ASHRAE 90.1 2016. These receptacles will be controlled via the room lighting occupancy sensors, however receptacles and lighting will be separately metered by the Owner meters as attached to the panelboards which they are fed from.

Bi-directional Amplifier System

A bi-directional amplifier with coaxial cabling above accessible ceilings will be provided to amplify Fire Department and Police frequencies to ensure that there are no “dead” spots in the building for communication within building.

Technology Systems Back Box and Conduit System

A telephone / data / video / security / clock / speaker conduit system consisting of empty back boxes and conduit with pull

strings to above accessible ceilings will be provided for technology. Cable tray will be provided in MDF and IDF rooms for low voltage wiring.

PV System Conduit System

An empty conduit system with pull strings will be provided for the PV system consisting of photovoltaic panels and an inverter. Conduits will be provided from the switchboard to an exterior mounted disconnect switch for shutting down the PV system if needed. Conduits will also be provided from the exterior disconnect switch to the inverter and from the inverter to the roof.

Electric Vehicle Charging Stations

Electric vehicle charging stations will be provided in accordance with LEED Green Vehicles Credit.

Destratification Fans

Destratification fans will be provided in the Gymnasium.

Mass Notification System

A mass notification system will be provided including control panel, info alarm graphic annunciation and control, addressable speakers, and amber lenses.

Lightning Protection

The building will be provided with a lightning protection system made up of air terminals on the roof with downlead conductors to ground.

Plumbing Systems

The following is the Plumbing system narrative, which defines the scope of work and capacities of the Plumbing system as well as the Basis of Design.

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Codes

All work installed under Section 220000 shall comply with the MA Building Code, MA Plumbing Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Plumbing work and all items incidental thereto, including commissioning and testing.

General

The Plumbing Systems that will serve the project are cold water, hot water, tepid water, sanitary waste and vent system, Garage waste & Vent, grease waste system and storm drain system. The building will be serviced by Municipal water and Municipal sewer system. All Plumbing in the building will conform to Accessibility codes and to water conserving sections of the Plumbing Code.

Drainage System

Soil, waste, and vent piping system is provided to connect to all fixtures and equipment. System runs from 10 feet outside building and terminates with stack vents through the roof. A separate grease waste system starting with connection to an exterior grease interceptor running thru the Kitchen and Served area fixtures and terminating with a vent terminal through the roof. Point of use grease interceptors are to be provided at grease laden kitchen fixtures per the plumbing code. Storm drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building. Drainage system piping will be

service weight cast iron piping; hub and spigot with gaskets for below grade; no hub with gaskets, bands and clamps for above grade 2 in. and larger. Waste and vent piping 1-1/2 in. and smaller will be type 'L' copper.

Water System

New 6-inch domestic water service from the municipal water system will be provided for the New Building. A meter and backflow preventer will be provided. Cold water distribution main is provided. Non-freeze wall hydrants with integral back flow preventers are provided along the exterior of the building. Two (2) Non-potable water systems will be provided for science classrooms, with a dedicated electric water heater, recirculation pump, & mixing valve. A pump will re-circulate hot water from the piping system. Water temperature will be 120 deg. to serve general use fixtures. Water piping will be type 'L' copper with wrought copper sweat fittings, silver solder or press-fit system. All piping will be insulated with 1 in. thick high-density fiberglass.

Fixtures

Furnish and install all fixtures, including supports, connections, fittings, and any incidentals to make a complete installation. Fixtures shall be the manufacturer's guaranteed label trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material. Vitreous china and acid resisting enameled fixtures, including stops, supplies and traps shall be of one manufacturer by Kohler, American Standard, or TOTO. Supports shall be Zurn, Smith or Watts. All fixtures shall be white. Faucets shall be American Standard, T&S or Chicago. Fixtures shall be as scheduled on drawings.

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- Water Closet: High efficiency toilet, 1.11 gallon per flush, wall hung, vitreous china, siphon jet. Sensor operated 1.11 gallon per flush-flush valve.
- Urinal: High efficiency 0.125 gallon per flush urinal, wall hung, vitreous china. Sensor operated 0.125 gallon per flush-flush valve.
- Lavatory: Wall hung / countertop ADA lavatory with 0.5 GPM mixing faucet with sensor programmed for 10 second run-time cycle.
- Shower: Tile shower by others. Shower head with 1.5 GPM flow rate, with Shower mixing valve, and Floor drain.
- Sink: ADA stainless steel countertop sink 1.5 GPM faucet and aerator.
- Drinking Fountain / Bottle Filler: Hi-low wall mounted electric water cooler, stainless steel basin with bottle filling stations.
- Janitor Sink: 30 x 30 Terrazzo mop receptor

Drains

Drains are cast iron, caulked outlets, nickaloy strainers, and in waterproofed areas and roofs shall have galvanized iron clamping rings with 6 lb. lead flashings to bond 9 in. in all directions. Drains shall be Smith, Zurn or Watts.

Valves

Locate all valves so as to isolate all parts of the system. Shutoff valves 3 in. and smaller shall be ball valves, solder end or screwed, Apollo, Watts or Milwaukee.

Insulation

All water piping shall be insulated with snap-on fiberglass insulation Type ASJ-SSL, equal to Johns Manville Micro-Lok HP.

Cleanouts

Cleanouts shall be full size up to 4 in. threaded bronze plugs located as indicated on the drawings and / or where required in soil and waste pipes. Cleanouts for Special Waste System shall be Zurn #Z9A-C04 polypropylene cleanout plug with Zurn #ZANB-1463-VP nickel bronze scoriated floor access cover.

Access Doors

Furnish access doors for access to all concealed parts of the plumbing system that require accessibility. Coordinate types and locations with the Architect.

Water Heaters

Domestic water heating will be supplied through duplex electric resistant type water heaters. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures. Dedicated water heating will be provided for Non-Potable water, (1) electric water heater per looped system. System is to be equipped with thermostatically controlled mixing devices to control water temperature (120 F) to the fixtures.

Fire Protection

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system as well as the Basis of Design.

Codes

All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

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Design Intent

All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.

General

In accordance with the provisions of the Massachusetts Building Code, a school building of greater than 12,000 s.f. must be protected with an automatic sprinkler system.

Description

The building will be served by a new 8-inch fire service, Double check valve assembly, wet alarm valve complete with electric bell, and fire department connection meeting local thread standards. System will be an automatic sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2013. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain.

All areas of the building, including all finished and unfinished spaces and combustible concealed spaces will be sprinklered. All sprinkler heads will be quick response, pendent in hung ceiling areas and upright in unfinished and spaces without ceilings.

Basis of Design

The mechanical rooms, kitchen, science classrooms, and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all

other areas are considered light hazard.

Required Design Densities:

- Light Hazard Areas 0.10 GPM over 1,500 s.f.
- Ordinary Hazard Group 1 0.15 GPM over 1,500 s.f.
- Ordinary Hazard Group 2 0.20 GPM over 1,500 s.f.

Sprinkler spacing (max.):

- Light Hazard Areas: 225 s.f.
- Ordinary Hazard Areas: 130 s.f.

Piping

Sprinkler piping 2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler / standpipe piping 3 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

Fittings

Fittings on fire service piping, 2 1/2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

Joints

Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints

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on piping, 2 1/2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

Double Check Valve Assembly

Double check valve assembly shall be MA State approved, U.L./F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

Double check valve detector assembly shall be of one of the following:

- Watts Series
- Wilkins
- Conbraco Series

Technology Systems

The design of the technology infrastructure for a New Galvin Middle School will include the systems and components listed below, which are organized according to CSI Specification sections.

271000 Structured Cabling

The new network design will support up to 10GHz over Category 6A to the desktop.

Twelve pairs of single mode OS2 fiber and twelve pairs of multi-mode OM4 fiber will be provided from the MDF to each IDF in the building. All fiber shall be terminated with duplex LC connectors. Two APC / Dell server cabinets with mounting hardware shall be provided in the MDF for Owner servers. Two post racks shall be provided for network switches.

Cat 6A cabling will be provided for data, voice, security video (CCTV), and wireless access points (four data drops at

each wireless access point location above classroom ceiling spaces). Wireless access point outlet placements are intended to provide the capability for complete wireless coverage throughout the school.

Administrative locations shall be provided with two data ports and one voice port per desk location.

Each teacher location will be wired with two data ports and a voice port if a wall phone location in the classroom is not provided. Two data ports shall be provided opposite the teaching location in each room. Category 6A cabling will be provided for the owner provided phone system (support for Voice over IP). Classrooms will also have three data ports located behind each interactive display (see 274000 below for display).

The science / technology labs will be cabled as a typical classroom, with wireless access for student use. Four ceiling data ports for a wireless access point shall be provided. In addition, the equipment specified below in 274000 for a typical classroom shall be included in each lab.

272100 Network Electronics

New network electronics (switches) shall be furnished, programmed and installed by the owner.

272133 Wireless Access Points

New wireless access points shall be furnished and installed by the owner.

273000 Voice Communications

The phone system, handsets, installation and programming shall be provided and installed by the Owner. The building shall be cabled to support a voice over IP phone system using Cat 6A.

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274000 Audio-Video Technology

Classrooms and Science Labs: video and audio presentation equipment (wall mounted 75" 4k interactive LCD / LED display with wireless option, voice lift system with microphones and amplifier, and up to four ceiling speakers) will be permanently installed in classrooms, labs and designated rooms. A presentation camera (minimum 5MP), shall be provided in each classroom / Lab. The PC / laptop in each classroom shall be provided by the Owner.

Any audio and video presentation equipment in the auditorium shall be provided by the Theater Section.

Any audio and video equipment for the gym shall be provided by the Theater Section

Any audio and video equipment in the student dining area shall be provided by the Theater Section.

One 86" 4k display for local presentation of material shall be provided.

A portable sound system shall be provided.

Various office spaces (principal, vice principals, SROs, custodial) may have displays, ranging from 50" to 70". For these displays, a local HDMI input at the desk location shall be provided for the display of owner content if desired.

Designated hallways may receive digital signage displays. Any digital signage devices and software shall be furnished and installed by the owner.

Any Band and Chorus audio and recording equipment shall be provided by the Theater Section.

275000 PA System

A networked based public address system shall be provided. Digital clocks synchronized with a master clock shall be provided in every classroom, conference room, and in offices. The PA system shall be integrated with the owner provided phone system to allow the use of the phone system for paging within the building. A call button with plastic guard cover shall be placed in each classroom opposite the phone location for emergency notifications.

277000 Video Communications

Digital signage devices for the displays mentioned above and software shall be provided and installed by the Owner. An IPTV system shall not be provided.

280000 Electronic Safety & Security

An access control system shall be provided. Card readers shall be located as designated on the drawings. The main entry shall be equipped with a video entry system. All door contacts shall be wired to both the access control system and the intrusion detection system. With all door contacts being monitored by the access control system, a higher level of situational awareness is provided to the staff regarding entrances and exits of the building while the building is occupied. Traditionally, the intrusion detection system only monitored and reported door alarms during unoccupied times when the system is armed. Leveraging the access control system to also monitors the door contacts allows the staff to receive door alarms during occupied times when the intrusion detection system is typically disarmed. An enrollment station with dual sided laminating color badge printer, card reader, camera, tripod, back drop and PC with monitor shall be provided. 500 printable proximity cards shall be provided.

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Exterior doors and entry vestibule doors shall not have mechanical dogging. These doors will have latch monitoring, tied into the access control system, for monitoring door latches during occupied times of the building.

An intrusion detection system and related components shall be provided. Every first floor room with a window shall have a motion sensor. Motion sensors shall also be placed within the hallways, in vestibules and at strategic locations.

An indoor / outdoor Video Surveillance System (IP based) will be provided. Coverage shall include entrances, hallways, stairwells, building perimeter, and parking (parking surveillance shall utilize both building mounted cameras as well as pole mounted cameras). Other areas, such as the gym, auditorium, café, and administration area shall be included. Bathroom entrances shall be visible, and pixels per foot shall be designed to 60ppf. All cameras shall be mounted at 8' to 9' above finished floor wherever possible. The video entry system camera shall be included as a camera recording to the Network Video Recorder. All interior and exterior cameras (but not the video entry cameras) will have IR for better low light visibility. Network Video Recorders will be provided for recording these cameras.

260000 Mass Notification System

A Mass Notification System, to include handheld microphone and amber strobes to indicate a security threat / event, shall be furnished and installed by the electrical subcontractor.

A Bi-Directional radio antenna system shall be furnished and installed by the electrical subcontractor for police and fire radio use within the building. ♦

Permitting Requirements - All Options

Site Planning Requirements

Canton Board of Appeals:

Required for any new building. Submission is sent to the Board of Appeals and is reviewed by the Planning Board. The Board of Appeals issues the final decision.

Canton Conservation Commission:

Work within wetlands and /or associated buffers and / or floodplain triggers the need for permitting with the Conservation Commission.

Groundwater Protection Overlay District

Portions of the site are located in the Town's Groundwater Protection Overlay District. The District corresponds with the Zone II well radius associated with the well on Charles Drive. Increasing impervious surface on the site in the District triggers the need for a special permit from the Board of Appeals.

Flood Hazard Overlay District

Portions of the site are located in the Town's Flood Hazard Overlay District. The District corresponds with the FEMA floodplain mapping. Work in the flood zone triggers the need for a special permit from the Board of Appeals.

Use Special Permit

An educational use is permitted in the SRA zone through the receipt of a special permit from the Board of Appeals

Massachusetts Environmental Policy Act (MEPA):

It is not anticipated that any proposed construction activity at the site will trigger MEPA review.

Massachusetts Department of Environmental Protection (MassDEP):

MassDEP will review and comment on Notice of Intent applications filed with the local Conservation Commission.



Summary

There are no constraints which prohibit the current middle school site from serving as a viable location for either an addition / renovation project or a newly constructed school. ♦

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Construction Cost Estimates - All Options

The following cost estimates were provided by PM&C LLC and AM Fogarty in January 2024. ◆



PSR Estimate

**Galvin Middle School
Add/Reno + New Building Options**

Canton, MA

PM&C LLC
20 Downer Ave, Suite 5
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:
Ai3 Architects, LLC

January 16, 2024



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

The costs presented in this PSR Estimate are ONLY for the comparison between the various options. These costs should not be represented as the final construction costs as the information they are based on is extremely preliminary and final construction costs may vary significantly from the PSR costs once the final design has been completed.

This PSR estimate was produced from outline drawings dated December 2023 as well as specifications and other documentation prepared by Ai3 Architects and their design team.

This estimate includes all direct construction costs, General Contractor's overhead and profit and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under Chapter 149 of the Massachusetts General Laws to pre-qualified general contractors, and pre-qualified sub-contractors, open specifications for materials and manufacturers.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- All professional fees and insurance
- Building Permit costs
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Rock excavation; special foundations (unless indicated by design engineers)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction or occupancy phasing or off hours' work, (except as noted in this estimate)



Galvin Middle School
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	GSF	Total Cost - C.149 DBB	Total Cost /GSF	Total Cost - C.149A CMr	Total Cost /GSF
OPTION 1 - BASE REPAIR RENOVATION	131,903	\$84,994,448	\$644.37	\$89,244,170	\$676.59
ADD/RENO SCHOOL OPTION 7A - Grades 5 Thru 8 (With Auditorium)	213,473	\$174,006,920	\$815.12	\$182,707,266	\$855.88
ADD/RENO SCHOOL OPTION 7B - Grades 5 Thru 8 (With Auditorium)	222,630	\$184,676,990	\$829.52	\$193,910,840	\$871.00
NEW THREE STORY SCHOOL OPTION 9B - Grades 5 Thru 8 (Auditorium)	218,350	\$171,547,401	\$785.65	\$180,124,771	\$824.94
NEW THREE STORY SCHOOL OPTION 9E - Grades 5 Thru 8 (Auditorium)	218,350	\$171,655,692	\$786.15	\$180,238,477	\$825.46
ALTERNATES:					
1. Artificial Turf Fields ILO of grass		ADD	\$946,256		
2. Sports Lighting at Fields		ADD	\$1,160,000		



Galvin Middle School
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PSR Estimate**MAIN CONSTRUCTION COST SUMMARY**

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
OPTION 1 - BASE REPAIR RENOVATION				
	May-26			
RENOVATIONS TO EXISTING SCHOOL		131,903	\$348.65	\$45,987,817
REMOVE HAZARDOUS MATERIALS (Excludes design + monitoring costs)				\$2,045,150
SITEWORK - allowance				\$4,598,782
SUBTOTAL TRADE COSTS BUILDING and SITEWORK		131,903	\$399.02	\$52,631,749
DESIGN AND PRICING CONTINGENCY	15.0%			\$7,894,762
ESCALATION	12.0%			\$6,315,810
PHASING & LOGISTICS				\$3,157,905
SUBTOTAL with CONTINGENCIES		131,903	\$530.69	\$70,000,226
GENERAL CONDITIONS	48	MTHS	\$165,000	\$7,920,000
GENERAL REQUIREMENTS	4.0%			\$2,800,009
INSURANCE	1.25%			\$875,003
BONDS	0.75%			\$525,002
PERMIT				Waived
TEMPORARY CLASSROOMS				Excluded
OVERHEAD + PROFIT	3.5%			\$2,874,208
TOTAL OF ALL CONSTRUCTION		131,903	\$644.37	\$84,994,448



Galvin Middle School
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MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
ADD/RENO SCHOOL OPTION 7A - Grades 5 Thru 8 (With Auditorium)				
Addition and Renovation	May-26	213,473	\$467.69	\$99,839,450
Demolish Existing School		40,059	\$15.00	\$600,885
Hazardous Material Abatement				\$2,045,150
SITWORK				\$13,138,410
<hr/>				
SUBTOTAL TRADE COSTS		213,473	\$541.63	\$115,623,895
Design and Estimating Contingency	15.0%			\$17,343,584
Escalation to mid-point of construction	12.0%			\$13,874,867
SUBTOTAL with CONTINGENCIES				\$146,842,346
General Conditions	60	MTHS	\$165,000	\$9,900,000
General Requirements	3.0%			\$4,405,270
Temporary Classroom/swing space				Not Required
Phasing + Enabling				\$2,936,847
Building Permit				By Owner
Insurances	2.00%			\$2,936,847
Bond	0.75%			\$1,101,318
Overhead + Profit	3.5%			\$5,884,292
TOTAL ESTIMATED CONSTRUCTION COST		213,473	\$815.12	\$174,006,920
<hr/>				
ADD FOR CMr (C.149A)			ADD	\$8,700,346



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MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
ADD/RENO SCHOOL OPTION 7B - Grades 5 Thru 8 (With Auditorium)				
Addition and Renovation	May-26	222,630	\$477.49	\$106,302,730
Demolish Existing School		95,303	\$15.00	\$1,429,545
Hazardous Material Abatement				\$2,045,150
SITWORK				\$12,897,821
<hr/>				
SUBTOTAL TRADE COSTS		222,630	\$551.03	\$122,675,246
Design and Estimating Contingency	15.0%			\$18,401,287
Escalation to mid-point of construction	12.0%			\$14,721,030
SUBTOTAL with CONTINGENCIES				\$155,797,563
<hr/>				
General Conditions	64	MTHS	\$165,000	\$10,560,000
General Requirements	3.0%			\$4,673,927
Temporary Classroom/swing space				Not Required
Phasing + Enabling				\$3,115,951
Building Permit				By Owner
Insurances	2.00%			\$3,115,951
Bond	0.75%			\$1,168,482
Overhead + Profit	3.5%			\$6,245,116
TOTAL ESTIMATED CONSTRUCTION COST		222,630	\$829.52	\$184,676,990
<hr/>				
ADD FOR CMr (C.149A)			ADD	\$9,233,850



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MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
NEW THREE STORY SCHOOL OPTION 9B - Grades 5 Thru 8 (Auditorium)				
New School Building	May-26	218,350	\$463.15	\$101,129,245
Demolish Existing School		131,903	\$10.00	\$1,319,030
Hazardous Material Abatement				\$2,045,150
SITEWORK				\$12,686,180
<hr/>				
SUBTOTAL TRADE COSTS		218,350	\$536.66	\$117,179,605
Design and Estimating Contingency	15.0%			\$17,576,941
Escalation to start of construction	10.0%			\$11,717,961
SUBTOTAL with CONTINGENCIES				\$146,474,507
<hr/>				
General Conditions	48	MTHS	\$165,000	\$7,920,000
General Requirements	3.0%			\$4,394,235
Phasing + Enabling				\$2,929,490
Building Permit				By Owner
Insurances	2.00%			\$2,929,490
Bond	0.75%			\$1,098,559
Overhead + Profit	3.5%			\$5,801,120
TOTAL ESTIMATED CONSTRUCTION COST		218,350	\$785.65	\$171,547,401
<hr/>				
ADD FOR CMr (C.149A)			ADD	\$8,577,370



Galvin Middle School
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MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
NEW THREE STORY SCHOOL OPTION 9E - Grades 5 Thru 8 (Auditorium)				
New School Building	May-26	218,350	\$475.78	\$103,886,114
Demolish Existing School		131,903	\$10.00	\$1,319,030
Hazardous Material Abatement				\$2,045,150
SITWORK				\$14,698,085
<hr/>				
SUBTOTAL TRADE COSTS		218,350	\$558.50	\$121,948,379
Design and Estimating Contingency	15.0%			\$18,292,257
Escalation to start of construction	9.0%			\$10,975,354
SUBTOTAL with CONTINGENCIES				\$151,215,990
<hr/>				
General Conditions		36	MTHS	\$5,940,000
General Requirements	3.0%			\$4,536,480
Phasing + Enabling				NR
Building Permit				By Owner
Insurances	2.00%			\$3,024,320
Bond	0.75%			\$1,134,120
Overhead + Profit	3.5%			\$5,804,782
TOTAL ESTIMATED CONSTRUCTION COST		<hr/> 218,350	<hr/> \$786.15	<hr/> \$171,655,692 <hr/>
 ADD FOR CMr (C.149A)			ADD	\$8,582,785



Galvin Middle School
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CONSTRUCTION COST SUMMARY						
<i>BUILDING SYSTEM</i>		OPTION 1 - BASE REPAIR	OPTION 7A ADD/RENOVATION	OPTION 7B ADD/RENOVATION	OPTION 9B NEW CONSTRUCTION	OPTION 9E NEW CONSTRUCTION
A10 FOUNDATIONS						
A1010	Standard Foundations	\$0	\$1,088,240	\$1,622,247	\$2,073,029	\$1,759,706
A1020	Special Foundations	\$0	\$0	\$0	\$0	\$0
A1030	Lowest Floor Construction	\$234,900	\$1,514,919	\$2,498,099	\$2,692,432	\$2,624,682
B10 SUPERSTRUCTURE						
B1010	Upper Floor Construction	\$25,000	\$4,412,817	\$5,986,737	\$5,976,100	\$6,232,482
B1020	Roof Construction	\$100,000	\$1,956,530	\$4,149,370	\$5,159,600	\$4,932,600
B20 EXTERIOR CLOSURE						
B2010	Exterior Walls	\$3,156,120	\$13,524,088	\$12,464,848	\$9,109,630	\$11,041,457
B2020	Windows	\$3,315,512	\$6,963,978	\$6,623,557	\$4,937,540	\$6,091,857
B2030	Exterior Doors	\$527,612	\$853,892	\$890,520	\$873,400	\$873,400
B30 ROOFING						
B3010	Roof Coverings	\$1,985,890	\$3,121,982	\$4,096,588	\$4,008,080	\$3,884,688
B3020	Roof Openings	\$0	\$74,800	\$74,800	\$74,800	\$74,800
C10 INTERIOR CONSTRUCTION						
C1010	Partitions	\$1,456,982	\$8,005,238	\$8,348,625	\$8,188,125	\$8,188,125
C1020	Interior Doors	\$1,055,224	\$1,707,784	\$1,781,040	\$1,746,800	\$1,746,800
C1030	Specialties/Millwork	\$650,040	\$3,017,452	\$3,145,326	\$3,560,098	\$3,342,098
C20 STAIRCASES						
C2010	Stair Construction	\$80,000	\$469,100	\$730,100	\$469,100	\$730,100
C2020	Stair Finishes	\$59,568	\$77,088	\$134,904	\$115,632	\$173,448
C30 INTERIOR FINISHES						
C3010	Wall Finishes	\$1,846,642	\$2,988,622	\$3,116,820	\$3,056,900	\$3,056,900
C3020	Floor Finishes	\$1,978,545	\$2,875,815	\$2,595,330	\$2,401,850	\$2,401,850
C3030	Ceiling Finishes	\$1,714,739	\$2,775,149	\$2,894,190	\$2,838,550	\$2,838,550
D10 CONVEYING SYSTEMS						
D1010	Elevator	\$0	\$225,000	\$225,000	\$225,000	\$225,000
D20 PLUMBING						
D20	Plumbing	\$3,504,479	\$5,977,244	\$6,233,640	\$6,113,800	\$6,113,800
D30 HVAC						
D30	HVAC	\$9,431,065	\$14,943,110	\$15,584,100	\$15,284,500	\$15,284,500
D40 FIRE PROTECTION						
D40	Fire Protection	\$1,221,176	\$1,814,521	\$1,892,355	\$1,855,975	\$1,855,975
D50 ELECTRICAL						
D5010	Service & Distribution		\$4,575,778	\$4,736,025	\$4,661,125	\$4,661,125
D5020	Lighting & Power		\$4,290,808	\$4,474,863	\$4,388,835	\$4,388,835
D5030	Communication & Security Systems		\$4,974,441	\$5,156,207	\$5,071,249	\$5,071,249
D5040	Other Electrical Systems	\$9,299,162	\$987,489	\$819,775	\$735,875	\$735,875
E10 EQUIPMENT						
E10	Equipment	\$1,117,920	\$2,029,490	\$2,029,490	\$2,029,490	\$2,029,490
E20 FURNISHINGS						
E2010	Fixed Furnishings	\$1,908,211	\$3,491,947	\$3,558,974	\$3,481,730	\$3,526,722
E2020	Movable Furnishings			NIC	NIC	NIC
F20 BUILDING DEMOLITION						
F2010	Building Elements Demolition	\$1,319,030	\$1,102,128	\$439,200	\$0	\$0
G10 SITEWORK						
		\$4,598,782	\$13,138,410	\$12,897,821	\$12,686,180	\$14,698,085
TOTAL DIRECT COST (Trade Costs)		\$50,586,599	\$112,977,860	\$119,200,551	\$113,815,425	\$118,584,199



Galvin Middle School
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PSR Estimate

GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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OPTION 1 - BASE REPAIR**GROSS FLOOR AREA CALCULATION**

<i>Level 1</i>	46,980
<i>Level 2</i>	49,278
<i>Level 3</i>	35,645

TOTAL GROSS FLOOR AREA (GFA)	131,903 sf
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A10 FOUNDATIONS**A1010 STANDARD FOUNDATIONS**

Allowance for footings for new shear walls	46,980	sf		Not Required		
SUBTOTAL						-

A1020 SPECIAL FOUNDATIONS

No work required per structural assessment						
SUBTOTAL						

A1030 LOWEST FLOOR CONSTRUCTION

Miscellaneous slab repairs; cutting + patching etc.	46,980	sf	5.00	234,900		
SUBTOTAL						234,900

TOTAL - FOUNDATIONS	\$234,900
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B10 SUPERSTRUCTURE**B1010 FLOOR CONSTRUCTION**

Rated penetrations for HVAC openings	1	ls	25,000.00	25,000		
Seismic upgrades to existing building	131,903	sf	10.00	Not Required		
SUBTOTAL						25,000

B1020 ROOF CONSTRUCTION

Snow load upgrades	1	ls	100,000.00	100,000		
SUBTOTAL						100,000

TOTAL - SUPERSTRUCTURE	\$125,000
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B20 EXTERIOR CLOSURE

63,760	sf			-
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B2010 EXTERIOR WALLS - solid

47,820	sf			
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042000 MASONRY

Repoint + clean existing brick veneer; 100%	47,820	sf	45.00	2,151,900		
Staging to exterior wall	47,820	sf	4.00	191,280		

070001 WATERPROOFING, DAMPPROOFING AND CAULKING

Miscellaneous repair of flashings & sealants at existing closure	47,820	sf	3.00	143,460		
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072100 THERMAL INSULATION

Rigid insulation at interior face of exterior wall; 3" thick	47,820	sf	4.00	191,280		
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092900 GYPSUM BOARD ASSEMBLIES

3-5/8" metal stud at inside face of exterior wall	47,820	sf	6.00	286,920		
5/8" drywall lining	47,820	sf	4.00	191,280		



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GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
OPTION 1 - BASE REPAIR								
59	SUBTOTAL					3,156,120		
60								
61	B2020 WINDOWS/CURTAINWALL							
62	Exterior Wall Area - Glazed	15,940	sf					
63								
64	061000 ROUGH CARPENTRY							
65	Wood blocking at openings	5,313	lf	14.00	74,382			
66								
67	070001 WATERPROOFING, DAMPPROOFING AND CAULKING							
68	Backer rod & double sealant	5,313	lf	10.00	53,130			
69								
70	080001 METAL WINDOWS							
71	Replace existing glazed systems with new windows/storefront/CW	15,940	sf	200.00	3,188,000			
72	SUBTOTAL					3,315,512		
73								
74	B2030 EXTERIOR DOORS							
75	Replace exterior doors	131,903	gsf	4.00	527,612			
76								
77	SUBTOTAL					527,612		
78								
79	TOTAL - EXTERIOR CLOSURE						\$6,999,244	
80								
81								
82	B30 ROOFING							
83								
84	B3010 ROOF COVERINGS							
85								
86	070002 ROOFING AND FLASHING							
87	<u>Roof demolition</u>							
88	Remove existing roofing membrane including edges, flashings and blocking, complete	49,278	sf	5.00	246,390			
89	Remove rooftop MEP equipment					taken below		
90	<u>Roof replacement</u>							
91	Replace existing roofing; complete with 10" thick	49,278	sf	32.00	1,576,896			
92	Miscellaneous roof flashings & sealants	49,278	sf	1.00	49,278			
93	<u>Roof edges/fascia's</u>							
94	Prefabricated roof edge; fascia taken below	1,402	lf	35.00	49,070			
95	<u>Miscellaneous roofing</u>							
96	Roof blocking at roof edge	1,402	lf	20.00	28,040			
97	AVB at roof edge	1,402	lf	8.00	11,216			
98	Walk pads; allowance	1	ls	15,000.00	15,000			
99	Roof ladders; replace existing	2	loc	5,000.00	10,000			
100	SUBTOTAL					1,985,890		
101								
102	B3020 ROOF OPENINGS							
103								
104	078010 ROOF OPENINGS							
105	SUBTOTAL					-		
106								
107	TOTAL - ROOFING						\$1,985,890	
108								
109								
110	C10 INTERIOR CONSTRUCTION							
111								
112	C1010 PARTITIONS							
113								
114	042000 MASONRY							



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PSR Estimate

GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
OPTION 1 - BASE REPAIR								
115	Enlarge classroom entrances for ADA; allowance	24	loc	3,000.00	72,000			
116	Form openings for MEP work	131,903	gsf	1.00	131,903			
117								
118	080001 GLAZING							
119	Allowance for new and replacement interior glazing	131,903	gsf	1.00	131,903			
120								
121	092900 GYPSUM BOARD ASSEMBLIES							
122	Modify existing and install New GWB partitions; 25% of walls	131,903	gsf	8.50	1,121,176			
123	SUBTOTAL					1,456,982		
124								
125	C1020 INTERIOR DOORS							
126								
127	Allowance for all interior doors	131,903	gsf	8.00	1,055,224			
128	SUBTOTAL					1,055,224		
129								
130	C1030 SPECIALTIES / MILLWORK							
131								
132	055000 MISCELLANEOUS METALS							
133	Miscellaneous metals throughout building	131,903	gsf	1.00	131,903			
134								
135	064020 INTERIOR ARCHITECTURAL WOODWORK							
136	Misc. rough carpentry and millwork allowance - desks, benches etc.	131,903	gsf	1.50	197,855			
137								
138	070001 WATERPROOFING, DAMPPROOFING AND CAULKING							
139	Miscellaneous sealants throughout building	131,903	gsf	1.25	164,879			
140								
141	101100 VISUAL DISPLAY SURFACES							
142	Marker boards + Tackboards	131,903	gsf	1.00	ETR			
143								
144	102110 TOILET COMPARTMENTS							
145	Replace existing				ETR			
146								
147	102800 TOILET ACCESSORIES							
148	Gang bathroom	6	rms	2,350.00	14,100			
149	Single bathroom	17	rms	500.00	8,500			
150	Janitors closet accessories	3	rms	300.00	900			
151								
152	Replace signage	131,903	gsf	1.00	131,903			
153								
154	104400 FIRE PROTECTION SPECIALTIES							
155	Fire extinguisher cabinets				assumed ETR			
156								
157	105000 LOCKERS							
158	Student lockers; single tier							
159	Athletic lockers and benches at rebuilt boys, girls and team rooms				assumed ETR			
160	SUBTOTAL				assumed ETR	650,040		
161								
162	TOTAL - INTERIOR CONSTRUCTION						\$3,162,246	
163								
164								
165	C20 STAIRCASES							
166								



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GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
OPTION 1 - BASE REPAIR								
167	C2010 STAIR CONSTRUCTION							
168	055000 MISCELLANEOUS METALS							
169	ADA modifications to stairs including replacement of guardrails	8	flt	10,000.00	80,000			
170								
171	SUBTOTAL					80,000		
172								
173	C2020 STAIR FINISHES							
174	090005 RESILIENT FLOORING							
175	Raised radial rubber landings at stairs	1,200	sf	16.00	19,200			
176	Rubber tile at stairs - treads & risers; allowance	744	flt	22.00	16,368			
177								
178	090007 PAINTING							
179	High performance coating to stairs including all railings etc.	8	flt	3,000.00	24,000			
180								
181	SUBTOTAL					59,568		
182								
183	TOTAL - STAIRCASES							\$139,568
184								
185								
186	C30 INTERIOR FINISHES							
187								
188	C3010 WALL FINISHES							
189	New wall finishes	131,903	gsf	14.00	1,846,642			
190	SUBTOTAL					1,846,642		
191								
192	C3020 FLOOR FINISHES							
193								
194	Floor prep	131,903	sf	4.00	527,612			
195	Floor finishes	131,903	gsf	11.00	1,450,933			
196	SUBTOTAL					1,978,545		
197								
198	C3030 CEILING FINISHES							
199								
200	Replace all ceiling finishes	131,903	sf	13.00	1,714,739			
201	SUBTOTAL					1,714,739		
202								
203	TOTAL - INTERIOR FINISHES							\$5,539,926
204								
205								
206	D10 CONVEYING SYSTEMS							
207								
208	D1010 ELEVATOR							
209	Replacement elevator - 3 stop					ETR		
210	SUBTOTAL					-		
211								
212	TOTAL - CONVEYING SYSTEMS							
213								
214								
215	D20 PLUMBING							
216								
217	D20 PLUMBING, GENERALLY							
218	Water heaters	1	ls	50,000.00	50,000			
219	Plumbing; replace all plumbing fixtures	131,903	gsf	10.00	1,319,030			



Galvin Middle School
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GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
OPTION 1 - BASE REPAIR							
220	Grease interceptor	1	ls	25,000.00	25,000		
221	Plumbing; replace all sanitary piping	131,903	gsf	4.00	527,612		
222	Plumbing; replace all DW piping	131,903	gsf	6.00	791,418		
223	Lab acid waste neutralizing system; central system; includes tanks etc.	131,903	sf	1.50	197,855		
224	Add overflow system for storm water management	131,903	sf	2.00	263,806		
225	Cut + cap	131,903	sf	2.50	329,758		
226	SUBTOTAL					3,504,479	
227							
228	TOTAL - PLUMBING						\$3,504,479
229							
230							
231	D30 HVAC						
232							
233	D30 HVAC, GENERALLY						
234	Cut & cap existing HVAC; gut renovation	131,903	gsf	1.50	197,855		
235	HVAC Allowance; all-electric VRF	131,903	gsf	70.00	9,233,210		
236	SUBTOTAL					9,431,065	
237							
238	TOTAL - HVAC						\$9,431,065
239							
240							
241	D40 FIRE PROTECTION						
242							
243	D40 FIRE PROTECTION, GENERALLY						
244	New fire service	1	ls	100,000.00	100,000		
245	New sprinkler system	131,903	gsf	8.50	1,121,176		
246	SUBTOTAL					1,221,176	
247							
248	TOTAL - FIRE PROTECTION						\$1,221,176
249							
250							
251	D50 ELECTRICAL						
252							
253	D50 ELECTRICAL, GENERALLY						
254	Replace all electrical systems; complete system	131,903	gsf	69.00	9,101,307		
255	Make-safe demolition	131,903	gsf	1.50	197,855		
256	SUBTOTAL					9,299,162	
257							
258	TOTAL - ELECTRICAL						\$9,299,162
259							
260							
261							
262	E10 EQUIPMENT						
263							
264	E10 EQUIPMENT, GENERALLY						
265	Kitchen equipment	2,329	sf	480.00	1,117,920		
266							
267	116100 THEATRE EQUIPMENT						
268	Stage rigging & curtain package, allowance	1	ls	450,000.00	ETR		
269	Lecture hall AV/Lighting pipe grid	1	ls	40,000.00	ETR		
270	Band chorus, allowance	1	ls	60,000.00	ETR		
271							
272	116600 ATHLETIC EQUIPMENT						
273	Volleyball sleeves	6	ea	500.00	ETR		



Galvin Middle School
 Add/Reno + New Building Options
 Canton, MA

16-Jan-24

PSR Estimate

GFA 131,903

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
OPTION 1 - BASE REPAIR								
274	Mat hoist	1	ls	8,000.00	ETR			
275	Gym wall pads	870	sf	11.00	ETR			
276	Basketball backstops; retractable	6	ea	11,000.00	ETR			
277	Gymnasium dividing net	1,150	sf	20.00	ETR			
278	Motorized assisted telescoping gymnasium bleacher seating w/ custom painted graphics on bleacher risers 800 seats	1	ls	192,000.00	ETR			
279	SUBTOTAL					1,117,920		
280								
281	TOTAL - EQUIPMENT						\$1,117,920	
282								
283								
284	E20 FURNISHINGS							
285								
286	E2010 FIXED FURNISHINGS							
287	Miscellaneous casework upgrades	131,903	gsf	13.50	1,780,691			
288	Miscellaneous furnishings							
289	Exterior window blinds	15,940	sf	8.00	127,520			
290	SUBTOTAL					1,908,211		
291								
292	E2020 MOVABLE FURNISHINGS							
293	All movable furnishings to be provided and installed by							
294	SUBTOTAL					NIC		
295								
296	TOTAL - FURNISHINGS						\$1,908,211	
297								
298								
299	F10 SPECIAL CONSTRUCTION							
300								
301	F10 SPECIAL CONSTRUCTION							
302	Temporary classrooms including demo after use				See Summary			
303	SUBTOTAL					-		
304								
305	TOTAL - SPECIAL CONSTRUCTION							
306								
307								
308	F20 SELECTIVE BUILDING DEMOLITION							
309								
310	F2010 BUILDING ELEMENTS DEMOLITION							
311	Selective interior demolition including removal of cut & capped MEP equipment & fixtures	131,903	gsf	8.00	1,055,224			
312	Temporary enclosures/protection	131,903	gsf	2.00	263,806			
313	SUBTOTAL					1,319,030		
314								
315	F2020 HAZARDOUS COMPONENTS ABATEMENT							
316	See summary							
317	SUBTOTAL							
318								
319	TOTAL - SELECTIVE BUILDING DEMOLITION						\$1,319,030	
SUBTOTAL REPAIR OPTION 1							\$45,987,817	



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7A ADD/RENOVATION

GROSS FLOOR AREA CALCULATION

1							
2	Level 1 - Existing	46,078					
3	Level 1 - New	36,970					
4	Level 2 - Existing	45,766					
5	Level 2 - New	22,300					
6	Level 3 - Existing	40,059					
7	Level 3 - New	22,300					

TOTAL GROSS FLOOR AREA (GFA)						213,473	sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

13	<u>Strip footings: 2'-4" x 1'-0"</u>						
14	Excavation	1,883	cy	12.00	22,596		
15	Store on site for reuse	1,883	cy	8.00	15,064		
16	Backfill with selected material	1,739	cy	9.00	15,651		
17	Formwork	3,228	sf	16.00	51,648		
18	Re-bar	16,140	lbs	2.00	32,280		
19	Concrete material; 3,000 psi	144	cy	140.00	20,160		
20	Placing concrete	144	cy	120.00	17,280		
21	<u>Foundation wall; 16" thick</u>						
22	Formwork	11,298	sf	22.00	248,556		
23	Re-bar	28,245	lbs	2.00	56,490		
24	Concrete material; 3,000 psi	292	cy	140.00	40,880		
25	Placing concrete	292	cy	150.00	43,800		
26	Dampproofing foundation wall and footing	9,684	sf	1.85	17,915		
27	Insulation to foundation walls; 2" thick	6,456	sf	3.00	19,368		
28	Form shelf	1,614	lf	6.00	9,684		
29	<u>Column footings, Perimeter - 7' x 7' x 2'-0"</u>						
30	Excavation	1,165	cy	14.00	16,310		
31	Store on site for reuse	1,165	cy	8.00	9,320		
32	Backfill with selected material	917	cy	12.00	11,004		
33	Formwork	3,640	sf	18.00	65,520		
34	Re-bar	8,201	lbs	2.00	16,402		
35	Concrete material; 3,000 psi	248	cy	140.00	34,720		
36	Placing concrete	248	cy	150.00	37,200		
37	<u>Column footings, Interior - 8' x 8' x 2'-0"</u>						
38	Excavation	373	cy	14.00	5,222		
39	Store on site for reuse	373	cy	8.00	2,984		
40	Backfill with selected material	199	cy	12.00	2,388		
41	Formwork	2,240	sf	16.00	35,840		
42	Re-bar	8,012	lbs	1.20	9,614		
43	Concrete material; 3,000 psi	174	cy	125.00	21,750		
44	Placing concrete	174	cy	150.00	26,100		
45	<u>Miscellaneous</u>						
46	Foundation drain	1,614	lf	16.00	25,824		
47	Piers/pilasters	59	cy	750.00	44,250		
48	Set anchor bolts grout plates; supplied by others	400	loc	25.00	10,000		
49							
50	New shear wall footings	12	cy	1,600.00	19,200		
51	Allowance for foundations against existing building	228	lf	365.00	83,220		
52	SUBTOTAL					1,088,240	

A1020 SPECIAL FOUNDATIONS

No Work in this section



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7A ADD/RENOVATION

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SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

	Rough and fine grade - included in site						
	Gravel beneath slab on grade; 12" thick; compacted	1,369	cy	45.00	61,605		
	Mesh Re-bar 15% lap	42,516	sf	1.80	76,529		
	Concrete -5" thick; 4,000 psi	589	cy	125.00	73,625		
	Place & finish including control joints	36,970	sf	2.50	92,425		
	Moisture Mitigation; admixture	589	cy	40.00	NR		
	Vapor barrier under slab on grade	36,970	sf	1.00	36,970		
	Rigid insulation beneath slab on grade; 2" thick	36,970	sf	3.00	110,910		
	<u>Miscellaneous</u>						
	Building cut					W/Site	
	Structural fill	10,954	cy	65.00	712,010		
	E+B for Underslab plumbing	36,970	sf	1.50	55,455		
	Equipment pads	1	ls	5,000.00	5,000		
	Loading dock	1	ls	20,000.00	20,000		
	New elevator pit	1	loc	40,000.00	40,000		
	Miscellaneous slab repairs; cutting + patching etc.	46,078	sf	5.00	230,390		

SUBTOTAL

1,514,919

TOTAL - FOUNDATIONS

\$2,603,159

A20 BASEMENT

A2010 BASEMENT EXCAVATION

No Work in this section

SUBTOTAL

A2020 BASEMENT WALLS

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

Floor Structure - Steel:

	Structure at Typical floors; 14 PSF	312	tns	5,200.00	1,622,400		
	Shear studs	5,575	ea	6.00	33,450		
	<u>Floor Structure</u>						
	Metal floor decking; 2", 18 gage	44,600	sf	6.00	267,600		
	Mesh reinforcement in concrete topping	51,290	sf	1.80	92,322		
	Concrete topping to metal decking, 4 1/2" thick; Light weight	650	cy	190.00	123,500		
	Placing concrete topping	44,600	sf	3.00	133,800		
	<u>Miscellaneous</u>						
	Rated penetrations for HVAC openings	2	loc	3,000.00	6,000		
	Rebar at slab edges	15,000	lbs	2.00	30,000		
	Firestopping at floor penetrations	3	floors	2,500.00	7,500		
	Miscellaneous fire stopping	1	ls	5,000.00	5,000		
	Supply anchor bolts installed by others	100	ea	12.00	1,200		
	Spray-applied fireproofing to beams and columns only	44,600	sf	2.50	111,500		

Seismic upgrades to existing building

131,903

sf

15.00

1,978,545

SUBTOTAL

4,412,817



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
OPTION 7A ADD/RENOVATION							
B1020 ROOF CONSTRUCTION							
	<u>Roof Structure - Steel:</u>						
	Structure at roof; 14 lbs per SF	259	tns	5,200.00	1,346,800		
	<u>Roof Structure</u>						
	Metal roof decking; 3", 20 gage galv.	36,970	sf	6.00	221,820		
	<u>Miscellaneous</u>						
	Snow load upgrades	1	ls	100,000.00	100,000		
	Support framing to roof screen ; HSS galvanized	6	tns	6,000.00	36,000		
	Spray-applied fireproofing to beams and deck	36,970	sf	3.00	110,910		
	Concrete slab for Roof Top equipment	5,000	sf	8.00	40,000		
	Angle framing at roof details	1	ls	50,000.00	50,000		
	Chiller dunnage	1	ls	15,000.00	15,000		
	Canopy structure Allowance	800	sf	45.00	36,000		
	SUBTOTAL					1,956,530	
TOTAL - SUPERSTRUCTURE							\$6,369,347
B20 EXTERIOR CLOSURE		122,176	sf		-		
B2010 EXTERIOR WALLS; 75%		91,632	sf				
	<u>Interior skin</u>						
	8" metal stud back-up	91,632	sf	16.00	1,466,112		
	GWB to inside of exterior wall	91,632	sf	4.00	366,528		
	Gypsum densglass sheathing board	91,632	sf	3.50	320,712		
	Air/Vapor barrier to exterior walls	91,632	sf	9.00	824,688		
	Rigid insulation, 3"	91,632	sf	2.50	229,080		
	Batt insulation, 6"	91,632	sf	5.00	458,160		
	Premium for GYM/Receiving CMU	7,140	sf	8.50	NR		
	<u>Exterior skin</u>						
	Brick veneer; 50%	45,816	sf	48.00	2,199,168		
	HP laminated wood-faced panel rainscreen; 50%	45,816	sf	85.00	3,894,360		
	Allow for projections; 10%	9,163	sf	85.00	778,855		
	<u>Decorative Trim and Custom Shapes</u>						
	Columns, cornice and trim	1	ls	853,892.00	853,892		
	<u>Precast trim and custom pieces</u>						
	Precast sills to windows; water table; trim	1	ls	213,473.00	213,473		
	<u>Miscellaneous</u>						
	Remove existing brick veneer; 100%	36,636	sf	20.00	732,720		
	Repair spalling at concrete foundations and remove staining/vegetation from prefab concrete infill panels	50	sf	140.00	7,000		
	Replace all control joints at exterior masonry	1	ls	50,000.00	50,000		
	Studs and insulation at existing brick	36,636	sf	14.00	512,904		
	Louvered equipment enclosure, prefinished louvered aluminum (10' high)	150	lf	900.00	135,000		
	Logo signs	1	ls	5,000.00	5,000		
	Scaffold to exterior walls	158,812	sf	3.00	476,436		
	SUBTOTAL					13,524,088	
B2020 WINDOWS; 25%		30,544	sf				
	Aluminum windows; triple glazed	21,381	sf	175.00	3,741,675		
	Curtainwall; 30%; triple glazed	9,163	sf	220.00	2,015,860		
	Ballistic Glazing; school guard	1,000	sf	40.00	40,000		
	Louvers	190	sf	90.00	17,100		
	Sun shade	1	ls	250,000.00	250,000		



Galvin Middle School
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Canton, MA

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PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7A ADD/RENOVATION								
171	Remove existing glazed systems with new windows/storefront/CW	12,212	sf	15.00	183,180			
172	Air/Vapor barrier at window & louver openings	21,378	lf	4.50	96,201			
173	Backer rod & sealant at window & louver openings	21,378	lf	15.00	320,670			
174	Wood blocking at window openings	21,378	lf	14.00	299,292			
175	SUBTOTAL					6,963,978		
176								
177	B2030 EXTERIOR DOORS							
178	Allowance for exterior doors	213,473	gsf	4.00	853,892			
179	SUBTOTAL					853,892		
180								
181	TOTAL - EXTERIOR CLOSURE							\$21,341,958
182								
183								
184	B30 ROOFING							
185								
186	B3010 ROOF COVERINGS							
187	Remove existing roofing membrane including edges, flashings and blocking, complete	46,078	sf	5.00	230,390			
188	<u>Flat Roofing:</u>							
189	PVC roof membrane mechanically fastened with 10" insulation	36,970	sf	28.00	1,035,160			
190	Replace existing roofing; complete	46,078	sf	28.00	1,290,184			
191	Membrane roof walkway pads	1	ls	10,000.00	10,000			
192	<u>Miscellaneous Roofing</u>							
193	Green roof	9,000	sf	30.00	270,000			
194	Pavers	1,800	sf	55.00	99,000			
193	Factory fabricated fascia trim/roof edge	3,051	lf	25.00	76,275			
194	Roof expansion joints	228	lf	150.00	34,200			
195	Air/Vapor barrier at roof edges	3,051	lf	8.00	24,408			
196	Wood blocking at expansion joints and roof edges	3,051	lf	15.00	45,765			
197	Roof ladders	4	loc	1,650.00	6,600			
198	SUBTOTAL					3,121,982		
199								
200	B3020 ROOF OPENINGS							
201	Elevator PH and vent	1	ea	3,000.00	3,000			
202	Aluminum skylights	1	ls	50,000.00	50,000			
203	Roof hatches and ladder	2	ea	2,900.00	5,800			
204	Smoke vents	2	ea	8,000.00	16,000			
205	SUBTOTAL					74,800		
206								
207	TOTAL - ROOFING							\$3,196,782
208								
209								
210	C10 INTERIOR CONSTRUCTION							
211								
212	C1010 PARTITIONS							
213	<u>CMU Partitions</u>							
214	CMU walls at gym, locker rooms, corridors etc.	213,473	gsf	2.50	533,683			
215	<u>GWB Partitions</u>							
216	Interior GWB partitions	213,473	gsf	32.00	6,831,136			
217	Glazed walls/borrowed lights	213,473	gsf	2.00	426,946			
218	Sealants & caulking at partitions	213,473	gsf	1.00	213,473			
219	SUBTOTAL					8,005,238		
220								
221	C1020 INTERIOR DOORS							
222	Allowance for all interior doors	213,473	gsf	8.00	1,707,784			
223	SUBTOTAL					1,707,784		
224								



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7A ADD/RENOVATION

225	C1030 SPECIALTIES / MILLWORK						
226	Tack boards/Marker Boards	213,473	gsf	1.50	320,210		
227	IWB				FF&E		
228	Expansion joint cover assemblies	1	ls	25,000.00	25,000		
229	Metal access panels	1	ls	5,000.00	5,000		
230	Fire extinguisher cabinets	71	ea	350.00	24,850		
231	Misc. fire equipment	1	ls	6,000.00	6,000		
232	Allowance for toilet accessories and compartments	213,473	gsf	0.60	128,084		
233	Allowance for all new millwork; including Auditorium	213,473	gsf	4.00	853,892		
234	Metal corridor lockers; single tier	213,473	gsf	2.00	426,946		
235	Signage + graphics	213,473	gsf	2.00	426,946		
236	Misc. metals	213,473	gsf	2.50	533,683		
237	Misc. sealants	213,473	gsf	1.25	266,841		
238	SUBTOTAL					3,017,452	

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TOTAL - INTERIOR CONSTRUCTION	\$12,730,474
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C20 STAIRCASES

245	C2010 STAIR CONSTRUCTION						
246	Premium for decorative stair	4	flt	30,000.00	120,000		
247	Metal pan stair; Egress stair	8	flt	40,000.00	320,000		
248	Concrete fill to stairs	8	flt	3,500.00	28,000		
249	Roof access ladders	1	ea	1,100.00	1,100		
250	SUBTOTAL					469,100	

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TOTAL - STAIRCASES	\$546,188
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C30 INTERIOR FINISHES

263	C3010 WALL FINISHES						
264	New wall finishes	213,473	gsf	14.00	2,988,622		
265	SUBTOTAL					2,988,622	
267	C3020 FLOOR FINISHES						
268	Floor prep	131,903	sf	4.00	527,612		
269	Floor finishes	213,473	gsf	11.00	2,348,203		
270	SUBTOTAL					2,875,815	
272	C3030 CEILING FINISHES						
273	Ceilings	213,473	gsf	13.00	2,775,149		
274	SUBTOTAL					2,775,149	

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TOTAL - INTERIOR FINISHES	\$8,639,586
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D10 CONVEYING SYSTEMS

281	D1010 ELEVATOR						
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Galvin Middle School
Add/Reno + New Building Options
Canton, MA

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PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
OPTION 7A ADD/RENOVATION							
282	Passenger elevator, 3 stop, new	1	ea	225,000.00	225,000		
283	SUBTOTAL					225,000	
TOTAL - CONVEYING SYSTEMS							\$225,000
D20 PLUMBING							
289	D20 PLUMBING, GENERALLY						
291	Plumbing allowance	213,473	gsf	28.00	5,977,244		
292	SUBTOTAL					5,977,244	
TOTAL - PLUMBING							\$5,977,244
D30 HVAC							
299	D30 HVAC, GENERALLY						
300	HVAC Allowance; all-electric VRF	213,473	gsf	70.00	14,943,110		
301	SUBTOTAL					14,943,110	
TOTAL - HVAC							\$14,943,110
D40 FIRE PROTECTION							
308	D40 FIRE PROTECTION, GENERALLY						
309	Fire protection allowance	213,473	gsf	8.50	1,814,521		
310	SUBTOTAL					1,814,521	
TOTAL - FIRE PROTECTION							\$1,814,521
D50 ELECTRICAL							
D5010 SERVICE & DISTRIBUTION							
Gear & Distribution							
<u>Normal Power</u>							
320	Normal power gear and distribution including feeders	213,473	gsf	9.00	1,921,257		
<u>Emergency power</u>							
322	2-750KW diesel fired generators with sound/wp cover	2	ea	420,000.00	840,000		
323	Emergency power ATS; panelboards and feeders; Two 750 Kw Generators	213,473	gsf	4.00	853,892		
<u>Equipment Wiring</u>							
325	Allowance for all equipment wiring	213,473	gsf	4.50	960,629		
326	SUBTOTAL					4,575,778	
D5020 LIGHTING & POWER							
<u>Lighting & Branch Power</u>							
330	Allowance for lighting fixtures and installation including controls	213,473	gsf	13.00	2,775,149		
<u>Lighting controls</u>							
332	Network Lighting controls	213,473	gsf	2.50	533,683		
333	Emergency lighting control panels				Incl. Above		
334	Switching/OS				Incl. Above		
<u>Branch Devices</u>							
336	Branch devices and circuitry	213,473	gsf	4.60	981,976		
337	SUBTOTAL					4,290,808	



Galvin Middle School
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PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7A ADD/RENOVATION

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D5030 COMMUNICATION & SECURITY SYSTEMS

Fire alarm

Fire Alarm system	213,473	gsf	3.00	640,419
Mass notification	213,473	gsf	0.65	138,757
BDA System	1	ls	90,000.00	90,000

Tel/Data

Network switches and equipment				NIC FF&E
Rough-in with conduit and back boxes	213,473	sf	1.00	213,473
Devices and cabling	213,473	sf	3.50	747,156

Digital Signage System

Devices/displays				NIC by owner
Rough-in and cabling	213,473	gsf	0.20	42,695
Stage package; dimming/AV/Lighting	1	ls	550,000.00	550,000

Speech Amplification

Speech Amplification system	213,473	gsf	0.75	160,105
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Audio Visual (rough-in and power only)

AV equipment -incl 75" 4K interactive displays etc per narrative, allow	213,473	gsf	4.00	853,892
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Rough-In conduit and backboxes only	213,473	gsf	0.50	106,737
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Public Address/Clock System

Clocks, speakers and cabling; includes voice amplification	213,473	sf	1.75	373,578
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Sound systems

Cafeteria sound system including speech amplification	1	ls	30,000.00	30,000
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Gymnasium sound system including speech amplification	1	ls	30,000.00	30,000
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Gymnasium

Scoreboard/ shot clock with feed and connection allow	1	ea	15,000.00	15,000
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Backboard/Adjuster feed and connection allow	6	ea	2,000.00	12,000
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Bleacher feed and connection allow	2	ea	2,000.00	4,000
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Divider curtain feed and connection allow	2	ea	2,000.00	4,000
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Mat feed and connection allow	1	ea	2,000.00	2,000
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Security System

CCTV + security system	213,473	sf	4.50	960,629
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SUBTOTAL					4,974,441
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D5040 OTHER ELECTRICAL SYSTEMS

Temp power and lights	213,473	sf	0.50	106,737
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Lightning Protection System	1	ls	140,000.00	140,000
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Grounding	1	ls	40,000.00	40,000
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Coordination + BIM etc.	213,473	sf	1.00	213,473
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Seismic restraints	1	ls	10,000.00	10,000
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Demolition/makesafe	131,903	sf	2.00	263,806
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Fees & Permits	213,473	sf	1.00	213,473
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SUBTOTAL					987,489
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TOTAL - ELECTRICAL					\$14,828,516
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

Kitchen equipment	2,329	sf	480.00	1,117,920
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116100 THEATRE EQUIPMENT

Stage rigging & curtain package, allowance	1	ls	450,000.00	450,000
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Black box sound/lighting/AV	1	ls	100,000.00	100,000
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Band chorus, allowance	1	ls	60,000.00	60,000
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Galvin Middle School
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PSR Estimate

GFA

213,473

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7A ADD/RENOVATION								
396	116600 ATHLETIC EQUIPMENT							
397	Volleyball sleeves	6	ea	500.00	3,000			
398	Mat hoist	1	ls	8,000.00	8,000			
399	Gym wall pads	870	sf	11.00	9,570			
400	Basketball backstops; retractable	6	ea	11,000.00	66,000			
401	Gymnasium dividing net	1,150	sf	20.00	23,000			
402	Motorized assisted telescoping gymnasium bleacher seating w/ custom painted graphics on bleacher risers 800 seats	1	ls	192,000.00	192,000			
403	SUBTOTAL					2,029,490		
404	TOTAL - EQUIPMENT						\$2,029,490	
405								
406								
407								
408	E20 FURNISHINGS							
409								
410	E2010 FIXED FURNISHINGS							
411	126100 FIXED AUDIENCE SEATING							
412	Seats @ auditorium	800	seats	380.00	304,000			
413								
414	Casework allowance	213,473	gsf	13.50	2,881,886			
415	Recessed entry mats	500	sf	80.00	40,000			
416	Walk off mats	635	sf	15.00	9,525			
417	Roller blinds to windows	42,756	sf	6.00	256,536			
418	SUBTOTAL					3,491,947		
419								
420	E2020 MOVABLE FURNISHINGS							
421	All movable furnishings to be provided and installed by owner							
422								
423	SUBTOTAL					NIC		
424	TOTAL - FURNISHINGS						\$3,491,947	
425								
426								
427	F10 SPECIAL CONSTRUCTION							
428								
429	F10 SPECIAL CONSTRUCTION							
430	No items in this section							
431	SUBTOTAL							
432								
433	TOTAL - SPECIAL CONSTRUCTION							
434								
435								
436	F20 SELECTIVE BUILDING DEMOLITION							
437								
438	F2010 BUILDING ELEMENTS DEMOLITION							
439	Selective interior demolition including removal of cut & capped MEP equipment & fixtures	91,844	gsf	10.00	918,440			
440	Temporary enclosures/protection	91,844	gsf	2.00	183,688			
441	Demolish exterior windows					With exterior		
442	Demolish exterior wall					With exterior		
443	SUBTOTAL					1,102,128		
444								
445	F2020 HAZARDOUS COMPONENTS ABATEMENT							
446	Removal of Asbestos Containing Materials in existing building - Included in Summary							
447	SUBTOTAL							
448	TOTAL - SELECTIVE BUILDING DEMOLITION						\$1,102,128	
449								
SUBTOTAL OPTION 7A						\$99,839,450		



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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 7A							
G SITEWORK							
G10	SITE PREPARATION & DEMOLITION	725,000	sf	Site Area			
	<u>Site Demolitions and Relocations</u>						
	Site construction fence/barricades; visual screen	3,600	lf	18.00	64,800		
	Phasing work mobilization etc.	1	ls	20,000.00	20,000		
	Temporary construction signs	1	ls	2,000.00	2,000		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	150,000	sf	1.50	225,000		
	Temporary parking	1	ls	140,000.00	140,000		
	Demolish existing buildings					Summary	
	Misc. Tree Protection	1	ls	5,000.00	5,000		
	Cut and cap existing utilities	1	ls	25,000.00	25,000		
	Remove and dispose of existing drainage structures and utilities	1	ls	50,000.00	50,000		
	SUBTOTAL					531,800	
	<u>Site Earthwork</u>						
	Construction entrances/wheel washes (allowance)	1	loc	12,000.00	12,000		
	Strip topsoil; Store on site	6,481	cy	25.00	162,025		
312000	SITE EARTHWORK						
	<u>Site cut to design subgrade</u>						
	Cut	52,000	cy	9.25	481,000		
	Store cut onsite	30,000	cy	3.75	112,500		
	<u>Site cut processing</u>						
	Screen cut soils	30,000	cy	7.00	210,000		
	<u>Site fill to design subgrade</u>						
	Fill - from cut	30,000	cy	12.00	360,000		
	Structural fill					W/Building	
312000	SOIL DISPOSAL - conversion factor 1.7 to tons						
	Load excess soils for disposal	22,000	cy	2.50	55,000		
	Less than RCS-1 - clean non-regulated	37,400	tn	22.00	822,800		
	Imported fill					Assumed Not Required	
	Fine grading	38,889	sy	1.00	38,889		
	Dispose of classified materials	1	ls	50,000.00	50,000		
	Silt fence/erosion control (allowance)	3,600	lf	12.00	43,200		
	Erosion Control monitoring & maintenance	1	ls	50,000.00	50,000		
	<u>Hazardous Waste Remediation</u>						
	Removal of UST + soils	1	ls	80,000.00	NR		
	SUBTOTAL					2,397,414	
G20	SITE IMPROVEMENTS						
	<u>Roadways and Parking Lots</u>						
	Bituminous concrete paving	<i>135,000</i>	sf		-		
	gravel base; 12" thick	5,000	cy	45.00	225,000		
	bituminous concrete; 4" thick	15,000	sy	36.00	540,000		
	6"x18" granite curb	7,185	lf	50.00	359,250		
	Single solid lines, 4" thick	1	ls	5,000.00	5,000		
	Other road markings	1	ls	2,500.00	2,500		
	New traffic signs	1	ls	10,000.00	10,000		
	<u>1/2 Basketball and Hardscape Play</u>						
	Bituminous concrete paving	<i>10,000</i>	sf		-		
	gravel base; 12" thick	370	cy	45.00	16,650		



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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 7A							
56	bituminous concrete; 4" thick	1,111	sy	34.00	37,774		
57	Colored surface	10,000	sf	3.00	30,000		
58	Fence	565	lf	70.00	39,550		
59	SUBTOTAL					1,265,724	
60							
61	<u>Exposed Agg Concrete at Entrance Plaza</u>	25,000	sf		-		
62	gravel base; 8" thick	620	cy	45.00	27,900		
63	Exp Aggregate concrete base; 6" thick	25,000	sf	20.00	500,000		
64							
65	<u>Pedestrian paving</u>						
66	Concrete paving broom finish						
67	gravel base; 8" thick	455	cy	45.00	20,475		
68	concrete paving; 4" thick	18,318	sf	14.00	256,452		
69	SUBTOTAL					804,827	
70							
71	<u>Site Improvements</u>						
72	Outdoor learning/amphitheater	1	ls	250,000.00	250,000		
72	Courtyard	1	ls	100,000.00	100,000		
73	Bicycle racks	1	ls	15,000.00	15,000		
74	Flag pole with granite base	1	loc	15,000.00	15,000		
75	Ornamental trash/recycling receptacles	1	ls	10,000.00	10,000		
76	Bollards	20	ea	2,000.00	40,000		
77	Ornamental Benches	10	ea	2,250.00	22,500		
78	Fixed dining chairs + tables	1	ls	30,000.00	30,000		
79	Safety netting/fencing	1	ls	350,000.00	350,000		
80							
81	<u>Play Area</u>						
82	Bituminous concrete paving	6,000	sf		-		
83	gravel base; 12" thick	222	cy	45.00	9,990		
84	Play surface	6,000	sf	34.00	204,000		
85	Play equipment	1	ls	250,000.00	250,000		
86	Fence	300	lf	70.00	21,000		
87							
88	Decorative entrance feature with sign	1	loc	50,000.00	50,000		
89	Retaining walls	735	lf	1,000.00	735,000		
90	Steps	1	ls	50,000.00	50,000		
91	Other site improvements	1	ls	750,000.00	750,000		
92	SUBTOTAL					2,902,490	
93							
94							
95	<u>Natural turf Multi-Purpose Field</u>	64,350	sf				
96	Amend existing topsoil, 8" deep	1,996	cy	30.00	59,880		
97	crushed stone; 12" thick - swell 10%	2,622	cy	52.00	136,344		
98	Irrigation	64,350	sf	1.25	80,438		
99	Drainage piping	64,350	sf	4.00	257,400		
100	Fine grade crushed stone	64,350	sf	0.25	16,088		
101	Geotextile	64,350	sf	0.55	35,393		
102	Field area seed	64,350	sf	0.55	35,393		
103	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
104	Scoreboard	1	ea	35,000.00	Assumed Not Required		
105	SUBTOTAL					620,936	
106							
107	<u>Natural turf Soccer Field (2 fields)</u>	44,415	sf				
108	Amend existing topsoil, 8" deep	1,378	cy	30.00	41,340		
109	crushed stone; 12" thick - swell 10%	1,810	cy	52.00	94,120		
110	Irrigation	44,415	sf	1.25	55,519		



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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 7A							
111	Drainage piping	44,415	sf	4.00	177,660		
112	Fine grade crushed stone	44,415	sf	0.25	11,104		
113	Geotextile	44,415	sf	0.55	24,428		
114	Field area seed	44,415	sf	0.55	24,428		
115	Soccer goals					Excluded	
116	Player benches					Excluded	
117	Team benches					Excluded	
118	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
119	Scoreboard	1	ea	35,000.00	Assumed Not Required		
120							
121	SUBTOTAL					428,599	
122							
123	<u>Landscaping & Plantings:</u>						
124	New seeded areas - L&S	100,000	sf	0.25	25,000		
125	Amend TS	3,107	cy	60.00	186,420		
126	Trees	36	ea	2,000.00	72,000		
127	Rain gardens	10,000	sf	18.00	180,000		
128	Allowance for planted areas	30,000	sf	15.00	450,000		
129							
130	SUBTOTAL					913,420	
131	G30 CIVIL MECHANICAL UTILITIES						
132	<u>Water supply</u>						
133	New CI piping; 12" loop	1,500	lf	120.00	180,000		
134	New fire water 8"	300	lf	80.00	24,000		
135	Connect to existing line	2	loc	15,000.00	30,000		
136	New fire hydrant	2	loc	2,600.00	5,200		
137	FD connection	2	loc	2,000.00	4,000		
138	<u>Sanitary</u>						
139	8" SDR-35	500	lf	60.00	30,000		
140	Grease trap	1	loc	15,000.00	15,000		
141	Manhole	3	loc	5,000.00	15,000		
142	<u>Surface Water Drainage</u>						
143	Allowance for storm drainage piping, structures and WQS	135,000	sf	15.00	2,025,000		
144							
145	SUBTOTAL					2,328,200	
146	G40 SITE ELECTRICAL						
147	Primary service	500	lf	350.00	175,000		
148	Secondary service	50	lf	800.00	40,000		
149	Communication service	500	lf	500.00	250,000		
150	EV stations	1	ls	75,000.00	75,000		
151							
152	<u>Site Lighting</u>						
153	Allowance for site lighting	135,000	sf	3.00	405,000		
154							
155	SUBTOTAL					945,000	
156							
	SUBTOTAL SITE DEVELOPMENT						\$13,138,410



Galvin Middle School
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PSR Estimate

GFA

222,630

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7B ADD/RENOVATION

GROSS FLOOR AREA CALCULATION

1							
2	Level 1 - Existing	18,300					
3	Level 1 - New	85,330					
4	Level 2 - Existing	18,300					
5	Level 2 - New	51,600					
6	Level 3 - New	49,100					

TOTAL GROSS FLOOR AREA (GFA)					222,630	sf	
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

13	<u>Strip footings; 2'-4" x 1'-0"</u>						
14	Excavation	2,700	cy	12.00	32,400		
15	Store on site for reuse	2,700	cy	8.00	21,600		
16	Backfill with selected material	2,493	cy	9.00	22,437		
17	Formwork	4,628	sf	16.00	74,048		
18	Re-bar	23,140	lbs	2.00	46,280		
19	Concrete material; 3,000 psi	207	cy	140.00	28,980		
20	Placing concrete	207	cy	120.00	24,840		
21	<u>Foundation wall; 16" thick</u>						
22	Formwork	16,198	sf	22.00	356,356		
23	Re-bar	40,495	lbs	2.00	80,990		
24	Concrete material; 3,000 psi	419	cy	140.00	58,660		
25	Placing concrete	419	cy	150.00	62,850		
26	Dampproofing foundation wall and footing	13,884	sf	1.85	25,685		
27	Insulation to foundation walls; 2" thick	9,256	sf	3.00	27,768		
28	Form shelf	2,314	lf	6.00	13,884		
29	<u>Column footings, Perimeter - 7' x 7' x 2'-0"</u>						
30	Excavation	1,524	cy	14.00	21,336		
31	Store on site for reuse	1,524	cy	8.00	12,192		
32	Backfill with selected material	1,200	cy	12.00	14,400		
33	Formwork	4,760	sf	18.00	85,680		
34	Re-bar	10,724	lbs	2.00	21,448		
35	Concrete material; 3,000 psi	324	cy	140.00	45,360		
36	Placing concrete	324	cy	150.00	48,600		
37	<u>Column footings, Interior - 8' x 8' x 2'-0"</u>						
38	Excavation	960	cy	14.00	13,440		
39	Store on site for reuse	960	cy	8.00	7,680		
40	Backfill with selected material	512	cy	12.00	6,144		
41	Formwork	5,760	sf	16.00	92,160		
42	Re-bar	20,604	lbs	1.20	24,725		
43	Concrete material; 3,000 psi	448	cy	125.00	56,000		
44	Placing concrete	448	cy	150.00	67,200		
45	<u>Miscellaneous</u>						
46	Foundation drain	2,314	lf	16.00	37,024		
47	Piers/pilasters	104	cy	750.00	78,000		
48	Set anchor bolts grout plates; supplied by others	700	loc	25.00	17,500		
49							
50	New shear wall footings	12	cy	1,600.00	19,200		
51	Allowance for foundations against existing building	212	lf	365.00	77,380		
52	SUBTOTAL					1,622,247	

A1020 SPECIAL FOUNDATIONS

55	No Work in this section						
56	SUBTOTAL						



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PSR Estimate

GFA

222,630

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 7B ADD/RENOVATION

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A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Rough and fine grade - included in site

Gravel beneath slab on grade; 12" thick; compacted

Mesh Re-bar 15% lap

Concrete -5" thick; 4,000 psi

Place & finish including control joints

Moisture Mitigation; admixture

Vapor barrier under slab on grade

Rigid insulation beneath slab on grade; 2" thick

Miscellaneous

Building cut

Structural fill

E+B for Underslab plumbing

Equipment pads

Loading dock

New elevator pit

Miscellaneous slab repairs; cutting + patching etc.

SUBTOTAL

		3,160	cy	45.00	142,200		
		98,130	sf	1.80	176,634		
		1,361	cy	125.00	170,125		
		85,330	sf	2.50	213,325		
		1,361	cy	40.00	NR		
		85,330	sf	1.00	85,330		
		85,330	sf	3.00	255,990		
						W/Site	
		18,000	cy	65.00	1,170,000		
		85,330	sf	1.50	127,995		
		1	ls	5,000.00	5,000		
		1	ls	20,000.00	20,000		
		1	loc	40,000.00	40,000		
		18,300	sf	5.00	91,500		
						2,498,099	

TOTAL - FOUNDATIONS

\$4,120,346

A20 BASEMENT

A2010 BASEMENT EXCAVATION

No Work in this section

SUBTOTAL

A2020 BASEMENT WALLS

SUBTOTAL

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

Floor Structure - Steel:

Structure at Typical floors; 14 PSF

Shear studs

Floor Structure

Metal floor decking; 2", 18 gage

Mesh reinforcement in concrete topping

Concrete topping to metal decking, 4 1/2" thick; Light weight

Placing concrete topping

Miscellaneous

Rated penetrations for HVAC openings

Rebar at slab edges

Firestopping at floor penetrations

Miscellaneous fire stopping

Supply anchor bolts installed by others

Spray-applied fireproofing to beams and columns only

Seismic upgrades to existing building

SUBTOTAL

		705	tns	5,200.00	3,666,000		
		12,588	ea	6.00	75,528		
		100,700	sf	6.00	604,200		
		115,805	sf	1.80	208,449		
		1,469	cy	190.00	279,110		
		100,700	sf	3.00	302,100		
		2	loc	3,000.00	6,000		
		15,000	lbs	2.00	30,000		
		3	flors	2,500.00	7,500		
		1	ls	5,000.00	5,000		
		175	ea	12.00	2,100		
		100,700	sf	2.50	251,750		
		36,600	sf	15.00	549,000		
						5,986,737	

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:



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GFA

222,630

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7B ADD/RENOVATION								
118	Structure at roof; 14 lbs per SF	597	tns	5,200.00	3,104,400			
119	<u>Roof Structure</u>							
120	Metal roof decking; 3", 20 gage galv.	85,330	sf	6.00	511,980			
121								
122	<u>Miscellaneous</u>							
123	Snow load upgrades	1	ls	100,000.00	100,000			
124	Support framing to roof screen ; HSS galvanized	6	tns	6,000.00	36,000			
125	Spray-applied fireproofing to beams and deck	85,330	sf	3.00	255,990			
126	Concrete slab for Roof Top equipment	5,000	sf	8.00	40,000			
127	Angle framing at roof details	1	ls	50,000.00	50,000			
128	Chiller dunnage	1	ls	15,000.00	15,000			
129	Canopy structure Allowance	800	sf	45.00	36,000			
130	SUBTOTAL					4,149,370		
131								
132	TOTAL - SUPERSTRUCTURE						\$10,136,107	
133								
134								
135	B20 EXTERIOR CLOSURE		121,232	sf		-		
136								
137	B2010 EXTERIOR WALLS; 75%		90,924	sf				
138	<u>Interior skin</u>							
139	8" metal stud back-up	90,924	sf	16.00	1,454,784			
140	GWB to inside of exterior wall	90,924	sf	4.00	363,696			
141	Gypsum densglass sheathing board	90,924	sf	3.50	318,234			
142	Air/Vapor barrier to exterior walls	90,924	sf	9.00	818,316			
143	Rigid insulation, 3"	90,924	sf	2.50	227,310			
144	Batt insulation, 6"	90,924	sf	5.00	454,620			
144	Premium for GYM/Receiving CMU	7,140	sf	8.50	NR			
145	<u>Exterior skin</u>							
146	Brick veneer; 50%	45,462	sf	48.00	2,182,176			
147	HP laminated wood-faced panel rainscreen; 50%	45,462	sf	85.00	3,864,270			
148	Allow for projections; 10%	9,092	sf	85.00	772,820			
149	<u>Decorative Trim and Custom Shapes</u>							
150	Columns, cornice and trim	1	ls	890,520.00	890,520			
151	<u>Precast trim and custom pieces</u>							
152	Precast sills to windows; water table; trim	1	ls	222,630.00	222,630			
153	<u>Miscellaneous</u>							
154	Remove existing brick veneer; 100%	9,048	sf	20.00	180,960			
155	Repair spalling at concrete foundations and remove staining/vegetation from prefab concrete infill panels	50	sf	140.00	7,000			
156	Replace all control joints at exterior masonry	1	ls	50,000.00	50,000			
157	Studs and insulation at existing brick	9,048	sf	14.00	126,672			
158								
159	Louvered equipment enclosure, prefinished louvered aluminum (10' high)	150	lf	900.00	135,000			
160	Logo signs	1	ls	5,000.00	5,000			
161	Scaffold to exterior walls	130,280	sf	3.00	390,840			
162	SUBTOTAL					12,464,848		
163								
164	B2020 WINDOWS; 25%		30,308	sf				
165								
166	Aluminum windows; triple glazed	21,216	sf	175.00	3,712,800			
167	Curtainwall; 30%; triple glazed	9,092	sf	220.00	2,000,240			
168	Ballistic Glazing; school guard	1,000	sf	40.00	40,000			
169	Louvers	190	sf	90.00	17,100			
170	Sun shade	1	ls	250,000.00	250,000			
171	Remove existing glazed systems with new windows/storefront/CW	3,016	sf	15.00	45,240			
172	Air/Vapor barrier at window & louver openings	16,662	lf	4.50	74,979			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7B ADD/RENOVATION								
173	Backer rod & sealant at window & louver openings	16,662	lf	15.00	249,930			
174	Wood blocking at window openings	16,662	lf	14.00	233,268			
175	SUBTOTAL					6,623,557		
176								
177	B2030 EXTERIOR DOORS							
178	Allowance for exterior doors	222,630	gsf	4.00	890,520			
179	SUBTOTAL					890,520		
180								
181	TOTAL - EXTERIOR CLOSURE							\$19,978,925
182								
183								
184	E30 ROOFING							
185								
186	B3010 ROOF COVERINGS							
187	Remove existing roofing membrane including edges, flashings and blocking, complete	18,300	sf	5.00	91,500			
188	<u>Flat Roofing:</u>							
189	PVC roof membrane mechanically fastened with 10" insulation	85,330	sf	28.00	2,389,240			
190	Replace existing roofing; complete	18,300	sf	28.00	512,400			
191	Membrane roof walkway pads	1	ls	10,000.00	10,000			
192	<u>Miscellaneous Roofing</u>							
193	Green roof	20,000	sf	30.00	600,000			
194	Pavers	5,000	sf	55.00	275,000			
193	Factory fabricated fascia trim/roof edge	3,751	lf	25.00	93,775			
194	Roof expansion joints	212	lf	150.00	31,800			
195	Air/Vapor barrier at roof edges	3,751	lf	8.00	30,008			
196	Wood blocking at expansion joints and roof edges	3,751	lf	15.00	56,265			
197	Roof ladders	4	loc	1,650.00	6,600			
198	SUBTOTAL					4,096,588		
199								
200	B3020 ROOF OPENINGS							
201	Elevator PH and vent	1	ea	3,000.00	3,000			
202	Aluminum skylights	1	ls	50,000.00	50,000			
203	Roof hatches and ladder	2	ea	2,900.00	5,800			
204	Smoke vents	2	ea	8,000.00	16,000			
205	SUBTOTAL					74,800		
206								
207	TOTAL - ROOFING							\$4,171,388
208								
209								
210	C10 INTERIOR CONSTRUCTION							
211								
212	C1010 PARTITIONS							
213	<u>CMU Partitions</u>							
214	CMU walls at gym, locker rooms, corridors etc.	222,630	gsf	2.50	556,575			
215	<u>GWB Partitions</u>							
216	Interior GWB partitions	222,630	gsf	32.00	7,124,160			
217	Glazed walls/borrowed lights	222,630	gsf	2.00	445,260			
218	Sealants & caulking at partitions	222,630	gsf	1.00	222,630			
219	SUBTOTAL					8,348,625		
220								
221	C1020 INTERIOR DOORS							
222	Allowance for all interior doors	222,630	gsf	8.00	1,781,040			
223	SUBTOTAL					1,781,040		
224								
225	C1030 SPECIALTIES / MILLWORK							
226	Tack boards/Marker Boards	222,630	gsf	1.50	333,945			
227	IWB				FF&E			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7B ADD/RENOVATION								
228	Expansion joint cover assemblies	1	ls	25,000.00	25,000			
229	Metal access panels	1	ls	5,000.00	5,000			
230	Fire extinguisher cabinets	74	ea	350.00	25,900			
231	Misc. fire equipment	1	ls	6,000.00	6,000			
232	Allowance for toilet accessories and compartments	222,630	gsf	0.60	133,578			
233	Allowance for all new millwork; including Auditorium	222,630	gsf	4.00	890,520			
234	Metal corridor lockers; single tier	222,630	gsf	2.00	445,260			
235	Signage + graphics	222,630	gsf	2.00	445,260			
236	Misc. metals	222,630	gsf	2.50	556,575			
237	Misc. sealants	222,630	gsf	1.25	278,288			
238	SUBTOTAL					3,145,326		
239								
240	TOTAL - INTERIOR CONSTRUCTION						\$13,274,991	
241								
242								
243	C20 STAIRCASES							
244								
245	C2010 STAIR CONSTRUCTION							
246	Premium for decorative stair	4	flt	30,000.00	120,000			
247	Metal pan stair; Egress stair	14	flt	40,000.00	560,000			
248	Concrete fill to stairs	14	flt	3,500.00	49,000			
249	Roof access ladders	1	ea	1,100.00	1,100			
250	SUBTOTAL					730,100		
251								
252	C2020 STAIR FINISHES							
253	High performance coating to stairs including all railings etc.	14	flt	3,000.00	42,000			
254	Rubber tile at stairs - landings	2,940	sf	14.00	41,160			
255	Rubber tile at stairs - treads & risers	2,352	lft	22.00	51,744			
256	SUBTOTAL					134,904		
257								
258	TOTAL - STAIRCASES						\$865,004	
259								
260								
261	C30 INTERIOR FINISHES							
262								
263	C3010 WALL FINISHES							
264	New wall finishes	222,630	gsf	14.00	3,116,820			
265	SUBTOTAL					3,116,820		
266								
267	C3020 FLOOR FINISHES							
268	Floor prep	36,600	sf	4.00	146,400			
269	Floor finishes	222,630	gsf	11.00	2,448,930			
270	SUBTOTAL					2,595,330		
271								
272	C3030 CEILING FINISHES							
273	Ceilings	222,630	gsf	13.00	2,894,190			
274	SUBTOTAL					2,894,190		
275								
276	TOTAL - INTERIOR FINISHES						\$8,606,340	
277								
278								
279	D10 CONVEYING SYSTEMS							
280								
281	D1010 ELEVATOR							
282	Passenger elevator, 3 stop, new	1	ea	225,000.00	225,000			
283	SUBTOTAL					225,000		



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OPTION 7B ADD/RENOVATION

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TOTAL - CONVEYING SYSTEMS							\$225,000
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D20 PLUMBING

D20	PLUMBING, GENERALLY						
	Plumbing allowance	222,630	gsf	28.00	6,233,640		
	SUBTOTAL					6,233,640	

TOTAL - PLUMBING							\$6,233,640
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D30 HVAC

D30	HVAC, GENERALLY						
	HVAC Allowance; all-electric VRF	222,630	gsf	70.00	15,584,100		
	SUBTOTAL					15,584,100	

TOTAL - HVAC							\$15,584,100
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D40 FIRE PROTECTION

D40	FIRE PROTECTION, GENERALLY						
	Fire protection allowance	222,630	gsf	8.50	1,892,355		
	SUBTOTAL					1,892,355	

TOTAL - FIRE PROTECTION							\$1,892,355
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D50 ELECTRICAL

D5010	SERVICE & DISTRIBUTION						
	Gear & Distribution						
	<u>Normal Power</u>						
	Normal power gear and distribution including feeders	222,630	gsf	9.00	2,003,670		
	<u>Emergency power</u>						
	2-750KW diesel fired generators with sound/wp cover	2	ea	420,000.00	840,000		
	Emergency power ATS; panelboards and feeders; Two 750 Kw Generators	222,630	gsf	4.00	890,520		
	<u>Equipment Wiring</u>						
	Allowance for all equipment wiring	222,630	gsf	4.50	1,001,835		
	SUBTOTAL					4,736,025	

D5020	LIGHTING & POWER						
	<u>Lighting & Branch Power</u>						
	Allowance for lighting fixtures and installation including controls	222,630	gsf	13.00	2,894,190		
	<u>Lighting controls</u>						
	Network Lighting controls	222,630	gsf	2.50	556,575		
	Emergency lighting control panels				Incl. Above		
	Switching/OS				Incl. Above		
	<u>Branch Devices</u>						
	Branch devices and circuitry	222,630	gsf	4.60	1,024,098		
	SUBTOTAL					4,474,863	

D5030 COMMUNICATION & SECURITY SYSTEMS



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 7B ADD/RENOVATION								
340	<u>Fire alarm</u>							
341	Fire Alarm system	222,630	gsf	3.00	667,890			
342	Mass notification	222,630	gsf	0.65	144,710			
343	BDA System	1	ls	90,000.00	90,000			
344	<u>Tel/Data</u>							
345	Network switches and equipment					NIC FF&E		
346	Rough-in with conduit and back boxes	222,630	sf	1.00	222,630			
347	Devices and cabling	222,630	sf	3.50	779,205			
348	<u>Digital Signage System</u>							
349	Devices/displays					NIC by owner		
350	Rough-in and cabling	222,630	gsf	0.20	44,526			
351	Stage package; dimming/AV/Lighting	1	ls	550,000.00	550,000			
352	<u>Speech Amplification</u>							
353	Speech Amplification system	222,630	gsf	0.75	166,973			
354	<u>Audio Visual (rough-in and power only)</u>							
355	AV equipment -incl 75" 4K interactive displays etc per narrative, allow	222,630	gsf	4.00	890,520			
356	Rough-In conduit and backboxes only	222,630	gsf	0.50	111,315			
357	<u>Public Address/Clock System</u>							
358	Clocks, speakers and cabling; includes voice amplification	222,630	sf	1.75	389,603			
359	<u>Sound systems</u>							
360	Cafeteria sound system including speech amplification	1	ls	30,000.00	30,000			
361	Gymnasium sound system including speech amplification	1	ls	30,000.00	30,000			
362	<u>Gymnasium</u>							
363	Scoreboard/ shot clock with feed and connection allow	1	ea	15,000.00	15,000			
364	Backboard/Adjuster feed and connection allow	6	ea	2,000.00	12,000			
365	Bleacher feed and connection allow	2	ea	2,000.00	4,000			
366	Divider curtain feed and connection allow	2	ea	2,000.00	4,000			
367	Mat feed and connection allow	1	ea	2,000.00	2,000			
368	<u>Security System</u>							
369	CCTV + security system	222,630	sf	4.50	1,001,835			
370	SUBTOTAL					5,156,207		
371								
372	D5040 OTHER ELECTRICAL SYSTEMS							
373	Temp power and lights	222,630	sf	0.50	111,315			
374	Lightning Protection System	1	ls	140,000.00	140,000			
375	Grounding	1	ls	40,000.00	40,000			
376	Coordination + BIM etc.	222,630	sf	1.00	222,630			
377	Seismic restraints	1	ls	10,000.00	10,000			
378	Demolition/makesafe	36,600	sf	2.00	73,200			
379	Fees & Permits	222,630	sf	1.00	222,630			
380	SUBTOTAL					819,775		
381								
382	TOTAL - ELECTRICAL						\$15,186,870	
383								
384								
385	E10 EQUIPMENT							
386								
387	E10 EQUIPMENT, GENERALLY							
388								
389	Kitchen equipment	2,329	sf	480.00	1,117,920			
390								
391	116100 THEATRE EQUIPMENT							
392	Stage rigging & curtain package, allowance	1	ls	450,000.00	450,000			
393	Black box sound/lighting/AV	1	ls	100,000.00	100,000			
394	Band chorus, allowance	1	ls	60,000.00	60,000			
395								
396	116600 ATHLETIC EQUIPMENT							
397	Volleyball sleeves	6	ea	500.00	3,000			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
OPTION 7B ADD/RENOVATION							
398	Mat hoist	1	ls	8,000.00	8,000		
399	Gym wall pads	870	sf	11.00	9,570		
400	Basketball backstops; retractable	6	ea	11,000.00	66,000		
401	Gymnasium dividing net	1,150	sf	20.00	23,000		
402	Motorized assisted telescoping gymnasium bleacher seating w/ custom painted graphics on bleacher risers 800 seats	1	ls	192,000.00	192,000		
403	SUBTOTAL					2,029,490	
TOTAL - EQUIPMENT							\$2,029,490
E20 FURNISHINGS							
E2010 FIXED FURNISHINGS							
126100 FIXED AUDIENCE SEATING							
412	Seats @ auditorium	800	seats	380.00	304,000		
414	Casework allowance	222,630	gsf	13.50	3,005,505		
415	Recessed entry mats	500	sf	80.00	40,000		
416	Walk off mats	635	sf	15.00	9,525		
417	Roller blinds to windows	33,324	sf	6.00	199,944		
418	SUBTOTAL					3,558,974	
E2020 MOVABLE FURNISHINGS							
All movable furnishings to be provided and installed by owner							
422	SUBTOTAL					NIC	
TOTAL - FURNISHINGS							\$3,558,974
F10 SPECIAL CONSTRUCTION							
F10 SPECIAL CONSTRUCTION							
No items in this section							
SUBTOTAL							
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							
F2010 BUILDING ELEMENTS DEMOLITION							
439	Selective interior demolition including removal of cut & capped MEP equipment & fixtures	36,600	gsf	10.00	366,000		
440	Temporary enclosures/protection	36,600	gsf	2.00	73,200		
441	Demolish exterior windows				With exterior		
442	Demolish exterior wall				With exterior		
443	SUBTOTAL					439,200	
F2020 HAZARDOUS COMPONENTS ABATEMENT							
Removal of Asbestos Containing Materials in existing building - Included in Summary							
447	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							\$439,200
SUBTOTAL OPTION 7B							\$106,302,730



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 7B							
G SITEWORK							
G10	SITE PREPARATION & DEMOLITION	725,000	sf	Site Area			
	<u>Site Demolitions and Relocations</u>						
	Site construction fence/barricades; visual screen	3,600	lf	18.00	64,800		
	Phasing work mobilization etc.	1	ls	20,000.00	20,000		
	Temporary construction signs	1	ls	2,000.00	2,000		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	150,000	sf	1.50	225,000		
	Temporary parking	1	ls	140,000.00	140,000		
	Demolish existing buildings					Summary	
	Misc. Tree Protection	1	ls	5,000.00	5,000		
	Cut and cap existing utilities	1	ls	25,000.00	25,000		
	Remove and dispose of existing drainage structures and utilities	1	ls	50,000.00	50,000		
	SUBTOTAL					531,800	
	<u>Site Earthwork</u>						
	Construction entrances/wheel washes (allowance)	1	loc	12,000.00	12,000		
	Strip topsoil; Store on site	6,481	cy	25.00	162,025		
	<u>Site cut to design subgrade</u>						
	Cut	52,000	cy	9.25	481,000		
	Store cut onsite	30,000	cy	3.75	112,500		
	<u>Site cut processing</u>						
	Screen cut soils	30,000	cy	7.00	210,000		
	<u>Site fill to design subgrade</u>						
	Fill - from cut	30,000	cy	12.00	360,000		
	Structural fill					W/Building	
	<i>312000 SOIL DISPOSAL - conversion factor 1.7 to tons</i>						
	Load excess soils for disposal	22,000	cy	2.50	55,000		
	Less than RCS-1 - clean non-regulated	37,400	tn	22.00	822,800		
	Imported fill					Assumed Not Required	
	Fine grading	39,000	sy	1.00	39,000		
	Dispose of classified materials	1	ls	50,000.00	50,000		
	Silt fence/erosion control (allowance)	3,600	lf	12.00	43,200		
	Erosion Control monitoring & maintenance	1	ls	50,000.00	50,000		
	<u>Hazardous Waste Remediation</u>						
	Removal of UST + soils	1	ls	80,000.00	NR		
	SUBTOTAL					2,397,525	
	G20 SITE IMPROVEMENTS						
	<u>Roadways and Parking Lots</u>						
	Bituminous concrete paving	135,000	sf		-		
	gravel base; 12" thick	5,000	cy	45.00	225,000		
	bituminous concrete; 4" thick	15,000	sy	36.00	540,000		
	6"x18" granite curb	5,471	lf	50.00	273,550		
	Single solid lines, 4" thick	1	ls	5,000.00	5,000		
	Other road markings	1	ls	2,500.00	2,500		
	New traffic signs	1	ls	10,000.00	10,000		
	<u>1/2 Basketball and Hardscape Play</u>						
	Bituminous concrete paving	10,000	sf		-		
	gravel base; 12" thick	370	cy	45.00	16,650		
	bituminous concrete; 4" thick	1,111	sy	34.00	37,774		



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 7B							
56	Colored surface	10,000	sf	3.00	30,000		
57	Fence	565	lf	70.00	39,550		
58	SUBTOTAL					1,180,024	
59							
60	<u>Exposed Agg Concrete at Entrance Plaza</u>	25,000	sf		-		
61	gravel base; 8" thick	620	cy	45.00	27,900		
62	Exp Aggregate concrete base; 6" thick	25,000	sf	20.00	500,000		
63							
64	<u>Pedestrian paving</u>						
65	Concrete paving broom finish						
66	gravel base; 8" thick	455	cy	45.00	20,475		
67	concrete paving; 4" thick	18,318	sf	14.00	256,452		
68	SUBTOTAL					804,827	
69							
70	<u>Site Improvements</u>						
71	Outdoor learning/amphitheater	1	ls	250,000.00	250,000		
72	Bicycle racks	1	ls	15,000.00	15,000		
73	Flag pole with granite base	1	loc	15,000.00	15,000		
74	Ornamental trash/recycling receptacles	1	ls	10,000.00	10,000		
75	Bollards	20	ea	2,000.00	40,000		
76	Ornamental Benches	10	ea	2,250.00	22,500		
77	Fixed dining chairs + tables	1	ls	30,000.00	30,000		
78	Safety netting/fencing	1	ls	350,000.00	350,000		
79							
80	<u>Play Area</u>						
81	Bituminous concrete paving	6,000	sf		-		
82	gravel base; 12" thick	222	cy	45.00	9,990		
83	Play surface	6,000	sf	34.00	204,000		
84	Play equipment	1	ls	250,000.00	250,000		
85	Fence	300	lf	70.00	21,000		
86							
87	Decorative entrance feature with sign	1	loc	50,000.00	50,000		
88	Retaining walls	680	lf	1,000.00	680,000		
89	Steps	1	ls	50,000.00	50,000		
90	Other site improvements	1	ls	750,000.00	750,000		
91	SUBTOTAL					2,747,490	
92							
93							
94	<u>Natural turf Multi-Purpose Field</u>	64,350	sf				
95	Amend existing topsoil, 8" deep	1,996	cy	30.00	59,880		
96	crushed stone; 12" thick - swell 10%	2,622	cy	52.00	136,344		
97	Irrigation	64,350	sf	1.25	80,438		
98	Drainage piping	64,350	sf	4.00	257,400		
99	Fine grade crushed stone	64,350	sf	0.25	16,088		
100	Geotextile	64,350	sf	0.55	35,393		
101	Field area seed	64,350	sf	0.55	35,393		
102	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
103	Scoreboard	1	ea	35,000.00	Assumed Not Required		
104	SUBTOTAL					620,936	
105							
106	<u>Natural turf Soccer Field (2 fields)</u>	44,415	sf				
107	Amend existing topsoil, 8" deep	1,378	cy	30.00	41,340		
108	crushed stone; 12" thick - swell 10%	1,810	cy	52.00	94,120		
109	Irrigation	44,415	sf	1.25	55,519		
110	Drainage piping	44,415	sf	4.00	177,660		
111	Fine grade crushed stone	44,415	sf	0.25	11,104		



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SITEWORK OPTION 7B							
112	Geotextile	44,415	sf	0.55	24,428		
113	Field area seed	44,415	sf	0.55	24,428		
114	Soccer goals				Excluded		
115	Player benches				Excluded		
116	Team benches				Excluded		
117	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
118	Scoreboard	1	ea	35,000.00	Assumed Not Required		
119							
120	SUBTOTAL					428,599	
121							
122	<u>Landscaping & Plantings:</u>						
123	New seeded areas - L&S	100,000	sf	0.25	25,000		
124	Amend TS	3,107	cy	60.00	186,420		
125	Trees	36	ea	2,000.00	72,000		
126	Rain gardens	10,000	sf	18.00	180,000		
127	Allowance for planted areas	30,000	sf	15.00	450,000		
128	SUBTOTAL					913,420	
129							
130	G30 CIVIL MECHANICAL UTILITIES						
131	<u>Water supply</u>						
132	New CI piping; 12" loop	1,500	lf	120.00	180,000		
133	New fire water 8"	300	lf	80.00	24,000		
134	Connect to existing line	2	loc	15,000.00	30,000		
135	New fire hydrant	2	loc	2,600.00	5,200		
136	FD connection	2	loc	2,000.00	4,000		
137	<u>Sanitary</u>						
138	8" SDR-35	500	lf	60.00	30,000		
139	Grease trap	1	loc	15,000.00	15,000		
140	Manhole	3	loc	5,000.00	15,000		
141	<u>Surface Water Drainage</u>						
142	Allowance for storm drainage piping, structures and WQS	135,000	sf	15.00	2,025,000		
143	SUBTOTAL					2,328,200	
144							
145	G40 SITE ELECTRICAL						
146	Primary service	500	lf	350.00	175,000		
147	Secondary service	50	lf	800.00	40,000		
148	Communication service	500	lf	500.00	250,000		
149	EV stations	1	ls	75,000.00	75,000		
150							
151	<u>Site Lighting</u>						
152	Allowance for site lighting	135,000	sf	3.00	405,000		
153	SUBTOTAL					945,000	
154							
155	SUBTOTAL SITE DEVELOPMENT						\$12,897,821



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GFA 218,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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OPTION 9B NEW CONSTRUCTION

GROSS FLOOR AREA CALCULATION

1	Level 1 - New	107,600					
2	Level 2 - New	66,200					
3	Level 3 - New	44,550					

TOTAL GROSS FLOOR AREA (GFA)					218,350	sf	
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

11	<u>Strip footings, 2'-4" x 1'-0"</u>						
12	Excavation	2,520	cy	12.00	30,240		
13	Store on site for reuse	2,520	cy	8.00	20,160		
14	Backfill with selected material	2,327	cy	9.00	20,943		
15	Formwork	4,320	sf	16.00	69,120		
16	Re-bar	21,600	lbs	2.00	43,200		
17	Concrete material; 3,000 psi	193	cy	140.00	27,020		
18	Placing concrete	193	cy	120.00	23,160		
19	<u>Foundation wall; 16" thick</u>						
20	Formwork	15,120	sf	22.00	332,640		
21	Re-bar	37,800	lbs	2.00	75,600		
22	Concrete material; 3,000 psi	391	cy	140.00	54,740		
23	Placing concrete	391	cy	150.00	58,650		
24	Dampproofing foundation wall and footing	12,960	sf	1.85	23,976		
25	Insulation to foundation walls; 2" thick	8,640	sf	3.00	25,920		
26	Form shelf	2,160	lf	6.00	12,960		
11	<u>Column footings, 6' x 6' x 2'-0"</u>						
12	Excavation	281	cy	14.00	3,934		
13	Store on site for reuse	281	cy	8.00	2,248		
14	Backfill with selected material	228	cy	12.00	2,736		
15	Formwork	912	sf	18.00	16,416		
16	Re-bar	2,055	lbs	2.00	4,110		
17	Concrete material; 3,000 psi	53	cy	140.00	7,420		
18	Placing concrete	53	cy	150.00	7,950		
19	<u>Column footings, 7' x 7' x 2'-0"</u>						
20	Excavation	251	cy	14.00	3,514		
21	Store on site for reuse	251	cy	8.00	2,008		
22	Backfill with selected material	198	cy	12.00	2,376		
23	Formwork	784	sf	18.00	14,112		
24	Re-bar	1,766	lbs	2.00	3,532		
25	Concrete material; 3,000 psi	53	cy	140.00	7,420		
26	Placing concrete	53	cy	150.00	7,950		
27	<u>Column footings, 8' x 8' x 2'-0"</u>						
28	Excavation	832	cy	14.00	11,648		
29	Store on site for reuse	832	cy	8.00	6,656		
30	Backfill with selected material	638	cy	12.00	7,656		
31	Formwork	2,496	sf	18.00	44,928		
32	Re-bar	5,623	lbs	2.00	11,246		
33	Concrete material; 3,000 psi	194	cy	140.00	27,160		
34	Placing concrete	194	cy	150.00	29,100		
35	<u>Column footings, Interior - 9' x 9' x 2'-0"</u>						
36	Excavation	1,264	cy	14.00	17,696		
37	Store on site for reuse	1,264	cy	8.00	10,112		
38	Backfill with selected material	628	cy	12.00	7,536		
39	Formwork	7,272	sf	16.00	116,352		
40	Re-bar	26,012	lbs	1.20	31,214		



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OPTION 9B NEW CONSTRUCTION								
41	Concrete material; 3,000 psi	636	cy	125.00	79,500			
42	Placing concrete	636	cy	150.00	95,400			
43	<u>Miscellaneous</u>							
44	Foundation drain	2,160	lf	32.00	69,120			
45	Piers/pilasters	657	cy	750.00	492,750			
46	Set anchor bolts grout plates; supplied by others	4,436	loc	25.00	110,900			
47	SUBTOTAL					2,073,029		
48								
49	A1020 SPECIAL FOUNDATIONS							
50	No Work in this section							
51	SUBTOTAL							
52								
53	A1030 LOWEST FLOOR CONSTRUCTION							
54	<u>New Slab on grade, 5" thick</u>							
55	Rough and fine grade - included in site							
56	Gravel beneath slab on grade; 12" thick; compacted	3,985	cy	40.00	159,400			
57	Mesh Re-bar 15% lap	123,740	sf	1.80	222,732			
58	Concrete -5" thick; 4,000 psi	1,716	cy	125.00	214,500			
59	Place & finish including control joints	107,600	sf	2.50	269,000			
60	Moisture Mitigation; admixture	1,716	cy	40.00	NR			
61	Vapor barrier under slab on grade	107,600	sf	1.00	107,600			
62	Rigid insulation beneath slab on grade; 2" thick	107,600	sf	3.00	322,800			
63	<u>Miscellaneous</u>							
64	Building cut					W/Site		
65	Structural fill	18,000	cy	65.00	1,170,000			
66	E+B for Underslab plumbing	107,600	sf	1.50	161,400			
67	Equipment pads	1	ls	5,000.00	5,000			
68	Loading dock	1	ls	20,000.00	20,000			
69	New elevator pit	1	loc	40,000.00	40,000			
70	SUBTOTAL					2,692,432		
71								
72	TOTAL - FOUNDATIONS							\$4,765,461
73								
74								
75	A20 BASEMENT							
76								
77	A2010 BASEMENT EXCAVATION							
78	No Work in this section							
79	SUBTOTAL							
80								
81	A2020 BASEMENT WALLS							
82	SUBTOTAL							
83								
84	TOTAL - BASEMENT CONSTRUCTION							
85								
86								
87	B10 SUPERSTRUCTURE							
88								
89	B1010 FLOOR CONSTRUCTION							
90	<u>Floor Structure - Steel:</u>							
91	Structure at Typical floors; 14 PSF	775	tns	5,200.00	4,030,000			
92	Shear studs	13,844	ea	6.00	83,064			
93	<u>Floor Structure</u>							
94	Metal floor decking; 2", 18 gage	110,750	sf	6.00	664,500			
95	Mesh reinforcement in concrete topping	127,363	sf	1.80	229,253			
96	Concrete topping to metal decking, 4 1/2" thick; Light weight	1,615	cy	190.00	306,850			
97	Placing concrete topping	110,750	sf	3.00	332,250			
98	<u>Miscellaneous</u>							
99	Rebar at slab edges	15,000	lbs	2.00	30,000			
100	Firestopping at floor penetrations	2	floors	2,500.00	5,000			
101	Miscellaneous fire stopping	1	ls	5,000.00	5,000			



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OPTION 9B NEW CONSTRUCTION							
102	Supply anchor bolts installed by others	1,109	ea	12.00	13,308		
103	Spray-applied fireproofing to beams and columns only	110,750	sf	2.50	276,875		
104	SUBTOTAL					5,976,100	
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
107	Structure at roof; 14 lbs per SF	753	tns	5,200.00	3,915,600		
<u>Roof Structure</u>							
109	Metal roof decking; 3", 20 gage galv.	107,600	sf	6.00	645,600		
110	Premium for acoustic deck	12,600	sf	7.00	88,200		
<u>Miscellaneous</u>							
113	Premium for Structure at low roof; 1 lbs per SF	2	tns	5,200.00	10,400		
114	Support framing to roof screen ; HSS galvanized	6	tns	6,000.00	36,000		
115	Spray-applied fireproofing to beams and deck	107,600	sf	3.00	322,800		
116	Concrete slab for Roof Top equipment	5,000	sf	8.00	40,000		
117	Angle framing at roof details	1	ls	50,000.00	50,000		
118	Chiller dunnage	1	ls	15,000.00	15,000		
119	Canopy structure Allowance	800	sf	45.00	36,000		
120	SUBTOTAL					5,159,600	
TOTAL - SUPERSTRUCTURE							\$11,135,700
B20 EXTERIOR CLOSURE		90,240	sf		-		
B2010 EXTERIOR WALLS; 75%							
<u>Interior skin</u>							
126	8" metal stud back-up	67,680	sf	16.00	1,082,880		
127	GWB to inside of exterior wall	67,680	sf	4.00	270,720		
128	Gypsum densglass sheathing board	67,680	sf	3.50	236,880		
129	Air/Vapor barrier to exterior walls	67,680	sf	8.00	541,440		
130	Rigid insulation, 3"	67,680	sf	3.00	203,040		
131	Batt insulation, 6"	67,680	sf	5.00	338,400		
132	Premium for GYM/Receiving CMU	7,140	sf	18.00	128,520		
<u>Exterior skin</u>							
133	Brick veneer; 50%	33,840	sf	48.00	1,624,320		
134	HP laminated wood-faced panel rainscreen; 50%	33,840	sf	85.00	2,876,400		
135	Allow for projections; 10%	6,768	sf	85.00	575,280		
<u>Decorative Trim and Custom Shapes</u>							
136	Columns, cornice and trim	1	ls	873,400.00	873,400		
<u>Precast trim and custom pieces</u>							
137	Precast sills to windows; water table; trim	1	ls	218,350.00	218,350		
<u>Miscellaneous</u>							
138	Louvered equipment enclosure, prefinished louvered aluminum (10' high)	150	lf	900.00	135,000		
139	Logo signs	1	ls	5,000.00	5,000		
140	Scaffold to exterior walls	90,240	sf	3.00	In Rates		
141	SUBTOTAL					9,109,630	
B2020 WINDOWS; 25%							
142	Aluminum windows; triple glazed	15,792	sf	175.00	2,763,600		
143	Curtainwall; 30%; triple glazed	6,768	sf	220.00	1,488,960		
144	Ballistic Glazing; school guard	1,000	sf	40.00	40,000		
145	Louvers	190	sf	90.00	17,100		
146	Sun shade	1	ls	250,000.00	250,000		
147	Air/Vapor barrier at window & louver openings	11,280	lf	4.50	50,760		



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OPTION 9B NEW CONSTRUCTION								
159	Backer rod & sealant at window & louver openings	11,280	lf	15.00	169,200			
160	Wood blocking at window openings	11,280	lf	14.00	157,920			
161	SUBTOTAL					4,937,540		
162								
163	B2030 EXTERIOR DOORS							
164	Allowance for exterior doors	218,350	gsf	4.00	873,400			
165	SUBTOTAL					873,400		
166								
167	TOTAL - EXTERIOR CLOSURE							\$14,920,570
168								
169								
170	B30 ROOFING							
171								
172	B3010 ROOF COVERINGS							
173	<u>Flat Roofing:</u>							
174	PVC roof membrane mechanically fastened with 10" insulation	107,600	sf	28.00	3,012,800			
175	Membrane roof walkway pads	1	ls	10,000.00	10,000			
176	<u>Miscellaneous Roofing</u>							
177	Green roof	20,000	sf	30.00	600,000			
178	Pavers	5,000	sf	55.00	275,000			
179	Factory fabricated fascia trim/roof edge	2,160	lf	25.00	54,000			
180	Air/Vapor barrier at roof edges	2,160	lf	8.00	17,280			
181	Wood blocking at expansion joints and roof edges	2,160	lf	15.00	32,400			
182	Roof ladders	4	loc	1,650.00	6,600			
183	SUBTOTAL					4,008,080		
184								
185	B3020 ROOF OPENINGS							
186	Elevator PH and vent	1	ea	3,000.00	3,000			
187	Aluminum skylights	1	ls	50,000.00	50,000			
188	Roof hatches and ladder	2	ea	2,900.00	5,800			
189	Smoke vents	2	ea	8,000.00	16,000			
190	SUBTOTAL					74,800		
191								
192	TOTAL - ROOFING							\$4,082,880
193								
194								
195	C10 INTERIOR CONSTRUCTION							
196								
197	C1010 PARTITIONS							
198	<u>CMU Partitions</u>							
199	CMU walls at gym, locker rooms, corridors etc.	218,350	gsf	2.50	545,875			
200	<u>GWB Partitions</u>							
201	Interior GWB partitions	218,350	gsf	32.00	6,987,200			
202	Glazed walls/borrowed lights	218,350	gsf	2.00	436,700			
203	Sealants & caulking at partitions	218,350	gsf	1.00	218,350			
204	SUBTOTAL					8,188,125		
205								
206	C1020 INTERIOR DOORS							
207	Allowance for all interior doors	218,350	gsf	8.00	1,746,800			
208	SUBTOTAL					1,746,800		
209								
210	C1030 SPECIALTIES / MILLWORK							
211	Tack boards/Marker Boards	218,350	gsf	1.50	327,525			
212	IWB				FF&E			
213	Expansion joint cover assemblies	1	ls	25,000.00	25,000			
214	Metal access panels	1	ls	5,000.00	5,000			
215	Fire extinguisher cabinets	73	ea	350.00	25,550			
216	Misc. fire equipment	1	ls	6,000.00	6,000			
217	Allowance for toilet accessories and compartments	218,350	gsf	0.60	131,010			



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OPTION 9B NEW CONSTRUCTION

218	Allowance for all new millwork	218,350	gsf	4.00	873,400			
219	Metal corridor lockers; single tier	218,350	gsf	2.00	436,700			
220	Signage + graphics	218,350	gsf	2.00	436,700			
221	Misc. metals	218,350	gsf	2.50	545,875			
222	Guardrail to open to below areas	1,186	lf	400.00	474,400			
223	Misc. sealants	218,350	gsf	1.25	272,938			
224	SUBTOTAL					3,560,098		
226	TOTAL - INTERIOR CONSTRUCTION							\$13,495,023

C20 STAIRCASES

231	C2010 STAIR CONSTRUCTION							
232	Premium for decorative stair	4	flt	30,000.00	120,000			
233	Metal pan stair; Egress stair	8	flt	40,000.00	320,000			
234	Concrete fill to stairs	8	flt	3,500.00	28,000			
235	Roof access ladders	1	ea	1,100.00	1,100			
236	SUBTOTAL					469,100		
238	C2020 STAIR FINISHES							
239	High performance coating to stairs including all railings etc.	12	flt	3,000.00	36,000			
240	Rubber tile at stairs - landings	2,520	sf	14.00	35,280			
241	Rubber tile at stairs - treads & risers	2,016	lft	22.00	44,352			
242	SUBTOTAL					115,632		
244	TOTAL - STAIRCASES							\$584,732

C30 INTERIOR FINISHES

249	C3010 WALL FINISHES							
250	New wall finishes	218,350	gsf	14.00	3,056,900			
251	SUBTOTAL					3,056,900		
253	C3020 FLOOR FINISHES							
254	Floor finishes	218,350	gsf	11.00	2,401,850			
255	SUBTOTAL					2,401,850		
257	C3030 CEILING FINISHES							
258	Ceilings	218,350	gsf	13.00	2,838,550			
259	SUBTOTAL					2,838,550		
261	TOTAL - INTERIOR FINISHES							\$8,297,300

D10 CONVEYING SYSTEMS

266	D1010 ELEVATOR							
267	Passenger elevator, 3 stop, new	1	ea	225,000.00	225,000			
268	SUBTOTAL					225,000		
270	TOTAL - CONVEYING SYSTEMS							\$225,000

D20 PLUMBING



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OPTION 9B NEW CONSTRUCTION								
275	D20 PLUMBING, GENERALLY							
276	Plumbing allowance	218,350	gsf	28.00	6,113,800			
277	SUBTOTAL					6,113,800		
279	TOTAL - PLUMBING							\$6,113,800
282	D30 HVAC							
284	D30 HVAC, GENERALLY							
285	HVAC Allowance; All-Electric VRF	218,350	gsf	70.00	15,284,500			
286	SUBTOTAL					15,284,500		
288	TOTAL - HVAC							\$15,284,500
291	D40 FIRE PROTECTION							
293	D40 FIRE PROTECTION, GENERALLY							
294	Fire protection allowance	218,350	gsf	8.50	1,855,975			
295	SUBTOTAL					1,855,975		
297	TOTAL - FIRE PROTECTION							\$1,855,975
300	D50 ELECTRICAL							
302	D5010 SERVICE & DISTRIBUTION							
303	Gear & Distribution							
304	<u>Normal Power</u>							
305	Normal power gear and distribution including feeders	218,350	gsf	9.00	1,965,150			
306	<u>Emergency power</u>							
307	2-750KW diesel fired generators with sound/wp cover	2	ea	420,000.00	840,000			
308	Emergency power ATS; panelboards and feeders; Two 750 Kw Generators	218,350	gsf	4.00	873,400			
309	<u>Equipment Wiring</u>							
310	Allowance for all equipment wiring	218,350	gsf	4.50	982,575			
311	SUBTOTAL					4,661,125		
312	D5020 LIGHTING & POWER							
314	<u>Lighting & Branch Power</u>							
315	Allowance for lighting fixtures and installation including controls	218,350	gsf	13.00	2,838,550			
316	<u>Lighting controls</u>							
317	Network Lighting controls	218,350	gsf	2.50	545,875			
318	Emergency lighting control panels				Incl. Above			
319	Switching/OS				Incl. Above			
320	<u>Branch Devices</u>							
321	Branch devices and circuitry	218,350	gsf	4.60	1,004,410			
322	SUBTOTAL					4,388,835		
324	D5030 COMMUNICATION & SECURITY SYSTEMS							
325	<u>Fire alarm</u>							
326	Fire Alarm system	218,350	gsf	3.00	655,050			
327	Mass notification	218,350	gsf	0.65	141,928			
328	BDA System	1	ls	90,000.00	90,000			
329	<u>Tel/Data</u>							



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OPTION 9B NEW CONSTRUCTION								
330	Network switches and equipment					NIC FF&E		
331	Rough-in with conduit and back boxes	218,350	sf	1.00	218,350			
332	Devices and cabling	218,350	sf	3.50	764,225			
333	<u>Digital Signage System</u>							
334	Devices/displays					NIC by owner		
335	Rough-in and cabling	218,350	gsf	0.20	43,670			
336	Stage package; dimming/AV/Lighting	1	ls	550,000.00	550,000			
337	<u>Speech Amplification</u>							
338	Speech Amplification system	218,350	gsf	0.75	163,763			
339	<u>Audio Visual (rough-in and power only)</u>							
340	AV equipment -incl 75" 4K interactive displays etc per narrative, allow	218,350	gsf	4.00	873,400			
341	Rough-In conduit and backboxes only	218,350	gsf	0.50	109,175			
342	<u>Public Address/Clock System</u>							
343	Clocks, speakers and cabling; includes voice amplification	218,350	sf	1.75	382,113			
344	<u>Sound systems</u>							
345	Cafeteria sound system including speech amplification	1	ls	30,000.00	30,000			
346	Gymnasium sound system including speech amplification	1	ls	30,000.00	30,000			
347	<u>Gymnasium</u>							
348	Scoreboard/ shot clock with feed and connection allow	1	ea	15,000.00	15,000			
349	Backboard/Adjuster feed and connection allow	6	ea	2,000.00	12,000			
350	Bleacher feed and connection allow	2	ea	2,000.00	4,000			
351	Divider curtain feed and connection allow	2	ea	2,000.00	4,000			
352	Mat feed and connection allow	1	ea	2,000.00	2,000			
353	<u>Security System</u>							
354	CCTV + security system	218,350	sf	4.50	982,575			
355	SUBTOTAL					5,071,249		
356								
357	D5040 OTHER ELECTRICAL SYSTEMS							
358	Temp power and lights	218,350	sf	0.50	109,175			
359	Lightning Protection System	1	ls	140,000.00	140,000			
360	Grounding	1	ls	40,000.00	40,000			
361	Coordination + BIM etc.	218,350	sf	1.00	218,350			
362	Seismic restraints	1	ls	10,000.00	10,000			
363	Fees & Permits	218,350	sf	1.00	218,350			
364	SUBTOTAL					735,875		
365								
366	TOTAL - ELECTRICAL						\$14,857,084	
367								
368	E10 EQUIPMENT							
369								
370								
371	E10 EQUIPMENT, GENERALLY							
372								
373	Kitchen equipment	2,329	sf	480.00	1,117,920			
374								
375	116100 THEATRE EQUIPMENT							
376	Stage rigging & curtain package, allowance	1	ls	450,000.00	450,000			
377	Black box sound/lighting/AV	1	ls	100,000.00	100,000			
378	Band chorus, allowance	1	ls	60,000.00	60,000			
379								
380	116600 ATHLETIC EQUIPMENT							
381	Volleyball sleeves	6	ea	500.00	3,000			
382	Mat hoist	1	ls	8,000.00	8,000			
383	Gym wall pads	870	sf	11.00	9,570			
384	Basketball backstops; retractable	6	ea	11,000.00	66,000			
385	Gymnasium dividing net	1,150	sf	20.00	23,000			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
OPTION 9B NEW CONSTRUCTION							
386	Motorized assisted telescoping gymnasium bleacher seating w/ custom painted graphics on bleacher risers 800 seats	1	ls	192,000.00	192,000		
387	SUBTOTAL					2,029,490	
TOTAL - EQUIPMENT							\$2,029,490
E20 FURNISHINGS							
E2010 FIXED FURNISHINGS							
395	126100 FIXED AUDIENCE SEATING						
396	Seats @ auditorium	800	seats	380.00	304,000		
398	Casework allowance	218,350	gsf	13.50	2,947,725		
399	Recessed entry mats	500	sf	80.00	40,000		
400	Walk off mats	635	sf	15.00	9,525		
401	Roller blinds to windows	22,560	sf	8.00	180,480		
402	SUBTOTAL					3,481,730	
E2020 MOVABLE FURNISHINGS							
405	All movable furnishings to be provided and installed by owner						
406	SUBTOTAL					NIC	
TOTAL - FURNISHINGS							\$3,481,730
F10 SPECIAL CONSTRUCTION							
F10 SPECIAL CONSTRUCTION							
414	No items in this section						
415	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							
F2010 BUILDING ELEMENTS DEMOLITION							
423	SUBTOTAL					-	
F2020 HAZARDOUS COMPONENTS ABATEMENT							
426	Removal of Asbestos Containing Materials in existing building - Included in Summary						
427	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							

SUBTOTAL OPTION 9B

\$101,129,245



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 9B							
G SITEWORK							
G10	SITE PREPARATION & DEMOLITION	725,000	sf	Site Area			
	<u>Site Demolitions and Relocations</u>						
	Site construction fence/barricades; visual screen	3,600	lf	18.00	64,800		
	Phasing work mobilization etc.	1	ls	20,000.00	20,000		
	Temporary construction signs	1	ls	2,000.00	2,000		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	150,000	sf	1.50	225,000		
	Temporary parking	1	ls	140,000.00	140,000		
	Demolish existing buildings					Summary	
	Misc. Tree Protection	1	ls	5,000.00	5,000		
	Cut and cap existing utilities	1	ls	25,000.00	25,000		
	Remove and dispose of existing drainage structures and utilities	1	ls	50,000.00	50,000		
	SUBTOTAL					531,800	
	<u>Site Earthwork</u>						
	Construction entrances/wheel washes (allowance)	1	loc	12,000.00	12,000		
	Strip topsoil; Store on site	6,481	cy	25.00	162,025		
	<u>Site cut to design subgrade</u>						
	Cut	52,000	cy	9.25	481,000		
	Store cut onsite	30,000	cy	3.75	112,500		
	<u>Site cut processing</u>						
	Screen cut soils	30,000	cy	7.00	210,000		
	<u>Site fill to design subgrade</u>						
	Fill - from cut	30,000	cy	12.00	360,000		
	Structural fill					W/Building	
	<i>312000 SOIL DISPOSAL - conversion factor 1.7 to tons</i>						
	Load excess soils for disposal	22,000	cy	2.50	55,000		
	Less than RCS-1 - clean non-regulated	37,400	tn	22.00	822,800		
	Imported fill					Assumed Not Required	
	Fine grading	39,000	sy	1.00	39,000		
	Dispose of classified materials	1	ls	50,000.00	50,000		
	Silt fence/erosion control (allowance)	3,600	lf	12.00	43,200		
	Erosion Control monitoring & maintenance	1	ls	50,000.00	50,000		
	<u>Hazardous Waste Remediation</u>						
	Removal of UST + soils	1	ls	80,000.00	NR		
	SUBTOTAL					2,397,525	
	G20 SITE IMPROVEMENTS						
	<u>Roadways and Parking Lots</u>						
	Bituminous concrete paving	130,000	sf		-		
	gravel base; 12" thick	4,815	cy	45.00	216,675		
	bituminous concrete; 4" thick	14,444	sy	36.00	519,984		
	6"x18" granite curb	5,005	lf	50.00	250,250		
	Single solid lines, 4" thick	1	ls	5,000.00	5,000		
	Other road markings	1	ls	2,500.00	2,500		
	New traffic signs	1	ls	10,000.00	10,000		
	<u>1/2 Basketball and Hardscape Play</u>						
	Bituminous concrete paving	10,000	sf		-		
	gravel base; 12" thick	370	cy	45.00	16,650		
	bituminous concrete; 4" thick	1,111	sy	34.00	37,774		



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 9B							
112	Geotextile	44,415	sf	0.55	24,428		
113	Field area seed	44,415	sf	0.55	24,428		
114	Soccer goals				Excluded		
115	Player benches				Excluded		
116	Team benches				Excluded		
117	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
118	Scoreboard	1	ea	35,000.00	Assumed Not Required		
119							
120	SUBTOTAL					428,599	
121							
122	<u>Landscaping & Plantings:</u>						
123	New seeded areas - L&S	100,000	sf	0.25	25,000		
124	Amend TS	3,107	cy	60.00	186,420		
125	Trees	36	ea	2,000.00	72,000		
126	Rain gardens	10,000	sf	18.00	180,000		
127	Allowance for planted areas	30,000	sf	15.00	450,000		
128	SUBTOTAL					913,420	
129							
130	G30 CIVIL MECHANICAL UTILITIES						
131	<u>Water supply</u>						
132	New CI piping; 12" loop	1,500	lf	120.00	180,000		
133	New fire water 8"	300	lf	80.00	24,000		
134	Connect to existing line	2	loc	15,000.00	30,000		
135	New fire hydrant	2	loc	2,600.00	5,200		
136	FD connection	2	loc	2,000.00	4,000		
137	<u>Sanitary</u>						
138	8" SDR-35	500	lf	60.00	30,000		
139	Grease trap	1	loc	15,000.00	15,000		
140	Manhole	3	loc	5,000.00	15,000		
141	<u>Surface Water Drainage</u>						
142	Allowance for storm drainage piping, structures and WQS	130,000	sf	15.00	1,950,000		
143	SUBTOTAL					2,253,200	
144							
145	G40 SITE ELECTRICAL						
146	Primary service	500	lf	350.00	175,000		
147	Secondary service	50	lf	800.00	40,000		
148	Communication service	500	lf	500.00	250,000		
149	EV stations	1	ls	75,000.00	75,000		
150							
151	<u>Site Lighting</u>						
152	Allowance for site lighting	130,000	sf	3.00	390,000		
153	SUBTOTAL					930,000	
154							
155	SUBTOTAL SITE DEVELOPMENT						\$12,686,180



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GFA 218,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 9E NEW CONSTRUCTION

GROSS FLOOR AREA CALCULATION

1								
2	Level 1 - New	102,600						
3	Level 2 - New	63,100						
4	Level 3 - New	52,650						
5	TOTAL GROSS FLOOR AREA (GFA)						218,350	sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

11	<u>Strip footings, 2'-4" x 1'-0"</u>						
12	Excavation	2,924	cy	12.00		35,088	
13	Store on site for reuse	2,924	cy	8.00		23,392	
14	Backfill with selected material	2,700	cy	9.00		24,300	
15	Formwork	5,012	sf	16.00		80,192	
16	Re-bar	25,060	lbs	2.00		50,120	
17	Concrete material; 3,000 psi	224	cy	140.00		31,360	
18	Placing concrete	224	cy	120.00		26,880	
19	<u>Foundation wall; 16" thick</u>						
20	Formwork	17,542	sf	22.00		385,924	
21	Re-bar	43,855	lbs	2.00		87,710	
22	Concrete material; 3,000 psi	454	cy	140.00		63,560	
23	Placing concrete	454	cy	150.00		68,100	
24	Dampproofing foundation wall and footing	15,036	sf	1.85		27,817	
25	Insulation to foundation walls; 2" thick	10,024	sf	3.00		30,072	
26	Form shelf	2,506	lf	6.00		15,036	
11	<u>Column footings, 6' x 6' x 2'-0"</u>						
12	Excavation	207	cy	14.00		2,898	
13	Store on site for reuse	207	cy	8.00		1,656	
14	Backfill with selected material	168	cy	12.00		2,016	
15	Formwork	672	sf	18.00		12,096	
16	Re-bar	1,514	lbs	2.00		3,028	
17	Concrete material; 3,000 psi	39	cy	140.00		5,460	
18	Placing concrete	39	cy	150.00		5,850	
19	<u>Column footings, 7' x 7' x 2'-0"</u>						
20	Excavation	305	cy	14.00		4,270	
21	Store on site for reuse	305	cy	8.00		2,440	
22	Backfill with selected material	240	cy	12.00		2,880	
23	Formwork	952	sf	18.00		17,136	
24	Re-bar	2,145	lbs	2.00		4,290	
25	Concrete material; 3,000 psi	65	cy	140.00		9,100	
26	Placing concrete	65	cy	150.00		9,750	
27	<u>Column footings, 8' x 8' x 2'-0"</u>						
28	Excavation	1,152	cy	14.00		16,128	
29	Store on site for reuse	1,152	cy	8.00		9,216	
30	Backfill with selected material	883	cy	12.00		10,596	
31	Formwork	3,456	sf	18.00		62,208	
32	Re-bar	7,786	lbs	2.00		15,572	
33	Concrete material; 3,000 psi	269	cy	140.00		37,660	
34	Placing concrete	269	cy	150.00		40,350	
35	<u>Column footings, Interior - 9' x 9' x 2'-0"</u>						
36	Excavation	1,252	cy	14.00		17,528	
37	Store on site for reuse	1,252	cy	8.00		10,016	
38	Backfill with selected material	622	cy	12.00		7,464	
39	Formwork	7,200	sf	16.00		115,200	
40	Re-bar	25,754	lbs	1.20		30,905	



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GFA

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
OPTION 9E NEW CONSTRUCTION								
41	Concrete material; 3,000 psi	630	cy	125.00	78,750			
42	Placing concrete	630	cy	150.00	94,500			
43	<u>Miscellaneous</u>							
44	Foundation drain	2,506	lf	32.00	80,192			
45	Piers/pilasters	110	cy	750.00	82,500			
46	Set anchor bolts grout plates; supplied by others	740	loc	25.00	18,500			
47	SUBTOTAL					1,759,706		
48								
49	A1020 SPECIAL FOUNDATIONS							
50	No Work in this section							
51	SUBTOTAL							
52								
53	A1030 LOWEST FLOOR CONSTRUCTION							
54	<u>New Slab on grade, 5" thick</u>							
55	Rough and fine grade - included in site							
56	Gravel beneath slab on grade; 12" thick; compacted	3,800	cy	40.00	152,000			
57	Mesh Re-bar 15% lap	117,990	sf	1.80	212,382			
58	Concrete -5" thick; 4,000 psi	1,636	cy	125.00	204,500			
59	Place & finish including control joints	102,600	sf	2.50	256,500			
60	Moisture Mitigation; admixture	1,636	cy	40.00	NR			
61	Vapor barrier under slab on grade	102,600	sf	1.00	102,600			
62	Rigid insulation beneath slab on grade; 2" thick	102,600	sf	3.00	307,800			
63	<u>Miscellaneous</u>							
64	Building cut					W/Site		
65	Structural fill	18,000	cy	65.00	1,170,000			
66	E+B for Underslab plumbing	102,600	sf	1.50	153,900			
67	Equipment pads	1	ls	5,000.00	5,000			
68	Loading dock	1	ls	20,000.00	20,000			
69	New elevator pit	1	loc	40,000.00	40,000			
70	SUBTOTAL					2,624,682		
71								
72	TOTAL - FOUNDATIONS							\$4,384,388
73								
74								
75	A20 BASEMENT							
76								
77	A2010 BASEMENT EXCAVATION							
78	No Work in this section							
79	SUBTOTAL							
80								
81	A2020 BASEMENT WALLS							
82	SUBTOTAL							
83								
84	TOTAL - BASEMENT CONSTRUCTION							
85								
86								
87	B10 SUPERSTRUCTURE							
88								
89	B1010 FLOOR CONSTRUCTION							
90	<u>Floor Structure - Steel:</u>							
91	Structure at Typical floors; 14 PSF	810	tns	5,200.00	4,212,000			
92	Shear studs	14,469	ea	6.00	86,814			
93	<u>Floor Structure</u>							
94	Metal floor decking; 2", 18 gage	115,750	sf	6.00	694,500			
95	Mesh reinforcement in concrete topping	133,113	sf	1.80	239,603			
96	Concrete topping to metal decking, 4 1/2" thick; Light weight	1,688	cy	190.00	320,720			
97	Placing concrete topping	115,750	sf	3.00	347,250			
98	<u>Miscellaneous</u>							
99	Rebar at slab edges	15,000	lbs	2.00	30,000			
100	Firestopping at floor penetrations	2	floors	2,500.00	5,000			
101	Miscellaneous fire stopping	1	ls	5,000.00	5,000			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 9E NEW CONSTRUCTION								
102	Supply anchor bolts installed by others	185	ea	12.00	2,220			
103	Spray-applied fireproofing to beams and columns only	115,750	sf	2.50	289,375			
104	SUBTOTAL					6,232,482		
105								
106	B1020 ROOF CONSTRUCTION							
107	<u>Roof Structure - Steel:</u>							
108	Structure at roof; 14 lbs per SF	718	tns	5,200.00	3,733,600			
109	<u>Roof Structure</u>							
110	Metal roof decking; 3", 20 gage galv.	102,600	sf	6.00	615,600			
111	Premium for acoustic deck	12,600	sf	7.00	88,200			
112								
113	<u>Miscellaneous</u>							
114	Premium for Structure at low roof; 1 lbs per SF	2	tns	5,200.00	10,400			
115	Support framing to roof screen ; HSS galvanized	6	tns	6,000.00	36,000			
116	Spray-applied fireproofing to beams and deck	102,600	sf	3.00	307,800			
117	Concrete slab for Roof Top equipment	5,000	sf	8.00	40,000			
118	Angle framing at roof details	1	ls	50,000.00	50,000			
119	Chiller dunnage	1	ls	15,000.00	15,000			
120	Canopy structure Allowance	800	sf	45.00	36,000			
121	SUBTOTAL					4,932,600		
122								
123	TOTAL - SUPERSTRUCTURE						\$11,165,082	
124								
125								
126	B20 EXTERIOR CLOSURE	112,736	sf		-			
127								
128	B2010 EXTERIOR WALLS; 75%	84,552	sf					
129	<u>Interior skin</u>							
130	8" metal stud back-up	84,552	sf	16.00	1,352,832			
131	GWB to inside of exterior wall	84,552	sf	4.00	338,208			
132	Gypsum densglass sheathing board	84,552	sf	3.50	295,932			
133	Air/Vapor barrier to exterior walls	84,552	sf	8.00	676,416			
134	Rigid insulation, 3"	84,552	sf	3.00	253,656			
135	Batt insulation, 6"	84,552	sf	5.00	422,760			
136	Premium for GYM/Receiving CMU	7,140	sf	18.00	128,520			
137	<u>Exterior skin</u>							
138	Brick veneer; 50%	42,276	sf	48.00	2,029,248			
139	HP laminated wood-faced panel rainscreen; 50%	42,276	sf	85.00	3,593,460			
140	Allow for projections; 10%	8,455	sf	85.00	718,675			
141	<u>Decorative Trim and Custom Shapes</u>							
142	Columns, cornice and trim	1	ls	873,400.00	873,400			
143	<u>Precast trim and custom pieces</u>							
144	Precast sills to windows; water table; trim	1	ls	218,350.00	218,350			
145	<u>Miscellaneous</u>							
146	Louvered equipment enclosure, prefinished louvered aluminum (10' high)	150	lf	900.00	135,000			
147	Logo signs	1	ls	5,000.00	5,000			
148	Scaffold to exterior walls	112,736	sf	3.00	In Rates			
149	SUBTOTAL					11,041,457		
150								
151	B2020 WINDOWS; 25%							
152		28,184	sf					
153	Aluminum windows; triple glazed	19,729	sf	175.00	3,452,575			
154	Curtainwall; 30%; triple glazed	8,455	sf	220.00	1,860,100			
155	Ballistic Glazing; school guard	1,000	sf	40.00	40,000			
156	Louvers	190	sf	90.00	17,100			
157	Sun shade	1	ls	250,000.00	250,000			
158	Air/Vapor barrier at window & louver openings	14,092	lf	4.50	63,414			



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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 9E NEW CONSTRUCTION								
159	Backer rod & sealant at window & louver openings	14,092	lf	15.00	211,380			
160	Wood blocking at window openings	14,092	lf	14.00	197,288			
161	SUBTOTAL					6,091,857		
162								
163	B2030 EXTERIOR DOORS							
164	Allowance for exterior doors	218,350	gsf	4.00	873,400			
165	SUBTOTAL					873,400		
166								
167	TOTAL - EXTERIOR CLOSURE							\$18,006,714
168								
169								
170	B30 ROOFING							
171								
172	B3010 ROOF COVERINGS							
173	<u>Flat Roofing:</u>							
174	PVC roof membrane mechanically fastened with 10" insulation	102,600	sf	28.00	2,872,800			
175	Membrane roof walkway pads	1	ls	10,000.00	10,000			
176	<u>Miscellaneous Roofing</u>							
177	Green roof	20,000	sf	30.00	600,000			
178	Pavers	5,000	sf	55.00	275,000			
179	Factory fabricated fascia trim/roof edge	2,506	lf	25.00	62,650			
180	Air/Vapor barrier at roof edges	2,506	lf	8.00	20,048			
181	Wood blocking at expansion joints and roof edges	2,506	lf	15.00	37,590			
182	Roof ladders	4	loc	1,650.00	6,600			
183	SUBTOTAL					3,884,688		
184								
185	B3020 ROOF OPENINGS							
186	Elevator PH and vent	1	ea	3,000.00	3,000			
187	Aluminum skylights	1	ls	50,000.00	50,000			
188	Roof hatches and ladder	2	ea	2,900.00	5,800			
189	Smoke vents	2	ea	8,000.00	16,000			
190	SUBTOTAL					74,800		
191								
192	TOTAL - ROOFING							\$3,959,488
193								
194								
195	C10 INTERIOR CONSTRUCTION							
196								
197	C1010 PARTITIONS							
198	<u>CMU Partitions</u>							
199	CMU walls at gym, locker rooms, corridors etc.	218,350	gsf	2.50	545,875			
200	<u>GWB Partitions</u>							
201	Interior GWB partitions	218,350	gsf	32.00	6,987,200			
202	Glazed walls/borrowed lights	218,350	gsf	2.00	436,700			
203	Sealants & caulking at partitions	218,350	gsf	1.00	218,350			
204	SUBTOTAL					8,188,125		
205								
206	C1020 INTERIOR DOORS							
207	Allowance for all interior doors	218,350	gsf	8.00	1,746,800			
208	SUBTOTAL					1,746,800		
209								
210	C1030 SPECIALTIES / MILLWORK							
211	Tack boards/Marker Boards	218,350	gsf	1.50	327,525			
212	IWB				FF&E			
213	Expansion joint cover assemblies	1	ls	25,000.00	25,000			
214	Metal access panels	1	ls	5,000.00	5,000			
215	Fire extinguisher cabinets	73	ea	350.00	25,550			
216	Misc. fire equipment	1	ls	6,000.00	6,000			
217	Allowance for toilet accessories and compartments	218,350	gsf	0.60	131,010			



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GFA 218,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 9E NEW CONSTRUCTION								
218	Allowance for all new millwork	218,350	gsf	4.00	873,400			
219	Metal corridor lockers; single tier	218,350	gsf	2.00	436,700			
220	Signage + graphics	218,350	gsf	2.00	436,700			
221	Misc. metals	218,350	gsf	2.50	545,875			
222	Guardrail to open to below areas	641	lf	400.00	256,400			
223	Misc. sealants	218,350	gsf	1.25	272,938			
224	SUBTOTAL					3,342,098		
225								
226	TOTAL - INTERIOR CONSTRUCTION						\$13,277,023	
227								
228								
229	C20 STAIRCASES							
230								
231	C2010 STAIR CONSTRUCTION							
232	Premium for decorative stair	4	flt	30,000.00	120,000			
233	Metal pan stair; Egress stair	14	flt	40,000.00	560,000			
234	Concrete fill to stairs	14	flt	3,500.00	49,000			
223	Roof access ladders	1	ea	1,100.00	1,100			
224	SUBTOTAL					730,100		
225								
226	C2020 STAIR FINISHES							
227	High performance coating to stairs including all railings etc.	18	flt	3,000.00	54,000			
228	Rubber tile at stairs - landings	3,780	sf	14.00	52,920			
229	Rubber tile at stairs - treads & risers	3,024	lft	22.00	66,528			
230	SUBTOTAL					173,448		
231								
232	TOTAL - STAIRCASES						\$903,548	
233								
234								
235	C30 INTERIOR FINISHES							
236								
237	C3010 WALL FINISHES							
238	New wall finishes	218,350	gsf	14.00	3,056,900			
239	SUBTOTAL					3,056,900		
240								
241	C3020 FLOOR FINISHES							
242	Floor finishes	218,350	gsf	11.00	2,401,850			
243	SUBTOTAL					2,401,850		
244								
245	C3030 CEILING FINISHES							
246	Ceilings	218,350	gsf	13.00	2,838,550			
247	SUBTOTAL					2,838,550		
248								
249	TOTAL - INTERIOR FINISHES						\$8,297,300	
250								
251								
252	D10 CONVEYING SYSTEMS							
253								
254	D1010 ELEVATOR							
255	Passenger elevator, 3 stop, new	1	ea	225,000.00	225,000			
256	SUBTOTAL					225,000		
257								
258	TOTAL - CONVEYING SYSTEMS						\$225,000	
259								
260								
261	D20 PLUMBING							
262								



Galvin Middle School
Add/Reno + New Building Options
Canton, MA

16-Jan-24

PSR Estimate

GFA

218,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
OPTION 9E NEW CONSTRUCTION							
263	D20 PLUMBING, GENERALLY						
264	Plumbing allowance	218,350	gsf	28.00	6,113,800		
265	SUBTOTAL					6,113,800	
TOTAL - PLUMBING							\$6,113,800
D30 HVAC							
270	D30 HVAC, GENERALLY						
272	HVAC Allowance; All-Electric VRF	218,350	gsf	70.00	15,284,500		
274	SUBTOTAL					15,284,500	
TOTAL - HVAC							\$15,284,500
D40 FIRE PROTECTION							
280	D40 FIRE PROTECTION, GENERALLY						
282	Fire protection allowance	218,350	gsf	8.50	1,855,975		
284	SUBTOTAL					1,855,975	
TOTAL - FIRE PROTECTION							\$1,855,975
D50 ELECTRICAL							
D5010 SERVICE & DISTRIBUTION							
Gear & Distribution							
<u>Normal Power</u>							
293	Normal power gear and distribution including feeders	218,350	gsf	9.00	1,965,150		
<u>Emergency power</u>							
295	2-750KW diesel fired generators with sound/wp cover	2	ea	420,000.00	840,000		
296	Emergency power ATS; panelboards and feeders; Two 750 Kw Generators	218,350	gsf	4.00	873,400		
<u>Equipment Wiring</u>							
298	Allowance for all equipment wiring	218,350	gsf	4.50	982,575		
299	SUBTOTAL					4,661,125	
D5020 LIGHTING & POWER							
<u>Lighting & Branch Power</u>							
303	Allowance for lighting fixtures and installation including controls	218,350	gsf	13.00	2,838,550		
<u>Lighting controls</u>							
305	Network Lighting controls	218,350	gsf	2.50	545,875		
306	Emergency lighting control panels				Incl. Above		
307	Switching/OS				Incl. Above		
<u>Branch Devices</u>							
309	Branch devices and circuitry	218,350	gsf	4.60	1,004,410		
310	SUBTOTAL					4,388,835	
D5030 COMMUNICATION & SECURITY SYSTEMS							
<u>Fire alarm</u>							
314	Fire Alarm system	218,350	gsf	3.00	655,050		
315	Mass notification	218,350	gsf	0.65	141,928		
316	BDA System	1	ls	90,000.00	90,000		
317	Tel/Data						



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PSR Estimate

GFA

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST	
OPTION 9E NEW CONSTRUCTION								
318	Network switches and equipment					NIC FF&E		
319	Rough-in with conduit and back boxes	218,350	sf	1.00	218,350			
320	Devices and cabling	218,350	sf	3.50	764,225			
321	<u>Digital Signage System</u>							
322	Devices/displays					NIC by owner		
323	Rough-in and cabling	218,350	gsf	0.20	43,670			
324	Stage package; dimming/AV/Lighting	1	ls	550,000.00	550,000			
325	<u>Speech Amplification</u>							
326	Speech Amplification system	218,350	gsf	0.75	163,763			
327	<u>Audio Visual (rough-in and power only)</u>							
328	AV equipment -incl 75" 4K interactive displays etc per narrative, allow	218,350	gsf	4.00	873,400			
329	Rough-In conduit and backboxes only	218,350	gsf	0.50	109,175			
330	<u>Public Address/Clock System</u>							
331	Clocks, speakers and cabling; includes voice amplification	218,350	sf	1.75	382,113			
332	<u>Sound systems</u>							
333	Cafeteria sound system including speech amplification	1	ls	30,000.00	30,000			
334	Gymnasium sound system including speech amplification	1	ls	30,000.00	30,000			
335	<u>Gymnasium</u>							
336	Scoreboard/ shot clock with feed and connection allow	1	ea	15,000.00	15,000			
337	Backboard/Adjuster feed and connection allow	6	ea	2,000.00	12,000			
338	Bleacher feed and connection allow	2	ea	2,000.00	4,000			
339	Divider curtain feed and connection allow	2	ea	2,000.00	4,000			
340	Mat feed and connection allow	1	ea	2,000.00	2,000			
341	<u>Security System</u>							
342	CCTV + security system	218,350	sf	4.50	982,575			
343	SUBTOTAL					5,071,249		
344								
345	D5040 OTHER ELECTRICAL SYSTEMS							
346	Temp power and lights	218,350	sf	0.50	109,175			
347	Lightning Protection System	1	ls	140,000.00	140,000			
348	Grounding	1	ls	40,000.00	40,000			
349	Coordination + BIM etc.	218,350	sf	1.00	218,350			
350	Seismic restraints	1	ls	10,000.00	10,000			
351	Fees & Permits	218,350	sf	1.00	218,350			
352	SUBTOTAL					735,875		
353								
354	TOTAL - ELECTRICAL						\$14,857,084	
355								
356	E10 EQUIPMENT							
357								
358								
359	E10 EQUIPMENT, GENERALLY							
360								
361	Kitchen equipment	2,329	sf	480.00	1,117,920			
362								
363	116100 THEATRE EQUIPMENT							
364	Stage rigging & curtain package, allowance	1	ls	450,000.00	450,000			
365	Black box sound/lighting/AV	1	ls	100,000.00	100,000			
366	Band chorus, allowance	1	ls	60,000.00	60,000			
367								
368	116600 ATHLETIC EQUIPMENT							
369	Volleyball sleeves	6	ea	500.00	3,000			
370	Mat hoist	1	ls	8,000.00	8,000			
371	Gym wall pads	870	sf	11.00	9,570			
372	Basketball backstops; retractable	6	ea	11,000.00	66,000			
373	Gymnasium dividing net	1,150	sf	20.00	23,000			



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PSR Estimate

GFA

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	ESTD COST	SUB TOTAL	TOTAL COST
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OPTION 9E NEW CONSTRUCTION

374	Motorized assisted telescoping gymnasium bleacher seating w/ custom painted graphics on bleacher risers 800 seats	1	ls	192,000.00	192,000			
375	SUBTOTAL					2,029,490		
376	TOTAL - EQUIPMENT						\$2,029,490	

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

383	126100 FIXED AUDIENCE SEATING						
384	Seats @ auditorium	800	seats	380.00	304,000		
385							
386	Casework allowance	218,350	gsf	13.50	2,947,725		
387	Recessed entry mats	500	sf	80.00	40,000		
388	Walk off mats	635	sf	15.00	9,525		
389	Roller blinds to windows	28,184	sf	8.00	225,472		
390	SUBTOTAL					3,526,722	

E2020 MOVABLE FURNISHINGS

393	All movable furnishings to be provided and installed by owner							
394	SUBTOTAL					NIC		
395	TOTAL - FURNISHINGS						\$3,526,722	

F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

402	No items in this section							
403	SUBTOTAL							
404	TOTAL - SPECIAL CONSTRUCTION							

F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

411	SUBTOTAL					-	
-----	----------	--	--	--	--	---	--

F2020 HAZARDOUS COMPONENTS ABATEMENT

444	Removal of Asbestos Containing Materials in existing building - Included in Summary							
445	SUBTOTAL							
446	TOTAL - SELECTIVE BUILDING DEMOLITION							

SUBTOTAL OPTION 9E

\$103,886,114



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Canton, MA

16-Jan-24

PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITWORK OPTION 9E							
G SITEWORK							
G10	SITE PREPARATION & DEMOLITION	725,000	sf	Site Area			
	<u>Site Demolitions and Relocations</u>						
	Site construction fence/barricades; visual screen	3,600	lf	18.00	64,800		
	Phasing work mobilization etc.	1	ls	20,000.00	20,000		
	Temporary construction signs	1	ls	2,000.00	2,000		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	150,000	sf	1.50	225,000		
	Temporary parking	1	ls	140,000.00	140,000		
	Demolish hockey rink	1	ls	50,000.00	50,000		
	Demolish existing buildings					Summary	
	Misc. Tree Protection	1	ls	5,000.00	5,000		
	Cut and cap existing utilities	1	ls	25,000.00	25,000		
	Remove and dispose of existing drainage structures and utilities	1	ls	50,000.00	50,000		
	SUBTOTAL					581,800	
	<u>Site Earthwork</u>						
	Construction entrances/wheel washes (allowance)	1	loc	12,000.00	12,000		
	Strip topsoil; Store on site	6,481	cy	25.00	162,025		
	<u>Site cut to design subgrade</u>						
	Cut	52,000	cy	9.25	481,000		
	Store cut onsite	30,000	cy	3.75	112,500		
	<u>Site cut processing</u>						
	Screen cut soils	30,000	cy	7.00	210,000		
	<u>Site fill to design subgrade</u>						
	Fill - from cut	30,000	cy	12.00	360,000		
	Structural fill					W/Building	
312000	SOIL DISPOSAL - conversion factor 1.7 to tons						
	Load excess soils for disposal	22,000	cy	2.50	55,000		
	Less than RCS-1 - clean non-regulated	37,400	tn	22.00	822,800		
	Imported fill					Assumed Not Required	
	Fine grading	39,000	sy	1.00	39,000		
	Dispose of classified materials	1	ls	50,000.00	50,000		
	Silt fence/erosion control (allowance)	1	lf	12.00	12		
	Erosion Control monitoring & maintenance	1	ls	50,000.00	50,000		
	<u>Hazardous Waste Remediation</u>						
	Removal of UST + soils	1	ls	80,000.00	NR		
	SUBTOTAL					2,354,337	
G20	SITE IMPROVEMENTS						
	<u>Roadways and Parking Lots</u>						
	Bituminous concrete paving	141,000	sf		-		
	gravel base; 12" thick	5,222	cy	45.00	234,990		
	bituminous concrete; 4" thick	15,667	sy	36.00	564,012		
	6"x18" granite curb	7,900	lf	50.00	395,000		
	Single solid lines, 4" thick	1	ls	5,000.00	5,000		
	Other road markings	1	ls	2,500.00	2,500		
	New traffic signs	1	ls	10,000.00	10,000		
	<u>1/2 Basketball and Hardscape Play</u>						
	Bituminous concrete paving	10,000	sf		-		
	gravel base; 12" thick	370	cy	45.00	16,650		



Galvin Middle School
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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 9E							
56	bituminous concrete; 4" thick	1,111	sy	34.00	37,774		
57	Colored surface	10,000	sf	3.00	30,000		
58	Fence	565	lf	70.00	39,550		
59	SUBTOTAL					1,335,476	
60							
61	<u>Exposed Agg Concrete at Entrance Plaza</u>	25,000	sf		-		
62	gravel base; 8" thick	620	cy	45.00	27,900		
63	Exp Aggregate concrete base; 6" thick	25,000	sf	20.00	500,000		
64							
65	<u>Pedestrian paving</u>						
66	Concrete paving broom finish						
67	gravel base; 8" thick	455	cy	45.00	20,475		
68	concrete paving; 4" thick	18,318	sf	14.00	256,452		
69	SUBTOTAL					804,827	
70							
71	<u>Site Improvements</u>						
71	Relocated skate park	25,000	ls	60.00	1,500,000		
72	Outdoor learning/amphitheater	1	ls	250,000.00	250,000		
73	Bicycle racks	1	ls	15,000.00	15,000		
74	Flag pole with granite base	1	loc	15,000.00	15,000		
75	Ornamental trash/recycling receptacles	1	ls	10,000.00	10,000		
76	Bollards	20	ea	2,000.00	40,000		
77	Ornamental Benches	10	ea	2,250.00	22,500		
78	Fixed dining chairs + tables	1	ls	30,000.00	30,000		
79	Safety netting/fencing	1	ls	350,000.00	350,000		
80							
81	<u>Play Area</u>						
82	Bituminous concrete paving	6,000	sf		-		
83	gravel base; 12" thick	222	cy	45.00	9,990		
84	Play surface	6,000	sf	34.00	204,000		
85	Play equipment	1	ls	250,000.00	250,000		
86	Fence	300	lf	70.00	21,000		
87							
88	Decorative entrance feature with sign	1	loc	50,000.00	50,000		
89	Retaining walls	710	lf	1,000.00	710,000		
90	Steps	1	ls	50,000.00	50,000		
91	Other site improvements	1	ls	750,000.00	750,000		
92	SUBTOTAL					4,277,490	
93							
94							
95	<u>Natural turf Multi-Purpose Field</u>	64,350	sf				
96	Amend existing topsoil, 8" deep	1,996	cy	30.00	59,880		
97	crushed stone; 12" thick - swell 10%	2,622	cy	52.00	136,344		
98	Irrigation	64,350	sf	1.25	80,438		
99	Drainage piping	64,350	sf	4.00	257,400		
100	Fine grade crushed stone	64,350	sf	0.25	16,088		
101	Geotextile	64,350	sf	0.55	35,393		
102	Field area seed	64,350	sf	0.55	35,393		
103	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
104	Scoreboard	1	ea	35,000.00	Assumed Not Required		
105	SUBTOTAL					620,936	
106							
107	<u>Natural turf Soccer Field (2 fields)</u>	44,415	sf				
108	Amend existing topsoil, 8" deep	1,378	cy	30.00	41,340		
109	crushed stone; 12" thick - swell 10%	1,810	cy	52.00	94,120		
110	Irrigation	44,415	sf	1.25	55,519		



Galvin Middle School
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Canton, MA

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PSR Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK OPTION 9E							
111	Drainage piping	44,415	sf	4.00	177,660		
112	Fine grade crushed stone	44,415	sf	0.25	11,104		
113	Geotextile	44,415	sf	0.55	24,428		
114	Field area seed	44,415	sf	0.55	24,428		
115	Soccer goals					Excluded	
116	Player benches					Excluded	
117	Team benches					Excluded	
118	Portable bleachers - 200 seat	1	ls	40,000.00	Assumed Not Required		
119	Scoreboard	1	ea	35,000.00	Assumed Not Required		
120							
121	SUBTOTAL					428,599	
122							
123	<u>Landscaping & Plantings:</u>						
124	New seeded areas - L&S	100,000	sf	0.25	25,000		
125	Amend TS	3,107	cy	60.00	186,420		
126	Trees	36	ea	2,000.00	72,000		
127	Rain gardens	10,000	sf	18.00	180,000		
128	Allowance for planted areas	30,000	sf	15.00	450,000		
129	SUBTOTAL					913,420	
130							
131	G30 CIVIL MECHANICAL UTILITIES						
132	<u>Water supply</u>						
133	New CI piping; 12" loop	1,500	lf	120.00	180,000		
134	New fire water 8"	300	lf	80.00	24,000		
135	Connect to existing line	2	loc	15,000.00	30,000		
136	New fire hydrant	2	loc	2,600.00	5,200		
137	FD connection	2	loc	2,000.00	4,000		
138	<u>Sanitary</u>						
139	8" SDR-35	500	lf	60.00	30,000		
140	Grease trap	1	loc	15,000.00	15,000		
141	Manhole	3	loc	5,000.00	15,000		
142	<u>Surface Water Drainage</u>						
143	Allowance for storm drainage piping, structures and WQS	141,000	sf	15.00	2,115,000		
144	SUBTOTAL					2,418,200	
145							
146	G40 SITE ELECTRICAL						
147	Primary service	500	lf	350.00	175,000		
148	Secondary service	50	lf	800.00	40,000		
149	Communication service	500	lf	500.00	250,000		
150	EV stations	1	ls	75,000.00	75,000		
151							
152	<u>Site Lighting</u>						
153	Allowance for site lighting	141,000	sf	3.00	423,000		
154	SUBTOTAL					963,000	
155							
156	SUBTOTAL SITE DEVELOPMENT						\$14,698,085

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A.M. Fogarty & Assoc., Inc.

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"Construction Cost Consultants"

Galvin Middle School - PSR Canton, MA

January 11, 2024

PSR ESTIMATE GRAND SUMMARY

	<u>chptr 149 a</u> <u>CM @ RISK</u>	<u>COST</u> <u>PER SF</u>	<u>chptr 149</u> <u>Desing/Bid</u>
OPTION 1	\$77,350,343	\$586.43	\$72,322,570
OPTION 7A - MINOR ADDITION MAJOR RENOVATION	\$178,177,310	\$834.66	\$166,595,785
OPTION 7B - MAJOR ADDITION MINOR RENOVATION	\$195,427,648	\$876.75	\$182,724,851
OPTION - 9B NEW CONSTRUCTION	\$186,508,677	\$854.17	\$174,385,613
OPTION - 9E NEW CONSTRUCTION	\$186,114,995	\$852.37	\$174,017,520
ALTERANTES			
ALT NO. 1 - ADD SYNTHETIC TURF FIELD	\$1,009,012		
ALT NO. 2 - ADD SPORTS FIELD LIGHTING	\$1,108,800		

DO NOT USE THIS ESTIMATE FOR BUDGETING PURPOSES, THESE ESTIAMTES ARE SOLEY OFFERED TO DEMONSTRATE THE RELATIVE COST DIFFERENCES BETWEEN THE OPTION



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Galvin Middle School - PSR Canton, MA

11-Jan-24

Designer: AI3 Architects

OPTION 1 BASE REPAIR

	GSF	COST	COST PER S.F.	TOTAL
RENOVATION	131,900	GSF	\$331.08	\$43,670,082
MODULAR DEMOLITION	5,000	GSF	\$6.00	\$30,000
HAZARDOUS WASTE				\$2,045,150
SITWORK	1	LS		\$2,071,965
TEMPORARY CLASSROOM				NIC
TOTAL DIRECT COST				\$47,817,197
CM CHPTR 149A BID				
DESIGN CONTINGENCY		15%		\$7,172,580
ESCALATION (june 2026)		10%		\$5,498,978
GENERAL CONDITIONS - PHASE 1	48	mos	\$165,000	\$7,920,000
GENERAL REQUIREMENTS/PHASING		5.0%		\$3,420,438
BUILDING PERMIT	waived	0%		\$0
P&P BOND & INSURANCE		2%		\$1,436,584
PROFIT		2.5%		\$1,831,644
CM CONTINGENCY		3%		\$2,252,923
TOTAL COST				\$77,350,343
COST PER SF				\$586.43

<h1 style="margin: 0;">A.M. Fogarty</h1> <h2 style="margin: 0;">& Assoc., Inc.</h2>	175 Derby St., Suite 5, Hingham, MA 02043 TEL: (781) 749-7272 • FAX: (781) 740-2652 ptim@amfogarty.com <hr style="border: 0.5px solid black;"/> <i>"Construction Cost Consultants"</i>
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Galvin Middle School - PSR Canton, MA

11-Jan-24

Designer: AI3 Architects

OPTION 7A ADD RENO

	GSF	COST	COST PER S.F.	TOTAL
ADDITION	81,573	GSF	\$588.70	\$48,022,043
RENOVATION	131,900	GSF	\$371.33	\$48,978,375
DEMOLITION	0	GSF	\$9.00	\$0
MODULAR DEMOLITION	5,000	GSF	\$6.00	\$30,000
HAZARDOUS WASTE				\$2,045,150
SITework	1	LS		\$13,702,605
TEMPORARY CLASSROOM				NIC
TOTAL DIRECT COST				\$112,778,172
CM CHPTR 149A BID				
DESIGN CONTINGENCY		15%		\$16,916,726
ESCALATION (june 2026)		12%		\$15,563,388
GENERAL CONDITIONS	60	mos	\$165,000	\$9,900,000
GENERAL REQUIREMENTS/PHASING		5.0%		\$7,757,914
BUILDING PERMIT	waived	0%		\$0
P&P BOND & INSURANCE		2%		\$3,258,324
PROFIT		4.1%		\$6,813,155
CM CONTINGENCY		3%		\$5,189,630
TOTAL COST				\$178,177,310
COST PER SF				\$834.66



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Galvin Middle School - PSR Canton, MA

11-Jan-24

Designer: AI3 Architects

OPTION 7B ADD RENO

	GSF	COST	COST PER S.F.	TOTAL
ADDITION	186,300	GSF	\$498.19	\$92,813,074
RENOVATION	36,600	GSF	\$401.07	\$14,679,033
DEMOLITION	95,303	GSF	\$9.00	\$857,727
MODULAR DEMOLITION	5,000	GSF	\$6.00	\$30,000
HAZARDOUS WASTE				\$2,045,150
SITWORK	1	LS		\$13,503,606
TEMPORARY CLASSROOM				NIC
TOTAL DIRECT COST				----- \$123,928,590
CM CHPTR 149A BID				
DESIGN CONTINGENCY		15%		\$18,589,288
ESCALATION (june 2026)		12%		\$17,102,145
GENERAL CONDITIONS	64	mos	\$165,000	\$10,560,000
GENERAL REQUIREMENTS/PHASING		5.0%		\$8,509,001
BUILDING PERMIT	waived	0%		\$0
P&P BOND & INSURANCE		2%		\$3,573,781
PROFIT		4.1%		\$7,472,775
CM CONTINGENCY		3%		\$5,692,067
TOTAL COST				----- \$195,427,648
COST PER SF				\$876.75

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**Galvin Middle School - PSR
Canton, MA**

11-Jan-24

Designer: AI3 Architects

OPTION 9B NEW 3 STORY

	GSF	COST	COST PER S.F.	TOTAL
NEW CONSTRUCTION	218,350	GSF	\$483.16	\$105,497,850
DEMOLITION	131,903	GSF	\$9.00	\$1,187,127
MODULAR DEMOLITION	5,000	GSF	\$6.00	\$30,000
HAZARDOUS WASTE				\$2,045,150
SITework	1	LS		\$13,368,971
TEMPORARY CLASSROOM				NIC
	TOTAL DIRECT COST			----- \$122,129,098
CM CHPTR 149A BID				
DESIGN CONTINGENCY		15%		\$18,319,365
ESCALATION (june 2026)		10%		\$14,044,846
GENERAL CONDITIONS	48	mos	\$165,000	\$7,920,000
GENERAL REQUIREMENTS/PHASING		5.0%		\$8,120,665
BUILDING PERMIT	waived	0%		\$0
P&P BOND & INSURANCE		2%		\$3,410,679
PROFIT		4.1%		\$7,131,731
CM CONTINGENCY		3%		\$5,432,292
	TOTAL COST			----- \$186,508,677
		COST PER SF		\$854.17



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"Construction Cost Consultants"

Galvin Middle School - PSR Canton, MA

11-Jan-24

Designer: AI3 Architects

OPTION 9E NEW 3 STORY

	GSF	COST	COST PER S.F.	TOTAL
NEW CONSTRUCTION	218,350	GSF	\$485.51	\$106,010,266
DEMOLITION	131,903	GSF	\$9.00	\$1,187,127
MODULAR DEMOLITION	5,000	GSF	\$6.00	\$30,000
HAZARDOUS WASTE				\$2,045,150
SITework	1	LS		\$15,283,092
TEMPORARY CLASSROOM				NIC
TOTAL DIRECT COST				----- \$124,555,634
CM CHPTR 149A BID				
DESIGN CONTINGENCY		15%		\$18,683,345
ESCALATION (june 2026)		9%		\$12,891,508
GENERAL CONDITIONS - PHASE 1	36	mos	\$165,000	\$5,940,000
GENERAL REQUIREMENTS/PHASING		5.0%		\$8,103,524
BUILDING PERMIT	waived	0%		\$0
P&P BOND & INSURANCE		2%		\$3,403,480
PROFIT		4.1%		\$7,116,677
CM CONTINGENCY		3%		\$5,420,825
TOTAL COST				----- \$186,114,995
COST PER SF				\$852.37

PROJECT: Galvin Middle School - PSR
 LOCATION: Canton, MA
 CLIENT: Leftfield
 DATE: 11-Jan-24



No.: 22025

SUMMARY

A. SUBSTRUCTURE

- A10 - FOUNDATIONS
 - A1010 STANDARD FOUNDATIONS
 - A1020 SPECIAL FOUNDATIONS
 - A1030 SLAB ON GRADE
- A20 - BASEMENT CONSTRUCTION
 - A2010 BASEMENT EXCAVATION
 - A2020 BASEMENT WALLS

B. SHELL

- B10 - SUPERSTRUCTURE
 - B1010 FLOOR CONSTRUCTION
 - B1020 ROOF CONSTRUCTION
- B20 - EXTERIOR ENCLOSURE
 - B2010 EXTERIOR WALLS
 - B2020 EXTERIOR WINDOWS
 - B2030 EXTERIOR DOORS
- B30 - ROOFING
 - B3010 ROOF COVERINGS
 - B3020 ROOF OPENINGS

C. INTERIORS

- C10 - INTERIOR CONSTRUCTION
 - C1010 PARTITIONS
 - C1020 INTERIOR DOORS
 - C1030 FITTINGS
- C20 - STAIRS
 - C2010 STAIR CONSTRUCTION
 - C2020 STAIR FINISHES
- C30 - INTERIOR FINISHES
 - C3010 WALL FINISHES
 - C3020 FLOOR FINISHES
 - C3030 CEILING FINISHES

OPT 9B NEW ESTIMATE TOTAL	OPT 9E NEW ESTIMATE TOTAL
\$6,748,088	\$6,554,716
\$0	\$0
\$1,422,937	\$1,359,719
\$0	\$0
\$0	\$0
\$6,531,300	\$6,813,300
\$5,302,866	\$5,052,270
\$7,970,035	\$8,633,663
\$4,323,156	\$4,682,078
\$207,200	\$239,200
\$4,319,990	\$4,179,378
\$46,250	\$46,250
\$8,571,919	\$8,595,078
\$1,623,475	\$1,623,475
\$3,769,715	\$3,357,534
\$466,000	\$638,000
\$52,500	\$82,500
\$3,275,250	\$3,275,250
\$3,024,148	\$3,024,148
\$3,275,250	\$3,275,250

Galvin Middle School - PSR

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D. SERVICES

- D10 - CONVEYING
 - D1010 ELEVATORS & LIFTS
- D20 - PLUMBING
 - D2010 PLUMBING
- D30 - HVAC
 - D3010 HVAC
- D40 - FIRE PROTECTION
 - D4010 SPRINKLERS
- D50 - ELECTRICAL
 - D5010 ELECTRICAL SERVICE & DISTRIBUTION
 - D5020 LIGHTING & BRANCH WIRING
 - D5030 COMMUNICATION & SECURITY
 - D5090 OTHER ELECTRICAL SYSTEMS

E. EQUIPMENT & FURNISHINGS

- E10 - EQUIPMENT
 - E1010 COMMERCIAL EQUIPMENT
 - E1090 OTHER EQUIPMENT
- E20 - FURNISHINGS
 - E 2010 FIXED FURNISHINGS
 - E2020 MOVABLE FURNISHINGS

F. SPECIAL CONSTRUCTION & DEMOLITION

- F10 - SPECIAL CONSTRUCTION
 - F1010 SPECIAL STRUCTURES
 - F1020 INTEGRATED CONSTRUCTION
 - F1030 SPECIAL CONSTRUCTION SYSTEMS
 - F1040 SPECIAL FACILITIES
 - F1050 SPECIAL CONTROLS & INSTRUMENTATION
- F20 - SELECTIVE BUILDING DEMOLITION
 - F2010 BUILDING ELEMENTS DEMOLITION
 - F2020 HAZARDOUS COMPONENTS ABATEMENT

TOTAL BUILDING COST

OPT 9B NEW ESTIMATE TOTAL	OPT 9E NEW ESTIMATE TOTAL
\$265,000	\$265,000
\$6,222,975	\$6,222,975
\$16,376,250	\$16,376,250
\$1,910,563	\$1,910,563
\$2,848,800	\$2,848,800
\$3,530,478	\$3,530,478
\$3,000,125	\$3,000,125
\$4,347,881	\$4,347,881
\$1,200,000	\$1,200,000
\$1,222,000	\$1,220,500
\$3,643,700	\$3,655,888
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
-----	-----
\$105,497,850	\$106,010,266

Galvin Middle School - PSR

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G. BUILDING SITEWORK

	OPT 9B NEW ESTIMATE TOTAL	OPT 9E NEW ESTIMATE TOTAL
G10 - SITE PREPARATION		
G1010 SITE CLEARING	\$380,610	\$395,415
G1020 SITE DEMOLITION & RELOCATIONS	\$630,160	\$642,115
G1030 SITE EARTHWORK	\$2,641,206	\$2,802,492
G1040 HAZARDOUS WASTE REMEDIATION	\$0	\$0
G20 - SITE IMPROVEMENTS		
G2010 ROADWAYS	\$1,315,129	\$1,399,661
G2020 PARKING LOTS	\$0	\$0
G2030 PEDESTRIAN PAVING	\$1,078,926	\$1,272,084
G2040 SITE DEVELOPMENT	\$2,650,363	\$4,006,645
G2050 LANDSCAPING	\$1,369,660	\$1,381,218
G30 - SITE MECHANICAL UTILITIES		
G3010 WATER SUPPLY	\$315,982	\$310,898
G3020 SANITARY SEWER	\$157,000	\$152,000
G3030 STORM SEWER	\$1,738,536	\$1,897,914
G3040 HEATING DISTRIBUTION	\$0	\$0
G3050 COOLING DISTRIBUTION	\$0	\$0
G3060 FUEL DISTRIBUTION	\$0	\$0
G3090 OTHER SITE MECHANICAL UTILITIES	\$0	\$0
G40 - SITE ELECTRICAL UTILITIES		
G4010 ELECTRICAL DISTRIBUTION	\$644,500	\$575,750
G4020 SITE LIGHTING	\$446,900	\$446,900
	-----	-----
TOTAL SITE COST	\$13,368,971	\$15,283,092
TOTAL DIRECT COST	\$118,866,821	\$121,293,357

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
A. SUBSTRUCTURE						
A10 - FOUNDATIONS						
A1010 STANDARD FOUNDATIONS						
<u>033000 CAST IN PLACE CONCRETE</u>						
Foundations :						
Wall Footing 1' x 3':	\$525.00	CY	205	\$107,683	233	\$122,150
Frost wall - 4' x 16"	\$1,100.00	CY	365	\$401,105	414	\$454,991
Interior Foundations	\$1,200.00	CY	30	\$36,000	30	\$36,000
Column Footing	\$625.00	CY	996	\$622,685	950	\$593,750
Elev Mat - 24"	\$650.00	CY	12	\$7,800	12	\$7,800
Elev pit wall	\$1,100.00	CY	7	\$7,700	7	\$7,700
Grade Beam (60 LF per 5,000 sf/ft)	\$135.00	LF	1,291	\$174,312	1,231	\$166,212
Pilasters	\$1,200.00	CY	73	\$87,514	83	\$99,271
Equipment pads	\$7,500.00	LS	1	\$7,500	1	\$7,500
<u>072100 INSULATION</u>						
2" Rigid ext. found. insul w/prot.bd	\$4.05	SF	7,384	\$29,905	8,376	\$33,923
<u>071000 DAMPPROOF., WATERPROOF. & CAULKING*</u>						
Foundation dampproofing	\$2.30	SF	7,384	\$16,983	8,376	\$19,265
<u>310000 EARTHWORK</u>						
Over Excavate 4' depth						
Excavate organics	11.00	CY	17,535	\$192,883	16,720	\$183,920
Truck and haul spoil	12.00	CY	17,535	\$210,418	16,720	\$200,640
Soil disposal	22.00	TON	28,056	\$617,225	26,752	\$588,544
Structural Fill	55.00	CY	17,535	\$964,415	16,720	\$919,600
Under slab Drain	\$1.25	SF	107,600	\$134,500	102,600	\$128,250

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Foundation Earthwork:						
Foundation excavation / backfill	\$5.00	SF	107,600	\$538,000	102,600	\$513,000
Dewatering	\$25,000.00	LS	1	\$25,000	1	\$25,000
Building Earthwork						
Bldg Cut	\$12.50	CY	31,881	\$398,519	30,400	\$380,000
Structural Fill	\$68.00	CY	31,881	\$2,167,941	30,400	\$2,067,200
				-----		-----
				\$6,748,088		\$6,554,716
<u>A1030 SLAB ON GRADE</u>						
<u>310000 EARTHWORK</u>						
12" Gravel base	\$48.00	CY	3,985	\$191,289	3,800	\$182,400
<u>033000 CAST IN PLACE CONCRETE</u>						
5" Slab on Grade:						
4,000 psi, NW, (incl. placement)	\$310.00	CY	1,660	\$514,753	1,583	\$490,833
Welded wire fabric	\$2.68	SF	107,600	\$288,368	102,600	\$274,968
Control Joint	\$3.50	LF	7,173	\$25,107	6,840	\$23,940
Trowel Finish	\$2.50	SF	107,600	\$269,000	102,600	\$256,500
<u>072100 INSULATION</u>						
4" Rigid Slab Insul. - 2' perm.	\$4.35	SF	3,692	\$16,060	4,188	\$18,218
<u>072616 BELOW GRADE VAPOR RETARDER</u>						
Stegro vapor barrier	\$1.10	SF	107,600	\$118,360	102,600	\$112,860
				-----		-----
				\$1,422,937		\$1,359,719
TOTAL A10 FOUNDATIONS				\$8,171,025		\$7,914,435

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
B. SHELL						
B10 - SUPERSTRUCTURE						
B1010 FLOOR CONSTRUCTION						
<u>051200 STRUCTURAL STEEL</u>						
New Construction:						
Floor frame (14 lbs/sf)	\$5,350.00	TONS	775	\$4,147,588	810	\$4,334,838
Shear stud	\$5.50	EA	11,075	\$60,913	11,575	\$63,663
Allow for exposed wood structure	\$250,000.00	LS	1	\$250,000	1	\$250,000
<u>033000 CAST IN PLACE CONCRETE</u>						
5 1/2" NW Deck fill	\$9.40	SF	110,750	\$1,041,050	115,750	\$1,088,050
<u>053100 STEEL DECKING</u>						
2" x 18 Ga. comp deck	\$5.90	SF	110,750	\$653,425	115,750	\$682,925
<u>072100 INSULATION</u>						
Spray on fireproofing	\$3.10	SF	110,750	\$343,325	115,750	\$358,825
Intumescent - allow	\$35,000.00	LS	1	\$35,000	1	\$35,000

				\$6,531,300	\$6,813,300	
B1020 ROOF CONSTRUCTION						
<u>033000 CAST IN PLACE CONCRETE</u>						
6" NW Deck fill - rtu pad	\$9.00	SF	15,000	\$135,000	15,000	\$135,000
<u>051200 STRUCTURAL STEEL</u>						

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
New Construction:						
Roof frame (14 lbs/sf)	\$5,350.00	TONS	753.20	\$4,029,620	718.20	\$3,842,370
Roof screen frame (110 lbs/lf)	\$5,600.00	TONS	9.38	\$52,500	9.38	\$52,500
Galv. RTU dunnage	\$5,600.00	TONS	3	\$16,800	3	\$16,800
Frame Entry Canopies (500 sf @ 20 lb:	\$5,200.00	TONS	5	\$26,000	5	\$26,000
<u>053100 STEEL DECKING</u>						
1 1/2" x 18 Ga roof deck - typ.	\$5.90	SF	98,186	\$579,297	95,600	\$564,040
3" x 18 Ga acoust. deck - gym/aux. gym	\$13.50	SF	9,414	\$127,089	7,000	\$94,500
1 1/2" x 20 Ga canopy roof deck	\$6.00	SF	500	\$3,000	500	\$3,000
<u>072100 INSULATION</u>						
Spray on fireproofing	\$3.10	SF	107,600	\$333,560	102,600	\$318,060
				-----		-----
				\$5,302,866		\$5,052,270
TOTAL B10 SUPERSTRUCTURE				\$11,834,166		\$11,865,570
B20 - EXTERIOR ENCLOSURE						
B2010 EXTERIOR WALLS						
<u>040001 MASONRY*</u>						
Masonry Veneer:						
Masonry Veneer - 37.5%	\$45.00	SF	28,125	\$1,265,625	30,563	\$1,375,313
Canopy col. -complete	\$8,500.00	EA	6	\$51,000	6	\$51,000
Stainless steel masonry flashing	\$29.00	LF	1,195	\$34,655	1,195	\$34,655
Architectural Precast:						
Precast Window Sill	\$68.00	LF	3,125	\$212,500	3,396	\$230,917

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Architectural precast trim - allowance	\$2.00	SF	75,000	\$150,000	81,500	\$163,000
CMU Exterior Wall: 8" CMU Gymnasium	\$38.00	SF	5,180	\$196,840	2,661	\$101,118
<u>054000 COLD FORMED METAL FRAMING</u>						
8" x 18 Ga. stud @ typical wall	\$16.50	SF	51,070	\$842,655	58,464	\$964,656
1/2" Dens glass sheathing-ext. wall	\$4.50	SF	51,070	\$229,815	58,464	\$263,088
3" Soffit/eave framing	\$25.00	LF	1,846	\$46,150	2,094	\$52,350
Eave/Cornice framing	\$9.50	SF	3,692	\$35,074	4,188	\$39,786
3" Canopy ceiling framing	\$7.00	SF	500	\$3,500	500	\$3,500
3" Overhang/soffit framing	\$7.00	SF				
1/2" Dens glass sheathing - eave/cornice	\$4.50	SF	3,692	\$16,614	4,188	\$18,846
1/2" Dens glass sheathing -canopy	\$4.50	SF	500	\$2,250	500	\$2,250
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>						
Misc. Ext Metals	\$0.50	SF	75,000	\$37,500	81,500	\$40,750
<u>071326 AIR & VAPOR BARRIERS</u>						
Air & vapor barrier - wall	\$9.50	SF	56,250	\$534,375	61,125	\$580,688
Air & vapor barrier - soffit	\$9.50	SF	3,692	\$35,074	4,188	\$39,786
Air & vapor barrier - overhang/soffit	\$9.50	SF				
<u>072100 INSULATION</u>						
Exterior Wall: Spray foam at perm openings	\$6.00	LF	15,625	\$93,750	16,979	\$101,875
5" Mineral wool Insul.	\$5.90	SF	56,250	\$331,875	61,125	\$360,638
2" Spray foam	\$4.65	SF	51,070	\$237,476	58,464	\$271,858
Bldg Soffit: 3" Rigid Insul. - cornice/eaves	\$4.10	SF	3,692	\$15,137	4,188	\$17,171
<u>071000 DAMPPROOF., WATERPROOF. & CAULKING*</u>						

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Exterior Sealants	\$0.65	SF	75,000	\$48,750	81,500	\$52,975
<u>074213 PERFORMED CLADDING</u>						
Wall Panel:						
Metal Comp. panel - 18.75%	\$100.00	SF	14,063	\$1,406,250	15,281	\$1,528,125
Architectural panel - 18.75%	\$100.00	SF	14,063	\$1,406,250	15,281	\$1,528,125
Alum. 16 ga Panel :						
Canopy ceiling	\$45.00	SF	500	\$22,500	500	\$22,500
Roof Eave Cladding	\$85.00	LF	3,692	\$313,820	4,188	\$355,980
Overhang/soffit	\$45.00	SF				
Roof Screen:						
10' H Metal Panel Equipment Screen	\$65.00	SF	2,500	\$162,500	2,500	\$162,500
<u>092116 GYPSUM WALLBOARD</u>						
1 Lyr 5/8" gyp @ ext. wall	\$4.15	SF	51,070	\$211,941	58,464	\$242,626
<u>090007 PAINTING*</u>						
Exterior painting	\$0.22	SF	75,000	\$16,500	81,500	\$17,930
<u>101400 IDENTIFYING DEVICES (EXT. BLD MTD SIGNAGE)</u>						
24" Alum bldg mtd letter - allow	\$420.00	EA	23	\$9,660	23	\$9,660
				-----		-----
				\$7,970,035		\$8,633,663
<u>B2020 EXTERIOR WINDOWS</u>						
<u>061000 ROUGH CARPENTRY</u>						
P.T. - perim blocking	\$14.00	LF	15,625	\$218,750	16,979	\$237,708
<u>071326 AIR & VAPOR BARRIERS</u>						

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Flex flashing - perim	\$10.00	LF	15,625	\$156,250	16,979	\$169,792
<u>071000 DAMPPROOF., WATERPROOF. & CAULKING*</u>						
Window Caulking	\$12.75	LF	15,625	\$199,219	16,979	\$216,484
<u>080001 METAL WINDOWS*</u>						
TRP Glazing Exterior Alum Window - 25%	\$175.00	SF	18,750	\$3,281,250	20,375	\$3,565,625
Alum. Curtainwall - premium	\$50.00	SF	3,750	\$187,500	4,075	\$203,750
Security glazing - premium	\$35.00	SF	2,813	\$98,438	3,056	\$106,969
Sun Shading: Typical Classroom Window	\$175,000.00	LS	1	\$175,000	1	\$175,000
<u>109000 MISCELLANEOUS SPECIALTIES</u>						
Alum louvers - allow	\$135.00	SF	50	\$6,750	50	\$6,750
				-----		-----
				\$4,323,156		\$4,682,078
 B2030 EXTERIOR DOORS						
<u>080001 METAL WINDOWS*</u>						
7' Alum. Doors (Incl. Hardware): Main Entry - dbl	\$14,500.00	EA	8	\$116,000	10	\$145,000
Main Gymnasium - dbl	\$14,500.00	EA	4	\$58,000	4	\$58,000
Auto opener - allow	\$9,000.00	PR	1	\$9,000	1	\$9,000
*Storefront at entries W /B 2020						
Security Glazing Premium	\$750.00	LVS	24	\$18,000	28	\$21,000
<u>081113 HOLLOW METALWORK</u>						

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Insulated HM Doors and Frame: Custodial - dbl	\$2,700.00	EA	2	\$5,400	2	\$5,400
<u>090007 PAINTING*</u>						
Paint HM Door & frame - dbl	\$400.00	EA	2	\$800	2	\$800
				-----		-----
				\$207,200		\$239,200
TOTAL B20 - EXTERIOR ENCLOSURE				\$12,500,391		\$13,554,941
B30 - ROOFING						
B3010 ROOF COVERINGS						
<u>061000 ROUGH CARPENTRY</u>						
Roof Blocking - main bldg	\$1.45	SF	107,600	\$156,020	102,600	\$148,770
Roof Blocking - canopy	\$1.20	SF	500	\$600	500	\$600
<u>070002 ROOFING AND FLASHING*</u>						
PVC roof - canopy	\$28.00	SF	500	\$14,000	500	\$14,000
PVC roof w/ 8" rigid insul	\$28.00	SF	107,600	\$3,012,800	102,600	\$2,872,800
Roof walkway pad (2'x2')	\$6.15	SF	5,380	\$33,087	5,130	\$31,550
Allow - Green Roof	\$32.00	SF	20,000	\$640,000	20,000	\$640,000
Allow - Terrace Paver	\$55.00	SF	5,000	\$275,000	5,000	\$275,000
Alum. Trim :						
Perimeter wall Coping	\$45.00	LF	2,489	\$112,005	2,764	\$124,380
Base Flashing	\$34.00	LF	667	\$22,678	617	\$20,978
Misc. flashing	\$0.50	SF	107,600	\$53,800	102,600	\$51,300
				-----		-----
				\$4,319,990		\$4,179,378

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
B3020 ROOF OPENINGS						
<u>077200 ROOF ACCESSORIES</u>						
Roof ladder	\$12,000.00	EA	1	\$12,000	1	\$12,000
Stage Vent	\$15,000.00	EA	2	\$30,000	2	\$30,000
Roof hatch	\$4,250.00	EA	1	\$4,250	1	\$4,250
*Mechanical equip screen is included with B1020 & B2010						
				-----		-----
				\$46,250		\$46,250
TOTAL B30 ROOFING				\$4,366,240		\$4,225,628
 C. INTERIORS						
C10 - INTERIOR CONSTRUCTION						
C1010 PARTITIONS						
<u>040001 MASONRY*</u>						
8" CMU Elev Shaft	\$44.00	SF	1,848	\$81,312	1,848	\$81,312
8" CMU - GF Gym	\$39.00	SF	5,662	\$220,818	6,748	\$263,172
8" CMU - Mech Receiving	\$36.75	SF	3,500	\$128,625	3,500	\$128,625
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>						
CMU angle brace frame - 4' OC	\$125.00	EA	197	\$24,576	216	\$27,000
Over head door supports	\$25,000.00	LS	1	\$25,000	1	\$25,000
Loose lintels	\$0.35	SF	11,010	\$3,854	12,096	\$4,234
<u>061000 ROUGH CARPENTRY</u>						
Interior blocking	\$1.00	GSF	218,350	\$218,350	218,350	\$218,350
Misc. rough carpentry	\$1.00	GSF	218,350	\$218,350	218,350	\$218,350
Clean Safety and Laborer	\$4.00	GSF	218,350	\$873,400	218,350	\$873,400

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
<u>072100 INSULATION</u>						
Firestopping	\$0.85	GSF	218,350	\$185,598	218,350	\$185,598
<u>081113 HOLLOW METALWORK</u>						
Interior H.M Windows, Sidelites and Transoms (INC. GLAZING):						
Door sidelight (2' x 7')	\$1,200.00	EA	68	\$81,600	68	\$81,600
Admin sidelight (1'x8')	\$1,200.00	EA	20	\$24,000	20	\$24,000
Rated Stair window	\$390.00	SF	500	\$195,000	500	\$195,000
Misc. window/sidelight & transom	\$90.00	SF	2,500	\$225,000	2,500	\$225,000
<u>083323 SPECIAL DOORS</u>						
Access panels	\$0.25	GSF	218,350	\$54,588	218,350	\$54,588
<u>080001 METAL WINDOWS*</u>						
Interior Aluminum Storefront:						
Vestibule and Entries	\$88.00	SF	500	\$44,000	500	\$44,000
Administration area	\$88.00	SF	1,000	\$88,000	750	\$66,000
General Building Area	\$0.50	GSF	218,350	\$109,175	218,350	\$109,175
Operable Folding Glazed Partition	\$145.00	SF	1,200	\$174,000	1,200	\$174,000
<u>092116 GYPSUM WALLBOARD</u>						
Drywall Partitions:						
GWB assemblies	\$25.50	GSF	218,350	\$5,567,925	218,350	\$5,567,925
Operable Partition:						
Eelc Op Partition - allow	\$115.00	SF	250	\$28,750	250	\$28,750
				-----		-----
				\$8,571,919		\$8,595,078
<u>C1020 INTERIOR DOORS</u>						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
<u>081113 HOLLOW METALWORK</u>						
<u>081416 WOOD AND PLASTIC DOORS</u>						
<u>087100 DOOR HARDWARE</u>						
Interior Door frame and Hardware	\$6.50	GSF	218,350	\$1,419,275	218,350	\$1,419,275
<u>080001 METAL WINDOWS*</u>						
Aluminum (Frame, Door, Glass, Glazing and Hdw):						
Vest - dbl	\$12,500.00	PR	5	\$62,500	5	\$62,500
Main office -sgl	\$3,600.00	EA	2	\$7,200	2	\$7,200
<u>083323 SPECIAL DOORS</u>						
Dish drop window	\$5,000.00	EA	1	\$5,000	1	\$5,000
Kitchen OH grille	\$4,500.00	EA	1	\$4,500	1	\$4,500
Security Gate and Grill	\$125,000.00	LS	1	\$125,000	1	\$125,000
				-----		-----
				\$1,623,475		\$1,623,475
<u>C1030 FITTINGS</u>						
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>						
Auditorium catwalk	\$200,000.00	LS	1	\$200,000	1	\$200,000
Auditorium Railing	\$125,000.00	LS	1	\$125,000	1	\$125,000
Black box catwalk	\$150,000.00	LS	1	\$150,000	1	\$150,000
Floor Railing @ opening	\$475.00	LF	1,233	\$585,675	390	\$185,250
Misc. metals	\$2.00	GSF	218,350	\$436,700	218,350	\$436,700
<u>062000 FINISH CARPENTRY</u>						
Utility & closet shelving	\$5,000.00	LS	1	\$5,000	1	\$5,000
Typ. window sill/apron (nic cw-gym)	\$65.00	LF	3,125	\$203,125	3,396	\$220,729
Project Area Millwork	\$40,000.00	LOC	12	\$480,000	12	\$480,000
Auditorium Millwork	\$75,000.00	LS	1	\$75,000	1	\$75,000

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Misc. wood trim	\$1.00	GSF	218,350	\$218,350	218,350	\$218,350
Media Center Built-in	\$30,000.00	LS	1	\$30,000	1	\$30,000
Raised Stage Platform and steps	\$55.00	SF	900	\$49,500	900	\$49,500
Custom Casework:						
Admin casework	\$20,000.00	LS	1	\$20,000	1	\$20,000
Circulation desk	\$15,000.00	LS	1	\$15,000	1	\$15,000
<u>102113 COMPARTMENTS & CUBICLES</u>						
Solid Plastic Toilet Partitions:						
Std. partition	\$1,385.00	EA	12	\$16,620	12	\$16,620
HC partition	\$1,590.00	EA	12	\$19,080	8	\$12,720
<u>102813 TOILET & BATH ACCESSORIES</u>						
Building Toilet Accessories *Excludes classroom accessories	\$0.92	GSF	218,350	\$200,882	218,350	\$200,882
<u>101100 MARKERBOARDS & TACKBOARDS</u>						
Marker board tackboard	\$1.30	GSF	218,350	\$283,855	218,350	\$283,855
Glass Display Case	\$1,000.00	LF	35	\$35,000	12	\$12,000
<u>109000 MISCELLANEOUS SPECIALTIES</u>						
Kitchen staff locker(12"wx15" D x 6'h)	\$350.00	EA	10	\$3,500	10	\$3,500
Custodian staff(12"wx15" D x 6'h)	\$350.00	EA	5	\$1,750	5	\$1,750
Student Lockers	\$400.00	EA	1,020	\$408,000	1,020	\$408,000
Wall & corner guards - allow	\$10,000.00	LS	1	\$10,000	1	\$10,000
Fire extinguisher and cab - allow	\$550.00	EA	35	\$19,250	35	\$19,250
Cubicle curtain track w/ curtain - health	\$1,500.00	EA	2	\$3,000	2	\$3,000
Misc. specialties	\$0.25	GSF	218,350	\$54,588	218,350	\$54,588
<u>101400 IDENTIFYING DEVICES</u>						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Building directory - allow	\$5,000.00	EA	1	\$5,000	1	\$5,000
Dedication plaque	\$3,500.00	EA	1	\$3,500	1	\$3,500
Interior Signage	\$0.40	GSF	218,350	\$87,340	218,350	\$87,340
Environmental graphics	\$25,000.00	LS	1	\$25,000	1	\$25,000
				-----		-----
				\$3,769,715		\$3,357,534
TOTAL C10 - INTERIOR CONSTRUCTION				\$13,965,109		\$13,576,086
C20 - STAIRS						
C2010 STAIR CONSTRUCTION						
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>						
Metal Pan Stair w/Rails:						
Egress corridor stair	\$55,000.00	FLT	4	\$220,000	6	\$330,000
Corridor Stair	\$50,000.00	FLT			4	\$200,000
Main Communicating Stair	\$75,000.00	FLT	3	\$225,000	1	\$75,000
<u>033000 CAST IN PLACE CONCRETE</u>						
Conc stair pan fill - full flt	\$3,000.00	FLTS	7	\$21,000	11	\$33,000
				-----		-----
				\$466,000		\$638,000
C2020 STAIR FINISHES						
<u>090005 RESILIENT FLOORING*</u>						
Rubber treads and risers	\$4,000.00	FLTS	7	\$28,000	11	\$44,000
<u>090007 PAINTING*</u>						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Paint stair & rails - full flt	\$3,500.00	FLTS	7	\$24,500	11	\$38,500
				----- \$52,500		----- \$82,500
TOTAL C20 - STAIRS				\$518,500		\$720,500
C30 - INTERIOR FINISHES						
C3010 WALL FINISHES						
Wall Finish	\$15.00	GSF	218,350	\$3,275,250	218,350	\$3,275,250
				----- \$3,275,250		----- \$3,275,250
C3020 FLOOR FINISHES						
Floor Finish	\$13.85	GSF	218,350	\$3,024,148	218,350	\$3,024,148
				----- \$3,024,148		----- \$3,024,148
C3030 CEILING FINISHES						
Ceiling Finish	\$15.00	GSF	218,350	\$3,275,250	218,350	\$3,275,250
				----- \$3,275,250		----- \$3,275,250
TOTAL C30 - INTERIOR FINISHES				\$9,574,648		\$9,574,648
D. SERVICES						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
D10 - CONVEYING						
D1010 ELEVATORS & LIFTS						
<u>140001 ELEVATORS*</u>						
Traction 3,500 lbs Passenger Elev	\$85,000.00	STOP	3	\$255,000	3	\$255,000
Elevator Metals	\$10,000.00	LS	1	\$10,000	1	\$10,000
				-----		-----
				\$265,000		\$265,000
TOTAL D10 - CONVEYING				\$265,000		\$265,000
D20 - PLUMBING						
D2010 PLUMBING						
Plumbing	\$28.50	GSF	218,350	\$6,222,975	218,350	\$6,222,975
				-----		-----
				\$6,222,975		\$6,222,975
TOTAL D20 - PLUMBING				\$6,222,975		\$6,222,975
D30 - HVAC						
D3010 HVAC						
VRF	\$75.00	GSF	218,350	\$16,376,250	218,350	\$16,376,250
				-----		-----

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
				\$16,376,250		\$16,376,250
TOTAL D30 - HVAC			\$75	\$16,376,250	\$75	\$16,376,250
D40 - FIRE PROTECTION						
D4010 SPRINKLERS						
<u>210001 FIRE SUPPRESSION*</u>						
Sprinkler system - wet *EXCLUDES FIRE PUMP	\$8.75	GSF	218,350	\$1,910,563	218,350	\$1,910,563
				----- \$1,910,563		----- \$1,910,563
TOTAL D40 - FIRE PROTECTION				\$1,910,563		\$1,910,563
D50 - ELECTRICAL						
D5010 ELECTRICAL SERVICE & DISTRIBUTION						
<u>260001 ELECTRICAL*</u>						
3,000A Service Panel and Feeders (480	\$7.00	GSF	218,350	\$1,528,450	218,350	\$1,528,450
Digital metering	\$25,000.00	LS	1	\$25,000	1	\$25,000
pv Rough in	\$22,000.00	LS	1	\$22,000	1	\$22,000
750 kw Diesel Generator	\$515,000.00	EA	2	\$1,030,000	2	\$1,030,000
Demo Disconnect	\$25,000.00	LS	1	\$25,000	1	\$25,000
Temp Power and Light	\$1.00	GSF	218,350	\$218,350	218,350	\$218,350
				----- \$2,848,800		----- \$2,848,800

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
D5020 LIGHTING & BRANCH WIRING						
<u>260001 ELECTRICAL*</u>						
Lighting	\$11.00	GSF	218,350	\$2,401,850	218,350	\$2,401,850
Lighting Control (inc device oc)	\$2.65	GSF	218,350	\$578,628	218,350	\$578,628
Auditroium Lighitng and diming system	\$550,000.00	LS	1	\$550,000	1	\$550,000
				-----		-----
				\$3,530,478		\$3,530,478
D5030 COMMUNICATION & SECURITY						
<u>260001 ELECTRICAL*</u>						
CCTV	\$3.00	GSF	218,350	\$655,050	218,350	\$655,050
Access control	\$1.00	GSF	218,350	\$218,350	218,350	\$218,350
Video entry system	\$27,500.00	LS	1	\$27,500	1	\$27,500
Digital Signage	\$4,000.00	EA	5	\$20,000	5	\$20,000
Tele/data cabling, racks and switches	\$7.50	GSF	218,350	\$1,637,625	218,350	\$1,637,625
Classroom AV rough-in only	\$1,500.00	EA	92	\$138,000	92	\$138,000
Speech Reinforcement	\$3,300.00	EA	92	\$303,600	92	\$303,600
				-----		-----
				\$3,000,125		\$3,000,125
D5090 OTHER ELECTRICAL SYSTEMS						
<u>260001 ELECTRICAL*</u>						
Rath 2way call	\$18,000.00	EA	1	\$18,000	1	\$18,000
Fire Alarm	\$4.80	GSF	218,350	\$1,048,080	218,350	\$1,048,080
Mass Notification	\$0.75	GSF	218,350	\$163,763	218,350	\$163,763
Devices	\$3.25	GSF	218,350	\$709,638	218,350	\$709,638
Clocks and PA	\$1.20	GSF	218,350	\$262,020	218,350	\$262,020

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Gym/Café Sound System	\$0.75	GSF	218,350	\$163,763	218,350	\$163,763
Lighting Protection	\$0.78	GSF	218,350	\$170,313	218,350	\$170,313
Kitchen/Mechanical Wiring	\$2.50	GSF	218,350	\$545,875	218,350	\$545,875
Bi-Direction Antenna	\$0.80	GSF	218,350	\$174,680	218,350	\$174,680
Test Permit and Misc.	\$5.00	GSF	218,350	\$1,091,750	218,350	\$1,091,750
By others: Telephone system Network switches Classroom projectors PV Panels						
				----- \$4,347,881		----- \$4,347,881
TOTAL D50 - ELECTRICAL			\$62.87	\$13,727,283	\$62.87	\$13,727,283
<u>E. EQUIPMENT & FURNISHINGS</u>						
E10 - EQUIPMENT						
E1010 COMMERCIAL EQUIPMENT						
<u>114000 FOOD SERVICE EQUIPMENT</u>						
Kitchen equipment - new	\$1,200,000.00	LS	1	\$1,200,000	1	\$1,200,000
				----- \$1,200,000		----- \$1,200,000
E1090 OTHER EQUIPMENT						
<u>113100 APPLIANCES</u>						
Staff kitchen refrigerator	\$1,000.00	EA	3	\$3,000	2	\$2,000
Staff kitchen microwave	\$500.00	EA	3	\$1,500	2	\$1,000

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Medical office refrigerator w/ice	\$1,000.00	EA	1	\$1,000	1	\$1,000
<u>115300 LABORATORY EQUIPMENT</u>						
Science Rm Equipment	\$15,000.00	EA	7	\$105,000	7	\$105,000
Prep Rm Equipment	\$10,000.00	EA	2	\$20,000	2	\$20,000
<u>116600 ATHLETIC & SPORTS EQUIPMENT</u>						
Basketball backstops - electric	\$11,000.00	EA	12	\$132,000	12	\$132,000
Wall padding - 6'	\$15.00	SF	1,200	\$18,000	1,200	\$18,000
Motorized gym divider curtain	\$19.00	SF	2,900	\$55,100	2,900	\$55,100
Volley ball court equip.	\$700.00	EA	2	\$1,400	2	\$1,400
Scoreboard and shot clock	\$24,000.00	EA	1	\$24,000	1	\$24,000
Ropes and Bars	\$10,000.00	LS	1	\$10,000	1	\$10,000
Bleachers	\$190.00	SEAT	1,500	\$285,000	1,500	\$285,000
<u>116143 THEATRICAL EQUIPMENT</u>						
Stage curtain and rigging	\$450,000.00	LS	1	\$450,000	1	\$450,000
Black Box Lighting and Sounds	\$100,000.00	LS	1	\$100,000	1	\$100,000
<u>115213 PROJECTION SCREENS</u>						
Projection screen - stage	\$12,000.00	EA	1	\$12,000	1	\$12,000
<u>119000 MISC. EQUIPMENT</u>						
Metal storage shelving		NIC				
Book security equipment		NIC				
Kiln	\$4,000.00	EA	1	\$4,000	1	\$4,000
				-----		-----
				\$1,222,000		\$1,220,500
TOTAL E10 - EQUIPMENT				\$2,422,000		\$2,420,500
E20 - FURNISHINGS						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
E 2010 FIXED FURNISHINGS						
<u>129000 MISC. FURNISHINGS</u>						
Meco shade - manual	\$7.50	SF	18,750	\$140,625	20,375	\$152,813
Elec Op Shades	\$45,000.00	LS	1	\$45,000	1	\$45,000
Theater Seating	\$365.00	EA	800	\$292,000	800	\$292,000
<u>123553 CLASSROOM CASEWORK</u>						
Casework	\$14.50	GSF	218,350	\$3,166,075	218,350	\$3,166,075
				-----		-----
				\$3,643,700		\$3,655,888
E2020 MOVABLE FURNISHINGS						
				-----		-----
				\$0		\$0
TOTAL E20 - FURNISHINGS				\$3,643,700		\$3,655,888
F20 - SELECTIVE BUILDING DEMOLITION						
F2010 BUILDING ELEMENTS DEMOLITION						
Demolish existing building	SEE SUMMARY PAGE			-----		-----
				\$0		\$0
F2020 HAZARDOUS COMPONENTS ABATEMENT						
Hazardous Waste Allowance	SEE SUMMARY PAGE			-----		-----

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
				\$0		\$0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				\$0		\$0
<u>G. BUILDING SITEWORK</u>						
G10 - SITE PREPARATION						
G1010 SITE CLEARING						
<u>311000 SITE PREPARATION & CLEARING</u>						
Construction fence- 100%	16.50	LF	4,186	\$69,069	4,300	\$70,950
Construction entrance pad(1,250 SF/EA	11.00	SF	2,500	\$27,500	2,500	\$27,500
Construction gate	1,200.00	EA	2	\$2,400	2	\$2,400
Erosion control 100%	8.50	LF	4,186	\$35,581	4,300	\$36,550
Inlet Protection- allow	110.00	EA	20	\$2,200	20	\$2,200
Erosion Control Maintenance	35,000.00	LS	1	\$35,000	1	\$35,000
Clear & Grub	0.20	SF	662,865	\$132,573	702,716	\$140,543
Protect trees @ clearing	10,000.00	LS	1	\$10,000	1	\$10,000
General Site Prep	0.10	SF	662,865	\$66,287	702,716	\$70,272
				-----		-----
				\$380,610		\$395,415
G1020 SITE DEMOLITION & RELOCATIONS						
Sawcut street @ entry	10.50	LF	100	\$1,050	100	\$1,050
Cut and Cap BLDG Utilities	25,000.00	LS	1	\$25,000	1	\$25,000
Site Remove Existing:						
Bit Pavement & berm - parking/roadway	1.35	SF	65,000	\$87,750	65,000	\$87,750
Bit Pavement - walk	1.20	SF	15,000	\$18,000	15,000	\$18,000
Conc Pavement - walk	1.50	SF	3,000	\$4,500	3,000	\$4,500
Flag pole	400.00	EA	1	\$400	1	\$400
Basketball courts	1.00	SF	28,000	\$28,000	28,000	\$28,000

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Basket ball hoop	400.00	EA	4	\$1,600	4	\$1,600
Site drainage sys - complete	35,000.00	LS	1	\$35,000	1	\$35,000
Electric sys - complete	30,000.00	LS	1	\$30,000	1	\$30,000
Sanitary sys - complete	35,000.00	LS	1	\$35,000	1	\$35,000
Water sys - complete	15,000.00	LS	1	\$15,000	1	\$15,000
Misc. Site Demolition	0.30	SF	662,865	\$198,860	702,716	\$210,815
Temporary Measures:						
Temp Sediment basin	50,000.00	LS	1	\$50,000	1	\$50,000
Temporary Parking and Access	50,000.00	LS	1	\$50,000	1	\$50,000
Snow removal	50,000.00	LS	1	\$50,000	1	\$50,000
				-----		-----
				\$630,160		\$642,115
G1030 SITE EARTHWORK						
<u>310000 EARTHWORK</u>						
Top Soil:						
Strip and Stack 9" Top Soil	8.50	CY	13,524	\$114,954	14,631	\$124,364
Site Grading to sub grade:						
Site Grading	2.30	SY	73,652	\$169,399	78,080	\$179,583
Site Cut	11.00	CY	49,101	\$540,112	52,053	\$572,583
Site Fill reuse	10.00	CY	24,551	\$245,506	26,027	\$260,265
Site Fill - Import	28.00	CY	12,275	\$343,708	13,013	\$364,371
Load and Truck top soil	10.00	CY	24,551	\$245,506	26,027	\$260,265
Dispose of Spoil	25.00	TONS	39,281	\$982,022	41,642	\$1,041,061
				-----		-----
				\$2,641,206		\$2,802,492
TOTAL G10 - SITE PREPARATION				\$3,651,975		\$3,840,022
G20 - SITE IMPROVEMENTS						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
G2010 ROADWAYS						
<u>321000 PAVING AND CURBING</u>						
Site Drive:						
4" STD Bituminous - drive	\$4.55	SF	116,291	\$529,124	132,209	\$601,551
12" Gravel base @ 4" STD Bit	\$60.00	CY	4,307	\$258,424	4,897	\$293,798
Loading Drive-allow:						
8" Concrete vehicular pavement	\$17.00	SF	2,500	\$42,500	2,500	\$42,500
12" Gravel base @ conc. pave.	\$55.00	CY	93	\$5,093	93	\$5,093
Site Curbing:						
Granite Curbing - Straight	\$52.50	LF	5,746	\$301,665	5,227	\$274,418
Granite Curbing - Radial	\$58.00	LF	350	\$20,300	350	\$20,300
Misc.						
Parking/traffic signage	\$0.10	SF	116,291	\$11,629	132,209	\$13,221
Pavement line painting & markings	\$0.15	SF	116,291	\$17,444	132,209	\$19,831
31" Wood Vehicular Guardrail	\$78.00	LF	150	\$11,700	150	\$11,700
31" Steel Vehicular Guard railing	\$115.00	LF	150	\$17,250	150	\$17,250
Vehicular Traffic gate		NIC				
Vehicular concrete unit paver w/ conc base		NIC				
Resurface /Repair Exist. Drive		NIC				
Street:						
Entrance Improvements	\$50,000.00	LOC	2	\$100,000	2	\$100,000
*excludes pedestrian and traffic control lights		NIC				
				-----		-----
				\$1,315,129		\$1,399,661
G2030 PEDESTRIAN PAVING						
<u>321000 PAVING AND CURBING</u>						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Site Walks:						
4" Concrete Walk - 75%	\$11.00	SF	29,167	\$320,834	38,624	\$424,859
Bit Walkway - 25%	\$4.20	SF	9,722	\$40,833	12,875	\$54,073
Scored Entry/ Specialty Pavement	\$18.00	SF	26,976	\$485,568	30,012	\$540,216
8" Gravel base @ ped. pavement	\$55.00	CY	1,626	\$89,445	2,013	\$110,691
HC Accessible Paver and curb cut	\$1,500.00	EA	15	\$22,500	15	\$22,500
*excludes town sidewalk, colored and exposed agg. concrete walks						
Asphalt Color Play Surface(4SQ & BB Court):						
Bit Pavement	\$4.35	SF	8,827	\$38,397	8,827	\$38,397
Plexi pave coating & striping	\$6.50	SF	8,827	\$57,376	8,827	\$57,376
8" Gravel base @ ped. pavement	\$55.00	CY	436	\$23,972	436	\$23,972
				-----		-----
				\$1,078,926		\$1,272,084
G2040 SITE DEVELOPMENT						
<u>323000 SITE IMPROVEMENTS</u>						
Site Retaining walls	\$500.00	LF	567	\$283,500	527	\$263,500
Misc. Retaining walls	\$100,000.00	LS	1	\$100,000	1	\$100,000
PIP Playground Surface						
Reslinet play surface	\$27.50	SF	5,638	\$155,045	4,172	\$114,730
Conc Perm Curb	\$65.00	LF	284	\$18,460	269	\$17,485
8" Gravel base	\$62.00	CY	139	\$8,630	103	\$6,386
Filter fabric	\$1.00	SF	5,638	\$5,638	4,172	\$4,172
Underdrain	\$1.00	SF	5,638	\$5,638	4,172	\$4,172
Playground Equipment	\$250,000.00	LS	1	\$250,000	1	\$250,000
New Skate Park	\$60.00	SF			24,555	\$1,473,300
Site Improvements:						
Trash/Recycle Receptacle	\$3,500.00	EA	8	\$28,000	8	\$28,000
Bicycle rack	\$975.00	EA	22	\$21,450	22	\$21,450
Picnic table & bench	\$7,500.00	EA	4	\$30,000	4	\$30,000

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
Drop off bollard	\$2,500.00	EA	50	\$125,000	50	\$125,000
Raised Garden bed (4'x8' x1'H)	\$2,600.00	EA	3	\$7,800	3	\$7,800
ADA Raised Garden bed (4'x4' x 2' H)	\$1,850.00	EA	6	\$11,100	6	\$11,100
Basketball hoop	\$4,000.00	EA	2	\$8,000	2	\$8,000
Flag Pole - 30' w/ fnd	\$11,000.00	EA	1	\$11,000	1	\$11,000
Cast Site Stair	\$40,000.00	LS	1	\$40,000	1	\$40,000
Ampitheater	\$100,000.00	EA	1	\$100,000	1	\$100,000
Outdoor Living	\$50,000.00	EA	2	\$100,000	2	\$100,000
Soccer Field:						
Soccer goal	\$4,000.00	EA	2	\$8,000	2	\$8,000
Perim chain link fence - 4'		NIC				
Safety netting		NIC				
Athletic Field(Soccer & Softball):						
12" Drairage Layer	\$65.00	CY	5,997	\$389,819	5,577	\$362,517
Perf field pipe	\$1.00	SF	161,925	\$161,925	150,584	\$150,584
Filter Fabric	\$1.05	SF	161,925	\$170,021	150,584	\$158,113
Mech Yard -Allow:						
Decorative Gravel surface	\$6.00	SF	100	\$600	100	\$600
8" Gravel base	\$55.00	CY	2	\$136	2	\$136
Metal Utility Bollard	\$1,325.00	EA	8	\$10,600	8	\$10,600
6' Alum Utility Screen	\$150.00	LF	100	\$15,000	100	\$15,000
Fencing-Allow	\$200,000.00	LS	1	\$200,000	1	\$200,000
Site sign	\$35,000.00	EA	1	\$35,000	1	\$35,000
Dumpster enclosure		NIC				
Masonry veneer @ site wall		NIC				
Granite Landscaping Curb		NIC				
Misc. site improvements	\$350,000.00	LS	1	\$350,000	1	\$350,000
				-----		-----
				\$2,650,363		\$4,006,645
G2050 LANDSCAPING						

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
329000 PLANTING						
Shrub bed	\$8.00	SF	4,000	\$32,000	4,000	\$32,000
Planting Allowance	\$0.55	SF	662,865	\$364,576	702,716	\$386,494
Planting maintenance	\$35,000.00	LS	1	\$35,000	1	\$35,000
Hydroseed - Athletic fields	\$0.45	SF	161,925	\$72,866	150,584	\$67,763
Hydroseed - typ lawn	\$0.45	SF	180,640	\$81,288	200,713	\$90,321
Loam:						
12" Planting Bed - import	\$88.00	CY	148	\$13,024	148	\$13,024
2" Mulch	\$62.00	CY	25	\$1,550	25	\$1,550
Loam Amended soil:						
9" Loam - athletic field lawn	\$48.00	CY	4,498	\$215,900	4,183	\$200,779
6" Typ Lawn - amend	\$48.00	CY	3,345	\$160,569	3,717	\$178,412
Irrigation System:						
Athletic Fields	\$1.50	SF	161,925	\$242,888	150,584	\$225,876
Lawn	N/A					
Plant bed	N/A					
Soil Cell Systems	N/A					
Rain Garden	\$30.00	SF	5,000	\$150,000	5,000	\$150,000
				-----		-----
				\$1,369,660		\$1,381,218
TOTAL G20 - SITE IMPROVEMENTS				\$6,414,078	\$8,059,608	
G30 - SITE MECHANICAL UTILITIES						
G3010 WATER SUPPLY						
330000 UTILITIES						
Street Connection	\$25,000.00	LOC	1	\$25,000	1	\$25,000
Temp St pavement cut & patch	\$3,000.00	LOC	1	\$3,000	1	\$3,000
8" Main	\$124.00	LF	1,718	\$213,032	1,677	\$207,948

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
8" Gate valve	\$3,600.00	EA	6	\$21,600	6	\$21,600
6" Fire Service	\$97.00	LF	100	\$9,700	100	\$9,700
6" Domestic	\$84.00	LF	100	\$8,400	100	\$8,400
6" Gate valve fire	\$3,200.00	EA	1	\$3,200	1	\$3,200
6" Gate valve dom	\$3,000.00	EA	1	\$3,000	1	\$3,000
Fire Hydrant	\$4,500.00	EA	2	\$9,000	2	\$9,000
6" Hydrant Service	\$97.00	LF	50	\$4,850	50	\$4,850
6" Gate valve hydrant	\$2,600.00	EA	2	\$5,200	2	\$5,200
Test, sanitize, thrust block , misc.	\$10,000.00	LS	1	\$10,000	1	\$10,000
				-----		-----
				\$315,982		\$310,898
G3020 SANITARY SEWER						
330000 UTILITIES						
Street Connection	\$25,000.00	LOC	1	\$25,000	1	\$25,000
Temp St pavement cut & patch	\$3,000.00	LOC	1	\$3,000	1	\$3,000
8" PVC San Main	\$105.00	LF	800	\$84,000	800	\$84,000
Site manhole	\$5,000.00	EA	2	\$10,000	1	\$5,000
Ext Grease Trap - 4,000 gal	\$35,000.00	EA	1	\$35,000	1	\$35,000
Int Grease interceptor		W / plumbing				
				-----		-----
				\$157,000		\$152,000
G3030 STORM SEWER						
330000 UTILITIES						
Drainage System @						
Parking Pavement	\$6.00	SF	116,291	\$697,746	132,209	\$793,254
Pedestrian pavement	\$6.00	SF	65,865	\$395,190	81,510	\$489,060
Building footprint	\$6.00	FTP	107,600	\$645,600	102,600	\$615,600
				-----		-----

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
				\$1,738,536		\$1,897,914
G3060 FUEL DISTRIBUTION		TBD				
				\$0		\$0
TOTAL G30 - SITE MECHANICAL UTILITIES				\$2,211,518		\$2,360,812
G40 - SITE ELECTRICAL UTILITIES						
G4010 ELECTRICAL DISTRIBUTION						
<u>330000 UTILITIES</u>						
Duct banks:						
Pole dressing	\$3,500.00	LS	2	\$7,000	2	\$7,000
Primary duct bank	\$125.00	LF	1,500	\$187,500	950	\$118,750
Secondary duct bank and conductor	\$250.00	LF	150	\$37,500	150	\$37,500
Tele data duct bank	\$125.00	LF	1,400	\$175,000	1,400	\$175,000
Future EV Station feed	\$35.00	LF	2,500	\$87,500	2,500	\$87,500
Future PV Canopy feed	\$35.00	LF	1,000	\$35,000	1,000	\$35,000
Transformer pad and grounding	\$10,000.00	EA	1	\$10,000	1	\$10,000
Generator pad and grounding	\$10,000.00	EA	1	\$10,000	1	\$10,000
Demolition and disconnect	\$20,000.00	LS	1	\$20,000	1	\$20,000
Temp Electrical	\$25,000.00	LS	1	\$25,000	1	\$25,000
*Electrical poles and primary by others						
Site Security	\$50,000.00	LS	1	\$50,000	1	\$50,000
				\$644,500		\$575,750

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DESCRIPTION	UNIT COST	UNIT	OPT 9B NEW		OPT 9E NEW	
			QUANTITY	TOTAL	QUANTITY	TOTAL
G4020 SITE LIGHTING						
<u>260001 ELECTRICAL*</u>						
Lighting Fixtures:						
Parking Fixtures	\$4,000.00	EA	35	\$140,000	35	\$140,000
Pedestrian Bollard Fixture(G2050)	\$3,500.00	EA	30	\$105,000	30	\$105,000
Flagpole light(G2050)	\$1,150.00	EA	1	\$1,150	1	\$1,150
1" c Light feed	\$14.00	LF	5,000	\$70,000	5,000	\$70,000
Specialty Lighting	\$25,000.00	LS	1	\$25,000	1	\$25,000
New Site Lighting:						
Light pole feeder trench	\$14.50	LF	5,000	\$72,500	5,000	\$72,500
Light pole base	\$950.00	EA	35	\$33,250	35	\$33,250
*Excludes traffic lights						
*Excludes sports field lighting						

				\$446,900	\$446,900	
TOTAL G40 - SITE ELECTRICAL UTILITIES				\$1,091,400	\$1,022,650	

PROJECT: Galvin Middle School - PSR
 LOCATION: Canton, MA
 CLIENT: Leftfield
 DATE: 11-Jan-24

No.: 22025

SUMMARY

A. SUBSTRUCTURE

- A10 - FOUNDATIONS
 - A1010 STANDARD FOUNDATIONS
 - A1020 SPECIAL FOUNDATIONS
 - A1030 SLAB ON GRADE
- A20 - BASEMENT CONSTRUCTION
 - A2010 BASEMENT EXCAVATION
 - A2020 BASEMENT WALLS

B. SHELL

- B10 - SUPERSTRUCTURE
 - B1010 FLOOR CONSTRUCTION
 - B1020 ROOF CONSTRUCTION
- B20 - EXTERIOR ENCLOSURE
 - B2010 EXTERIOR WALLS
 - B2020 EXTERIOR WINDOWS
 - B2030 EXTERIOR DOORS
- B30 - ROOFING
 - B3010 ROOF COVERINGS
 - B3020 ROOF OPENINGS

C. INTERIORS

- C10 - INTERIOR CONSTRUCTION
 - C1010 PARTITIONS
 - C1020 INTERIOR DOORS
 - C1030 FITTINGS
- C20 - STAIRS
 - C2010 STAIR CONSTRUCTION
 - C2020 STAIR FINISHES
- C30 - INTERIOR FINISHES
 - C3010 WALL FINISHES
 - C3020 FLOOR FINISHES
 - C3030 CEILING FINISHES

	OPT 7A ADDITION ESTIMATE TOTAL	OPT 7B ADDITION ESTIMATE TOTAL	OPT 7A RENOVATION ESTIMATE TOTAL	OPT 7B RENOVATION ESTIMATE TOTAL
	\$2,538,127	\$5,518,317	\$92,156	\$36,600
	\$0	\$0	\$0	\$0
	\$481,097	\$1,132,164	\$230,390	\$91,500
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$2,800,440	\$5,964,480	\$1,978,500	\$549,000
	\$1,903,178	\$4,196,879	\$50,000	\$50,000
	\$5,004,833	\$8,410,679	\$5,026,375	\$1,563,286
	\$2,720,377	\$4,582,464	\$2,484,261	\$800,918
	\$143,000	\$175,000	\$79,200	\$47,200
	\$1,526,687	\$3,633,760	\$2,134,245	\$721,935
	\$46,250	\$46,250	\$4,250	\$4,250
	\$3,720,701	\$7,196,089	\$1,730,940	\$518,160
	\$727,775	\$1,413,395	\$882,350	\$262,900
	\$2,862,906	\$3,149,979	\$1,029,635	\$387,661
	\$466,000	\$638,000	\$25,000	\$62,500
	\$52,500	\$82,500	\$15,000	\$37,500
	\$1,208,250	\$2,790,450	\$1,978,500	\$549,000
	\$1,115,618	\$2,576,516	\$1,826,815	\$506,910
	\$1,208,250	\$2,790,450	\$1,978,500	\$549,000

	OPT 7A ADDITION ESTIMATE TOTAL	OPT 7B ADDITION ESTIMATE TOTAL	OPT 7A RENOVATION ESTIMATE TOTAL	OPT 7B RENOVATION ESTIMATE TOTAL
D. SERVICES				
D10 - CONVEYING	\$265,000	\$265,000	\$0	\$0
D1010 ELEVATORS & LIFTS				
D20 - PLUMBING	\$2,295,675	\$5,301,855	\$3,759,150	\$1,043,100
D2010 PLUMBING				
D30 - HVAC	\$6,041,250	\$13,952,250	\$9,892,500	\$2,745,000
D3010 HVAC				
D40 - FIRE PROTECTION	\$704,813	\$1,627,763	\$1,154,125	\$320,250
D4010 SPRINKLERS				
D50 - ELECTRICAL				
D5010 ELECTRICAL SERVICE & DISTRIBUTION	\$1,746,400	\$2,590,240	\$1,055,200	\$292,800
D5020 LIGHTING & BRANCH WIRING	\$1,649,508	\$3,089,310	\$1,800,435	\$499,590
D5030 COMMUNICATION & SECURITY	\$1,415,425	\$2,628,445	\$1,544,350	\$448,400
D5090 OTHER ELECTRICAL SYSTEMS	\$1,615,307	\$3,706,975	\$2,615,577	\$725,778
E. EQUIPMENT & FURNISHINGS				
E10 - EQUIPMENT	\$1,200,000	\$1,200,000	\$0	\$0
E1010 COMMERCIAL EQUIPMENT				
E1090 OTHER EQUIPMENT	\$971,500	\$970,000	\$434,900	\$434,900
E20 - FURNISHINGS				
E 2010 FIXED FURNISHINGS	\$1,591,176	\$3,183,865	\$1,912,550	\$530,700
E2020 MOVABLE FURNISHINGS	\$0	\$0	\$0	\$0
F. SPECIAL CONSTRUCTION & DEMOLITION				
F10 - SPECIAL CONSTRUCTION				
F1010 SPECIAL STRUCTURES	\$0	\$0	\$0	\$0
F1020 INTEGRATED CONSTRUCTION	\$0	\$0	\$0	\$0
F1030 SPECIAL CONSTRUCTION SYSTEMS	\$0	\$0	\$0	\$0
F1040 SPECIAL FACILITIES	\$0	\$0	\$0	\$0
F1050 SPECIAL CONTROLS & INSTRUMENTATION	\$0	\$0	\$0	\$0
F20 - SELECTIVE BUILDING DEMOLITION				
F2010 BUILDING ELEMENTS DEMOLITION	\$0	\$0	\$3,263,470	\$900,195
F2020 HAZARDOUS COMPONENTS ABATEMENT	\$0	\$0	\$0	\$0
TOTAL BUILDING COST	\$48,022,043	\$92,813,074	\$48,978,375	\$14,679,033

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G. BUILDING SITEWORK

- G10 - SITE PREPARATION
 - G1010 SITE CLEARING
 - G1020 SITE DEMOLITION & RELOCATIONS
 - G1030 SITE EARTHWORK
 - G1040 HAZARDOUS WASTE REMEDIATION
- G20 - SITE IMPROVEMENTS
 - G2010 ROADWAYS
 - G2020 PARKING LOTS
 - G2030 PEDESTRIAN PAVING
 - G2040 SITE DEVELOPMENT
 - G2050 LANDSCAPING
- G30 - SITE MECHANICAL UTILITIES
 - G3010 WATER SUPPLY
 - G3020 SANITARY SEWER
 - G3030 STORM SEWER
 - G3040 HEATING DISTRIBUTION
 - G3050 COOLING DISTRIBUTION
 - G3060 FUEL DISTRIBUTION
- G40 - OTHER SITE MECHANICAL UTILITIES
 - G4010 ELECTRICAL DISTRIBUTION
 - G4020 SITE LIGHTING

	OPT 7A ADDITION ESTIMATE TOTAL	OPT 7B ADDITION ESTIMATE TOTAL	OPT 7A RENOVATION ESTIMATE TOTAL	OPT 7B RENOVATION ESTIMATE TOTAL
	\$380,610	\$395,415	\$0	\$0
	\$630,160	\$642,115	\$0	\$0
	\$2,641,206	\$2,802,492	\$0	\$0
	\$0	\$0	\$0	\$0
	\$1,534,453	\$1,244,811	\$0	\$0
	\$0	\$0	\$0	\$0
	\$1,201,865	\$1,251,311	\$0	\$0
	\$2,518,315	\$2,441,053	\$0	\$0
	\$1,346,448	\$1,381,979	\$0	\$0
	\$425,598	\$417,786	\$0	\$0
	\$157,000	\$152,000	\$0	\$0
	\$1,775,550	\$1,751,994	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$644,500	\$575,750	\$0	\$0
	\$446,900	\$446,900	\$0	\$0
	\$13,702,605	\$13,503,606	\$0	\$0
	\$61,724,648	\$106,316,680	\$48,978,375	\$14,679,033

TOTAL SITE COST

TOTAL DIRECT COST

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Galvin Middle School - PSR

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
A. SUBSTRUCTURE										
A10 - FOUNDATIONS										
A1010 STANDARD FOUNDATIONS										
<u>033000 CAST IN PLACE CONCRETE</u>										
Foundations :										
Wall Footing 1' x 3':	\$525.00	CY	141	\$74,083	210	\$110,425				
Frost wall - 4' x 16"	\$1,100.00	CY	251	\$275,950	374	\$411,317				
Interior Foundations	\$1,200.00	CY	30	\$36,000	30	\$36,000				
Column Footing	\$625.00	CY	333	\$208,044	790	\$493,808				
Elev Mat - 24"	\$650.00	CY	12	\$7,800	12	\$7,800				
Elev pit wall	\$1,100.00	CY	7	\$7,700	7	\$7,700				
Grade Beam (60 LF per 5,000 sf/ft)	\$135.00	LF	431	\$58,239	1,024	\$138,235				
Pilasters	\$1,200.00	CY	50	\$60,207	75	\$89,742				
Equipment pads	\$7,500.00	LS	1	\$7,500	1	\$7,500				
<u>072100 INSULATION</u>										
2" Rigid ext. found. insul w/prot.bd	\$4.05	SF	5,080	\$20,574	7,572	\$30,667				
<u>071000 DAMPPROOF., WATERPROOF. & CAULKING*</u>										
Foundation dampproofing	\$2.30	SF	5,080	\$11,684	7,572	\$17,416				
<u>310000 EARTHWORK</u>										
Over Excavate 4' depth	11.00	CY	5,859	\$64,444	13,906	\$152,962				
Excavate organics	12.00	CY	5,859	\$70,302	13,906	\$166,868				
Truck and haul spoil	22.00	TON	9,374	\$206,220	22,249	\$489,478				
Soil disposal	55.00	CY	5,859	\$322,219	13,906	\$764,810				
Structural Fill	\$1.25	SF	35,950	\$44,938	85,330	\$106,663				
Under slab Drain	\$5.00	SF	35,950	\$179,750	85,330	\$426,650				
Foundation Earthwork:	\$25,000.00	LS	1	\$25,000	1	\$25,000				
Foundation excavation / backfill										
Dewatering										
Building Earthwork	\$12.50	CY	10,652	\$133,148	25,283	\$316,037				
Bldg Cut	\$68.00	CY	10,652	\$724,326	25,283	\$1,719,241				
Structural Fill										

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Repair foundation as necessary	\$2.00	ftp					46,078	\$92,156	18,300	\$36,600
				\$2,538,127		\$5,518,317		\$92,156		\$36,600
A1030 SLAB ON GRADE										
310000 EARTHWORK										
12" Gravel base	\$48.00	CY	1,331	\$63,911	3,160	\$151,698				
033000 CAST IN PLACE CONCRETE										
5" Slab on Grade:										
4,000 psi, NW, (incl. placement)	\$310.00	CY	555	\$171,983	1,317	\$408,215				
Welded wire fabric	\$2.68	SF	35,950	\$96,346	85,330	\$228,684				
Control Joint	\$3.50	LF	2,397	\$8,388	5,689	\$19,910				
Trowel Finish	\$2.50	SF	35,950	\$89,875	85,330	\$213,325				
Slab Patch at new plumbing	\$5.00	ftp					46,078	\$230,390	18,300	\$91,500
072100 INSULATION										
4" Rigid Slab Insul. - 2' perm.	\$4.35	SF	2,540	\$11,049	3,786	\$16,469				
072616 BELOW GRADE VAPOR RETARDER										
Stegro vapor barrier	\$1.10	SF	35,950	\$39,545	85,330	\$93,863				
				\$481,097		\$1,132,164		\$230,390		\$91,500
TOTAL A10 FOUNDATIONS				\$3,019,225		\$6,650,482		\$322,546		\$128,100
B. SHELL										
B10 - SUPERSTRUCTURE										
B1010 FLOOR CONSTRUCTION										
051200 STRUCTURAL STEEL										

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
New Construction: Floor frame (14 lbs/sf)	\$5,350.00	TONS	312	\$1,670,270	705	\$3,771,215				
Shear stud	\$5.50	EA	4,460	\$24,530	10,070	\$55,385				
Allow for exposed wood structure	\$250,000.00	LS	1	\$250,000	1	\$250,000			36,600	\$549,000
Seismic Upgrade	\$15.00	GSF					131,900	\$1,978,500		
<u>033000 CAST IN PLACE CONCRETE</u>										
5 1/2" NW Deck fill	\$9.40	SF	44,600	\$419,240	100,700	\$946,580				
<u>053100 STEEL DECKING</u>										
2" x 18 Ga. comp deck	\$5.90	SF	44,600	\$263,140	100,700	\$594,130				
<u>072100 INSULATION</u>										
Spray on fireproofing	\$3.10	SF	44,600	\$138,260	100,700	\$312,170				
Intumescent - allow	\$35,000.00	LS	1	\$35,000	1	\$35,000				
				\$2,800,440		\$5,964,480		\$1,978,500		\$549,000
<u>B1020 ROOF CONSTRUCTION</u>										
<u>033000 CAST IN PLACE CONCRETE</u>										
6" NW Deck fill - rtu pad	\$9.00	SF	15,000	\$135,000	15,000	\$135,000				
<u>051200 STRUCTURAL STEEL</u>										
New Construction: Roof frame (14 lbs/sf)	\$5,350.00	TONS	251.65	\$1,346,328	597.31	\$3,195,609				
Roof screen frame (110 lbs/lf)	\$5,600.00	TONS	9.38	\$52,500	9.38	\$52,500				
Galv. RTU damage	\$5,600.00	TONS	3	\$16,800	3	\$16,800				
Frame Entry Canopies (500 sf @ 20 lb	\$5,200.00	TONS	5	\$26,000	5	\$26,000				
Equipment Structural support	\$50,000.00	LS					1	\$50,000	1	\$50,000
<u>053100 STEEL DECKING</u>										
1 1/2" x 18 Ga roof deck - typ.	\$5.90	SF	35,950	\$212,105	85,330	\$503,447				
3" x 18 Ga acoust. deck - gym/aux. gym	\$13.50	SF	n/a		n/a					

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
1 1/2" x 20 Ga canopy roof deck	\$6.00	SF	500	\$3,000	500	\$3,000				
<u>072100 INSULATION</u>										
Spray on fireproofing	\$3.10	SF	35,950	\$111,445	85,330	\$264,523				
				\$1,903,178		\$4,196,879				\$50,000
TOTAL B10 SUPERSTRUCTURE				\$4,703,618		\$10,161,359		\$2,028,500		\$599,000
B20 - EXTERIOR ENCLOSURE										
<u>B2010 EXTERIOR WALLS</u>										
<u>040001 MASONRY*</u>										
Masonry Veneer:										
Masonry Veneer - 37.5%	\$45.00	SF	17,240	\$775,811	29,886	\$1,344,870			4,205	\$189,219
Canopy col. -complete	\$8,500.00	EA	6	\$51,000	6	\$51,000			6	\$51,000
Stainless steel masonry flashing	\$29.00	LF	1,195	\$34,655	1,195	\$34,655			1,195	\$34,655
Repair Masonry	\$20.00	SF								
Architectural Precast:										
Precast Window Sill	\$68.00	LF	1,916	\$130,260	3,321	\$225,805			467	\$31,770
Architectural precast trim - allowance	\$2.00	SF	45,974	\$91,948	79,696	\$159,392			11,213	\$22,426
CMU Exterior Wall:										
8" CMU Gymnasium	\$38.00	SF	0	\$0	2,661	\$101,118			1,596	\$60,648
<u>054000 COLD FORMED METAL FRAMING</u>										
8" x 18 Ga. stud @ typical wall	\$16.50	SF	34,481	\$568,928	57,111	\$942,332			6,814	\$112,427
1/2" Dens glass sheathing-ext. wall	\$4.50	SF	34,481	\$155,162	57,111	\$257,000			6,814	\$30,662
3" Soffit/cape framing	\$25.00	LF	1,270	\$31,750	1,893	\$47,325			801	\$20,023
Eave/Cornice framing	\$9.50	SF	2,540	\$24,130	3,786	\$35,967			1,602	\$15,218
3" Canopy ceiling framing	\$7.00	SF	500	\$3,500	500	\$3,500			500	\$3,500
3" Overhang/soffit framing	\$7.00	SF								
1/2" Dens glass sheathing - eave/cornice	\$4.50	SF	2,540	\$11,430	3,786	\$17,037			1,602	\$7,208
1/2" Dens glass sheathing -canopy	\$4.50	SF	500	\$2,250	500	\$2,250			500	\$2,250
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>										

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Misc. Ext Metals	\$0.50	SF	45,974	\$22,987	79,696	\$39,848	41,698	\$20,849	11,213	\$5,607
<u>071326 AIR & VAPOR BARRIERS</u>										
Air & vapor barrier - wall	\$9.50	SF	34,481	\$327,565	59,772	\$567,834	31,274	\$297,098	8,410	\$79,893
Air & vapor barrier - soffit	\$9.50	SF	2,540	\$24,130	3,786	\$35,967	5,957	\$56,590	1,602	\$15,218
Air & vapor barrier - overhang/soffit	\$9.50	SF								
<u>072100 INSULATION</u>										
Exterior Wall:										
Spray foam at perm openings	\$6.00	LF	9,578	\$57,468	16,603	\$99,620	8,687	\$52,123	2,336	\$14,016
5" Mineral wool Insul.	\$5.90	SF	34,481	\$203,435	59,772	\$352,655	31,274	\$184,514	8,410	\$49,618
2" Spray foam	\$4.65	SF	34,481	\$160,334	57,111	\$265,566	29,678	\$138,000	6,814	\$31,684
Bldg Soffit:										
3" Rigid Insul. - cornice/leaves	\$4.10	SF	2,540	\$10,414	3,786	\$15,523	5,957	\$24,423	1,602	\$6,568
<u>071000 DAMPROOF., WATERPROOF. & CAULKING*</u>										
Exterior Sealants	\$0.65	SF	45,974	\$29,883	79,696	\$51,802	41,698	\$27,104	11,213	\$7,288
<u>074213 PERFORMED CLADDING</u>										
Wall Panel:										
Metal Comp. panel - 18.75%	\$100.00	SF	8,620	\$862,013	14,943	\$1,494,300	7,818	\$781,838	2,102	\$210,244
Architectural panel - 18.75%	\$100.00	SF	8,620	\$862,013	14,943	\$1,494,300	7,818	\$781,838	2,102	\$210,244
Alum. 16 ga Panel :										
Canopy ceiling	\$45.00	SF	500	\$22,500	500	\$22,500	500	\$22,500	500	\$22,500
Roof Eave Cladding	\$85.00	LF	2,540	\$215,900	3,786	\$321,810	5,957	\$506,333	1,602	\$136,158
Overhang/soffit	\$45.00	SF								
Roof Screen:										
10' H Metal Panel Equipment Screen	\$65.00	SF	2,500	\$162,500	2,500	\$162,500	2,500	\$162,500	2,500	\$162,500
<u>092116 GYPSUM WALLBOARD</u>										
1 Lyr 5/8" gyp @ ext. wall	\$4.15	SF	34,481	\$143,094	57,111	\$237,011	29,678	\$123,162	6,814	\$28,277
<u>090007 PAINTING*</u>										
Exterior painting	\$0.22	SF	45,974	\$10,114	79,696	\$17,533	41,698	\$9,174	11,213	\$2,467
<u>101400 IDENTIFYING DEVICES (EXT. BLD MTD SIGNAGE)</u>										

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24" Alum bldg mtd letter - allow	\$420.00	EA	23	\$9,660	23	\$9,660				
				\$5,004,833		\$8,410,679				\$1,563,286
B2020 EXTERIOR WINDOWS										
<u>061000 ROUGH CARPENTRY</u>										
P.T. - perim blocking	\$14.00	LF	9,578	\$134,091	16,603	\$232,447	8,687	\$121,619	2,336	\$32,705
<u>071326 AIR & VAPOR BARRIERS</u>										
Flex flashing - perim	\$10.00	LF	9,578	\$95,779	16,603	\$166,033	8,687	\$86,871	2,336	\$23,360
<u>071000 DAMPPROOF, WATERPROOF, & CAULKING*</u>										
Window Caulking	\$12.75	LF	9,578	\$122,118	16,603	\$211,693	8,687	\$110,760	2,336	\$29,785
<u>080001 METAL WINDOWS*</u>										
TRP Glazing Exterior Alum Window - 25%	\$175.00	SF	11,494	\$2,011,363	19,924	\$3,486,700	10,425	\$1,824,288	2,803	\$490,569
Alum. Curtainwall - premium	\$50.00	SF	2,299	\$114,935	3,985	\$199,240	2,085	\$104,245	561	\$28,033
Security glazing - premium	\$35.00	SF	1,724	\$60,341	2,989	\$104,601	1,564	\$54,729	420	\$14,717
Sun Shading: Typical Classroom Window	\$175,000.00	LS	1	\$175,000	1	\$175,000	1	\$175,000	1	\$175,000
<u>109000 MISCELLANEOUS SPECIALTIES</u>										
Alum louvers - allow	\$135.00	SF	50	\$6,750	50	\$6,750	50	\$6,750	50	\$6,750
				\$2,720,377		\$4,582,464				\$800,918
B2030 EXTERIOR DOORS										
<u>080001 METAL WINDOWS*</u>										
7" Alum. Doors (Incl. Hardware): Main Entry - dbl	\$14,500.00	EA	8	\$116,000	10	\$145,000	4	\$58,000	2	\$29,000
Auto opener - allow	\$9,000.00	PR	1	\$9,000	1	\$9,000	1	\$9,000	1	\$9,000
*Storefront at entries W /B 2020										

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Security Glazing Premium	\$750.00	LVS	24	\$18,000	28	\$21,000	8	\$6,000	4	\$3,000
<u>081113 HOLLOW METALWORK</u>										
Insulated HM Doors and Frame: Custodial - db1	\$2,700.00	EA							2	\$5,400
<u>090007 PAINTING*</u>										
Paint HM Door & frame - dbl	\$400.00	EA		\$143,000		\$175,000		\$800	2	\$800
TOTAL B20 - EXTERIOR ENCLOSURE				\$7,868,210		\$13,168,143		\$7,589,837		\$2,411,404
B30 - ROOFING										
<u>B3010 ROOF COVERINGS</u>										
<u>061000 ROUGH CARPENTRY</u>										
Roof Blocking - main bldg	\$1.45	SF	35,950	\$52,128	85,330	\$123,729	54,100	\$78,445	18,300	\$26,535
Roof Blocking - canopy	\$1.20	SF	500	\$600	500	\$600				
<u>070002 ROOFING AND FLASHING*</u>										
PVC roof - canopy	\$28.00	SF	500	\$14,000	500	\$14,000				
PVC roof w/ 8" rigid insul	\$28.00	SF	35,950	\$1,006,600	85,330	\$2,389,240				
Roof walkway pad (2'x2')	\$6.15	SF	1,798	\$11,055	4,267	\$26,239				
Allow - Green Roof	\$32.00	SF	9,000	\$288,000	20,000	\$640,000				
Allow - Terrace Paver	\$55.00	SF	1,800	\$99,000	5,000	\$275,000				
Replace Roofing and Flashing	\$38.00	SF					54,100	\$2,055,800	18,300	\$695,400
Alum. Trim :										
Perimeter wall Coping	\$45.00	LF	822	\$36,990	2,376	\$106,920				
Base Flashing	\$34.00	LF	10	\$340	452	\$15,368				
Misc. flashing	\$0.50	SF	35,950	\$17,975	85,330	\$42,665				
				\$1,526,687		\$3,633,760		\$2,134,245		\$721,935

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B3020 ROOF OPENINGS										
<u>077200 ROOF ACCESSORIES</u>										
Roof ladder	\$12,000.00	EA	1	\$12,000	1	\$12,000				
Stage Vent	\$15,000.00	EA	2	\$30,000	2	\$30,000				
Roof hatch	\$4,250.00	EA	1	\$4,250	1	\$4,250	1	\$4,250	1	\$4,250
*Mechanical equip screen is included with B1020 & B2010										
				-----		-----		-----		-----
				\$46,250		\$46,250		\$46,250		\$46,250
TOTAL B30 ROOFING				\$1,572,937		\$3,680,010		\$2,138,495		\$726,185
C. INTERIORS										
C10 - INTERIOR CONSTRUCTION										
C1010 PARTITIONS										
<u>040001 MASONRY*</u>										
8" CMU Elev Shaft	\$44.00	SF	1,848	\$81,312	1,848	\$81,312				
8" CMU - GF Gym	\$39.00	SF								
8" CMU - Mech Receiving	\$36.75	SF	3,500	\$128,625	3,500	\$128,625				
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>										
CMU angle brace frame - 4' 0C	\$125.00	EA	96	\$11,938	96	\$11,938				
Over head door supports	\$25,000.00	LS	1	\$25,000	1	\$25,000				
Loose lintels	\$0.35	SF	5,348	\$1,872	5,348	\$1,872				
<u>061000 ROUGH CARPENTRY</u>										
Interior blocking	\$1.00	GSF	80,550	\$80,550	186,030	\$186,030	131,900	\$131,900	36,600	\$36,600
Misc. rough carpentry	\$1.00	GSF	80,550	\$80,550	186,030	\$186,030	131,900	\$131,900	36,600	\$36,600
Clean Safety and Laborer	\$4.00	GSF	80,550	\$322,200	186,030	\$744,120	131,900	\$527,600	36,600	\$146,400
<u>072100 INSULATION</u>										
Fires topping	\$0.85	GSF	80,550	\$68,468	186,030	\$158,126	131,900	\$112,115	36,600	\$31,110
<u>081113 HOLLOW METALWORK</u>										
Interior H.M Windows, Sidelites and Transoms (INC. GLAZING):										

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Door sidelight (2' x 7')	\$1,200.00	EA	60	\$72,000	65	\$78,000	15	\$18,000	5	\$6,000
Admin sidelight (1'x8')	\$1,200.00	EA	20	\$24,000	20	\$24,000	5	\$6,000	5	\$6,000
Rated Stair window	\$390.00	SF	500	\$195,000	500	\$195,000				
Misc. window/sidelight & transom	\$90.00	SF	2,000	\$180,000	2,000	\$180,000			500	\$45,000
<u>083323 SPECIAL DOORS</u>										
Access panels	\$0.25	GSF	80,550	\$20,138	186,030	\$46,508	131,900	\$32,975	36,600	\$9,150
<u>080001 METAL WINDOWS*</u>										
Interior Aluminum Storefront:										
Vestibule and Entries	\$88.00	SF	500	\$44,000	500	\$44,000				
Administration area	\$88.00	SF	1,000	\$88,000	750	\$66,000				
General Building Area	\$0.50	GSF	80,550	\$40,275	186,030	\$93,015	131,900	\$65,950	36,600	\$18,300
Operable Folding Glazed Partition	\$145.00	SF	1,200	\$174,000	1,200	\$174,000				
<u>092116 GYPSUM WALLBOARD</u>										
Drywall Partitions:										
GWB assemblies	\$25.50	GSF	80,550	\$2,054,025	186,030	\$4,743,765	131,900	\$659,500	36,600	\$183,000
Minor rework partitions	\$5.00	GSF								
Operable Partition:										
Elec Op Partition - allow	\$115.00	SF	250	\$28,750	250	\$28,750				
				\$3,720,701		\$7,196,089		\$1,730,940		\$518,160
<u>C1020 INTERIOR DOORS</u>										
081113 HOLLOW METALWORK										
081416 WOOD AND PLASTIC DOORS										
087100 DOOR HARDWARE										
Interior Door frame and Hardware	\$6.50	GSF	80,550	\$523,575	186,030	\$1,209,195	131,900	\$857,350	36,600	\$237,900
<u>080001 METAL WINDOWS*</u>										
Aluminum (Frame, Door, Glass, Glazing and Hdw):										
Vest - dbl	\$12,500.00	PR	5	\$62,500	5	\$62,500			2	\$25,000
Main office -sgl	\$3,600.00	EA	2	\$7,200	2	\$7,200				

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083323 SPECIAL DOORS										
Dish drop window	\$5,000.00	EA	1	\$5,000	1	\$5,000				
Kitchen OH grille	\$4,500.00	EA	1	\$4,500	1	\$4,500				
Security Gate and Grill	\$125,000.00	LS	1	\$125,000	1	\$125,000				
				-----		-----		-----		-----
				\$727,775		\$1,413,395		\$882,350		\$262,900
C1030 FITTINGS										
050001 MISCELLANEOUS & ORNAMENTAL IRON*										
Auditorium catwalk	\$200,000.00	LS	1	\$200,000	1	\$200,000				
Auditorium Railing	\$125,000.00	LS	1	\$125,000	1	\$125,000				
Black box catwalk	\$150,000.00	LS	1	\$150,000	1	\$150,000				
Floor Railing @ opening	\$475.00	LF	1,233	\$585,675	390	\$185,250				
Misc. metals	\$2.00	GSF	80,550	\$161,100	186,030	\$372,060	131,900	\$263,800	36,600	\$73,200
062000 FINISH CARPENTRY										
Utility & closet shelving	\$5,000.00	LS	1	\$5,000	1	\$5,000			1	\$5,000
Typ. window sill/apron (nic cw-gym)	\$65.00	LF	1,916	\$124,513	3,321	\$215,843	1,737	\$112,932	467	\$30,369
Project Area Millwork	\$40,000.00	LOC	12	\$480,000	12	\$480,000				
Auditorium Millwork	\$75,000.00	LS	1	\$75,000	1	\$75,000				
Misc. wood trim	\$1.00	GSF	80,550	\$80,550	186,030	\$186,030	131,900	\$131,900	36,600	\$36,600
Media Center Built-in	\$30,000.00	LS	1	\$30,000	1	\$30,000			1	\$30,000
Raised Stage Platform and steps	\$55.00	SF	900	\$49,500	900	\$49,500	900	\$49,500	900	\$49,500
Custom Casework:										
Admin casework	\$20,000.00	LS	1	\$20,000	1	\$20,000			1	\$20,000
Circulation desk	\$15,000.00	LS	1	\$15,000	1	\$15,000			1	\$15,000
102113 COMPARTMENTS & CUBICLES										
Solid Plastic Toilet Partitions:										
Std. partition	\$1,385.00	EA	10	\$13,850	10	\$13,850			2	\$2,770
HC partition	\$1,590.00	EA	6	\$9,540	6	\$9,540			2	\$3,180
102813 TOILET & BATH ACCESSORIES										
Building Toilet Accessories	\$0.92	GSF	80,550	\$74,106	186,030	\$171,148	131,900	\$121,348	36,600	\$33,672
*Excludes classroom accessories										

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101100 MARKERBOARDS & TACKBOARDS										
Marker board tackboard	\$1.30	GSF	80,550	\$104,715	186,030	\$241,839	131,900	\$171,470	36,600	\$47,580
Glass Display Case	\$1,000.00	LF	35	\$35,000	12	\$12,000				
109000 MISCELLANEOUS SPECIALTIES										
Kitchen staff locker(12"wx15" D x 6'h)	\$350.00	EA	10	\$3,500	10	\$3,500				
Custodian staff(12"wx15" D x 6'h)	\$350.00	EA	5	\$1,750	5	\$1,750				
Student Lockers	\$400.00	EA	1,020	\$408,000	1,020	\$408,000				
Wall & corner guards - allow	\$10,000.00	LS	1	\$10,000	1	\$10,000			1	\$10,000
Fire extinguisher and cab - allow	\$50.00	EA	25	\$13,750	25	\$13,750			10	\$5,500
Cubicle curtain track w/ curtain - health	\$1,500.00	EA	1	\$1,500	1	\$1,500			1	\$1,500
Misc. specialties	\$0.25	GSF	80,550	\$20,138	186,030	\$46,508	131,900	\$32,975	36,600	\$9,150
101400 IDENTIFYING DEVICES										
Building directory - allow	\$5,000.00	EA	1	\$5,000	1	\$5,000				
Dedication plaque	\$3,500.00	EA	1	\$3,500	1	\$3,500				
Interior Signage	\$0.40	GSF	80,550	\$32,220	186,030	\$74,412	131,900	\$52,760	36,600	\$14,640
Environmental graphics	\$25,000.00	LS	1	\$25,000	1	\$25,000				
				\$2,862,906		\$3,149,979		\$1,029,635		\$387,661
TOTAL C10 - INTERIOR CONSTRUCTION				\$7,311,383		\$11,759,464		\$3,642,925		\$1,168,721
C20 - STAIRS										
C2010 STAIR CONSTRUCTION										
050001 MISCELLANEOUS & ORNAMENTAL IRON*										
Metal Pan Stair w/Rails:										
Egress corridor stair	\$55,000.00	FLT	4	\$220,000	6	\$330,000				
Corridor Stair	\$50,000.00	FLT			4	\$200,000				
Main Communicating Stair	\$75,000.00	FLT	3	\$225,000	1	\$75,000				
ADA Stair Railing upgrade	\$12,500.00	FLTS					2	\$25,000	5	\$62,500
033000 CAST IN PLACE CONCRETE										

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Conc stair pan fill - full ft	\$3,000.00	FLTS	7	\$21,000	11	\$33,000				
				\$466,000		\$638,000		\$25,000		\$62,500
C2020 STAIR FINISHES										
<u>090005 RESILIENT FLOORING*</u>										
Rubber treads and risers	\$4,000.00	FLTS	7	\$28,000	11	\$44,000	2	\$8,000	5	\$20,000
<u>090007 PAINTING*</u>										
Paint stair & rails - full ft	\$3,500.00	FLTS	7	\$24,500	11	\$38,500	2	\$7,000	5	\$17,500
				\$52,500		\$82,500		\$15,000		\$37,500
TOTAL C20 - STAIRS				\$518,500		\$720,500		\$40,000		\$100,000
C30 - INTERIOR FINISHES										
C3010 WALL FINISHES										
Wall Finish	\$15.00	GSF	80,550	\$1,208,250	186,030	\$2,790,450	131,900	\$1,978,500	36,600	\$549,000
				\$1,208,250		\$2,790,450		\$1,978,500		\$549,000
C3020 FLOOR FINISHES										
Floor Finish	\$13.85	GSF	80,550	\$1,115,618	186,030	\$2,576,516	131,900	\$1,826,815	36,600	\$506,910
				\$1,115,618		\$2,576,516		\$1,826,815		\$506,910
C3030 CEILING FINISHES										
Ceiling Finish	\$15.00	GSF	80,550	\$1,208,250	186,030	\$2,790,450	131,900	\$1,978,500	36,600	\$549,000
				\$1,208,250		\$2,790,450		\$1,978,500		\$549,000

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
TOTAL C30 - INTERIOR FINISHES				\$3,532,118		\$8,157,416		\$5,783,815		\$1,604,910
D. SERVICES										
D10 - CONVEYING										
D1010 ELEVATORS & LIFTS										
<u>140001 ELEVATORS*</u>										
Traction 3,500 lbs Passenger Elev	\$85,000.00	STOP	3	\$255,000	3	\$255,000				
Elevator Metals	\$10,000.00	LS	1	\$10,000	1	\$10,000				
				-----		-----		-----		-----
				\$265,000		\$265,000		\$0		\$0
TOTAL D10 - CONVEYING				\$265,000		\$265,000		\$0		\$0
D20 - PLUMBING										
D2010 PLUMBING										
Plumbing	\$28.50	GSF	80,550	\$2,295,675	186,030	\$5,301,855	131,900	\$3,759,150	36,600	\$1,043,100
				-----		-----		-----		-----
				\$2,295,675		\$5,301,855		\$3,759,150		\$1,043,100
TOTAL D20 - PLUMBING				\$2,295,675		\$5,301,855		\$3,759,150		\$1,043,100
D30 - HVAC										
D3010 HVAC										
VRF	\$75.00	GSF	80,550	\$6,041,250	186,030	\$13,952,250	131,900	\$9,892,500	36,600	\$2,745,000
				-----		-----		-----		-----

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
TOTAL D30 - HVAC			\$75	\$6,041,250	\$75	\$13,952,250	\$75	\$9,892,500	\$75	\$2,745,000
D40 - FIRE PROTECTION										
D4010 SPRINKLERS										
<u>210001 FIRE SUPPRESSION*</u>										
Sprinkler system - wet	\$8.75	GSF	80,550	\$704,813	186,030	\$1,627,763	131,900	\$1,154,125	36,600	\$320,250
*EXCLUDES FIRE PUMP				\$704,813		\$1,627,763		\$1,154,125		\$320,250
TOTAL D40 - FIRE PROTECTION				\$704,813		\$1,627,763		\$1,154,125		\$320,250
D50 - ELECTRICAL										
D5010 ELECTRICAL SERVICE & DISTRIBUTION										
<u>260001 ELECTRICAL*</u>										
3,000A Service Panel and Feeders (480	\$7.00	GSF	80,550	\$563,850	186,030	\$1,302,210	131,900	\$923,300	36,600	\$256,200
Digital metering	\$25,000.00	LS	1	\$25,000	1	\$25,000				
pv Rough in	\$22,000.00	LS	1	\$22,000	1	\$22,000				
750 kw Diesel Generator	\$515,000.00	EA	2	\$1,030,000	2	\$1,030,000				
Demo Disconnect	\$25,000.00	LS	1	\$25,000	1	\$25,000				
Temp Power and Light	\$1.00	GSF	80,550	\$80,550	186,030	\$186,030	131,900	\$131,900	36,600	\$36,600
				\$1,746,400		\$2,590,240		\$1,055,200		\$292,800
D5020 LIGHTING & BRANCH WIRING										
<u>260001 ELECTRICAL*</u>										
Lighting	\$11.00	GSF	80,550	\$886,050	186,030	\$2,046,330	131,900	\$1,450,900	36,600	\$402,600

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Lighting Control (inc device oc)	\$2.65	GSF	80,550	\$213,458	186,030	\$492,980	131,900	\$349,535	36,600	\$96,990
Auditorium Lighting and dimming system	\$550,000.00	LS	1	\$550,000	1	\$550,000				
				\$1,649,508		\$3,089,310		\$1,800,435		\$499,590
D5030 COMMUNICATION & SECURITY										
260001 ELECTRICAL*										
CCTV	\$3.00	GSF	80,550	\$241,650	186,030	\$558,090	131,900	\$395,700	36,600	\$109,800
Access control	\$1.00	GSF	80,550	\$80,550	186,030	\$186,030	131,900	\$131,900	36,600	\$36,600
Video entry system	\$27,500.00	LS	1	\$27,500	1	\$27,500	1	\$27,500	1	\$27,500
Digital Signage	\$4,000.00	EA	5	\$20,000	5	\$20,000				
Tele/data cabling, racks and switches	\$7.50	GSF	80,550	\$604,125	186,030	\$1,395,225	131,900	\$989,250	36,600	\$274,500
Classroom AV rough-in only	\$1,500.00	EA	92	\$138,000	92	\$138,000				
Speech Reinforcement	\$3,300.00	EA	92	\$303,600	92	\$303,600				
				\$1,415,425		\$2,628,445		\$1,544,350		\$448,400
D5090 OTHER ELECTRICAL SYSTEMS										
260001 ELECTRICAL*										
Rath 2way call	\$18,000.00	EA	1	\$18,000	1	\$18,000				
Fire Alarm	\$4.80	GSF	80,550	\$386,640	186,030	\$892,944	131,900	\$633,120	36,600	\$175,680
Mass Notification	\$0.75	GSF	80,550	\$60,413	186,030	\$139,523	131,900	\$98,925	36,600	\$27,450
Devices	\$3.25	GSF	80,550	\$261,788	186,030	\$604,598	131,900	\$428,675	36,600	\$118,950
Clocks and PA	\$1.20	GSF	80,550	\$96,660	186,030	\$223,236	131,900	\$158,280	36,600	\$43,920
Gym/Café Sound System	\$0.75	GSF	80,550	\$60,413	186,030	\$139,523	131,900	\$98,925	36,600	\$27,450
Lighting Protection	\$0.78	GSF	80,550	\$62,829	186,030	\$145,103	131,900	\$102,882	36,600	\$28,548
Kitchen/Mechanical Wiring	\$2.50	GSF	80,550	\$201,375	186,030	\$465,075	131,900	\$329,750	36,600	\$91,500
Bi-Direction Antenna	\$0.80	GSF	80,550	\$64,440	186,030	\$148,824	131,900	\$105,520	36,600	\$29,280
Test Permit and Misc.	\$5.00	GSF	80,550	\$402,750	186,030	\$930,150	131,900	\$659,500	36,600	\$183,000
By others:										
Telephone system										
Network switches										
Classroom projectors										
PV Panels										

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
TOTAL D50 - ELECTRICAL			\$79.78	\$6,426,639	\$64.59	\$12,014,969	\$53.73	\$1,966,568
E. EQUIPMENT & FURNISHINGS								
E10 - EQUIPMENT								
E1010 COMMERCIAL EQUIPMENT								
<u>114000 FOOD SERVICE EQUIPMENT</u>								
Kitchen equipment - new	\$1,200,000.00	LS	1	\$1,200,000	1	\$1,200,000		
				-----		-----		-----
				\$1,200,000		\$1,200,000		\$0
E1090 OTHER EQUIPMENT								
<u>113100 APPLIANCES</u>								
Staff kitchen refrigerator	\$1,000.00	EA	3	\$3,000	2	\$2,000	2	\$2,000
Staff kitchen microwave	\$500.00	EA	3	\$1,500	2	\$1,000	2	\$1,000
Medical office refrigerator w/ice	\$1,000.00	EA	1	\$1,000	1	\$1,000	1	\$1,000
<u>115300 LABORATORY EQUIPMENT</u>								
Science Rm Equipment	\$15,000.00	EA	7	\$105,000	7	\$105,000		
Prep Rm Equipment	\$10,000.00	EA	2	\$20,000	2	\$20,000		
<u>116600 ATHLETIC & SPORTS EQUIPMENT</u>								
Basketball backstops - electric	\$11,000.00	EA					6	\$66,000
Wall padding - 6'	\$15.00	SF					750	\$11,250
Motorized gym divider curtain	\$19.00	SF					1,750	\$33,250
Volley ball court equip.	\$700.00	EA					2	\$1,400
Scoreboard and shot clock	\$24,000.00	EA					1	\$24,000
Ropes and Bars	\$10,000.00	LS					1	\$10,000
Bleachers	\$190.00	SEAT					1,500	\$285,000
<u>116143 THEATRICAL EQUIPMENT</u>								
Stage curtain and rigging	\$450,000.00	LS	1	\$450,000	1	\$450,000		

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Auditorium Lighting and dimming system	\$275,000.00	LS	1	\$275,000	1	\$275,000				
Black Box Lighting and Sounds	\$100,000.00	LS	1	\$100,000	1	\$100,000				
<u>115213 PROJECTION SCREENS</u>										
Projection screen - stage	\$12,000.00	EA	1	\$12,000	1	\$12,000				
<u>119000 MISC. EQUIPMENT</u>										
Metal storage shelving		NIC								
Book security equipment		NIC								
Kiln	\$4,000.00	EA	1	\$4,000	1	\$4,000				
				\$971,500		\$970,000				\$434,900
TOTAL E10 - EQUIPMENT				\$2,171,500		\$2,170,000				\$434,900
<u>E20 - FURNISHINGS</u>										
E 2010 FIXED FURNISHINGS										
<u>129000 MISC. FURNISHINGS</u>										
Meco shade - manual	\$7.50	SF	11,494	\$86,201	19,924	\$149,430			0	\$0
Elec Op Shades	\$45,000.00	LS	1	\$45,000	1	\$45,000				
Theater Seating	\$365.00	EA	800	\$292,000	800	\$292,000				
<u>123553 CLASSROOM CASEWORK</u>										
Casework	\$14.50	GSF	80,550	\$1,167,975	186,030	\$2,697,435			131,900	\$1,912,550
										\$530,700
E2020 MOVABLE FURNISHINGS										
				\$1,591,176		\$3,183,865				\$530,700
										NIC
										\$0
										\$0
TOTAL E20 - FURNISHINGS				\$1,591,176		\$3,183,865				\$1,912,550
F20 - SELECTIVE BUILDING DEMOLITION										
										\$530,700

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
F2010 BUILDING ELEMENTS DEMOLITION								
Interior Demolition	\$20.00	GSF				\$2,638,000	36,600	\$732,000
Remove Exterior wall	\$15.00	GSF				\$625,470	11,213	\$168,195
				\$0		\$3,263,470		\$900,195
F2020 HAZARDOUS COMPONENTS ABATEMENT								
Hazardous Waste Allowance	SEE SUMMARY PAGE							
				\$0				\$0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				\$0		\$3,263,470		\$900,195
G. BUILDING SITEWORK								
G10 - SITE PREPARATION								
G1010 SITE CLEARING								
311000 SITE PREPARATION & CLEARING								
Construction fence- 100%	16.50	LF		\$69,069	4,300	\$70,950		
Construction entrance pad(1,250 SF/EA	11.00	SF		\$27,500	2,500	\$27,500		
Construction gate	1,200.00	EA	2	\$2,400	2	\$2,400		
Erosion control 100%	8.50	LF	4,186	\$35,581	4,300	\$36,550		
Inlet Protection- allow	110.00	EA	20	\$2,200	20	\$2,200		
Erosion Control Maintenance	35,000.00	LS	1	\$35,000	1	\$35,000		
Clear & Grub	0.20	SF	662,865	\$132,573	702,716	\$140,543		
Protect trees @ clearing	10,000.00	LS	1	\$10,000	1	\$10,000		
General Site Prep	0.10	SF	662,865	\$66,287	702,716	\$70,272		
				\$380,610		\$395,415		\$0
G1020 SITE DEMOLITION & RELOCATIONS								
Sawcut street @ entry	10.50	LF	100	\$1,050	100	\$1,050		
Cut and Cap BLDG Utilities	25,000.00	LS	1	\$25,000	1	\$25,000		

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Site Remove Existing:										
Bit Pavement & berm - parking/roadway	1.35	SF	65,000	\$87,750	65,000	\$87,750		\$87,750		\$87,750
Bit Pavement - walk	1.20	SF	15,000	\$18,000	15,000	\$18,000		\$18,000		\$18,000
Conc Pavement - walk	1.50	SF	3,000	\$4,500	3,000	\$4,500		\$4,500		\$4,500
Flag pole	400.00	EA	1	\$400	1	\$400		\$400		\$400
Basketball courts	1.00	SF	28,000	\$28,000	28,000	\$28,000		\$28,000		\$28,000
Basketball hoop	400.00	EA	4	\$1,600	4	\$1,600		\$1,600		\$1,600
Site drainage sys - complete	35,000.00	LS	1	\$35,000	1	\$35,000		\$35,000		\$35,000
Electric sys - complete	30,000.00	LS	1	\$30,000	1	\$30,000		\$30,000		\$30,000
Sanitary sys - complete	35,000.00	LS	1	\$35,000	1	\$35,000		\$35,000		\$35,000
Water sys - complete	15,000.00	LS	1	\$15,000	1	\$15,000		\$15,000		\$15,000
Misc. Site Demolition	0.30	SF	662,865	\$198,860	702,716	\$210,815		\$210,815		\$210,815
Temporary Measures:										
Temp Sediment basin	50,000.00	LS	1	\$50,000	1	\$50,000		\$50,000		\$50,000
Temporary Parking and Access	50,000.00	LS	1	\$50,000	1	\$50,000		\$50,000		\$50,000
Snow removal	50,000.00	LS	1	\$50,000	1	\$50,000		\$50,000		\$50,000
				\$630,160		\$630,160		\$630,160		\$630,160
G1030 SITE EARTHWORK										
<u>310000 EARTHWORK</u>										
Top Soil:										
Strip and Stack 9" Top Soil	8.50	CY	13,524	\$114,954	14,631	\$124,364		\$124,364		\$124,364
Site Grading to sub grade:										
Site Grading	2.30	SY	73,652	\$169,399	78,080	\$179,583		\$179,583		\$179,583
Site Cut	11.00	CY	49,101	\$540,112	52,053	\$572,583		\$572,583		\$572,583
Site Fill reuse	10.00	CY	24,551	\$245,506	26,027	\$260,265		\$260,265		\$260,265
Site Fill - Import	28.00	CY	12,275	\$343,708	13,013	\$364,371		\$364,371		\$364,371
Load and Truck top soil	10.00	CY	24,551	\$245,506	26,027	\$260,265		\$260,265		\$260,265
Dispose of Spoil	25.00	TONS	39,281	\$982,022	41,642	\$1,041,061		\$1,041,061		\$1,041,061
				\$2,641,206		\$2,802,492		\$2,802,492		\$2,802,492
TOTAL G10 - SITE PREPARATION				\$3,651,975		\$3,840,022		\$3,840,022		\$3,840,022
G20 - SITE IMPROVEMENTS										

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION		OPT 7B RENOVATION		OPT 7A RENOVATION		OPT 7B RENOVATION	
			QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL
G2010 ROADWAYS										
<u>321000 PAVING AND CURBING</u>										
Site Drive:										
4" STD Bituminous - drive	\$4.55	SF	131,435	\$598,029	106,382	\$484,038				
12" Gravel base @ 4" STD Bit	\$60.00	CY	4,868	\$292,078	3,940	\$236,404				
Loading Drive-allow:										
8" Concrete vehicular pavement	\$17.00	SF	2,500	\$42,500	2,500	\$42,500				
12" Gravel base @ conc. pave.	\$55.00	CY	93	\$5,093	93	\$5,093				
Site Curbing:										
Granite Curbing - Straight	\$52.50	LF	7,898	\$414,645	5,732	\$300,930				
Granite Curbing - Radial	\$58.00	LF	350	\$20,300	350	\$20,300				
Misc.										
Parking/traffic signage	\$0.10	SF	131,435	\$13,144	106,382	\$10,638				
Pavement line painting & markings	\$0.15	SF	131,435	\$19,715	106,382	\$15,957				
31" Wood Vehicular Guardrail	\$78.00	LF	150	\$11,700	150	\$11,700				
31" Steel Vehicular Guard railing	\$115.00	LF	150	\$17,250	150	\$17,250				
Vehicular Traffic gate		NIC								
Vehicular concrete unit paver w/ conc base		NIC								
Resurface /Repair Exist. Drive		NIC								
Street:										
Entrance Improvements	\$50,000.00	LOC	2	\$100,000	2	\$100,000				
*excludes pedestrian and traffic control lights										
				\$1,534,453		\$1,244,811				\$0
G2030 PEDESTRIAN PAVING										
<u>321000 PAVING AND CURBING</u>										
Site Walks:										
4" Concrete Walk - 75%	\$11.00	SF	32,879	\$361,664	41,210	\$453,313				
Bit Walkway - 25%	\$4.20	SF	10,960	\$46,030	13,737	\$57,694				
Scored Entry/ Specialty Pavement	\$18.00	SF	30,602	\$550,836	27,040	\$486,720				
8" Gravel base @ ped. pavement	\$55.00	CY	1,838	\$101,090	2,024	\$111,339				
HC Accessible Paver and curb cut	\$1,500.00	EA	15	\$22,500	15	\$22,500				

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
*excludes town sidewalk, colored and exposed agg. concrete walks										
Asphalt Color Play Surface(4SQ & BB Court):										
Bit Pavement	\$4.35	SF	8,827	\$38,397	8,827	\$38,397				
Plexi pave coating & striping	\$6.50	SF	8,827	\$57,376	8,827	\$57,376				
8" Gravel base (@ ped. pavement	\$55.00	CY	436	\$23,972	436	\$23,972				
				\$1,201,865		\$1,251,311				\$0
G2040 SITE DEVELOPMENT										
<u>323000 SITE IMPROVEMENTS</u>										
Site Retaining walls	\$500.00	LF	507	\$253,500	256	\$128,000				
Misc. Retaining walls	\$100,000.00	LS	1	\$100,000	1	\$100,000				
PIP Playground Surface										
Reslinet play surface	\$27.50	SF	4,158	\$114,345	5,449	\$149,848				
Conc Perm Curb	\$65.00	LF	281	\$18,265	313	\$20,345				
8" Gravel base	\$62.00	CY	103	\$6,365	135	\$8,341				
Filter fabric	\$1.00	SF	4,158	\$4,158	5,449	\$5,449				
Underdrain	\$1.00	SF	4,158	\$4,158	5,449	\$5,449				
Playground Equipment	\$250,000.00	LS	1	\$250,000	1	\$250,000				
Site Improvements:										
Trash/Recycle Receptacle	\$3,500.00	EA	8	\$28,000	8	\$28,000				
Bicycle rack	\$975.00	EA	22	\$21,450	22	\$21,450				
Picnic table & bench	\$7,500.00	EA	4	\$30,000	4	\$30,000				
Drop off bollard	\$2,500.00	EA	50	\$125,000	50	\$125,000				
Raised Garden bed (4'x8' x1'H)	\$2,600.00	EA	3	\$7,800	3	\$7,800				
ADA Raised Garden bed (4'x4' x 2' H)	\$1,850.00	EA	6	\$11,100	6	\$11,100				
Basketball hoop	\$4,000.00	EA	2	\$8,000	2	\$8,000				
Flag Pole - 30' w/ fnd	\$11,000.00	EA	1	\$11,000	1	\$11,000				
Cast Site Stair	\$40,000.00	LS	1	\$40,000	1	\$40,000				
Amphitheater	\$100,000.00	EA	1	\$100,000	1	\$100,000				
Outdoor Living	\$50,000.00	EA	2	\$100,000	2	\$100,000				
Soccer Field:										
Soccer goal	\$4,000.00	EA	2	\$8,000	2	\$8,000				
Perim chain link fence - 4'		NIC								
Safety netting		NIC								
Athletic Field(Soccer & Softball):										

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DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION		OPT 7B RENOVATION		OPT 7A RENOVATION		OPT 7B RENOVATION	
			QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL	QUANTITY	TOTAL
12" Drainage Layer	\$65.00	CY	5,533	\$359,614	5,583	\$362,907				
Perf field pipe	\$1.00	SF	149,378	\$149,378	150,746	\$150,746				
Filter Fabric	\$1.05	SF	149,378	\$156,847	150,746	\$158,283				
Mech Yard -Allow:										
Decorative Gravel surface	\$6.00	SF	100	\$600	100	\$600				
8" Gravel base	\$55.00	CY	2	\$136	2	\$136				
Metal Utility Bollard	\$1,325.00	EA	8	\$10,600	8	\$10,600				
6' Alum Utility Screen	\$150.00	LF	100	\$15,000	100	\$15,000				
Fencing-Allow	\$200,000.00	LS	1	\$200,000	1	\$200,000				
Site sign	\$35,000.00	EA	1	\$35,000	1	\$35,000				
Dumpster enclosure		NIC								
Masonry veneer @ site wall		NIC								
Granite Landscaping Curb		NIC								
Misc. site improvements	\$350,000.00	LS	1	\$350,000	1	\$350,000				
				\$2,518,315		\$2,441,053		\$0		\$0
G2050 LANDSCAPING										
<u>329000 PLANTING</u>										
Shrub bed	\$8.00	SF	4,000	\$32,000	4,000	\$32,000				
Planting Allowance	\$0.55	SF	662,865	\$364,576	702,716	\$386,494				
Planting maintenance	\$35,000.00	LS	1	\$35,000	1	\$35,000				
Hydressed - Athletic fields	\$0.45	SF	149,378	\$67,220	150,746	\$67,836				
Hydressed - typ lawn	\$0.45	SF	194,072	\$87,332	200,884	\$90,398				
Loam:										
12" Planting Bed - import	\$88.00	CY	148	\$13,024	148	\$13,024				
2" Mulch	\$62.00	CY	25	\$1,550	25	\$1,550				
Loam Amended soil:										
9" Loam - athletic field lawn	\$48.00	CY	4,149	\$199,171	4,187	\$200,995				
6" Typ Lawn - amend	\$48.00	CY	3,594	\$172,508	3,720	\$178,564				
Irrigation System:										
Athletic Fields	\$1.50	SF	149,378	\$224,067	150,746	\$226,119				
Lawn	N/A									
Plant bed	N/A									
Soil Cell Systems	N/A									

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
Rain Garden	\$30.00	SF	5,000	\$150,000	5,000	\$150,000				
				\$1,346,448		\$1,381,979				\$0
TOTAL G20 - SITE IMPROVEMENTS				\$6,601,082		\$6,319,154		\$0		\$0
G30 - SITE MECHANICAL UTILITIES										
G3010 WATER SUPPLY										
330000 UTILITIES										
Street Connection	\$25,000.00	LOC	1	\$25,000		\$25,000				
Temp St pavement cut & patch	\$3,000.00	LOC	1	\$3,000		\$3,000				
8" Main	\$124.00	LF	2,602	\$322,648		\$314,836				
8" Gate valve	\$3,600.00	EA	6	\$21,600		\$21,600				
6" Fire Service	\$97.00	LF	100	\$9,700		\$9,700				
6" Domestic	\$84.00	LF	100	\$8,400		\$8,400				
6" Gate valve fire	\$3,200.00	EA	1	\$3,200		\$3,200				
6" Gate valve dom	\$3,000.00	EA	1	\$3,000		\$3,000				
Fire Hydrant	\$4,500.00	EA	2	\$9,000		\$9,000				
6" Hydrant Service	\$97.00	LF	50	\$4,850		\$4,850				
6" Gate valve hydrant	\$2,600.00	EA	2	\$5,200		\$5,200				
Test, sanitize, thrust block, misc.	\$10,000.00	LS	1	\$10,000		\$10,000				
				\$425,598		\$417,786				\$0
G3020 SANITARY SEWER										
330000 UTILITIES										
Street Connection	\$25,000.00	LOC	1	\$25,000		\$25,000				
Temp St pavement cut & patch	\$3,000.00	LOC	1	\$3,000		\$3,000				
8" PVC San Main	\$105.00	LF	800	\$84,000		\$84,000				
Site manhole	\$5,000.00	EA	2	\$10,000		\$5,000				
Ext Grease Trap - 4,000 gal	\$35,000.00	EA	1	\$35,000		\$35,000				
Int Grease interceptor		W / plumbing								
				\$157,000		\$152,000				\$0
G3030 STORM SEWER										

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Galvin Middle School - PSR

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
330000 UTILITIES										
Drainage System @										
Parking Pavement	\$6.00	SF	131,435	\$788,610	106,382	\$638,292				
Pedestrian pavement	\$6.00	SF	74,440	\$446,640	81,987	\$491,922				
Building footprint	\$6.00	FTP	90,050	\$540,300	103,630	\$621,780				
				\$1,775,550		\$1,751,994		\$0		\$0
G3060 FUEL DISTRIBUTION										
		TBD								
								\$0		\$0
TOTAL G30 - SITE MECHANICAL UTILITIES				\$2,358,148		\$2,321,780		\$0		\$0
G40 - SITE ELECTRICAL UTILITIES										
G4010 ELECTRICAL DISTRIBUTION										
330000 UTILITIES										
Duct banks:										
Pole dressing	\$3,500.00	LS	2	\$7,000		\$7,000				
Primary duct bank	\$125.00	LF	1,500	\$187,500	950	\$118,750				
Secondary duct bank and conductor	\$250.00	LF	150	\$37,500	150	\$37,500				
Tele data duct bank	\$125.00	LF	1,400	\$175,000	1,400	\$175,000				
Future EV Station feed	\$35.00	LF	2,500	\$87,500	2,500	\$87,500				
Future PV Canopy feed	\$35.00	LF	1,000	\$35,000	1,000	\$35,000				
Transformer pad and grounding	\$10,000.00	EA	1	\$10,000	1	\$10,000				
Generator pad and grounding	\$10,000.00	EA	1	\$10,000	1	\$10,000				
Demolition and disconnect	\$20,000.00	LS	1	\$20,000	1	\$20,000				
Temp Electrical	\$25,000.00	LS	1	\$25,000	1	\$25,000				
*Electrical poles and primary by others										
Site Security	\$50,000.00	LS	1	\$50,000	1	\$50,000				
				\$644,500		\$575,750		\$0		\$0

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
G4020 SITE LIGHTING										
<u>260001 ELECTRICAL*</u>										
Lighting Fixtures:										
Parking Fixtures	\$4,000.00	EA	35	\$140,000	35	\$140,000				
Pedestrian Bollard Fixture(G2050)	\$3,500.00	EA	30	\$105,000	30	\$105,000				
Flagpole light(G2050)	\$1,150.00	EA	1	\$1,150	1	\$1,150				
1" c Light feed	\$14.00	LF	5,000	\$70,000	5,000	\$70,000				
Specialty Lighting	\$25,000.00	LS	1	\$25,000	1	\$25,000				
New Site Lighting:										
Light pole feeder trench	\$14.50	LF	5,000	\$72,500	5,000	\$72,500				
Light pole base	\$950.00	EA	35	\$33,250	35	\$33,250				
*Excludes traffic lights										
*Excludes sports field lighting										
TOTAL G40 - SITE ELECTRICAL UTILITIES				\$1,091,400		\$1,022,650		\$0		\$0
ALTERANTES										
<u>NO. 1 ADD SYNTHETIC TURF FIELD</u>										
Deduct:										
Loam Amended soil:										
9" Loam - athletic field lawn	(\$48.00)	CY	3,021	(\$145,020)						
Irrigation - Athletic Fields	(\$1.50)	SF	108,765	(\$163,148)						
Hydroseed - Athletic fields	(\$0.45)	SF	108,765	(\$48,944)						
Add:										
Artificial Turf -(Allow in lieu of Lawn):										
Synthetic Turf	\$7.25	SF	108,765	\$788,546						
Perim sil edge & nailer	\$55.00	LF	2,000	\$110,000						
Filter Fabric	\$1.05	SF	108,765	\$114,203						
Underdrain	\$1.00	SF	108,765	\$108,765						
mark-up	32.0%			\$764,403						
				\$244,609						

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Galvin Middle School - PSR

DESCRIPTION	UNIT COST	UNIT	OPT 7A ADDITION QUANTITY	OPT 7A ADDITION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL	OPT 7A RENOVATION QUANTITY	OPT 7A RENOVATION TOTAL	OPT 7B RENOVATION QUANTITY	OPT 7B RENOVATION TOTAL
TOTAL - ALT 1				\$1,009,012						
NO. 2 ADD SPORTS FIELD LIGHTING										
Add:										
Musco Light, pole and foundation	\$115,000.00	EA	6	\$690,000						
Trenching	\$75,000.00	LS	1	\$75,000						
Misc. Panels and connection	\$75,000.00	LS	1	\$75,000						
mark-up	32.0%			\$840,000						
				\$268,800						
TOTAL - ALT 2				\$1,108,800						

PROJECT: Galvin Middle School - PSR
 LOCATION: Canton, MA
 CLIENT: Leftfield
 DATE: 11-Jan-24

No.: 22025

SUMMARY

A. SUBSTRUCTURE

A10 - FOUNDATIONS

A1010 STANDARD FOUNDATIONS

A1020 SPECIAL FOUNDATIONS

A1030 SLAB ON GRADE

B. SHELL

B10 - SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

B1020 ROOF CONSTRUCTION

B20 - EXTERIOR ENCLOSURE

B2010 EXTERIOR WALLS

B2020 EXTERIOR WINDOWS

B2030 EXTERIOR DOORS

B30 - ROOFING

B3010 ROOF COVERINGS

C. INTERIORS

C10 - INTERIOR CONSTRUCTION

C1010 PARTITIONS

C1020 INTERIOR DOORS

C1030 FITTINGS

C20 - STAIRS

C2010 STAIR CONSTRUCTION

C2020 STAIR FINISHES

C30 - INTERIOR FINISHES

C3010 WALL FINISHES

C3020 FLOOR FINISHES

C3030 CEILING FINISHES

OPT 1 BASE REPAIR REPAIR TOTAL
\$50,000
\$0
\$175,000
\$0
\$32,500
\$3,152,500
\$3,297,575
\$72,500
\$3,165,672
\$1,319,030
\$923,321
\$1,978,545
\$48,000
\$25,400
\$1,582,836
\$1,846,642
\$1,714,739

Galvin Middle School - PSR	1/11/24	OPT 1 BASE REPAIR REPAIR TOTAL
D. SERVICES		
D10 - CONVEYING		
D1010 ELEVATORS & LIFTS		\$0
D20 - PLUMBING		
D2010 PLUMBING		\$3,297,575
D30 - HVAC		
D3010 HVAC		\$9,892,725
D40 - FIRE PROTECTION		
D4010 SPRINKLERS		\$989,273
D50 - ELECTRICAL		
D5010 ELECTRICAL SERVICE & DISTRIBUTION		\$2,638,060
D5090 OTHER ELECTRICAL SYSTEMS		\$989,273
E. EQUIPMENT & FURNISHINGS		
E10 - EQUIPMENT		
E1010 COMMERCIAL EQUIPMENT		\$1,100,000
E20 - FURNISHINGS		
E 2010 FIXED FURNISHINGS		\$2,016,045
G. BUILDING SITEWORK		
G10 - SITE PREPARATION		
G1010 SITE CLEARING		\$127,500
G1020 SITE DEMOLITION & RELOCATIONS		\$116,550
G1030 SITE EARTHWORK		\$56,000
G1040 HAZARDOUS WASTE REMEDIATION		\$0
G20 - SITE IMPROVEMENTS		
G2010 ROADWAYS		\$473,560
G2020 PARKING LOTS		\$0
G2030 PEDESTRIAN PAVING		\$64,275
G2040 SITE DEVELOPMENT		\$1,034,080
G2050 LANDSCAPING		\$100,000
G30 - SITE MECHANICAL UTILITIES		
G3010 WATER SUPPLY		\$0
G3020 SANITARY SEWER		\$0
Galvin Middle School - PSR	1/11/24	OPT 1 BASE REPAIR TOTAL
G3030 STORM SEWER		\$50,000

G40 - SITE ELECTRICAL UTILITIES
G4010 ELECTRICAL DISTRIBUTION
G4020 SITE LIGHTING

TOTAL DIRECT COST

\$0
\$50,000

\$47,061,077

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
<u>A. SUBSTRUCTURE</u>				
A10 - FOUNDATIONS				
A1010 STANDARD FOUNDATIONS				
<u>033000 CAST IN PLACE CONCRETE</u>				
Mis. foundation repair	\$50,000.00	LS	1	\$50,000

				\$50,000
A1020 SPECIAL FOUNDATIONS				
Special improvement allowance				NOT USED

				\$0
A1030 SLAB ON GRADE				
<u>310000 EARTHWORK</u>				
<u>033000 CAST IN PLACE CONCRETE</u>				
Patch slab at under slab plumbing	\$50.00	SF	3,500	\$175,000

				\$175,000
TOTAL A10 FOUNDATIONS				\$225,000
<u>B. SHELL</u>				
B10 - SUPERSTRUCTURE				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REPAIR	
			QUANTITY	TOTAL
B1010 FLOOR CONSTRUCTION				
				\$0
				----- \$0
B1020 ROOF CONSTRUCTION				
<u>051200 STRUCTURAL STEEL</u>				
New Construction:				
Galv. TRU dunnage - allow	\$6,500.00	TONS	5.00	\$32,500
				----- \$32,500
TOTAL B10 SUPERSTRUCTURE				\$32,500
B20 - EXTERIOR ENCLOSURE				
B2010 EXTERIOR WALLS				
<u>040001 MASONRY*</u>				
Masonry Repairs	\$65.00	SF	48,500	\$3,152,500
				----- \$3,152,500
B2020 EXTERIOR WINDOWS				
<u>080001 METAL WINDOWS*</u>				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Window system	\$25.00	GSF	131,903	\$3,297,575
				----- \$3,297,575
B2030 EXTERIOR DOORS				
<u>080001 METAL WINDOWS*</u>				
7' Alum. Doors (Incl. Hardware):				
Main Entry - dbl	\$10,500.00	EA	6	\$63,000
Auto opener - allow	\$8,500.00	PR	1	\$8,500
090007 PAINTING				
Exterior door painting	\$1,000.00	LS	1	\$1,000
				----- \$72,500
TOTAL B20 - EXTERIOR ENCLOSURE				\$6,522,575
B30 - ROOFING				
B3010 ROOF COVERINGS				
<u>070002 ROOFING AND FLASHING*</u>				
Roofing & flashing	\$24.00	SF	131,903	\$3,165,672
				----- \$3,165,672
B3020 ROOF OPENINGS				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
				----- \$0
TOTAL B30 ROOFING				\$3,165,672
<u>C. INTERIORS</u>				
C10 - INTERIOR CONSTRUCTION				
C1010 PARTITIONS				
<u>061000 ROUGH CARPENTRY</u>				
Interior partitions - minor work	\$10.00	GSF n/a	131,903	\$1,319,030
				----- \$1,319,030
C1020 INTERIOR DOORS				
<u>081113 HOLLOW METALWORK</u>				
<u>081416 WOOD AND PLASTIC DOORS</u>				
<u>087100 DOOR HARDWARE</u>				
Interior Door frame and Hardware	\$7.00	GSF	131,903	\$923,321
				----- \$923,321
C1030 FITTINGS				
<u>109000 MISCELLANEOUS SPECIALTIES</u>				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Fittings and Specialties	\$15.00	GSF	131,903	\$1,978,545
				----- \$1,978,545
TOTAL C10 - INTERIOR CONSTRUCTION				\$4,220,896
C20 - STAIRS				
C2010 STAIR CONSTRUCTION				
<u>050001 MISCELLANEOUS & ORNAMENTAL IRON*</u>				
ADA railing upgrade	\$12,000.00	FLT	4	\$48,000
				----- \$48,000
C2020 STAIR FINISHES				
<u>090005 RESILIENT FLOORING*</u>				
Rubber treads and risers	\$2,850.00	EA	4	\$11,400
<u>090007 PAINTING*</u>				
Paint stair structure	\$3,500.00	EA	4	\$14,000
				----- \$25,400
TOTAL C20 - STAIRS				\$73,400
C30 - INTERIOR FINISHES				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
C3010 WALL FINISHES				
Wall Finish	\$12.00	GSF	131,903	\$1,582,836
				----- \$1,582,836
C3020 FLOOR FINISHES				
Floor Finishes	\$14.00	GSF	131,903	\$1,846,642
				----- \$1,846,642
C3030 CEILING FINISHES				
Ceiling Finish	\$13.00	GSF	131,903	\$1,714,739
				----- \$1,714,739
TOTAL C30 - INTERIOR FINISHES				\$5,144,217
D. SERVICES				
D10 - CONVEYING				
D1010 ELEVATORS & LIFTS				
<u>140001 ELEVATORS*</u>				
Passanger Elevator		existing to remain		----- \$0

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
TOTAL D10 - CONVEYING				
				\$0
D20 - PLUMBING				
D2010 PLUMBING				
Plumbing	\$25.00	GSF	131,903	\$3,297,575

				\$3,297,575
TOTAL D20 - PLUMBING				
				\$3,297,575
D30 - HVAC				
D3010 HVAC				
HVAC - FCU/AHU	\$75.00	GSF	131,903	\$9,892,725

				\$9,892,725
TOTAL D30 - HVAC				
				\$9,892,725
D40 - FIRE PROTECTION				
D4010 SPRINKLERS				
<u>210001 FIRE SUPPRESSION*</u>				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Sprinkler system - wet *EXCLUDES FIRE PUMP	\$7.50	GSF	131,903	\$989,273
				----- \$989,273
TOTAL D40 - FIRE PROTECTION				\$989,273
D50 - ELECTRICAL				
D5010 ELECTRICAL SERVICE & DISTRIBUTION				
<u>260001 ELECTRICAL*</u>				
Service Panel & Feeders	\$20.00	GSF	131,903	\$2,638,060
				----- \$2,638,060
D5020 LIGHTING & BRANCH WIRING				
<u>260001 ELECTRICAL*</u>				
Lighting	\$11.00	GSF	131,903	\$1,450,933
Lighting Control (inc device oc)	\$3.00	GSF	131,903	\$395,709
				----- \$1,846,642
D5030 COMMUNICATION & SECURITY				
<u>260001 ELECTRICAL*</u>				
CCTV	\$3.00	GSF	131,903	\$395,709

Galvin Middle School - PSR

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DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Access control	\$1.00	GSF	131,903	\$131,903
Video entry system	\$22,000.00	LS	1	\$22,000
Digital Signage	\$4,000.00	EA	3	\$12,000
Tele/data cabling, racks and switches	\$6.00	GSF	131,903	\$791,418
Classroom AV rough-in only	\$1,500.00	EA	34	\$51,000
Speech Reinforcement	\$3,300.00	EA	34	\$112,200

				\$1,516,230
D5090 OTHER ELECTRICAL SYSTEMS				
<u>260001 ELECTRICAL*</u>				
Fire Alarm	\$4.50	GSF	131,903	\$593,564
Mechanical Wiring	\$2.00	GSF	131,903	\$263,806
Misc. Electrical	\$1.00	GSF	131,903	\$131,903
By others:				
Telephone system				
Network switches				
Classroom projectors				
PV Panels				

				\$989,273
TOTAL D50 - ELECTRICAL				\$6,990,205
E. EQUIPMENT & FURNISHINGS				
E10 - EQUIPMENT				
E1010 COMMERCIAL EQUIPMENT				
114000 FOOD SERVICE EQUIPMENT				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Kitchen equipment - new	\$1,100,000.00	LS	1	\$1,100,000
				----- \$1,100,000
E1090 OTHER EQUIPMENT				
<u>113100 APPLIANCES</u>				----- \$0
TOTAL E10 - EQUIPMENT				\$1,100,000
E20 - FURNISHINGS				
E 2010 FIXED FURNISHINGS				
<u>129000 MISC. FURNISHINGS</u>				
Meco shade - manual	\$7.50	SF	5,000	\$37,500
<u>123553 CLASSROOM CASEWORK</u>				
Casework	\$15.00	GSF	131,903	\$1,978,545
				----- \$2,016,045
E2020 MOVABLE FURNISHINGS				----- \$0

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
TOTAL E20 - FURNISHINGS				\$2,016,045
F20 - SELECTIVE BUILDING DEMOLITION				
F2010 BUILDING ELEMENTS DEMOLITION				
Interior Demolition	\$10.00	GSF	131,903	\$1,319,030

				\$1,319,030
F2020 HAZARDOUS COMPONENTS ABATEMENT				
Hazardous Waste Allowance	SEE SUMMARY PAGE			

				\$0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				\$1,319,030
<u>G. BUILDING SITEWORK</u>				
G10 - SITE PREPARATION				
G1010 SITE CLEARING				
<u>311000 SITE PREPARATION & CLEARING</u>				
Construction fence	16.00	LF	1,500	\$24,000
Construction entrance pad	15.00	SF	1,500	\$22,500
Construction gates	1,000.00	EA	1	\$1,000
Clear and Grub	0.20	SF	200,000	\$40,000
Strip and stack 6" avg. top soil	11.00	CY		
Protect stockpile	10,000.00	LS		

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Protect tree	10,000.00	LS	1	\$10,000
General Site Prep	0.15	SF	200,000	\$30,000

				\$127,500
G1020 SITE DEMOLITION & RELOCATIONS				
Erosion control	8.50	LF	1,200	\$10,200
Inlet Protection	110.00	EA	35	\$3,850
Erosion Control Maintance	7,500.00	LS	1	\$7,500
Misc. Site Removal	0.30	SF	200,000	\$60,000
Temporary Measures:				
Temp Sediment basin	15,000.00	LS		
Temporary Parking and Access	50,000.00	LS		
Phasing logistics	35,000.00	LS	1	\$35,000

				\$116,550
G1030 SITE EARTHWORK				
<u>310000 EARTHWORK</u>				
Site Cut to fill	28.00	CY	2,000	\$56,000

				\$56,000
G1040 HAZARDOUS WASTE REMEDIATION				
Soil classifications		NIC		

				\$0

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
TOTAL G10 - SITE PREPARATION				\$300,050
G20 - SITE IMPROVEMENTS				
G2010 ROADWAYS				
<u>321000 PAVING AND CURBING</u>				
Bituminous - Drive and parking	\$5.20	SF	50,000	\$260,000
12" Gravel base @ vehicular pave.	\$60.00	CY	1,851	\$111,060
Granite Curbing - road/drop off	\$53.00	LF	1,500	\$79,500
Curb cut /St. patch @ entry drive	\$5,000.00	LOC	1	\$5,000
Parking/traffic signage	\$0.12	SF	50,000	\$6,000
Parking line panting & markings	\$0.24	SF	50,000	\$12,000

				\$473,560
G2030 PEDESTRIAN PAVING				
<u>321000 PAVING AND CURBING</u>				
4" Concrete Pavement	\$11.00	SF	5,000	\$55,000
Bit Play Surface	\$10.00	SF		
Unit Entry Paver	\$36.00	SF		
8" Gravel base @ ped. pavement	\$55.00	CY	125	\$6,875
Tactile warning paver	\$1,200.00	EA	2	\$2,400

				\$64,275
G2040 SITE DEVELOPMENT				
<u>323000 SITE IMPROVEMENTS</u>				
Play Area :				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
Under drain system	\$1.00	SF	12,000	\$12,000
Resilient play surface	\$27.00	SF	12,000	\$324,000
8" Gravel Base	\$55.00	CY	296	\$16,280
Perim. curb	\$55.00	LF	542	\$29,810
Decorative metal fencing	\$145.00	LF	542	\$78,590
5'W Gate @ decorative metal fencing	\$4,200.00	EA	2	\$8,400
Play Equipment - allow	\$500,000.00	LS	1	\$500,000
Benches	\$3,000.00	EA	5	\$15,000
Misc. site improvements	\$50,000.00	LS	1	\$50,000

				\$1,034,080
G2050 LANDSCAPING				
<u>329000 PLANTING</u>				
Landscaping	\$100,000.00	LS	1	\$100,000

				\$100,000
TOTAL G20 - SITE IMPROVEMENTS				\$1,671,915
G30 - SITE MECHANICAL UTILITIES				
G3010 WATER SUPPLY				
330000 UTILITIES				

				\$0
G3020 SANITARY SEWER				

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
330000 UTILITIES				----- \$0
G3030 STORM SEWER				
330000 UTILITIES				
Minor drainage at pavement replacemen	\$50,000.00	LS	1	\$50,000
				----- \$50,000
TOTAL G30 - SITE MECHANICAL UTILITIES				\$50,000
G40 - SITE ELECTRICAL UTILITIES				
G4010 ELECTRICAL DISTRIBUTION				
<u>330000 UTILITIES</u>				----- \$0
G4020 SITE LIGHTING				
<u>260001 ELECTRICAL*</u>				
Lighting Fixtures: Improve site lighting	\$50,000.00	LS	1	\$50,000
				----- \$50,000

Galvin Middle School - PSR

1/11/24

DESCRIPTION	UNIT COST	UNIT	OPT 1 BASE REAPIR	
			QUANTITY	TOTAL
G4030 SITE COMMUNICATIONS & SECURITY				----- \$0
G4090 OTHER SITE ELECTRICAL UTILITIES		N/A		----- \$0
TOTAL G40 - SITE ELECTRICAL UTILITIES				\$50,000

Summary of Preliminary Design Pricing

Estimated Total Construction Cost

Both the Designer's Cost Consultant, PM&C, and the OPM's Cost Consultant, AM Fogarty, reconciled their PSR estimated construction costs as can be seen on the Comparative Costs Analysis Matrix included.

As shown in the Comparative Costs Analysis, the two estimates could not reconcile within 1%. This is because each estimator assumed a different construction delivery approach. We have used the AM Fogarty cost estimate as the basis for the

PSR costs as their estimates assumed a CM at-Risk Construction Delivery approach, which is the direction the SBC voted to move forward with at their January 24, 2024 meeting.

For the Preferred Option 9E - New Construction, the estimated total construction costs is \$186,200,000.

Refer to the Budget Statement in Section 3.3.4, PREFERRED SOLUTION for additional information.

	A	B	C	D	E	F
Options	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sf)	Square Feet of New Construction (cost*/sf)	Site, Building, Takedown, Haz. Mat. Cost*	Estimated Total Construction** (cost*/sf)	Estimated Total Project Costs
Option 1 (6-8) Base Repair/ Code Upgrade	131,903 sf	N/A	N/A	\$4.1 M	\$76.7 M (\$581.50/sf)	\$95.9 M
Option 7a (5-8) Add/Reno	213,473 sf	131,903 sf (\$371.33/sf)	81,570 sf (\$588.70/sf)	\$15.8 M	\$181.1 M (\$848.27/sf)	\$226.3 M
Option 7b (5-8) Add/Reno	222,630 sf	36,600 sf (\$401.07/sf)	186,030 sf (\$498.18/sf)	\$16.4 M	\$198.6 M (\$892.15/sf)	\$248.2 M
Option 9b (5-8) New Con.	218,350 sf	N/A	218,350 sf (\$869.68/sf)	\$16.8 M	\$189.9 M (\$869.68/sf)	\$237.4 M
***Option 9e (5-8) New Con.	218,350 sf	N/A	218,350 sf (\$852.87/sf)	\$18.6 M	\$186.2 M (\$852.87/sf)	\$232.8 M

*Marked Up Construction Costs

**Does not include construction contingency

***District's Preferred Solution

Estimated Total Project Costs include 25% for soft costs.



William H. Galvin Middle School Project - Canton, MA

Preferred Schematic Report - Comparative Cost Analysis

	Option 7A			Option 7B		
	Addition/Renovation			Addition/Renovation		
	Gross Square Footage: 213,473			Gross Square Footage: 222,630		
	PM&C	AM Fogarty	Delta	PM&C	AM Fogarty	Delta
Student Enrollment : 1,020 Students						
TOTAL DIRECT COSTS	\$ 115,623,895	\$ 112,778,172	\$ 2,845,723	\$ 122,675,246	\$ 123,928,591	\$ (1,253,345)
TOTAL ESTIMATED CONSTRUCTION COSTS	\$ 181,485,282	\$ 181,082,475	\$ 402,807	\$ 192,609,452	\$ 198,620,048	\$ (6,010,596)
Cost/SF	\$ 850.16	\$ 848.27	\$ 1.89	\$ 865.15	\$ 892.15	\$ (27.00)
Soft Costs Calculated at 25%	\$ 45,371,320	\$ 45,270,619	\$ 100,702	\$ 48,152,363	\$ 49,655,012	\$ (1,502,649)
TOTAL ESTIMATED PROJECT COSTS	\$ 226,856,602	\$ 226,353,093	\$ 503,509	\$ 240,761,815	\$ 248,275,061	\$ (7,513,245)

For All Options

ALTERNATES	For All Options	
(incl. markups) Add for Synthetic Turf Field	\$ 1,182,820	\$ 1,261,265
(incl. markups) Add for Sports Field Lighting	\$ 1,450,000	\$ 1,386,000
		\$ (78,445)
		\$ 64,000

The estimated construction and total project cost provided are for COMPARISON PURPOSES ONLY. The estimated costs will be updated at the Schematic Design Report (SD) phase to inform the Total Project Budget that will be submitted to the MSBA.

William H. Galvin Middle School Project - Canton, MA

Preferred Schematic Report - Comparative Cost Analysis

	Option 9B				Option 9E			
	New Construction				New Construction			
	Gross Square Footage: 218,350				Gross Square Footage: 218,350			
	PM&C	AM Fogarty	Delta		PM&C	AM Fogarty	Delta	
Student Enrollment : 1,020 Students								
TOTAL DIRECT COSTS	\$ 117,179,605	\$ 122,329,831	\$ (5,150,226)		\$ 121,948,379	\$ 124,631,992	\$ (2,683,613)	
TOTAL ESTIMATED CONSTRUCTION COSTS	\$ 179,075,461	\$ 189,895,221	\$ (10,819,759)		\$ 179,611,565	\$ 186,224,907	\$ (6,613,342)	
Cost/SF	\$ 820.13	\$ 869.68	\$ (49.55)		\$ 822.59	\$ 852.87	\$ (30.29)	
Soft Costs Calculated at 25%	\$ 44,768,865	\$ 47,473,805	\$ (2,704,940)		\$ 44,902,891	\$ 46,556,227	\$ (1,653,336)	
TOTAL ESTIMATED PROJECT COSTS	\$ 223,844,327	\$ 237,369,026	\$ (13,524,699)		\$ 224,514,456	\$ 232,781,134	\$ (8,266,678)	

ALTERNATES For All Options

(incl. markups)	Add for Synthetic Turf Field	\$ 1,182,820	\$ 1,261,265
(incl. markups)	Add for Sports Field Lighting	\$ 1,450,000	\$ 1,386,000
			\$ (78,445)
			\$ 64,000

The estimated construction and total project cost provided are for COMPARISON PURPOSES ONLY. The estimated costs will be updated at the Schematic Design Report (SD) phase to inform the Total Project Budget that will be submitted to the MSBA.



William H. Galvin Middle School Project - Canton, MA
Preferred Schematic Report - Comparative Cost Analysis

Base Repair Option Renovation Only			
Gross Square Footage: 131,903			
	PM&C	AM Fogarty	Delta
Student Enrollment : 1,020 Students			
TOTAL DIRECT COSTS	\$ 52,631,749	\$ 44,454,326	\$ 8,177,423
TOTAL ESTIMATED CONSTRUCTION COSTS	\$ 87,408,152	\$ 76,700,952	\$ 10,707,199
Cost/SF	\$ 662.67	\$ 581.50	\$ 81.17
Soft Costs Calculated at 25%	\$ 21,852,038	\$ 19,175,238	\$ 2,676,800
TOTAL ESTIMATED PROJECT COSTS	\$ 109,260,190	\$ 95,876,191	\$ 13,383,999

ALTERNATES For All Options				
(incl. markups)	Add for Synthetic Turf Field	\$ 1,182,820	\$ 1,261,265	\$ (78,445)
(incl. markups)	Add for Sports Field Lighting	\$ 1,450,000	\$ 1,386,000	\$ 64,000

The estimated construction and total project cost provided are for COMPARISON PURPOSES ONLY. The estimated costs will be updated at the Schematic Design Report (SD) phase to inform the Total Project Budget that will be submitted to the MSBA.

3.3.4 | PREFERRED SOLUTION

4

Updated Educational Program

Refer to the following document, included herein, for the Canton School District's Educational Program for Calvin Middle School. ♦



CANTON PUBLIC SCHOOLS



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Derek Folan, M.Ed.
Superintendent of Schools

An exceptional education that develops innovative thinkers, curious and empowered learners, and compassionate citizens.

GMS Education Program - MSBA REVISIONS

MODULE 3: PRELIMINARY DESIGN PROGRAM

January, 2024

3.1.2 Galvin Middle School Educational Program

District members primarily responsible for developing this Educational Program include Principal Jon Mulhern and Instructional Coach Catherine Stein, with input and writing from department leaders and coordinators, were the lead authors. Assistant Superintendent for Teaching and Learning Sarah Shannon and Superintendent Derek Folan served as editors.

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1. INTRODUCTION

Vision Statement

The Canton Public Schools is committed to providing all students an exceptional education that develops innovative thinkers, curious and empowered learners, and compassionate citizens. All Canton Public Schools staff and students are committed to building learning communities consistent with our District's core values:

- Respectful and collaborative relationships
- Educational Equity
- Academic and personal excellence
- Community engagement
- High-quality teaching, learning, and leading

Galvin Middle School Mission

The William H. Galvin Middle School is an inclusive, student-centered learning community that fosters academic growth, resilience, and achievement while ensuring that every community member experiences a sense of belonging, embraces challenge, and positively impacts their world.

Historical Context of Canton

The area that would become Canton was inhabited for tens of thousands of years prior to European colonization. The Paleo-Indian site Wamsutta, radiocarbon dated to 12,140 years before present,[2] is located within the bounds of modern day Canton at Signal Hill. At the time of the Puritan migration to New England in the early 1600s, Canton was seasonally inhabited by the Neponset band of Massachusetts under the leadership of sachem Chickatawbut.

From the 1630s to the 1670s, increasing encroachment by year-round English settlers on lands traditionally inhabited only part of the year, devastating virgin soil epidemics, and English colonial policy pushed native people into Praying Towns, a precursor to modern day Indian reservations. The modern town of Canton was the site of Ponkapoag, the second Praying Town in the Massachusetts Bay Colony, which was set off from Dorchester in 1657, three years after English colonists resettled a group of Nemasket there from Cohannet, modern day Taunton. The so-called Praying Indians that settled in Ponkapoag are known today as the Massachusetts Tribe at Ponkapoag.

In 1674, King Philip's War led to significant depopulation of Ponkapoag, which found itself on the fault lines of one of the bloodiest conflicts in North American history,[3] and in October 1675 those Praying Indians that remained were forcibly removed to Deer Island by order of the Massachusetts General Court. After the war, in part because of the loss of life and the fleeing of native refugees north to join the Wabanaki Confederacy, the General Court disbanded 10 of the original 14 towns in 1677 and placed the remaining four, including Ponkapoag, under the supervision of colonists. Over the next hundred years although Ponkapoag remained an official entity, loss of self-determination and privatization of collective lands led to the gradual intermixing of native and settler populations in the area.[4]

In 1726, Stoughton, Massachusetts split from the large original territory of Dorchester; then on February 23, 1797, Canton was officially incorporated from the territory of Stoughton. The name "Canton" was suggested by Elijah Dunbar and comes from a belief that Canton, China was antipodal to it.[5] This is not possible, since they are both well north of the Equator; they are, however, about 2 degrees from being antipodal in longitude, ignoring latitude. In addition to being a prominent Canton citizen, Elijah Dunbar was the first president of the Stoughton Musical Society from 1786 to 1808.[6] Now named the Old Stoughton Music Society, it is the oldest choral society in the United States.[7]

Paul Revere built the nation's first copper rolling mill in Canton in 1801. His poem entitled Canton Dale expresses his affection for the town. Canton was the location of the Rising Sun Stove Polish Company, founded by Elijah Morse, a wealthy merchant and creator of the pot-belly stove.

The town of Canton has three public elementary schools: the John F. Kennedy School, Lt. Peter M. Hansen School, and Dean S. Luce School. The area in which one lives determines which elementary school one's children attend.

Canton has one public middle school, the William H. Galvin Middle School, where promoted students from all of the three elementary schools combine. It serves grades 6–8 and is located next to the Lt. Peter M. Hansen Elementary School. The Galvin Middle School is named after William H. Galvin who was a lifelong resident and graduate of Canton High School. William H. Galvin taught in the town from 1935 to 1943, at which time he was appointed principal of the Crane School. Galvin also moved to various positions throughout the school system, being named principal of the Augustus Hemenway (1950) and the Dean S. Luce (1954) Schools, assistant superintendent (1958) and then in 1959 he was made superintendent of the Canton School System, a post he held until his retirement in 1976. In recognition of his service to the town of Canton, the William H. Galvin Middle School was named in his honor in 1973.

Canton also has a public high school, Canton High School, that provides grades 9–12. The Rodman Early Childhood Center, Canton’s public preK program, serves students at the Rodman building. There is one private school, St. John the Evangelist, which has been open since 1883 and serves students in grades Preschool–8. In addition, the state’s Pappas Rehabilitation Hospital for Children, formerly known as the Massachusetts Hospital School, is in Canton.[23] In addition, the Marilyn G. Rodman Educational and Administrative Center is located next to Canton High School, housing administrative buildings as well as a preschool.

The Blue Hills Regional Technical School and the Canton campus of Massasoit Community College are located within the town as well.[24]

Clarke Schools for Hearing and Speech, formerly Clarke School for the Deaf, operates a satellite school, "Clarke Boston", in Canton for children who are diagnosed with deafness at an early age and then are mainstreamed to a public school. Clarke is the oldest school for the deaf in the country that teaches children to lip-read and speak orally, rather than use sign language; its main campus is located 80 miles to the west in Northampton, Massachusetts.

The Judge Rotenberg Educational Center is housed in Canton as well.

Canton has the open town meeting form of government. Annually each spring, and as necessary, the voters gather to discuss matters such as zoning, schools, public works, recreational facilities, the budget, taxes and bond issues. Property taxes on residential and other land, buildings and improvements, and transfers from the state government, are two important sources of revenue for the town. The five elected members of the Select Board oversee the day-to-day operations of the town government.

The School Committee is the governing board for the Canton Public Schools and consists of five members who are elected to overlapping three-year terms of volunteer, public service.. In serving the school community, the Committee’s primary charge is to establish those purposes, programs and procedures that will best produce the educational achievement needed by our students. The Committee also is tasked with accomplishing this while also being responsible for the wise management of resources available to the District.

The Planning Board approves new town subdivisions, reviews site plans for commercial development, oversees the towns scenic ways, drafts and approves a town-wide master plan, and statutorily provides recommendations to Town Meeting regarding zoning and development.

The Finance Committee studies the financial affairs of the town, advises and makes recommendations to the Town Meeting on the budget and other areas with fiscal implications in serving the Canton residents.

Companies large and small continue to find Canton a business-friendly town. Canton is the headquarters of Dunkin' Donuts and is the headquarters of Computershare (North American HQ), Organogenesis, Inc., Boston Mutual Life Insurance Company, Interpolymer Corporation, Casual Male Retail Group, and formerly, Tweeter. It is also home to the Massachusetts Division headquarters of the Salvation Army.

According to the US Census Bureau, the Canton population is estimated to be 24,609 people as of July 1, 2022. The US Census Bureau estimates that the population increased by 1.0% since April 1, 2020. This population growth suggests a need for greater school resources to support families with children moving into the town of Canton. Additional census data shows 22.2% of the population is under 18 years old. The median household income (in 2021 dollars) from 2017 - 2021 was \$118,814. The median value of owner-occupied housing units from 2017-2021 was \$560,200, while the median gross rent was \$1,931. US census data also shows that 16.9% of Canton residents ages 5+ years and older speak languages other than English at home; such a diverse population provides evidence for a need for greater multilingual learner resources at school to support multilingual families with school-age children.

Canton has always been a community with a multitude of activities for its youth. In addition to the extracurricular baseball, softball, football, and hockey programs long in place in this town, there are now extensive youth soccer, basketball, lacrosse and recreational programs as well. Many of these activities take place on fields that have been constructed or renovated in recent years through the hard work of many volunteers and cooperation of the town. The vast majority of opportunities for students to participate in visual and performing arts activities come via the public school system.

Educational Vision

Strategic Plan

In 2023, the District undertook the challenge of rewriting its Mission and Vision statements and restating its Core Values. Ultimately, they were turned into measurable action through the District's Five-Year Strategic Plan that was the culmination of a year of collaboration between the community, the schools, and the Town of Canton. Currently, staff across the District are implementing research-based pedagogical approaches on how content and essential skills are taught and assessed at each grade level and in each content area.

The Strategic Plan lays out Objectives and Benchmarks that will help focus and prepare the Canton Public Schools staff, and the greater Canton community, in delivering a comprehensive, student-centered, and relevant education to every student, every day.

The Plan emphasizes social and emotional well-being, critical thinking, collaborative problem solving, and authentic learning experiences in appropriate spaces, allowing the District to position itself to ensure that every student becomes a compassionate global citizen and an active life-long learner.

- The District will work to create a purposeful and sustainable budget, guided by the CPS Strategic Plan, that provides sufficient funds to operate and improve the Canton Public Schools; in doing this, the system is poised to improve student achievement.
- The Plan upholds the larger District goal of creating facilities that are centers for innovation and comprehensive, transformative educational experiences, and that will foster and promote problem solving and creativity for both staff and students within a safe environment.
- The District's commitment to high quality teaching, learning and leading and ensuring equitable and culturally responsive practices is also reflected in the Strategic Plan. The practices that will inspire lifelong curiosity through collaborative problem solving and authentic learning are now part of the District's teaching and learning plan.
- A commitment to a holistic, connected approach is another key objective. By supporting STEAM (Science Technology Engineering and Math), Engineering, Visual and Performing Arts, Wellness and World Languages and other specials, the District's goal remains creating pathways that enable students to explore and pursue their interests and passions, while contributing to the overall good of the community. Extracurricular activities in the arts, athletics, and other enrichment areas are available to all middle school students and support the holistic approach.
- The goal of creating a culture of equity, care, inclusion, and safety for every student and family in the Canton Public Schools will be a hallmark of the educational future of the Canton Public Schools.

This Education Plan is directly tied to two of the District's strategic initiatives to create facilities that are centers for innovative, transformational and rigorous educational experiences, and that will foster and promote problem solving and creativity for both staff and students within a safe environment:

- District's Priority Objective #2:
To develop state-of-the-art operational systems that assure access to high-quality resources, including facilities, aligned to our educational vision, equitably distributed, and utilized efficiently.
- District's Strategic Objective #4:
To create and sustain a culturally and linguistically responsive school climate and culture that supports an equitable educational environment for every student and staff member.

Summer /Fall 2023 Educational Visioning

In the summer and early fall of 2023, a combined 60+ participants – including Canton Public Schools leadership, staff, students, administrators, parents, and community members – participated in a variety of visioning and programming sessions led by Educational Planner, Mike Pirolo (MLP Integrated Design) and Ai3 Architects. Each session was part of a collaborative process designed to inform the Galvin Middle School Massachusetts School Building Authority (MSBA) Feasibility Study and pre-design process.

In a series of 5 visioning sessions, participants were led through a step-by-step process aimed at capturing their high-level thinking around 5 key areas:

- Educational, architectural, and community goals and priorities
- Vision of the middle school learner, including the physical, academic, and social-emotional development and needs
- Vision of teaching and learning, including engaging academics and important skills and experiences
- Vision of specials programming and scheduling to best support interdisciplinary experiences and student voice and choice
- Vision of the ideal learning environment, including space types, design features, and adjacencies

At the core of the District's educational vision are a series of overarching goals that speak to space and the teaching, learning, and social-emotional experiences within that space:

- Middle-schooler focused building (students as heart of the school)
- Spaces, curriculum, and opportunities to support teaming and experiential, project-based learning

- Spaces to support a wealth of specials programs
- Flexible learning environment
- Outdoor space for academic and social-emotional needs
- Calming spaces throughout
- Maximize inclusion and integration of all students and programs
- Building and site as a community resource, even beyond school hours
- Safety and security
- Structures, instructional practices, and design features to support collaboration
- Welcoming and inspiring facilities
- Visible learning beyond display cases
- Sustainability
- Maximize natural light

Middle School Learner Snapshot

As part of the educational visioning process participants reviewed research on the physical, academic, and social-emotional development of students from grades 5-8 using information from the book *Yardsticks* by Chip Wood. Each table focused on one age group and created a visual highlighting the key traits of that developmental stage. Participants posted the visuals and took a museum walk where they noted the similarities and differences among the four different age levels. The following high-level observations from that visioning serve as part of our overall educational vision:

- The need for flexible space is a common throughline among all 4 grade levels
- Each grade has social-emotional tensions (i.e. – need for independence but also want to be a part of a group; need for stimulation but also desire for quiet or down time)
- Need for acceptance and connections as a common throughline among grade levels
- Developmentally, 5th and 6th graders are more similar and 7th and 8th graders are more similar
- There is a progression of development where the desire for feedback changes; in younger grades, students seek teacher feedback and in older grades it's more about peer-to-peer feedback

- There is a progression in the way students challenge rules – as students get older, they think about what’s just and fair
- There is a need for space to move, especially in the younger grades as students use the floor and like to spread out

Participants furthered their learner snapshot by creating a three-column chart (documented below) identifying characteristics of students entering, going through, and leaving middle school. The following questions prompted their discussion:

- What does it look like as students transition into middle school?
- What do we need to keep in mind developmentally? (Physical, cognitive, social-emotional)
- How might these developmental traits inform/shape the design of the building?

	Students Entering MS	Middle Year(s)	Students Leaving MS
Who are they physically, academically, socially-emotionally?	<ul style="list-style-type: none"> • Sixth graders are kids • Guided learning • High energy (2) • Rapidly growing • Developing self-consciousness • Small and immature (3) • Eager to please • Searching for a social group (4) • Nervous, anxious, fragile • Emerging executive functioning • Overwhelmed • Excited and sweet • Prepubescent and young • Elementary foundation skills • Seek teacher/adult interaction and approval (5) • Structured friendships • Structure in academics and expectations (2) • Memorizing facts/logic • Exploration and team activities • Physical growth and need for movement and outdoors 	<ul style="list-style-type: none"> • Seventh graders display a size disparity & development (some young, some mature) (4) • Lack of social awareness (3) • Starting to develop own thinking (2) • Increasing confidence (2) • Formative • Physical (hormones) • Constant changing social groups (3) • Finding their voice and identity (2) • Drama – fighting with social group • Sassy • High energy and fidgety (2) • Hungry and exhausted • Putting boundaries (2) • Interpersonal problems • Intellectual/interest driven • Testing rules and expectations (2) • Big reactions • Influx • Start pulling away from adult interaction (2) 	<ul style="list-style-type: none"> • Eight graders are physically mature (tall, big) (2) • Less physical • DRAMA! (stress about coming year) • Academic independence (3) • 1:1 relationship (dating, friendships) • Social media concerns • Hormonal (2) • Awkward • Sensitive • Understanding of accountability (2) • Gaps widening • Deep dive into interests • Mini adult-ish • Seeking independence from adults but want interaction with them (3) • Peer and social interaction (and approval) is priority (8) • Separation academically (grouped for high school) • Fairness and justice focused

	Students Entering MS	Middle Year(s)	Students Leaving MS
<p>In an ideal setting, how might educators work with and support them?</p> <p>What might it look like physically, academically, socially-emotionally?</p>	<ul style="list-style-type: none"> • Heavily dependent on adults (3) • Rule followers • Structure • Gradual release of responsibility (2) • Staff-monitored (big enough for groups to work in room) • Building designed to meet the needs of a 21st century education • Smaller community • Slow fade into more dynamic thinking • More explicit teaching (norms, expectations, routines – how to do middle school) • More access to counselors – transition • More defined sensory options • Develop healthy communication skills • Crave novelty • Exploratory design, set up for inquiry and discussion (labs, amphitheaters) • Fewer teachers on team – increased adult connection/feedback 	<ul style="list-style-type: none"> • Group work revolving around global issues (3) • More student voice/choice on topics • Passionate • Organized clubs • Fairness • Gradual release to independent group work over year • More responsibility and independence • Homework • Need executive functioning supports • Optional seating spaces • Room for science experiments/sinks/equipment • Increased technological access for learning and variety of presentation options • Develop healthy communication skills • Foster tools for healthy debate • Modeling independence/self-advocacy • Routine/predictability 	<ul style="list-style-type: none"> • More independence (2) • Inquiry based learning • Small group collab/group work/projects (3) • Seating for independence: student-led work spaces, small/large group, breakouts (3) • Digital display board (interactive) in classrooms and hallways • Various dining space options • Less defined sensory options • Develop healthy communication skills • Healthy debates • Opportunities/desire for peer coaching and mentoring

	Students Entering MS	Middle Year(s)	Students Leaving MS
What might the building need to be like or have to support them?	<ul style="list-style-type: none"> Wider hallways Smaller class sizes but bigger rooms to foster movement and calming (2) Flexible space/furniture/seating (3) Seating for independent learning: small/large group instruction (2) More space between lockers Pod space (team) (2) Common space Breakout space Purposeful organization: designated areas per grade levels, specialists in central space, support staff in central space (2) Separate auditorium and cafeteria Tiered seating in auditorium Multifunctional library with high tech support More space to get up and work (writable wall spaces, pod spaces, movable walls) (3) Multi-modal learning stations within classrooms Kinesthetic learner in mind Larger spaces to incorporate group work 	<ul style="list-style-type: none"> Neighborhood Watch approach One way circulation Field houses Auditorium Science labs Access to exterior space Ability to reconfigure classroom and grouping in classroom to provide collaboration (2) Seating options for various types of instruction Flex collab between room and corridors Multi-modal learning stations within classrooms Ensemble spaces Distinct learning spaces for each grade Interactive Field Recess Winter garden/courtyard Auditorium that opens to courtyard Spaces (organic) for students to present, debate, discuss 	<ul style="list-style-type: none"> Stimulation Worldly Idea based Breakout spaces – space to leave room and work in small groups/independently (3) Robust technology (Smart boards, etc.) Student desks that can be separate/grouped Seating options for various types of instruction Multi-modal learning stations within classrooms Independent work spaces outside of classroom Something that encourages leadership Open spaces Walking trails Outdoor design spaces Outdoor courtyard Recreation spaces

2. GRADE AND SCHOOL CONFIGURATION

The Canton Public Schools provides educational programs for students in preschool through age 22. As of September 12, 2023, there were 3,323 students enrolled in the Canton Public Schools. Canton operates:

- The Rodman Early Childhood Program for students ages three and four,
- Three elementary schools, kindergarten through grade five,
- One middle school, grades six through eight,
- One high school, grades nine through twelve.
- One post-grad 18-22 program for students who have completed four years of high school but will remain in the Canton Public School system until age 22, as well as non-diploma students.

Students attend the Canton Public Schools elementary schools based on their geographic neighborhoods with some movement between schools based on special education programming. CPS does not participate in School Choice.

The William H. Galvin Middle School sits at the center of the educational system in Canton, accepting students from each of the three elementary schools and preparing the students for entry into Canton High School or another secondary institution. The staff aims to foster social, emotional, and intellectual growth in a safe, inclusive, and academically rigorous environment. The Middle School incorporates programs that meet the needs and explore the potential of each student. It provides teachers and teaching styles that are compatible with intellectual, aesthetic, social, physical, and emotional growth. This work is done in partnership with the Canton community, with a collective effort toward developing students into successful and compassionate citizens who become life-long learners. As such, the School also serves as a nexus of community activities; it is a busy civic center for all of Canton's citizens.

Galvin Middle School currently educates students from grades 6 through 8. The current enrollment of Galvin Middle School is 743 students. Overcrowding is a persistent issue, as there is consistent incremental growth in enrollment in the elementary schools. This pattern of increasing enrollment is persistent throughout the elementary grade levels, as the current first grade enrollment is at 285 students. The overcrowding issue is exacerbated by the fact that the current Galvin Middle School, built in 1972, was designed for a junior high school departmentalized model of education. Overcrowding has been persistent, with every available space in the building used to support programming whether the space is suited to

the program or not. Current best practices, and the current Galvin Middle School model, takes a team-based approach.

As a result of Canton's need for a building that supports the educational plan of the School and this steady increase in the student population, the MSBA has authorized Canton to complete a feasibility study for renovation/expansion or new construction of a Galvin Middle School.

This educational program outlines an educational vision that considers ~~both a 5-8 and 6-8~~ middle school model based on the decision made by the Canton Public School Committee on December 20, 2023. At the core, our educational vision remains the same with the addition of grade 5 at the middle school. We believe that a 5-8 middle school will alleviate overcrowding issues at all three elementary schools in Canton. Each elementary school is at capacity and when a class section or a program needs to be added due to class size or student need, another teacher is displaced and forced to be a traveling teacher. This is usually a health, art or music teacher. Additionally, the Hansen school is our most overcrowded and each summer we have to cap our class sizes and students who register late are assigned to either JFK or Luce. When grade 5 moves to GMS, the three elementary schools will have more room for the increased number of students they have been enrolling and the increased programmatic needs that are becoming a need at the elementary level.

Middle School Team Model

The use of teams at the middle school is a research-based practice known to have three benefits: the creation of a small school atmosphere within a large school setting while allowing for fluctuations in enrollment, allowing for dedicated common planning time for teachers, and maintaining a structure that allows for the specific needs of middle school groups to be prioritized.

The current Galvin Middle School has an average enrollment of 750 students. This is a significant jump from the 275 student average at the elementary level. Middle schools use the team-based model to help divide a large population into smaller, more personal groupings. In the team model, each grade is divided into interdisciplinary teams that align students with a small group of teachers that can focus on the needs of the students and create a neighborhood school feel for students and families. At GMS, each grade averages 250 students. Those students are divided into three interdisciplinary teams made up of five content teachers (Math, Science, Social Studies, ELA, World Language) and a special educator. This allows each team to work with 80-85 students each year. There are benefits for both students and families in this model. Students are placed in smaller groups that allow for teachers to build strong relationships with students, social emotional learning, and community development while still being able to access the benefits of a larger school

(physical amenities, shared staff, scheduling). Middle School students range in age from 10-14 - an age group that is distinctly different from both elementary and high school. Early “junior high” based models forced recent elementary graduates into a very complex system that many were not ready to navigate. The current teaming philosophy better meets their social, emotional and maturity needs.

The team-based model is also an effective way to ensure that teachers have consistent common planning time. Currently, teachers at GMS have common planning time on three days out of each seven day rotation. This is possible because of the team-based model. The grades and teams are aligned for 5 periods per day, including the 5 core subjects (ELA, Math, Science, Social Studies and World Language), X Block for Response to Intervention, and electives. Grades also have two blocks dedicated for a rotation of technology and engineering, visual and performing arts, physical education, and health classes. Since all the students are aligned in their core classes by team, this “off-team” time occurs simultaneously by grade. This allows every teacher to have one prep period per day. Common planning time at GMS is well used. On a seven-day rotation, teachers have one curriculum planning day, and two team planning days. Our ability to meet the needs of our school population and our school and District goals is supported by this structure.

As mentioned above, the team-based model allows for the specific needs of middle school students to be met and allows for fluctuations in enrollment. Middle School students have different educational and community needs than their elementary and high school counterparts. They are not “junior” or smaller versions of high school students. They are educationally and emotionally different. Middle School students do not require the highly restrictive environment of one teacher and one classroom that is typical in an elementary school. The content they are learning is becoming more specialized, and they are beginning to develop their own interest in particular subjects. The team model in grades five and six allows for this growth in a secure setting. Using a two-teacher team in grade five allows students to transition between two teachers focused more deeply on two content areas, but also maintains the elementary feel of a dedicated teacher to a small group of students. In grade six, students are ready to move between more classes but can be anxious to traverse a large physical area in a short period of time multiple times a day. The five-teacher team in grades 6-8 allow those transitions to occur in a smaller neighborhood, easing anxiety. By the end of eighth grade, students are ready to launch to a greater level of independence and freedom that comes with high school. That growth occurs over four years and requires the safe and familial atmosphere of a team model.

The current team structure for grades 6-8 of three teams per grade ensures opportunity for students to become a part of the community and have a sense of belonging. As described earlier, this philosophy is based on middle school learner needs and developmental stages.

Per the Unit A educator contract with the Canton Educator Association, our current class size goal is to work toward 60 classroom teachers per 1000 students, or roughly 1 teacher for every 17 students. Using the team-based model allows this increase to occur with no additional staff or space needs in the core subject areas. Fifteen classrooms per grade level for grades 6-8 and 12 classrooms for grade 5 provides appropriate spacing for the student population, even when considering possible enrollment growth.

The team-based model for middle school has been shown through research to be a best practice. It accounts for the specific educational and social emotional needs of middle school aged children, helping them grow from elementary students to high school students. It provides the opportunity for common planning time for teachers and maintains a level of flexibility to account for fluctuations in enrollment. A new GMS would need to maintain the current team model that requires 12 - 15 core academic classes per grade level as detailed above.

Proposed

The ideal middle school design will locate students into grade-level academic neighborhoods each containing three teams for grades 6-8 and into six two-person academic teams for grade 5. This will allow for efficient transitions and unstructured time and create a small school feel, while still allowing for connectivity and collaboration across grade levels and content areas. Additionally, these academic neighborhoods will allow for flexibility with regards to how teams utilize their neighborhood spaces. Flexibility and collaboration were an important focus during educational visioning sessions and will be further delineated later in this document.

Additionally, through our visioning sessions, we determined that according to our values, our specials classes (Wellness, Art, Music, Theater, Technology & Engineering) are essential for students. As such, we hope to make these classes visible and placed in a centralized location, yet, still adjacent to team neighborhoods in order to allow for centralized spilling and interdisciplinary learning. The goal is for teachers to be close enough to be a part of teams. Students may need to move to some central locations within the building for specials classes (i.e. music) but priority goals identified herein include integrating as many topics, activities, and disciplines within the grade-level academic neighborhoods as possible.

We are continuing to explore scheduling opportunities to increase student exposure and choice when it comes to specials. For example, during visioning conversations academic department leaders discussed the idea of an elective specials model for 7th and 8th grade students, in which students are able to choose their arts and wellness classes based on interest. This would allow students greater choice and voice in their schedule, and better prepare students for increased choices in high school.

Daily collaborative time will be provided to each grade level team of teachers to allow for lesson coordination, professional development, conferencing on the needs of students, and analysis of performance and curriculum data. Space to accommodate the Galvin's Professional Learning Communities model is critical to the School's success.

Students are heterogeneously grouped to maintain high expectations for performance, as well as to allow for role-modeling and scaffolding between students. Our math program for Grade 7 and Grade 8 do have accelerated levels. Many core classes include students who receive specialized instruction and English Language Learners, who are consistently mainstreamed while being provided with support services. Whenever possible, these support services will be housed within the academic neighborhoods, as well. These classes are often co-taught by two teachers and are considered inclusion.

The 5-8 Model & Grade 5 Experience

When we expand to a 5-8 grade model at Galvin Middle School, it will provide additional services to grade five students, as well as consolidate special education resources into locations that are specifically designed to meet the needs of students who have required services. Additionally, several areas of the grade five experience will be enhanced by this change. Adding grade five to GMS would add to the grade five students' much-needed "specials" classes such as World Language, Technology and Engineering, Project Lead the Way programming, Art, Music, and other specialties that are part of the Galvin Middle School curriculum offerings. It also allows grade five teachers to collaborate more closely with 6-8 teachers, enhancing the ability of teachers to work on vertical teams to increase student achievement. The 5-8 middle school model would provide a longer grade span of years in the same school, reducing the frequency of transitions for this specific student population, which needs additional support and connectivity with fewer transitions.

The ~~proposed~~ 5-8 model would allow for an easier transition into the middle school model and would allow for a scaffolded approach to increased student independence and agency as they matriculate through middle school. Additionally, this model would provide flexibility in grades five and six. For example, two-teacher teams would be utilized in grade five to minimize transitions and independent movement throughout the building, with students traveling as a static class to specials. In grade six, the five-teacher team model would be introduced for core subjects and specials, while still minimizing interactions outside of the team neighborhood. At each of Canton's elementary schools, the fifth grade students and staff participate in two-teacher teams. This will not change when we adopt a 5-8 model.

In the ~~proposed~~ 5-8 model, grades 7 and 8 will continue a more traditional middle school model where students transition for all classes and have access to a larger variety of specials courses.

With a 5-8 middle school model, some aspects of the neighborhood elementary schools will change. Grade 4 students become the leaders, and may take on many of the traditional roles and celebrations. The elementary schools would also benefit from more space, while grade five teachers would benefit from more time for collaboration.

3. CLASS SIZE and CERTIFICATION CONSIDERATIONS

Current

Per the Unit A teacher contract with the Canton Educator Association, our current class size goal is to work toward 60 classroom teachers per 1000 students at the secondary level, or roughly 1 teacher for every 17 students. The current building does not have adequate building space for all classes and programs. At the present time, the Galvin Middle School is at capacity and unable to add additional classrooms or programs due to space constraints. Core subject classes currently average approximately 20 students given that within our teaming model, some math classes in the upper grades are differentiated by level and see a wider range of sizes. Specials classes have a wider range of 20-28 students.

Proposed

The proposed space template for grades 5-8 includes the appropriate number of classrooms to support core instruction, which includes 5 classrooms per team in grades 6-8 and 2 classrooms per team in grade 5. This allows us to preserve our middle school team model with each grade level 6-8 having three full teams and a ~~potential~~ grade 5 having (6) 2-person teams and access to a variety of courses. At an eventual enrollment projection of 1,070 students, this would translate into approximately 270 students per grade, and 18-22 students per classroom.

Teacher Certification

Almost one hundred percent of the current 5th and 6th grade teachers have certifications that fall within the following categories, 1-6, 5-12 subject specific, or All Levels. A few of our staff are dual-certified. When we move forward with a 5-8 model, we will review teacher certification with potential fifth grade staff. We have already met with our current fifth grade educators to begin this conversation. Additionally, as the District hires additional staff or replaces staff who leave, we will be intentional about the certifications required to meet the 5-8 model.

4. SCHOOL SCHEDULING METHODS

Current

The school schedule is revisited annually with the Principal and school-based team. Adjustments are made based upon enrollment, student and programming needs, staffing levels, and contractual agreements around educator preparation and professional development. Starting in Fall 2021, the student day runs between approximately 7:45 a.m. to 2:15 p.m. The Galvin Middle School has an academic schedule that has six 52-minute periods and a 26-minute “X Block”, which allows for Response to Intervention, academic support, and participation in certain elective groups. This block is also used for regularly scheduled social-emotional learning (SEL) and Restorative Justice (RJ) programs and lessons developed and implemented by our teaching staff. Based upon the RTI model, students are assigned to teachers from their core team in this period to receive targeted assistance in Math or ELA when they need additional support, extra practice, clarification, or enrichment. All students have a 25-minute lunch, Art, Music (Band/Chorus/Orchestra/Gen. Music), Wellness, Tech and Engineering, and World Language. Students that do not require RTI receive instruction by a variety of teachers that assist and enrich students in academics, social skills, test preparation, goal setting, student and community leadership, or SEL.

The team-based approach with grade level specials block scheduling allows for teachers to have regular common planning time. This allows for cross-curricular planning, student management, parent meetings, and small group, highly specialized professional development.

Proposed

The grade five schedule would be based on a two-teacher team model, allowing for longer blocks of time to dig deeper into combined subject areas, engage in project-based learning and retain that developmentally appropriate feel to the students’ school day. The schedule for specialist programs will be aligned with the middle school specialist schedule to allow grade five students to take advantage of any potential advanced or extended learning opportunities that may be available in grades six through eight. This also allows for a greater sharing of resources. World Languages would be added to the grade five schedule to enhance the District’s proficiency-based language model. World Languages are an essential component of a 21st century education, and integral to Canton’s mission to create culturally proficient, global citizens. As such, our World Language Department Coordinator is currently studying how to introduce learning languages at the elementary level. Our intent is that students grades K-5 will have some level of language instruction prior to the completion of the new Galvin. This means that when GMS moves to a 5-8 model, students in grade 5 will arrive having some level of exposure and learning about world languages. Enhancing and extending World Language opportunities for students within the 5-8 model is vitally

important to create world-ready students who participate in local, national, and international communities, through acquiring proficiency in multiple languages. By starting earlier in grade five and providing more contact hours in grades 6 and 7, all Canton students will have the opportunity to become eligible for earning the Seal of Biliteracy and becoming truly culturally competent, linguistically proficient, world-ready citizens. The schedule must also include the appropriate staff planning and collaboration time within the established school day. Grade five teachers would also work in the team-based model that allows for daily common planning time.

There will be times when teachers who share the same students will be able to adjust the daily schedule to accommodate project-based and multi-disciplinary instruction that requires longer or shorter periods of instruction. Teaming the same students within common neighborhoods allows for scheduling flexibility for staff. Since students are placed on cross curricular teams, there is flexibility within the “on-team” schedule to do project-based and cross-curricular work.

As we develop our vision, we fully recognize that delivering this educational program within our existing schedule and structures is not always ideal. With that in mind, we are continuing to explore alternatives to traditional definitions of school schedules so our schools become idealized places of deeper teaching and learning. We know we must increase time for teacher collaboration and professional development. Likewise, we must find ways to allow more interdisciplinary opportunities and find ways to balance the exposure to core academic and specials curriculum. We also view the community as a tremendous resource for mentoring our students in our project-based approach.

5. SPATIAL, ORGANIZATIONAL, AND FACILITY DEFICIENCIES IMPACT

The Galvin Middle School is burdened with physical and mechanical deficiencies that affect the social, educational, and psychological well-being of its student population. The dedicated GMS staff work steadily to combat the effects of these deficiencies on a daily basis.

Antiquated Program Organization

Organizationally, Galvin Middle School faces a number of challenges. Originally designed to support departmental school organization, the building does not fit the middle school team structure that the Galvin (and most modern middle schools) currently employs. Team or “neighborhood” organization of middle schools creates smaller, more personalized learning environments, which foster interdepartmental collaboration and support social-emotional learning. These teams also provide a sense of belonging for students, helping them to foster an identity that unites them with their peers and makes them feel supported and secure. The

existing building is not designed to support this teaming structure, and does not provide the neighborhood-based support spaces that make this model truly successful.

Substandard Classrooms

The classrooms at the Galvin Middle School are rife with deficiencies. They are, by and large, undersized, overcrowded, acoustically poor, and lacking ventilation and light (almost half of all classrooms have no windows), creating less-than-desirable teaching and learning conditions. Additionally, an overall lack of classrooms limits the number of electives that can be offered. When trying to build a relevant and cohesive educational program, the outstanding Galvin staff is often hamstrung by a lack of adequate STEAM facilities, which do not have the infrastructure or layout to support the technology and instructional activities typical of a modern STEAM program. The school library space is subdivided into three sections with two of the sections functioning as classrooms. The theater arts program is housed entirely within the school's cafetorium and the school's music program lacks adequate storage space and smaller rehearsal spaces. For students and staff, this is their existence for almost eight hours per day. Canton Public Schools wants to do better for their students, staff and families.

Lack of Collaborative Workspaces

Furthermore, as the Galvin Middle School evolves its pedagogy to meet 21st Century Learning criteria, the school has developed STEAM integration, as well as a robust teacher collaboration protocol, and is implementing more project-based, hands-on instruction for deeper learning. The current building layout provides no dedicated spaces for STEAM-integrated work, project-based work, teacher collaboration or student collaboration, which impacts the scheduling of available teaching and meeting spaces.

Lack of Connectivity and Transparency

The solid-wall corridors and presence of interior classrooms with no windows in the school create a disconnection between what is happening inside the classroom and the rest of the school. Not only does the lack of transparency isolate the classrooms, but it makes the hallways feel sterile and institutional, with no vibrancy or connection to the learning happening within the building.

Poor Organizational Layout

The disorienting layout of the current school makes security and navigation a challenge. The layout of each of the floors is uneven, meaning that multiple stairwells do not grant access to all floors of the building. The minimal and uninviting community spaces send an unwelcoming message to students, parents, staff and community members. Due to a lack of sprinklers in the corridors, there is an overall lack of opportunity to showcase student work, which is a critical component of fostering a sense of school stewardship, community and

identity. Consistent and safe wayfinding, and bright, welcoming spaces are essential to a student’s feeling of safety and security in their school environment.

Inadequate Student Support Spaces

A cornerstone of 21st Century schools is providing students with a support network to help them to be successful. The current Galvin Middle School lacks appropriate spaces for Health Services, Student Services, Special Education and Administration. While Canton has developed strong programs to provide students with the support they need, the lack of dedicated spaces for these programs in the current building has forced these functions to carve out room wherever they can find it which means they are often housed in remote, disconnected parts of the School, lacking accessible, appropriate spaces for meetings, academic support, testing, and counseling.

6. TEACHING METHODOLOGY AND STRUCTURE

The Galvin Middle School is currently organized into grade-level teams. Each team consists of five core subject teachers (Math, Science, Social Studies, ELA, and World Language) with most teams having a dedicated inclusion special educator. This takes our school of approximately 750 students and distributes them into smaller school environments of 80-90 students each. These smaller, more personalized environments facilitate meaningful relationships between students and teachers and ensure that no students fall through the cracks academically or social-emotionally. Each grade level has three teams and our substantially separate programs are all aligned with a grade level team. Full inclusion for all students is Canton’s goal. In the new building, this structure would be retained as it promotes the social and academic well-being of all students, while promoting equity and inclusion. In a 5-8 middle school model, the team structure may be modified to reduce the number of teachers for grade five students in order to be more developmentally appropriate.

Teacher Collaboration

Galvin Middle School has developed a curriculum and instructional approach based heavily on Project-Based Learning. Success within this model relies on robust teacher collaboration in order to implement more project-based, hands-on instruction and to prevent the inadvertent creation of “knowledge silos”. The new Galvin will provide one independent Teacher Collaboration space per team to support this protocol. The collaboration spaces will be utilized by all grade level teachers and support staff. Teachers who are not assigned to a classroom when the school is fully occupied will have an office space within the teacher collaboration room. These spaces will be designed to promote teacher interaction and collaboration with faculty and staff and will include a copier, works surfaces, kitchenette, and other materials and equipment not appropriate to the classroom setting. These spaces

will be essential to supporting activities for curriculum planning, small seminar meetings, informal and spontaneous gatherings, conference areas, and collaborative work areas.

Student Collaboration

Student collaboration and project-based learning are foundational concepts to 21st Century learning. Student collaboration areas would create space for gatherings or for activities that would be limited or not possible in the classroom setting. For example, to increase student engagement and create an experiential learning opportunity, the three grade 8 ELA teachers have students perform the roles from the plays they cover in class. However, all such performances are restricted to the classroom space meaning that students from the other teams cannot watch one another perform. In a student collaboration space, small groups could each take a scene, practice and design their portion of the play and have ample space to perform and watch their classmates perform. Likewise, our Civic Action Project display day is when all eighth grade students present the results of their year-long interdisciplinary project aimed at increasing community engagement around sustainability measures. Parents/guardians and local officials are invited to attend but, again, presentations are restricted to classroom spaces. The open layout of the planned student collaboration spaces would be more conducive to the collaborative creation, as well as display of student work than a typical classroom. Additionally, on a daily basis these spaces could be used for small break-out groups, testing, alternative workspaces, and places where students might work 1:1 with a teacher or service provider.

Curriculum Delivery

The following chart outlines the curriculum delivery that is currently in place in Canton for grades 5-8. This will be followed by more detailed descriptions and proposed changes that would be facilitated by the proposed new middle school.

Grade 5	
Core Curriculum	Specials
Literacy (Reading, Writing & Phonics)	Music (1x/week)
Math	Health (1x/week)
Science	Physical Education (1x/week)
Social Studies	Art (1x/week)
	Library/Technology (1x/week)

Grade 6	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
Writing	Music (band, chorus, orchestra, or general music) (2x full class and 2x band, chorus, orchestra sectionals during X block)
Reading	Physical Education (2x)
Science	Technology & Engineering (2x)
	World Language (Semester French/ Semester Spanish) (2x)

Grade 7	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
English	Music (band, chorus, orchestra, or music) (3x)
Science	Physical Education (2x)
World Language (Spanish or French)	Technology & Engineering (2x)
	Library/Media (1x)
	Introduction to Theater (1x)

Grade 8	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
English	Music (band, chorus, orchestra, or general music) (3x)
Science	Physical Education (2x)
World Language (Spanish or French)	Technology & Engineering (2x)
	iDesign (1x)
	Theater Arts Exploration (1x)

Through professional development that has already begun and will continue, we are trying to develop a more project-based, interdisciplinary curriculum and program. The proposed vision for the building would enhance this type of learning for our students. All of the following programming as described would support a project-based curriculum.

Design needs for our core classrooms to support our more progressive approach to education include the following resources which facilitate learning across the curriculum:

- Each classroom would include:
 - A storage closet/cabinets for book storage
 - Movable bookshelves
 - Ample space for flexible seating - tables, standing desks, separate desks and chairs (not attached to one another), learning “nooks” (such as window seats)
 - Multiple in-room charging stations to meet the demands of Canton’s 1:1 technology model
 - Adjustable lighting for reading and performance

- Multiple teaching walls with digital display and access to large vertical whiteboards

English Language Arts (ELA)

The Reading and English Language Arts curricula and courses align with the district's vision, mission, and core values, as well as the Massachusetts State Curriculum Frameworks. We work to teach students to use their developing knowledge of the written, viewed, and spoken word to improve as critical thinkers and communicators. Students gain proficiency in identifying and analyzing the textual decisions authors of all genres make that influence voice, tone, and meaning in literary works. They apply these lessons to their own writing and communication as they move through each course. Ultimately, the work fosters an appreciation for literature and exemplary skills in reading, writing, speaking, listening.

Galvin Middle School teachers in grades 5-8 utilize novels, anthologies, periodicals, eBooks, digital materials, and 1:1 technology for instructional purposes. Text genres include novels and short fiction, drama, poetry, oral tradition, and nonfiction. Teachers assess comprehension through tests and quizzes, project-based learning, text-based open response, narrative, and essay writing.

Literacy standards for writing, grammar, and vocabulary are also directly aligned to the Massachusetts Curriculum Frameworks for ELA and Literacy. ELA teachers plan instruction around common themes, providing students with a strong connection between what they are reading, writing, speaking, and listening about in class and the world in which they live. ELA teachers use common resources, aligned to the new state standards, to develop lessons and assessments that support the theme or unit, including: Prentice Hall Literature textbooks, book clubs (determined by teacher and student interest and need), mobile book carts which support reading choice activities, CommonLit and Newsela as selections, vocabulary from classical roots and text-based vocabulary, Warriner's English Grammar and Composition, First Course, and grade-specific texts.

Math

The Galvin Middle School math department is a collaborative team of highly qualified teachers committed to providing every student with a rigorous mathematical experience. Our standards-based curriculum is grounded in the Massachusetts Department of Elementary and Secondary Education Standards for Mathematics. The math department has made a strong commitment to the integration of technology into our instruction as well as high-quality instructional materials designed to challenge and engage students. Reveal Math™, a core math program for grades 5-8, provides a truly active classroom experience through a seamless approach to blended print and digital delivery. With purposefully integrated technology and plentiful opportunities for students to explore, collaborate, and

reflect, Reveal Math increases both student engagement and students' confidence in their own math abilities. Teachers additionally use IXL, a personalized learning experience for all students. With a comprehensive K-12 curriculum, individualized guidance, and real-time analytics, IXL meets the unique needs of each learner.

Teachers follow curriculum maps for the grade 5, grade 6 math, grade 7 Pre-Algebra, grade 7 accelerated Pre-Algebra, grade 8 Intro to Algebra, and grade 8 accelerated Algebra 1 courses for common pacing, alignment, and assessments. Advanced Math is only offered in 7th or 8th grade. Students may be placed into advanced math using a point system, based on results from the IXL diagnostic exam, a placement exam, test grades, MCAS results, and teacher evaluation of student independence. Parents/guardians have the option to opt out if desired. Parents/guardians may also request an override if one's child was not selected for the accelerated math program. Approximately 35% of grade 8 students take accelerated math. There will be an additional opportunity for students to enroll in Advanced Math in 9th grade, even if they were not enrolled in 8th grade.

On the Galvin Middle School program of studies website, there is a page dedicated to the placement review process which outlines for students and families that though an educator may recommend a student for a particular math level or course, we encourage them to make a decision based on what's right for the student and family. We encourage students to have conversations with their parents/guardians if they disagree with the recommendation for enrollment or opt out of the advanced math program. Ultimately, we believe this is an important decision for students to make with the support of their families.

Teachers and students have access to workbooks and online digital resources. Every math classroom is equipped with a projector, and access to the internet for interactive whole class lessons including the Google classroom suite, and Reveal Math programs. All students have been provided Chromebooks for in class and home use.

No major programmatic changes are proposed for the Math program. Galvin Middle School will continue to add opportunities for project-based and blended learning work to increase student-centered learning and move away from teacher-directed learning.

Social Studies (Civics/World History)

The GMS Social Studies Department uses the Massachusetts' History and Social Science Curriculum Framework as a foundation for our courses. We use a student-centered approach with the goal of helping students become informed, prepared, and proactive citizens. The curriculum emphasizes historical and critical thinking, a focus on developing literacy skills, opportunities for students to make connections to the material they are learning, and exploring different perspectives. The Social Studies Department fosters active,

empathetic and global citizens who respect varying human experiences. By studying the complexities of the past and learning to be reflective and critical thinkers, students will be prepared to participate in a democratic society and influence the future.

- Students will understand the importance of different perspectives in building a strong community.
- Students will understand the relevance of the past and connection to their own individual lives.
- Through strengthening their reading, writing, speaking and listening skills, students will learn to make arguments, discuss and explain conclusions, and use valid reasoning to support their thinking.

Teachers in 5th, 6th and 7th grades are currently piloting the new Massachusetts Investigating History curriculum. This curriculum weaves inquiry-based units featuring geography and ancient civilizations throughout a two-year progression. In 8th grade, students study contemporary Civics, culminating in an end-of-year, multidisciplinary Civics project. Primary sources, periodicals, virtual tours, field trips, web-based research, and teacher-created lessons all contribute to the design and implementation of the Social Studies curriculum. Using primary and secondary sources, students engage in critical thinking as well as evidence based writing, continuously improving on their analytical writing skills. In both system- and site-based professional development, teachers share best practice and supplemental resources. Using the middle school team model, the Social Studies department is often integral in the design of interdisciplinary units that connect history to current events, usually with a social justice lens, and provide students the opportunity to process through writing or discussions. Some examples of classroom practices include virtual reality for students to view other places around the world, discussions connecting historical moments with cultural ideas, and collaborative, student-led inquiry to solve problems or create understanding of events and cultures. The goal is to build active and engaged citizens through the English Language Arts and Social Studies curriculum. There are no proposed changes to the current Civics/History program outside of increasing the opportunities for students to engage in project-based learning.

Science

The Galvin Middle School Science, Technology, and Engineering curricula are designed with the notion that active engagement of middle school students with science and engineering practices is critical. Students engage in learning opportunities to experience the dynamic, interdisciplinary nature of science and technology/engineering. Sixth through eighth grade science and technology/engineering courses are structured in a way that instills wonder in

students about the world around them through engaging and exciting learning experiences. This includes thoughtful hands-on activities, laboratories, investigations, and design challenges as students navigate through Earth, Life, Physical, and Technology/Engineering concepts. At the same time, active engagement in learning promotes a “growth mindset” that allows students to feel they can access content and develop skills, and thus succeed in STE.

All units are written to engage students in the current science content and science practices standards. Each grade level uses a variety of digital and printed text resources to support experiential learning. Pairs and small groups of students engage in scientific practices through hands-on activities, collaborative projects, simulations, design challenges, and science inquiry. The use of video clips, online demonstrations, and media-rich presentations, as well as hands on data collection, dominate the student experience. Science can be connected to all other disciplines and programs at the GMS.

All the larger Science (STE) rooms are designated grade level classrooms that would be used in the same manner as the smaller grade 5/6 rooms. The benefit of having 3 Science labs per grade level would allow for all grade 6, 7 and 8 students to have the appropriate space for hands-on Science labs and experiments. In grade five, the grade 5 teachers would use common planning time to outline the Science pacing and plan. At grade five, Science happens daily but involves less intense lab activities than grade 6 through 8 where lab space is needed several times per week. As Galvin Middle School expands its implementation of Project Lead the Way, these spaces would also receive higher utilization for these hands-on project-based activities.

Each 5th grade classroom will incorporate design features that support the District’s vision and allow for flexibility for curriculum not yet envisioned. Fixed architectural elements will be located around the perimeter maximizing open floor space for individual or group work. All 5th grade classrooms will include two sinks, supporting hands on and inquiry and project-based learning. Storage amenities will be thoughtfully sized to provide the space for the required curriculum material, but not overly zealous reducing floor area of the room. Writing and display surfaces will be strategically located around the perimeter to foster interactions and learning at all scales. The design plan includes two sinks in each of the 5th grade classrooms - both science specific and general education classrooms to support hands-on and project-based learning. The proposed 850 square foot classrooms will provide adequate space to fully support the delivery of the 5th grade science curriculum.

The 5th grade science units will be undergoing a curriculum review process in the next two years. That process will allow us to shift our curriculum units so they are more aligned with the new DESE science MCAS assessments. We are looking to provide more phenomenon, performance and project based units around the current fifth grade

standards which include driving questions such as: How do living things make in our world? “Water” you doing for your community? Sunshine, Earth-shine, Moon-shine, How do you shine? and What does it “matter”? Our 5th grade teachers are also collaborating with the Museum of Science to provide an engineering unit and receive grant funding through the Youth Engineering Solutions to do a unit on engineering plastic filters.

World Languages

The study of world languages provides us with a greater understanding of ourselves, others, our community, and the world. The ability to communicate in another language is an asset for all students. Our proficiency-focused world languages program is guided by the principles of the 2021 Massachusetts World Languages Curriculum Framework, the 2017 NCSSFL-ACTFL Can-Do Statements, and the 2012 ACTFL Proficiency Guidelines. In our world languages courses, students develop cultural competence and communicative proficiency in the interpretive, interpersonal, and presentational modes. Students are provided with comprehensible input and learn strategies to become effective listeners, readers, writers, and speakers. All World Languages courses are taught in the target languages and integrate authentic and adapted cultural resources that are organized around unit themes. Students set personalized language goals and demonstrate their knowledge, skills, and understanding through real-world performance tasks appropriate for the unit and course proficiency targets.

Students are expected to use the target language during class for a variety of functions, such as: making requests, asking for help, giving opinions, and comparing cultural products, perspectives, and/or practices. Communicative tasks focus on using the target language for a specific purpose and in a culturally-appropriate context. Some examples of performance tasks include engaging in conversations to share opinions, conducting oral presentations for an intended audience, reading infographics to make informed decisions, identifying key information from videos and podcasts to convey information, and writing emails to introduce oneself. Student progress toward proficiency is evaluated through real-world language and cultural tasks like those on the proficiency-based ACTFL AAPPL Examination. Student performance is evaluated with rubrics.

World languages classes meet every day for our seventh and eighth grade students and two out of seven days/cycle for our sixth graders. Currently, French and Spanish are offered at the school, but additional languages may be added. World Languages students use the language for daily interactions in class, experience cultures first hand, and are encouraged to use their knowledge of language and cultures beyond the classroom walls. Students are encouraged to become proficient in their home/heritage language and the languages taught and take the AAPPL examination as a way of working toward the MA State Seal of Biliteracy. All world languages courses have their own ACTFL AAPPL course proficiency targets, which

serve as the year-end goals for students. Students regularly self-assess and reflect on their progress toward proficiency to ensure that they are prepared to meet unit and course goals.

Students who study world languages in grades 6-12, explore topics in integrated thematic units; this model would also be adopted with the addition of grade 5 World Language classes. The units differ in complexity, depending on the course and targeted proficiency level.

World languages week is an important activity that takes place each March. Visitors provide cultural programming to classes and to all world languages students. Currently, the library is used for Latin and African dance, African drumming, and other activities. The cafeteria and the gym have been used for cultural assemblies and large-scale events.

World languages teachers teach multiple levels, grades, and languages currently, but may be language, grade and team specific in the new school. Ideally, World languages teachers should form part of the grade level team and be able to have schedules and spaces that allow them to fully participate with ONE grade level team as opposed to multiple grade level teams.

The Galvin Middle School currently has a staff of six 1.0 FTE world language teachers. World Language classes are part of our core academic curriculum and educational programming. With the expansion of the Galvin to a 5-8 model, we envision World Language teachers each having their own classroom with a full schedule. We also envision adding another 1.0 FTE world language teacher to support grade 5 world language. We also intend for World Language teachers to be incorporated into our grade level groups, and attaching these classrooms to specific grade levels.

Galvin Middle School would like to enhance and extend World Language opportunities for our students by including grade five. Including grade five students in the World Languages program within the 5-8 model would facilitate the development of world-ready students who participate at local, national and international levels. Starting earlier in grade five allows all GMS students to have the opportunity to study a world language. become eligible not only for earning the Seal of Biliteracy but also for truly becoming culturally competent, linguistically proficient, world-ready citizens. The Canton Public Schools is committed to exposing students to world languages earlier and anticipate that this will be achieved in the coming years prior to the opening of a new GMS.

The World Languages Department strives to build curious, compassionate, confident, and autonomous learners who demonstrate a high level of communicative proficiency in at least one language other than English because knowing and using another language builds cultural understanding, empathy, joy, and knowledge about oneself, others, and the world.

The study of world languages at the Galvin Middle School offers students at all levels of proficiency access to rigorous, reflective, responsive, and relevant standards-aligned learning experiences with the necessary support. In world languages classes, students use the target language to:

- communicate with speakers/signers of the target language;
- explore and celebrate the products, practices, and perspectives of multiple cultures;
- compare their own languages and cultures with those of the target communities;
- expand their academic knowledge of other disciplines;
- act to promote equity, global awareness, and multicultural understanding;
- serve, work, and lead in their academic, local, and global communities; and
- become lifelong learners

The World Languages Curriculum Review, which was presented to the Canton School Committee on May 11, 2023, highlighted the need for a dedicated language laboratory at GMS that will allow students to practice speaking regularly so that they can build confidence and proficiency in the target language. The space would also be needed to administer quality world languages regular speaking assessments and standardized assessments, such as the AAPPL and STAMP examinations, to prepare students to achieve high levels of language proficiency to qualify heritage language, multi language learners, and district world language learners students for the Massachusetts State Seal of Biliteracy.

Multilingual learners participate in the World Language Program across grades 6-8, regardless of native language; in incidences where their native language is coincident with World Language course offerings, students have the option to improve their native language skills, or learn a new language. With the addition of World Language in grade 5, multilingual learners would also participate in grade 5 world language classes. Across all grades, participation in the World Language program provides multilingual learners with leadership opportunities in sharing their experiences and supporting others in learning a second language; this in turn could support their acquisition of English Language Skills.

Proposed

Currently, the Galvin Middle School has only three traditional classroom spaces dedicated solely to World Languages instruction. A fourth space has been created within the larger library space, and there are four additional classrooms where World Languages teachers

travel to classrooms with other primary uses. Based on current usage rates, the new school should include 6 classrooms dedicated to use by World Languages teachers based on our middle school teaming philosophy, an enhanced World Languages experience for both grades five and six.

World Language Classrooms Daily Utilization Chart:

309	76.00%	English - 8th, World Language (2)
308	76.00%	Math - 8th, World Language (1), Wellness (1)
310	71.00%	Social Studies - 8th, World Language (1), Wellness (1)
312	76.00%	World Language
313	76.00%	World Language
LIB1	61.00%	World Language
311	78.00%	World Language
208	84.00%	World Language (3), Wellness (3)

Like ELA, math, science, and social studies, world languages classes are core content areas integral to the student experience at the Galvin Middle School. For that reason, students receive world language instruction every day in dedicated and culturally immersive world languages classrooms for the entire school year in grades seven and eight. World languages teachers work with grade level teams and teach the same groups of students that their colleagues in ELA, math, science, and social studies teachers teach. In grade six, we have been able to add World Language as a special, meeting two times in a seven day cycle for every student. Our proposed programming would increase this to daily for grade six students and, when we move to a 5-8, our fifth grade would receive World Language instruction as a special. This will allow us to continue the experience of our fifth grade students who will, we anticipate, be receiving World Language instruction at the elementary level in the near future.

As such, and according to our interdisciplinary, team-based approach to teaching and learning, the District requests (6) world language classrooms or 2 per grade level along with a dedicated language lab in a 5-8 middle school model to support our approach of world language as a core academic subject. This dedicated language lab will support programming designed to develop students who receive the Seal of Biliteracy when they graduate from Canton High School.

The design features of the language lab should include the following:

- In a quiet area-used for testing, recording, speaking activities, intercultural field trips, visitors, etc.
- Soundproofing for room
- 30 digital student carrels (glass on front, sound barriers on side)-computers, cameras, Virtuoso software for pairing, recording, groupings, digitizing resources, sending out multiple files to all student stations simultaneously. etc.
- Language lab furniture (comfortable moveable chairs on casters, carrels, etc.)
- White boards. smart board, projector
- Voice amplification system for teachers
- Many outlets throughout for hardwiring lab
- Teacher station on platform overlooking students (teacher should be able to see each student's computer station as they work). Teacher station includes teacher computer, computer camera, printer, doc camera, large desk with storage,
- Separate cabinets for resources and equipment (lab storage)
- Table/work area for pencil sharpener and for other student-facing items like papers, notebooks
- Wall space for student work, posters, etc.

The proposed Galvin Middle School lab design and equipment would mirror the forward-thinking build at Canton High School. The CHS World Languages Lab is one of the most robust technology spaces utilized by large numbers of students on a daily basis to build language proficiency and cultural understanding in the target language. The flexible interface for synchronous and asynchronous learning allows for both personalization and collaboration in the same space. The technology (software and hardware) drives the lab. It is highly efficient and quick, as paired instructional materials – text, audio, video, etc. – are sent to individual students, pairs, and/or students in a matter of seconds. Similarly, audio and video recording and collection of student work are quick and effective because of the hardwired network connection. The Canton High School lab space was built for changes in fast-changing technology, and is monitored and updated regularly as new technology emerges. The GMS language lab will follow this path and utilize the CHS lab as a model. Flexibility will be integral in the design to ensure that as technology evolves, the space can flex to support the advancements.

The proposed Galvin Middle School lab would follow a similar schedule to the World Language Lab at Canton High School. At Canton High School, every World Language teacher rotates through the World Language lab one day per cycle in order to provide immersive language experiences to students using the cutting-edge software available only in the lab.

The chart below shows usage of the language lab at the high school; at the middle school, each full time teacher would be assigned to the language lab one day per cycle for immersive language practice, with one day open per cycle for proficiency testing.

LANGUAGE LAB SCHEDULE	<i>Drop G</i> Day 1	<i>Drop F</i> Day 2	<i>Drop E</i> Day 3	<i>Drop D</i> Day 4	<i>Drop C</i> Day 5	<i>Drop B</i> DAY 6	<i>Drop A</i> DAY 7
PERIOD 1	A1 block	G1 block	F2 block	E3 block	D4 block	C5 block	B6 block
8:00-8:53 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 2	B1 block	A2 block	G2 block	F3 block	E4 block	D5 block	C6 block
8:57-9:50 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 3	C1 block	B2 block	A3 block	G3 block	F4 block	E5 block	D6 block
9:54-10:47 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 3	TEACHER 7	TEACHER 8
PERIOD 4	D1 block	C2 block	B3 block	A4 block	G4 block	F5 block	E6 block
10:51-11:14 AM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
2nd LUNCH 11:18-11:45-12:08	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
12:12-12:35 PM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 5	E1 block	D2 block	C3 block	B4 block	A5 block	G5 block	F6 block
12:39-1:32 PM	TEACHER 3	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 6	F1 block	E2 block	D3 block	C4 block	B5 block	A6 block	G6 block
1:36-2:29 PM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 2	TEACHER 6	TEACHER 3	TEACHER 8
AFTER SCHOOL	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7

World Language classrooms would be used to provide primary instruction for world language; these classrooms would also maintain an element of flexibility in case other courses need to be scheduled into them. Just as the World Language Lab is currently used at Canton High School, the GMS World Language Lab would provide a more immersive world language experience, using state of the art software to provide rigorous opportunities for proficiency practice in the target language. Additionally, the lab would provide opportunities for proficiency testing on the ACTFL, in order for students to advance towards the Massachusetts State Seal of Bilingualism.

Academic Support Programming Spaces

Current

There are only two designated academic support spaces for 12 academic support sections. Many teachers use general education classrooms, the middle section of the library, storage spaces, hallways, and other less desirable spaces for small academic support spaces.

Proposed

The proposed spaces would be designed to be an integrated part of the general education teams, and would be accessible by neighborhood. In addition to being used for academic

support, these spaces can be used for small group testing, break-out groups for projects, and many other integrated opportunities with general education classes.

Student Guidance and Support Services

Space for guidance will be located in a central part of the building adjacent to the main administrative office for easy access, however, to provide more hands-on and interactive relationships between administration/guidance and the student population, GMS is looking to distribute a portion of the guidance and administrative offices throughout the physical school space. This would be an essential component to create a strong school community within a large space. Students are heterogeneously grouped, except for grades 7 and 8 math, to maintain high expectations for performance, as well as to allow for role-modeling and scaffolding between students. Many core classes include Special Education students and English Language Learners, who are consistently mainstreamed, while being provided with support services. Whenever possible, these support services will be housed within the academic neighborhoods, as well. These classes are often co-taught by two teachers and are considered inclusion.

Multilingual Learners

Multilingual Learners (MLL) are students who are not proficient in speaking English and are developing skills in order to better access the current curriculum. This is done through consultation with teachers, as well as both a push in and pull out model of instruction. Teachers identify possible MLLs based on home language surveys. The WIDA Screener is given to students who speak and understand a language or languages other than English. Qualified students receive comprehensive English language development instruction in all language domains: listening, speaking, reading, and writing. Students at all levels of English proficiency receive instruction that is rooted in researched based methods and uses a variety of resources. Students are given many and varied opportunities to hear, speak, read, and write English.

The goal for all students in our MLL Program is for all students to be scheduled in a manner that will allow them to progress with their peers and eventually test out of the Multilingual Learner Program.

At the high school level, students have to earn a Proficient rating on ELA MCAS in order to earn the Seal of Biliteracy. We choose their programming to support their English instruction in order for them to earn that proficient rating. ML students have the option to test for the Seal in their home language as early as 9th grade. They have 4 years to repeat the test to demonstrate an Intermediate High or higher rating in the 4 tested domains for the Seal. Students have the opportunity to demonstrate their proficiency through a portfolio if their home language is not a tested language. The State Seal of Biliteracy is an award provided by

state approved districts that recognizes high school graduates who attain high functional and academic levels of proficiency in English and a world language in recognition of having studied and attained proficiency in two or more languages by high school graduation. Our vision is to help students recognize the value of their academic success and see the tangible benefits of being bilingual.

Proposed

In recent years, our population of Multilingual Language Learners has continued to grow, mirroring trends many districts have experienced throughout the country. The table below illustrates this growth across our district from last year to the start of this year.

Galvin Middle School: Caseload at a "glance"

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS (EL students with disabilities)	SSPs*	total
	4	4	11	19
MLL 2023-2024				
	14	6	9	27

Hansen

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	3	1	2	21
MLL 2023-2024				
	6	1	5	23

JFK

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	7	2	1	28
MLL 2023-2024				
	4	2	4	24

Luce

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	9		4	37
MLL 2023-2024				
	9		11	42

In an effort to remain efficient in our building design yet still plan ahead with current trends, we propose a total of (2) half-sized classroom spaces to accommodate MLL instruction. Much like resource rooms, these spaces would support teachers providing pull out instruction. Likewise, as we continue to push in and support students on-team, we will utilize the small group collaboration spaces within each team for additional support space.

The need for ML services has grown exponentially in Canton, specifically at the Galvin. We began the year with a 1.0 ML teacher and had to add a second 1.0 ML teacher to meet our student needs. Given the current trends and the addition of fifth grade, we only see the numbers in this population as well as their required services increasing. It is anticipated that we will actually require 3.0 FTE for our ML services. These three teachers will provide both push-in and pull-out services for students. Based on student need, the 3.0 FTE would utilize both spaces throughout the school day.

Design changes needed in a new Galvin Middle School to support and enhance this programming include the following:

- (2) half-sized classrooms; rooms should be adjacent to each other with the ability to open up into one larger classroom to support fluctuating MLL enrollments and needs over the years
- Adjustable lighting,
- Flexible seating to allow for individualized learning and collaboration,
- Technology and space for small groups, 1:1 and station work,
- Easy access to whiteboards in a variety of areas to support instruction,
- Access to the Performance Technology Studio space to allow for presentations, as well as provide opportunities for spoken language in a dramatic and engaging manner for our English Language Learners.

7. TEACHER PLANNING AND COLLABORATION

Through the use of a team-based model, Galvin Middle School is able to provide every teacher in the building at least one non-teaching block per day. Every teacher has a daily prep period, with three periods per 7 day cycle designated for collaborative meetings. Team teachers have designated common planning time (CPT) twice per 7 day cycle. For each seven-day cycle they have one curriculum-based meeting with department colleagues, and two team-based meetings. Specials teachers have two designated common planning meetings per week - both with department colleagues. This model allows for collaborative approaches to learning, as teachers have weekly time to develop and modify instruction, continuous professional development on topics connected to the school improvement plan, as well as designated time to look at students data, discuss at-risk students, and create action plans. Vertical planning occurs twice per month on designated faculty meeting days, as well as on department dedicated half-days throughout the school year. These time periods allow for grades 5-8-8 (and at times grades 6-12) to create vertical units of study, as well as allow for larger cross-curricular planning. Currently, there are no designated teacher planning spaces at Galvin Middle School. CPT meetings take place in unused classrooms, areas of the library, and anywhere else teachers can find a space.

The grade five schedule would also use a team approach in order to provide daily common planning time. Grade five teachers would develop a similar CPT schedule to the 5-8-8 model currently in place.

The Galvin is organized into a teaming structure, which provides opportunities for community building among smaller groups of students, collaboration among teachers, and organization of classes to provide differentiated instruction based on student profiles. Ultimately, these teams make a large school feel smaller and increase connection and communication among students and staff. Currently, there are three teams per grade level - “G teams” support multilingual learners, “M teams” support students in our ACCESS program, and “S teams” support students in our Therapeutic Classroom. All teams provide inclusion services to students on IEPs. Currently, the Galvin has only two staff rooms, one of which is located in the office, and one is located next to the library. These workrooms are not nearly large enough to accommodate the 120 staff members which currently work at Galvin Middle School, and are additionally located far away from many teams. At the new Galvin Middle, staff collaboration rooms would be located within grade level teams to facilitate teacher collaboration and communication, as well as provide quiet work spaces on prep periods. These rooms provide a multipurpose space for the following:

- team meetings twice per cycle,
- professional learning community meetings once per cycle
- department meetings once per month
- collaboration space during teacher prep periods, particularly when “home” classrooms are being used
- individual work areas during teacher prep periods, particularly when “home” classrooms are being used
- IEP meeting spaces
- family meeting spaces
- private areas for sensitive or confidential communication with families

There would be a need to create designated planning spaces for teachers in a new Galvin Middle School. Each grade level will be housed in an academic neighborhood, providing opportunities for students and staff to work in a horizontal and vertical interdisciplinary manner that fully integrates Special Education and project-based learning. The teams would also incorporate co-teaching sub-teams, particularly across the Math/Science disciplines and the ELA/Social Studies disciplines. This should include the creation of team collaboration areas within the grade-level academic neighborhoods. Each grade level neighborhood and its included teams should include the full integration of Special Education through the incorporation of SPED classrooms and English Language Learner support services. The goal is to integrate these services into the neighborhoods as much as possible, while remaining mindful of the fact that some of these services (i.e., severe special needs) may require balancing the distance between two grade level neighborhoods. Integrating Special Education services into the neighborhoods will allow the Special Education teachers to become part of a co-teaching solution, and to work collaboratively with the other teachers and teams in the neighborhood.

The teacher collaboration spaces will be utilized at least four out of six periods per day with teacher team and department meetings as well as prep time. The other periods, the room will be available for individual meetings between teachers and students and/or families.

The grade 5 neighborhood should be similar to the grade 6, 7, and 8 neighborhoods, as keeping all academic neighborhoods as flexible and interchangeable as possible will allow for variations and flexibility in future use. However, the grade five neighborhoods should recognize the need for further subdivision into two-teacher teams to reduce transitions.

Professional Development, Curricular and Personal Development Opportunities

A core value of the Canton Public Schools is to provide high quality learning experiences for all. This includes our adult staff. As such, the district provides opportunities for professional development during and outside the regular school year, including an expansive professional development catalog with virtual and in-person offerings, based on district and school goals, curricular changes, and opportunities related to the maintenance and advancement of licensure and degree status.

Similar to many districts, Canton has early release and full days that are dedicated to teacher professional learning. These learning focuses these days are guided by our Strategic Plan and determined by input from District and school-based administration as well as the District-wide Professional Learning Council that is made up of admin, educators and support staff. This year, some of our areas of focus have been equity, curriculum design and revision, and writing across the curriculum.

In addition to the release time provided, we also provide job embedded professional learning for staff. Sometimes this looks like a consultant or one of our content specialists providing direct instruction for staff who have been released from the classes for a period of time or the day and sometimes it looks like us releasing staff to design curriculum collaboratively during the day. In each of those cases, space in the buildings for this purpose is at a premium so the professional learning space being proposed as part of this educational program will facilitate the adult learning culture we are working to promote.

Examples of additional professional development opportunities provided by the district in the 2023-2024 school year include Restorative Justice training, Reveal math training, Wade Institute for Science Learning courses, Engaging All Students with Differentiated Learning, and Strategies to Enhance Instruction for English Language Learners in the Classroom. Additionally, the District invites staff to submit proposals to do paid curriculum work over the summer and funds multiple teacher-driven endeavors. The district also engages in cyclical program reviews and curricular development and provides opportunities for staff input, review, and professional development as necessary. Staff may also pursue self-initiated professional learning through Novak Education, PBLWorks, IDEAS, Massachusetts Partnership for Youth and Teachers as Scholars, and content-specific programs. Canton Public Schools has also established partnerships with local colleges and universities for staff to earn a Bachelors, Masters, or Doctoral Degree in education and education-related fields at a reduced rate, including programs at Curry College, William James College, Regis College, and Merrimack College. Furthermore, Canton Public Schools

provides course reimbursement for Unit A members of up to \$2,500, per staff member, per year, with an aggregate cap of \$125,000 per year across the district; for Unit E members the district provides \$350 per staff member, per year, with an aggregate cap of \$5,000 per year; these funds are available on a first-come, first serve basis for outside professional development opportunities and graduate credit acquisition. Finally, with the vote to move to a 5-8 building, the District is committed to creating a professional learning community to study best practices for grade reconfiguration and for being a 5-8 middle school, including learning from those already following that model.

Instructional Coaching

The GMS instructional coaching program is designed to provide individual coaching to teachers, including modeling lessons and practicing key features of lessons with teachers. The instructional coach also supports PLC meetings (grade level-department meetings of 4 - 5 adults). Additionally, the instructional coach plans professional development meetings for the whole staff. The goal of the instructional coaching program is to help teachers improve their practice, so that students are more engaged and invested in learning. The instructional coaching program supports all departments and grade levels, including core academics, specials classes, and special education.

The instructional coaching office should feel warm, accessible, and personable. Teachers may stop by for a quick question, snack/coffee break, or a longer meeting. The office should also feel somewhat private - teachers can feel comfortable expressing concerns, problem-solving, and practicing teaching. Additionally, the office should feel quiet (not next to hubs of loud student traffic such as gym, cafeteria, etc.)

Design needs for the Instructional Coaching program include a large office used to hold both individual and small group meetings with educators, and model lessons. The office should be soundproof or sound dampening to increase educator privacy during conversations and include:

- Big external facing windows.
- Adequate space for desk, bookshelf, filing cabinet, comfortable chairs or couch, and larger meeting table.
- Central location in close proximity to teacher meeting and co-working spaces.
- Door can be easily propped open for educators to pop in.
- Separate from administrative and guidance offices.
- Small sink for coffee area.

8. LUNCH PROGRAMS AND DINING

Current

The Galvin Middle School offers three lunch blocks during a typical school day. Currently, all students eat in one large cafeteria with grades 6, 7, and 8 rotating their lunch time every 60 school days. First lunch begins at 11:04 am, second lunch begins at 11:32 am, and third lunch starts at noon, with all lunches over by 12:25 pm. The Galvin Middle School coordinates the overall normal day schedule into six periods. Each day typically includes four academic offerings and two specials offerings. Each day there is a dropped block which means that on some days students will have one fewer core course or one fewer special block. This approach allows one twenty-five-minute period for lunch, including the travel time needed for a student to get to the cafeteria from their classroom or learning space. There is time built into the schedule after each lunch block for students to proceed to their next class. When possible, 3 to 4 tables are selected to eat outside if they wish. The close proximity of the fields allow students to walk, play games, and get fresh air during their lunch period. This short break has increased students' attention and productivity after lunch. Dining staff and Administrative staff associated with supervision are constrained by the cafeteria schedule from 11:04 am to 12:25 pm daily.

The district confirms that all food incorporated in student breakfasts and lunches conform to food-service and health standards as set forth in 105 CMR 590.000: State Sanitary Code Chapter X - Minimum Sanitation Standards For Food Establishments, as well as comply with the National Child Nutrition Act, National School Lunch Program, and Mass. General Laws c.69 § 1C. All competitive foods and beverages, such as those sold at the school snack bar and in vending machines, comply with nutritional standards and laws, including but not limited to MA law Title XVI, Chapter 111, Section 223.

Proposed

The proposed Galvin Middle School will provide a dining space large enough to accommodate the entire student population (grades 5-8) in two seatings (although, operationally, the District is considering accommodating the student population in two waves – four seatings). This vision is consistent with MSBA guidelines for middle school cafeterias, allows for maximal flexibility and seating capacity in an event setting, and creates more manageable student sizes in the cafeteria at any one moment. In this concept, two grade levels would be in the first wave. While one grade level eats in the cafeteria, the other grade would go to recess. Each grade level would then switch before the second wave with the other two grade levels begins.

Ideally, the seating areas and furnishings of the cafeteria would be consistent with that of academic spaces, allowing the large space to be zoned to support different experiences that differ in their furniture (height, group size, softness/hardness), acoustic properties, and scale. One acoustically separate but visually connected dining space should be carved out of the allotted dining square footage. This space will provide a quieter environment, suitable for smaller groups, students with sensory issues or experiencing recent trauma, or simply students wanting a quieter environment. More and more research suggests that the lunch period can produce high levels of anxiety in many middle school students, so zoning the seating area in this way could help reduce those anxiety levels. All areas, including the acoustically separate space, should be easy to supervise by adults but different enough to provide students a choice for which environment best serves their needs.

With lunch consuming smaller windows of time in the daily schedule, the cafeteria spaces will be available for many other uses, such as peer tutoring sessions, team meetings, small group or grade level assemblies and cultural events. Audio and video conferencing capabilities with movable chairs and tables would allow the School to take full advantage of the square footage usually unused in many schools for long periods of the day. This space could also be capitalized on for many after school activities such as clubs and an area to work in while waiting for the late bus.

Ideally, the dining area would be located next to an adjacent outdoor space for eating during the warmer weather. This would benefit the students by allowing for outdoor time, increasing ventilation, and optimizing the space for other activities while creating more room for eating without increasing the size of the physical building. Easy and safe access to an outdoor play or garden area would benefit students and staff and would be needed to maintain the potential recess time being considered as part of the lunch schedule.

Student-grown foods, supported by both the educational program as well as the community, could be integrated into lesson plans and the school lunch programs. The gardens could be integrated into the desired requirement for outdoor learning and indoor/outdoor connections and could become an integral part of the exterior site design. This immediate source of food production would serve to strengthen the link between healthy fresh food production and consumption in support of the School Wellness Policy. It could also provide an added opportunity for community, business, and neighborhood connections. In wellness classes, student grown foods could connect to nutrition education topics, identifying the foods that are grown, what nutritional benefits they bring, and how they compare to other popular food choices that students in this age group tend to make. In science classes, a garden could provide opportunities for further standards-aligned project-based learning, including the study of: environmental factors which affect plant growth rates, specialized structures which support plant reproduction, and photosynthesis and respiration.

Student-grown foods could be integrated into lesson plans with guidance from the school nurse and in consideration of student allergies, dietary restrictions, and student health/safety concerns. All food used in the curriculum must meet requirements set forth by the Canton Public Schools Food Allergy Management Policy and Plan, including:

- reviewing acceptable foods set forth by the Massachusetts Nutrition Evaluation Tool for Schools,
- identifying students in the classroom with allergies,
- discussing the allergy and reviewing the allergy with the nurse and reviewing the student's individual health care plan,
- safeguarding students with food-related issues, before, during, and after this activity,
- notifying parents/guardians at least 7 days in advance of the intended lesson using the Food in the Curriculum Parent Notification/Approval form ,
- providing parent/guardian access to all food labels,
- and providing parents/guardians the opportunity to provide an alternative for the child or class.

In order to ensure the safety of our gardens, we would follow the current practices we use for ensuring safety and security as well as the maintenance of our gardens. Every year, students replenish gardens at the Galvin that have been planted as a result of a project-based learning unit, with plants and flowers that are native to the region. To secure the gardens, we are careful about where the garden is located and use our security cameras to monitor access. Additionally, when students are out working in the garden, they always have adult supervision. Finally, we have staff committed to maintaining the outdoor garden spaces over the summer and during school vacations. Moving forward, we would also like to include a schedule of students who volunteer time during these breaks. We will consider our summer programming for additional help maintaining the garden.

9. TECHNOLOGY PROGRAM & LIBRARY MEDIA

Canton has also established a strong technology program, with the vision of creating a technology-rich teaching and learning environment that encourages collaboration, communication, innovation, and achieves academic and professional proficiency for all students and teachers respectively. All students are provided with District-issued Chromebooks with access to the internet, the TestNav testing app, and G-Suite programs including Google Classroom, Mail, Docs, Slides, and Sheets. Students also have District-provided access to online curricular programs such as Reveal Math, research databases through Ebscohost, and curricular resources such as Newsela, Edulastic, Edpuzzle, and Canva. For students that do not have internet access at home, we refer students and families to their cable company or the town library for access to internet services, on a need-based basis. Our home school interventionists also help families apply for internet access, occasionally accessing Title 1 or McKinney-Vento funding.

Teachers, administrators, and related services providers are also equipped with district-issued laptops with wireless internet access and G-Suite programs. This year, the Canton school district has also provided all educational assistants at the middle school with laptops to support classroom instruction, staff communication, and professional development. All classrooms also have instructional technologies including fixed projectors, speaker systems, and sound systems for multimedia displays. Some classrooms also have printers for teacher use. Teams with students who are hard of hearing also have classroom FM systems to enhance teacher voice projection, based on needs described in student IEPs. The Canton technology program aims to enable students and teachers to use technology to:

- Enhance teaching and learning to meet the learning needs and styles of all students
- Engage in learning anytime, anyplace
- Procure, research, organize and share information
- Think critically and solve problems
- Innovate and create new ideas
- Express themselves effectively and creatively
- Collaborate with other students and teachers anywhere in the world

This program is further supported by the Strategic Plan, which aspires to build a technology ecosystem that is equitable, collaborative, always-on and available everywhere.

The district will maintain current staffing associated with technology support and repair:

- 1 Director of Technology and Data Analytics oversees all technology across the district
- 1 network administrator provides security, contracting, and networking support across the district
- 1 Instructional Technology Coordinator provides classroom software support at across the district
- 1 IT specialist provides chromebook repair across the district, located at GMS
- 1 IT specialist provides classroom hardware support at GMS

Library & Media

Current

The GMS Library program aligns with the DESE Rubric for Evaluating School Librarians. Grade 7 students participate in a research skills course aligned with the MA English Language Arts and Literacy frameworks, as well as the MA Digital Literacy and Computer

Science Frameworks. This course introduces students to tools and concepts that will support them in their other academic classes. Topics covered in the research skills class include using the library catalog system, understanding and processing informational texts, database usage, website evaluation, citations, and avoiding plagiarism.

The GMS Library provides equitable access to resources and informational technology for instructional and recreational use. The GMS library currently houses an expansive collection of both fiction and nonfiction print materials, with 8,768 unique titles and 12,248 total books. All students have access to all levels and genres of books. Over the last five years (excluding the remote COVID year), students checked out an average of 3,809 books per year. The library program also provides access to online middle school research resources, including GALE databases for nonfiction research and Noodle Tools research management program supporting critical thinking.

Throughout all three grade levels, students are welcome. However, with the existing space being used to house two classrooms and our library media course, students have been vocal about having added access to books “in the moment”.

The library supports a multitude of academic programs, including:

- The GMS Marathon Monday schoolwide reading initiative. All students across the school participate in 20 minutes of silent, sustained independent reading (SSR) weekly on Mondays. Students check out books of their choice from the library during their ELA classes or during X block. All students have a goal of reading 26 books throughout the school year.
- 5th and 6th grade teachers bring classes to the library for book checkouts and research projects.
- An annual school-wide book fair provides an opportunity for all students to purchase age-appropriate books; this book fair also generates money to supplement the library budget and expand the student library catalog.
- Teachers co-plan and co-teach classes which provide opportunities for cross-grade and cross-team collaboration and public products within Project Based Learning units (e.g. all three English classes meet in the same space).
- Special educators provide small group and individualized instruction to students with disabilities in the library. Special educators and related service providers also use the library testing office for special education testing, conducting IEP meetings with families, and providing individual instruction to students.

- Math Buddies intervention program meets in the main library space 2 times per week. 100 students across all three grades and teams participate to provide peer tutoring between 8th and 7th grade students, and 7th and 6th grade students. We also envision adding math buddies peer tutoring for 5th grade students, provided by 6th graders.
- Grade-level team meetings occur in the main library space on a quarterly basis to facilitate the development of school community and positive school culture.
- Student and staff lunch groups meet in the library, providing a quieter alternative community space to the busy cafeteria and crowded teacher workroom.
- Monthly faculty meetings and monthly faculty PD are held in the library; this is currently the only academic space large enough in the school to host approximately 106 educators.
- World languages week activities (dance, drumming, presentations) occur in the library with the movement of flexible furniture to clear space for large groups of students.
- World Languages competency testing.
- MCAS testing for small groups, individual testing, and extended time testing occur in the library.

Due to limited space and schedule constraints in the current GMS, in 2023-2024, five daily sections of World Language classes, two daily sections of Health Classes and one daily section of Research Skills are housed in the library. These classes are sometimes scheduled concurrently in different sections of the library, limiting ELA, team, and cross-curricular access to the library, as well as limiting student access to library checkouts.

The library also supports a several extracurricular and community programs before, during, and after school, including:

- After school clubs such as Newspaper Club and Mural Club occur in the library.
- The library provides a late bus meeting place.
- Student-school committee meetings provide an opportunity for small groups of students to share feedback on school climate and culture with district administration.
- CAPT meetings (parent-school committee) occur in the library.
- Community events occur in the library on afternoons, nights, and weekends.

The Library/Media Center is currently and will continue to be overseen, scheduled, and maintained by a certified Library Media Specialist, holding a professional library license for grades K-12, with a Master's Degree in Library and Information Science. The Library Media Specialist will continue to attend school-based and self-initiated professional development, state conferences, and meet in professional learning communities with other Canton school librarians to align on district library and book policies. The Library Media Specialist also curates collection development, including selecting appropriate, quality, and diverse books in the library and keeping the library current, and provides reader advisory in order to guide book selection for students. As a classroom teacher, the Library Media Specialist also maintains a safe, welcoming space for all for classes, and provides a space for testing, reading, separate teaching, emotionally safe spaces, and provides flexibility and adaptability to support diverse needs. The Library Media Specialist also designs classroom materials and delivering and assessing instruction, and attends associated professional development opportunities. Finally, the Library Media Specialist attends curricular development sessions and collaborates with classroom teachers during the school day and in professional learning community meetings to co-design and ultimately co-teach classes.

Proposed

As part of the visioning process, members of Canton Public Schools toured a number of recently built learning environments to see educational best practices in action. One tour was to the Lester J. Gates Middle School in Scituate, MA where the educational model includes a decentralized library to boost interdisciplinary, project-based learning.

At Gates the “library experience” is no longer a destination but instead a regular part of the day-to-day academic function. Media commons with book stacks and “zones” for presentation skills development are distributed among each team, not centralized as in a conventional library. This layout intentionally provides tools and resources at hand's reach to teachers and students rather than at a single destination.

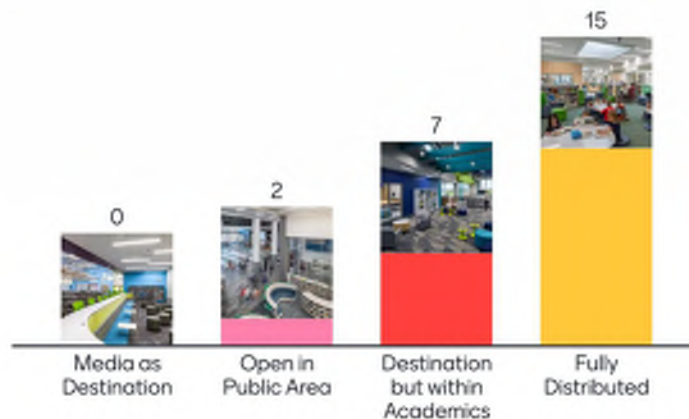
During visioning members of Canton Public Schools also toured the recently built Chapman Middle School in Weymouth, MA where teams surround a centralized commons area designed to support project-based learning. At Chapman, these areas also include sinks, storage, drop down electrical receptacles, and flexible furniture with durable tops for STEAM-based activities.

With these precedent learning environments in mind, we continued to explore various academic organizations and contemporary design patterns throughout the visioning process in order to unpack our vision. Specifically, during Visioning Session 4 focused on building adjacencies and design features we considered the following questions to refine our thinking:

- What program spaces make up a GMS learning community / team pod?
- How might programs like art, media, world language, etc. be embedded within teams to support more experiential spilling or interdisciplinary learning?
- What program spaces might be on the edge/entry of the learning community?
- How can media space(s) and resources best be organized to further support the implementation of deeper learning and project-based experiences?

In Visioning Session 4, we were also shown a spectrum of media experiences from a traditional destination library model to a fully disbursed model like at the Gates MS in Scituate. Participants voted on their top choice, and 63% chose a fully distributed model (as seen in the visioning polling below).

Media Vision



Given the robust usage of our current media program, we look to expand media's reach by using a hybrid library model to place resources and media staff as close to students and teachers as possible, truly making media, literacy, and STEAM the circulation system that brings life to our school, while also maintaining a centralized library space for diverse programming, professional learning, and large school and staff meeting spaces. The library should be centrally located and easily accessible from all grade levels within the school. It should act as the school's hub while extending into the neighborhood entrances. For

instance, if there are three-story academic neighborhoods, the media center should be positioned on the second floor in such a way that it extends into the surrounding areas. Our proposed vision also includes varied working spaces including collaboration spaces, a multi-use cafeteria space, meeting rooms, teacher collaboration spaces, and direct access to books in the team spaces, which would meet the needs the current GMS library currently fulfills due to a lack of alternative options.

The media experience at a future Galvin Middle School combines the educational models and design features of Gates and Chapman with our own goals of fostering deeper teaching and learning, student voice, adjacency, and interdisciplinary, project-based collaboration. In our vision, -a hybrid media center model would allow some of our library square footage to be disbursed into satellite Project-Based Media Commons within each team learning community. This space, within the circulation zone of each learning community, will serve as the connective tissue for each team and among the teams. The space will include movable book stacks, varied breakout/collaboration spaces, a presentation zone, niches and alcoves for one-on-one collaboration, pin-up space, display for works in progress, and design features to support making. The Media and Project Commons would support the full team meetings and multi-class collaborations that currently happen in the library because no other spaces exist.

In addition to the hybrid media commons in each team area, the District envisions using the remainder of allocated media square footage to create a large flexible Library Media space to support a number of different media and academic uses, including but not limited to:

- Small school assemblies
- Multi-grade collaboration (peer/mentor buddy program)
- Math buddies intervention program
- World Language Week
- Book Fair
- Professional learning
- Additional conference space
- Additional space for alternative dining and lunch peer groups for Guidance
- Gallery/display space for exhibitions of learning
- CAPT meetings (parent-school committee)

- After School clubs

In a way, we have already begun making steps to disbursing our media experience at the existing Galvin Middle School. To support the GMS Marathon Monday schoolwide reading initiative, we have purchased portable book stacks filled with high interest texts and have located them within the hallway of each team area throughout the school. Additionally, classroom teachers have extensive collections of classroom libraries from which students select books in their free time. Our vision is that a hybrid media experience will further this work already in place so that students are immersed in texts and learning throughout the building and that this model will increase readership even more, while maintaining a central library space with a larger collection of books which could support more expansive research projects, as well as club meetings and a variety of other unique programming throughout the year.

10.PERFORMING ARTS

Music

The current Galvin Middle School Music model includes Band, Chorus, Orchestra, and General Music classes. Students can elect to be in Band, Chorus, or Orchestra (strings) starting in grade 5. All students who do not elect a performing ensemble will be automatically enrolled in general music. Currently, those students in Band, Chorus and Orchestra also take general music.

All classes align with the 2019 Massachusetts Arts Curriculum Frameworks (Create, Perform, Respond, Connect). The four year program includes music as a vital component of each student's education, while providing an environment for students with various strengths and learning styles.

Through the General Music curriculum, students are given the opportunity to create music and to refine and rework their compositions in collaborative groups. After interpretation and analysis, students then present their work to their peers. Throughout their musical studies, students build a language to respond to musical examples and performances, identifying meaning and intent. Students also connect their musical knowledge to their personal life, historical events, culture, as well as other classes they take throughout the day. Students in 6th grade develop proper technique in xylophone, ukulele, and voice. In 7th grade, students will continue to use and build their skills on ukuleles and guitars. Students also continue to develop their composition skills and their knowledge of music theory and notation via a variety of assignments using the notation software FlatIO. Students study world music drumming, keyboards, and the Blues. In 8th grade, students will continue to build on the

percussion skills that they learned in 7th grade through bucket drumming including keeping time, rhythmic patterns, and drumming tones. They will also experiment with electronic music through composition and musical software using a software program called Soundtrap. Students also continue playing guitar/ukulele, keyboard and drums. Four teachers provide general music education, and classes range in size from 20-30 students.

Performing Ensembles provide another opportunity for students to expand their performing skills through singing and instrument playing with their classmates. Students are introduced to a wide variety of music styles and genres, as well as advanced instruction in music literacy, interpretation, rehearsal techniques, and performance etiquette. GMS provides multiple performance opportunities throughout the year for the members of the band, chorus, and orchestra (strings). Band students play flute, clarinet, bass clarinet, saxophone, oboe, bassoon, trumpet, trombone, euphonium, and tuba, or percussion instruments. Orchestra students play violin, viola, cello, or bass. Chorus members sing in Soprano, Alto, and often tenor/Baritone voice parts. The band and orchestra curricula include instrument specific technique, score reading, audiation, and basic music theory, while the Chorus curriculum includes vocal technique, score reading, audiation, and basic solfege for sight reading. Band, orchestra, and chorus rehearses twice each seven-day cycle. In addition to the full ensemble rehearsal, students attend small group lessons called “sectionals”. There are 3 performing ensemble teachers (band, orchestra, and chorus), and rehearsals by grade level may exceed 50 students. Each of these teachers has their own classroom that is also used as a rehearsal space.

In addition to performing ensembles, students have the opportunity to participate in afterschool activities. GMS offers an acapella group jazz band, and orchestra for students enrolled in daytime performing ensembles. Students in performing ensembles also have the option to participate in after school lessons on site with contracted studio teachers. Appropriate and adequate space for both curricular and extracurricular music programs are a necessity.

Proposed

With the addition of grade 5, students will maintain at least the same amount of music programming, if not more, and have access to higher quality percussion equipment, low string equipment and facilities than is currently available at the elementary level. Given our analysis of the current usage rate of these spaces (chart below), it is likely that adding a 5th grade music program will not require an additional room.

Room	Usage Rate	
220	63.00%	Band/General Music
219	73.00%	Chorus//General Music
221	61.00%	Orchestra//General Music

Design needs for the music program include the following:

- All music rooms should be removed from other parts of the building and have adequate soundproofing.
- All rooms should be large enough to accommodate upwards of 50 students and instruments (band and orchestra) or 80 students on risers (chorus), and ample instrument storage.
- Each room should have extra wide doors for ease of moving equipment.
- Each room should be attached to 3-4 practice rooms with windows for visibility.
- Rooms should have direct access to the auditorium for ease of moving equipment.
- Rooms should be on the first floor with outdoor access for ease of sharing instruments throughout the district.
- Music classrooms should be in close proximity to one another.
- Auditorium, to be used as a shared space with the drama program, for band, orchestra, and choral performances.
- Faucets and sinks to clean the instruments

Drama

Current

The GMS Drama Department follows the Massachusetts Curriculum framework to provide performing arts education in grades 7 and 8. In grade 7, all students take an Introduction to Theatre course, in which students are introduced to acting and the theatre arts. This fast-paced, dynamic class allows students to gain experience in public speaking, creative expression, and collaborative problem solving. Performing subjects include improvisation, drama games, and scene work. In grade 8, all students take a Theater Arts Exploration course. Students continue to learn Acting and Technical Theatre including exploring play study, scene work, and aspects of Technical Theatre such as Costume Design, Hair & Makeup, Set Construction, Sound & Lighting, and Prop Making. By the end of this course students

develop greater self-confidence, empathy, and a strong sense of community with their classmates. The drama program also provides a vital opportunity for the development of students' 21st century skills, including communication, collaboration, creativity, and critical thinking. Students also develop social emotional learning skills through the drama program, including self-awareness and social awareness, through drama games and role playing.

All students are encouraged to audition for the GMS musical, which occurs after school. Auditions are in November and rehearsals run through January and February with the show opening in March. All students who audition are included in the show!

Currently at GMS there is inadequate space for the drama program. Drama classes occur in the cafetorium (a combined cafeteria-auditorium space), and classes may occur during grade-level lunches, separated only by a curtain, causing students in class difficulty to hear instructions, take part in games, and perform. In addition, there is inadequate seating for whole-class instruction, and no projector technology available for teacher use. There is also no teacher workspace in the cafetorium. When our school play is in session, the practice occurs in the cafeteria and on the stage while an after-school program for younger students happens simultaneously in the same space. The final production of the play cannot, at this time, occur at the middle school given the large audience it draws which exceeds fire code.

Proposed

A new or renovated Galvin Middle School would include two separate performance spaces – a performance technology studio and an auditorium – to support the robust performing arts and the level of performance-based, exhibitionary experiences that occur in other core academic and special areas. In a 5-8 middle school model, we are considering expanding our performing arts offering to grade 6 as a way of further scaffolding student exposure to specials and to support the public presentation aspect of the deeper and project based learning experience we are working to provide for students.

The Performance Technology Studio

The Performance Technology Studio would be the home base of the theater arts teacher and would also be a shared space with several other disciplines, including Technology, ELA, History, World Language, and Fine Arts. For example, the Performance Technology Studio would be used by the ELA department to bring plays and other literary texts to life, while also providing small performance spaces for drama, music and other core and unified arts performances. Currently, each grade level uses two or more performance-based texts each year. Grade 8 studies *A Midsummer Night's Dream*, *The Diary of Anne Frank*, and *Twelve Angry Men* over the course of four weeks. Grade 7 studies *The Monsters are Due on Maple Street* and *A Christmas Carol* over a six-week time period. For both of these units, the Studio could see daily use by three teachers, each teaching four sections. The space could be shared at

times or signed out for small class uses such as poetry readings and performance. Additionally, each grade level does a unit on poetry.

The Performance Technology Studio creates utilization potential for up to 6 periods per week for use by teachers from other program areas. Our 1.0 drama teacher currently teaches 24 sections 7th and 8th grade drama over the course of four class periods. The classes currently happen on the stage at the GMS in the cafeteria. When the class meets during the lunch block because of the rotating schedule, the teacher relocates to a different classroom. In the proposed model, this class would extend to grade six, adding two more periods of usage to this space, bringing it to a total of 6 periods out of 7 per day. This space could also allow for use by specials classes, such as Chorus. This space would also be used by the robust Drama program that currently performs one musical each school year.

Design needs for the Performance Technology Studio include:

- Near other performing arts spaces
- Flexible seating for 150-200
- Sound system with sound board, receivers, mics
- Separate tech operator space, accessible from inside space
- Light board with lighting system
- Storage for props etc
- Changing rooms
- Close proximity to restrooms for BOH and FOH
- Dedicated backstage area
- Projector, white board
- Student chairs and chair storage

Auditorium

The Galvin Middle School currently maintains a cafetorium which is woefully inadequate to support the district's expansive middle school performing arts curriculum. Presently, GMS offers drama courses to grades 7 and 8, and music ensemble to students in grades 5, 6, 7, and 8; hundreds of students are currently enrolled across these performing arts programs. While drama and large musical ensembles are best suited to practice and performance on the stage, the cafeteria is used for both breakfast and lunch, as well as school assemblies, team and grade level meetings, and other curricular and extracurricular programming. These activities render the cafetorium unusable for drama and music ensemble practice in

a shared space, due to the large volume of students and noise level associated with these activities. In many instances, drama classes are displaced to other areas of an already overcrowded building, while multigrade music ensembles are unable to meet due to scheduling conflicts with meals or other large student meetings. This causes disruption to student routines, and also impedes drama class, as regular classrooms are not set up for acting, improv, and movement and theater games. A separate auditorium would allow an intentional and important opportunity for drama classes to meet in a space specifically designed for practice and performance, and provide space for the Galvin's three large musical ensembles (band, choir, and orchestra) to practice together during the school day. This space would also offer expanded opportunities for GMS to offer drama classes in grades 5 and 6.

Historically, the GMS cafetorium is used for an average of 233 nights per year, while the high school auditorium is used for an average of 261 nights per year. More specifically, the GMS cafetorium is currently used afterschool for student clubs, step team, play rehearsal, and talent show rehearsal, all of which compete for space; an auditorium would also allow for expanded after school opportunities for students, including the addition of a musical theater performance, a capella and glee club groups, and additional musical ensembles. Elementary and middle school plays also have an average of 502 attendees per night - this is a far larger audience than any cafetorium option would allow. An auditorium would allow for students to perform at their home school in front of large audiences of parents and community members in an appropriately sized and designed space with ideal lighting, acoustics and seating. The auditorium also doubles as a community resource, providing a beautiful space for town events, meetings, and performances.

A gymnasium is also woefully inadequate for many of the same reasons as stated above. Additionally, with the amount of usage our gymnasiums are far too great to also put our drama course in the same space. We could not have both physical education and drama classes happen simultaneously in the same physical space.

At the third community forum on November 20th, hosted about the GMS building project, of 91 participants, 80 participants voted that Canton Public Schools should invest in an auditorium over other options. The Canton Public School Committee and Building Committee are both fully supportive of a separate auditorium, and unanimously voted at a joint School Committee and Building Committee meeting on December 20, 2023 to move forward with the building of an 800 seat auditorium and stage. This vote included full understanding and recognition that this auditorium would be paid for by the Town of Canton, with an additional associated project cost at a centerpoint of \$16,790,670, and is not eligible for reimbursement by MSBA funding.

The auditorium would be used for the GMS musical performance, as well as a shared space with the GMS Music program. The auditorium would also provide an alternative space to the high school auditorium for performances and events and a key asset for community use. It will also provide a valuable space for grade-level assemblies with students. In particular, it will allow us to invite guest speakers and presenters who would have access to the

presentational tools they would need for impactful messaging and performance.

Design needs for the auditorium include:

- Full stage, curtain
- Adequate wing space for ease of sets
- Light system
- Sound system to support 24 mic channels with receivers and full sound board, wireless mics, mic packs, mic stands, overhead mics
- Fly space above stage for full backdrops, with automated fly bars
- Dedicated changing areas, close to bathrooms backstage and FOH
- Costume storage closet
- Dedicated storage space for stands, risers, chairs
- Large Pit area
- Seating for a minimum of 500
- Tech operating booth at front of house
- Air conditioning
- Projector
- Concession area
- Ticketbooth
- Proximity to exterior entrance
- Moveable concert shells for acoustics
- Large wing space
- Projector, Projector screen
- Vestibule
- Space should be community welcoming, accessible, ramps to stage
- No bar in double doors, large doors for access of sets
- Close proximity to loading dock

11. VISUAL ARTS

Students in grades 5-8~~6-8~~ Visual Arts classes create artwork in our hands-on studio art program while engaging in a variety of art-making experiences through drawing, painting, mixed media, ceramics, and sculpture materials. Our curriculum aligns with the Massachusetts Visual Arts standards and nurtures creative thinking, self-expression, and artistic intent as key components for growth in the visual arts. Students find that our art studios are all inclusive learning spaces where every student can find individual success while learning to work collaboratively with their peers. Our vision for the space is one that is warm, welcoming, creative, collaborative, innovative, flexible lighting/furniture for teaching/students, fostering student ownership of the studio spaces - organized with easy access to materials and student storage. Spaces that make student learning in the arts visible and encourage active learning.

Additionally, model inclusion studio classrooms will have adaptive equipment for students with unique learning styles that support accommodations for OT, PT, SEL, and communication needs which will continue to foster and expand our working relationship with our school's ACCESS and Therapeutic programs.

At GMS, as we continue to build our vision for the future of Visual Arts, we envision more opportunities for students to explore expanded forms of art, from 2D and 3D art to digital art and graphic design. As such, we are looking for art rooms to have enough flexibility and robust technology to support multiple art forms. Though we cannot predict what technology will look like 3-5 years from now, we imagine that within a general art space, our students will also be able to use high powered digital devices (i.e. laptops, iPads, etc.) to create more digital and graphic forms of artistic expression.

Design needs for Visual Arts studios include:

Art studio classrooms

- (3) large art studio classrooms with windows, demonstration space/table/area, project tables and stools
 - To support digital/multimedia art, each room should also support the use of digital devices, color printer, scanner, 3D printers, Cricut machines, teacher workstation/desk and projector
 - To support high-powered digital devices for students (strong graphic cards, lots of processing power & RAM, HD/2K/4K monitors) with Adobe Creative Cloud software and networked for teacher supervision

- Ample classroom storage for student work and materials, ample counter space, hanging space for student work and instructional visuals, white board.
- 2-3+ sinks with multiple faucets in every studio classroom
- Teacher desk, color printer, and projector in each classroom.
- Easy access to common supply storage area and kiln room.
- Light blocking blinds to help with projection needs during instruction, and ample access to wall outlets for charging and equipment.
- Cubby area to store student belongings.
- Proper ventilation in all spaces to support kiln, electronics, clay dust, and fumes.
- Centralized project work tables
- Storage for equipment/materials,
- Hanging space for student work and instructional visuals, white board, projection screen, green screen, flat-file storage, counter space for materials/equipment.
- Supply storage area with open storage shelves and movable bins for organizing/transporting materials, large flat-file storage drawers, carts for transporting materials, and a prep/work area.
- Kiln Room with a large kiln and open shelves for drying student work.
- Dedicated display spaces/cases/enclosed bulletin boards throughout school to showcase student work.
- Multiple power outlets around the room and in a drop-down format, teacher workstations (for tools that require separation from students for safety purposes, such as paper cutters for example),
- Outdoor access would be optimal, to allow for environmental art as well as opportunities to use the landscape for potential projects,
- Furniture that is flexible by design with art in mind, including high top tables, stools for students, tables that can tilt and recline for drawing,
- Room for a variety of art-specific equipment like light tables and color printers,
- Design of the Art Rooms should have a studio quality, to emphasize the many career areas that incorporate the visual arts,
- Both the Art Rooms and the School should have multiple display areas for student work. The classroom would benefit from shelves or cases to showcase student

models and exemplars. Additional spaces in the school should contain cases and bulletin boards to display student's artwork (both 2D and 3D work). Preferably in areas with high student traffic.

12. WELLNESS

Current

The Canton Wellness Department will encourage, educate, and motivate our students to make positive daily decisions and develop healthy lifelong habits.

The Wellness curriculum provides students with the opportunity to develop their physical, mental, and social well being. We provide students with critical learning experiences focused around how to pursue physical well-being, social/emotional learning, mental health, substance use prevention and awareness, human development, stress management, healthy coping skills, nutrition, bullying prevention, advocacy, and transferable life skills. Our program aims to help students develop in 8 unique dimensions of overall wellness in alignment with the SHAPE America National Health and Physical Education Standards. We challenge students to become aware of how their everyday choices impact their overall well-being and the well-being of those around them. Classes are designed to be fun, dynamic, and educational every day. We utilize project-based learning units across all classes, plt4m fitness education, Wayfinder SEL curriculum, and Break Free From Depression. This serves students in their everyday life and choices beyond the walls of class. Project Teammate and Access Health are also connected to Wellness.

Health classes use a project-based learning model and cover several sensitive, but appropriate topics for adolescents in the middle grades. We are hoping for an overall connected space where all things geared toward physical education are in the same area of the building together. We hope to have a fully functional gymnasium that will hold 60-90 or more students at a time to ensure it holds at least 3 physical education classes with storage space and student locker room/restrooms attached. The gymnasium and Wellness spaces are ideally on the first floor with immediate outdoor access for when classes utilize outdoor space. We hope to have a functional fitness and movement education space to facilitate student fitness education in grades 5-8. We also hope to have a space for adapted physical education and health to operate in as well that is independent from the other movement or classroom spaces so that proper equipment and resources can be kept directly in those spaces. Ideally, we would have three classrooms that can be dedicated to health education and that would include the appropriate appliances and set up to support food, cooking and nutrition units. We would greatly benefit from at least 3 health education classrooms to house health education for all students year round in grades 5-8 without the need for any teacher to travel to teach

a health class beyond the Wellness classes or area.

Health Room and Physical Education Gymnasium Utilization

The GMS Wellness curriculum consists of both health and physical education. Our wide range of academic and active instruction requires staff to use gym and classroom space, or sometimes a combination of the two based on activities and curriculum.

Currently, students in grades 6-8 take 2 days of health (a blend of movement- and academic-based activities) and 2 days of physical education in a seven day cycle for the full year, while students in grade 5 take one 45-minute section of physical education and one 45-minute section of health per week. This translates to 12 sections of health and 12 sections of physical education for each grade level (6-8), and an additional 12 sections of health and 12 sections of physical education in grade 5 per week; this equates to at least two health classes and two physical education classes happening simultaneously. Given our schedule, there are also a few times when three of each course may be occurring at once. When fifth grade is added, at least three spaces for each will be needed to accommodate the additional grade receiving instruction at the same time as grades 6-8.

Proposed

For the proposed Galvin Middle School building, several areas of the facility design are at the forefront of curriculum development and instruction in the Wellness Department:

- The Wellness Department needs physical movement space like a gymnasium or physical fitness space for 3 or more classes of 60-90 students to be in at a time, at least 3 health education classrooms to support health education for all students year round, adapted physical education/movement space, room for equipment, and staff meeting and planning space
- Gymnasium to support 60-90 or more students at once, fitness/physical movement space for fitness education, 3 or more health education classrooms, adapted physical education space, staff office space, equipment storage space, student locker room space
- Open movement space, space for functional fitness education, classroom setting for health education
- A gymnasium with ample size (at least three - four teaching stations, separated by drop down curtains/dividers) to accommodate large groups of students is essential, and supplements the games and activities in the Physical Education curriculum. The gymnasium should have two full-courts with 9 basketball hoops. A climbing wall and other indoor Project Adventure elements (cargo net, hanging ropes) would also

greatly enhance the team-building goals and objectives of the Wellness Department. Three - four teaching stations in the gymnasium will be critical in the 5-8 model for providing Wellness instruction as well as for community usage. The Canton High School athletics uses the middle school gymnasium space as well. Freshman basketball practices daily at the Galvin. In the fall and the spring, when weather requires indoor practices, other sports use the Galvin as well. As noted in the Community Usage section of this document, the current gymnasium at Galvin Middle School is a well-used, valued community asset that many community groups rely upon. Further detail is provided in that section.

- Bleachers for one of the full-court gymnasium spaces to accommodate our intramural and Unified Sports programming. Our students compete in basketball and cheerleading against other schools in the winter. Our teams travel and host teams in our home gym. Additionally, two years ago, we established a Unified Sports basketball team to support our inclusive programming. Our Unified team plays intramurally as well, hosting basketball games that are one of our most well-attended and supported student events.
- Adequate storage space (minimum of two indoor closets and outdoor storage containers) is of high priority. Adequate electrical outlets and a quality sound system in the Gym are two design elements that must also be addressed.
- Additionally, a true Fitness Center -- equipped with age-appropriate cardio and strength training equipment -- should be considered a “must have” in the design of the new building. This fitness center would also serve as an appropriate space for adaptive PE and OT/PT services for Special Education services. The current physical education curriculum includes strength-based units and capitalizes on the use of the PLT4M technology that builds a healthy and life-long love of fitness in students.

Adaptive P.E./Fitness Center

A well equipped fitness center is essential to meet the needs of Galvin's diverse student population. Canton prides itself on its effort to retain the maximum number of students possible within the District, minimizing out of District placements. Part of these school-based programs include occupational and physical therapy and adaptive PE. A fitness center would provide the appropriate space to meet the needs of students within our various substantially separate programs. Additionally, the fitness center would allow for greater inclusion and participation during general education wellness classes. Middle school is a challenging time for many students and playing games with peers can create anxiety which leads to low or no participation in physical activities. A fitness room that is directly adjacent to the gym would allow the wellness teachers to have individuals or small groups getting

exercise in a smaller space during wellness classes. All open blocks would be available for use by Wellness Classes.

13. SPECIAL EDUCATION

Review of the Special Education Rubric and Regulations

Since the previous state review of Canton did not include facilities, the CPS Special Education Department reviewed the rubric for the purposes of this plan. Looking at the four standards for ensuring accessibility, it was found that none of the four standards is being met in full. Currently, there are few designated classroom spaces for inclusion services and substantially separate programs are located in corners of the building. They are close to the main office and nursing office but are not team- or grade-aligned. While the Canton Public Schools provide all necessary equipment for individual student needs, the District is unable to provide non-individualized audio or lighting treatments and must rely on individual FM systems and cloth coverings. For the standard of ensuring equity, the Canton also fails to meet the requirement of Special Education spaces being equal, in physical respects, to general education classrooms.

Most general education classrooms meet basic subject-specific designs; all Science classes are in Science Rooms; STEM Rooms have appropriate equipment. The ACCESS Program room is a prime example of how a space was reallocated without transitioning the space to the appropriate use. The ACCESS room used to be a home economics space, complete with several kitchen stations. Some of the stations were removed, and some left for use by the program, however, the room was not able to be redesigned to best fit the needs of the program. The current building does meet the standard for minimizing stigmatization by not isolating Special Education spaces in one place, and by only serving middle school aged children in the programs at Galvin Middle School.

Current Special Education Program Offerings

Inclusion

The majority of students that receive Special Education services receive them in the inclusion setting. Each grade level has an inclusion program, and they are spread across all nine teams for maximum integration. Most inclusion students also have a scheduled academic support class that provides assistance in organization, test preparation, skill building and other needs that may be outlined on a student's Individual Education Program (IEP).

Design needs for the inclusion special education program would be:

- A half-size classroom embedded within each team for grade level academic support, including multiple white boards
- Private testing spaces connected to each team, with a window for viewing into the room for supervision, allowing students to focus on testing,
- Office space for itinerant staff members.
- Special education evaluation room

ACCESS Program

Galvin Middle School houses five substantially separate programs. The depth of these programs allows us to retain the majority of all Special Education students within their home school and district, providing them access to their peers and educating them within their community. All of our programs are designed for maximum inclusion, which provides a meaningful educational experience for all of our middle school students. The All Students Can Expand Skill Sets (ACCESS) program provides a highly individualized and modified curriculum for students with Autism spectrum disorders, developmental disability, and/or intellectual impairment. In addition, students in this program exhibit significant impairment in some or all of the following areas:

- verbal communication
- social interaction and pragmatic skills
- comprehension
- behavioral and emotional regulation
- adaptive daily living skills
- ability to acquire new skills

The program utilizes a multi-disciplinary approach to enhance communication, socialization and sensory integration. Visual symbols and augmentative communication are used throughout the classroom to assist students in understanding of classroom activities, schedules and rules. Emphasis on behavioral based methodologies (i.e. discrete trial, applied behavioral analysis, multi-sensory etc) and the development/strengthening of functional skills are integral components of the program. Low student to teacher ratio maximizes the learning of new skills and reinforces appropriate behaviors. Students are integrated into the general education setting on an individual basis as determined by the team. Students practice activities of daily living, including Cooking, hygiene, access and mobility, and travel

training. Students also engage in Engagement in curricular activities in the areas of ELA, math, science, and social studies. Opportunities for inclusion should be beneficial, meaningful, and tolerated by the student. A District behavioral specialist (BCBA), Occupational therapy, Physical therapy, and Speech and Language Pathology consult to the program regularly. These services are grid based according to the students' individual needs and educational plans.

Design needs for the ACCESS special education program would be:

- Flexible classroom space and furniture
- The program supports 8-12 or more students and 3-6 staff- the size of the space is important.
- 2 connected classrooms on the same floor; movable acoustic partition to allow for the rooms to be opened into one large space as appropriate given grouping
 - One room for activities of daily living, including a washer, dryer, sink, refrigerator, stove, and living space
 - One room for academics and groups
- Connected restroom for toileting needs
- Space for students to de-escalate, take breaks and regroup to rejoin the class.
- This program space should be near speech and language and occupational therapy rooms

Therapeutic Classroom

The Therapeutic Classroom (TC) program is a District-wide academic and therapeutic program, addressing the emotional, behavioral and learning needs of students who have an emotional impairment. The TC program provides specialized Instruction by design to target student learning profile, as well as consistent wrap-around therapeutic supports throughout the day. Placement in the TC program is determined by students' IEP goals. Students will have the opportunity to access inclusion classes and the opportunity to learn the same material in a setting with a smaller number of students.

Counseling, guidance, and student services are all connected to support students in this program. The Therapeutic Classroom space should provide a soothing environment to engage in academic growth while supporting emotional needs, a student breakout space, as well as inclusion opportunities with space to process and gain support.

Design needs for the TC special education program would be:

- 2 separate classrooms
- Access to the gym/ opportunities for movement breaks
- Close to single stall bathroom
- Rooms close to each other
- Centrally located between grade level teams

Homebase

Homebase is a general education support to increase student access to the curriculum. It is used as a Tier II and Tier III intervention program. It is designed to aid in the transition back to school from an extended absence. Students entering Homebase receive informal academic support from a general education teacher. The Homebase program also addresses the need for a safe and supportive place when students are experiencing emotional distress. Students may receive short term or in the moment counseling and debriefing as needed.

Design needs for the Homebase program would be:

- Calming space with differentiated seating
- Near a restroom
- Near the nurse
- Close to guidance suite
- Quieter part of the building

Language-Based Program

Language-based learning disability (LBLD) refers to a spectrum of difficulties related to the understanding and use of spoken and written language. LBLD is a common cause of students' academic struggles because weak language skills impede comprehension and communication, which are the basis for most school activity.

Design needs for the Language Based program would be:

- Working space for students access to inclusive environments.
 - Access to typically developing peers
- Ability to work in small break out groups

- Targeting Phonemic awareness
- Targeting receptive and expressive language (input and output)
- Targeted time to work on reading fluency and comprehension
- Multi sensory working spaces
 - Instruction with a kinesthetic approach

Related Services Offerings

Speech

The Speech program is designed to provide social communication support, pragmatic language support, and movement and writing support. The Speech program is a pivotal support for our students with Autism Spectrum needs. These programs support students with other learning needs. Students will engage in small groups to generalize skills across peers. Staff include the speech pathologist and occupational therapist.

Design needs for the Speech program would be:

- A small classroom for small group work to generalize learned skills
- Near or attached to a sensory movement space
- Light and bright
- Access to technology
- A sink to clean up multi sensory activities

Occupational Therapy

Occupational Therapy (OT) program is designed to provide support in the areas of sensory and motor development, manipulation and hand use, visual-perceptual skills, motor planning and coordination, daily living skills, work skills, organization, and the use of assistive technology and adaptive equipment.

Design needs for the OT program would be:

- A small classroom for small group work to generalize learned skills
- Near or attached to a sensory movement space

- Light and bright
- Access to technology
- A sink to clean up multi sensory activities

Physical Therapy

The Physical Therapy (PT) program is designed to provide support in the areas of motor development, manipulation and hand use, motor planning/ coordination, and implementation and supported use of adaptive equipment. These therapies aid students in movement (gait and balance), flexibility, muscle strengthening, and range of motion.

Design needs for the PT program would be:

- A small classroom for small group work to generalize learned skills (this could be space shared with APE or a Fitness room with breakout space for therapies.)
- Space for storage and maintenance of specialized equipment
- Adjacent to or near space used by Adapted Physical Education or fitness room
- Near or attached to a sensory movement space
- Light and bright
- Access to specialized equipment individualized to students needs
- A sink to clean up multi sensory activities

Adapted Physical Education

Adapted PE provides opportunities for a differentiated physical education experience to address needs with gross motor skills and/or developmental delays.

Counseling/Social Skills Groups

School Psychologists, Adjustment Counselors, Home/School Interventions and Guidance Counselors are responsible for behavioral supports, social skills groups, small group and individualized counseling and consultation with staff and parents. In addition, the School Psychologists conduct psychological testing for evaluations.

Assistive Technology

Assistive technology services directly assist with the selection, acquisition or use of technology devices such as: equipment or product system (software) that can be used to increase, maintain, or improve the functional capabilities of a student with disabilities.

Applied Behavior Analysis Services

Individualized programming for children with Autism Spectrum Disorders using the principles of applied behavior analysis to increase skill acquisition and decrease maladaptive behaviors. Regular review of data and programming, training of staff and regular consultation to classroom and families is provided by a Board Certified Behavior Analyst.

Proposed

There are no proposed programmatic changes for the substantially separate programs at GMS., however each program will, given the recent vote, include our 5th grade students to mirror the services they currently receive at the elementary schools. No programs will be eliminated and no additional programs will be brought back into the District. The increase in numbers of student who require services as part of our specific programs will increase our space needs for special education, ie - two ACCESS classrooms, one for students in grades 5 and 6 and one for students in grades 7 and 8

The 5-8 Galvin Middle School would allow for true integration of Special Education services. All inclusion academic support classrooms would be a part of their team pod, appearing as any other classroom in the neighborhood. There would be no signage designating that room for any type of specialized instruction. Galvin would have a half-size special education classroom included within each team to better support the students and allow for greater integration among the overall school design. Small group break out spaces in the team neighborhoods will also support the special education service delivery. Physical inclusion is equally important to inclusion within the classroom. Placement of all Special Education spaces would follow the design of peer and grade integration. Additional related service spaces would also be integrated throughout the building.

Additional Spaces Needed:

- Team Chair Office
- Conference Room for meetings (in addition to guidance and main office conference rooms)
- BCBA office adjacent an ACCESS classroom
- Room with suspension equipment (ability to hang suspension equipment)

- Spaces will be designated for related service providers in the areas of:
 - Speech and Language Pathologists
 - Occupational Therapists
 - Physical Therapists, access to APE space
 - Behavior Specialists, office
 - Adaptive Physical Education
 - School Adjustment Counselors, Counseling suite
 - School Psychologist, etc.
 - Team Chairperson
 - The following related service providers will use small-group spaces within each grade level team as they are shared staff throughout the District:
 - Vision and Hearing Specialists
 - Reading Specialists

The new middle school will include many smaller meeting rooms for individual and small group tutorials, outside therapists, and specialists. These rooms may be used for regular teacher/tutor meetings and for small group testing environments and will be fully immersed within the academic neighborhoods.

14. TECHNOLOGY EDUCATION

The GMS Technology and Engineering curriculum is built with a focus of developing conceptual understanding and real-world problem solving skills through a broad variety of hands-on projects and activities, based on the Project Lead the Way curricula. All GMS students take technology classes 2 days per cycle. Instruction is provided by 2 technology and engineering teachers. Using the Engineering Design Process through a project based learning approach, students engage in relevant and rigorous learning experiences. Technology/engineering grades sixth through eighth students explore, engage and learn Computer Aided Design, Robotics, Transportation, Manufacturing and Communication Technologies. Teaching and learning experiences include, teacher directed content delivery, thoughtful hands-on activities, phenomena investigations, collaborative group work and projects, and design challenges. Technology and Engineering also allows students to develop 21st century skills, including collaboration, communication, critical thinking, and creativity; therefore tech and engineering can be connected to all programs at GMS.

Beginning in sixth grade with a rigorous Design and Modeling course, Project Lead the Way (PLTW) provides hands-on opportunities for our students to solve real world problems while working through the Engineering Design Process and to learn skills to promote confidence and curiosity. Learning that we can solve problems for others encourages empathy in all we do. With a strong foundation of the design process our students move onto more complex technology systems in seventh grade.

Seventh grade students follow the Energy and the Environment Curricula from PLTW. Students use their logical thinking and problem solving skills to form a deeper understanding of the world around them by exploring communication and transportation systems and technologies. We explore the history and evolution of technology as a way to share ideas, knowledge and materials with others while also focusing on logical problem solving and reasoning. Eighth graders follow the Computer Science for Innovators and Makers curricula from PLTW. By completion of eighth grade, students will demonstrate a fundamental understanding of the Engineering Design Process and necessary skills by participating in our Innovation Summit. Students will explore the world around them and improve or redesign solutions to share with the local community. Students complete 8th grade as competent problem solvers with a sound knowledge of technology, tools and programs and how they relate to and improve their world.

Currently, two technology classes are located on opposite ends of the building. One space is an old carpentry classroom with immobile desks and immobile, non-functioning carpentry equipment. The other classroom has pair desks with unattached chairs, but lacks any storage. In the new GMS, Technology & engineering learning spaces would allow students to create solutions to relevant real world questions and problems through engaging and exciting design challenges. A flexible technology & engineering learning space that would also allow for meaningful collaboration between teachers and students.

Based on this vision and current programming, design needs for the technology and engineering program include:

- Adaptable and flexible classrooms with convenient outdoor access
- Two tech/engineering classrooms close to each other
 - Functional and accessible storage closets for each classroom with space to store student projects mid-work
 - Moveable teacher station/demo table

- Content delivery space with traditional student desks with unattached chairs
- Multiple projection options
- Student inquiry space with large flexible tables or islands
- Convenient access to electrical outlets, preferably in floor
- 3D printing lab (3D printmaking is part of the PLTW curriculum)
- Convenient outdoor access
- Teacher refrigerator, cooktop, & oven
- Outdoor water feature for water wheel and similar testing

When grade five is brought into the middle school, we would look to add a fourth PLTW unit designed specifically for these students which would replace their current 5th grade instructional technology/media block.

15. CLUBS

GMS afterschool clubs are an afterschool extracurricular program that is run by staff members. Clubs provide a fun and engaging afterschool community where students can explore activities that interest them and create relationships with peers and staff. This provides an opportunity for students to stay after school to extend their school day. Clubs are currently offered during 3 sessions per school year (fall, winter and spring). Some clubs are 5 weeks, some are 10 weeks or for the entire school year. With the addition of grade 5, these enriching club experiences would also be extended to even more students. GMS clubs include many common teaching and learning experiences. Students stay after school and engage with staff members and peers to extend their school day. In the 2022 - 2023 school year we had over 300 students join at least one club. This year, our fall club session has 290 students registered to participate in 33 different club offerings. If needed students are supported by additional staff to meet their individual needs. Clubs utilize previously existing spaces and systems, including:

- At least 20 different classrooms support a variety of clubs
 - Numerous gym spaces provide space for sports clubs (basketball, soccer, pickleball, volleyball, etc.)
 - A separate auditorium provides space for performing arts clubs (theater, acting, singing, etc.)
 - Numerous outdoor spaces provide space for outdoor sports clubs (soccer, flag

football, wiffle ball, golf, etc.)

- Open collaborative spaces support STEAM activities (robotics, lego, art, rocket etc.)

After school buses transport students home.

16. STUDENT SUPPORT SERVICES & ADMINISTRATION

Health Office

Health Services supports student health and academic achievement. Space includes two full-time registered nurses in the Health Office. Mandated Health Screenings are conducted for all students in the Health Office annually. GMS nurses have up to 100 nurse visits a day, students are seen on an as needed basis for illness or injury as well as scheduled visits for medication administration and medical treatments. Health Office should be located close to the Guidance Office as the nurses work closely with the guidance counselors through student referrals

Nursing promotes wellness and health for students. Goals include reducing the time students spend in the Health Office and increasing classroom learning time, completing mandated screenings and health education. Other programs connected to this program are the Guidance Department, The Wellness Department, and Food Services. The vision is a welcoming, warm, comfortable environment with an emphasis on privacy and confidentiality. Students should feel safe and comfortable in the health office environment. Additionally, the health office should provide adequate space to isolate ill and contagious students from well students with ventilation. The nurse's space should be visible from the doorway entry. The health office should also include confidential accessible space for medical meetings. Design needs for the health office would include:

- Two desk/work spaces are needed for each nurse where they are able to view each other for collaboration
- A waiting room for students waiting for nurse assessment
- Two private exam/treatment rooms
- Separate space is needed for 4 beds for injured/ill students
- Private closed space to conduct scoliosis screenings, parent or staff meetings, student emotional support, etc. This can also be used for diabetic treatments. This space would need dividers for privacy

- 2 handicapped accessible restrooms with sinks
- Space for med lock boxes/medical records/medical equipment storage
- Built-in supply closets
- Ventilation and windows

Counseling Department

The Counseling Department consists of seven counselors, three adjustment, three school counselors, a home-to-school interventionist (a certified adjustment counselor) as well as an annual counseling intern from a local graduate program. The counseling department supports our students through the critical middle school years when they are developing their identity and exploring social circles. Counselors play a critical role in supporting faculty in understanding student needs and how they impact students' abilities to be successful. Counselors partner with families to help them manage issues inside and outside of school so that a true partnership forms between school and home. Seven counselors see a wide population of students on a daily basis

Families frequently come in and meet with counselors and teachers to collaborate on student issues. Counselors work collaboratively to provide wraparound services to our most vulnerable youth

Counselors need to provide additional space for students to process emotions and work through issues that are troubling them. Students often come down in pairs when they need to talk about something difficult or troubling. The Counseling office should feel like a welcoming, warm, comfortable environment with an emphasis on privacy and confidentiality.

Design needs for the Counseling Office include:

- 7 counseling offices in the same office suite so that counselors can work collaboratively on student cases, with a waiting open space for students to come and wait for their counselor with an administrative assistant at the front.
- Two confidential, accessible meeting rooms, allowing multiple groups and meetings simultaneously, specifically during before and after school hours, as well as during X block
- 2 extra offices for the director and interns
- A copier/storage room

- Private bathrooms for students who are crying or escalated, in order to process and deescalate before they go back to class
- A sensory room will provide space for meditation, calming, and de-escalation
- Small kitchen
- Counseling suite should be in proximity to students but also near the main office staff; the guidance suite should not be a direct part of administration, so that students feel safe and comfortable and discipline issues are not overlapping with counseling; ideally, the ideal design solution would include an internal connection between guidance and administration so students in crisis can move from guidance/counseling to the front door or administration in privacy

Administration

The GMS administration is responsible for ensuring safety and operational consistency. The administrative team plans and delivers professional learning sessions for the faculty in order to foster a culture of innovation and dynamic learning. The team needs to be able to host meetings with various stakeholders in the school community on a regular basis in order to make decisions that advance the work of the school as a whole. The administration includes the academic and operational leadership team in the building. Principal, Assistant Principal, Dean of Students, Team Chair, Instructional Coach, and three administrative assistants. The main office of the building should be separate (but not necessarily detached) from the guidance and support offices in the building. Ideally, they would be adjacent to one another with a connecting feature. The main office should enable efficient and secure check-in of guests. Administrative office space should be designed to foster important conversations while ensuring a degree of privacy related to sensitive topics. The main office should include a large, bright reception area so that visitors and invited guests feel welcome.

Design needs for the administrative offices include:

- Each administrator needs a dedicated office space, not necessarily in the same suite
- A large multi-use conference space
- Administrative offices should be adjacent to guidance and support services offices

17. TRANSPORTATION POLICY

Canton Public School students in grades 5-8 who live more than 2 miles from school are provided bus transportation to their school at no cost. Students who live within 2 miles pay a fee for bus transportation. The number of students needing bus transportation will be determined each summer and could add to some additional bus traffic at the school.

Presently there are 20 buses, five mini-busses, and 25 passenger vans that transport approximately 1,000 regular and Special Education students daily for the Canton Public Schools. At the present time 107 grade five students get transported daily by the Canton Public Schools. We would anticipate this number increasing because students would no longer be attending their neighborhood school and may be traveling further in town to attend the middle school. Students are transported to their respective schools in three tiers, with middle school students picked up and dropped off first, high school students picked up and dropped off second, and elementary students transported to their schools last.

There is an expected increase in cost to moving grade five students to a new middle school because of the geographic location of the school. Mitigation for any increased traffic by buses or cars will be provided at a new Galvin Middle School with improved roadways, clearer signage, improved lighting, and better sight lines for vehicles and pedestrians. There are currently separated bus and car drop off and pick up areas at GMS. To maintain safety and relieve congestion a new Galvin Middle School should also have separate bus and parent/guardian pick up areas.

New or existing walking paths, sidewalks, and crosswalks will be built or upgraded. They will be well lit, clearly marked, and will provide students, staff, and community members safe passage into and out of the building. All transportation and access improvements will be ADA compliant.

Strategically placed bike racks will provide more opportunities for students and staff to use an alternative method of travel to school.

Parking at the new school will be adequate to serve the needs of the school during the day and will also be sufficient to serve the Canton community for town-wide events during out-of-school time.

Additionally, the Town of Canton and the Canton Public Schools will ensure that the Galvin Middle School is designed to ensure:

- Safe access for bus traffic that does not interfere with drop off and pick up traffic

- Safe and controlled access for deliveries
- Recess and recreation areas that are protected from traffic

18. FUNCTIONAL AND SPATIAL RELATIONSHIPS AND KEY ADJACENCIES

Current

Organizationally, Galvin Middle School faces a number of challenges. Originally designed to support departmental school organization, the building does not fit the middle school team structure that Galvin (and most modern middle schools) currently employs. Team or “neighborhood” organization of middle schools creates smaller, more personalized learning environments, which foster interdepartmental collaboration and support social-emotional learning. These teams also help provide a sense of belonging for students, helping them to foster an identity that unites them with their peers and makes them feel supported and secure. The existing building is not designed to support this teaming structure, and does not provide the neighborhood-based support spaces that make this model truly successful.

Furthermore, as the Galvin Middle School evolves its pedagogy to meet up-to-date learning criteria, the School has developed STEAM integration, as well as a robust teacher collaboration model, and is implementing more project-based, hands-on instruction. The current building layout provides no dedicated spaces for STEAM-integrated work, project-based work, teacher collaboration or student collaboration.

Building navigation and location of publicly accessible spaces are also problematic. A network of dark, circuitous internal corridors makes wayfinding in the existing Galvin Middle School difficult. Spaces that are often the destination of outside visitors and parents – such as the gymnasium and medical suite – are located far from the main entrance and create a security issue when visitors need to access these locations. Navigation and layout deficiencies also impact student support services. These services often end up being housed in smaller spaces that are unsuitable, and end up being tucked away in whatever spaces can be carved out for them in an already crowded building.

It is not only the corridors that are dark: The original building was constructed in 1972, at a time when it was considered acceptable to design classrooms without direct access to natural light and ventilation. We now know that student performance is negatively impacted by the lack of fresh air and sunlight, yet many of the internal spaces in the existing building – classrooms, included – lack this access.

Proposed

The educational visioning sessions provided much insight into the aspects of the proposed educational environment and its ability to support the desired educational program. Many of those concepts are captured in the above-defined requirements for specific program areas. However, there are also overall functional, spatial, and adjacency requirements not mentioned above that are documented below.

During Visioning Session 4, participants reviewed a list of design considerations and space needs identified by stakeholders throughout the visioning process. Using a prioritization strategy called “making the cut”, table groups placed items above or below the “cut line” based on whether or not they thought the item should become a guiding design principle or design feature for a future GMS. Items placed above the line made the cut, and those below the line, did not.

The following guiding design principles and design features are listed in priority order, with those items placed above the cut line receiving one point.

- True teaming via community pods centered around a collaborative space
- Architectural elements to support a calming environment (quiet spaces to compress; softened sightlines in transition spaces; no sharp corners)
- Alternative cafeteria spaces; smaller dining spaces
- Spaces for displaying student work in creative ways
- Breakout spaces in and out of classrooms
- Flexible classrooms spaces that can combine and separate; collapsible walls
- Use of outdoors for more than just learning (eating / breaks)
- Independent workstations outside of classrooms
- Centralized open spaces for gathering with working spaces adjacent
- Culturally-responsive building
- Small group spaces near or attached to classrooms for small breakout
- Teacher planning space
- Accessible building during off times
- Performance space for large and small groups

- Ample gym space to support clubs and interests
- Students entering MS have more defined sensory options
- Multimodal learning stations within classrooms
- PE dedicated outdoor space

The overall functional and spatial layout of the building is built upon the following key concepts and is rooted in our overarching project goals:

- Creation of team learning communities to provide smaller learning environments that will better support personalized learning as well as social, emotional and academic student support.
- Creation of a variety of flexible, adaptable learning spaces within team communities and throughout the building that can be utilized to support teacher collaboration, student collaboration, and hands-on, project-based learning.
- Specials centralized yet adjacent to grade level learning communities to support collaboration and interdisciplinary opportunities among specials and core academic classes
- Media as connective tissue among each learning community
- Visible learning beyond display cases
- Maximize access to natural light and ventilation and create ample opportunities to access outdoor learning spaces.

Team Learning Communities

With the research showing an overwhelming benefit to having more personalized learning environments for students – particularly in the middle school years, the strategy many districts find themselves employing is balancing the operational need to maintain “fewer and newer” buildings by consolidating populations into one location with the educational/social need to create smaller, more personal learning environments that can cater to individual students’ needs.

The foundational organizational unit of Galvin Middle School is the Grade Level Team. While GMS has employed a team structure for some time now, the physical layout of the current

building does not support it. The proposed Middle School will provide each team with its own academic learning community. Each of these neighborhoods will serve as the “home base” for their team, providing a more personalized learning and social environment within the context of the larger school.

Each learning community will consist of the following:

- (4) learning studios to support core subjects with a visual presence on the learning commons
- (1) Science lab/room and associated prep space per team Special Education-related rooms as required by District programs
- (3) Small group rooms with a visual connection to the learning commons for student collaboration, teacher collaboration, interventions, and testing
- Collaboration space, including PBL Media Commons
- Teacher collaboration and planning space to serve as home base for faculty, specialists, and paraprofessionals
- Bathrooms
- Direct access to an outdoor learning area
- When possible, paired classrooms in each learning community have opportunities to open up to one another via acoustic and magnetic writable movable partitions (specific design to be further explored in later design phases).

Centralized but adjacent to team/grade level learning communities will be the following:

- Instructional and office spaces for professionals delivering support services
- Specials rooms and their associated support spaces – Art, STEAM, etc.

Within each team, classes are assigned neither a teacher nor subject – and educators can choose what space they want to use on a given day. One room per team should have a dedicated kitchen area to support cooking as project-based, interactive learning. For example, a world language class may use the room so students can learn to cook in their native language and health wellness courses can implement food and nutrition units of study.

The three learning communities within each grade level will be organized through a stacked vertical separation. This organization allows for teams within the same grade level to collaborate vertically, and it allows for teams across grade levels to collaborate as well. Though in this model there is not a specific delineation between a lower (5-6) and upper (7-8) school, the district has directed the design team to look for design strategies that will create more synergy among grades 5-6 and 7-8.

Creation of a Variety of Flexible Learning Spaces

A key component of the team neighborhoods is the inclusion of a variety of spaces that support the pedagogical goals of the school. One example provided during visioning was the potential for collaboration between Social Studies, Science, and ELA departments during the 8th grade capstone Civics project. In this months-long inquiry project, students investigate an environmental or social justice issue of their choice and its impacts on both a community level and national or global level. Students then research possible solutions and develop pitches to change community behavior. Ultimately, students create multimedia presentations in small groups which are presented to parents, community, and local government stakeholders during a grade-wide public convention. Open flexible learning spaces could provide a place where the departments could work together to create, practice, and deliver presentations.

The move towards a more project-based instructional style is dependent upon the provision of spaces that support collaborative group work both for students and teachers. The proposed Galvin Middle School will provide a variety of these types of spaces. Academic learning communities will be home to several breakout spaces and design features allowing for learning and collaboration to happen beyond the four walls of the classroom. These spaces and features include the following:

- Small Group Rooms -3 per grade level team for individuals or groups of 2-4 students that may want to spill directly from the classroom or from the larger collaboration space.
- Project-based Learning (PBL) Media Commons - one large collaboration space per team learning community; the district and design team envision these as dynamic, multi-use spaces that serve as environments for breakout, small and large group instruction, team assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Book stacks and other media and STEAM resources (i.e. sinks and low-tech equipment) related to making and project-based learning would also be located here.

- The use of transparency and adjacency will ensure that these spaces are open, welcoming, well-supervised, and acoustically controlled; movable partitions between classrooms and between classrooms and the large PBL media commons will be explored further in the design process but preference will be made to varying the size and transparency of openings to allow some rooms within each learning community to be more extroverted than others.

In our educational vision, flexibility doesn't end within core academic spaces and the small learning communities. Rather, shared spaces (i.e., gym, cafeteria, auditorium, and performance technology studio) should also be flexible enough to accommodate the needs of the educational program and the community before, during, and after the school day ends. For example, the cafeteria should be flexible enough to serve as a place to eat but also as a place for collaborative, project-based work or professional development. Project-based media commons should be flexible enough to accommodate individual or group study and research and be a place where students can exhibit work and their work for parents and community to see. Since performance-based assessments will be an integral part of our teaching and learning model, any proposed design should allow for the community to interact with students as they demonstrate their command of subject matter and skills through project-based learning exhibitions.

Connection to Outdoor Learning Spaces

The benefits of learning outdoors have been well documented: students perform better academically, have better health, decreased stress, and decreased behavioral issues, to name a few. Connecting curriculum and instruction to outdoor spaces enriches education by providing expanded opportunities to engage students in hands-on, real-world learning.

In addition to taking advantage of on-site outdoor learning spaces, the current Galvin Middle School is situated directly adjacent to a number of athletic fields and surrounding woodland—a town resource which offers a variety of other outdoor learning opportunities, walking paths, and a single outdoor classroom space.

Team Neighborhoods should have direct access to outdoor learning spaces, which will provide additional project space, social space, classrooms, performance space, study areas, recreational space, and other support areas for the educational environment.

Other outdoor learning connections to be incorporated include student dining, Visual Arts, Music and Wellness.

Additional Considerations

Within the public zone, design alternative should support the following:

- Administrative suite immediately adjacent to the main entry of the facility with direct visual access to the building approach and the main entry
- Guidance above administration but connected with an internal stair to support privacy of students in crisis
- Some distribution of administration offices may be desired. This distribution of resources is believed to have some potential benefits in controlling security and discipline.
- Auditorium and performing arts spaces located near the front entry to put programs on display

Within the private zone, design alternative should support the following:

- Each grade level organized into clearly marked but not entirely isolated teams; design should separate students by grade level but still allow for some level of connectivity and collaboration
- When possible, specials classes should be centralized for easy access to grade levels yet still located at the entry to grade level teams to allow interdisciplinary opportunities and collaboration
- Special education distributed throughout all grade level teams to maximize inclusive practices, allow for effective delivery of support services, and reduce travel times for students
- Spatial relationships to support flexibility, student choice, and project-based learning

19.ACCESS AND SECURITY

The security design of the new Galvin Middle School will build upon the current safety and security design of the other buildings across the District. Cameras will be placed throughout the inside and outside of the building and will be tied into the central camera recording system and software for the District. All exterior doors will be electrified, along with specified interior doors and tied into the district-wide access control system currently in use in other buildings. The security equipment that will be put into place will be designed to be non-intrusive to student learning, while also creating a safe environment that can be secured

and monitored both from a central command center and inside the school itself. This equipment will include:

- **Access Control System**

All exterior doors and a select number of interior doors will be electrified, and will be controlled by the same access control system used throughout the District. Staff members will receive identification key cards that will provide access to their building. Specific access schedules will be assigned to staff members based on their job type and access needs. The doors will also be connected to multiple panic buttons in the school and police station, in case of emergency and need for remote lockdown.

- **Security Camera System**

Security cameras will be installed around the entire outdoor perimeter of the school building as well as in entryways, hallways, stairwells, and other select high-traffic interior areas of the school. The School will work with school administrators, school resource officers and the Facilities Department to identify and select the areas in need of security camera installation. Access to the cameras will be given to a select group of administrators and installed on select computers in the School Department. All cameras will be tied into Canton's district camera system, in which a minimum of 30 days of recording will be stored. Access to the camera system will also be available in the Facilities Command Center, as well as the dispatch command center in the Canton Police Department.

- **Intrusion Detection System**

The School will also include an intrusion alarm system that includes motion detection, window and door contacts. Multiple alarm zones will be set up around the building with keypad panels. Access to security codes will be given to specific employees dependent upon job function and access needs. When an alarm is triggered, a notification will be sent to the Canton Police Department, as well as to members of Facility Director and school administrators.

- **School Emergency Notification System**

The School will install an emergency notification system that will interface with the VOIP phone system, PA system and school computers, which will allow for emergency notifications to reach the entire school population instantly in the event of a school emergency, lockdown or evacuation event.

- **Community Entrance**

There is a desire to have a designated entrance for community use for the auditorium and gymnasium, so there is appropriate access to the facilities but keeps the remainder of the building secure.

20. COMMUNITY USAGE

Galvin's facilities are a heavily utilized school site in the District and are used year-round by several Town and community organizations for residents of all ages. The Gymnasium, Cafetorium, and athletic fields in particular are indispensable community assets. The Cafetorium is the home of the Cole-Harrington after school care program which hosts more than 50 students a day until as late as 6pm. For the Galvin Gymnasium, usage is also very high. The current gym is 9,900 SF and allows for multiple activities to take place simultaneously. For the 2021-2022 fiscal year, there were a total of 457 events scheduled for evenings and weekends throughout the school year and over the course of the summer. For the 2022-2023 year that number was 481.

Based on community feedback, there is a strong desire to have multiple fields established -- turf and grass -- with lights on the site of Galvin Middle School. Additionally, there is a desire to have walking trails, playgrounds for multiple age groups, basketball courts and community gardens.

During the summer, the gym is used every weekday from 8 am until 3 pm by the Town Recreation Department and Cole Harrington for summer camp. During the school year, the gymnasium is consistently scheduled for usage by a variety of organizations for the majority of the day on most Saturdays and Sundays, and multiple evenings a week from 3 pm to 9 pm. Often during the school year, multiple events are scheduled for overlapping times.

Town and community organizations that utilize the Galvin include:

- The Recreation Department
- The Health Department
- Canton Youth Soccer
- Canton Youth Basketball
- St Gerard's annual Kids' Camp

Kids' Camp is a longstanding tradition in Canton, involving over a thousand Canton children and young adults and hundreds of families. The weeklong outdoor camp, which generally runs in the first week of July and is open to every Canton resident, is free of charge. There are a number of adult supervisors and coordinators, but it is largely student-

led by counselors who work with different camper age groups. Every section of the Galvin field space is used, including the large hill in the front as a water slide, affectionately named Splash Mountain.

Canton Youth Soccer uses the Galvin fields throughout the fall and spring, for practices and games. In Fall 2023, there are 480 participants on the travel team and 455 involved on the in-town teams, for a total of 935 participants. Last year, the total was 885. Last spring, Canton Youth Soccer had 834 participants.

Additionally, the Fine Arts and Athletic Departments use the Galvin for several different community events (concerts, rehearsals, practices, games, meets, etc.) for grades elementary through middle school.

The various youth leagues identified in the list above rely heavily on the Gym and outdoor space at the Galvin. Without being able to utilize a Gym the size Galvin currently has, and the number of fields currently offered, the sports programming for youth in Canton will be negatively impacted. Space is already a scarce commodity in Canton, between the various Town and community organizations that are seeking safe places to provide programming to residents and students. More space for these programs is needed, not less.

The first two organizations on this list -- the Recreation Department and the Health Department -- are especially strong partners and collaborators of Canton Public Schools. They work with CPS to bring programming, resources, and opportunities to our students as well as to the broader community.

The Recreation Department works with Cole-Harrington to offer after school programming for elementary school students, half-day enrichment programs on early dismissal days, and intramural sport options. CPS also offers a number of middle school interscholastic athletic programs including cross-country, cheerleading, and basketball so this partnership is key in providing students opportunities and exposure to athletics. We are looking to expand offerings middle school athletic offerings in the spring as well. The Recreation Department also offers basketball clinics and volleyball clinics, bringing together the coaches at the Canton High school with Galvin Middle School students interested in those programs. Additionally, the Recreation Department runs Community Service groups targeting middle school students and requires space at Galvin after school to do this.

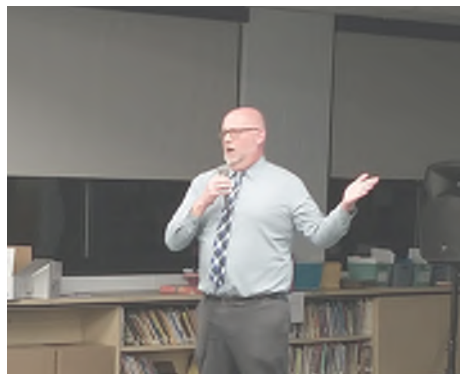
The Recreation Department uses the Galvin site for most of their summer camps and programs that run from the end of June until mid- August. There are between 250-300 students weekly, grades K-8th grade, involved in these summer programs at the Galvin site.

Without all these spaces, the offering of the Recreation Department to the town's youth would be impacted.

The Canton After School Program currently conducts programs for elementary students at the middle school. After school options for middle school students exist through our menu of staff-supervised extracurricular clubs and teams. Recently, discussions have begun to create a middle school academic support program after school at the Galvin. The afterschool program will need to be extended to the new building. The program would be able to use the existing spaces in the new building and any storage needs could be emotional regulation programming to the youth at Galvin (for example: yoga, fitness programming, meditation). Ideally having more breakout spaces with more flexible seating or a Wellness Center would help after school programming achieve its community-wide goals.



The Principals of Hansen, Luce, and JFK elementary schools



GMS Principal Jonathan Mulhern speaks about his experience as an educator, administrator, and parent.



Attendees participate in a live poll about grade configuration

Grade Configuration

Galvin Middle School is Canton's only public middle school, presently serving Canton's entire grade 6-8 student enrollment population. As part of the Feasibility Study phase of this project, the District has studied design options for both the current 6-8 grade configuration and for a grade 5-8 configuration. In the grade 5-8 configuration options, the fifth grade students from the town's three elementary schools would attend the Middle School, thereby creating a Town-wide school for grades 5-8.

This enrollment question has generated significant inquiry and many meetings have occurred regarding which configuration is most appropriate and best serves the students of Canton. Community members, students, parents, staff, administrators, and consultants have contributed to the discourse regarding the educational opportunities of a new grade configuration at the middle school, how different grade configurations address the social-emotional and academic needs of fifth graders, and questions about the impacts to the elementary schools.

This grade configuration study was acknowledged in the Middle School Enrollment letter dated September 8, 2022 from the MSBA. The District and Professional Team understand that as part of the Preferred Schematic Report (PSR)


submission, the grade configuration for the project must be determined with the PSR submission documents supporting the selected enrollment.

The consideration of grade configuration has been a touchstone throughout the duration of the Feasibility Study phase. In-depth presentations and discussions have occurred between the District, the Professional Team, the School Building Committee, the School Committee, and the community. In addition, grade configuration was considered throughout the development of each program area during the development of the District's Educational Program for GMS.

The analysis of the impact of the grade configuration decision is a significant task that must involve all stakeholders. To fully understand all aspects, topics associated with the decision were identified and presented at numerous meetings. Notably, the content and participant feedback from these meetings has consistently been reported to the School Committee, which is ultimately responsible for deciding the grade level configuration for the Galvin Middle School. The meetings that have included presentation and discussion of topics regarding grade configuration are identified and outlined in the chart on the following pages.

Community members, parents, teachers, staff, and administrators attended Community Forum #2 on October 25, 2023. The agenda focused on grade level configuration for the Galvin Middle School. District leadership, members of the design team, the owner's project manager, and the educational planning consultant also attended and presented at this forum.

EDUCATIONAL VISIONING #2 August 21, 2023



Student Centered Design

Student Centered Design

Physical Grade 5


- Flexible Groupings
 - work well with peers & adults
 - enjoy debates/discussion
- Need for movement!
 - Size of instructional
 - flexible furniture arrangements
 - in & out of the classroom
 - flexible classroom space
 - need for outdoor space - time - *ritual*


Social-Emotional

- Create social structures
- turn off + need social interactions
- Academic - *Self* benefits =
- developing conflict resolution skills
- sensitive to fairness / *got* comp.
- intrinsic for debate/presentation

PODS

I need to






GRADE 5

- Work well in groups
- Enjoy cooperative and competitive games
- Developing large muscles
- Enjoy collecting, classifying, and organizing
- Able to concentrate for longer periods
- Growth spurts lead to hunger and tiredness

GRADE 6


- Very social & engage with peers
- Enjoy competition and team activities
- Restless and energetic
- Growth spurts lead to hunger and tiredness
- Benefit from physical activity
- Enjoy challenge of increased responsibility




Student Centered Design

Student Centered Design

7th Grade





GRADE 7

- Spontaneous but care about peers' opinions
- Growth spurts lead to being fidgety and energetic
- Benefit from movement and activity
- Enjoy conversation

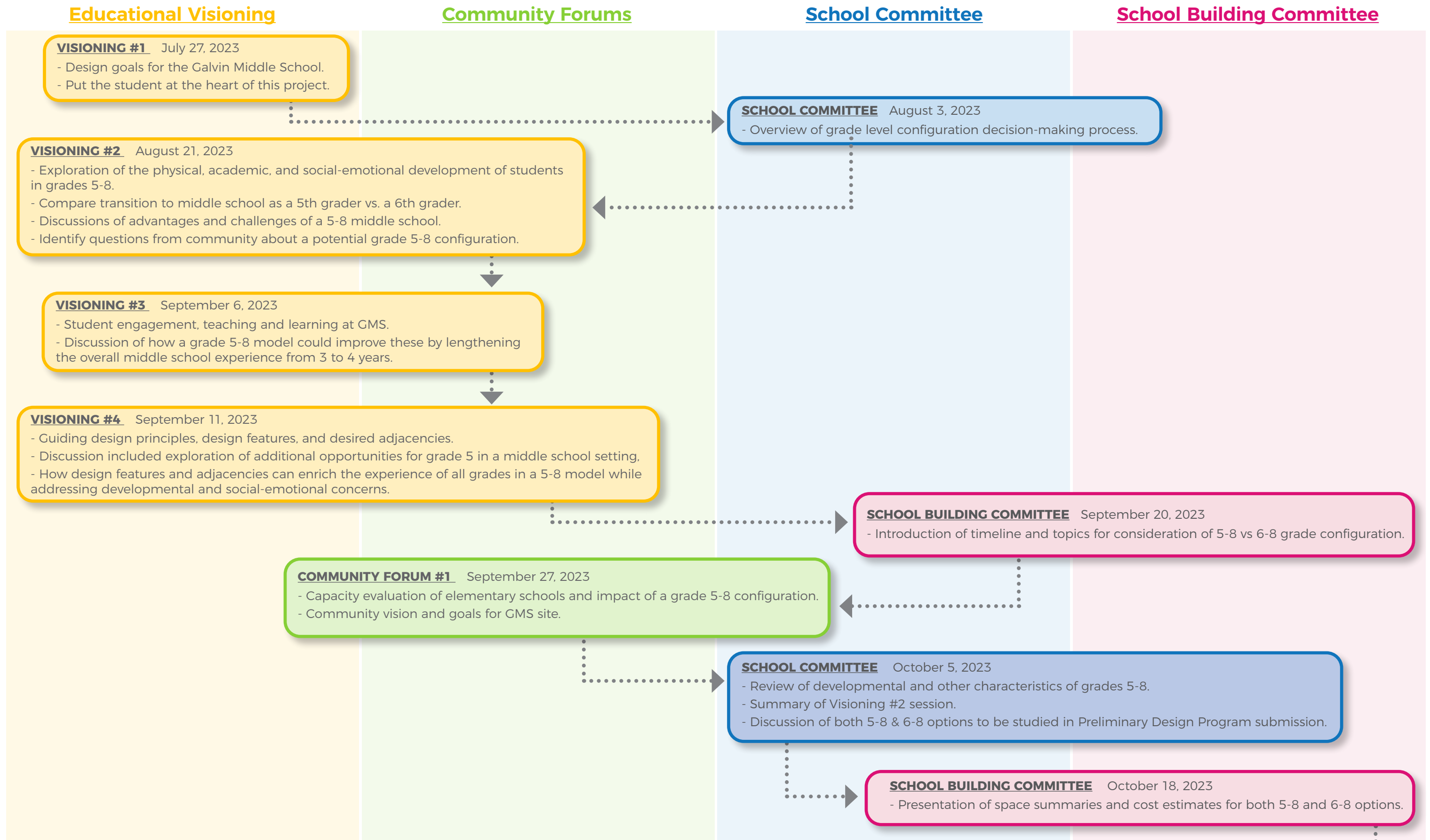
GRADE 8

- Pay close attention to what's in and what's out
- May need support working in groups
- Tentative or unwilling to take risks on academic tasks
- Likes to express their likes and dislikes (more vocal)
- Have lots of physical energy


During educational visioning sessions, **student centered design** was identified as the highest priority for Galvin Middle School, which became a key lens to inform and shape the discussions about potential grade configurations for GMS. These graphics and learner characteristics were developed by district elementary and middle school teachers and staff at Educational Visioning Session 2: The Learner Profile. They were shared at Community Forum #2 to show both similarities and differences in social and emotional development, learning styles, and physical characteristics of 5th, 6th, 7th, and 8th graders.

476

Critical meetings that discussed the topic of Grade Configuration



COMMUNITY FORUM #2 November 13, 2023



Case Study Interview
Dr. Nolin - Former Superintendent of Natick Public Schools

CONSIDERATION: Busing

- Natick has assigned seating, they are organized by grade level; so 5th at the front, 6th directly behind, 7th behind them, 8th graders - of course, kings of the bus - rule the back.
- For all the angst that went into worrying about this, **8th graders could not be less interested in 5th grade people.**

CONSIDERATION: 5th grade children engaging with 7th and 8th graders during dining and outdoor recess:

- Natick doesn't mix grade levels for lunches.

EDUCATIONAL BENEFITS: such as access to advanced placement programs, 5th graders have when they are included in a 6-8 middle school environment? Do 5th grade students have access to more specialized educational opportunities and support services at the middle school level than compared to an elementary school level?

- In terms of the total development of young people, we don't have a robust club offering scenario at the K-4 level. We also don't offer as much after-school music programs, dance, etc, but we do offer all of that at our middle school programs.
- The number one benefit we feel is that very early on in their academic career, grade 5 students are able to taste a bunch of different life experiences and club experiences.**
- The 5th graders do engage with older students through mentorship programs and support. We do have a tutoring program where 8th graders help with the 5th graders, so there are a lot of nice relationships that come.

What was your **COMMUNITY'S BIGGEST CONCERN** in regards to adding 5th grade to the middle school? How have these issues changed over time?

- The biggest focus has been on finding the balance to push students to the just right sweet spot of "hard enough" but "not so hard that it creates desperation and loss of hope", while they're going through this massive developmental change in the brain, the spine, the size of their body, the hormones, all of those pieces.

Natick:
Made the grade configuration shift to a 5-8 20+ years ago
Interview occurred in 2021

Case studies from two districts (Quincy and Natick) were presented to the community. Natick's decision focused on educational and social / emotional benefits to students at the middle school, but acknowledged that a 5-8 configuration alleviated space concerns at the elementary schools. For both districts, moving to a grade 5-8 configuration presented a significant cost savings compared to building additions / renovations or new building at the elementary schools to address educational program space and enrollment needs at the elementary level.

COMMUNITY FORUM #2 November 13, 2023



Student Centered Design


Student - Centered Design Considerations

- Still kids
- High energy
- Rapidly growing
- Small and immature
- Eager to please
- Searching for a social group
- Nervous, anxious, fragile
- Emerging executive functioning
- Overwhelmed
- Excited and sweet
- Prepubescent and young
- Seek teacher/adult interaction and approval
- Structured friendships
- Structure in academics and expectations
- Exploration and team activities
- Physical growth and need for movement and outdoors



A significant portion of Community Forum #2 focused on comparing the social-emotional development of 5th graders to middle school peers in grades 6-8 vs. elementary school peers in grades K-4.

SCHOOL COMMITTEE MEETING November 2, 2023



Community Forum #2 Recap

Community Forum #2 - Recap
October 25, 2023 - GMS Library

Multiple Choice Questions


Rank the following considerations the District needs to be mindful of when making the grade configuration decision:

- Peer-to-peer interactions
- Bussing
- Traditions
- Lunch/recess
- Access to clubs and programs
- Transition time - 3 or 4 years in same building
- Capacity at Elementary Schools
- Offering of Academic Programming

Row Labels	Sum of Values:
Peer-to-peer interactions	281
Capacity at elementary schools	220
Offering of Academic Programming	214
Bussing	163
Access to Clubs and Programs	155
Lunch / Recess	146
Transition time - 3 or 4 years in the same building	132
Traditions	82

Public input gathered at Community Forum #2 was presented to the school committee. This slide shows the members of the school committee how the community ranked considerations that they should be mindful of when making the grade configuration decision.

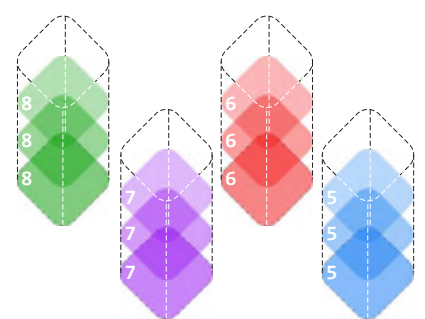
COMMUNITY FORUM #3 November 13, 2023



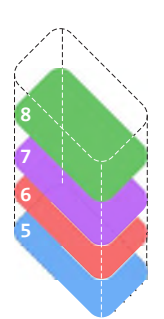
Building Organization

Grade-Level Configuration - Organization Options
Using building design & organization to control grade-level interactions

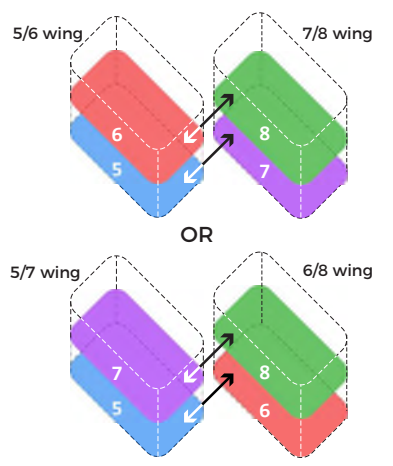
A new school can be designed to maintain separation between grade levels



A
Vertical Organization



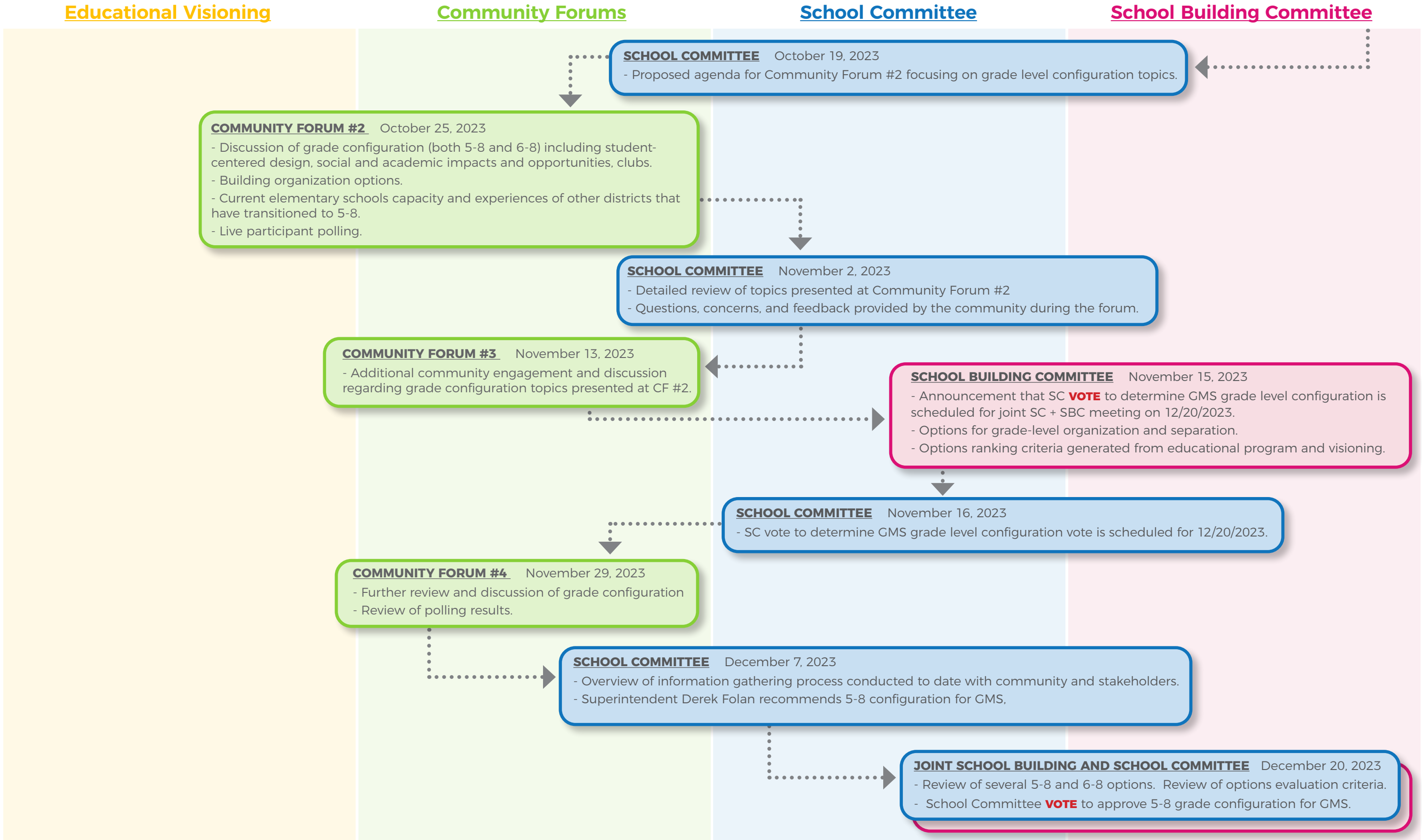
B
Horizontal Organization



C
Grade Level Component Organization

Discussions at Community Forum #3 included follow-up conversations about both opportunities and concerns for grade-level interactions in a 5-8 configuration.

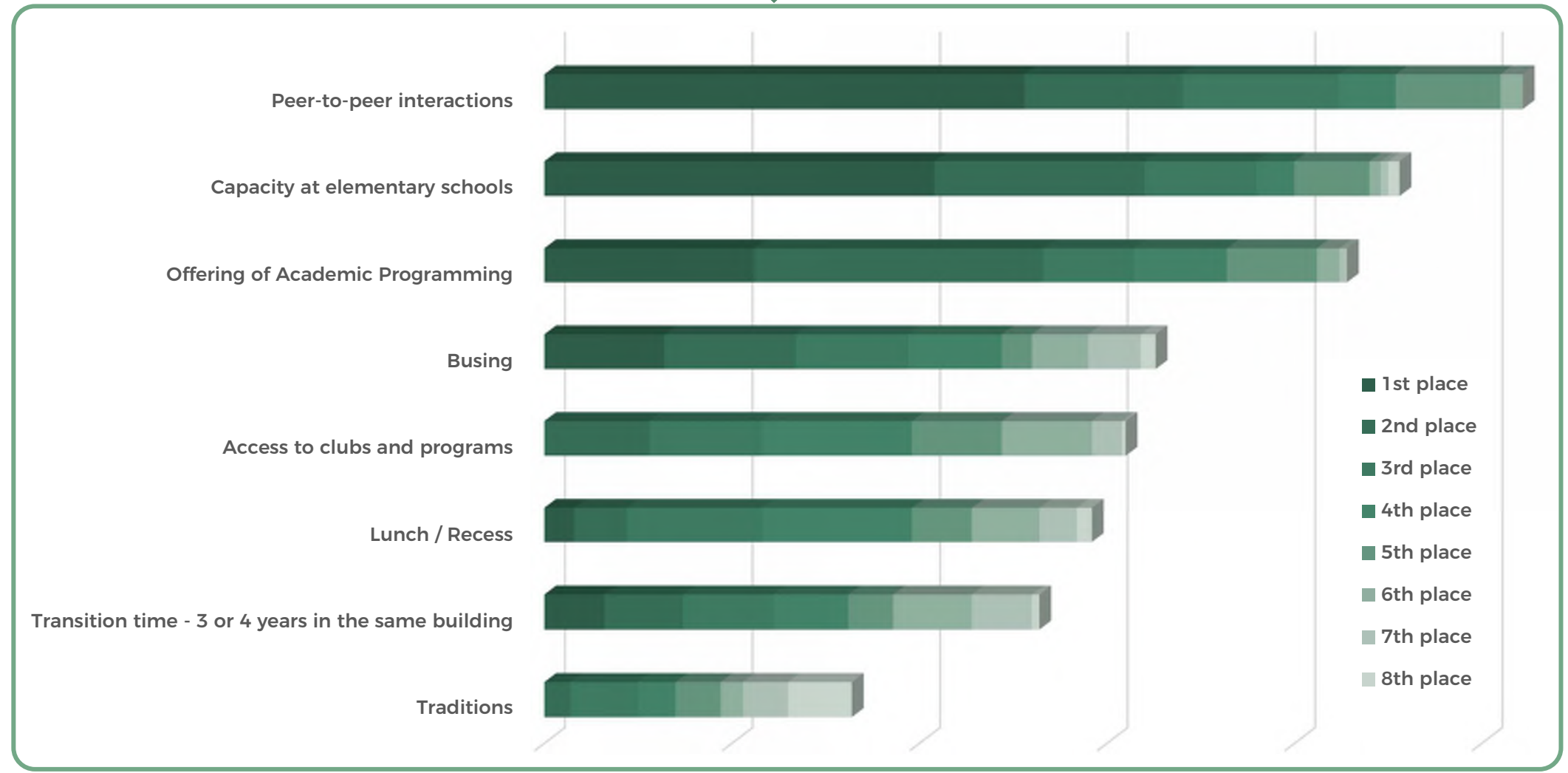
Critical meetings that discuss the topic of Grade Configuration



Participant Engagement at Community Forum #2

POLLING

Rank the following considerations the District needs to be mindful of when making the grade configuration decision:



OPEN RESPONSE

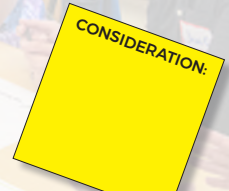


Activity 1 Post-it notes

1 Write one consideration you feel the School Committee should consider when making the grade configuration decision.

2 When finished, spend 3 minutes sharing your thoughts with your table

Please leave these post-it notes on your table when you leave this evening



Open Response: Advantages

- "Increased access to specials and specialty classes for 5th graders."
- "5-8 alleviates the capacity issues at JFK, Luce, and Hansen."
- "Children would have a longer middle school experience to build relationships."
- "An entire additional grade gains access to air conditioning"

Open Response: Questions & Concerns

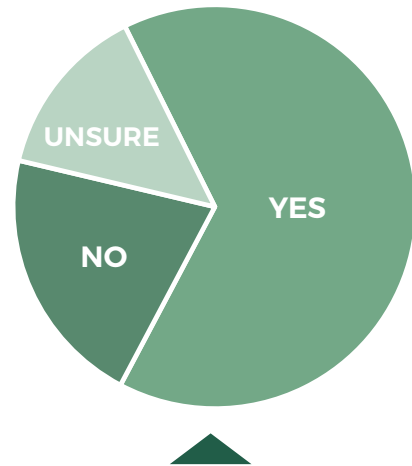
- "Age differences and maturity between 5th graders and 8th graders"
- "Concern w/ grades mixed on the bus."
- "Traditions - missing out on 5th grade milestones."
- "Are there other districts similar to Canton who have the 5-8 configuration?"
- "Separate wings for 5+6 and 7+8?"

PREFERRED SOLUTION

The Community Forums were held to ensure that the Canton Community was aware of the possibility of a modified grade configuration as well as to provide a platform to voice their thoughts, concerns, and ideas. Participant polling was conducted to receive a sample of feedback from those in attendance. For those who could not attend the forum in person, the virtual poll was made available on the project's website and open for one week after the presentation. Community members were also informed of the poll through emails, robocalls, and the community TV station. The poll included two questions: the first elicited respondents' ranking of concerns about moving the 5th grade to the middle school; the second provided insight into respondents' openness to the possibility of a 5-8 grade configuration. An open response activity asked participants to Refer to the adjacent bar graph and pie chart for the results of the poll and a sample of open responses.

In addition to polling, the discussions focused on the pedagogical and social-emotional benefits to 5th graders of being in a middle school environment.

While meeting participants expressed valid concerns about maturity and developmental differences between 5th graders and older middle school students, these concerns prompted discussions of how each concern could be addressed with either design, scheduling, or organizational solutions. For example, other 5-8 districts addressed concerns about busing by having students sit on the bus by grade level, with 5th graders at the front, then 6th, etc., and the oldest students at the back. Physical differences are respected by having a completely separate recess for 5th graders. Various architectural solutions can address concerns about peer to peer interactions among the grades. One example of a



Are you open to the idea of modifying the grade configuration of Galvin to include 5th grade?



design solution would be to provide 5th graders the benefit of neighborhood clusters in an academic wing shared with the 6th grade teams, while 7th and 8th graders could have their own wing. 5th graders would still mix with older grades in supervised settings such as club activities and dramatic and musical productions, which create a safe, structured, supervised opportunity for socialization and mentoring among mixed age groups.

The greatest excitement expressed by participants about the 5-8 configuration stemmed from two major areas: first, the social-emotional benefits of having 4 years instead of 3 years at middle school, giving students more time to transition through the tween phases, more support for the

PREFERRED SOLUTION

dramatic physical, social-emotional, and intellectual changes they are experiencing in these years, gaining more time to build deeper relationships with other students and staff, and developing a strong sense of GMS as their home base and community. Second, parents, educators, and administrators were all excited about the academic and intellectual opportunities for 5th graders in a middle school setting:

- more specials (music, art, and drama)
- more world language instruction
- access to better science labs
- access to makerspace and technical education space and more PBL (Project-Based Learning) experiences
- many more clubs, providing the opportunity to explore more topics and experiences at precisely the age when intellectual growth and curiosity align to support students' rapidly expanding range of interests.

Throughout these explorations, the discourse focused on the student experience, reflecting the fundamental goal of student-centered design expressed at the first Visioning session for the Galvin Middle School. However, while the focus was on the middle school student experience, it was also important to evaluate how grade K-4 students in all three elementary schools would benefit from a 5-8 configuration.

Proposed Future Use of Existing Spaces

As a result of the elementary schools capacity analysis conducted for the District during the Preliminary Design Program, it was already known that the three elementary schools suffered from capacity problems and the inability to meet all educational programming needs in the existing elementary school spaces. The preliminary conclusion was that all three schools in their current grade configuration are either at capacity or overcrowded and do not provide the District with the appropriate space for specialized programs, testing, evaluation, and collaboration spaces. The district evaluated the middle school grade configuration question from a middle school student perspective, focusing on the educational and social-emotional benefits for students in a grade 5-8 configuration. However, the benefits to other grades and the opportunity to alleviate significant space challenges at the elementary schools was also an important consideration in the school committee's evaluation.



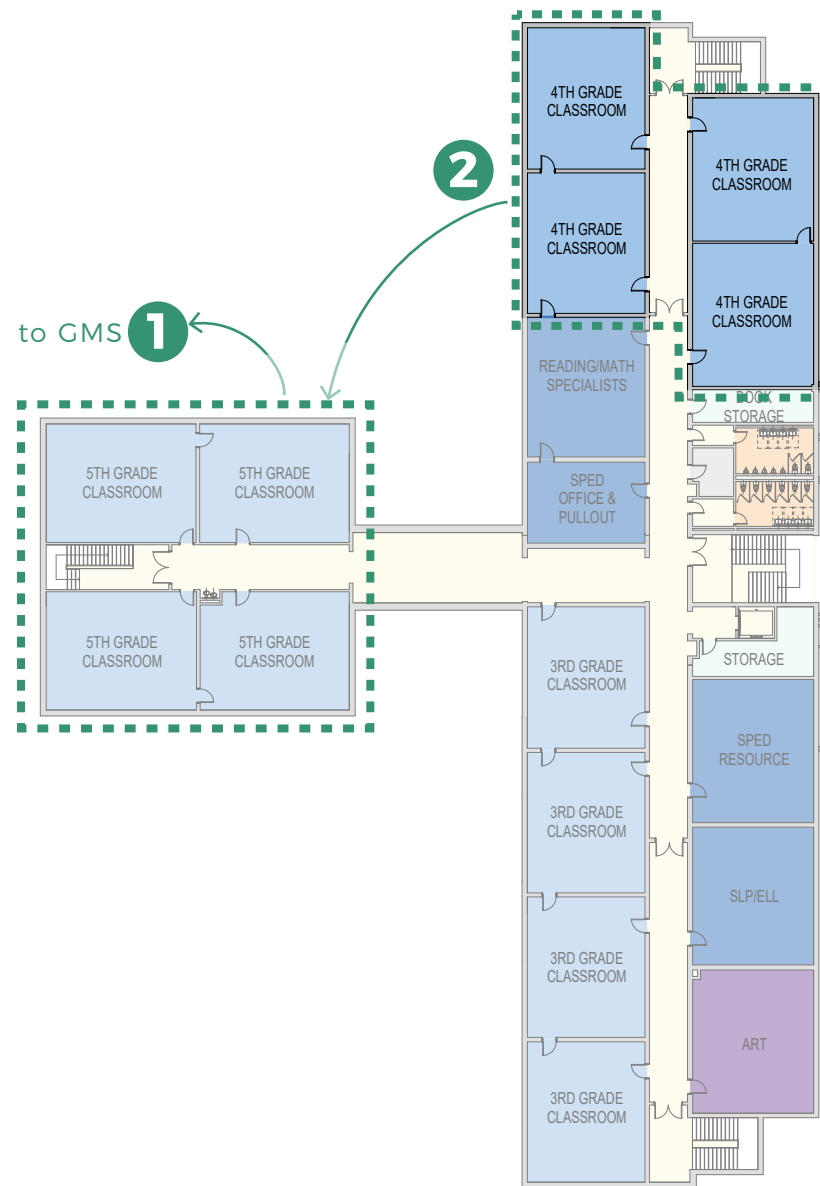
Example of a flexible, small group breakout space adjacent to general academic classrooms. There are almost no small group collaboration spaces provided by the current spatial layouts in the Canton elementary schools.

PREFERRED SOLUTION

Existing Floor Plans
Lt. Peter M. Hansen Elementary School

- Step 1:** Grade 5 moves to Galvin Middle School.
- Step 2:** Grade 4 classrooms are located in former grade 5 classrooms
- Step 3:** Utilize newly vacated spaces for Music classroom, Health classroom, Loop classroom, Reading / Special Education classroom, or Conference room.

- 3 NEW SPACES:**
- Music classroom
 - Health classroom
 - Loop classroom
 - Reading / Special Education classroom
 - Conference room
- *Examples of new spaces are based on current needs.*



Floor 2



Floor 1

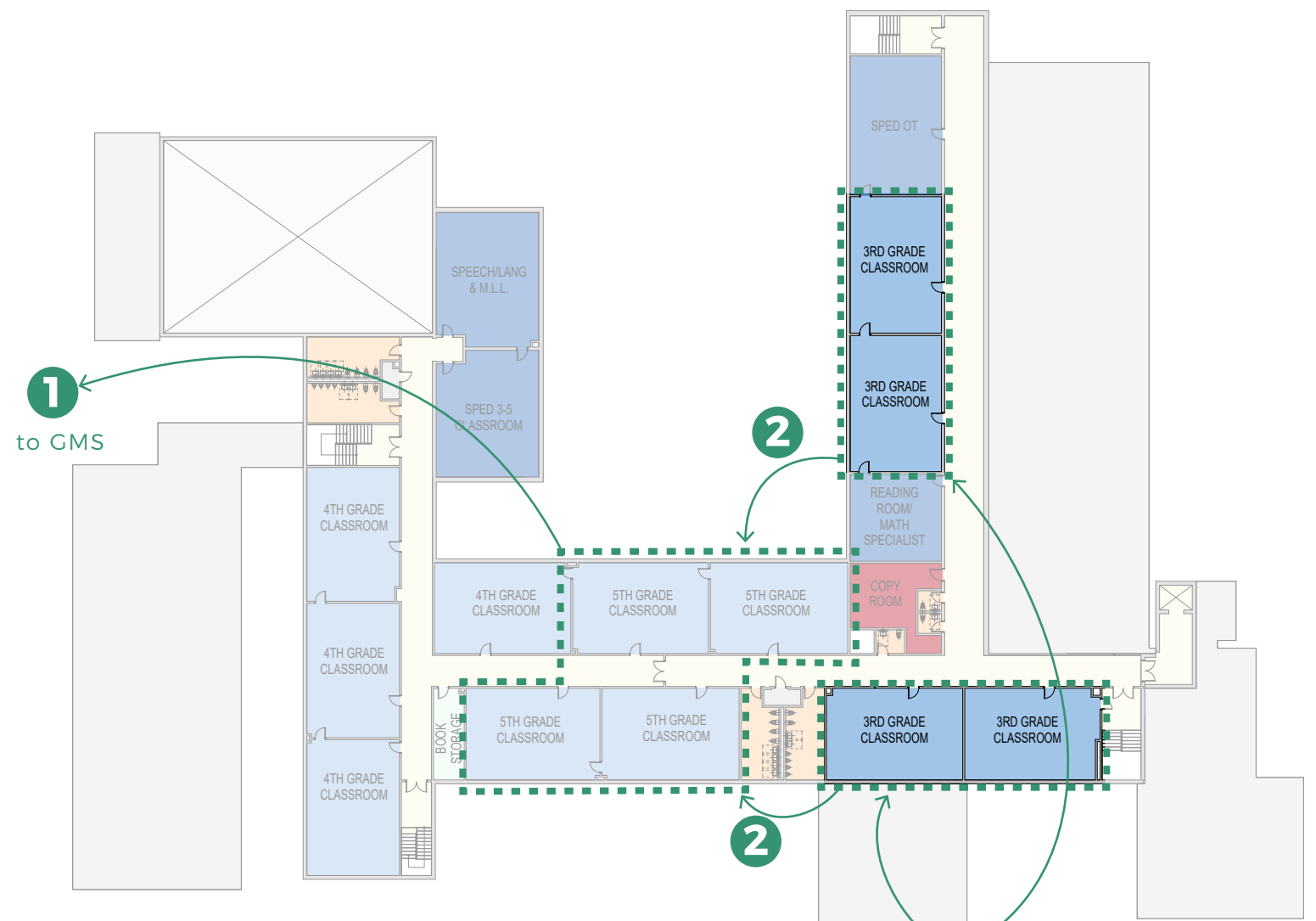
PREFERRED SOLUTION

Existing Floor Plans
John F. Kennedy Elementary School



Floor 1

Step 1: Grade 5 moves to Galvin Middle School.
Step 2: Grade 3 classrooms are located in former grade 5 classrooms
Step 3: Utilize newly vacated spaces for Computer & Technology space, Counselors' Office, Calming space, and Testing space.



- NEW SPACES:**
- Computer & Technology space
 - Counselors' Office
 - Calming Space
 - Testing Space

▶ Examples of new spaces are based on current needs.

Floor 2

PREFERRED SOLUTION

Existing Floor Plans
Luce Elementary School

- Step 1:** Grade 5 moves to Galvin Middle School.
- Step 2:** Two grade 4 classrooms are located in former grade 5 classrooms.
- Step 3:** Utilize newly vacated spaces for Student Collaboration space, Small Group space, Conference room, Testing space, SEL & Sensory room.



- 3 NEW SPACES:**
- Student Collaboration space
 - Small Group space
 - Conference room
 - Testing space
 - SEL & Sensory room
- ▶ *Examples of new spaces are based on current needs.*

Of the three elementary schools, overcrowding at Hansen is the most pressing. In recent years, the school reaches capacity before all students have registered, meaning that any late summer new student registrations must be assigned to one of the other elementary schools. Alleviating overcrowding at Hansen would enable all Canton elementary students to attend the elementary school in their own neighborhood. The removal of the fifth grade from Hansen would also be beneficial to the school academically and social-emotionally. With four available classrooms, there would be greater opportunity to add specialized spaces including a dedicated music room, a health classroom, an additional special education and reading room, and an additional general classroom to accommodate grade level enrollment bubbles.

At the Kennedy school, removal of the fifth grade would also be beneficial to the school academically and social-emotionally. With four available classrooms, there would be greater opportunity to add specialized spaces including a computer and technology room, office space for a team chair and counselor, a testing space, and a calming space.

At the Luce school, academic and social-emotional benefits to students would be attained through the addition of specialized spaces including a computer and technology room, conference room, testing / breakout room / small group collaboration space, office space for support staff, and a SEL and sensory room.

Moving 5th grade to the middle school will not only provide dedicated spaces for existing programs that struggle to meet student needs due to lack of space, but also create opportunities for flexible, collaborative, and project-based learning at the elementary schools.

It should also be noted that a K-4 configuration would allow for nearly all grade-level classrooms to be co-located, facilitating team teaching, use of resources, and opening up opportunities for collaboration. Currently, of the 18 grade-level teams in the three elementary schools, 3 teams are not co-located. In the new configuration, only one grade-level team would not be fully co-located. (Refer to the plan diagrams on the preceding pages.)

On December 20, 2023, the School Committee voted to modify the grade configuration within the Canton Public Schools to include 5th grade at the Galvin Middle School. All three elementary schools will adjust from K-5 to K-4 enrollment when the new Galvin Middle School is ready for occupancy. ♦

Architectural Response to Educational Program

Preferred Schematic Option

On January 24, 2024, the School Building Committee voted to submit Option 9e as the Preferred Solution that will continue to be developed and refined through the Schematic Design phase. It is a new construction option for grades 5-8 that will include an auditorium. Option 9e received the highest total score on the Building Options Matrix completed by the SBC and was selected as the best option to fulfill the priorities of the Educational Program and Statement of Interest.

The organization of Option 9e stems from two academic wings running parallel to the student commons at the heart of the school. The efficient layout engages the site for views and daylight while being sensitive to open space and cost constraints.

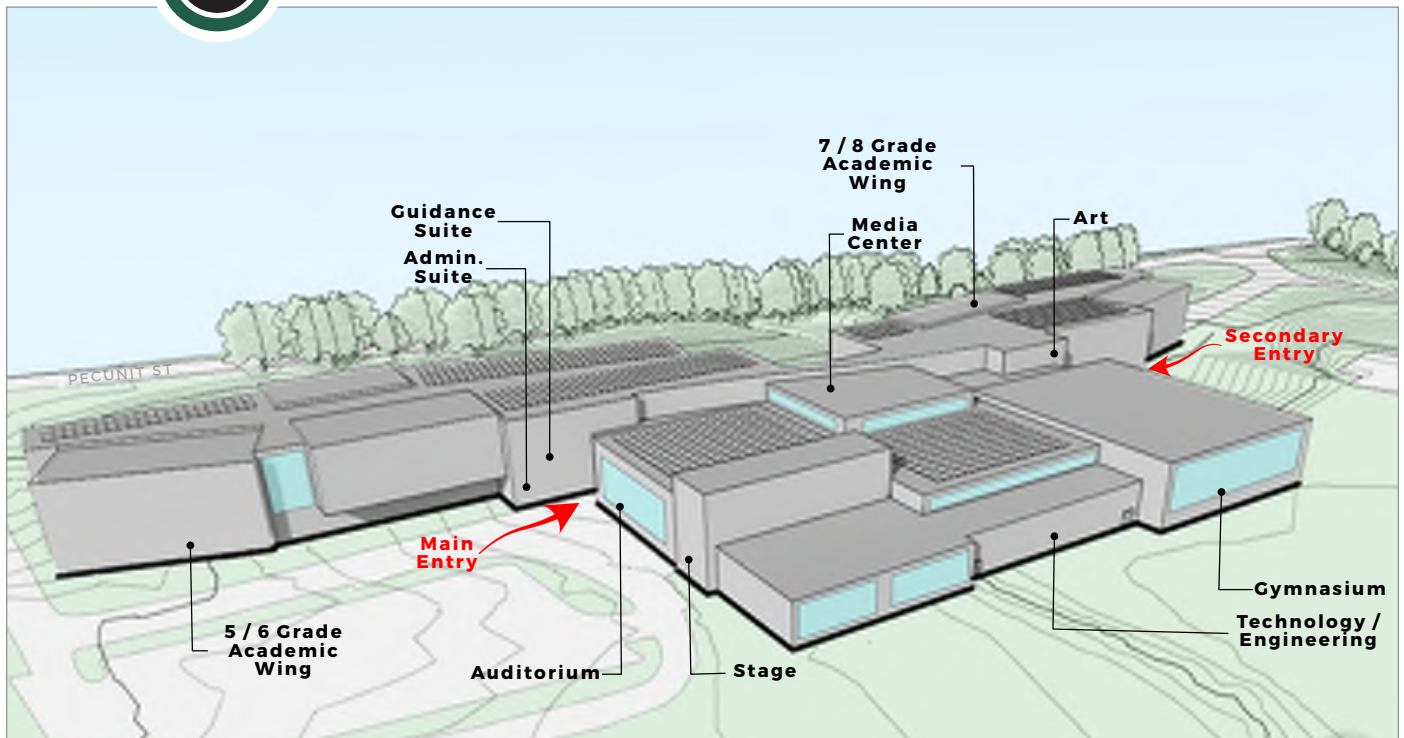
Option 9e: Summary

GRADE LEVELS	▶ 5-8
ENROLLMENT	▶ 1020 students
AUDITORIUM	▶ YES
FLOORS	▶ 3
ADD / NEW SF	▶ 218,350 SF
RENOVATED SF	▶ 0 SF
TOTAL SF	▶ 218,350 SF
EST. DURATION	▶ ± 36 Months

The following list and diagrams demonstrate how this option aligns with the Educational Program.

9e

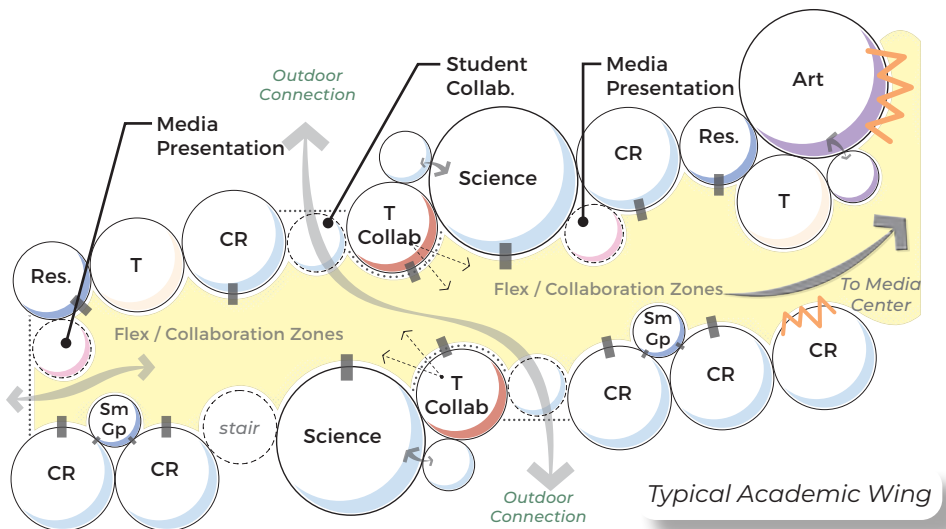
New Construction w/ Hybrid Stacked Grade-Level Teams



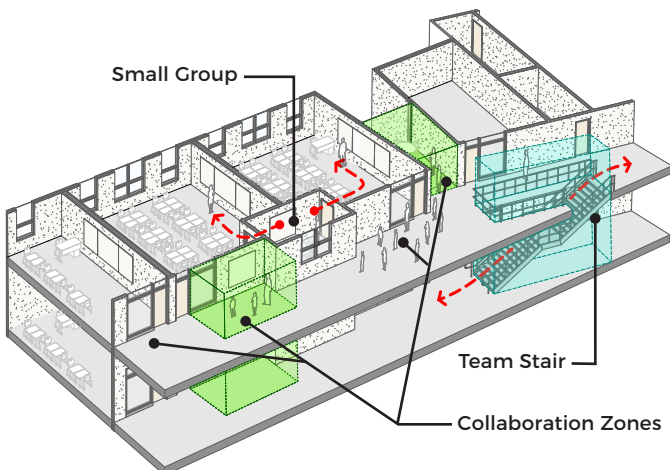
PREFERRED SOLUTION

How the Preferred Schematic Option (9e) aligns with the Educational Program:

- ▶ Clear program layout with natural light in corridors and transparency into program spaces creates vibrant learning connections and positive social / emotional environment for students.
- ▶ General academic classrooms are designed to be flexible and support co-teaching for inclusion.
- ▶ Circulation spaces are widened and configured to create welcoming, flexible common spaces adjacent to classrooms in each team zone for exploratory inquiry, collaboration, and group discussion.
- ▶ Small group rooms enable project team collaboration, student-led work, peer mentoring, and personalized student support within each academic team.
- ▶ Flexible neighborhood team-based support spaces are also available to bring one-on-one and small group services to students within their team zones.



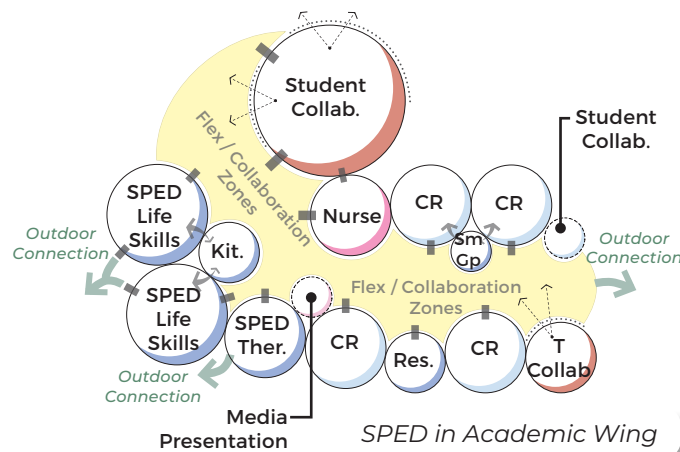
- ▶ Every learning community includes teacher collaboration space to support the coordination and planning of interdisciplinary, project-based learning.
- ▶ State-of-the-art STE rooms support hands-on activities, collaborative projects, simulations, design challenges, and science inquiry.
- ▶ Support services such as specialized instruction and English Language Learners are integrated within the academic neighborhoods.
- ▶ Each academic team experiences personalized learning and a social “neighborhood” setting while benefiting from the resources of a larger school.
- ▶ Organizes grade-levels into academic neighborhoods
- ▶ Offers separation of grade-levels without isolation
- ▶ Outdoor learning spaces adjacent to academic wings for both academic and social-emotional needs.



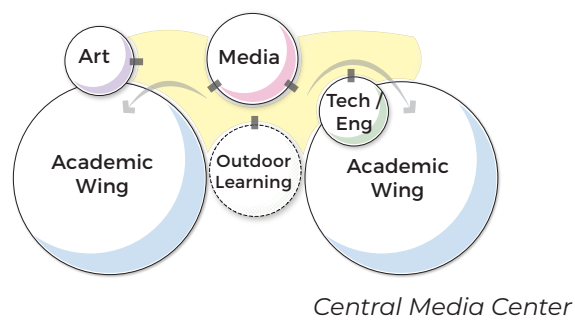
Circulation w/ Team Connections & Collaboration Space

PREFERRED SOLUTION

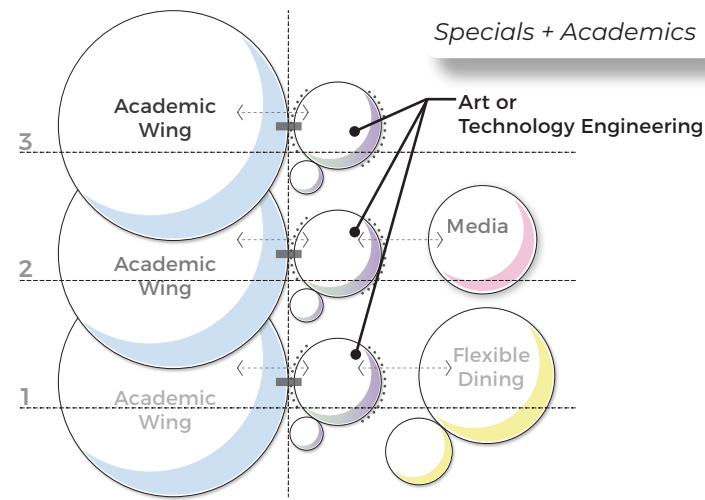
- ▶ Integrates special education into the general learning areas
- ▶ Both the therapeutic and substantially separate programs are located in academic neighborhoods while enjoying proximity to student services. This supports team- and grade- alignment, inclusion, and access to shared school programming and resources.



- ▶ The media center is a flexible, welcoming media & technology hub that is centrally located and easily accessible from all grade levels within the school.
- ▶ The media presentation zones provide dedicated spaces and technology to promote presentation skills. Students can collaborate, debate, discuss, and deliver presentations in these innovative spaces that are distributed among each team.

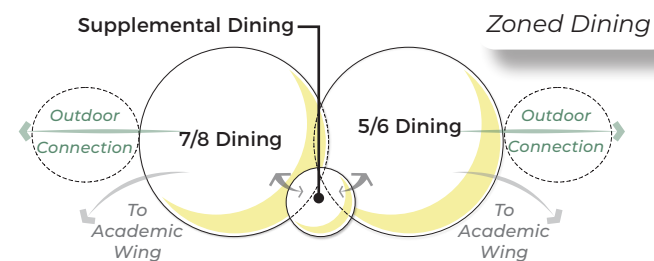


- ▶ The Art and Technology / Engineering classrooms are adaptable, flexible spaces adjacent to the academic teams to support STEAM curriculum connections to other programs, real-world problem solving.

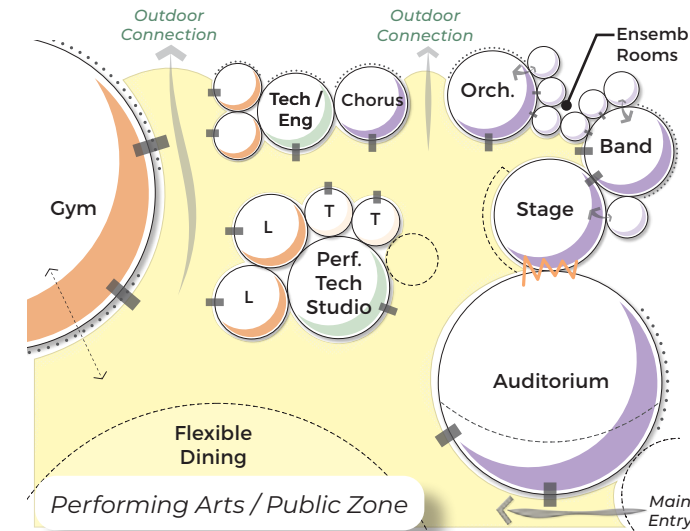


- ▶ Specials are centralized yet adjacent to grade level learning communities to support collaboration, interdisciplinary opportunities, and student choice, all within a supportive community setting.

- ▶ The flexible dining space can be zoned to support different experiences and uses throughout the school day. The acoustically separate smaller dining space supports students' sensory needs.

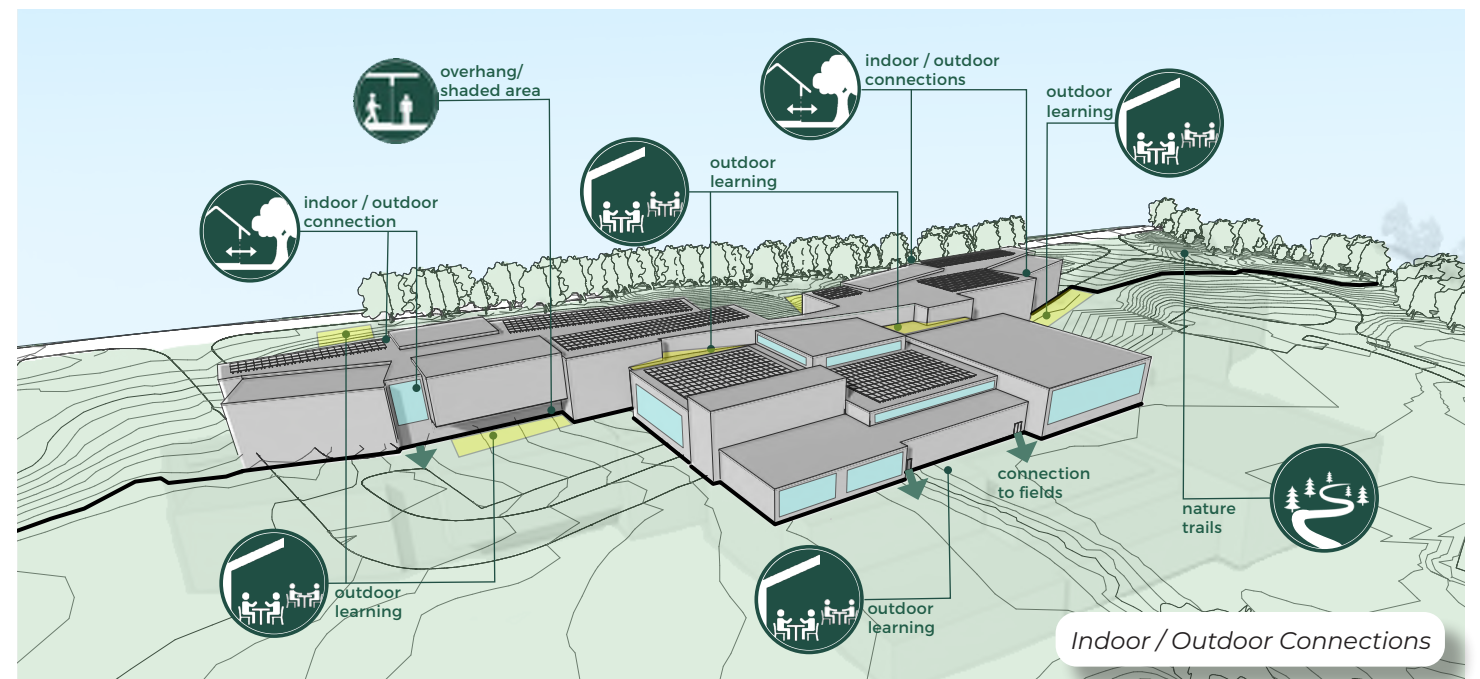


- ▶ Music spaces support teaching and ensemble work, with spaces for students to present their music to peers.



- ▶ Drama programming allows students to develop greater self-confidence, empathy, and a strong sense of community with their classmates.
- ▶ The auditorium provides a large instructional space and supports the vibrant performing arts programming of the middle school.

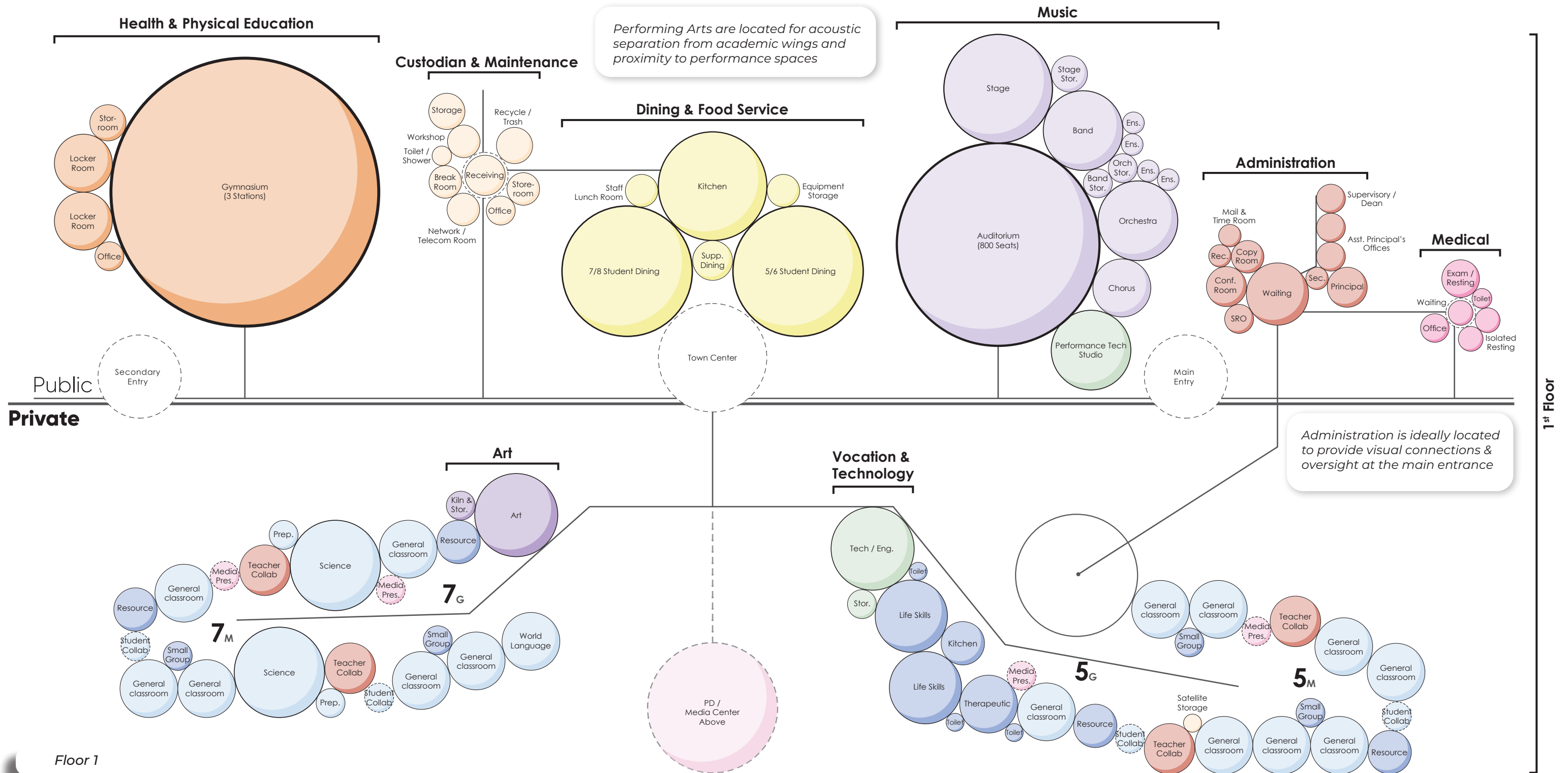
- ▶ All programs supporting wellness and physical education are gathered in the same area of the building with direct access to the outdoors and fields.
- ▶ The building organization promotes community use by placing shared / public spaces at the front of the building for access and oversight. These spaces are clustered together with clear separation points from the academic wings and "private" zones of the building.
- ▶ Flexible physical education spaces support occupational / physical therapy and adaptive PE for inclusion of all students.
- ▶ Administration, guidance, and nurse are centrally located and can provide campus oversight given their location
- ▶ Strong indoor / outdoor connections through direct access, transparency, natural daylight, and views



9e

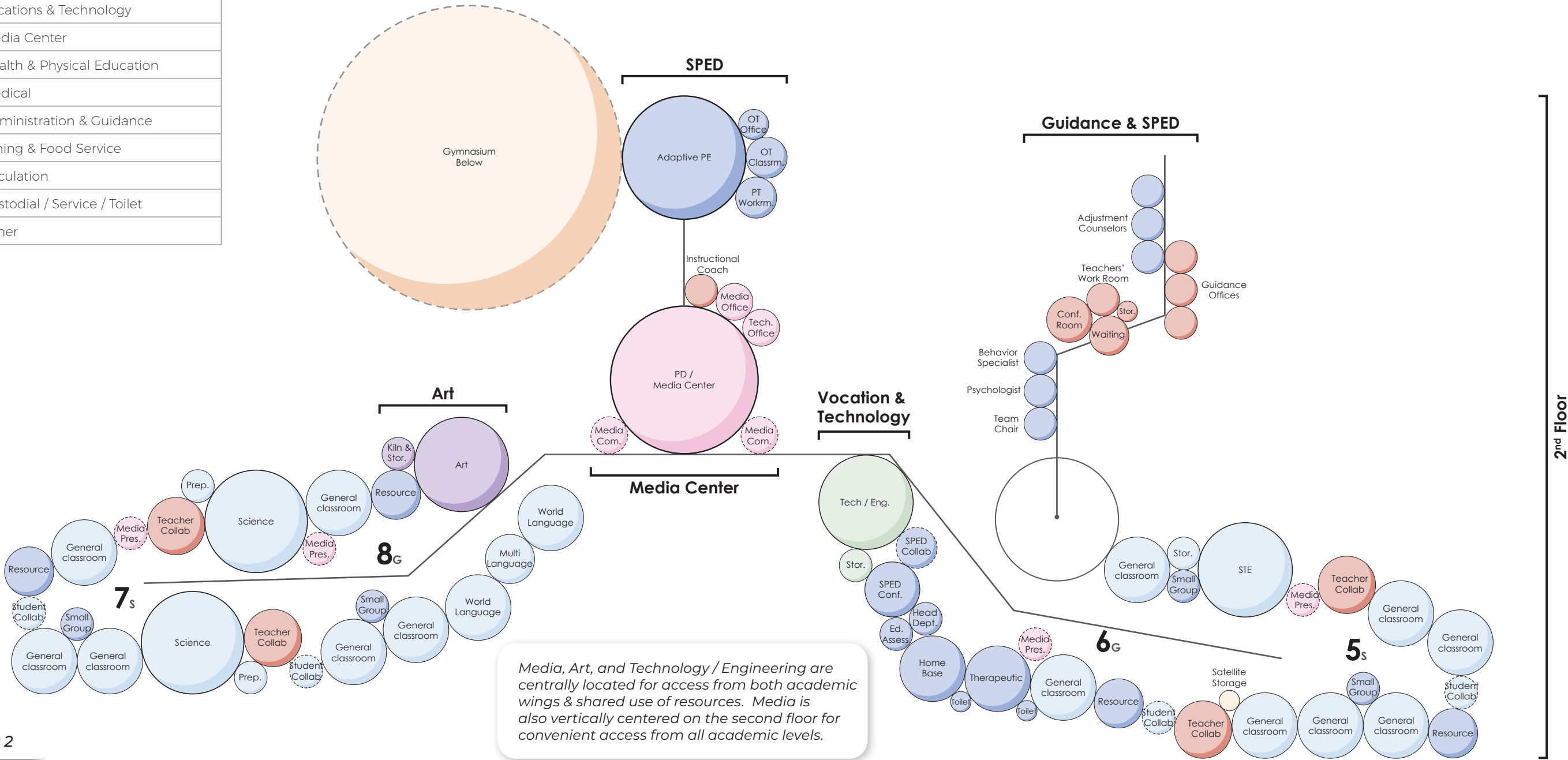
Conceptual Diagrams - Whole Building Bubble Diagrams

These diagrams conceptually assemble the priorities of the Educational Program and aspects from the visioning sessions as a whole building. The detailed layout of each program category will be further investigated during the schematic design phase following specific programming meetings with teachers and staff.



PREFERRED SOLUTION

PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Circulation
■	Custodial / Service / Toilet
■	Other



Floor 2

2nd Floor

PREFERRED SOLUTION

PROGRAM LEGEND	
■	Core Academic Spaces
■	Special Education
■	Art & Music
■	Vocations & Technology
■	Media Center
■	Health & Physical Education
■	Medical
■	Administration & Guidance
■	Dining & Food Service
■	Circulation
■	Custodial / Service / Toilet
■	Other

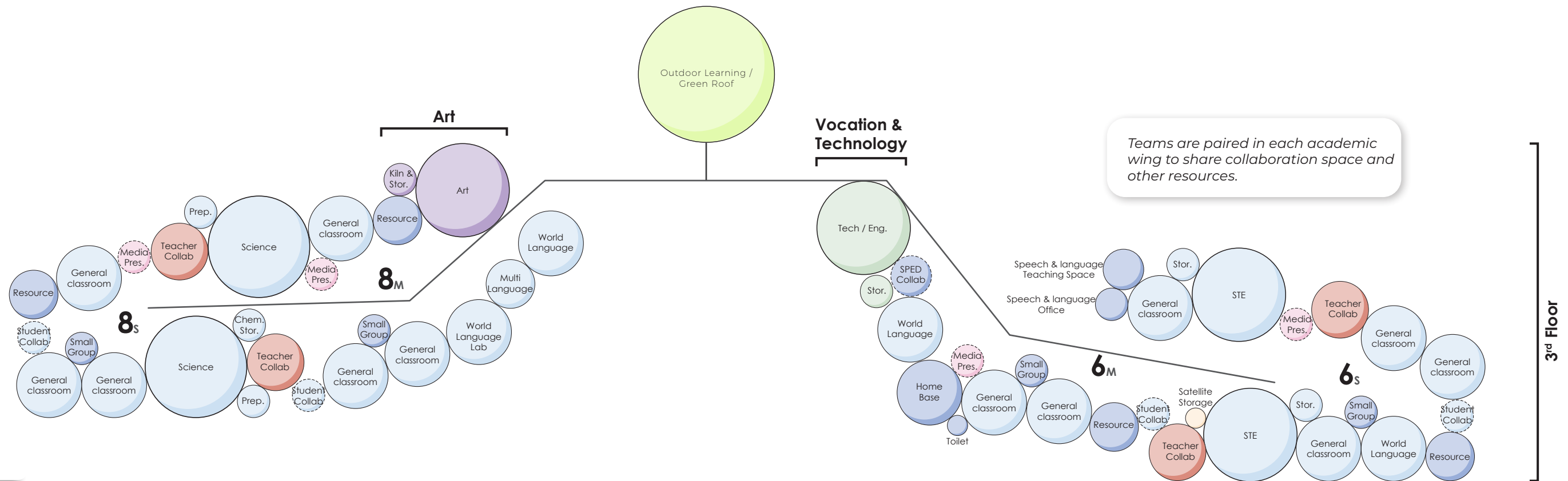


Bennett Elementary School, Bellevue, WA



Anne E. Moncure Elementary School, Stafford, VA

Examples of flexible open collaboration areas within academic neighborhoods.



Floor 3

3rd Floor

PREFERRED SOLUTION

Program Organization

This option is efficiently organized to achieve the desired spatial adjacencies and program space characteristics defined in the educational program. It provides the spatial qualities to create the positive, nurturing, developmentally appropriate middle school student experiences identified in the visioning sessions. It enables collaboration and 21st century learning with flexible, multi-functional spaces that can evolve as educational pedagogy evolves in the coming decades. Importantly, it is designed to create strong academic neighborhoods in an open, daylight setting that helps students attain a sense of belonging, with simple circulation that connects them to all of the educational and support settings they need throughout their day. When the existing Galvin Middle School was built, the intertwined nature of student social / emotional well being and academic success was not as well recognized as it is today. The new Galvin Middle School exemplifies how an educational setting can serve to help students thrive socially and emotionally, and therefore to thrive academically.

In this option, both the gymnasium and auditorium are located for optimal adjacencies and public / private separation of building spaces to provide the best experience for students during the day, while adding significant value as a community resource for after hours use. The auditorium stage is located adjacent to the band, orchestra, and chorus classrooms creating a back-of-house zone, instrumental in producing large productions and events.

The student dining commons is a double height space with many clerestories as well as outdoor connections and views at each end. This large, welcoming, flexible space

is grouped with the gym, performance technology studio, and auditorium to create a cluster of "public" spaces in the building.

Two academic wings extend from the student commons, bracketing the kitchen and student servery on the first floor, the media center and engineering technology on second and third floors.

To understand the teaming layout, it is important to note that grades 6-8 consist of three teams, while grade 5 consists of six smaller teams as they utilize the co-taught instructional model. 5th grade students circulate between two general academic classrooms to cover multiple subjects, while 6th-8th grade students circulate to separate classrooms for each subject. Spatially, the six 5th grade teams comprise a similar building area to three 6th grade teams.



Key plan diagram of total gross square footage of proposed option and proximity to existing building.

PREFERRED SOLUTION

Utilizing the hybrid stacked grade level team layout, one academic wing hosts grades 5 and 6, with four 5th grade teams sharing the first floor and two 5th grade teams and one 6th grade team sharing the second floor. Two 6th grade teams make up the third floor. A similar stacking is repeated in the other academic wing for grades 7 and 8. Notably, there are open stairs placed to vertically connect the stacked teams, creating a dynamic, linear vertical flow through the academic wing and strengthening connections between teams. This hybrid configuration allows students to transition through the building in a continuous and fluid nature, as they progress through their middle years of education.

Every team space includes flexible student and teacher collaboration spaces, a media presentation space, and small group rooms for project team collaboration with excellent sight lines from classrooms to collaboration spaces. On all 3 levels, each wing greets students with a special program; technology engineering classrooms for the 5/6 wing, and art classrooms for the 7/8 wing. This placement celebrates and showcases these programs while supporting the desired grade level separation, because students from either wing can access these programs without entering the other academic wing.

The academic teams in this option employ a different classroom clustering strategy compared to the other options. Compared to the other options, each set of team classrooms enjoy greater proximity to each other and stronger connections and visibility to the collaboration space. This option also uses geometry to create more open niches and defined zones within the collaboration space in order to support groups of varying sizes.

9e

Conceptual Floor Plans

NOT TO SCALE

This scheme was developed and refined in direct response to the goals of the educational program and the visioning sessions. Because it is all new construction, it does not have to compromise desired program goals or adjacencies in order to fit into the constraints of an existing building. It is able to achieve the desired programs, adjacencies, and spatial qualities such as ample natural light, an efficient layout, innovative media spaces, and functional, activated circulation that supports student collaboration. This option also provides the desired grade-level separation in its layout so that in a school with a four year age spread, students spend more time with similar-aged peers, but also have opportunities to appropriately mix with other grade levels during supervised activities such as musical and theater performances and clubs.

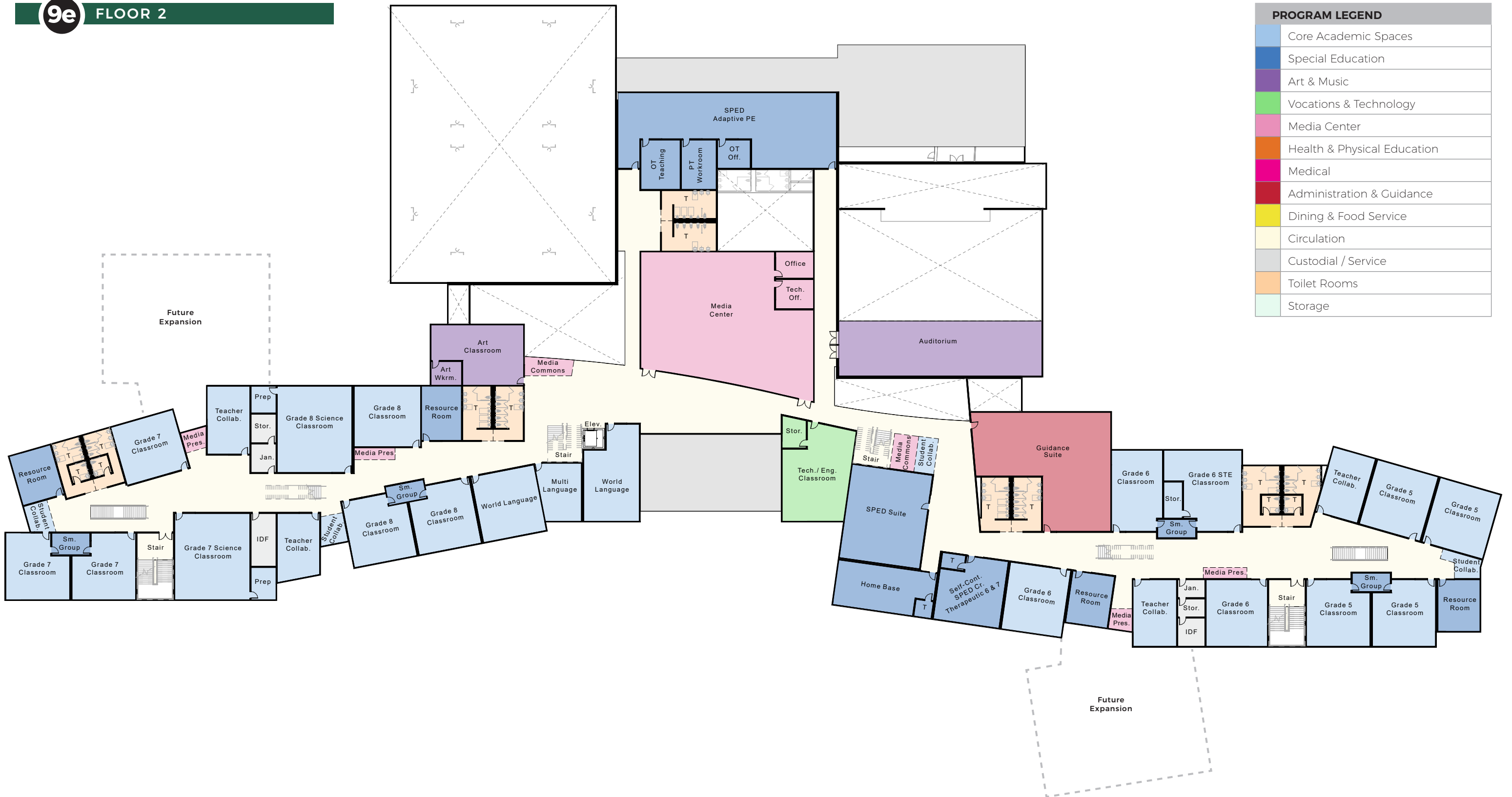
It should be noted that even though this option is somewhat similar in layout and overall footprint to add / reno option 7b, it is more efficiently located on the site because the entire building is shifted closer to Pecunit Street. This achieves two goals from the visioning sessions: to maximize open space on the site, and to provide optimal views of the outdoors and nature from the academic wings. In this scheme, the open field space to plan north of the building is large enough to support an additional play field compared to the add / reno options. This site layout provides more unobstructed views and better access to the rear fields, creating a true campus experience for students and the community. ♦

9e FLOOR 1



PROGRAM LEGEND	
[Light Blue Box]	Core Academic Spaces
[Dark Blue Box]	Special Education
[Purple Box]	Art & Music
[Green Box]	Vocations & Technology
[Pink Box]	Media Center
[Orange Box]	Health & Physical Education
[Magenta Box]	Medical
[Red Box]	Administration & Guidance
[Yellow Box]	Dining & Food Service
[Light Grey Box]	Circulation
[Dark Grey Box]	Custodial / Service
[Light Orange Box]	Toilet Rooms
[Light Green Box]	Storage

9e FLOOR 2



9e FLOOR 3

PROGRAM LEGEND	
Light Blue	Core Academic Spaces
Dark Blue	Special Education
Purple	Art & Music
Light Green	Vocations & Technology
Pink	Media Center
Orange	Health & Physical Education
Magenta	Medical
Red	Administration & Guidance
Yellow	Dining & Food Service
Grey	Circulation
Light Grey	Custodial / Service
Light Orange	Toilet Rooms
Light Green	Storage



PREFERRED SOLUTION












9e Conceptual Site Plan
SCALE 1" = approx. 175'-0"

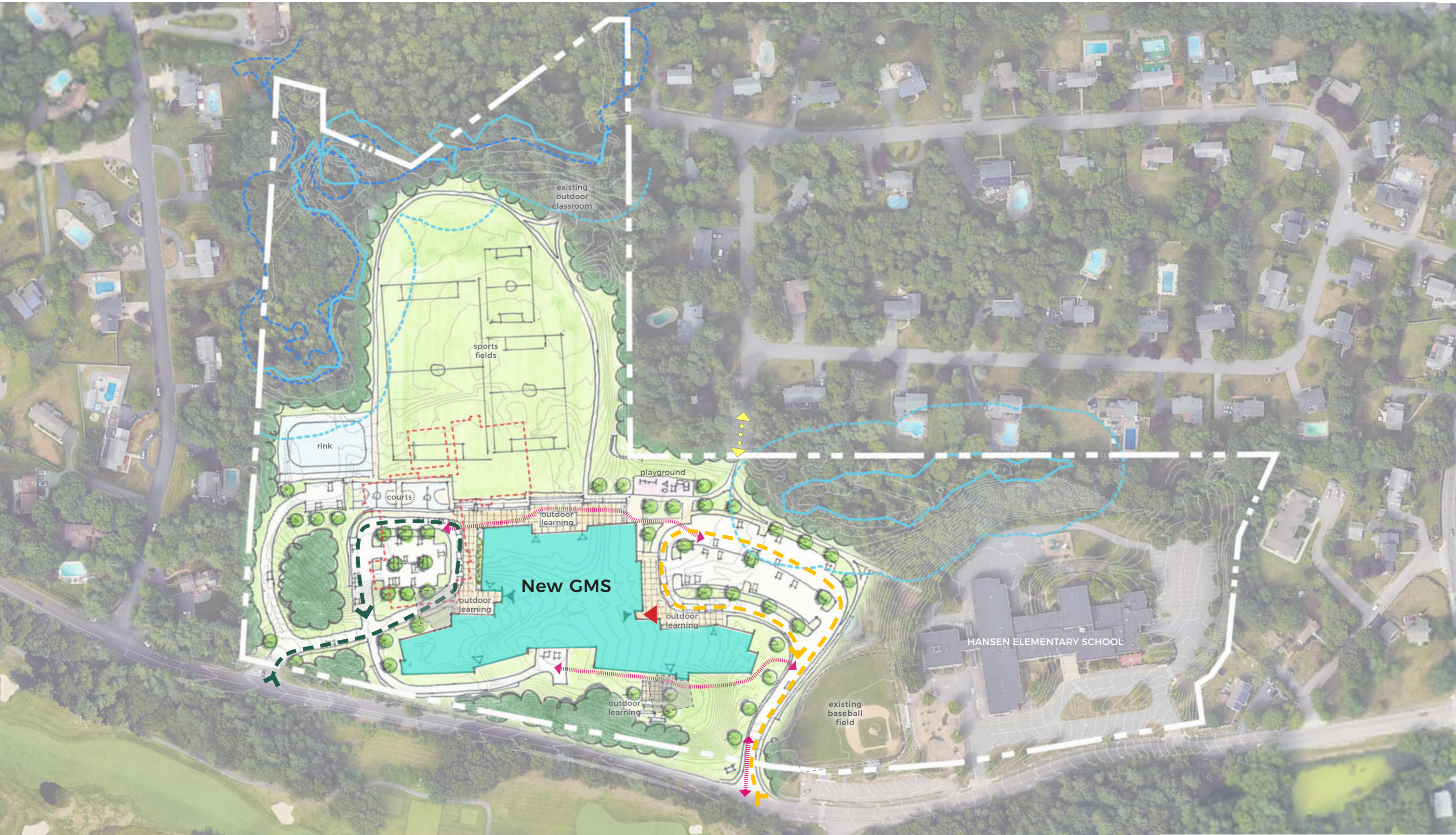
Site Plan

Option 9e places the new building to the south of the existing middle school, allowing for more visually-open and connected open spaces on the campus. Site circulation and access is improved with distributed parking and separated routes for bus and parent drop-off, both of which include availability for long queuing. The grouping of athletic fields facilitates community use while promoting security, as no field is isolated behind a building.

Learning opportunities are enhanced through the use of plazas with outdoor classrooms directly adjacent to the academic wings.

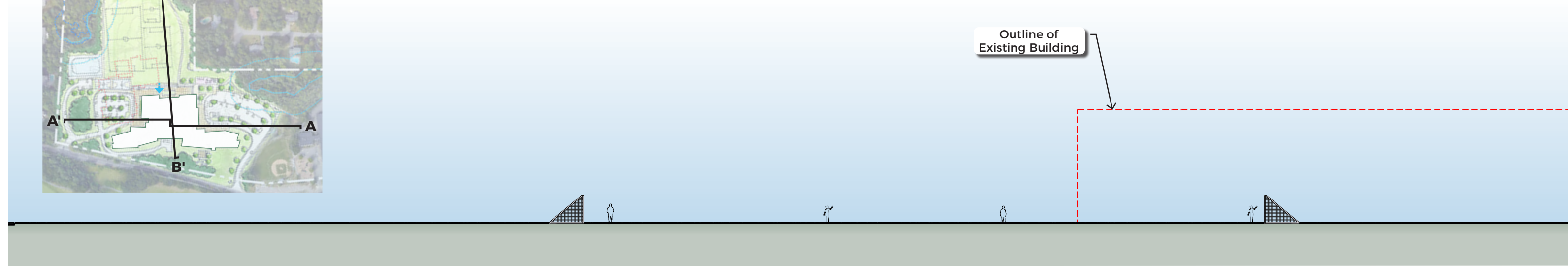
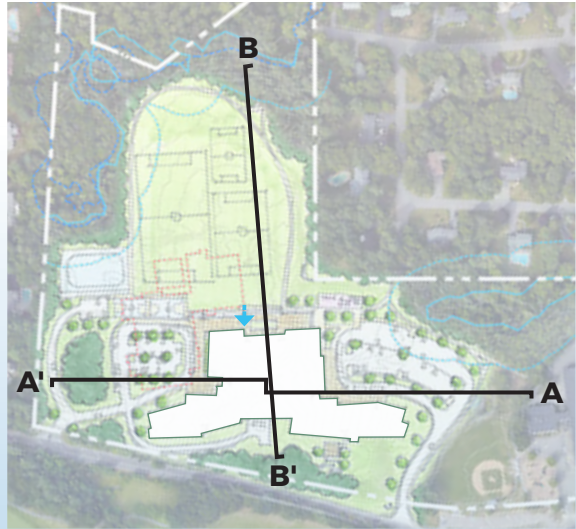
Legend

-  Main Entry
 -  Bus Drop-off
 -  Parent Drop-off
 -  Walking Path to neighborhood
 -  Emergency Access
 -  Outline of Existing
 -  Future Expansion
-   0 50 100 200



PREFERRED SOLUTION

9e Conceptual Site Sections

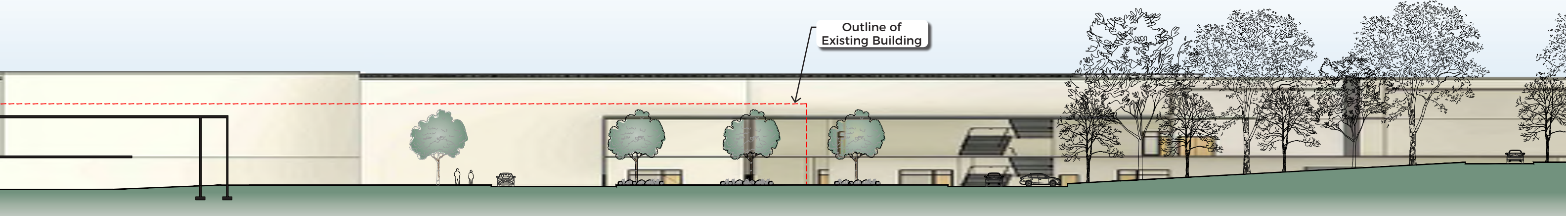
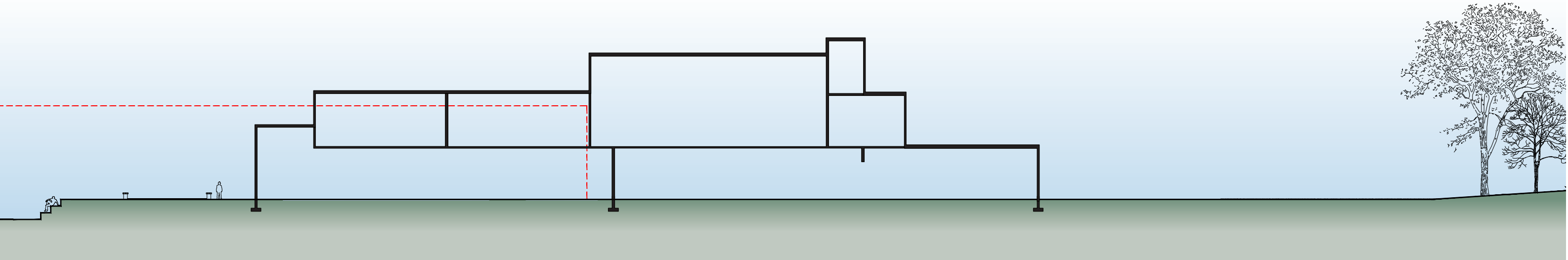


Site Section A



Site Section B

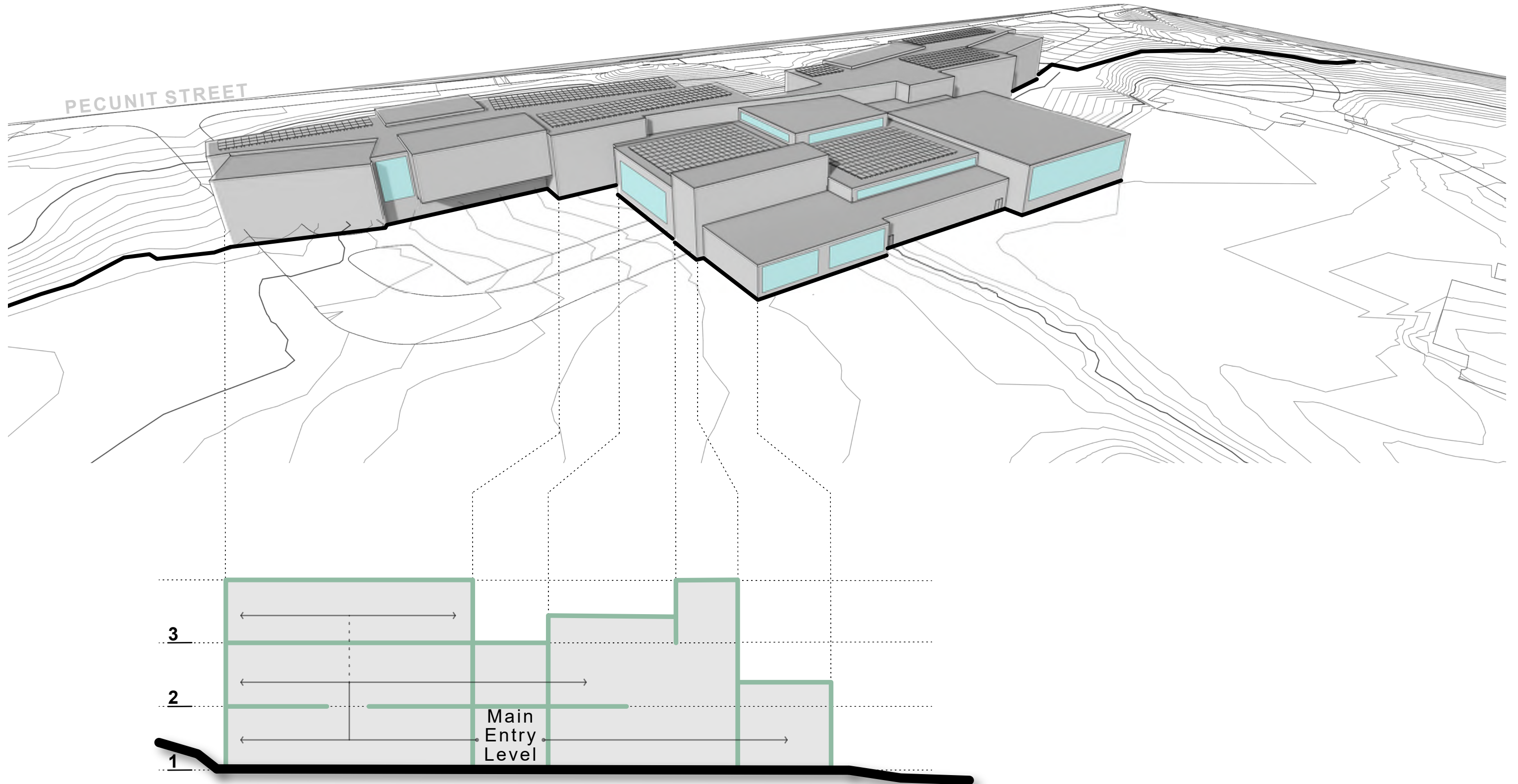
PREFERRED SOLUTION



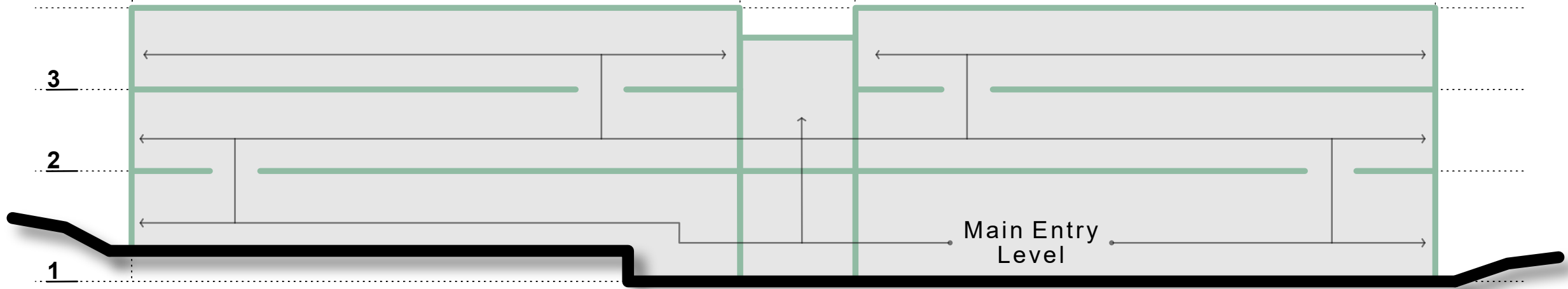
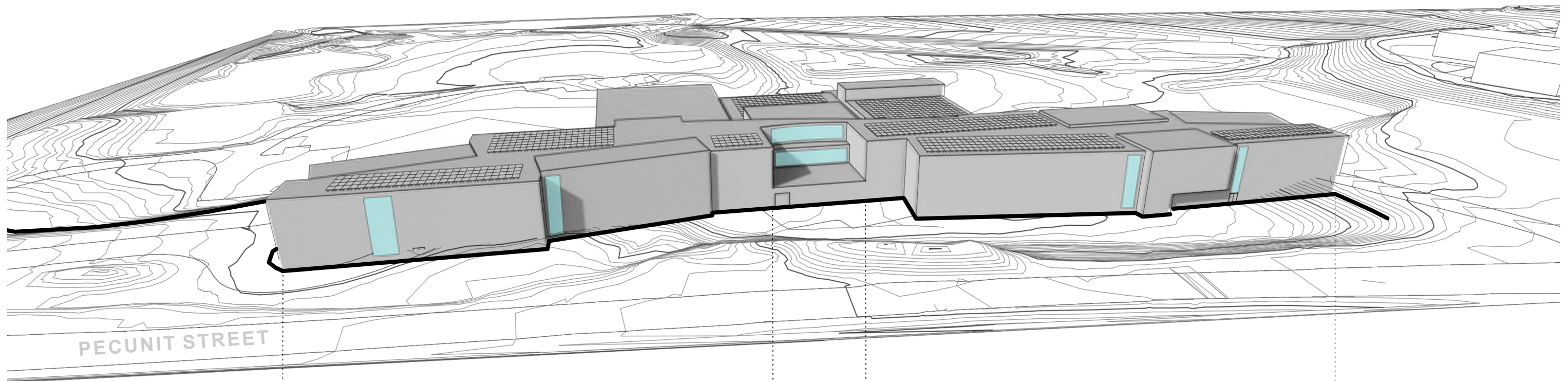
PREFERRED SOLUTION

9e

Building's Sectional Response To Site



PREFERRED SOLUTION



PREFERRED SOLUTION

9e

Site Plan Diagrams

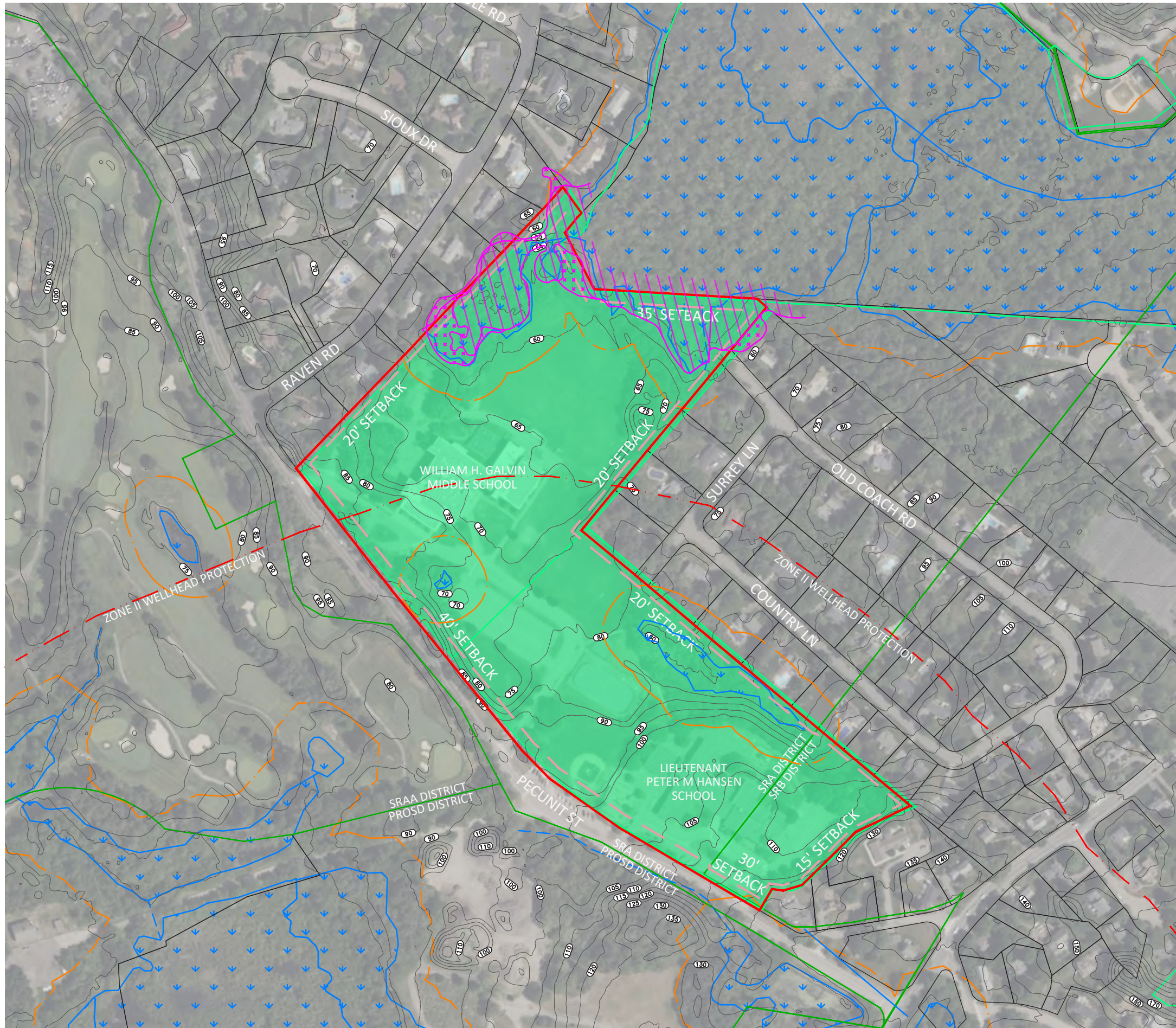
SCALE 1" = approx. 300'-0"

Existing Constraints Diagram

This diagram represents existing site constraints such as zoning setbacks, wetlands and other environmental buffers impact the availability of space on the site for development.

The site plan for the preferred solution has incorporated these constraints into its layout. As the site layout is further refined in schematic design and subsequent phases, all site features will continue to be coordinated with these constraints.

CONSTRAINT MAP
GALVIN MIDDLE SCHOOL
 EXISTING GALVIN MIDDLE SCHOOL SITE
 55 PECUNIT STREET
 CANTON, MA 02021
 APRIL 2023



LEGEND

- PROPERTY BOUNDARY
- SETBACK
- ABUTTING PROPERTY
- WETLAND
- 100-FT WETLAND BUFFER
- ZONING DISTRICT BOUNDARY
- LIMITED OPENSACE
- APPROXIMATE FLOODPLAIN ZONE AE
- APPROXIMATE FLOODPLAIN ZONE X
- STREAM
- HYDROLOGIC CONNECTIONS
- ZONE II WELLHEAD PROTECTION AREA

ZONING:
 SRAA - SINGLE RESIDENCE AA
 SRA - SINGLE RESIDENCE A
 SRB - SINGLE RESIDENCE B
 PROSD - PARKLAND AND OPEN SPACE

- NOTES:**
1. TOTAL PROPERTY AREA IS 33.8 ± ACRES
 2. WETLANDS LINES WITHIN THE PROPERTY CORRESPOND TO FLAGGED LIMITS
 3. SPECIAL FLOOD HAZARD ZONE AE LIMITS ESTABLISHED AT 60FT ELEVATION, AS PER 250235 0002 B FLOOD INSURANCE MAP DATED 1987.



SCALE: 1" = 300'

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 THE VERTEX COMPANIES, INC.
 400 Libbey Parkway
 Weymouth, MA 02189
 Main: 781.952.6000
 VERTEXENG.COM

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9e Site Plan Diagrams




SCALE 1" = approx. 175'-0"



Utilities Diagram

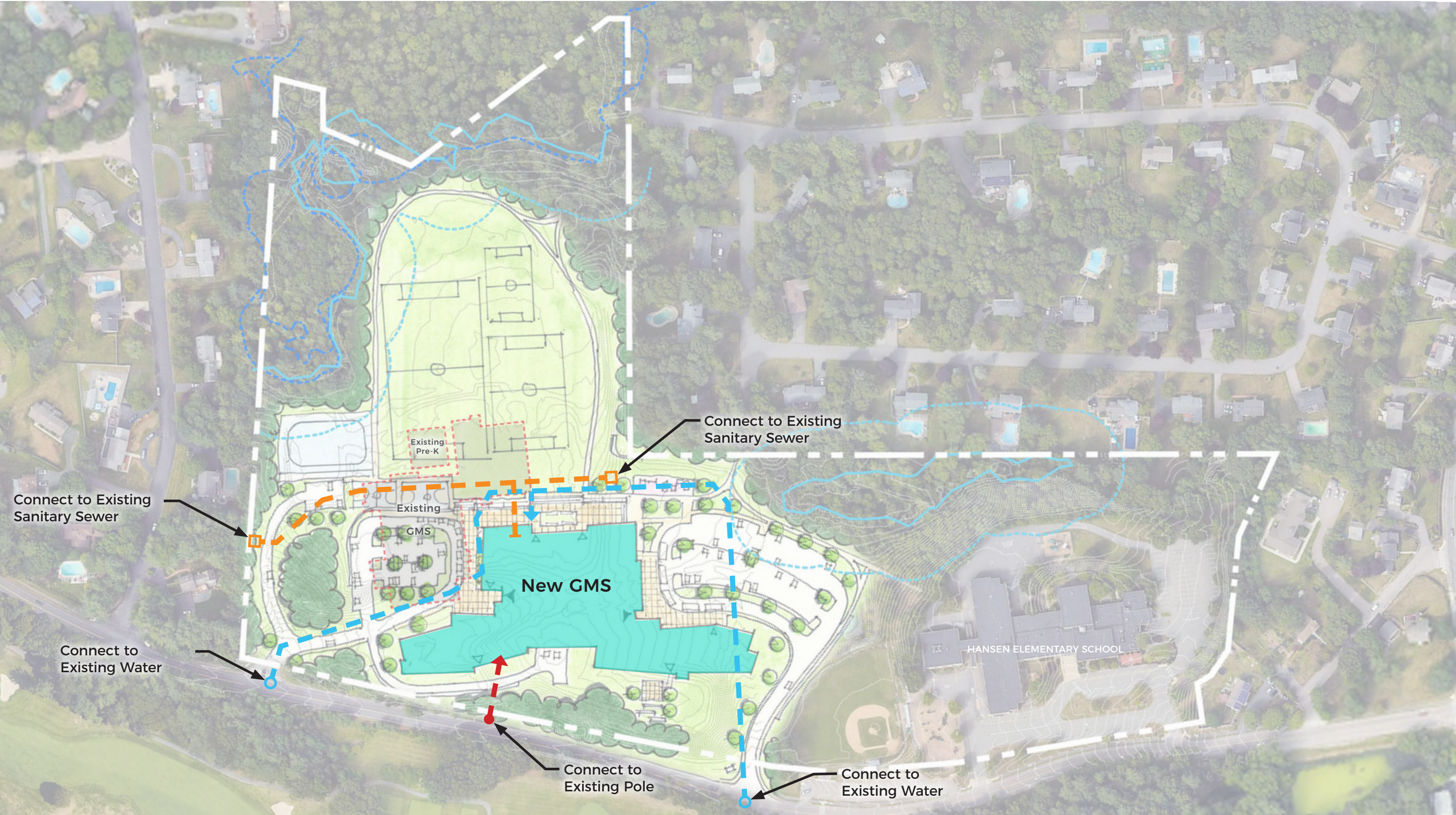
This diagram represents how existing utilities may be routed to the new building. The existing conditions utility information was found using aerial imagery. The availability of record documents to confirm these locations was limited.

Existing conditions and capacity will be field verified in the next design phase, and new services will be provided where required to meet building demand. Future design phase submissions will include this information.

Legend

-  Proposed Water
-  Proposed Electric
-  Proposed Sewer





Utilities Diagram

PREFERRED SOLUTION

9e Site Plan Diagrams
SCALE 1" = approx. 175'-0"

Safety & Security Diagram

This diagram represents how both Passive and Active site and building security measures may be implemented to enhance a secure, non-invasive building approach and entry sequence, and natural administrative oversight of student activity

- Limited access points to the site with clear sightlines to the main entrances to allow for maximized visual security of entry / exit points
- Perimeter & building mounted security cameras
- Controlled access point at building entries
- Natural surveillance of entry with clear sightlines from administrative & faculty positions
- Native, low plantings at entry & building perimeter to facilitate clear visual sightlines
- Perimeter building access for first responders

The security strategies will continue to be refined in future design phases involving all stakeholders including school staff and administration, the project security consultants, and the town's Police and Fire Departments, SRO's, and First Responders. Civil and landscape consultants will also coordinate their designs with the security features and goals. Future design phase submissions will reflect these adjustments as they are discussed.

Legend

Entry
A. Main Secured Entry
B. Secondary Secured Entry
C. Entry / Exit for Egress

View Cone

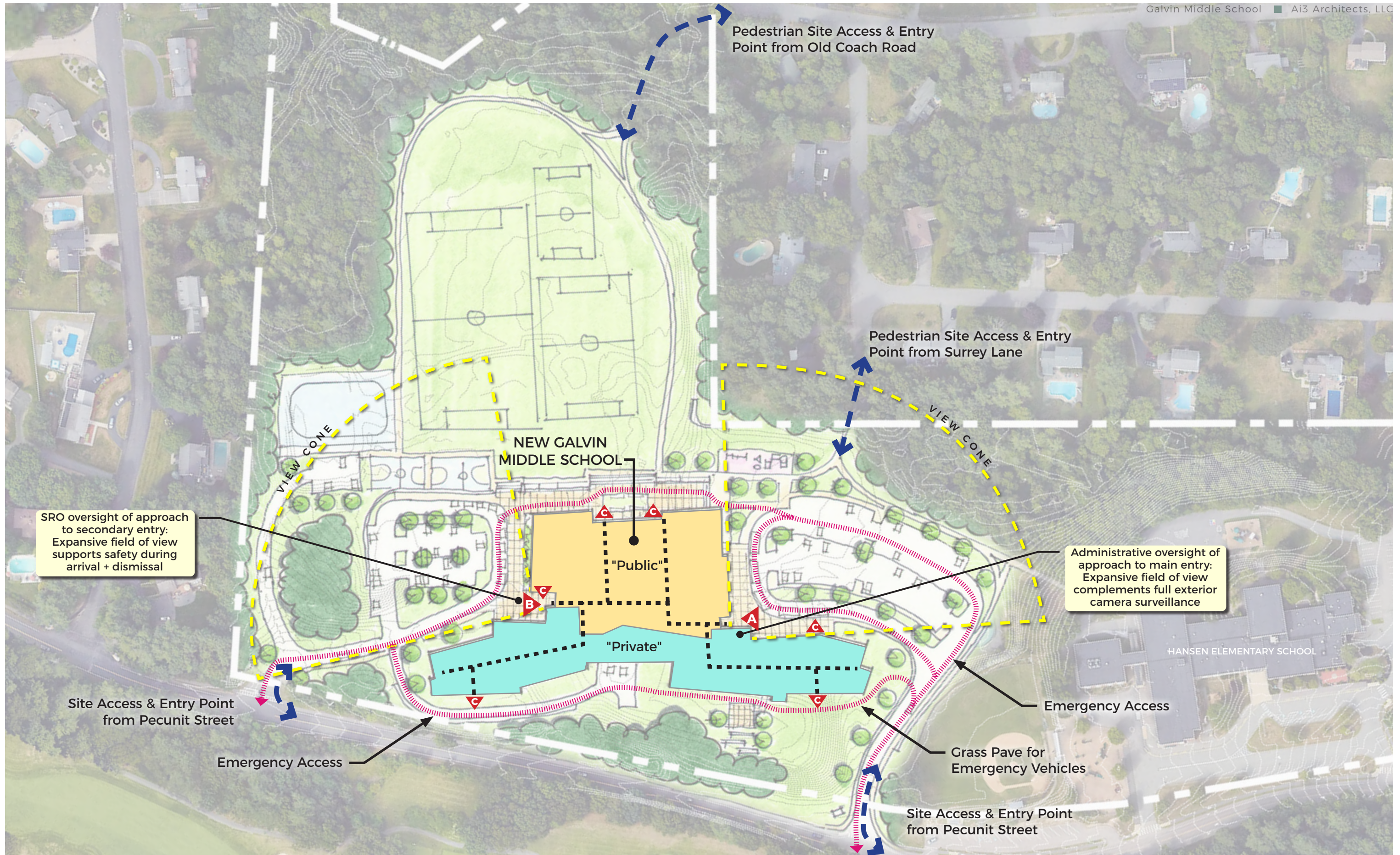
Interior Circulation

Emergency Access

Site Access & Entry Point

"Public"
Access during / after school hours

"Private"
Access during school hours only



SRO oversight of approach to secondary entry: Expansive field of view supports safety during arrival + dismissal

Administrative oversight of approach to main entry: Expansive field of view complements full exterior camera surveillance

Safety & Security Diagram

Space Summary

Overview of Updates

With the final grade configuration determined, the project team is submitting a space summary reflective of the grade 5 through 8 decision. Option 9 as previously submitted during the PDP phase is what this PSR Option 9E space summary is being compared to since that was the option that included both grade 5 and an auditorium.

Updates to the space summary following the PDP submission are:

Adjustments made to the "Core Academic" category are in response to the MSBA PDP review comments. It was identified that the prep rooms and the central chemical storage room areas previously reported were inverted. The PSR submission space summary reflects the required area for these spaces.

Adjustments made to the "Art and Music" category are a result of the team identifying one Art Workroom as not being required. The space summary has been updated to reflect three workrooms to support the three art classrooms.

Adjustments made to the "Other" category are directly related to the auditorium. The PDP submission included space for a 600 seat auditorium. After multiple public discussions, stakeholder input, and district wide analysis, the School Building Committee voted to formally include an 800 seat auditorium as part of the project. The larger area in the space summary reflects the increase needed to accommodate the additional seats.

Refer to the following summary and chart of the specific changes per category, and the overall change in category square footage.

Increase in "Core Academic" = +250 sf
 Decrease in "Art and Music" = -150 sf
 Increase in "Other" = +2,300 sf

Total Adjustment to Net Floor Area
 = **+2,400 sf**

x1.5 grossing factor

Total Change in Space Summary GSF
 = **3,250 sf**

PDP Gross Floor Area = 215,100 gsf
 PSR Gross Floor Area = **218,350 gsf**

The Schematic Design project phase will include detailed programming meetings with middle school teachers and staff members that may result in further modifications. A finalized Space Summary will be submitted with the Schematic Design documents. ♦

A	B	C	D	E	F
Space Summary Category	Area per PDP Submission	Proposed Area per PSR Submission	Category Difference PDP vs. PSR (C-B)	Allowable Area per MSBA	Difference Proposed vs. MSBA (C-E)
CORE ACADEMIC SPACES	62,440 sf	62,690 sf	+ 250 sf	53,650 sf	9,040 sf
Prep Room - 7th	450 sf	600 sf	+ 150 sf		
Prep Room - 8th	450 sf	600 sf	+ 150 sf		
Central Chemical Storage	200 sf	150 sf	- 50 sf		
ART & MUSIC	7,850 sf	7,700 sf	- 150 sf	5,000 sf	2,700 sf
Art Workroom with Storage and Kiln	600 sf	450 sf	- 150 sf		
OTHER	9,400 sf	11,700 sf	+ 2,300 sf	0 sf	11,700 sf
Auditorium	7,000 sf	9,300 sf	+ 2,300 sf		
TOTAL NET FLOOR AREA	143,265 sf	145,665 sf	2,400 sf	110,165 sf	35,500 sf
TOTAL GROSS AREA (GSF)	215,100 sf	218,350 sf	3,250 sf	163,200 gsf	55,150 sf

PREFERRED SOLUTION

**Option 9e: New Construction
w/ Hybrid Stacked Grade-Level
Teams**

page 1

PREFERRED SOLUTION

**Option 9e: New Construction
w/ Hybrid Stacked Grade-Level
Teams**

page 2

Proposed Space Summary - Middle School

Date: 2/2/2024 Preferred Schematic Report

CANTON PUBLIC SCHOOLS GALVIN MIDDLE SCHOOL				PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) <i>(Refer to Educational Facility Planning for additional information)</i>											
EXISTING CONDITIONS				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL			EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL			MSBA GUIDELINES (DO NOT MODIFY) <i>(Refer to Educational Facility Planning for additional information)</i>					
ROOM TYPE	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	COMMENTS		
Behavior Specialist	0	0	0				125	1	125	125	1	125	125	1	125												
SPED Adaptive PE	0	0	0				2,000	1	2,000	2,000	1	2,000	2,000	1	2,000												
Department Head Office	0	0	0				125	1	125	125	1	125	125	1	125												
SPED Conference Room	0	0	0				500	1	500	500	1	500	500	1	500												
OT Teaching Space	0	0	0				425	1	425	425	1	425	425	1	425												
OT Office	0	0	0				125	1	125	125	1	125	125	1	125												
Speech & Language Teaching Space	0	0	0				300	1	300	300	1	300	300	1	300												
Speech & Language Office	0	0	0				125	1	125	125	1	125	125	1	125												
Adjustment Counselor	190	2	380				150	3	450	150	3	450	150	3	450												
PT Workroom	0	0	0				450	1	450	450	1	450	450	1	450												
SPED Collaboration	0	0	0				250	2	500	250	2	500	250	2	500												
Educational Assessment	0	0	0				125	1	125	125	1	125	125	1	125												
Public Day Education Spaces (List rooms separately below)																											
Collaborative Program Spaces (List rooms separately below)																											
[Enter room type here]			0						0			0			0												
ART & MUSIC			6,771			0			7,700			7,700			2,700			5,000									
Art Classroom	1,034	1	1,034			0	1,000	3	3,000	1,000	3	3,000	-200	1	600	1,200	2	2,400								Assumed schedule: 50% total enrollment; 2 times per week	
Art Classroom	1,029	1	1,029			0	0	0	0	0	0	0	0	0	0												
Art Workroom with Storage and Kiln	145	2	290			0	150	3	450	150	3	450	0	1	150	150	2	300								no kiln, storage only	
Art Workroom with Storage and Kiln	141	2	282			0	0	0	0	0	0	0	0	0	0												
Art / Digital Art Classroom	816	1	816			0	0	0	0	0	0	0	0	0	0												
Band (100 seats)	945	1	945			0	1,300	1	1,300	1,300	1	1,300	-200	0	-200	1,500	1	1,500								Assumed schedule: 50% total enrollment; 2 times per week	
Music Practice / Ensemble	0	0	0			0	100	4	400	100	4	400	-100	0	-400	200	4	800									
Orchestra	1,040	1	1,040			0	1,300	1	1,300	1,300	1	1,300	1,300	1	1,300												
Orchestra Storage	217	1	217			0	150	1	150	150	1	150	150	1	150												
Chorus	834	1	834			0	900	1	900	900	1	900	900	1	900												
Band Storage	148	1	148			0	200	1	200	200	1	200	200	1	200												
Band Storage	68	2	136			0	0	0	0	0	0	0	0	0	0												
VOCATIONS & TECHNOLOGY			2,608			0			5,760			5,760			0			5,760									
Technology / Engineering Rooms	1,429	1	1,429			0	1,440	2	2,880	1,440	2	2,880	0	-2	-2,880	1,440	4	5,760								STE Guidelines Policy	
Technology / Engineering Rooms	985	1	985			0	990	1	990	990	1	990	990	1	990											Assumed schedule: 50% total enrollment; 5 times per week; 850 NSF (minimum size) - 2,000 NSF (maximum size); Refer to the STE Guidelines for additional information.	
Technology Storage	194	1	194			0	0	0	0	0	0	0	0	0	0												
Performance Technology Studio	0	0	0			0	1,440	1	1,440	1,440	1	1,440	1,440	1	1,440												
Engineering Storage	0	0	0			0	150	3	450	150	3	450	150	3	450												
HEALTH & PHYSICAL EDUCATION			15,890			0			14,400			14,400			6,000			8,400								Excess Physical Education Spaces Policy	
Gymnasium (3 Stations)	9,414	1	9,414			0	12,000	1	12,000	12,000	1	12,000	6,000	0	6,000	6,000	1	6,000									
Gym Storeroom	165	1	165			0	450	1	450	450	1	450	300	0	300	150	1	150									
Health Instructor's Office with Shower and Toilet	202	2	404			0	350	1	350	350	1	350	100	0	100	250	1	250									
Locker Room - Girls with Toilets	2,370	1	2,370			0	800	1	800	800	1	800	-200	-1	-1,200	1,000	2	2,000									
Locker Rooms - Boys with Toilets	2,115	1	2,115			0	800	1	800	800	1	800	800	1	800												
Gym Storeroom	222	1	222			0	0	0	0	0	0	0	0	0	0												
Outdoor Athletic Equipment Storage	326	1	326			0	0	0	0	0	0	0	0	0	0												
Storage	169	2	338			0	0	0	0	0	0	0	0	0	0												
Storage	139	1	139			0	0	0	0	0	0	0	0	0	0												
Storage	106	1	106			0	0	0	0	0	0	0	0	0	0												
Fitness Office	96	1	96			0	0	0	0	0	0	0	0	0	0												
Fitness Storage	195	1	195			0	0	0	0	0	0	0	0	0	0												
MEDIA CENTER			4,373			0			6,245			6,245			0			6,245									
Media Center / Reading Room	3,995	1	3,995			0	4,335	1	4,335	4,335	1	4,335	-1,910	0	-1,910	6,245	1	6,245									
Media Office	73	1	73			0	150	1	150	150	1	150	150	1	150												
Technology Office	305	1	305			0	200	1	200	200	1	200	200	1	200												
Media Center - Commons	0	0	0			0	180	2	360	180	2	360	180	2	360												

PREFERRED SOLUTION

**Option 9e: New Construction
w/ Hybrid Stacked Grade-Level
Teams**
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Proposed Space Summary - Middle School

Date: 2/2/2024 Preferred Schematic Report

CANTON PUBLIC SCHOOLS GALVIN MIDDLE SCHOOL				PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) <i>(Refer to Educational Facility Planning for additional information)</i>										
EXISTING CONDITIONS				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL			EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL			MSBA GUIDELINES (DO NOT MODIFY) <i>(Refer to Educational Facility Planning for additional information)</i>				
ROOM TYPE	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	COMMENTS	
Media Center - Presentation	0	0	0				100	12	1,200	100	12	1,200	100	12	1,200											
DINING & FOOD SERVICE			9,497			0			10,865			10,865			-1,600			12,465								
Cafeteria / Dining	4,795	1	4,795			0	7,150	1	7,150	7,150	1	7,150			-500	0	-500	7,650	1	7,650					Based on 2 lunch seatings - 15 NSF per seat	
Stage & Theater Classroom	1,266	1	1,266			0	0	0	0	0	0	0			-1,600	-1	-1,600	1,600	1	1,600						
Chair / Table / Equipment Storage	0	0	0			0	540	1	540	540	1	540			0	0	0	540	1	540						
Kitchen	2,224	1	2,224			0	2,320	1	2,320	2,320	1	2,320			0	0	0	2,320	1	2,320					1,600 NSF for first 300 students + 1 NSF per additional student	
Staff Lunch Room	87	1	87			0	355	1	355	355	1	355			0	0	0	355	1	355					20 NSF per student	
Staff Lunch Room	180	1	180			0	0	0	0	0	0	0			0	0	0									
Dishwashing	197	1	197			0	0	0	0	0	0	0			0	0	0									
Food Service Office	72	1	72			0	0	0	0	0	0	0			0	0	0									
Food Service Storage	122	1	122			0	0	0	0	0	0	0			0	0	0									
Food Service Storage	116	1	116			0	0	0	0	0	0	0			0	0	0									
Food Service Storage - Dry	334	1	334			0	0	0	0	0	0	0			0	0	0									
Kitchen Staff Locker	63	1	63			0	0	0	0	0	0	0			0	0	0									
Kitchen Staff Toilet	41	1	41			0	0	0	0	0	0	0			0	0	0									
5/6 Student Dining	0	0	0			0	0	0	0	0	0	0			0	0	0									
7/8 Student Dining	0	0	0			0	0	0	0	0	0	0			0	0	0									
Supplemental Dining	0	0	0			0	500	1	500	500	1	500			500	1	500									
MEDICAL			573			0			810			810			0			810								
Medical Suite Toilet	22	1	22			0	60	1	60	60	1	60			0	0	0	60	1	60						
Nurse's Office / Waiting Room	127	1	127			0	100	1	100	100	1	100			-150	0	-150	250	1	250						
Examination Room / Resting	306	1	306			0	300	1	300	300	1	300			200	-4	-200	100	5	500						
Nurse's Office	118	1	118			0	150	1	150	150	1	150			150	1	150									
Isolated Resting	0	0	0			0	100	2	200	100	2	200			100	2	200									
ADMINISTRATION & GUIDANCE			2,527			0			3,820			3,820			-450			4,270								
General Office / Waiting Room with Toilet (no toilet)	345	1	345			0	610	1	610	610	1	610			0	0	0	610	1	610						
Teachers' Mail and Time Room	112	1	112			0	100	1	100	100	1	100			0	0	0	100	1	100						
Copy Room	118	1	118			0	200	1	200	200	1	200			0	0	0	200	1	200						
Records Room	59	1	59			0	100	1	100	100	1	100			-100	0	-100	200	1	200						
Principal's Office with Conference Area	152	1	152			0	350	1	350	350	1	350			-25	0	-25	375	1	375						
Principal's Secretary / Waiting	0	0	0			0	125	1	125	125	1	125			0	0	0	125	1	125						
Assistant Principal's Office - AP1	156	1	156			0	150	1	150	150	1	150			0	0	0	150	1	150						
Assistant Principal's Office - AP2	0	0	0			0	150	1	150	150	1	150			0	-1	-150	150	2	300						
Supervisory / Spare Office (Dean of Students)	179	1	179			0	150	1	150	150	1	150			0	0	0	150	1	150						
Conference Room	209	1	209			0	350	1	350	350	1	350			0	0	0	350	1	350						
Guidance Office	105	3	315			0	150	3	450	150	3	450			0	-3	-450	150	6	900						
Guidance Waiting Room	135	1	135			0	250	1	250	250	1	250			150	0	150	100	1	100						
Guidance Storeroom	0	0	0			0	50	1	50	50	1	50			0	0	0	50	1	50						
Teachers' Work Room	300	1	300			0	160	1	160	160	1	160			-500	0	-500	660	1	660						
Teachers' Work Room	239	1	239			0	0	0	0	0	0	0			0	0	0									
Attendance	135	1	135			0	0	0	0	0	0	0			0	0	0									
Instructional Coach	73	1	73			0	150	1	150	150	1	150			150	1	150									
Guidance Conference Room	0	0	0			0	350	1	350	350	1	350			350	1	350									
School Resource Officer	0	0	0			0	125	1	125	125	1	125			125	1	125									

PREFERRED SOLUTION

**Option 9e: New Construction
w/ Hybrid Stacked Grade-Level
Teams**

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Proposed Space Summary - Middle School

Date: 2/2/2024 Preferred Schematic Report

CANTON PUBLIC SCHOOLS GALVIN MIDDLE SCHOOL			
ROOM TYPE	EXISTING CONDITIONS		
	ROOM NFA ¹	# OF ROOMS	AREA TOTALS
CUSTODIAL & MAINTENANCE			1,850
Custodian's Office with Toilet	189	1	189
Custodian's Workshop	0	0	0
Custodian's Storage	168	1	168
Recycling Room / Trash	0	0	0
Receiving and General Supply	282	1	282
Storeroom	521	1	521
Network / Telecom Room)	170	1	170
Custodial Closets w mop sink (total of 5)	463	1	463
Can Wash	57	1	57
Custodian's Break Room	0	0	0
Toilet/Shower	0	0	0
Satellite Storage	0	0	0
OTHER			0
(List rooms separately below)			
Auditorium (800 Seat)	0	0	0
Stage	0	0	0
Stage Storage	0	0	0
Total Building Net Floor Area (NFA)			88,366
Proposed Student Capacity / Enrollment			
NON-PROGRAMMED SPACES			32,177
Other Occupied Rooms (List rooms separately below)			
Unoccupied MEP / FP Spaces	2,721	1	2,721
Unoccupied Closets, Supply Rooms, and Storage Rooms	1,182	1	1,182
Toilet Rooms	2,415	1	2,415
Circulation (corridors, stairs, ramps and elevators)	25,859	1	25,859
Remaining ³			
Total Building Gross Floor Area (GFA) ²			131,903
Grossing Factor (GFA / NFA)			1.49

PROPOSED PROGRAM								
EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL		
ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS
0			2,495			2,495		
0		0	120	1	120	120	1	120
0		0	200	1	200	200	1	200
0		0	350	1	350	350	1	350
0		0	340	1	340	340	1	340
0		0	400	1	400	400	1	400
0		0	200	1	200	200	1	200
0		0	200	1	200	200	1	200
0		0	0	0	0	0	0	0
0		0	0	0	0	0	0	0
0		0	200	1	200	200	1	200
0		0	85	1	85	85	1	85
0		0	100	4	400	100	4	400
0			11,700			11,700		
0		0	9,300	1	9,300	9,300	1	9,300
0		0	2,000	1	2,000	2,000	1	2,000
0		0	400	1	400	400	1	400
0			145,665			145,665		
% of GFA	0		% of GFA	72,685		% of GFA	72,685	
-	#DIV/0!		-	0.0%		-	0.0%	0
-	#DIV/0!		-	0.0%		-	0.0%	0
-	#DIV/0!		-	0.0%		-	0.0%	0
-	#DIV/0!		-	0.0%		-	0.0%	0
-	#DIV/0!	0	-	33.3%	72,685	-	33.3%	72,685
0			218,350			218,350		
#DIV/0!			1.50			1.50		

VARIATION TO MSBA GUIDELINES		
ROOM NFA ¹	# OF ROOMS	AREA TOTALS
0		
-30	0	-30
-50	0	-50
-25	0	-25
-60	0	-60
-40	0	-40
-480	0	-480
0	0	0
0	0	0
0	0	0
200	1	200
85	1	85
100	4	400
		11,700
8,100	1	9,300
2,000	1	2,000
400	1	400
		35,500
		72,685
		55,150
		0.02

MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM NFA ¹	# OF ROOMS	AREA TOTALS	COMMENTS
2,495			
150	1	150	
250	1	250	
375	1	375	
400	1	400	
440	1	440	
680	1	680	
200	1	200	
0			
1,200	0	-	1,100 NSF (minimum size) - 1,300 NSF (maximum size)
		110,165	Total Building Net Floor Area (NFA)
# of Grades	4		
Grade 5	1	1,020	Total Enrollment (Enter Design Enrollment)
Grade 6	1	510	Lower Middle School Enrollment (Grades 5-6)
Grade 7	1	510	Upper Middle School Enrollment (Grades 7-8)
Grade 8	1		
			Complete this category with Schematic Design Submittal
		163,200	Total Building Gross Floor Area (GFA) ²
		1.48	Grossing Factor (GFA / NFA)

¹ Individual Room Net Floor Area (NFA)

Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

46404

² Total Building Gross Floor Area (GFA)

Includes the entire building gross square footage measured from the outside face of exterior walls.

49458

³ Remaining

Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

36041

131903

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: Ai3 Architects, LLC

Name of Principal Architect: Justin P. Thibeault, AIA, NCARB

Signature of Principal Architect:

Date: February 2, 2024

PREFERRED SOLUTION

Sustainability Documents

Sustainability Goals

The Town of Canton is currently designated as a Green Community by the Massachusetts Department of Energy Resources (DOER) and has been since 2017. As a Green Community, Canton adopted the Stretch Energy Code in 2017 and the development of an Energy Reduction Plan for reducing energy consumption by 20% below the 2016 baseline.

During Schematic Design, the OPM and Design Team will be reaching out to local utility companies to discuss the opportunities available for rebates and incentives, such as those through the Mass Save Program. The discussion will focus on establishing an early dialogue so that the maximum energy savings and incentives can be realized. A future "energy charette" will be scheduled for the purpose of identifying, discussing / analyzing, and comparing potential building energy conservation measures along with the corresponding state energy code compliant base case assumptions and standard practice considerations.

The Design Team will present the sustainability objectives to the working group, school administration, and Middle School Building Committee during Schematic Design. However, in anticipation of this future discussion, and knowing the requirements of the upcoming Massachusetts' DOER updated Stretch Code and the new Specialized Opt-In Code (225 CMR 22 and 23), the following LEED Scorecard assumes a target of Net Zero Energy, which will concurrently meet and exceed minimum energy performance requirements.

Sustainability Certification

This is an acknowledgment that the Canton Public Schools District has identified a goal of 4% additional reimbursement from the MSBA High Efficiency Green School

Program (Project Advisory #81). As their Designer, I have submitted a completed "LEED v4.1 BD+C: Schools" scorecard showing all prerequisites and **62** attempted points for LEED "Gold" Certification.

To achieve 3% (of the 4% total) additional reimbursement, this project shall meet the minimum energy efficiency requirements described in the MA DOER "Opt-in Specialized Code" standards.

To achieve the additional 1% reimbursement, this project shall achieve a minimum total of five points (from seven available points) in the following LEED indoor air quality points categories:

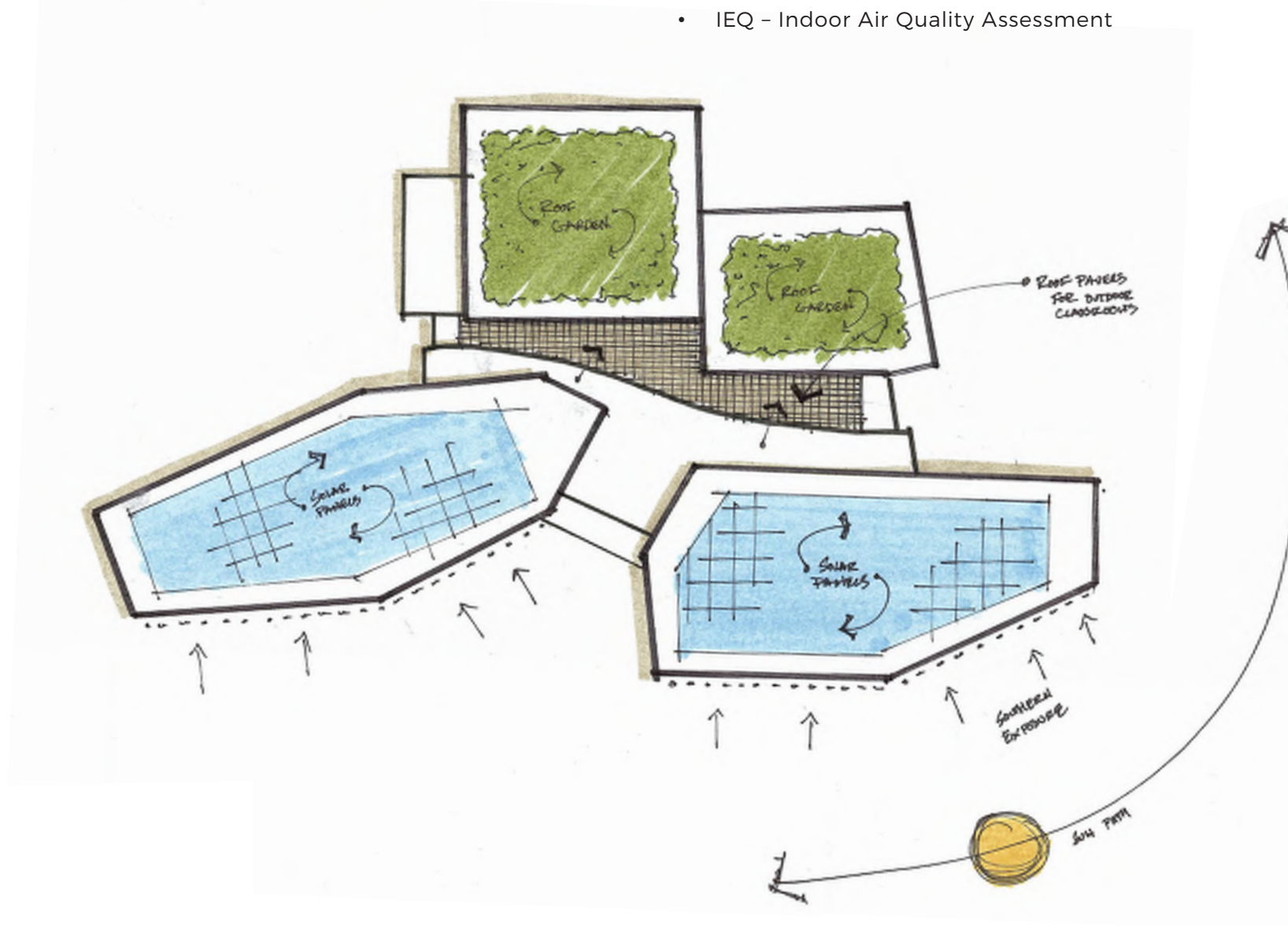
- MR Building Product Disclosure and Optimization - Material Ingredients
- IEQ - Low Emitting Materials
- IEQ - Indoor Air Quality Assessment

The scope of work for this project will include the construction elements and performance tasks to achieve LEED Certification, and all subsequent documents, including but not limited to specifications, drawings, and cost estimates, will match the scope of work indicated in the submitted scorecard.

Please see the preliminary scorecard attached on the following page.

Sincerely,
Ai3 Architects, LLC

Justin Thibeault, Principal
AIA, NCARB





LEED v4.1 BD+C: Schools
Project Checklist

Project Name: Galvin Middle School
Date: February 2024

DRAFT

Y ? N

1		Credit	Integrative Process	1
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3	0	#	Location and Transportation	15
		15	Credit LEED for Neighborhood Development Location	15
1			Credit Sensitive Land Protection	1
		2	Credit High Priority Site and Equitable Development	2
		5	Credit Surrounding Density and Diverse Uses	5
		4	Credit Access to Quality Transit	4
		1	Credit Bicycle Facilities	1
1			Credit Reduced Parking Footprint	1
1			Credit Electric Vehicles	1

6	3	3	Sustainable Sites	12
Y			Prereq Construction Activity Pollution Prevention	Required
Y			Prereq Environmental Site Assessment	Required
1			Credit Site Assessment	1
		2	Credit Protect or Restore Habitat	2
1			Credit Open Space	1
		3	Credit Rainwater Management	3
2			Credit Heat Island Reduction	2
1			Credit Light Pollution Reduction	1
		1	Credit Site Master Plan	1
1			Credit Joint Use of Facilities	1

4	3	5	Water Efficiency	12
Y			Prereq Outdoor Water Use Reduction	Required
Y			Prereq Indoor Water Use Reduction	Required
Y			Prereq Building-Level Water Metering	Required
1	1		Credit Outdoor Water Use Reduction	2
2	2	3	Credit Indoor Water Use Reduction	7
		2	Credit Optimize Process Water Use	2
1			Credit Water Metering	1

30	1	0	Energy and Atmosphere	31
Y			Prereq Fundamental Commissioning and Verification	Required
Y			Prereq Minimum Energy Performance	Required
Y			Prereq Building-Level Energy Metering	Required
Y			Prereq Fundamental Refrigerant Management	Required
6			Credit Enhanced Commissioning	6
16			Credit Optimize Energy Performance (8 pts for 45% improvement)	16
1			Credit Advanced Energy Metering	1
2			Credit Grid Harmonization	2
5			Credit Renewable Energy	5
		1	Credit Enhanced Refrigerant Management	1

5	5	3	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
	2	3	Credit Building Life-Cycle Impact Reduction	5
1	1		Credit Environmental Product Declarations	2
1	1		Credit Sourcing of Raw Materials	2
1	1		Credit Material Ingredients	2
2			Credit Construction and Demolition Waste Management	2

7	6	2	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
Y			Prereq Minimum Acoustic Performance	Required
1			Credit Enhanced Indoor Air Quality Strategies	2
2	1		Credit Low-Emitting Materials	3
	1		Credit Construction Indoor Air Quality Management Plan	1
2			Credit Indoor Air Quality Assessment	2
	1		Credit Thermal Comfort	1
2			Credit Interior Lighting	2
	2	1	Credit Daylight	3
	1		Credit Quality Views	1
		1	Credit Acoustic Performance	1

4	2	0	Innovation	6
3	2		Credit Innovation	5
1			Credit LEED Accredited Professional	1

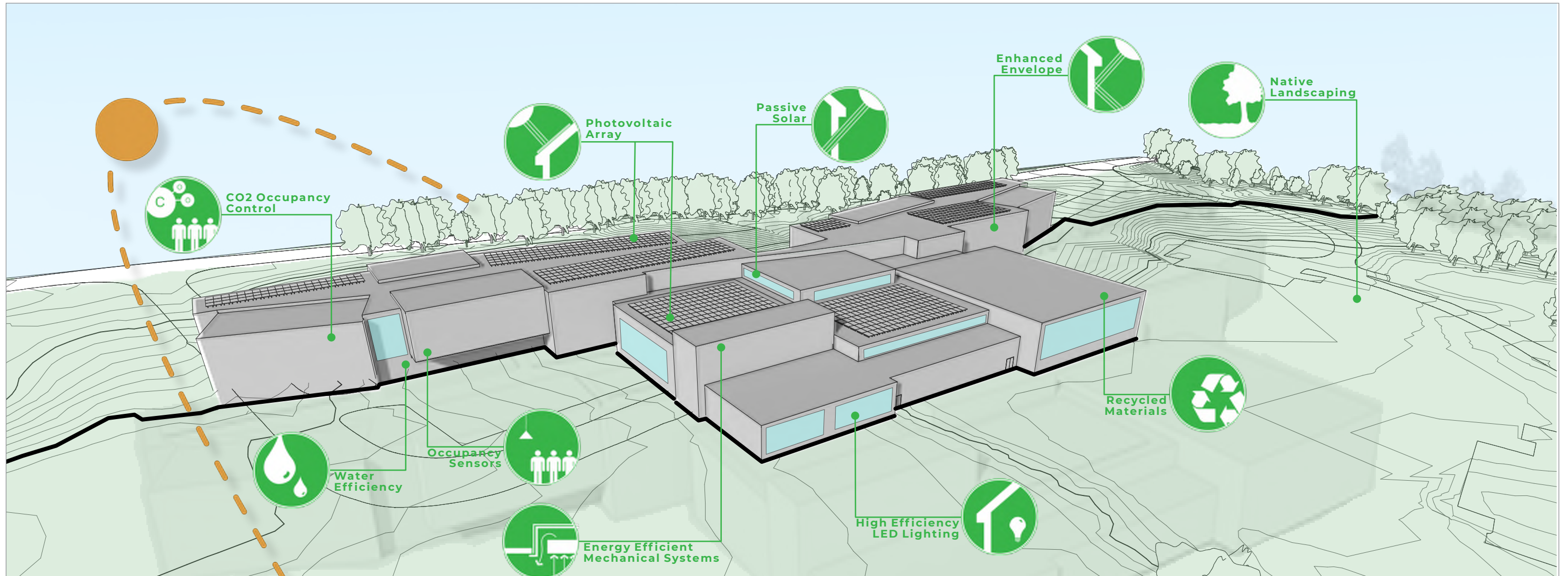
2	1	1	Regional Priority	4
1			Credit Regional Priority: Optimize Energy Performance	1
1			Credit Regional Priority: Renewable Energy	1
	1		Credit Regional Priority: Rainwater Management	1
		1	Credit Regional Priority: Building Life-Cycle Impact Reduction	1

62	21	41	TOTALS	Possible Points: 110
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum 80 to 110 points				

PREFERRED SOLUTION

Sustainable Strategies

Option 9e - New Construction w/ Hybrid Stacked Grade-Level Teams



Conceptual diagram identifying key sustainable strategies of the preferred schematic option for GMS

The preferred schematic option includes many sustainable strategies that will be further investigated during the next project phase. An Integrative Process charrette will occur to identify opportunities for synergies across disciplines and building systems, as well as to identify and confirm the goals of the Town of Canton.

The charrette will also identify an energy performance target, such as achieving net zero energy. The preferred schematic option accounts for on-site renewable energy. It also respects the existing ecology of the site and seeks to restore some of the areas previously disturbed by development. ♦

PREFERRED SOLUTION

Budget Statement

The William H. Galvin Middle School Project will have a significant effect on the Town’s budget and financing capacity. Town and School officials and their financial teams have worked together to analyze the Town’s existing debt limit, debt service capacity and financing capabilities to determine the Town’s ability to support the Preferred Option 9E for New Construction on the Existing Middle School site. The Preferred Option was deemed to be the most appropriate from an educational and operational perspective. This option was also thoroughly evaluated from a financial perspective and thoughtfully compared to the other options that were explored.

Estimated Total Construction Cost

Both the Designer’s Cost Consultant, PM&C, and the OPM’s Cost Consultant, AM Fogarty, reconciled their PSR estimated construction costs as can be seen on the Comparative Costs Analysis Matrix included.

As shown in the Comparative Costs Analysis, the two estimates could not reconcile within 1%. This is because each estimator assumed a different construction delivery approach. We have used the AM Fogarty cost estimate as the basis for the PSR costs as their estimates assumed a CM at-Risk Construction Delivery approach, which is the direction the SBC voted to move forward with at their January 24, 2024 meeting.

For the Preferred Option 9E – New Construction, the estimated total construction costs is \$186,200,000.

Estimated Total Project Cost

The estimated Total Project Costs are currently being carried at 25% of the estimated total construction costs of \$186,200,000, bringing the estimated total project costs to \$232,800,000 as indicated in the Preliminary Pricing Table and the Comparative Costs Analysis Matrix included.

Budget Chart

Building Construction	\$106,053,169
Site Construction, Building Demolition, & Haz. Mat. Removal	\$18,578,823
Contingencies	\$24,118,824
Escalation	\$24,574,680
Markups	\$12,899,411
Construction Total	\$186,224,907
All Soft Costs: <i>Consultant Fees, Administrative Costs, FF&E, Technology</i>	\$46,556,227
Base Total Project Budget	\$232,781,134
Add Alternates: <i>for Synthetic Turf and Sports Field Lighting</i>	\$2,647,265
Maximum Total Project Budget	\$235,428,399

Estimated Funding Capacity

After thorough analysis, the Town feels that the anticipated construction costs of the Preferred Option 9E of \$186,200,000 and the total project cost of \$232,800,000 are within the Town’s capacity to fund. Based on comparative preliminary Total Project

PREFERRED SOLUTION

Budget Form 3011s conducted during this phase, the Town is prepared to fund approximately \$161,000,000, representing a conservative anticipated Town share, by seeking Debt Exclusion approval from Town residents.

The Town of Canton remains committed to providing the necessary financial resources to fund the William H. Galvin Middle School in a prudent and responsible manner that does not preclude other known priorities and future capital expenditure needs. The Project Team has worked closely and diligently with the Town to develop the Preferred Option 9E and feels confident that it not only meets the educational goals, objectives and needs of the District and its students but is also fiscally feasible for the Town.

Please see the included spreadsheet showing the Computation of Legal Debt Margin.

List of Other Municipal Projects Currently Planned or in Progress

A summary list of other Municipal Projects currently planned or in progress includes but is not limited to the following:

- Memorial Hall Exterior Brick Repairs
- Gibson Field Drainage Project
- Police Station Control Room and Kitchen Renovations
- Ponkapoag School Building Roof Replacement
- Cemetery Garage

District's Not-to-Exceed Total Project Budget

The Town has set a Not-to-Exceed Total Project Budget of \$235,000,000. All parties will work together to refine the Total Project Budget with the goal of maintaining and preferably reducing the costs.

Description of the Local Process for Authorization and Funding

Canton has a regular, annual Open Town Meeting on the second Monday of May. Special Town Meetings are called for particular purposes outside of the Spring Town Meeting. Every registered voter is allowed to be present, take part in and vote in the legislative arm of the town government.

Registered voters must be present to vote. There is no absentee or early voting for Town Meetings.

After approval of the Schematic Design Submission by the MSBA Board of Directors, targeted for the August 28, 2024 MSBA Board Meeting, the Town of Canton, through its Select Board, may schedule a Special Town Meeting in November 2024. The Preliminary Project Schedule tentatively has anticipated a date of November 18, 2024 which will be confirmed during the Schematic Design phase of the project.

For the William H. Galvin Middle School funding, the School Building Committee would vote to recommend to the Select Board that the MSBA Project Scope and Budget Agreement be approved and that the Select Board call for a Special Town Meeting for the registered voters to vote on the funding amount.

It is anticipated that funding will be by Debt Exclusion. That would require a referendum election, after the Town Meeting vote, where the registered voters would be asked to exempt the amount of the Town's borrowing from the limits of Proposition 2 and ½. The borrowing would be accomplished through the issuance of General Obligation State Qualified Bonds that are either 25-year or 30-year level debt service bonds. The Preliminary Project Schedule tentatively has anticipated a date of December 10, 2024 which will be confirmed during the Schematic Design phase of the project.

Estimated Impact to Local Property Tax

The Town has identified several funding services that could alleviate the burden on taxpayers and have run several early tax impact scenarios. The impact on an average residential tax bill will be calculated based on the current year's assessed property values and tax split between residential and business (CIP: commercial, industrial, and personal property) classes of property. Canton has an aggressive property tax split that currently charges 60.47% of the burden to residential and 39.53% to CIP. Without this tax split, which is recommended by the Board of Assessors and voted by the Select Board, the tax burden would be split 76.15% residential and 23.85% CIP. The result is a 20.6% shift of the residential tax burden to CIP classes of property.

Budget Statement

See included Budget Statement provided by the District and Town of Canton.

PREFERRED SOLUTION

**Budget Statement:
Expenditures, February 2024**

page 1

Budget Statement for Preferred Schematic - Expenditures

As reported on the school district's most recent three end of year information, please updated to the 3 latest fiscal year periods and complete the fields below												
Category	2020-2021 FY2021		2021-2022 FY2022		2022-2023 FY2023		Change from Previous Year		Post-Constuction Budget		New Facility vs. Current	
	Staff (FTE)	Budget	Staff (FTE)	Budget	Staff (FTE)	Budget	Staff (FTE)	Budget	Staff	Budget	Staff (FTE)	Budget
Salaries												
Administration												
Admin. Secretary	19.50	790,917	20.00	795,379	21.00	760,738	1.00	(34,641)	22.00	852,027	1.00	91,289
Assistant Principal	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Business Office	4.00	428,340	4.00	481,617	4.00	545,933	0.00	64,316	4.00	611,445	0.00	65,512
Curriculum Director/Coord.	2.50	283,987	2.50	263,258	2.50	246,862	0.00	(16,396)	2.50	276,485	0.00	29,623
Custodians/Maintenance Staff	21.00	1,384,585	22.00	1,510,999	22.00	1,539,486	0.00	28,487	23.00	1,844,224	1.00	304,738
Executive Secretary	1.00	81,980	1.00	88,031	1.00	127,294	0.00	39,263	1.00	142,569	0.00	15,275
Facilities Manager	1.00	114,000	1.00	119,520	1.00	118,500	0.00	(1,020)	1.00	132,720	0.00	14,220
Guidance	17.00	1,057,886	17.00	1,142,515	17.00	1,293,881	0.00	151,366	18.00	1,549,147	1.00	255,266
Adjustment Counselor	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Guidance Counselors	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Guidance Director	1.00	107,152	1.00	110,416	1.00	115,944	0.00	5,528	1.00	129,857	0.00	13,913
Legal	0.00	92,422	0.00	123,225	0.00	149,000	0.00	25,775	0.00	166,880	0.00	17,880
Nurse	11.00	763,846	11.00	864,132	11.00	970,634	0.00	106,502	11.00	1,087,110	0.00	116,476
Other	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Principal	10.00	1,318,521	10.00	1,188,397	10.00	1,257,095	0.00	68,698	10.00	1,407,946	0.00	150,851
Special Education Admin	10.50	1,303,981	11.00	1,360,874	12.00	1,337,321	1.00	(23,553)	12.00	1,497,800	0.00	160,479
Superintendent/Asst. Superintendent	2.00	405,237	2.00	382,433	2.00	425,630	0.00	43,197	2.00	476,706	0.00	51,076
Transportation	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Treasurer	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Total Administration	100.50	8,132,855	102.50	8,430,796	104.50	8,888,318	2.00	457,522	107.50	10,174,916	3.00	1,286,598
Instruction - Teaching Services												
Arts	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Teacher	246.00	19,218,712	238.00	19,420,547	254.00	20,925,747	16.00	1,505,200	264.00	24,076,837	10.00	3,151,090
Communications	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Coping Instructor	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Culinary Arts	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
ELL	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
English Language	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Family Consumer Services	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Foreign Language	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Health Services	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
History & Social Science	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Instructional Assistant/Paraprofessionals	89.00	3,417,505	93.00	3,110,050	97.00	4,297,346	4.00	1,187,296	101.00	5,063,028	4.00	765,682
Library/Media	2.00	198,730	2.00	201,662	2.00	210,898	0.00	9,236	2.00	236,206	0.00	25,308
Mathematics	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
MCAS	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Music	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Other	1.00	23,314	1.00	189,943	1.00	38,237	0.00	(151,706)	1.00	42,825	0.00	4,588
Physical Education	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Reading	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
School Adjustment Counselor	2.00	170,249	3.00	255,291	4.00	336,627	1.00	81,336	5.00	377,022	1.00	40,395
Science												
Biology	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Botany	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Chemistry	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Geology	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Physics	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Special Education	35.00	3,858,300	36.00	4,133,104	44.00	4,741,065	8.00	607,961	46.00	5,309,993	2.00	568,928
Substitute Teachers	8.00	1,202,408	8.00	831,956	8.00	743,964	0.00	(87,992)	9.00	833,240	1.00	89,276
Technology	8.00	573,131	8.00	557,001	8.00	606,443	0.00	49,442	8.00	679,216	0.00	72,773
Vocational Tech.	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	-
Total Instruction - Teaching Services	391.00	28,662,348	389.00	28,699,554	418.00	31,900,327	29.00	3,200,773	436.00	36,618,366	18.00	4,718,039
Total Salaries Administration & Instruction	491.50	36,795,203	491.50	37,130,349	522.50	40,788,645	31.00	3,658,296	543.50	46,793,282	21.00	6,004,637
Employee Benefits												
All employee-related fringe (health insurance, retirement etc)		-		-		-		-		-		-

PREFERRED SOLUTION

**Budget Statement:
Expenditures, February 2024**

page 2

COMPUTATION OF LEGAL DEBT MARGIN

LAST TEN FISCAL YEARS

	(Amounts in Thousands)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Equalized Valuation.....	\$ 4,131,231	\$ 4,083,658	\$ 4,083,658	\$ 4,615,563	\$ 4,615,563	\$ 5,111,199	\$ 5,111,199	\$ 5,664,785	\$ 5,664,785	\$ 6,376,735
Debt Limit.....	206,562	204,183	204,183	230,778	230,778	255,560	255,560	283,239	283,239	318,837
Outstanding general obligation bonds.....	56,602	53,965	49,397	51,467	47,130	45,310	51,750	46,671	55,924	60,771
Authorized and unissued debt.....	6,547	22,881	16,695	15,992	20,072	29,086	24,704	25,932	16,910	10,896
Debt not applicable to debt limit.....	(31,263)	(30,212)	(28,533)	(28,457)	(25,574)	(24,193)	(22,651)	(22,776)	(31,126)	(35,781)
Legal debt margin.....	\$ 174,676	\$ 157,549	\$ 166,624	\$ 191,776	\$ 189,150	\$ 205,357	\$ 201,757	\$ 233,412	\$ 241,531	\$ 282,951
Total debt applicable to the limit as a percentage of debt limit.....	15.44%	22.84%	18.39%	16.90%	18.04%	19.64%	21.05%	17.59%	14.73%	11.26%

Source: State Division of Local Services, Accounting Records

Budget Statement for Preferred Schematic - Expenditures

Category	2020-2021 FY2021		2021-2022 FY2022		2022-2023 FY2023		Change from Previous Year		Post-Construction Budget		New Facility vs. Current	
	Staff (FTE)	Budget	Staff (FTE)	Budget	Staff	Budget	Staff (FTE)	Budget	Staff	Budget	Staff (FTE)	Budget
Materials & Services												
Materials												
Audio-Visual Materials	-	-	-	-	-	-	-	-	-	-	-	-
Culinary Arts Materials	-	-	-	-	-	-	-	-	-	-	-	-
General Office Supplies	44,283	44,283	73,934	73,934	116,624	116,624	42,690	42,690	139,949	139,949	23,325	23,325
Information technology	-	-	-	-	-	-	-	-	-	-	-	-
Hardware	153,432	153,432	121,793	121,793	80,374	80,374	(41,419)	(41,419)	96,449	96,449	16,075	16,075
Software	25,502	25,502	112,496	112,496	140,884	140,884	28,388	28,388	169,061	169,061	28,177	28,177
Library Materials	14,124	14,124	14,467	14,467	15,566	15,566	1,099	1,099	18,679	18,679	3,113	3,113
Instructional Supplies	331,554	331,554	369,945	369,945	510,594	510,594	140,649	140,649	612,713	612,713	102,119	102,119
Testing Materials & Supplies	-	-	-	-	-	-	-	-	-	-	-	-
Textbooks	3,391	3,391	-	-	-	-	-	-	-	-	-	-
Total Materials	572,285	572,285	692,635	692,635	864,042	864,042	171,407	171,407	1,036,850	1,036,850	172,808	172,808
Services												
Athletics	619,247	619,247	604,175	604,175	770,091	770,091	165,916	165,916	924,109	924,109	154,018	154,018
OOD	2,243,996	2,243,996	3,337,844	3,337,844	3,150,652	3,150,652	(187,192)	(187,192)	3,780,782	3,780,782	630,130	630,130
Food Service	175,000	175,000	-	-	-	-	-	-	-	-	-	-
Health Services	5,915	5,915	6,363	6,363	12,601	12,601	6,238	6,238	15,121	15,121	2,520	2,520
Other Student Activities	260,150	260,150	306,156	306,156	357,205	357,205	51,049	51,049	428,646	428,646	71,441	71,441
Educational Services & PD	695,520	695,520	1,179,656	1,179,656	892,034	892,034	(287,622)	(287,622)	1,070,441	1,070,441	178,407	178,407
School Security	-	-	-	-	-	-	-	-	-	-	-	-
Student Transportation	2,606,882	2,606,882	2,197,357	2,197,357	2,610,960	2,610,960	413,603	413,603	3,133,152	3,133,152	522,192	522,192
Total Services	6,606,709	6,606,709	7,631,551	7,631,551	7,793,543	7,793,543	(417,528)	(417,528)	9,352,252	9,352,252	1,558,709	1,558,709
Total Material & Services	7,178,995	7,178,995	8,324,186	8,324,186	8,657,585	8,657,585	(246,120)	(246,120)	10,389,102	10,389,102	1,731,517	1,731,517
Facility Costs & Capital Improvements												
Facility Costs												
Custodial Supplies	9,648	9,648	47,443	47,443	17,422	17,422	(30,021)	(30,021)	20,906	20,906	3,484	3,484
Electricity	540,896	540,896	638,876	638,876	563,200	563,200	(75,676)	(75,676)	675,840	675,840	112,640	112,640
Heating Oil	-	-	-	-	-	-	-	-	-	-	-	-
Maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Building Security Maintenance	19,244	19,244	51,722	51,722	69,736	69,736	18,014	18,014	83,683	83,683	13,947	13,947
Elevator	18,321	18,321	16,250	16,250	18,937	18,937	2,688	2,688	22,724	22,724	3,787	3,787
Equipment Maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Exterminating	-	-	-	-	-	-	-	-	-	-	-	-
Facility Maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Fire Alarm	9,876	9,876	4,276	4,276	3,369	3,369	(907)	(907)	4,043	4,043	674	674
Fire Extinguisher Inspection	-	-	-	-	-	-	-	-	-	-	-	-
Generator	-	-	-	-	-	-	-	-	-	-	-	-
HVAC Maintenance	39,632	39,632	42,293	42,293	55,196	55,196	12,903	12,903	66,235	66,235	11,039	11,039
Other	86,541	86,541	381,289	381,289	105,003	105,003	(276,286)	(276,286)	126,004	126,004	21,001	21,001
Site Maintenance (Grouds)	-	-	-	-	-	-	-	-	-	-	-	-
Technology	36,883	36,883	36,084	36,084	33,157	33,157	(2,927)	(2,927)	39,788	39,788	6,631	6,631
Pest Control	5,872	5,872	6,171	6,171	6,129	6,129	(42)	(42)	7,355	7,355	1,226	1,226
Natural Gas	230,992	230,992	305,995	305,995	316,629	316,629	10,634	10,634	379,955	379,955	63,326	63,326
Snow Removal	4,911	4,911	-	-	-	-	-	-	-	-	-	-
Telephone	3,174	3,174	49,914	49,914	42,802	42,802	(7,112)	(7,112)	51,362	51,362	8,560	8,560
Water/Sewer	-	-	-	-	-	-	-	-	-	-	-	-
Total Facility Costs	1,005,989	1,005,989	1,580,313	1,580,313	1,231,580	1,231,580	(348,733)	(348,733)	1,477,896	1,477,896	246,316	246,316
Capital Improvements												
Capital Improvements	750,000	750,000	800,000	800,000	944,000	944,000	144,000	144,000	1,050,000	1,050,000	106,000	106,000
Total Facility Costs & Capital Improvements	1,755,989	1,755,989	2,380,313	2,380,313	2,175,580	2,175,580	(204,733)	(204,733)	2,527,896	2,527,896	352,316	352,316
Debt Service												
Short-term	-	-	-	-	-	-	-	-	-	-	-	-
Long-term	98,630	98,630	11,850	11,850	86,490	86,490	74,640	74,640	-	-	(86,490)	(86,490)
Total Debt Service	98,630	98,630	11,850	11,850	86,490	86,490	74,640	74,640	-	-	(86,490)	(86,490)
Total Budget & Staff	491.50	45,828,817	491.50	47,846,698	522.50	51,708,300	31	3,282,082	544	59,710,280	21	8,001,980

PREFERRED SOLUTION

Budget Statement:
Expenditures, February 2024

page 3

January 2014

Budget Statement for Preferred Schematic - Revenue

As reported on the school district's most recent three End of Year Pupil and Financial Reports schedule 1, please update to the 3 latest fiscal year periods and report sources of revenue in the fields below.

	FY21 End of Year Financial Report						FY22 End of Year Financial Report						FY23 End of Year Financial Report									
	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	
A. Revenue from Local Sources																						
Assessments received by Regional Schools	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E&D Fund Appropriations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Individuals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Other Districts in Comm.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Districts in Other States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Year Unexpended Encumbrances (Carry Forward)	-	-	-	-	-	10,092	10,092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation Fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139,360	139,360	-
Earnings on Investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rental of School Facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Care and Assistance	-	109,486	-	-	-	-	109,486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Revenue Receipts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue From Local Sources	-	109,486	-	-	-	10,092	119,578	-	-	-	-	-	-	-	-	-	-	-	-	139,360	139,360	-
B. Revenue from State Aid																						
School Aid (Chapter 70)	-	-	-	-	-	6,516,115	6,516,115	-	-	-	-	-	6,613,135	6,613,135	-	-	-	-	-	7,890,436	7,890,436	-
Mass School Building Authority - Construction Aid	-	456,305	-	-	-	-	456,305	-	34,273	-	-	-	-	34,273	-	34,273	-	-	-	-	34,273	-
Pupil Transportation (Ch. 71, 71A,71B,74)	-	-	-	-	-	18,030	18,030	-	-	-	-	-	19,625	19,625	-	-	-	-	-	22,021	22,021	-
Charter Tuition Reimbursements & Charter Facilities Aid	-	179,239	-	-	-	20,870	200,109	-	177,846	-	-	-	23,875	201,721	-	110,010	-	-	-	20,131	130,141	-
Circuit Breaker	-	-	-	-	-	4,375,344	4,375,344	-	-	-	-	-	2,455,684	2,455,684	-	-	-	-	-	3,296,640	3,296,640	-
Foundation Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue From State Aid	-	635,544	-	-	-	10,930,359	11,565,903	-	212,119	-	-	-	9,112,319	9,324,438	-	144,283	-	-	-	11,229,228	11,373,511	-
C. Revenue from Federal Grants																						
ESE Administered Grants	123,738	1,001,765	-	-	-	1,096,649	2,222,152	141,817	937,839	-	-	-	635,864	1,715,520	156,268	1,054,250	-	-	-	683,923	1,894,441	-
Direct Federal Grants	-	-	-	-	-	1,556,708	1,556,708	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue Federal Grants	123,738	1,001,765	-	-	-	2,653,357	3,778,860	141,817	937,839	-	-	-	635,864	1,715,520	156,268	1,054,250	-	-	-	683,923	1,894,441	-
D. Revenue from State Grants																						
ESE Administered Grants	-	-	-	-	-	123,425	123,425	-	-	-	-	-	126,357	126,357	-	-	-	-	-	59,535	59,535	-
Other State Grants	-	-	-	-	-	236,425	236,425	-	-	-	-	-	108,571	108,571	-	-	-	-	-	80,000	80,000	-
Total Revenue From State Grants	-	-	-	-	-	359,850	359,850	-	-	-	-	-	234,928	234,928	-	-	-	-	-	139,535	139,535	-
E. Revenue - Revolving & Special Funds																						
School Lunch Receipts	-	-	-	-	-	561,699	561,699	-	-	-	-	-	1,758,236	1,758,236	-	-	-	-	-	1,801,715	1,801,715	-
Athletic Receipts	-	-	-	-	-	141,732	141,732	-	-	-	-	-	233,186	233,186	-	-	-	-	-	261,096	261,096	-
Tuition Receipts - School Choice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition Receipts - Other	-	33,384	-	-	-	-	33,384	-	30,665	-	-	-	168,112	198,777	-	-	-	-	-	-	-	-
Other Local Receipts	-	-	-	-	-	360,581	360,581	-	-	-	-	-	947,362	947,362	-	-	-	-	-	908,247	908,247	-
Private Grants	-	-	-	-	-	17,583	17,583	-	-	-	-	-	133,862	133,862	-	-	-	-	-	23,455	23,455	-
Total Revenue Revolving & Special Funds	-	33,384	-	-	-	1,081,595	1,114,979	-	30,665	-	-	-	3,240,758	3,271,423	-	-	-	-	-	2,994,513	2,994,513	-
Total Revenue All Sources	123,738	1,780,179	-	-	-	15,035,253	16,939,170	141,817	1,180,623	-	-	-	13,223,869	14,546,309	156,268	1,198,533	-	-	-	15,186,559	16,541,360	-

PREFERRED SOLUTION

Budget Statement:
Revenue, February 2023

page 1

January 2014

Budget Statement for Preferred Schematic - Revenue

As reported on the school district's most recent three End of Year Pupil and Financial Reports schedule 1, please update to the 3 latest fiscal year periods and report sources of revenue in the fields below.

	FY21 End of Year Financial Report						FY22 End of Year Financial Report						FY23 End of Year Financial Report									
	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	Regular Day	Special Education	C74 Occupational Day	Adult Education	Other Programs	Un-distributed	Total	
A. Revenue from Local Sources																						
Assessments received by Regional Schools	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E&D Fund Appropriations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Individuals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Other Districts in Comm.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition from Districts in Other States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previous Year Unexpended Encumbrances (Carry Forward)	-	-	-	-	-	10,092	10,092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation Fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139,360	139,360	-
Earnings on Investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rental of School Facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Care and Assistance	-	109,486	-	-	-	-	109,486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Revenue Receipts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue From Local Sources	-	109,486	-	-	-	10,092	119,578	-	-	-	-	-	-	-	-	-	-	-	-	139,360	139,360	-
B. Revenue from State Aid																						
School Aid (Chapter 70)	-	-	-	-	-	6,516,115	6,516,115	-	-	-	-	-	6,613,135	6,613,135	-	-	-	-	-	7,890,436	7,890,436	-
Mass School Building Authority - Construction Aid	-	456,305	-	-	-	-	456,305	-	34,273	-	-	-	-	34,273	-	34,273	-	-	-	-	34,273	-
Pupil Transportation (Ch. 71, 71A,71B,74)	-	-	-	-	-	18,030	18,030	-	-	-	-	-	19,625	19,625	-	-	-	-	-	22,021	22,021	-
Charter Tuition Reimbursements & Charter Facilities Aid	-	179,239	-	-	-	20,870	200,109	-	177,846	-	-	-	23,875	201,721	-	110,010	-	-	-	20,131	130,141	-
Circuit Breaker	-	-	-	-	-	4,375,344	4,375,344	-	-	-	-	-	2,455,684	2,455,684	-	-	-	-	-	3,296,640	3,296,640	-
Foundation Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue From State Aid	-	635,544	-	-	-	10,930,359	11,565,903	-	212,119	-	-	-	9,112,319	9,324,438	-	144,283	-	-	-	11,229,228	11,373,511	-
C. Revenue from Federal Grants																						
ESE Administered Grants	123,738	1,001,765	-	-	-	1,096,649	2,222,152	141,817	937,839	-	-	-	635,864	1,715,520	156,268	1,054,250	-	-	-	683,923	1,894,441	-
Direct Federal Grants	-	-	-	-	-	1,556,708	1,556,708	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue Federal Grants	123,738	1,001,765	-	-	-	2,653,357	3,778,860	141,817	937,839	-	-	-	635,864	1,715,520	156,268	1,054,250	-	-	-	683,923	1,894,441	-
D. Revenue from State Grants																						
ESE Administered Grants	-	-	-	-	-	123,425	123,425	-	-	-	-	-	126,357	126,357	-	-	-	-	-	59,535	59,535	-
Other State Grants	-	-	-	-	-	236,425	236,425	-	-	-	-	-	108,571	108,571	-	-	-	-	-	80,000	80,000	-
Total Revenue From State Grants	-	-	-	-	-	359,850	359,850	-	-	-	-	-	234,928	234,928	-	-	-	-	-	139,535	139,535	-
E. Revenue - Revolving & Special Funds																						
School Lunch Receipts	-	-	-	-	-	561,699	561,699	-	-	-	-	-	1,758,236	1,758,236	-	-	-	-	-	1,801,715	1,801,715	-
Athletic Receipts	-	-	-	-	-	141,732	141,732	-	-	-	-	-	233,186	233,186	-	-	-	-	-	261,096	261,096	-
Tuition Receipts - School Choice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tuition Receipts - Other	-	33,384	-	-	-	-	33,384	-	30,665	-	-	-	168,112	198,777	-	-	-	-	-	-	-	-
Other Local Receipts	-	-	-	-	-	360,581	360,581	-	-	-	-	-	947,362	947,362	-	-	-	-	-	908,247	908,247	-
Private Grants	-	-	-	-	-	17,583	17,583	-	-	-	-	-	133,862	133,862	-	-	-	-	-	23,455	23,455	-
Total Revenue Revolving & Special Funds	-	33,384	-	-	-	1,081,595	1,114,979	-	30,665	-	-	-	3,240,758	3,271,423	-	-	-	-	-	2,994,513	2,994,513	-
Total Revenue All Sources	123,738	1,780,179	-	-	-	15,035,253	16,939,170	141,817	1,180,623	-	-	-	13,223,869	14,546,309	156,268	1,198,533	-	-	-	15,186,559	16,541,360	-

PREFERRED SOLUTION

Project Schedule

For Preferred Solution

The following proposed project schedule for the preferred schematic option was assembled by the OPM, LeftField Project Management, with input from the Designer - Ai3 Architects - and School Building Committee. There have been no substantial changes to the projected schedule since submission of the Preliminary Design Program Report and the proposed schedule continues to align with the targeted dates established in the RFS.

The Project Team, District, and the Town have been working closely to ensure that sufficient time is being taken to review the data and options effectively and sufficiently. Throughout the process, the Project Team will notify the MSBA promptly if additional time is needed for any phase, and the Project Schedule will be modified as necessary. ♦



WILLIAM H GALVIN MIDDLE SCHOOL
Preliminary Project Schedule

2/5/2024

Task Name	Duration (days)	Start	Finish
Procure OPM [MOD 2]	36	Monday, January 30, 2023	Monday, March 6, 2023
OPM interviews	1	Monday, January 30, 2023	Monday, January 30, 2023
OPM fee review & approval	36	Tuesday, January 31, 2023	Tuesday, March 7, 2023
MSBA OPM meeting approval	1	Tuesday, March 7, 2023	Tuesday, March 7, 2023
MSBA OPM letter issued	1	Thursday, February 2, 2023	Thursday, February 2, 2023
OPM contract executed	1	Monday, March 6, 2023	Monday, March 6, 2023
Procure Architect [MOD 2]	107	Wednesday, March 15, 2023	Thursday, June 29, 2023
Committee reviews & approves issuance RFS to the MSBA	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
LF issues RFS to the MSBA	1	Thursday, March 16, 2023	Thursday, March 16, 2023
MSBA-RFS review period	15	Thursday, March 16, 2023	Thursday, March 30, 2023
Finalize RFS with MSBA/BC	1	Monday, April 3, 2023	Monday, April 3, 2023
Ad submitted in Central Register & local newspaper	1	Thursday, March 30, 2023	Thursday, March 30, 2023
Select 3 members for DSP team / Assign DSP subcommittee	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
Ad appears in Central Register	1	Wednesday, April 5, 2023	Wednesday, April 5, 2023
On-Site RFS briefing	1	Thursday, April 13, 2023	Thursday, April 13, 2023
Receive RFS designer submissions	1	Thursday, May 11, 2023	Thursday, May 11, 2023
Review RFS & check references	1	Wednesday, May 24, 2023	Wednesday, May 24, 2023
Submit initial RFS packets to the MSBA DSP	1	Wednesday, May 24, 2023	Wednesday, May 24, 2023
Submit reference check data to the MSBA DSP [MSBA deadline]	1	Tuesday, May 30, 2023	Tuesday, May 30, 2023
Designer Selection Panel Dry Run	1	Monday, June 5, 2023	Monday, June 5, 2023
Attend MSBA 1st DSP Meeting [assume rank and interview option is selected]	1	Tuesday, June 6, 2023	Tuesday, June 6, 2023
Attend MSBA 2nd DSP Meeting for Interviews	1	Tuesday, June 20, 2023	Tuesday, June 20, 2023
MSBA DSP issues official ranking and letter Re: Top Ranked Design Firm	1	Tuesday, June 20, 2023	Tuesday, June 20, 2023
Negotiate Designer Fee	9	Tuesday, June 20, 2023	Wednesday, June 28, 2023
Designer contract - approval by BC	1	Wednesday, June 28, 2023	Wednesday, June 28, 2023
Execute Designer contact	1	Thursday, June 29, 2023	Thursday, June 29, 2023
Develop schedule/work plan	15	Thursday, June 29, 2023	Thursday, July 13, 2023
BC approves work plan	1	Thursday, August 3, 2023	Thursday, August 3, 2023
MSBA/District kick off meeting	1	Tuesday, August 1, 2023	Tuesday, August 1, 2023
FEASIBILITY STUDY [MOD 3]	285	Friday, July 14, 2023	Wednesday, April 24, 2024
Preliminary Design Program (PDP)	120	Thursday, June 29, 2023	Friday, October 27, 2023
Educational Programming	78	Friday, July 14, 2023	Friday, September 29, 2023
Ed. Visioning kick off meeting	1	Friday, July 14, 2023	Friday, July 14, 2023
Educational Visioning Galvin Walkthrough	1	Friday, July 21, 2023	Friday, July 21, 2023
Educational Visioning Group Workshop #1	1	Thursday, July 27, 2023	Thursday, July 27, 2023
Educational Visioning School Tours	2	Wednesday, August 2, 2023	Thursday, August 3, 2023
Educational Visioning Group Workshop #2 & #3	1	Wednesday, August 16, 2023	Wednesday, August 16, 2023
Educational Visioning Workshop #4 - Community Meeting	1	Sunday, August 20, 2023	Sunday, August 20, 2023
Educational Programming Verification Session #1	1	Friday, August 18, 2023	Friday, August 18, 2023
Educational Programming Verification Session #2	1	Thursday, September 14, 2023	Thursday, September 14, 2023
EDUCATIONAL PLAN; Ed plan statement of teaching philosophy, methods and goals.	78	Thursday, June 29, 2023	Thursday, September 14, 2023
Initial space summary ("ISS")	1	Thursday, September 14, 2023	Thursday, September 14, 2023
Evaluation of existing conditions	121	Thursday, June 29, 2023	Friday, October 27, 2023

Meetings	254	Tuesday, March 7, 2023	Wednesday, November 15, 2023
SBC #1 OPM Kickoff	1	Tuesday, March 7, 2023	Tuesday, March 7, 2023
SBC #2 Designer Selection Process	1	Wednesday, March 15, 2023	Wednesday, March 15, 2023
SBC #3	1	Wednesday, June 14, 2023	Wednesday, June 14, 2023
SBC #4	1	Wednesday, June 28, 2023	Wednesday, June 28, 2023
SBC #5	1	Wednesday, September 20, 2023	Wednesday, September 20, 2023
SBC #6	1	Wednesday, October 18, 2023	Wednesday, October 18, 2023
SBC #7	1	Wednesday, November 15, 2023	Wednesday, November 15, 2023
** Submit PDP to the MSBA **	1	Friday, October 27, 2023	Friday, October 27, 2023
MSBA PDP Review	22	Monday, October 30, 2023	Monday, November 20, 2023
Receive MSBA PDP comments	1	Wednesday, December 20, 2023	Wednesday, December 20, 2023
District returns responses to MSBD PDP comments	27	Wednesday, December 20, 2023	Monday, January 15, 2024
Preferred Schematic Report (PSR)	178	Monday, October 30, 2023	Wednesday, April 24, 2024
Prepare and Submit Project Notification to Mass Historical Commission and Receive MHC Response	36	Friday, December 1, 2023	Friday, January 5, 2024
SBC Vote to Submit PSR	1	Wednesday, January 24, 2024	Wednesday, January 24, 2024
*** Submit PSR to the MSBA ***	1	Monday, February 5, 2024	Monday, February 5, 2024
MSBA Review Period	22	Tuesday, February 6, 2024	Tuesday, February 27, 2024
Respond to MSBA PSR review comments	15	Tuesday, February 27, 2024	Tuesday, March 12, 2024
MSBA Facilities Assessment Committee (FAS) review (3/13 or 3/27)	15	Wednesday, March 13, 2024	Wednesday, March 27, 2024
Respond to MSBA FAS Comments	29	Wednesday, March 13, 2024	Wednesday, April 10, 2024
★★MSBA BOD Mtg - PSR - Proceed to Schematic★★	1	Wednesday, April 24, 2024	Wednesday, April 24, 2024
Schematic Design [MOD 4]	325	Tuesday, February 6, 2024	Thursday, December 26, 2024
DESE submittal	22	Thursday, June 6, 2024	Thursday, June 27, 2024
MSBA Review of DESE Submittal	22	Friday, June 28, 2024	Friday, July 19, 2024
DESE Review and Approval	22	Monday, July 22, 2024	Monday, August 12, 2024
Schematic Design Submittal	65	Wednesday, April 24, 2024	Thursday, June 27, 2024
SD Cost Estimates and Reconciliation	29	Friday, May 10, 2024	Friday, June 7, 2024
MSBA and Bond Counsel to Review Vote Language	15	Thursday, June 27, 2024	Thursday, July 11, 2024
SBC Vote to Approve SD Submission to MSBA	1	Wednesday, June 26, 2024	Wednesday, June 26, 2024
MSBA Schematic Design Notification	1	Thursday, June 13, 2024	Thursday, June 13, 2024
** Schematic Submitted to the MSBA **	1	Thursday, June 27, 2024	Thursday, June 27, 2024
MSBA Project Scope and Budget meeting	15	Wednesday, July 17, 2024	Wednesday, July 31, 2024
MSBA Review Comments Issued	22	Thursday, June 27, 2024	Thursday, July 18, 2024
Respond to MSBA Comments	15	Friday, July 19, 2024	Friday, August 2, 2024
★★MSBA BOD Meeting - SD Approval★★ (TBD - 2024 dates not released)	1	Wednesday, August 28, 2024	Wednesday, August 28, 2024
120-day duration to secure funding authorization	121	Wednesday, August 28, 2024	Thursday, December 26, 2024
District executes PSBA	8	Saturday, August 31, 2024	Saturday, September 7, 2024
★★Town Approvals★★ (exact dates TBD)	23	Monday, November 18, 2024	Tuesday, December 10, 2024
★★Execute PFA★★	17	Tuesday, December 10, 2024	Thursday, December 26, 2024
CM PROCUREMENT [applicable if committee decides to utilize CM-R methodology]	82	Wednesday, January 24, 2024	Monday, April 15, 2024
SBC Approves Use of CM at Risk Delivery & Selection Committee	1	Wednesday, January 24, 2024	Wednesday, January 24, 2024
CM at Risk Award / Notice to Proceed	1	Monday, April 15, 2024	Monday, April 15, 2024
SD Preconstruction	784	Monday, April 15, 2024	Monday, June 8, 2026

Design Development	177	Thursday, January 2, 2025	Friday, June 27, 2025
Design Development Documents	106	Thursday, January 2, 2025	Friday, April 18, 2025
DD Cost Estimate	21	Friday, April 18, 2025	Friday, May 9, 2025
DD Value Engineering and Reconciliation	14	Saturday, May 10, 2025	Friday, May 23, 2025
** Submit DD package to MSBA **	1	Friday, May 23, 2025	Friday, May 23, 2025
MSBA Issues Comments	22	Friday, May 23, 2025	Friday, June 13, 2025
Response to MSBA Comments	14	Friday, June 13, 2025	Friday, June 27, 2025
CD 60% Phase_MSBA Submission	160	Friday, June 27, 2025	Thursday, December 4, 2025
Develop CD 60% Documents	91	Friday, June 27, 2025	Thursday, September 25, 2025
CD 60% Cost Estimate	21	Thursday, September 25, 2025	Thursday, October 16, 2025
CD 60% VE and Reconciliation	14	Thursday, October 16, 2025	Thursday, October 30, 2025
** Submit 60% CD MSBA submission **	1	Thursday, October 30, 2025	Thursday, October 30, 2025
MSBA Issues Comments	21	Thursday, October 30, 2025	Thursday, November 20, 2025
Response to MSBA Comments	14	Thursday, November 20, 2025	Thursday, December 4, 2025
CD 90% Phase_MSBA Submission	133	Thursday, December 4, 2025	Thursday, April 16, 2026
Develop CD 90% Documents	63	Thursday, December 4, 2025	Thursday, February 5, 2026
CD 90% Cost Estimate	21	Thursday, February 5, 2026	Thursday, February 26, 2026
CD 90% VE and Reconciliation	14	Thursday, February 26, 2026	Thursday, March 12, 2026
** Submit 90% CD MSBA submission **	1	Thursday, March 12, 2026	Thursday, March 12, 2026
MSBA Issues Comments	21	Thursday, March 12, 2026	Thursday, April 2, 2026
Response to MSBA Comments	14	Thursday, April 2, 2026	Thursday, April 16, 2026
Final 100% CD MSBA submission - for record only	41 days		
100% CD drawings developed	45	Thursday, April 16, 2026	Sunday, May 31, 2026
Prepare 100% CDs for Final Bidding	8	Sunday, May 31, 2026	Monday, June 8, 2026
** Submit 100% CD (Bid) drawings/specs/GMP to MSBA ** FOR RECORD	1	Monday, June 8, 2026	Monday, June 8, 2026
PERMITTING - STATE and LOCAL JURISDICTIONAL APPROVALS	459	Thursday, October 30, 2025	Monday, February 1, 2027
Zoning Board of Appeals	98	Thursday, December 4, 2025	Thursday, March 12, 2026
Notice of Intent to Conservation Commission (Review based on Preliminary Site Design w/ Final Site Design due at 60% CDs)	1	Thursday, October 30, 2025	Thursday, October 30, 2025
NPDS Construction General Permit	45	Thursday, April 16, 2026	Sunday, May 31, 2026
EPA-NPDES / SWPPP	25	Sunday, May 31, 2026	Thursday, June 25, 2026
Permits from Town Engineering Dept.	45	Thursday, April 16, 2026	Sunday, May 31, 2026
Special Permit to Planning Dept.	35	Thursday, September 25, 2025	Thursday, October 30, 2025
Building Permit	246	Sunday, May 31, 2026	Monday, February 1, 2027
Bidding			
Early Site Work Bid Period (after 60% CDs, if possible)	28	Thursday, November 20, 2025	Thursday, December 18, 2025
Award Early Package Contract	1	Thursday, December 18, 2025	Thursday, December 25, 2025
Main Bid Period	30	Monday, June 8, 2026	Wednesday, July 8, 2026
Final GMP	28	Wednesday, July 8, 2026	Wednesday, August 5, 2026
Construction	1342	Thursday, December 25, 2025	Tuesday, August 28, 2029
Early Mobilization	28	Thursday, December 25, 2025	Thursday, January 22, 2026
Early Site Work Construction (if possible)	167	Thursday, January 22, 2026	Wednesday, July 8, 2026
Main Construction	730	Wednesday, July 8, 2026	Friday, July 7, 2028
Building Substantial Completion	1	Friday, July 7, 2028	Friday, July 7, 2028
FFE Installation	31	Friday, July 7, 2028	Monday, August 7, 2028
Punchlist	31	Friday, July 7, 2028	Monday, August 7, 2028
Final Completion of New School	1	Monday, August 7, 2028	Monday, August 7, 2028
Teacher Move-In	21	Monday, August 7, 2028	Monday, August 28, 2028

School Opening	1	Monday, August 28, 2028	Monday, August 28, 2028
Building Demo and Field Construction (if applicable)	365	Monday, August 28, 2028	Tuesday, August 28, 2029

Project Closeout Phase	118	Tuesday, August 28, 2029	Monday, December 24, 2029
Prepare and Submit Closeout Documents	90	Tuesday, August 28, 2029	Monday, November 26, 2029
Final Application for Payment	1	Monday, November 26, 2029	Monday, November 26, 2029
Submit 100% DCAMM Contractor Evaluations	7	Monday, November 26, 2029	Monday, December 3, 2029
Final Reimbursement Request	1	Monday, December 3, 2029	Monday, December 3, 2029
MSBA Closeout Documents Submitted	21	Monday, December 3, 2029	Monday, December 24, 2029
LEED	1604	Thursday, January 2, 2025	Friday, May 25, 2029
LEED Registration	21	Thursday, January 2, 2025	Thursday, January 23, 2025
LEED Kick-Off Meeting	1	Thursday, January 30, 2025	Thursday, January 30, 2025
Submit Design Submittal to USGBC	1	Monday, June 8, 2026	Monday, June 8, 2026
Final LEED 10-Month Cx Report	300	Friday, July 7, 2028	Thursday, May 3, 2029
Final Cx Report, Cx Completion Certificate	7	Friday, May 4, 2029	Friday, May 11, 2029
Construction Submittal to USGBC	14	Friday, May 11, 2029	Friday, May 25, 2029
Targeted Date of LEED Certification Letter	1	Friday, May 25, 2029	Friday, May 25, 2029
DCAMM Documentation	833	Monday, June 8, 2026	Monday, September 18, 2028
Designer evaluation for Design Phase	21	Monday, June 8, 2026	Monday, June 29, 2026
Designer evaluation for CA Phase	21	Friday, July 7, 2028	Friday, July 28, 2028
Contractor 50% evaluation	21	Thursday, September 2, 2027	Thursday, September 23, 2027
Contractor 100% evaluation	21	Monday, August 28, 2028	Monday, September 18, 2028

3.3.5 | LOCAL ACTIONS & APPROVAL CERTIFICATION

5

Local Actions and Approvals Certification Letters

The following Local Actions and Approvals Certification Letters have been executed by the Town of Canton's Chief Executive Officer, the Superintendent of Schools, and the Chair of the School Committee.

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CANTON PUBLIC SCHOOLS



960 Washington Street, Canton, MA 02021
Telephone: 781-821-5060
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www.cantonma.org



Derek Folan, M.Ed.
Superintendent of Schools

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Module 3 Grade Reconfiguration and Districting Approval Certification Template

February 5, 2024

Mr. Mike McGurl
Director of Capital Planning
40 Broad Street
Boston, Massachusetts 02109

Dear Mr. McGurl:

The Canton School Committee (the "SC") understands the proposed change to existing 6 to 8 grade configuration that is being proposed in the Preferred Schematic Report for the William H. Galvin Middle School project (the "Project"), and on December 20, 2023, the SC voted to approve and authorize the proposed change to include grades 5 through 8 because an expanded configuration will provide enhanced educational opportunities for our students and will alleviate the overcrowding in the elementary schools as described in the Feasibility Study related materials. A certified copy of the SC meeting minutes, which includes the specific language of the vote and the number of votes in favor, opposed, and abstained, is attached.

The SC has held 4 meetings regarding the proposed change in the grade configuration as related to the proposed Project, in compliance with the state Open Meeting Law. These meetings include:

11/02/2023 6:00pm Canton School Committee Meeting –
In Person Meeting @ Canton HS

GMS Building Project Update by Project Team No action required/taken.
- A recap of the 10/27/23 public forum was presented. The focus of that forum was grade configuration. Priorities of community from that forum were shared with the SC.

11/06/2023 6:00pm Canton School Committee Meeting –
In Person Meeting @ Canton HS

GMS Building Project Update by Project Team No action required/taken.
- The project team provided a project update focusing on the upcoming grade configuration decision and the steps the project was taking to help the SC get to that decision point.

12/07/2023 6:00pm Canton School Committee Meeting –
In Person Meeting @ Canton HS

GMS Building Project Update by Project Team No action required/taken.
 - Superintendent Folan provided a recommendation for a 5 to 8 grade configuration to the SC. The SC asked for information about how the building would be arranged in order to control interactions between the 8th graders and the 5th graders.

12/20/2023 6:00pm Canton School Committee Meeting –
In Person Meeting @ Canton HS

GMS Building Project Update by Project Team No action required/taken.
 - The Project Team and District Leadership reviewed the information provided to date, recapped public forums and feedback received from parents, teachers, and the general public.

Public Comment No Action required/taken.
 Vote to Select a Grade Configuration Motion Made/Action Taken

In addition to the SBC meetings listed above, the District held four community meetings, at which the Project and its grade configuration was discussed on some level. Formal meeting notes were not kept for these community meetings.

GMS Community Forum #1
*Open meetings w/ brief informational presentation followed by public comment.
 No formal meeting notes were taken.*

09/27/2023 7:00pm GMS Community Forum #1
In Person @ Canton HS

Team Introductions
 The MSBA Process
 Project Timeline (including timeline for grade configuration decision)
 Work To Date
 Questions & Answers

GMS Community Forum #2
*Open meetings w/ brief informational presentation followed by public comment.
 No formal meeting notes were taken.*

10/25/2023 7:00pm GMS Community Forum #2
In Person @ Galvin Middle

School Library
 Grade Configuration
 Student Centered Design
 Existing Elementary School Analysis
 Massachusetts Middle School Configurations
 Social Emotional Learning Aspects

Case Study Interviews with Natick & Quincy
Building Organization Options
Questions & Answers
Community Engagement / Live Polling

GMS Community Forum #3

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

11/13/2023 7:00pm

GMS Community Forum #3

In Person @ Galvin Middle

School Cafetorium

Project Overview

Performance Space Options: Auditorium/Cafetorium/Gymnasium

Grade Configuration: Community Forum #2 Recap

Questions & Answers

Community Engagement / Live Polling

GMS Community Forum #4

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

11/29/2023 7:00pm

GMS Community Forum #4

In Person @ Galvin Middle

School Library

Project Overview

Grade Configuration: Community Forum #2 Recap

Performance Space Options: Community Forum #3 Recap

Questions & Answers

In addition to the SC meetings listed above, the District held 12 public meetings and 4 public forums, which were posted in compliance with the state Open Meeting Law, at which the Project was discussed. These meetings include:

- November 2, 2022 - School Building Committee Meeting #1
- December 7, 2022 - School Building Committee Meeting #2
- February 15, 2023 - School Building Committee Meeting #3
- March 15, 2023 - School Building Committee Meeting #4
- June 14, 2023 - School Building Committee Meeting #5
- June 28, 2023 - School Building Committee Meeting #6
- September 20, 2023 - School Building Committee Meeting #7
- September 27, 2023 – Community Forum #1
- October 18, 2023 - School Building Committee Meeting #8
- October 25, 2023 – Community Forum #2 (Grade Configuration Forum)
- November 13, 2023 - Community Forum #3
- November 15, 2023 - School Building Committee Meeting #9
- November 29, 2023 - Community Forum #4

December 20, 2023 - School Building Committee Meeting #10
January 3, 2024 - School Building Committee Meeting #11
January 24, 2024 - School Building Committee Meeting #12

The presentation materials for each meeting, meeting minutes, and summary materials related to the Project are available locally for public review at <https://galvinmsproject.com/>.

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§ 18-25 and 940 CMR 29 *et seq.*

If you have any questions or require any additional information, please contact [*insert name, title, and contact information*].

By signing this Grade Reconfiguration and Districting Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Grade Reconfiguration and Districting Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Grade Reconfiguration and Districting Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By: Thomas W. Theodore

By: Derek Folan

By: Kendall O'Halloran

Title: Chief Executive Officer

Title: Superintendent of Schools

Title: Chair of the School Committee

Date:

Date:

Date:

CANTON PUBLIC SCHOOLS



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Derek Folan, M.Ed.
Superintendent of Schools

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William H. Galvin Middle School (GMS) Canton Public School District GMS School Building Committee

February 5, 2024

Mr. Mike McGurl
Director of Capital Planning
40 Broad Street
Boston, Massachusetts 02109

Re: GMS Feasibility Study
Module 3 – Local Actions and Approval Certification

Dear Mr. McGurl:

The GMS School Building Committee ("SBC") has completed its review of the Feasibility Study – Preferred Schematic Report ("PSR") for the William H. Galvin Middle School Project (the "Project"), and on January 24, 2025, the SBC voted to approve and authorize the Designer and the Owner's Project Manager to submit the Feasibility Study related materials to the MSBA for its consideration. A certified copy of the SBC meeting minutes from November 15, 2023 through January 3, 2024 are attached for record. The certified copy of the January 24, 2024 meeting minutes which includes the specific language of the vote and the number of votes in favor, opposed, and abstained will be sent along after their approval at the SBC's next meeting.

Since the MSBA's Board of Directors invited the District to conduct a Feasibility Study on October 26, 2022, the SBC has held 12 meetings regarding the proposed project, in compliance with the state Open Meeting Law.

The following is a summary of GMS SBC meetings held to discuss and/or present to the public material related to the Project since the Committee's inception. Where no action was required or taken, or where discussion is noted, please refer to the attached meeting minutes for additional detail. Notice for each meeting was posted at the GMS School Department office and on the GMS website.

Preliminary Design Program Phase Meetings:

11/02/2022	6:00pm	GMS School Building Committee Meeting – In Person Meeting @ Rodman Building
Call to Order		No action required/taken.
Introductions		No action required/taken.
Owner’s Project Manager Selection process		No action required/taken.
Review timelines for the Feasibility Phase		No action required/taken.
Future meeting schedule		No action required/taken.
Adjourn		No action required/taken.
12/07/2022	6:00pm	GMS School Building Committee Meeting - In Person @ Rodman Building
Call to Order		No action required/taken.
Review OPM RFS Draft		No action required/taken.
Review OPM RFS Selection Timeline		No action required/taken.
Vote to Appoint: OPM Selection Committee		Motion taken/approved.
Vote to approve meeting minutes		Motion taken/approved.
Next Meeting		No action required/taken.
Adjourn		No action required/taken.
02/15/2023	6:00pm	GMS School Building Committee Meeting - In Person @ Rodman Building
Call to Order		No action required/taken.
Membership update		No action required/taken.
Vote to approve meeting minutes		Motion taken/approved.
Review OPM selection package sent to MSBA		No action required/taken.
Review designer selection process		No action required/taken.
Feasibility Phase next steps and timeline		No action required/taken.
Schedule upcoming meeting		No action required/taken.
Adjourn		No action required/taken.
03/15/2023	6:00pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order		No action required/taken.
Vote to approve meeting minutes		Motion taken/approved.
OPM Introductions		No action required/taken.
Review/Vote on Designer Selection RFS		Motion taken/approved
Schedule upcoming meeting		No action required/taken.
Adjourn		No action required/taken.
06/14/2023	6:00pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order		No action required/taken.
Vote to approve meeting minutes		Motion taken/approved
Vote to approve invoices		Motion taken/approved
Feasibility Study Budget Update		No action required/taken.
Project Timeline		No action required/taken.
Designer Procurement Update		No action required/taken.
Public Comment		No action required/taken.
Next Meeting		No action required/taken.
Adjourn		No action required/taken.

06/28/2023 5:00pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Designer Selection Process & Contract Review	Motion taken/approved.
Next Steps	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.
09/20/2023 5:30pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Vote to approve invoices	Motion taken/approved.
Project Budget Update	No action required/taken.
Schedule Review	No action required/taken.
MSBA Process Update	No action required/taken.
Next Steps	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.
10/18/2023 5:30pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Vote to approve invoices	Motion taken/approved.
Feasibility Study Budget Update	No action required/taken.
Schedule Overview	No action required/taken.
Preliminary Design Program (PDP) Summary	No action required/taken.
Vote to submit PDP to MSBA	Motion taken/approved.
Public Comment	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.
<u>Preferred Schematic Report Phase Meetings:</u>	
11/15/2023 5:30pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order	No action required/taken.
Vote to approve meeting minutes	Motion taken/approved.
Vote to approve invoices	Motion taken/approved.
Feasibility Study Budget Update	No action required/taken.
Schedule Overview	No action required/taken.
Performance Space Options	No action required/taken.
Building Options Matrix	No action required/taken.
Building Option Development Considerations	No action required/taken.
Public Comment	No action required/taken.
Next Meeting	No action required/taken.
Adjourn	No action required/taken.

12/20/2023 6:00pm	Joint Meeting of GMS School Building Committee Meeting and Canton School Committee- in Person @ Canton HS
Call to Order Schedule Overview Performing Arts Space Review Public Comment: Performance Spaces Vote to approve meeting minutes Vote to approve amendments Vote to approve invoices Budget Overview Adjourn	No action required/taken. No action required/taken. No action required/taken. No action required/taken. Motion taken/approved. Motion taken/approved. Motion taken/approved. No action required/taken. No action required/taken.
01/03/2024 5:30pm	GMS School Building Committee Meeting - Remote Meeting
Call to Order Vote to approve meeting minutes Construction Delivery Method Review Public Comment Next Meeting Adjourn	No action required/taken. Motion taken/approved. No action required/taken. No action required/taken. No action required/taken. No action required/taken.
01/24/2024 4:30pm	GMS School Building Committee Meeting - In Person @ Galvin Middle School Library
Call to Order Vote to approve meeting minutes Vote to approve invoices Feasibility Study Budget Update Schedule Overview Construction Delivery Method Review Public Comment: Construction Delivery Method Vote to select Construction Delivery Method Building Options Review Building Options Review: Cost Update Building Options Review: Evaluation Matrix Public Comment: Building Options Review Vote to Select Preferred Schematic Vote to submit PSR to MSBA Next Meeting Adjourn	No action required/taken. Motion taken/approved. Motion taken/approved. No action required/taken. No action required/taken. No action required/taken. No action required/taken Motion taken/approved. No action required/taken No action required/taken No action required/taken No action required/taken No action required/taken Motion taken/approved. Motion taken/approved. No action required/taken. No action required/taken.

In addition to the SBC meetings listed above, the District held four community meetings, at which the Project was discussed. Formal meeting notes were not kept for these community meetings.

GMS Community Forum #1
Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.

09/27/2023 7:00pm

GMS Community Forum #1
In Person @ Canton High School Library

Team Introductions
The MSBA Process
Project Timeline / Project Milestones
Work To Date
Next Steps
Site Plan Community Use Charette
Questions & Answers

GMS Community Forum #2

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

10/25/2023 7:00pm

GMS Community Forum #2
In Person @ Galvin Middle School Library

Grade Configuration
Student Centered Design
Existing Elementary School Analysis
Massachusetts Middle School Configurations
Social Emotional Learning Aspects
Case Study Interviews with Natick & Quincy
Building Organization Options
Questions & Answers
Community Engagement / Live Polling

GMS Community Forum #3

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

11/13/2023 7:00pm

GMS Community Forum #3
In Person @ Galvin Middle School Cafetorium

Project Overview
Performance Space Options: Auditorium/Cafetorium/Gymnasium
Grade Configuration: Community Forum #2 Recap
Questions & Answers
Community Engagement / Live Polling

GMS Community Forum #4

*Open meetings w/ brief informational presentation followed by public comment.
No formal meeting notes were taken.*

11/29/2023 7:00pm

GMS Community Forum #4
In Person @ Galvin Middle School Library

Project Overview
Grade Configuration: Community Forum #2 Recap
Performance Space Options: Community Forum #3 Recap
Questions & Answers

Agenda's, meeting minutes, and presentation materials for each of the above listed meetings are available for public viewing electronically via the following links:

For SBC information: <https://galvinmsproject.com/>

For School Committee Information: <https://www.cantonma.org/school-committee>

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§ 18-25 and 940 CMR 29 *et seq.*

If you have any questions or require any additional information, please contact Jen Carlson via e-mail at jcarlson@leftfieldpm.com.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By: Thomas W. Theodore

Title: Chair of the Select Board

Date:

By: Derek Folan

Title: Superintendent of Schools

Date:

By: Kendall O'Halloran

Title: Chair of the School Committee

Date:

School Building Committee Agendas & Minutes

The agendas and meeting minutes for all School Building Committee (SBC) Meetings noted on the certification letter are included in the following pages.

Each set of meeting minutes was approved by a vote of the committee at the beginning of subsequent meeting.

All actions taken by the SBC are recorded in the meeting minutes. Actions are authorized by a vote of the committee, and the meeting minutes record the specific vote language and resulting vote.

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Canton School Building Committee
November 15, 2023
5:30 PM
Via Zoom (Link Below)

Purpose / Agenda

1. Call the Meeting to Order
2. Project Approvals
 - October 18, 2023 Meeting Minutes
 - LeftField and Ai3 Invoices
3. Feasibility Study Budget Update
4. Schedule Overview
5. Performance Space Options
6. Building Options Matrix
7. Building Option Development Considerations
8. Public Comment
9. Next Meeting
10. Adjourn

Join Zoom Meeting

<https://cantonma-org.zoom.us/j/84367940165?pwd=RkxtOUlyK3IwUThibFRzNG9YU1MvZz09>

Meeting ID: 843 6794 0165

Passcode: 071436

One tap mobile

+13052241968,,84367940165#,,, *071436# US

+13092053325,,84367940165#,,, *071436# US

Dial by your location

• +1 305 224 1968 US

• +1 309 205 3325 US

Approved on December 20, 2023

**Canton School Building Committee
November 15, 2023
Via Zoom
Minutes**

1. **Call the Meeting to Order:** Superintendent Folan called for a motion to convene the Wednesday, November 15, 2023 Canton School Building Committee meeting at 5:33 pm. Mr. McCarthy made the motion; Mr. Benedetti seconded. As the meeting was virtual, a roll call vote was required and recorded as follows:

Bob Benedetti yea
John Connolly yea
Derek Folan yea
Stephen Marshall yea
Bob McCarthy yea
Kristian Merenda yea

6 yeas 0 nays

Attendees: Bob Benedetti
David Bucelli
John Connolly
Derek Folan
Brian Lynch
Stephen Marshall
Bob McCarthy
Kristian Merenda
Jonathan Mulhern
Tina Perez (departed at 6:17 pm)
Sarah Shannon
Andrea Stuart
Lou Tarmy (departed at 6:33 pm)
Amy Tom
Joanne Campbell, Recording Secretary

Absent: Charles Doody
Randy Scollins

Guests: Troy Randall-Ai3
Justin Thibeault-Ai3
Jon Quell-Ai3
Jen Carlson-LeftField (departed at 6:58 pm)
Tim Ericson-community member

Approved on December 20, 2023

2. Project Approvals:

a. October 18, 2023 Meeting Minutes: Chair Folan asked for a motion to enter into discussion and possible approval of the October 18, 2023 minutes. The motion was made by Mr. Benedetti and seconded by Mr. Connolly. Hearing no requests for discussion, Mr. Folan called for a vote for approval of minutes as written and presented. Roll call vote was unanimous at 6-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Kristian Merenda	yea
6 yeas	0 nays

b. LeftField and Ai3 Invoices: Jen Carlson, LeftField Project Manager, gave a Budget overview and presented one LeftField invoice (\$17,300) for October 2023 services and 3 Ai3 invoices for continued Feasibility studies and extra services (within contractual agreement) totaling \$115,469.38. Chair Folan asked for a motion to enter into discussion and possible approval of these invoices. Mr. McCarthy made the motion; Mr. Marshall seconded. Mr. Marshall noted that after review, he found all invoices in line with contractual obligations. Hearing no questions or requests for discussion, Mr. Folan called for a vote of approval for all October 2023 invoices as written and presented. Roll call vote was unanimous at 6-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Kristian Merenda	yea
6 yeas	0 nays

Ms. Carlson also indicated that the first reimbursement request has been submitted to MSBA. Remuneration to the Town of Canton is expected in the next few weeks.

3. Feasibility Study Budget Update: Ms. Carlson reviewed the Feasibility steps and budget documenting the completion and submission of Step 1. Next steps include a response to MSBA comments. Budget is 96% committed and 34% spent with \$66,140 remaining uncommitted.

4. Schedule Overview: Ms. Carlson debriefed the committee on the progress of the PSR

Approved on December 20, 2023

(Preferred Schematic Report) and the important dates that will need to be met to choose a schematic design and move the project forward:

- a. 12/20/23-School Committee vote;
- b. By January 2024, SBC will decide final performance space option and construction delivery method for the next MSBA submission;
- c. Submission of decisions to MSBA by end of June 2024. MSBA will review for approximately 2 months;
- d. End of August 2024-MSBA funds become available.

Discussion ensued over justification of the cost of the stand alone auditorium (\$12-15 million). Ai3 representatives agreed the cost is high, but suggested that square footage costs for auditoriums are based on ceiling height and necessary, complicated and sophisticated equipment that is expensive. Ai3 representative, Mr.Thibeault, acknowledged members' concerns and proposed that members look on the MSBA website for comparable cost analysis.

5. Performance Space Options: Mr.Thibeault reviewed the three options for performance space at the Galvin–Auditorium, Cafetorium, and Gymatorium. Noting that all three options would provide income opportunities to the town, Mr. Thibeault reviewed all considerations that included historical data of Canton performances, evaluating each option and its benefits and limitations. Committee members asked that approximate building costs and final cost to each homeowner for each option be available to the community to guide informed decision making. These costs should include MSBA reimbursement monies.

Members scrutinized the three options for cost, feasibility of the spaces, and impact of any dining and performance compromises within each space. Members wondered about sight lines, inclusive spaces, acoustic considerations, and design configurations. Mr.Thibeault will work on “best practices” and creative ways to achieve better acoustics and sight lines in the two alternatives to the auditorium.

There was discussion over the “Live Poll” distributed at the October 25, 2023 Community Forum. Committee members expressed concern that the poll was not a good example of the “whole town.” Members requested that the poll be more widely distributed. Mr. Folan will add information to the 11.16.23 CPS email blast. Ms.Tom suggested the poll and additional information on decision-making be included in school principals' SMORES communications as well.

6. Building Options Matrix: Mr. Thibeault reviewed Building Organization for all nine options. Once the grade configuration decision is made, criteria for each of the five categories (Educational Program, Community & Access, Construction Phasing, Sustainability, and Cost) will be ranked and presented for consideration.

Committee members asked that accessibility, adequate/improved spaces for athletics and community use, indoor air quality (tempered air/traditional air conditioning/dehumidified air), centralized/decentralized library all be addressed for community awareness and better decision making.

7. Building Option Development Considerations: Ai3 representatives provided vertical and horizontal considerations for grade level separation as well as the suggestions for the ideal

Approved on December 20, 2023

location of the building and the performance and athletic space in the Galvin for the committee's review and opinions. No decisions were made.

8. Public Comment: There were no requests for public comments.

9. Next Meeting: The next SBC Meeting will be held on Wednesday, December 20, 2023. This meeting will be in person in the CHS Distant Learning Lab.

10. Adjournment: Hearing no questions or requests for any further discussion, Chair Folan called for a motion to adjourn the Wednesday, November 16, 2023 Galvin Building Committee meeting at 7:11 pm. Mr. McCarthy made the motion; Mr. Marshall seconded. Mr. Folan called for a roll call vote. Vote was unanimous at 6-0 and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
Kristian Merenda	yea
6 yeas	0 nays

**Canton School Building Committee
Joint meeting with the School Committee
December 20, 2023
Canton High School
Distance Learning Lab
900 Washington Street
Canton, MA 02021
6:00 PM**

1. Call to Order
2. Schedule Overview
3. Performing Arts Space Review
4. Public Comment: Performance Spaces
5. Performance Space Discussion and Vote
6. Project Approvals
 - November 15, 2023 Meeting Minutes
 - LeftField Amendment No. 1 for Cost Estimating Services
 - LeftField and Ai3 Invoices
7. Budget Overview
8. Adjourn

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Approved by School Building Committee
on January 3, 2024

Approved by School Committee
on January 18, 2024

**Canton School Building Committee
and School Committee Joint Meeting
December 20, 2023
Minutes**

A. Call to Order: Chair O’Halloran asked for a motion to call to order the Thursday, December 21, 2023 School Committee Open Session Meeting at 6:03 pm. Superintendent Folan, Chair of the SBC, opened the School Building Committee Meeting to order at 6:03 pm.

Attendees: Kimberly McCourt (SC)
Kristian Merenda (SC)
Kendall O’Halloran (SC)
Derek Folan, Superintendent (SC & SBC)
Stephen Marshall, Assistant Superintendent of Finance & Operations (SC & SBC)
(Left the meeting at 7:27 pm)
John Connolly (SBC)
Charles Doody (SBC)
Tom Kelleher (SBC)
Brian Lynch (SBC)
Bob McCarthy (SBC)
Jonathan Mulhern (SBC)
Tina Perez (SBC)
Sarah Shannon (SBC)
Andrea Stuart (SBC)
Lou Tarmy (SBC)

Absent: Laura Arboleda (SC)
Maureen Moran (SC)
Bob Benedetti (SBC)
Amy Tom (SBC)

Guests: Justin Thibeault, Ai3
Lynn Stapleton, LeftField

B. GMS Building Project Update: Mr. Thibeault reviewed the GMS Building Project schedule overview including building options (addition/renovation vs. new construction) for both grade configurations (6-8 or 5-8) and a matrix to identify what option is best and thus inform the final

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on January 3, 2024

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on January 18, 2024

decision. Criteria included Educational Program, Community & Access, Construction Phasing, Sustainability, and Cost.

Superintendent Folan announced his recommendation for grade configuration. Advocating for a 5-8 grade configuration, Mr. Folan noted that the 5-8 grade configuration will provide enhanced educational opportunities for our students and will alleviate the overcrowding in the elementary schools. This decision was born out of meetings, discussions, workshops, community forums with live polling, and facility assessments in both the GMS as well as the three elementary schools. Careful consideration was given to current 5th grade model (two teacher teams), grade level separation, and controlled interaction. Educators were strongly in favor of the 5-8 grade shift noting that academic neighborhoods and collaborative spaces offer extra opportunities to be a part of the school.

C. Public Comment: Ms. Haley Pecarski, a graduate of Canton schools, spoke of concerns with a 5-8 grade configuration for the new GMS. She expressed concern with moving 5h grade students into a bigger building. She wondered how students would be protected from bullying in a larger community. Ms. Pecarski asked the group to consider dignity and civility as an important part of school culture.

D. New Business:

Grade Configuration Recommendation and Vote: Mr. Folan recommended the 5-8 configuration. Ms. Merenda requested an estimate of the impact in tax costs to residents. Lynn Davenport (LeftField) indicated that the range is not set yet, but would be able to supply some range estimates and reimbursement levels from MSBA after both votes (grade configuration and Performing Arts Space) were recorded.

Hearing no further questions or requests for additional discussion, Chair Merenda called for a motion to vote on grade configuration for the new Galvin Middle School. Kristian Merenda made the motion for the school committee to modify the current 6-8 grade configuration at the Galvin Middle School to a 5-8 grade configuration for the new Galvin Middle School project in conjunction with the MSBA process. Kimberly McCourt seconded. Roll call vote was unanimous at 3-0 and recorded as follows:

Kristian Merenda	yea		
Kimberly McCourt	yea		
Kendall O'Halloran	yea		
	3 yeas	0 nays	

E. Future Business: The next Open Session meeting is scheduled for Thursday, December 21, 2023 at 6:00 pm.

F. Adjournment of Canton School Committee Open Session Meeting: Ms. O'Halloran called for a motion to adjourn the Wednesday, December 20, 2023 Canton School Committee Open

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on January 18, 2024

Session Meeting at 7:03 pm. Ms. Merenda made the motion; Kimberly McCourt seconded. Roll call vote was unanimous at 3-0 and recorded as follows:

Kristian Merenda	yea		
Kimberly McCourt	yea		
Kendall O'Halloran	yea		
		3 yeas	0 nays

G. SBC portion of the Meeting:

- a. **Performing Arts Space Review:** Ai3 Principal, Mr. Thibeault, gave an overview of the Performing Arts Space options:
 - a. Auditorium: dedicated performance space
 - b. Cafetorium: stage attached to a dining space;
 - c. Gymnatorium: stage attached to a gymnasium

Mr. Thibeault showed examples of all three building options, noting size , seating capacity (600 or 800 seats), availability of each space within the school day, and cost estimates, and did note the MSBA will partially reimburse for Cafetoriums and Gymtoriums, but will not consider middle school auditoriums eligible for reimbursement. He indicated that live polling from Community Forum #3 suggested residents were in favor of investing in an auditorium.

The District recommended building a full auditorium based on current ticket sales and attendance data at CHS auditorium, and the additional educational and community benefits the space would allow.

H. Public Comment: Performance Spaces-no public comments were heard.

- I. **Performance Space Discussion and Vote:** Mr. McCarthy was in favor of building an 800 seat auditorium, and charged Ai3 to look at everything to bring the cost down. Mr. Doody, Mr. Scollins, Mr. Connolly, and Ms. Merenda all supported an 800 seat auditorium.

Mr. McCarthy made a motion that the School Building Committee vote to support an 800 seat auditorium for the new Galvin Middle School project under Item #9. Mr. Doody seconded. Voting was unanimous and recorded as:

Mr. Marshall-yea
 Mr. Connolly-yea
 Ms. Merenda-yea
 Mr. McCarthy-yea
 Mr. Scollins-yea
 Mr. Doody-yea
 Mr. Folan-yea

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on January 3, 2024

Approved by School Committee
on January 18, 2024

7 yeas 0 nays

J. Project Approvals:

a. November 15, 2023 Meeting Minutes: LeftField representative, Ms. Stapleton, presented the 11.15.23 minutes for a vote of approval. Hearing no questions or concerns, Mr. Folan called for a vote to approve minutes as written and presented. Mr. McCarthy made the motion; Mr. Connolly seconded. Voting was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

b. LeftField OPM Contract Amendment No. 1 for Cost Estimating Services: Ms. Stapleton explained the billing for performed by AM Fogarty for cost estimating comparisons. The cost of this amendment is \$9,900. Mr. Folan called for a motion of approval.. Mr. Connolly made the motion, Mr.McCarthy seconded. With no further discussion. Voting was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

c. LeftField and Ai3 Invoices for November: Ms. Stapleton reviewed bills from LeftField and Ai3 in the amount of \$110,185.83. Mr. Folan called for a motion of approval. Mr. Connolly made the motion, Mr.McCarthy seconded. With no further discussion, Hearing no requests for discussion, Mr. Folan called for a vote. Voting was unanimous and recorded as:

Mr. Connolly-yea

Approved by School Building Committee
on January 3, 2024

Approved by School Committee
on January 18, 2024

Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

7. Feasibility Study Budget Overview: Ms. Stapleton noted that 96% of the budget is committed; 42% has been expended to date. LeftField is reserving \$56,240 of uncommitted funds until the construction delivery method is chosen.

Future Meeting Dates: The next School Building Meeting is scheduled to meet remotely on Wednesday, January 3, 2024 and Wednesday, January 17, 2024 when decisions around construction method will be discussed and voted on.

8. Adjournment: Mr. Folan called for a motion to adjourn the Wednesday, December 20, 2023 School Building Meeting at 7:38 pm. Mr. Connolly made the motion; Mr. McCarthy seconded. Roll Call vote was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

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Canton School Building Committee

January 3, 2024

5:30 PM

Via Zoom (link below)

Purpose / Agenda

1. Call the Meeting to Order
2. Project Approvals
 - December 20, 2023 Meeting Minutes
3. Construction Delivery Method Review
4. Public Comment
5. Next Meeting
6. Adjourn

Join Zoom Meeting

<https://cantonma-org.zoom.us/j/82564660232?pwd=YUg4MFh1cDNvN2FGY0JhR1FnRFFudz09>

Meeting ID: 825 6466 0232

Passcode: 948123

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Approved on January 24, 2024

**Canton School Building Committee Meeting
Wednesday, January 3, 2024
MINUTES**

1. Call the Meeting to Order: Superintendent Folan asked for a motion to convene the Wednesday, January 3, 2024 Canton School Building Committee at 5:37 pm. Mr. McCarthy made the motion. Mr. Connolly seconded. Roll call vote was unanimous and recorded as 5-0:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
5 yeas	0 nays

Attendees:

- Bob Benedetti
- David Buccelli
- John Connolly
- Derek Folan
- Mary Graziano
- Stephen Marshall
- Bob McCarthy
- Tina Perez
- Andrea Stuart
- Jonathan Mulhern
- Sarah Shannon
- Amy Tom
- Brian Lynch

Absent:

- Mike Loughran
- Kristian Merenda
- Charles Doody
- Randy Scollins
- Lou Tarmy

Guests:

- Jennifer Carlson, LeftField
- John Quell, Ai3

Approved on January 24, 2024

Troy Randall, Ai3
Lynn Stapleton, LeftField
Justin Thibeault, Ai3

2. Project Approvals:

December 20, 2023 Meeting Minutes: Superintendent Folan asked for a motion to enter into discussion of the Wednesday, December 20, 2023 minutes. Mr. McCarthy made the motion; Mr. Connolly seconded. Hearing no requests for discussion on the proposed minutes, Mr. Folan asked for a motion to approve the Wednesday, January 3, 2024 minutes as written and presented. Mr. Connolly made the motion; Mr. Scollins seconded. Ensuing roll call vote was recorded as 7-0 with one abstention:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
5 yeas	0 nays

3. Construction Delivery Method Review: Jennifer Carlson, LeftField representative, reviewed the history of the two construction delivery methods, comparing and contrasting their values, methods, advantages, procurement process, accounting, general challenges, key differences and overall project risks and benefits. Ms. Carlson indicated that change orders are inevitable. Ms. Carlson explained that a decision for a CM-at risk construction delivery method will necessitate approval by the Inspector General. Regardless of the final decision of method for the Galvin School project, Ms. Carlson assured committee members that LeftField will play an integral role in the process of the project.

Ms. Carlson suggested voting language, and advocated for a decision on the Construction Delivery Method at the next SBC meeting (scheduled for Wednesday, January 24, 2024) to allow the project to move forward.

4. Public Comment: No public comments were heard.

5. Next Meeting: The next SBC Meeting will be held in person on January, 24th, 2024 at 4:30pm in the Canton High School Library. Agenda will include discussion and vote for the preferred option for PSR as well as the Construction Delivery Method.

6. Adjournment: Hearing no requests for further discussion, Chair Folan called for a motion to adjourn the Wednesday, January 3, 2024 Canton School Building Committee meeting at 6:39 pm. Mr. McCarthy made the motion; Mr. Connolly seconded. Roll call

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vote was unanimous and recorded as follows:

Bob Benedetti	yea
John Connolly	yea
Derek Folan	yea
Stephen Marshall	yea
Bob McCarthy	yea
5 yeas	0 nays

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AGENDA
Canton School Building Committee
January 24, 2024
4:30 PM
Galvin Middle School Library
55 Pecunit Street
Canton, MA 02021

Purpose / Agenda

1. Call the Meeting to Order
2. Project Approvals
 - January 3, 2024 Meeting Minutes
 - LeftField and Ai3 Invoices
3. Feasibility Study Budget Update
4. Schedule Update
5. Construction Delivery Method Review
 - Public Comment
 - Vote to select Construction Delivery Method
6. Building Options Review
 - Cost Estimate Update
 - Evaluation Matrix
 - Public Comment
 - Vote to Select Preferred Schematic
7. Vote to Authorize Project Team to Submit Preferred Schematic Report to the MSBA on behalf of the District
8. Next Meeting
9. Adjourn

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School Committee Agendas & Minutes

The meeting minutes for the Canton School Committee (SC) Meetings that have occurred since the submission of the Preliminary Design Program Report on October 27, 2023 and include agenda items associated with the Galvin Middle School building project are included in the following pages.

Each set of meeting minutes was approved by a vote of the committee at the beginning of subsequent meeting.

All actions taken by the SC are recorded in the meeting minutes. Actions are authorized by a vote of the committee, and the meeting minutes record the specific vote language and resulting vote.



**Canton School Committee
Open Meeting Agenda**

Champions of Excellence: Creating a Culture of Achievement, Equity, Inspiration and Joy

November 2, 2023	Canton High School Distance Learning Lab 900 Washington Street Canton, MA 02021	6:00 PM Open Session
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Members of the public can access the meeting via live stream over the "Student Station" on Comcast 6 & 1070/Verizon 41 and on Verizon HD2143 as well as CantonCommunityTV.org for specific and easy links to streamed LIVE coverage of the School Committee. The LIVE link will go up on the day of the meeting. Please take note that Canton Community TV is recording this meeting and streaming it live on the internet and local television stations.

A. Call to Order

B. (10 Min.) Student Member Report School Committee Student Advisor, Zoya Gildenberg, will share Dean S. Luce school updates.

C. (15 min.) Teaching and Learning Report Mr. Josh Fogel will share a 2023-2024 Assessment Schedule.

D. (10 min.) Superintendent Report Superintendent Folan will present District progress, highlights, and accolades.

E. New Business

1. **(5 min.) CPS Facilities Director Introduction:** Superintendent Folan will introduce the new Facilities Director, Mr. David Buccelli.
2. **(20 min.) GMS Building Project Progress Update:** Representatives from Ai3 and LeftField will provide an update on the GMS Building Project.
3. **(10 min.) Preview Considerations for the Upcoming GMS Community Forum:** Members of LeftField and Ai3 will discuss considerations for the next Community Forum.
4. **(5 min.) Food Allergy Management Policies - 1st Read:** Members of the policy subcommittee will share policies JLCEA and JLCEA-R for a 1st read.
5. **(20 min.) FY25 Capital - 1st read:** Mr. Marshall will present the FY25 Capital Budget for a 1st read.
6. **(5 min.) 2024-2025 School Start Date (VOTE):** Superintendent Folan will propose a school start date for the school year 2024-2025.

F. (5-30 min.) Public Comment Click [here](#) to sign up to make a public comment. Public comment allows individuals to express an opinion or share a comment on issues to be discussed on the meeting agenda and/or within the School Committee's authority. It is not an opportunity for discussion dialogue between individuals and the School Committee or Administration. To respect the time of all participants in the meeting, the totality of individual comments cannot exceed 5 minutes. For more information and guidance on making public comments, please see the CPS policies [here](#).

G. (10 min.) Assistant Superintendent of Finance and Operations Report

H. (5 min.) Consent Agenda The consent agenda is designed to expedite the District's handling of routine and miscellaneous business. The School Committee may adopt the entire Consent Agenda with one

motion. At the request of any committee member, any item(s) may be removed and placed on the Regular Agenda for discussion. Note: per Robert's Rules of Order: A member's absence from the meeting for which minutes are being approved does not prevent the member from participating in their correction or approval.

1. Open Session Minutes: August 3, 2023, October 19, 2023
2. Overnight and Out of State Travel Approvals:
 - a. CHS Girls Hockey Overnight Trip to Martha's Vineyard - 1/13/24-1/14/24
 - b. GMS Montreal, Canada Out of State Travel - 4/14/24-4/16/24
3. Warrants: November 3, 2023

I. (5 min.) Update of Sub-Committee, Task Force and Liaison Posts *In addition to the core role of governing our schools, the Canton School Committee creates, participates in, and/or designates representatives to help manage issues of particular importance to the school district or town. They are listed below for reference in order to prompt priority updates from or questions of representatives as relevant.*

1. Subcommittees and Negotiation Teams - Policy, Budget and Finance, Units A&E Contracts, AFSCME Units Contract
2. School Committee Ad Hoc Task Forces/CPS Advisory Committees - Content and Communications, District Planning Process Design, Superintendent Evaluation Process Design, Routine District Attorney Review
3. Liaisons Appointed to Positions on Joint Committees - Master Planning Implementation Committee (MPIC), Canton Community Preservation Committee (CCPC), Building and Renovations Committee (BRC), Canton Diversity Equity and Inclusion (CDEI), Sustainability, Health Insurance Advisory Committee (HIC), Canton Alliance Against Substance Abuse (CAASA), CPS Wellness/SWAG, GMS MSBA School Building Committee, GMS MSBA Design Project Team Committee
4. Liaisons to CPS or Town Boards, Committees, and Municipally-Governed Groups - Annual Town Meeting Prep Committee, Select Board, Town Finance Committee, Capital Planning
5. Liaisons to Groups Serving Canton Public Schools - CAPT, Student Advisory Committee
6. Liaisons to Regional Organizations - Teaching Education Collaborative (TEC), Massachusetts Association of School Committees (MASC), Massachusetts Association of Student Representatives (MASR)

J. Other Business Topics not reasonably anticipated 48 hours in advance of the meeting.

K. Future Business The next Open Session meeting is scheduled for Thursday, November 16, 2023 @ 6:00 pm.

L. Adjournment

The listing of matters is those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Approved by the School Committee
on November 16, 2023

**Canton School Committee
Thursday, November 2, 2023
Open Meeting
Minutes**

A. Call to Order: Chair O'Halloran asked for a motion to call to order the Thursday, November 2, 2023 School Committee Open Session Meeting at 6:03 pm. Maureen Moran made the motion; Kimberly McCourt seconded. Roll Call vote was unanimous at 4-0 and recorded as follows:

Laura Arboleda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	4 yeas	0 nays

Attendees: Laura Arboleda (virtually)
Kimberly McCourt
Maureen Moran
Kendall O'Halloran

Absent: Kristian Merenda

Guests: Zoya Gildenberg, School Committee School Advisor
Josh Fogel
Justin Thibeault, Ai3
Adele Sands, LeftField
David Buccelli-CPS Facilities Director

B. Student Member Report: School Committee Student Advisor, Zoya Gildenberg, shared Dean S. Luce Elementary School updates. During her visit to the Luce, Ms. Gildenberg was impressed with the SEL structure that offers a safe and welcoming environment to all students. She commented on the priorities of the school in building cultural-emotional relationships prioritizing cultural identities. This was quite evident in the cafeteria where the flags of each country representing students at the Luce. By offering full representation, Ms. Gildenberg praised the strong cultural awareness of Luce personnel, the evolution of the sense of belonging, and its impact on young students.

C. Teaching and Learning Report: Mr. Josh Fogel shared a 2023-2024 Assessment Schedule. Testing dates for grades 3-8 and Grade 10 in English Language Arts, Math and Science dates are prescribed by the State and are already scheduled. DESE has made some changes that impact the Spring 2024 MCAS testing in the area of Science, Technology and Engineering, and Social Studies/Civics. New testing is expected to be more engaging, focus more on depth, and emphasize the "doing of science." Grades 5 and 8 were chosen to participate in a pilot of the revised STE MCAS. Two sessions of testing will be offered-1 will consist of traditional questions and one will consist of new, innovative interactive performance tasks. It is important to note that ONLY the scores from the traditional "operational" MCAS questions. While specific dates for

Approved by the School Committee
on November 16, 2023

each grade and school are yet to be identified, Mr. Fogel offered windows of time for these exams. Beginning this academic year, DESE is also requiring a MCAS Grade 8 Civics field test. This test will be administered sometime between April 29 and June 7, 2024.

All ACCESS testing will be scheduled between January 4 and February 9, 2024.

Mr. Fogel also announced AP Exam dates as prescribed by the State. Building Principals will announce these dates shortly.

D. Superintendent Report: Superintendent Folan presented District progress, highlights, and accolades.

Champions of Excellence

GMS Student Forum: Yesterday, School Committee Members Ms. O'Halloran, Ms. McCourt, Principal Jon Mulhern and I met with 14 Galvin Middle School students at the annual GMS Student Forum. The forum provides students an authentic opportunity to share their experiences at GMS, celebrate the strengths, offer ideas for improvement, and reflect on their learning. They also had the unique chance to share ideas and hopes for the Galvin Middle School Project. As usual, student voice is simply outstanding and the forum provided great insight into the GMS student experience. Thank you to all involved. The CHS student forum is scheduled for November 15th.

SEMASC: The CHS Student Council attended the Southeastern Massachusetts Association of Student Councils (S.E.M.A.S.C.) Fall Leadership Conference on October 27 at Walpole High School, connecting with about 25 school districts in Massachusetts. The conference theme was "Commit to Your Community" and centered around connection and collaboration. Attendants participated in a variety of student-led workshops, with CHS students Lucas Massih, Emma Cummings, Sarah Conard, and Aaron Scibelli presenting a workshop about effective leadership skills and strategies. Representing Canton's Student Council were the following members: Siya Bais, Sarah Conard, Leah Condon, Emma Cummings, Kelsey DeLello, Tara Geoghan, Lila Kennedy, Mercia Kolokithas, Lucas Massih, Aaron Scibelli, and Viviana Truglia.

CHS Athletics: Tournament Time! Congratulations to all of our fall athletic teams who have qualified for the MIAA tournament. The playoffs kick off today with No. 8 Field Hockey hosting Westborough at 5 p.m. No. 3 seed Volleyball competes on Friday at home at 6 p.m. A special shoutout to the Volleyball Team for completing the regular season 20-0 on Senior Night. No. 13 Football plays at Tewksbury on Friday at 7 p.m. No. 19 Girls Soccer plays on Monday, November 6 at Westwood. The Cross Country teams are competing this weekend, and the Cheerleading Team competes at the Hockomock Championships on Sunday.

For all schedules and tournament updates, links to tickets and live streaming, click on the [CHS Athletics Blog](#).

Cantonstock: MUSICCOUNTS! and the Canton Performing Arts Department proudly present Cantonstock 2023 on November 4 12:00-4:00 p.m.

Cantonstock is the annual music extravaganza showcasing hundreds of student musicians representing all performing ensembles in the Canton schools, and is the primary fundraiser for

Approved by the School Committee
on November 16, 2023

MusicCounts, the volunteer, non-profit group dedicated to supporting performing arts in Canton Public Schools. In addition to a variety of performances, there will be **games, food, raffles**, and lots of **fun** for the whole family. There is a \$1 entry fee for non-performers.

Visit the MusicCounts! website at: www.MusicCountsInCanton.org

Performance schedule

Performance timeslot	Outside (gym if raining)	Auditorium
12:00-12:30	Mallet Madness Grade 5 Chorus	Grades 6-12 Strings
12:30-1:00	Grades 6-12 Chorus	
1:00-1:30	Grade 5 Band	
1:30-2:00	CHS Contemporary Music Workshop CHS A Capella	Grade 4-5 Strings
2:00-2:30	Jazz Band	Grade 4-5 Parent/guardian Strings Workshop
2:30-3:00	Tri-M Induction Ceremony	
3:00-3:30	Tri-M Induction Ceremony	Grades 6-8 Band
3:30-4:00		CHS Band CHS Pops Orchestra

STEAM Week: October 16-20 was the designated MA STEM Week, and STEAM Week in Canton. Students experienced a variety of STEAM related activities and learning opportunities throughout the week. This year's theme remained "See yourself in STEM".

At CHS, we launched STEAM week with our Robotics Teams attending the Canton Farmers Market with a Kids & Bots activity and the E-Waste drive. The CHS Art Club hosted an Origami workshop (open to all high school students) on Thursday, October 19th after school.

At GMS, students engaged in STEAM related activities during their art and engineering classes.

At elementary level students engaged in the engineering design process through a Mystery Science lesson. In the activity, *Bobby Dropper*, students try to save a falling bobby pin from a crash landing by inventing a paper device to slow the fall. They worked like inventors, learning from their failures — and learning that failures are part of the invention process! Our art teachers also supported STEAM week with activities that included color mixing, shape collages, and learning about anatomy, reflections and symmetry through art work.

Champions of Wellness Road Race: The Champions of Wellness 5k is taking place on Sunday, November 19th. If you have not already done so, I encourage you to sign up and/or come out

Approved by the School Committee
on November 16, 2023

and cheer on the runners. Here is the [LINK](#) to register. We have 127 runners signed up. As a bonus, there will be a Kids Fun Run for any children of adults who are signed up.

Acknowledgments

Veteran's Day: Veterans Day is a federal holiday in the United States observed annually on November 11, to honor military veterans of the United States Armed Forces. Please join me in celebrating the service of all United States military veterans including Canton Public School's own.

- Nick Fitzgerald, CHS Assistant Principal was a Captain from the U.S. Army Corps of Engineers. He served for 4.5 years at Fort Wainwright, Alaska; Camp Edwards, South Korea; and Fort Knox, Kentucky.
- Justyn Pelchat, GMS Technology Specialist, served in the Army SGT for 8 years. He was stationed in Newport Navel in the Army's 443rd Civil Affairs Battalion USACAPOC(Civil Affairs and Psychological Operations Command). Specialty: 25C Radio Operator and 25U Signal Support Specialist. He deployed to Operation Enduring Freedom -Horn of Africa 2013-2014 as the Battalion's S6(signal) NCOIC (Non-Commissioned Officer In-Charge).
- Katie Healey, CHS Science/Robotics Teacher, graduated from the US Coast Guard Academy and served in the Coast Guard on active duty for 10 years and as a reservist for three years. Lt. Healey served as the Operations Officer on the Coast Guard cutter COWSLIP in Portsmouth, VA, and the Executive Officer (2nd in command) on the Coast Guard cutter RED BEECH in New York City. She was also the Commanding Officer of her reserve unit, Vessels New Bedford, and she served on the Coast Guard cutter BITTERSWEET in Woods Hole, MA.
- Eric Kascavitch, CPS School Resource Officer (SRO), enlisted in 2003 after high school. He spent eight years in the Army serving as a medic at the rank of Sergeant and was stationed at Fort McCoy Wisconsin, Fort Sam Houston in Texas and Fort Benning in Georgia. Eric spent five months in Kuwait. From Kuwait, he was deployed to Iraq during Operation Iraqi Freedom from August 2006 until October 2007. He was honorably discharged in 2012.
- Paul McKnight, Hansen Elementary School Principal enlisted in 2000, and after completing basic training at Fort Benning, GA., served for 6 years as an infantryman in the 1st / 181st Infantry Battalion in the Massachusetts Army National Guard. In June of 1997, he received the Army Achievement Medal.

Updates

GMS Community Forum No. 2 and Upcoming Forums: We held a successful Community Forum on October 25. Here is a [LINK](#) to the recording. Community Forum No. 3 will be Monday, Nov. 13 at 7 p.m. in the GMS Cafetorium; Community Forum No. 4 will be held on Wednesday, Nov. 29 at GMS. To learn more about the Galvin Middle School Building Project, click on this [LINK](#).

Safety Drills: Thanks to the coordination of our building leaders, our School Resource Officers and Canton Police, and the Canton Fire Department, we have completed our first round of fire drills, shelter-in-place drills and lockdown drills. We still need to conduct a lockdown drill at the Early Childhood program. We appreciate everyone's cooperation and our continued attention to safety.

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DESE Family Engagement Summit: I had the opportunity to attend a Superintendent's Roundtable at the DESE Family Engagement Summit. It was extremely helpful to hear some of the best practices to engage families who are new to the community, may need language support, may need transportation or family services. They emphasized the importance of knowing the "lived experiences of those in your District," and providing intentional outreach. This work aligns with our Core Values of Community Engagement and Equity.

Student Representative, Emma Cummings, invited the community to "follow her down the Yellow Brick Road" at the CHS presentation on "The Wizard of Oz," scheduled for Nov. 17-19. Tickets are on sale now!

Ms. Moran asked that notes from the most recent Forum (10/25) be provided to School Committee members. Mr. Folan assured the committee that Ms. Hutchinson will provide notes from the 10/25/23 forum.

Important Dates and Events

Nov. 4	Cantonstock, Canton High School, 12 pm - 4:00 pm
Nov. 7	No School, Professional Development
Nov. 10	No School, Veterans Day Observed
Nov. 16	School Committee Meeting, CHS DLL, 6:00 pm
Nov. 17	Early Release, Parent Conferences, PreK-8
Nov. 17, 18 & 19	CHS Fall Play, Wizard of Oz, 7:00 pm 11/17, 4:00 pm 11/18, 2:00 pm 11/19
Nov. 19	Champions of Wellness 5K, CHS, 9:00 am
Nov. 22	Early Release, Thanksgiving Break
Nov. 23 & 24	No School, Thanksgiving Break

E. New Business:

1. **CPS Facilities Director Introduction**: Superintendent Folan welcomed the new Facilities Director, Mr. David Buccelli. Mr. Buccelli gave a brief overview of his education and career highlights and thanked the District and town of Canton for the opportunity to succeed in this role.
2. **GMS Building Project Progress Update**: Mr. Justin Thibeault, Ai3 representative, provided an update on the GMS Building Project. He reviewed the Project Schedule, announcing that a fully executed copy of the PDP was submitted on time. The MSBA has accepted this submission and is currently under review. The PSR (final preferred schematic option) will be submitted by the end of January

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2024. The PSR will include decisions regarding grade configuration and whether or not an auditorium will be included in the new building.

Mr. Thibeault recapped Community Forum #2 held on October 25th, indicating there was good engagement and activity from those present. Attendees completed a "post-it" exercise completing the question, "What is on your mind about grade configuration?" Eight main categories emerged: peer-to-peer interactions, Bussing, Traditions, Lunch/recess, Club/Programs; Transition time, Capacity at Elementary Schools, Academic Programming. After some small group table conversations, Mr. Thibeault talked through each of the categories, and asked the group to rank these considerations as the District makes the grade configuration decision. Peer to peer interactions emerged as the main consideration. Finally, there was a live poll asking participants if they were open to the idea of a 5-8th grade configuration. The poll results (Yes-28, No 9, unsure -6) are meant to inform the School Committee as they make their decision.

3. **Preview Considerations for the Upcoming GMS Community Forum**: Members of LeftField and Ai3 discussed considerations for the next Community Forum to be held on November 13, 2023. Ai3 expects the District to make a decision on grade configuration. School Committee members suggested that more polling, particularly on grade configuration, as well as feedback from other forums be made available to the community. Other suggestions included having a preliminary floor plan available for community review, insuring the community has on-line access to all comments from previous Community forums before Forum #3, and encouraging consideration for an auditorium, despite its ineligibility for MSBA reimbursement.
4. **Food Allergy Management Policies - 1st Read**: Chair O'Halloran shared the most updated draft of policies JLCEA and JLCEA-R, Food Allergy Management, for a 1st read. She indicated that, in an effort to separate policy from procedures, MASC representative, Mr. Jim Hardy, had advised that the policy include only the ***Preface to Food Allergy Management Policy***, and an integration of **Sections JLCEA and JLCEA-R**. It was decided that legal references be included in the policy as well. As part of regulations for procedure, it was suggested that they be included in the Staff Handbook as exhibits to allow cross reference to the plan. Subcommittee members agreed that there should be a notation to contact the school nurse for a printed copy of the Parents and Students Responsibilities regarding allergy management and that the Parents and Students Responsibilities should be in the District Handbook as an appendix. School Committee members discussed allergy management in each of the school cafeterias. Mr. Marshall noted that on-line training is required of all food service workers and electronic lunch cards have pop-up, specific allergy notifications allowing workers to review each student's food choices to ensure allergens are not present. Ms. Moran proposed inviting Ms. Lawless to a future School Committee meeting to engage in a conversation regarding needs for further financial support.

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5. **FY25 Capital - 1st read:** Mr. Marshall presented the most updated FY25 Capital Budget to the committee for a 1st read. Reviewing each request, Mr. Marshall offered justifications for the requests being moved forward and rationale for those declined. He noted that, considering budgetary constraints, the District is prioritizing the most serious issues. He also reported that not all backup information was available at the time of this report, but assured the committee supporting paperwork would be forthcoming.

A question was raised regarding sponsorship of the scoreboard in the gym. Mr. Marshall indicated that the scoreboard (already having a sponsorship sign on it) had moved as is from the previous gym after completion of renovations.

Ms. Moran requested further information on the following items:

1. Luce Doors-she understood some doors were recently replaced and still under warranty. She requested verification of warranty for these doors.
2. An inventory of CPS technology for educators, staff and students and a plan for repurposing anything that may still have a life. She also asked for a plan for recouping funds for damaged or lost inventory from staff/ students. Mr. Fogel indicated that this inventory is almost ready and will be presented shortly.
3. CHS Art Laptops–more information on what they are and how they are unique from other laptops. Mr. Marshall understood from the Art Department that current laptops are not meeting the needs of art students.
4. Safety and Security–Ms. Moran asked Mr. Folan to forward Chief Rafferty’s Safety Plan. Mr. Folan will share report as well as feedback from building members regarding safety and best practices and noted the signage
5. Hansen Interior Door Shades-Ms. Moran recalled an allocation 2 years ago to install interior door shades on all Hansen windows. She asked for clarification on what was completed. Mr. Marshall stated he had walked the building and noted that there were no shades on some of the classroom windows. These windows will be covered with shades.
6. Ms.Moran asked that all Custodial equipment requests be moved to Furniture and Fixtures for consistency.
7. Library Furniture-Ms. Moran asked for clarification of library furniture purchases and that Mr. Marshall designate year of work on this–ie year 1 of 2; year 2 of 2;
8. Classroom based Instruments- \$100k has been spent on instruments since 2019. Ms. Moran would like an inventory that includes what has been purchased, where it is now and expected lifetime use of each instrument. Mr. Marshall did note that band/orchestra now includes fifth graders who had to be outfitted with instruments.
9. Allocations for furniture-Ms. Moran is looking for where 2022 allocations might be. Mr. Marshall stated that some carpet and soft chairs were stored in a container and had to be discarded due to mold; other furniture was moved around from the lobby in the building to other spaces within the same building.
10. GMS requests: Ms. Moran wanted to be sure requests from GMS were being acknowledged. She noted concern that the new building will not be inhabitable for at least five years and wants to be sure the current building has all it needs to accommodate current students. Mr. Marshall acknowledged that he had had a conversation with Mr. Mulhern who thought the building was in good shape and not requiring further capital monies.

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Ms. O’Halloran thanked the administration for their efforts in budget planning, but did ask that the administration provide better context for some line item considerations to the School Committee. Mr. Folan reiterated the process of budgeting indicating it was borne out of professional recommendations, vetting and quality control with principals followed by several reviews before moving forward with the requests.

6. 2024-2025 School Start Date (VOTE): Superintendent Folan proposed a school start date of Wednesday, August 28th for the school year 2024-2025. This date was mutually agreed upon by the CEA and District administration, and well received by the Canton Community. Hearing no questions or requests for further discussion, Chair O’Halloran called for a motion to approve the 2024-25 School Start date as written and presented. Vote was unanimous at 4-0 and recorded as follows:

Laura Arboleda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O’Halloran	yea
	4 yeas
	0 nay

F. Public Comment: None

G. Assistant Superintendent of Finance and Operations Report; Mr. Marshall had nothing further to report.

H. Consent Agenda:

1. Open Session Minutes: August 3, 2023, October 19, 2023
2. Overnight and Out of State Travel Approvals:
 - a. CHS Girls Hockey Overnight Trip to Martha’s Vineyard - 1/13/24-1/14/24
 - b. GMS Montreal, Canada Out of State Travel - 4/14/24-4/16/24
3. Warrants: November 3, 2023

Chair O’Halloran announced the contents of the Consent Agenda and asked if any member had a need for discussion or a request to remove any of the items. Hearing none, Ms. O’Halloran asked for a motion for approval of the listed minutes, travel requests, and warranty as written and presented. Ms. Moran made the motion; Ms. McCourt seconded. Roll Call vote was unanimous at 4-0 and recorded as follows:

Laura Arboleda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O’Halloran	yea
	4 yeas
	0 nays

I. Update of Sub-Committee, Task Force and Liaison Posts:

5. Ms. McCourt-nothing to report;

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- 6. Ms. Moran-nothing to report;
- 7. Ms. Arboleda: nothing to report, but did note that the Policy Subcommittee continues its work to update the Policy Manual by the end of the year;
- 8. Ms. O'Halloran:
 - i. CCPC-proposal presentations and interviews will begin next week;
 - ii. reminded School Committee members to review Section I of the Policy Manual and forward questions and comments to her;
 - iii. Content and Communications: nothing to report;
- 5. Stephen Marshall:
 - i. CCPC proposal presentations ar scheduled for Nov. 6th;
 - ii. The Sustainability Committee has not convened yet; there is discussion merging it with another subcommittee.
 - iii. BRC meeting-Mr. Marshall was absent for the most recent meeting due to other commitments at CPS.
- 6. Emma Cummings:
 - i. Attended the MASA Delegates Assembly where she was elected to the Executive Board;
 - ii. Announced a mattress/pillow sale on November 11th and 12th 10am-4pm in the CHS gym to support the Seniors.
 - iii. Tickets for the Wizard of Oz performances scheduled for Nov. 17-19 are now available.(Ms. Cummings is playing the role of Dorothy.)

J. Other Business: None

K. Future Business: The next Open Session meeting is scheduled for Thursday, November 16, 2023 @ 6:00 pm.

L. Adjournment: Hearing no questions or requests for further discussion, Ms. O'Halloran asked for a motion to adjourn the Thursday, November 2, 2023 School Committee Open Session Meeting at 8:17 pm. Ms. Moran made the motion; Ms. McCourt seconded. Ensuing vote was unanimous at 4-0 and recorded as follows:

Laura Arboleda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	4 years	0 nays

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Documents Reviewed:

Superintendent's Report November 2, 2023

Teaching and Learning Update-2023-24 Assessment Schedule

Galvin Middle School Building Update November 2, 2023

CPS Food Allergy Management Policy-revised October 17, 2023

FY25 Capital Requests

CPS 2024-2025 School Start Date

Overnight & Out of State Travel Approvals:

CHS Girls Hockey overnight trip to Martha's Vineyard 1.13.24-1.14.24

GMS Montreal, Canada 4.14.24-4.16.24



Canton School Committee Open Meeting Agenda

Champions of Excellence: Creating a Culture of Achievement, Equity, Inspiration and Joy

November 16, 2023	Canton High School Distance Learning Lab 900 Washington Street Canton, MA 02021	4:00 Executive Session 6:00 PM Open Session
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Members of the public can access the meeting via live stream over the "Student Station" on Comcast 6 & 1070/Verizon 41 and on Verizon HD2143 as well as CantonCommunityTV.org for specific and easy links to streamed LIVE coverage of the School Committee. The LIVE link will go up on the day of the meeting. Please take note that Canton Community TV is recording this meeting and streaming it live on the internet and local television stations.

A. Call to Order

B. Executive Session (a) Approve executive session minutes (10/19/23), **(b)** conduct contract negotiations with nonunion personnel - Superintendent.

C. (10 Min.) Student Member Report School Committee Student Advisor, Aaron Scibelli, will share Hansen school updates.

D. (10 min.) Superintendent Report Superintendent Folan will present District progress, highlights, and accolades.

E. New Business

- (20 min.) GMS Building Project Progress Update:** Representatives from Ai3 and LeftField will provide an update on the GMS Building Project.
- (10 min.) Preview Considerations for the Upcoming GMS Community Forum:** Members of LeftField and Ai3 will discuss considerations for the next Community Forum.
- (20 min.) Elementary Handbook and District Appendix Revisions (VOTE):** Superintendent Folan and Elementary Principals will present suggested changes to the Handbooks and District Appendix for a possible vote of approval.
- (15 min.) CCPC Projects (VOTE):** Mr. Marshall will review the proposed CCPC projects and request a vote of approval.

F. Unfinished Business

- (20 min.) FY25 Capital - 2nd read (VOTE):** Mr. Marshall will present the FY25 Capital Budget for a 2nd read and a vote of approval.
- (5 min.) Food Allergy Management Policies - 2nd Read (VOTE):** Members of the policy subcommittee will share policies 00JLCEA and JLCEA-R for a 2nd read and a vote of approval.

G. (5-30 min.) Public Comment Click [here](#) to sign up to make a public comment. Public comment allows individuals to express an opinion or share a comment on issues to be discussed on the meeting agenda and/or within the School Committee's authority. It is not an opportunity for discussion dialogue between individuals and the School Committee or Administration. To respect the time of all

participants in the meeting, the totality of individual comments cannot exceed 5 minutes. For more information and guidance on making public comments, please see the CPS policies [here](#).

H. (10 min.) Assistant Superintendent of Finance and Operations Report

I. (5 min.) Consent Agenda *The consent agenda is designed to expedite the District's handling of routine and miscellaneous business. The School Committee may adopt the entire Consent Agenda with one motion. At the request of any committee member, any item(s) may be removed and placed on the Regular Agenda for discussion. Note: per Robert's Rules of Order: A member's absence from the meeting for which minutes are being approved does not prevent the member from participating in their correction or approval.*

1. Open Session Minutes: November 2, 2023
2. Warrants: November 17, 2023

J. (5 min.) Update of Sub-Committee, Task Force and Liaison Posts *In addition to the core role of governing our schools, the Canton School Committee creates, participates in, and/or designates representatives to help manage issues of particular importance to the school district or town. They are listed below for reference in order to prompt priority updates from or questions of representatives as relevant.*

1. Subcommittees and Negotiation Teams - Policy, Budget and Finance, Units A&E Contracts, AFSCME Units Contract
2. School Committee Ad Hoc Task Forces/CPS Advisory Committees - Content and Communications, District Planning Process Design, Superintendent Evaluation Process Design, Routine District Attorney Review
3. Liaisons Appointed to Positions on Joint Committees - Master Planning Implementation Committee (MPIC), Canton Community Preservation Committee (CCPC), Building and Renovations Committee (BRC), Canton Diversity Equity and Inclusion (CDEI), Sustainability, Health Insurance Advisory Committee (HIC), Canton Alliance Against Substance Abuse (CAASA), CPS Wellness/SWAG, GMS MSBA School Building Committee, GMS MSBA Design Project Team Committee
4. Liaisons to CPS or Town Boards, Committees, and Municipally-Governed Groups - Annual Town Meeting Prep Committee, Select Board, Town Finance Committee, Capital Planning
5. Liaisons to Groups Serving Canton Public Schools - CAPT, Student Advisory Committee
6. Liaisons to Regional Organizations - Teaching Education Collaborative (TEC), Massachusetts Association of School Committees (MASC), Massachusetts Association of Student Representatives (MASR)

K. Other Business Topics not reasonably anticipated 48 hours in advance of the meeting.

L. Future Business The next Open Session meeting is scheduled for Thursday, December 7, 2023 @ 6:00 pm.

M. Adjournment

The listing of matters is those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

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Canton School Committee
Thursday, November 16, 2023
Open Session
Minutes

A. Call to Order: Chair O'Halloran asked for a motion to call to order the Thursday, November 16, 2023 School Committee Open Session Meeting at 4:36 pm. Laura Arboleda made the motion; Kimberly McCourt seconded. Roll Call vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea
Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O'Halloran	yea
5 yeas	0 nays

Attendees: Laura Arboleda
Kimberly McCourt
Kristian Merenda
Maureen Moran
Kendall O'Hallora
Danica Seto, Student Representative

Guests: Aaron Scibelli, School Committee School Advisor
Josh Fogel, Director of Technology and Data Analytics
Saundra Watson, JFK Elementary School Principal
Justin Thibeault, Ai3

A. Executive Session: (a) Approve executive session minutes (10/19/23), (b) conduct contract negotiations with nonunion personnel - Superintendent.

School Committee members returned from Executive Session at 6:42 pm.

B. Student Member Report: School Committee Student Advisor for the Hansen Elementary School, Aaron Scibelli, shared Hansen school updates. Mr. Scibelli recently met with Hansen School Principal, Mr McKnight and reported on the following events:

1. CAPT sponsored Circus;
2. Hansen Fall Book Sale;
3. Extracurricular activities:
 - i. French Club meets once a month

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- ii. 30-40 students are now taking Instrument lessons that will offer multiple performance opportunities;
- iii. 1st graders enjoyed a field trip to the Food Pantry; and held a Food Drive to help benefit Project 51;
- iv. Hansen students enjoyed a surprise visit from CHS student actors who make up the cast of *The Wizard of Oz*;
- v. Mr. Scibelli also announced the State finals for Women's Volleyball will be held at Worcester State University on Saturday, November 18th at 1:30pm.

C. Superintendent Report: Superintendent Folan presented District progress, highlights, and accolades.

Champions of Excellence

CHS Volleyball: Congratulations to the No. 3 CHS Volleyball team for an epic 5-set win this week over No. 2 Algonquin, moving to 24-0 on the season and earning a spot in Saturday's State Championship game! We wish the very best to all of the players, families, coaches, especially Hall of Fame coach Pat Cawley, who is in her 17th year at the helm. The Bulldogs won the state championship in 2019. The State Championship match against top-seeded Westboro will be held **Saturday, November 18th at 1:30pm at Worcester State University**. 486 Chandler Street, Worcester. We are looking for the Canton community to attend and provide an incredible fan section. All ticket and fan bus information, plus directions, are outlined in the [CHS Athletics blog](#).

Cross Country: Girls Team qualifies for the All-States this weekend by finishing 5th at State Meet. This could be the first time in history the Bulldog Girls team has qualified. It 100% is the first time they have qualified this century! Lauren Raffetto finished 2nd overall!

CHS Student Forum: Yesterday, School Committee Members Ms. O'Halloran and Ms. Merenda joined Principal Jeff Sperling, Ms. Shannon and six Canton High School students for the bi-annual CHS School Committee/Student Forum. The forum provides students an opportunity to share their experiences at CHS, celebrate the strengths, offer ideas for improvement, and reflect on their learning. Student voice was remarkable and provided great insight into the CHS student experience. Thank you to all involved.

Food Pantry Visit: A shout out to the first graders from the Hansen Elementary School who donated 354 pounds of food to the Canton Food Pantry. We are so proud of them for being exemplary students in helping our community. As part of their field trip, students walked to the Food Pantry, helped shelve items, and learned about how the Food Pantry helps our community. This great community engagement was part of a social studies unit.

National Honor Society Induction Ceremony: Congratulations to the Canton High School students who were inducted into the school's Robert W. Tighe Chapter of the National Honor Society (NHS) on November 8. NHS requires students to demonstrate four core values – scholarship, service, leadership, and character. Thank you to all who organized

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this memorable event, especially Principal Sperling, guest speaker Adam Hughes, Colleen Brown and Jen Sousa (CHS NHS Advisor). Thank you also to Sarah Shannon for attending the event in my absence. [2023 NHS Inductees](#).

Champions of Wellness Road Race: The Champions of Wellness 5k is this weekend, Sunday, November 19. We have 177 runners signed up already! As a bonus, there will be a Kids Fun Run for any children of adults who are signed up. It is not too late to sign up, so please use this [LINK](#) to register. Registration is open until Saturday, November 18.

Acknowledgments

Substitute Educators Day: I would like to extend a very special thanks to our substitute workers. Substitute Teacher Appreciation Day is tomorrow, November 17. Our substitutes provide a critical link in the education of students by serving as a bridge to provide continued quality education to children in the temporary absence of regular classroom educators. We are grateful for their work.

Thanksgiving: I wish all of you a wonderful, joyous and relaxing Thanksgiving holiday. The 97th annual Thanksgiving football game between Canton and Stoughton will be played at Stoughton High School on November 23 at 10 a.m. Click on the [CHS Athletic Blog](#) for all of the information.

Updates

Social Media Launch: Today, we launched Canton Public School social media platforms for Facebook, Instagram and LinkedIn. Please consider following as we enhance our community engagement.

CHS Student Forum: Yesterday, School Committee Members Ms. O'Halloran and Ms. Merenda joined Principal Jeff Sperling, Ms. Shannon and six Canton High School students for the bi-annual CHS School Committee/Student Forum. The forum provides students an opportunity to share their experiences at CHS, celebrate the strengths, offer ideas for improvement, and reflect on their learning.

GMS Community Forum No. 3 and Upcoming Forums: We held another successful Community Forum on November 13, which focused primarily on the consideration of an auditorium, a cafetorium or a gymnasium for the GMS Building Project Here is a [LINK](#) to the recording. Community Forum No. 4 will be held on Wednesday, Nov. 29 at GMS Library. To learn more about the Galvin Middle School Building Project, click on this [LINK](#).

MASC/MASS Conference: School Committee Member Kristian Merenda and I attended the Massachusetts Association of School Committees (MASC) / Massachusetts Association of School Superintendents (MASS) conference last week. Ms. Merenda served on a panel discussion that focused on equity in early literacy. School Committee Chair Kendall O'Halloran was recognized at the MASC Dinner as a member of the All-State School Committee for her work and Canton's work on updating and enhancing school policy.

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Superintendent Roundtable/Israeli War: I recently attended the Tri-County Superintendent Roundtable and joined 50 other superintendents to discuss the impact of the Israeli-Hamas War on our students and families. As we hold our Jewish and Palestinian families closely with love and support, we also reaffirm that we do not tolerate hate or discrimination in any form -- especially during this time of war. As the war intensifies, we continue to stand with every member of our community and will not tolerate any acts of antisemitism, anti-Muslim or anti-Palestinian. We will endeavor to deepen our relationships within our community through this difficult time.

Important Dates and Events

Nov. 17	Early Release, Parent Conferences, PreK-8
Nov. 17, 18 & 19	CHS Fall Play, Wizard of Oz, 7:00 pm 11/17, 4:00 pm 11/18, 2:00 pm 11/19
Nov. 19	Champions of Wellness 5K, CHS, 9:00 am
Nov. 22	Early Release, Thanksgiving Break
Nov. 23 & 24	No School, Thanksgiving Break
Nov. 29	GMS Building Project Community Forum #4, 7:00 pm, GMS Library

C. New Business

1. **GMS Building Project Progress Update**: Ai3 representative, Justin Thibeault provided an update on the GMS Building Project. Mr. Thibeault reviewed Building Organization for all nine options. Once the grade configuration decision is made (5-8 or 6-8), criteria for each of the five categories (Educational Program, Community & Access, Construction Phasing, Sustainability, and Cost) will be ranked and presented for consideration.

Mr. Thibeault briefed the School Committee on the three options for performance space at the Galvin–Auditorium, Cafetorium, and Gymatorium. Noting that all three options would provide income opportunities to the town, Mr. Thibeault reviewed all considerations that included historical data of Canton performances, evaluating each option and its benefits and limitations, including examples from previous Ai3 projects. Costs for a stand alone auditorium is estimated at \$12-15 million. This expense will not be reimbursable through MSBA. Ms. Merenda wondered whether the size of the surrounding spaces would be affected. Mr. Thibeault indicated that once there is a decision on the performance space, Ai3 will be able to advise on available rough cost scenarios. If this decision is made early, there may be consideration for cost modifications; however, Mr. Thibeault expects costs to remain in the \$12-15 million range. Ms. Moran inquired over the percent of reimbursement from MSBA for a Cafetorium or Gymatorium. Mr. Thibeault suggested reimbursement for these “eligible spaces” is not fully funded,

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but the formula for reimbursement percentages will be further defined after the final decision.

Mr. Thibeault highlighted the nine building configuration options and explained how each would be accomplished, then defined how Ai3's building design concepts directly connect to the CPS Mission Statement and Educational Program. He noted there was a live poll from Community Forum #3 asking attendees whether Canton should invest in an auditorium, cafetorium or gymnasium. For those who were unable to attend the forum but want to participate, the poll will remain live until Monday, November 30th at 3 pm. Members of the School Committee suggested the Canton community make their voices heard by responding to the poll. (www.menti.com; enter code 1464 7717).

2. **Preview Considerations for the Upcoming GMS Community Forum:** Members of Ai3 discussed considerations for the next Community Forum scheduled for Wednesday, November 29th at the Galvin Middle School. Canton residents are encouraged to attend and give feedback as the School Committee is expected to vote on both grade configuration, performance space type and preferred building option at the December 20, 2023 School Committee Open Session meeting.
3. **Elementary Handbook and District Appendix Revisions:** JFK Elementary Principal, Saundra Watson, proposed changes to the cell phone policy in the elementary school Handbooks and District Appendix for a possible vote of approval. As "Away-for-the-Day" schools, Ms. Watson recommended that all cell phones and other electronic devices be off and in backpacks, not to be used during the school day without the principal's permission. Students will be reminded to put devices away. If the rule is ignored, devices will be confiscated for the day. (If parents/guardians must contact their children during the school day, they are asked to go through the school office.) Students are not allowed to take pictures or videos of other students or staff. If this occurs, cell phones will be confiscated and parents/guardians will be notified. Additionally, the school cannot be responsible for phone loss or theft.

Principal Watson noted that this same policy is in effect at both the middle and high schools, and reiterated that devices can be brought into the building, but must be left in backpacks.

School committee members voiced their support of this update and offered further advocacy if appropriate. They did suggest that the updated policy be included in any teacher/school/District communications (SMORES, Blackboard, etc) to allow parents/guardians every opportunity to understand and embrace the policy.

There was a request from a community member at the meeting to hold the vote until after Public Comment so their thoughts and concerns could be voiced. After a short discussion, Kristian Merenda made a motion to hold the vote to approve the proposed changes to the cell phone policy in the elementary school

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Handbooks and District Appendix as written until after Public Comment. Laura Arboleda seconded. Ensuing vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea
Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O'Halloran	yea
5 yeas	0 nays

4. **CCPC Projects:** Mr. Marshall brought forward three proposed CCPC projects, requesting a vote of approval:
 - a. **Gibson Field Lighting:** funding requested: \$550,000 to install lighting at Gibson Field. Used by a variety of youth, adult and high school sports programs, lighting will allow additional hours for practice and games allowing accessibility to more teams and players. Two existing poles will be updated by adding two extra heads. LED lighting will be used; a reduction in lighting costs is expected. Lighting costs will also include remote lighting controls. Requestors have done due diligence in acknowledging abutting neighbors. *Mr. Marshall recommended moving this request forward.*
 - b. **JFK Little League Bathroom Supplement:** funding requested: \$250,000. Project will include construction of a Little League bathroom facility. Delays and changes in design added unforeseen costs. Funds are being sought to cover the total shortfall of the project. *This project will not move forward with CCPC monies as funds cannot be accessed until after project date completion. Canton Recreation Department, School Committee and Select Board will fund this project.*
 - c. **The John F. Kennedy Elementary Playground:** The playground is heavily used by elementary school students as well as the Canton community. This project will include the removal of all existing playground equipment. The current mulch base will be excavated. A sub base will be installed, topped by a pour in place rubber playground surface. New, updated structures including slides, and a climbing structure suitable for elementary age children will be installed. *Mr. Marshall recommended moving this request forward. He did acknowledge that a potential, anonymous donor may come forward. The CCPC board is aware of this situation, and has asked that this be resolved before funding decisions are made.*

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Mr. Marshall asked for a vote of approval for projects A and C above. Chair O'Halloran asked for a motion to approve CCPC applications for projects A and C as written, presented, and listed above. Laura Arboleda made the motion; Maureen Moran seconded. Ensuing vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea	
Kristian Merenda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	5 yeas	0 nays

D. Unfinished Business

1. **FY25 Capital - 2nd read and possible vote of approval:** Mr. Marshall presented the FY25 Capital Budget for a 2nd read and possible vote of approval. Mr. Marshall acknowledged that he continues to await back up quotes for some of the projects (warehouse lot paving, landscaping design & construction, Rodman Staircases (3), and Chromebook replacements) and understood that the School Committee might prefer to hold a vote for FY 25 Capital until these quotes become available. Further discussion on Capital issues included:

- a. Ms. Moran requested a copy of the safety recommendations from the recent Canton Police review as well as the backup information for Hansen's interior window shades.

Action Item: Mr. Folan will send Ms. Moran the CPD report. Mr. Marshall will forward the Hansen shades quote.

- b. A local business has offered to fund a new scoreboard and CHS. There was discussion over the naming rights for this scoreboard. Committee members expressed concern that the donor might expect to include their logo on the scoreboard, and wondered what the school might give up in accepting this donation.
- c. Ms. Moran asked for an inventory of the District's musical instruments. Mr. Marshall stated he is working on it; however, the responsible person is out on leave. He does not expect to have this inventory available for the FY25 budget.
- d. Ms. Moran inquired about the devices inventory she requested at a previous meeting. She asked for:
 - i. a report on insurance usage;
 - ii. a report on whether the insurance is beneficial to the District;
 - iii. how the District manages the devices at "end of life;" (Mr. Marshall reported that they are sold off at a minimal price);
 - iv. Mr. Marshall also reminded the committee that some of these expenses have been moved into "Operating Expenses" as he feels that is a more appropriate place for device costs.

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on December 7, 2023

- v. Mr. Fogel will forward a copy of a devices inventory when completed;
 - vi. elementary school furniture inventory-Mr. Marshall will provide backup.
- e. Ms.Moran recommended holding the vote on FY25 Capital until the next School Committee meeting (scheduled for 12.7.23). Members agreed. FY Capital vote of approval will be added to the December 7, 2023 agenda.

Ms. Merenda did note that a Capital Plan for the District is underway.

2. **Food Allergy Management Policies - 2nd Read and possible vote of approval:** Members of the policy subcommittee shared updated policies **00JLCEA** and **JLCEA-R** for a 2nd read and possible vote of approval. Ms. O’Halloran noted these policies include updated practices instituted after the last update in 2018, and following professional medical recommendations. There was a question on where these policies might be posted. Mr. Folan assured committee members that they will be embedded in the CPS website with links the community might follow. A question was asked about the availability of epi pens on buses. Because each epi pen is individualized, there are currently no “standard” epi pens available in the first aid kits on buses. However, Ms. Byrne agreed to look into opportunities to include a “standard” dose epi pen for each bus.
- Hearing no further questions or comments, Ms. O’Halloran asked for a motion to approve the 2023 Food Allergy Management Policies **00JLCEA** and **JLCEA-R** as written and presented. Kristian Merenda made the motion; Maureen Moran seconded. Ensuing vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea	
Kristian Merenda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O’Halloran	yea	
	5 yeas	0 nays

E. Public Comment:

1. Canton resident Jennifer O’Donnell spoke of her concerns of normalizing bad behavior of students, and vocally opposed proposed new cell phone policy in the elementary schools due to safety concerns she has.
2. Canton resident Eileen Coyle commended the work of Mr. Marshall and his staff in aligning the budgetary process for the District. She also asked that the District consider the process for vetting an anonymous donor; cautioned care in interpreting the very specific software/hardware rules; advised against including epi pens on buses as it is not the responsibility of the bus company, but did suggest making a detailed safety plan for general use of an epi pen.

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With no further comments voiced from the community, School Committee members entered into a short discussion of the proposed Elementary Handbook and District Appendix revisions regarding cell phone use. Ms. O'Halloran noted that the School Committee is not allowed to see any videos of any students or personnel. Ms. Moran wondered if the committee should revisit the policy for any unintended consequences. Superintendent Folan reiterated that he supports the policy as it was brought forward. The policy has stood up to the process-moving through school councils and he felt the new policy is important for clarity for all.

Hearing no further questions or requests for further discussion, Chair O'Halloran asked for a motion to approve the Elementary Handbook and District Appendix revisions as written and presented. Kristian Merenda made the motion; Kimberly MCCourt seconded. Vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea	
Kristian Merenda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	5 yeas	0 nays

F. Assistant Superintendent of Finance and Operations Report: Mr Marshall had nothing further to report.

G. Consent Agenda:

1. Open Session Minutes: November 2, 2023
2. Warrant: November 17, 2023

Chair O'Halloran announced the contents of the Consent Agenda and asked if any member had a need for discussion or a request to remove any of the items. Hearing none, Ms. O'Halloran asked for a motion for approval of the Open Session Minutes from 11.2.23 and the warrant for 11.17.23 as written and presented. Laura Arboleda made the motion; Maureen Moran seconded. Roll Call vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea	
Kristian Merenda	yea	
Kimberly McCourt	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	5 yeas	0 nays

H. Update of Sub-Committee, Task Force and Liaison Posts:

Ms. McCourt-nothing to report;

Ms. Moran-nothing to report;

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Ms. Arboleda: nothing to report;

Ms. O'Halloran:

1. The Policy Subcommittee will meet next November 29, 2023;
2. CCPC-Committee continues to review applications and presentations;
3. Content & Communications: a CHS student has been hired as the graphic artist for ads and communications.

Stephen Marshall: nothing further to report;

Superintendent Folan: nothing further to report;

I. Other Business: None

J. Future Business: The next Open Session meeting is scheduled for Thursday, December 7, 2023 @ 6:00 pm.

K. Adjournment: Hearing no questions or requests for further discussion, Ms. O'Halloran asked for a motion to adjourn the Thursday, November 16, 2023 School Committee Open Session Meeting at 8:47 pm. Laura Arboleda made the motion; Maureen Moran seconded. Ensuing vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea
Kimberly McCourt	yea
Kristian Merenda	yea
Maureen Moran	yea
Kendall O'Halloran	yea
	5 yeas
	0 nays

Documents Reviewed:

- Superintendent's Report November 16, 2023
- Galvin Middle School Building Update November 16, 2023
- Revisions to Elementary Handbook and District Appendix
- CCCP Project applications (3)
- CPS Food Allergy Management Policy-revised October 17, 2023
- FY25 Capital Requests-Summary of Requests

Action Items:

1. Mr. Folan will send Ms. Moran the CPD report.
2. Mr. Marshall will forward the Hansen shades quote.



Canton School Committee Open Meeting Agenda

Champions of Excellence: Creating a Culture of Achievement, Equity, Inspiration and Joy

December 7, 2023	Canton High School Distance Learning Lab 900 Washington Street Canton, MA 02021	5:00 PM Executive Session 6:00 PM Open Session
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Members of the public can access the meeting via live stream over the "Student Station" on Comcast 6 & 1070/Verizon 41 and on Verizon HD2143 as well as CantonCommunityTv.org for specific and easy links to streamed LIVE coverage of the School Committee. The LIVE link will go up on the day of the meeting. Please take note that Canton Community TV is recording this meeting and streaming it live on the internet and local television stations.

A. Call to Order

B. Executive Session (a) Approve executive session minutes (10/19/23& 11/16/23), **(b)** discuss strategy with regard to negotiations.

C. (10 min.) Student Member Report School Committee Student Advisor, Brianna Geoghan, will share JFK updates.

D. (15 min.) Teaching and Learning Report Ms. Melanie Omar will share a Multilingual Learner update.

E. (10 min.) Superintendent Report Superintendent Folan will present District progress, highlights, and accolades.

F. New Business

- (20 min.) GMS Building Project Progress Update:** Representatives from Ai3 and LeftField will provide an update on the GMS Building Project. Superintendent Folan will make a recommendation regarding grade configuration for the GMS Building Project.
- (10 min.) German American Partnership Program (GAPP) Approval (VOTE):** Ms. Olson will share details of the German exchange program and request a vote of approval.

G. Unfinished Business

- (20 min.) FY25 Capital (VOTE):** Mr. Folan will present the FY25 Capital Budget for a vote of approval.
- (15 min.) Policy Section H (VOTE):** Members of the policy subcommittee will present Section H for a vote of approval.

H. (5-30 min.) Public Comment Click [here](#) to sign up to make a public comment. Public comment allows individuals to express an opinion or share a comment on issues to be discussed on the meeting agenda and/or within the School Committee's authority. It is not an opportunity for discussion dialogue between individuals and the School Committee or Administration. To respect the time of all participants in the meeting, the totality of individual comments cannot exceed 5 minutes. For more information and guidance on making public comments, please see the CPS policies [here](#).

I. (10 min.) Assistant Superintendent of Finance and Operations Report

J. (5 min.) Consent Agenda *The consent agenda is designed to expedite the District's handling of routine and miscellaneous business. The School Committee may adopt the entire Consent Agenda with one motion. At the request of any committee member, any item(s) may be removed and placed on the Regular Agenda for discussion. Note: per Robert's Rules of Order: A member's absence from the meeting for which minutes are being approved does not prevent the member from participating in their correction or approval.*

1. Open Session Minutes: November 16, 2023
2. Warrants: December 8, 2023

K. (5 min.) Update of Sub-Committee, Task Force and Liaison Posts *In addition to the core role of governing our schools, the Canton School Committee creates, participates in, and/or designates representatives to help manage issues of particular importance to the school district or town.*

L. Other Business Topics not reasonably anticipated 48 hours in advance of the meeting.

M. Future Business Joint meeting of the School Building Committee and School Committee on Wednesday, December 20 @ 6:00 pm in the CHS DLL. The next Open Session meeting is scheduled for Thursday, December 21, 2023 @ 6:00 pm.

N. Adjournment

The listing of matters is those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Public Participation

Under the Open Meeting Law, the public is permitted to attend meetings of public bodies but is excluded from an executive session that is called for a valid purpose listed in the law. While the public is permitted to attend an open meeting, an individual may not address the public body without permission of the chair. An individual may not disrupt a meeting of a public body, and at the request of the chair, all members of the public shall be silent. If, after clear warning, a person continues to be disruptive, the chair may order the person to leave the meeting. If the person does not leave, the chair may authorize a constable or other officer to remove the person. Although public participation is entirely within the chair's discretion, the Attorney General encourages public bodies to allow as much public participation as time permits. Any member of the public may make an audio or video recording of an open session of a public meeting. A member of the public who wishes to record a meeting must first notify the chair and must comply with reasonable requirements regarding audio or video equipment established by the chair so as not to interfere with the meeting. The chair is required to inform other attendees of any such recording at the beginning of the meeting. If someone arrives after the meeting has begun and wishes to record a meeting, that person should attempt to notify the chair prior to beginning recording, ideally in a manner that does not significantly disrupt the meeting in progress (such as passing a note for the chair to the board administrator or secretary). The chair should endeavor to acknowledge such attempts at notification and announce the fact of any recording to those in attendance.

<https://www.mass.gov/doc/open-meeting-law-guide-and-educational-materials-0/download>

Approved by the School Committee
on December 21, 2023

**Canton School Committee
Open Meeting
Thursday, December 7, 2023
Minutes**

A. Call to Order: Chair O'Halloran asked for a motion to call to order the Thursday, December 7, 2023 School Committee Open Session Meeting at 5:06 pm. Maureen Moran made the motion; Kristian Merenda seconded. Roll call vote was unanimous at 4-0 and recorded as follows:

Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O'Halloran	yea
4 yeas	0 nays

B. Executive Session: Committee members went directly into Executive Session for: **(a)** to approve executive session minutes (10/19/23 & 11/16/23), **(b)** discuss strategy with regard to negotiations.

School Committee Members returned to Open Session at 6:09 pm.

Attendees: Laura Arboleda
Kimberly McCourt
Kristian Merenda
Maureen Moran
Kendall O'Halloran
Danica Seto, Student Representative
Derek Folan, Superintendent

Absent: Stephen Marshall, Assistant Superintendent of Finance & Operations

Guests: Brianna Geoghan, Advisor to the School Committee
Melanie Omar, MLL PreK-12 Dept. Coordinator/Multilingual Learner Program
Meghan Byrne, Director of Student Services
Josh Fogel, Director of Technology and Data Analytics
Justin Thibeault, Ai3
Jen Carlson, LeftField, GMS Project Manager

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C. Student Member Report: School Committee Student Advisor, Brianna Geoghan, shared JFK updates including:

1. JFK Holiday Shop is open to students throughout each school day. With the help of JFK parent volunteers, the shop offers 10 tables of unique gifts at different price points that students can purchase for friends and family.
2. JFK students are also enjoying a Holiday Countdown that recognizes and observes holiday celebrations from all cultures. Currently, they are celebrating Hanukkah.
3. Reading Buddies are sponsoring a Book Drive through December 18th. They are accepting new and gently used PreK to Grade 5 level books that will be delivered to the Rodman and elementary schools to bolster their sharing libraries.

D. Teaching and Learning Report: Ms. Melanie Omar, MLL PreK-12 Dept.

Coordinator/Multilingual Learner Program, shared a Multilingual Learner update. After giving a brief history of the program, Ms. Omar acknowledged there has been a substantial increase in multilingual learners since 2012 as well as the number of languages spoken. Student enrollment in this program is now approximately 3% of the District's total enrollment. State guidelines have also shifted to include strengthening home-school partnerships and better monitoring of students' progress via ACCESS (a federally and state mandated standardized test measuring language proficiency in listening, speaking, reading and writing.) Ms. Omar indicated that CPS has a 100% graduation rate; however, the ML program continues to support all students through Flashlight 360, a structured speaking practice platform and Title III subsidized platforms for foundational language learning, as well as the Sheltered English Immersion instructional model. She also noted that there are now extended learning opportunities through Summer Scholars. Ms. Omar was delighted to announce that an ELPAC had just been formed. She believes this PAC will offer community members security and community engagement, while advocating for students and families, and extended learning opportunities they hope will result in greater success.

E. Superintendent Report: Before presenting District progress, highlights, and accolades, Superintendent Folan remembered Mr. Dickie, a longtime employee and friend of the District. He acknowledged his family's continued legacy in Canton, and asked for a moment of silence to honor Mr. Dickie. Mr. Folan also announced that the Champions of Wellness 5K Road Race held on November 19th was a great success raising over \$5000.

Champions of Excellence

DESE Visit to JFK: Canton Public Schools is doing extremely strong work in the realm of high-quality curricular implementation and instruction. Members of the Department of Elementary and Secondary Education (DESE) reached out to observe our K-2 Literacy work (UFLI - University of Florida Literacy Institute) and our integration of social studies and literacy in grades 3-5. Our educators and students at JFK elementary did a phenomenal job during the visit leaving DESE guests with this great appreciation of rigorous and equitable learning experiences, and the high-quality instruction delivered by staff. We also hosted educators from Middleboro who wanted to learn more about UFLI, and educators from Dover-Sherborn visited Canton to learn about Reveal Math.

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Westfield State and CHS student visit: Students in CHS teacher Rebecca Ashley's English class had a great opportunity this week to interact with Westfield State students and professors, discussing literary analysis through the lens of social class. Our students "blew the audience away" with their analysis, reflections and critical thinking. Westfield provided a bus for them, and Commissioner Riley came for the visit.

English Learner Parent Advisory Council (ELPAC) Presentation: The Multi-Language Learner team, led by MLL Coordinator Melanie Omar, coordinated a second meeting for ML families last night (12.6.23). The team secured interpreters, offered light snacks and had student volunteers to play with the kids. The goal was to provide an overview of the services and experiences, and to establish an English Learner Parent Advisory Council (ELPAC).

Annual Waterfall Hills Donation: Last week, we accepted the annual donation from the residents of Waterfall Hill Apartment Complex. Waterfall Hills generously donates backpacks, school supplies, and a monetary donation each year. Backpacks are available in the Enrollment Office for families in need.

CHS Club Highlights: **DECA** members are preparing for their online testing on December 7 followed by an in-person conference on January 3 and 4.

The **Math Team** is having a productive year so far. They have been conducting weekly practice sessions on Wednesdays from 5:30 to 7:00 pm since August. Freshmen are coming to practices, while seniors are doing a great job of explaining advanced concepts to the underclassmen. There is a lot of overlap between Math Team participants and orchestra and the play production; advisors Paul Dybdahl and Kevin Ng report that it is great to see the level of dedication these students have for their regular schoolwork and extracurricular activities.

Robotics is off to a busy start so far this year. Robodog leaders presented at the FIRST Technical Challenge Kickoff event on Saturday, September 9th at Archbishop Williams High School. The presentation was geared to help Rookie teams get up and running for the season.

They held their annual E-waste drive and Kids & Bots events on October 15th. The team redirected 1800 lbs of electronic waste from landfills and received \$1750 in donations to support the CHS Robotics Program during the E-waste drive. Hundreds of children interacted with EV3 Lego Mindstorm robots and watched demonstrations of the Canton Robodogs Robot.

On November 7th, eight members of the Canton Robodogs went to the Boston Convention Center and joined the Rockwell Automation EXPO.

The team also participated in a scrimmage on November 17th at Needham High School. They tested out their lift design and airplane launcher. Robodogs recorded the airplane launch high score of the event (30 points!).

Back home, the Robodogs hosted a scrimmage for the three Galvin Middle School teams to help them prepare for their FLL Qualifier on December 3rd.

Lastly, on November 25th, the team hosted the CHS Robotics Alumni for a light breakfast, a Jeopardy game, and networking. Alumni shared advice on college, internships, co-ops, and jobs. The event ended with a look at this season's game and robot.

Teams are currently preparing for competitions to be held on December 9 at Needham High School and January 21 at Worcester Polytechnic Institute. We will be hosting a competition at Canton High School on Saturday, February 3, 2024.

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The **CHS Science Team** has been busy competing in West Suburban Science League (WSSL) team events, in preparation for the Massachusetts Science Olympiad in March. After two meets and a handful of new members, Canton currently ranks 13 out of 20 teams in the Metro-West Boston area, advancing 4 places from our first to second meet. When asked to describe their experience this year in three words, team captain Abby Qiu stated "fun, inclusive, and communicative."

World Languages Grant: Congratulations to Ms. Heidi Olson for being awarded another grant to help support our Assessment of Performance toward Proficiency in Languages (AAPPL) testing in world language classes.

Important Dates and Events

Dec. 8	Early Release: PreK-12, Professional Development
Dec. 14	World Languages Honors Society Induction Ceremony, 6:00 pm, CHS Auditorium
Dec. 19	CHS Winter Concert, 7:00 pm, CHS Auditorium
Dec. 20	Joint Meeting of School Building Committee and School Committee, 6:00 pm, CHS DLL
Dec. 21	School Committee Meeting, 6:00 pm, CHS DLL
Dec. 22	Early Release: PreK-12, Winter Break
Dec. 25 - Jan. 1	No School: Winter Break
Jan. 2	School resumes for all grades

F. New Business:

1. **GMS Building Project Progress Update**: Ms. Jen Carlson, LeftField Representative, provided an update on the GMS Building Project. After reviewing the GMS Project schedule overview, Ms. Carlson indicated that some key decisions will be made before the end of the year. On December 20th, 2023, the School Committee and the School Building Committee will host a joint meeting. Grade configuration (5-8 vs. 6-8) will be decided by the School Committee, and performance space (auditorium vs. cafetorium or gymatorium) will be discussed and voted on by the School Building Committee (SBC).

Superintendent Folan then reviewed the grade configuration options (5-8 vs. 6-8). Mr.Folan had thoughtful conversations with the Canton community as well as other local districts who had recently made similar decisions. He particularly engaged in substantial elementary educator discussion and feedback. After thoughtfully deliberating over the many aspects of the GMS school project, Mr. Folan recommended the 5-8 grade configuration for GMS.

In January 2024, the SBC will meet to decide on a preferred model for the school.

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on December 21, 2023

Once these decisions are made, costs of the project as well as ultimate cost to individual taxpayers can be better determined.

2. **German American Partnership Program (GAPP) Approval:** Ms. Melanie Omar, MLL PreK-12 Dept. Coordinator/Multilingual Learner Program shared details of the German exchange program. Supported by a DESE grant, this 21 day study abroad immersion and family homestay program has been in existence for 40 years. Ms. Omar described the objectives, itinerary, timeframe, and selection criteria (academic excellence, intellectual passion and curiosity). Ms. Omar did acknowledge that students studying German have first preference, but selection is not based on ability to pay. After responding to questions, Ms. Omar requested a vote of approval. Chair O'Halloran asked for a motion to approve the German American Partnership Program (GAPP) as written and presented. Laruan Arboleda made the motion; Maureen Moran seconded. Vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea
Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O'Halloran	yea
5 yeas	0 nays

G. Unfinished Business:

1. **FY25 Capital:** Mr. Folan reviewed the FY25 Capital Budget as a third read indicating that all numbers remained consistent with the previous read. On behalf of Mr. Marshall, he asked for clarification on how the committee preferred to assign monies provided through *Grounds Improvement–General Landscaping or Landscaping and Design*. Members agreed these monies would be best spent on *Landscaping and Design* to add a progression of curb appeal.

Ms. Moran requested:

- backup paperwork for the Landscaping work. Mr. Folan will forward this once received from the vendor.
- clarity on the warehouse paving project;
- Chromebook replacement purchases; insurance reimbursement for Chromebook losses, as well as an analysis of whether the cost of insurance is beneficial to the District in covering the cost of replacements. Mr Fogel will forward this information to Ms. Moran.
- the need for Hansen indoor window shades;
- an explanation of where the Elementary School furniture has been placed. Mr. Folan indicated that this cost is for collaborative seating and is a two phased approach–2025 being the second year.

Ms. Merenda requested a comprehensive review and plan for how all lots needing repair will be managed.

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Hearing no further questions, Chair O’Halloran asked for a motion to approve the FY25 Capital Budget totaling \$1,056,000 as written and presented. Kimberly McCourt made the motion; Kristian Merenda seconded. Ensuing vote was recorded as follows:

Laura Arboleda	yea
Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	nay
Kendall O’Halloran	yea

4 yeas 1 nay

2. **Policy Section H vote:** Members agreed to table a vote to approve changes in Section H until the next School Committee meeting (scheduled for Thursday, December 21, 2023).

H. Public Comment: Canton resident, Ms. O’Donnell, spoke about human rights and dignity and local government’s obligations to uphold these rights without discrimination.

I. Assistant Superintendent of Finance and Operations Report: No report was given.

J. Consent Agenda:

1. Open Session Minutes: November 16, 2023
2. Warrants: December 8, 2023

Chair O’Halloran announced the contents of the Consent Agenda and asked if any member wanted discussion or a request to remove any of the items. Hearing none, Ms. O’Halloran asked for a motion for approval of the Open Session Minutes from 11.16.23 and the warrant for 12.8.23 as written and presented. Laura Arboleda made the motion; Maureen Moran seconded. Roll Call vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea
Kristian Merenda	yea
Kimberly McCourt	yea
Maureen Moran	yea
Kendall O’Halloran	yea

5 yeas 0 nays

K. Update of Sub-Committee, Task Force and Liaison Posts:

Ms. Merenda:

1. The School Building Committee meeting will be held on Wed. December 20th;
2. Master Planning Committee recently met and discussed storm water

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management and ways to be diligent around it;

Ms. McCourt-nothing to report;

Ms. Moran-Budget & Finance Meeting is scheduled for Tuesday, December 12th at 12pm;
the subcommittee will begin discussions on the Operating Budget;

Ms. Arboleda: nothing to report;

Ms. O'Halloran:

1. CCPC-Committee members are working through the third round of interviewing;
2. Content & Communications-asked if any member would be interested in taking on the tasks of this committee;

Stephen Marshall: absent

Superintendent Folan: Meeting with all CAPT groups regarding the GMS building;

Emma Cummings: National Honor Society is hosting a Toy Drive until December 18th.
Ms. Cummings asked the committee and community to consider supporting this drive.

L. Other Business: None

M. Future Business: A joint meeting of the School Building Committee and School Committee is scheduled for Wednesday, December 20 @ 6:00 pm in the CHS DLL. The next School Committee Open Session meeting is scheduled for Thursday, December 21, 2023 @ 6:00 pm.

N. Adjournment

Hearing no questions or requests for further discussion, Ms. O'Halloran asked for a motion to adjourn the Thursday, December 7, 2023 School Committee Open Session Meeting at 8:00 pm. Laura Arboleda made the motion; Kimberly McCourt seconded. Ensuing vote was unanimous at 5-0 and recorded as follows:

Laura Arboleda	yea	
Kimberly McCourt	yea	
Kristian Merenda	yea	
Maureen Moran	yea	
Kendall O'Halloran	yea	
	5 yeas	0 nays

Documents Reviewed:

- Superintendent Report, December 7, 2023
- German American Partnership Program (GAPP)
- GMS Building Project Progress Update
- CPS Policy Manual, Section H
- FY25 Capital Budget
- Open Session Minutes: November 16, 2023

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on December 21, 2023

Warrant: December 8, 2023



Canton School Committee
Open Meeting Agenda

Champions of Excellence: Creating a Culture of Achievement, Equity, Inspiration and Joy

December 20, 2023	Canton High School Distance Learning Lab 900 Washington Street Canton, MA 02021	6:00 PM Joint meeting with the School Building Committee
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Members of the public can access the meeting via live stream over the "Student Station" on Comcast 6 & 1070/Verizon 41 and on Verizon HD2143 as well as CantonCommunityTV.org for specific and easy links to streamed LIVE coverage of the School Committee. The LIVE link will go up on the day of the meeting. Please take note that Canton Community TV is recording this meeting and streaming it live on the internet and local television stations.

A. Call to Order

B. New Business

1. **(15 min.) GMS Building Project Update:** Representatives from Ai3 and LeftField will provide an update on the GMS Building Project.

C. (5-30 min.) Public Comment Click [here](#) to sign up to make a public comment. Public comment allows individuals to express an opinion or share a comment on issues to be discussed on the meeting agenda and/or within the School Committee's authority. It is not an opportunity for discussion dialogue between individuals and the School Committee or Administration. To respect the time of all participants in the meeting, the totality of individual comments cannot exceed 5 minutes. For more information and guidance on making public comments, please see the CPS policies [here](#).

D. New Business

2. **(10 min.) Grade Configuration Recommendation (VOTE):** Superintendent Folan will make a recommendation for a 5-8 grade configuration for the GMS Building Project and request a vote of approval.

E. Future Business The next Open Session meeting is scheduled for Thursday, December 21, 2023 @ 6:00 pm.

F. Adjournment

The listing of matters is those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Public Participation

Under the Open Meeting Law, the public is permitted to attend meetings of public bodies but is excluded from an executive session that is called for a valid purpose listed in the law. While the public is permitted to attend an open meeting, an individual may not address the public body without permission of the chair. An individual may not disrupt a meeting of a public body, and at the request of the chair, all members of the public shall be silent. If, after clear warning, a person continues to be disruptive, the chair may order the person to leave the meeting. If the person does not leave, the chair may authorize a constable or other officer to

remove the person. Although public participation is entirely within the chair's discretion, the Attorney General encourages public bodies to allow as much public participation as time permits. Any member of the public may make an audio or video recording of an open session of a public meeting. A member of the public who wishes to record a meeting must first notify the chair and must comply with reasonable requirements regarding audio or video equipment established by the chair so as not to interfere with the meeting. The chair is required to inform other attendees of any such recording at the beginning of the meeting. If someone arrives after the meeting has begun and wishes to record a meeting, that person should attempt to notify the chair prior to beginning recording, ideally in a manner that does not significantly disrupt the meeting in progress (such as passing a note for the chair to the board administrator or secretary). The chair should endeavor to acknowledge such attempts at notification and announce the fact of any recording to those in attendance.

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Approved by School Building Committee
on January 3, 2024

Approved by School Committee
on January 18, 2024

**Canton School Building Committee
and School Committee Joint Meeting
December 20, 2023
Minutes**

A. Call to Order: Chair O'Halloran asked for a motion to call to order the Thursday, December 21, 2023 School Committee Open Session Meeting at 6:03 pm. Superintendent Folan, Chair of the SBC, opened the School Building Committee Meeting to order at 6:03 pm.

Attendees: Kimberly McCourt (SC)
Kristian Merenda (SC)
Kendall O'Halloran (SC)
Derek Folan, Superintendent (SC & SBC)
Stephen Marshall, Assistant Superintendent of Finance & Operations (SC & SBC)
(Left the meeting at 7:27 pm)
John Connolly (SBC)
Charles Doody (SBC)
Tom Kelleher (SBC)
Brian Lynch (SBC)
Bob McCarthy (SBC)
Jonathan Mulhern (SBC)
Tina Perez (SBC)
Sarah Shannon (SBC)
Andrea Stuart (SBC)
Lou Tarmy (SBC)

Absent: Laura Arboleda (SC)
Maureen Moran (SC)
Bob Benedetti (SBC)
Amy Tom (SBC)

Guests: Justin Thibeault, Ai3
Lynn Stapleton, LeftField

B. GMS Building Project Update: Mr. Thibeault reviewed the GMS Building Project schedule overview including building options (addition/renovation vs. new construction) for both grade configurations (6-8 or 5-8) and a matrix to identify what option is best and thus inform the final

Approved by School Building Committee
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decision. Criteria included Educational Program, Community & Access, Construction Phasing, Sustainability, and Cost.

Superintendent Folan announced his recommendation for grade configuration. Advocating for a 5-8 grade configuration, Mr. Folan noted that the 5-8 grade configuration will provide enhanced educational opportunities for our students and will alleviate the overcrowding in the elementary schools. This decision was born out of meetings, discussions, workshops, community forums with live polling, and facility assessments in both the GMS as well as the three elementary schools. Careful consideration was given to current 5th grade model (two teacher teams), grade level separation, and controlled interaction. Educators were strongly in favor of the 5-8 grade shift noting that academic neighborhoods and collaborative spaces offer extra opportunities to be a part of the school.

C. Public Comment: Ms. Haley Pecarski, a graduate of Canton schools, spoke of concerns with a 5-8 grade configuration for the new GMS. She expressed concern with moving 5h grade students into a bigger building. She wondered how students would be protected from bullying in a larger community. Ms. Pecarski asked the group to consider dignity and civility as an important part of school culture.

D. New Business:

Grade Configuration Recommendation and Vote: Mr. Folan recommended the 5-8 configuration. Ms. Merenda requested an estimate of the impact in tax costs to residents. Lynn Davenport (LeftField) indicated that the range is not set yet, but would be able to supply some range estimates and reimbursement levels from MSBA after both votes (grade configuration and Performing Arts Space) were recorded.

Hearing no further questions or requests for additional discussion, Chair Merenda called for a motion to vote on grade configuration for the new Galvin Middle School. Kristian Merenda made the motion for the school committee to modify the current 6-8 grade configuration at the Galvin Middle School to a 5-8 grade configuration for the new Galvin Middle School project in conjunction with the MSBA process. Kimberly McCourt seconded. Roll call vote was unanimous at 3-0 and recorded as follows:

Kristian Merenda	yea		
Kimberly McCourt	yea		
Kendall O'Halloran	yea		
	3 yeas	0 nays	

E. Future Business: The next Open Session meeting is scheduled for Thursday, December 21, 2023 at 6:00 pm.

F. Adjournment of Canton School Committee Open Session Meeting: Ms. O'Halloran called for a motion to adjourn the Wednesday, December 20, 2023 Canton School Committee Open

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Session Meeting at 7:03 pm. Ms. Merenda made the motion; Kimberly McCourt seconded. Roll call vote was unanimous at 3-0 and recorded as follows:

Kristian Merenda	yea		
Kimberly McCourt	yea		
Kendall O'Halloran	yea		
		3 yeas	0 nays

G. SBC portion of the Meeting:

- a. **Performing Arts Space Review:** Ai3 Principal, Mr. Thibeault, gave an overview of the Performing Arts Space options:
 - a. Auditorium: dedicated performance space
 - b. Cafetorium: stage attached to a dining space;
 - c. Gymnatorium: stage attached to a gymnasium

Mr. Thibeault showed examples of all three building options, noting size , seating capacity (600 or 800 seats), availability of each space within the school day, and cost estimates, and did note the MSBA will partially reimburse for Cafetoriums and Gymtoriums, but will not consider middle school auditoriums eligible for reimbursement. He indicated that live polling from Community Forum #3 suggested residents were in favor of investing in an auditorium.

The District recommended building a full auditorium based on current ticket sales and attendance data at CHS auditorium, and the additional educational and community benefits the space would allow.

H. Public Comment: Performance Spaces-no public comments were heard.

- I. **Performance Space Discussion and Vote:** Mr. McCarthy was in favor of building an 800 seat auditorium, and charged Ai3 to look at everything to bring the cost down. Mr. Doody, Mr. Scollins, Mr. Connolly, and Ms. Merenda all supported an 800 seat auditorium.

Mr. McCarthy made a motion that the School Building Committee vote to support an 800 seat auditorium for the new Galvin Middle School project under Item #9. Mr. Doody seconded. Voting was unanimous and recorded as:

Mr. Marshall-yea
 Mr. Connolly-yea
 Ms. Merenda-yea
 Mr. McCarthy-yea
 Mr. Scollins-yea
 Mr. Doody-yea
 Mr. Folan-yea

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on January 3, 2024

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7 yeas 0 nays

J. Project Approvals:

a. November 15, 2023 Meeting Minutes: LeftField representative, Ms. Stapleton, presented the 11.15.23 minutes for a vote of approval. Hearing no questions or concerns, Mr. Folan called for a vote to approve minutes as written and presented. Mr. McCarthy made the motion; Mr. Connolly seconded. Voting was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

b. LeftField OPM Contract Amendment No. 1 for Cost Estimating Services: Ms. Stapleton explained the billing for performed by AM Fogarty for cost estimating comparisons. The cost of this amendment is \$9,900. Mr. Folan called for a motion of approval.. Mr. Connolly made the motion, Mr.McCarthy seconded. With no further discussion. Voting was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

c. LeftField and Ai3 Invoices for November: Ms. Stapleton reviewed bills from LeftField and Ai3 in the amount of \$110,185.83. Mr. Folan called for a motion of approval. Mr. Connolly made the motion, Mr.McCarthy seconded. With no further discussion, Hearing no requests for discussion, Mr. Folan called for a vote. Voting was unanimous and recorded as:

Mr. Connolly-yea

Approved by School Building Committee
on January 3, 2024

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Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

7. Feasibility Study Budget Overview: Ms. Stapleton noted that 96% of the budget is committed; 42% has been expended to date. LeftField is reserving \$56,240 of uncommitted funds until the construction delivery method is chosen.

Future Meeting Dates: The next School Building Meeting is scheduled to meet remotely on Wednesday, January 3, 2024 and Wednesday, January 17, 2024 when decisions around construction method will be discussed and voted on.

8. Adjournment: Mr. Folan called for a motion to adjourn the Wednesday, December 20, 2023 School Building Meeting at 7:38 pm. Mr. Connolly made the motion; Mr. McCarthy seconded. Roll Call vote was unanimous and recorded as:

Mr. Connolly-yea
Ms. Merenda-yea
Mr. McCarthy-yea
Mr. Scollins-yea
Mr. Doody-yea
Mr. Folan-yea
6 yeas 0 nays

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Canton School Committee
Open Meeting Agenda

Champions of Excellence: Creating a Culture of Achievement, Equity, Inspiration and Joy

February 1, 2024	Canton High School Distance Learning Lab 900 Washington Street Canton, MA 02021	5:00 PM Executive Session 6:00 PM Open Session
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Members of the public can access the meeting via live stream over the "Student Station" on Comcast 6 & 1070/Verizon 41 and on Verizon HD2143 as well as CantonCommunityTv.org for specific and easy links to streamed LIVE coverage of the School Committee. The LIVE link will go up on the day of the meeting. Please take note that Canton Community TV is recording this meeting and streaming it live on the internet and local television stations.

A. Call to Order

B. Executive Session (a) Purpose 2 - strategy with respect to contract negotiations with nonunion personnel- Superintendent & Interim Director of Student Services. (b) Purpose 7 - G.L. c. 30A, section 22 - Approve executive session minutes (11/16/23, 12/6/23, 12/18/2023, 1/4/2024, 1/17/24, 1/18/24).

C. (5 min.) Student Report School Committee Student Advisor, Zoya Gildeberg, will share CHS updates.

D. (10 min.) Superintendent Report Superintendent Folan will present District progress, highlights, and accolades.

E. New Business

1. **(45 min.) GMS Program of Studies (VOTE):** Principal Mulhern will present the GMS Program of Studies.
2. **(20 min.) GMS Building Project Update and Revised Educational Plan Approval (VOTE):** Representatives from Ai3 and LeftField will provide an update on the GMS Building Project and present the revised Educational Plan for a vote of approval.
3. **(5 min.) Interim Director of Student Services Contract (VOTE):** Superintendent Folan will request a vote of approval for the Interim Director of Student Services contract.
4. **(40 min.) Superintendent Formative Assessment:** Superintendent Folan will report on the mid-year progress made on District goals. The School Committee will offer feedback and discuss progress.

F. Unfinished Business

1. **(40 min.) FY25 Budget (VOTE):** Mr. Marshall will present the FY25 Budget for a vote of approval.
2. **(15 min.) 2024-2025 District Calendar 2nd Read (VOTE):** Superintendent Folan will present the District calendar for a vote of approval.

G. (5-30 min.) Public Comment Click [here](#) to sign up to make a public comment. Public comment allows individuals to express an opinion or share a comment on issues to be discussed on the meeting agenda and/or within the School Committee's authority. It is not an opportunity for discussion dialogue between individuals and the School Committee or Administration. To respect the time of all

participants in the meeting, the totality of individual comments cannot exceed 5 minutes. For more information and guidance on making public comments, please see the CPS policies [here](#).

H. (5 min.) Assistant Superintendent of Finance and Operations Report

I. (5 min.) Consent Agenda *The consent agenda is designed to expedite the District's handling of routine and miscellaneous business. The School Committee may adopt the entire Consent Agenda with one motion. At the request of any committee member, any item(s) may be removed and placed on the Regular Agenda for discussion. Note: per Robert's Rules of Order: A member's absence from the meeting for which minutes are being approved does not prevent the member from participating in their correction or approval.*

1. Open Session Minutes: January 18, 2024
2. Warrants: February 2, 2024

J. (5 min.) Update of Sub-Committee, Task Force and Liaison Posts *In addition to the core role of governing our schools, the Canton School Committee creates, participates in, and/or designates representatives to help manage issues of particular importance to the school district or town.*

K. Other Business Topics not reasonably anticipated 48 hours in advance of the meeting.

L. Future Business The next Open Session meeting is scheduled for Thursday, February 15, 2024 @ 6:00 pm.

M. Adjournment

The listing of matters are those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Public Participation

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APPENDIX

A

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End of Report

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A Educational Program - Redlined Copy

CANTON PUBLIC SCHOOLS



960 Washington Street, Canton, MA 02021
Telephone: 781-821-5060
Fax: 781-575-6500
www.cantonma.org



Derek Folan, M.Ed.
Superintendent of Schools

An exceptional education that develops innovative thinkers, curious and empowered learners, and compassionate citizens.

GMS Education Program - MSBA REVISIONS

MODULE 3: PRELIMINARY DESIGN PROGRAM

January, 2024

3.1.2 Galvin Middle School Educational Program

District members primarily responsible for developing this Educational Program include Principal Jon Mulhern and Instructional Coach Catherine Stein, with input and writing from department leaders and coordinators, were the lead authors. Assistant Superintendent for Teaching and Learning Sarah Shannon and Superintendent Derek Folan served as editors.

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1. INTRODUCTION

Vision Statement

The Canton Public Schools is committed to providing all students an exceptional education that develops innovative thinkers, curious and empowered learners, and compassionate citizens. All Canton Public Schools staff and students are committed to building learning communities consistent with our District's core values:

- Respectful and collaborative relationships
- Educational Equity
- Academic and personal excellence
- Community engagement
- High-quality teaching, learning, and leading

Galvin Middle School Mission

The William H. Galvin Middle School is an inclusive, student-centered learning community that fosters academic growth, resilience, and achievement while ensuring that every community member experiences a sense of belonging, embraces challenge, and positively impacts their world.

Historical Context of Canton

The area that would become Canton was inhabited for tens of thousands of years prior to European colonization. The Paleo-Indian site Wamsutta, radiocarbon dated to 12,140 years before present,[2] is located within the bounds of modern day Canton at Signal Hill. At the time of the Puritan migration to New England in the early 1600s, Canton was seasonally inhabited by the Neponset band of Massachusetts under the leadership of sachem Chickatawbut.

From the 1630s to the 1670s, increasing encroachment by year-round English settlers on lands traditionally inhabited only part of the year, devastating virgin soil epidemics, and English colonial policy pushed native people into Praying Towns, a precursor to modern day Indian reservations. The modern town of Canton was the site of Ponkapoag, the second Praying Town in the Massachusetts Bay Colony, which was set off from Dorchester in 1657, three years after English colonists resettled a group of Nemasket there from Cohannet, modern day Taunton. The so-called Praying Indians that settled in Ponkapoag are known today as the Massachusetts Tribe at Ponkapoag.

In 1674, King Philip's War led to significant depopulation of Ponkapoag, which found itself on the fault lines of one of the bloodiest conflicts in North American history,[3] and in October 1675 those Praying Indians that remained were forcibly removed to Deer Island by order of the Massachusetts General Court. After the war, in part because of the loss of life and the fleeing of native refugees north to join the Wabanaki Confederacy, the General Court disbanded 10 of the original 14 towns in 1677 and placed the remaining four, including Ponkapoag, under the supervision of colonists. Over the next hundred years although Ponkapoag remained an official entity, loss of self-determination and privatization of collective lands led to the gradual intermixing of native and settler populations in the area.[4]

In 1726, Stoughton, Massachusetts split from the large original territory of Dorchester; then on February 23, 1797, Canton was officially incorporated from the territory of Stoughton. The name "Canton" was suggested by Elijah Dunbar and comes from a belief that Canton, China was antipodal to it.[5] This is not possible, since they are both well north of the Equator; they are, however, about 2 degrees from being antipodal in longitude, ignoring latitude. In addition to being a prominent Canton citizen, Elijah Dunbar was the first president of the Stoughton Musical Society from 1786 to 1808.[6] Now named the Old Stoughton Music Society, it is the oldest choral society in the United States.[7]

Paul Revere built the nation's first copper rolling mill in Canton in 1801. His poem entitled Canton Dale expresses his affection for the town. Canton was the location of the Rising Sun Stove Polish Company, founded by Elijah Morse, a wealthy merchant and creator of the pot-belly stove.

The town of Canton has three public elementary schools: the John F. Kennedy School, Lt. Peter M. Hansen School, and Dean S. Luce School. The area in which one lives determines which elementary school one's children attend.

Canton has one public middle school, the William H. Galvin Middle School, where promoted students from all of the three elementary schools combine. It serves grades 6–8 and is located next to the Lt. Peter M. Hansen Elementary School. The Galvin Middle School is named after William H. Galvin who was a lifelong resident and graduate of Canton High School. William H. Galvin taught in the town from 1935 to 1943, at which time he was appointed principal of the Crane School. Galvin also moved to various positions throughout the school system, being named principal of the Augustus Hemenway (1950) and the Dean S. Luce (1954) Schools, assistant superintendent (1958) and then in 1959 he was made superintendent of the Canton School System, a post he held until his retirement in 1976. In recognition of his service to the town of Canton, the William H. Galvin Middle School was named in his honor in 1973.

Canton also has a public high school, Canton High School, that provides grades 9–12. The Rodman Early Childhood Center, Canton’s public preK program, serves students at the Rodman building. There is one private school, St. John the Evangelist, which has been open since 1883 and serves students in grades Preschool–8. In addition, the state’s Pappas Rehabilitation Hospital for Children, formerly known as the Massachusetts Hospital School, is in Canton.[23] In addition, the Marilyn G. Rodman Educational and Administrative Center is located next to Canton High School, housing administrative buildings as well as a preschool.

The Blue Hills Regional Technical School and the Canton campus of Massasoit Community College are located within the town as well.[24]

Clarke Schools for Hearing and Speech, formerly Clarke School for the Deaf, operates a satellite school, "Clarke Boston", in Canton for children who are diagnosed with deafness at an early age and then are mainstreamed to a public school. Clarke is the oldest school for the deaf in the country that teaches children to lip-read and speak orally, rather than use sign language; its main campus is located 80 miles to the west in Northampton, Massachusetts.

The Judge Rotenberg Educational Center is housed in Canton as well.

Canton has the open town meeting form of government. Annually each spring, and as necessary, the voters gather to discuss matters such as zoning, schools, public works, recreational facilities, the budget, taxes and bond issues. Property taxes on residential and other land, buildings and improvements, and transfers from the state government, are two important sources of revenue for the town. The five elected members of the Select Board oversee the day-to-day operations of the town government.

The School Committee is the governing board for the Canton Public Schools and consists of five members who are elected to overlapping three-year terms of volunteer, public service.. In serving the school community, the Committee’s primary charge is to establish those purposes, programs and procedures that will best produce the educational achievement needed by our students. The Committee also is tasked with accomplishing this while also being responsible for the wise management of resources available to the District.

The Planning Board approves new town subdivisions, reviews site plans for commercial development, oversees the towns scenic ways, drafts and approves a town-wide master plan, and statutorily provides recommendations to Town Meeting regarding zoning and development.

The Finance Committee studies the financial affairs of the town, advises and makes recommendations to the Town Meeting on the budget and other areas with fiscal implications in serving the Canton residents.

Companies large and small continue to find Canton a business-friendly town. Canton is the headquarters of Dunkin' Donuts and is the headquarters of Computershare (North American HQ), Organogenesis, Inc., Boston Mutual Life Insurance Company, Interpolymer Corporation, Casual Male Retail Group, and formerly, Tweeter. It is also home to the Massachusetts Division headquarters of the Salvation Army.

According to the US Census Bureau, the Canton population is estimated to be 24,609 people as of July 1, 2022. The US Census Bureau estimates that the population increased by 1.0% since April 1, 2020. This population growth suggests a need for greater school resources to support families with children moving into the town of Canton. Additional census data shows 22.2% of the population is under 18 years old. The median household income (in 2021 dollars) from 2017 - 2021 was \$118,814. The median value of owner-occupied housing units from 2017-2021 was \$560,200, while the median gross rent was \$1,931. US census data also shows that 16.9% of Canton residents ages 5+ years and older speak languages other than English at home; such a diverse population provides evidence for a need for greater multilingual learner resources at school to support multilingual families with school-age children.

Canton has always been a community with a multitude of activities for its youth. In addition to the extracurricular baseball, softball, football, and hockey programs long in place in this town, there are now extensive youth soccer, basketball, lacrosse and recreational programs as well. Many of these activities take place on fields that have been constructed or renovated in recent years through the hard work of many volunteers and cooperation of the town. The vast majority of opportunities for students to participate in visual and performing arts activities come via the public school system.

Educational Vision

Strategic Plan

In 2023, the District undertook the challenge of rewriting its Mission and Vision statements and restating its Core Values. Ultimately, they were turned into measurable action through the District's Five-Year Strategic Plan that was the culmination of a year of collaboration between the community, the schools, and the Town of Canton. Currently, staff across the District are implementing research-based pedagogical approaches on how content and essential skills are taught and assessed at each grade level and in each content area.

The Strategic Plan lays out Objectives and Benchmarks that will help focus and prepare the Canton Public Schools staff, and the greater Canton community, in delivering a comprehensive, student-centered, and relevant education to every student, every day.

The Plan emphasizes social and emotional well-being, critical thinking, collaborative problem solving, and authentic learning experiences in appropriate spaces, allowing the District to position itself to ensure that every student becomes a compassionate global citizen and an active life-long learner.

- The District will work to create a purposeful and sustainable budget, guided by the CPS Strategic Plan, that provides sufficient funds to operate and improve the Canton Public Schools; in doing this, the system is poised to improve student achievement.
- The Plan upholds the larger District goal of creating facilities that are centers for innovation and comprehensive, transformative educational experiences, and that will foster and promote problem solving and creativity for both staff and students within a safe environment.
- The District's commitment to high quality teaching, learning and leading and ensuring equitable and culturally responsive practices is also reflected in the Strategic Plan. The practices that will inspire lifelong curiosity through collaborative problem solving and authentic learning are now part of the District's teaching and learning plan.
- A commitment to a holistic, connected approach is another key objective. By supporting STEAM (Science Technology Engineering and Math), Engineering, Visual and Performing Arts, Wellness and World Languages and other specials, the District's goal remains creating pathways that enable students to explore and pursue their interests and passions, while contributing to the overall good of the community. Extracurricular activities in the arts, athletics, and other enrichment areas are available to all middle school students and support the holistic approach.
- The goal of creating a culture of equity, care, inclusion, and safety for every student and family in the Canton Public Schools will be a hallmark of the educational future of the Canton Public Schools.

This Education Plan is directly tied to two of the District's strategic initiatives to create facilities that are centers for innovative, transformational and rigorous educational experiences, and that will foster and promote problem solving and creativity for both staff and students within a safe environment:

- District's Priority Objective #2:
To develop state-of-the-art operational systems that assure access to high-quality resources, including facilities, aligned to our educational vision, equitably distributed, and utilized efficiently.
- District's Strategic Objective #4:
To create and sustain a culturally and linguistically responsive school climate and culture that supports an equitable educational environment for every student and staff member.

Summer /Fall 2023 Educational Visioning

In the summer and early fall of 2023, a combined 60+ participants – including Canton Public Schools leadership, staff, students, administrators, parents, and community members – participated in a variety of visioning and programming sessions led by Educational Planner, Mike Pirollo (MLP Integrated Design) and Ai3 Architects. Each session was part of a collaborative process designed to inform the Galvin Middle School Massachusetts School Building Authority (MSBA) Feasibility Study and pre-design process.

In a series of 5 visioning sessions, participants were led through a step-by-step process aimed at capturing their high-level thinking around 5 key areas:

- Educational, architectural, and community goals and priorities
- Vision of the middle school learner, including the physical, academic, and social-emotional development and needs
- Vision of teaching and learning, including engaging academics and important skills and experiences
- Vision of specials programming and scheduling to best support interdisciplinary experiences and student voice and choice
- Vision of the ideal learning environment, including space types, design features, and adjacencies

At the core of the District's educational vision are a series of overarching goals that speak to space and the teaching, learning, and social-emotional experiences within that space:

- Middle-schooler focused building (students as heart of the school)
- Spaces, curriculum, and opportunities to support teaming and experiential, project-based learning

- Spaces to support a wealth of specials programs
- Flexible learning environment
- Outdoor space for academic and social-emotional needs
- Calming spaces throughout
- Maximize inclusion and integration of all students and programs
- Building and site as a community resource, even beyond school hours
- Safety and security
- Structures, instructional practices, and design features to support collaboration
- Welcoming and inspiring facilities
- Visible learning beyond display cases
- Sustainability
- Maximize natural light

Middle School Learner Snapshot

As part of the educational visioning process participants reviewed research on the physical, academic, and social-emotional development of students from grades 5-8 using information from the book *Yardsticks* by Chip Wood. Each table focused on one age group and created a visual highlighting the key traits of that developmental stage. Participants posted the visuals and took a museum walk where they noted the similarities and differences among the four different age levels. The following high-level observations from that visioning serve as part of our overall educational vision:

- The need for flexible space is a common throughline among all 4 grade levels
- Each grade has social-emotional tensions (i.e. – need for independence but also want to be a part of a group; need for stimulation but also desire for quiet or down time)
- Need for acceptance and connections as a common throughline among grade levels
- Developmentally, 5th and 6th graders are more similar and 7th and 8th graders are more similar
- There is a progression of development where the desire for feedback changes; in younger grades, students seek teacher feedback and in older grades it's more about peer-to-peer feedback

- There is a progression in the way students challenge rules – as students get older, they think about what’s just and fair
- There is a need for space to move, especially in the younger grades as students use the floor and like to spread out

Participants furthered their learner snapshot by creating a three-column chart (documented below) identifying characteristics of students entering, going through, and leaving middle school. The following questions prompted their discussion:

- What does it look like as students transition into middle school?
- What do we need to keep in mind developmentally? (Physical, cognitive, social-emotional)
- How might these developmental traits inform/shape the design of the building?

	Students Entering MS	Middle Year(s)	Students Leaving MS
Who are they physically, academically, socially-emotionally?	<ul style="list-style-type: none"> • Sixth graders are kids • Guided learning • High energy (2) • Rapidly growing • Developing self-consciousness • Small and immature (3) • Eager to please • Searching for a social group (4) • Nervous, anxious, fragile • Emerging executive functioning • Overwhelmed • Excited and sweet • Prepubescent and young • Elementary foundation skills • Seek teacher/adult interaction and approval (5) • Structured friendships • Structure in academics and expectations (2) • Memorizing facts/logic • Exploration and team activities • Physical growth and need for movement and outdoors 	<ul style="list-style-type: none"> • Seventh graders display a size disparity & development (some young, some mature) (4) • Lack of social awareness (3) • Starting to develop own thinking (2) • Increasing confidence (2) • Formative • Physical (hormones) • Constant changing social groups (3) • Finding their voice and identity (2) • Drama – fighting with social group • Sassy • High energy and fidgety (2) • Hungry and exhausted • Putting boundaries (2) • Interpersonal problems • Intellectual/interest driven • Testing rules and expectations (2) • Big reactions • Influx • Start pulling away from adult interaction (2) 	<ul style="list-style-type: none"> • Eight graders are physically mature (tall, big) (2) • Less physical • DRAMA! (stress about coming year) • Academic independence (3) • 1:1 relationship (dating, friendships) • Social media concerns • Hormonal (2) • Awkward • Sensitive • Understanding of accountability (2) • Gaps widening • Deep dive into interests • Mini adult-ish • Seeking independence from adults but want interaction with them (3) • Peer and social interaction (and approval) is priority (8) • Separation academically (grouped for high school) • Fairness and justice focused

	Students Entering MS	Middle Year(s)	Students Leaving MS
<p>In an ideal setting, how might educators work with and support them?</p> <p>What might it look like physically, academically, socially-emotionally?</p>	<ul style="list-style-type: none"> • Heavily dependent on adults (3) • Rule followers • Structure • Gradual release of responsibility (2) • Staff-monitored (big enough for groups to work in room) • Building designed to meet the needs of a 21st century education • Smaller community • Slow fade into more dynamic thinking • More explicit teaching (norms, expectations, routines – how to do middle school) • More access to counselors – transition • More defined sensory options • Develop healthy communication skills • Crave novelty • Exploratory design, set up for inquiry and discussion (labs, amphitheaters) • Fewer teachers on team – increased adult connection/feedback 	<ul style="list-style-type: none"> • Group work revolving around global issues (3) • More student voice/choice on topics • Passionate • Organized clubs • Fairness • Gradual release to independent group work over year • More responsibility and independence • Homework • Need executive functioning supports • Optional seating spaces • Room for science experiments/sinks/equipment • Increased technological access for learning and variety of presentation options • Develop healthy communication skills • Foster tools for healthy debate • Modeling independence/self-advocacy • Routine/predictability 	<ul style="list-style-type: none"> • More independence (2) • Inquiry based learning • Small group collab/group work/projects (3) • Seating for independence: student-led work spaces, small/large group, breakouts (3) • Digital display board (interactive) in classrooms and hallways • Various dining space options • Less defined sensory options • Develop healthy communication skills • Healthy debates • Opportunities/desire for peer coaching and mentoring

	Students Entering MS	Middle Year(s)	Students Leaving MS
What might the building need to be like or have to support them?	<ul style="list-style-type: none"> • Wider hallways • Smaller class sizes but bigger rooms to foster movement and calming (2) • Flexible space/furniture/seating (3) • Seating for independent learning: small/large group instruction (2) • More space between lockers • Pod space (team) (2) • Common space • Breakout space • Purposeful organization: designated areas per grade levels, specialists in central space, support staff in central space (2) • Separate auditorium and cafeteria • Tiered seating in auditorium • Multifunctional library with high tech support • More space to get up and work (writable wall spaces, pod spaces, movable walls) (3) • Multi-modal learning stations within classrooms • Kinesthetic learner in mind • Larger spaces to incorporate group work 	<ul style="list-style-type: none"> • Neighborhood Watch approach • One way circulation • Field houses • Auditorium • Science labs • Access to exterior space • Ability to reconfigure classroom and grouping in classroom to provide collaboration (2) • Seating options for various types of instruction • Flex collab between room and corridors • Multi-modal learning stations within classrooms • Ensemble spaces • Distinct learning spaces for each grade • Interactive • Field • Recess • Winter garden/courtyard • Auditorium that opens to courtyard • Spaces (organic) for students to present, debate, discuss 	<ul style="list-style-type: none"> • Stimulation • Worldly • Idea based • Breakout spaces – space to leave room and work in small groups/independently (3) • Robust technology (Smart boards, etc.) • Student desks that can be separate/grouped • Seating options for various types of instruction • Multi-modal learning stations within classrooms • Independent work spaces outside of classroom • Something that encourages leadership • Open spaces • Walking trails • Outdoor design spaces • Outdoor courtyard • Recreation spaces

2. GRADE AND SCHOOL CONFIGURATION

The Canton Public Schools provides educational programs for students in preschool through age 22. As of September 12, 2023, there were 3,323 students enrolled in the Canton Public Schools. Canton operates:

- The Rodman Early Childhood Program for students ages three and four,
- Three elementary schools, kindergarten through grade five,
- One middle school, grades six through eight,
- One high school, grades nine through twelve.
- One post-grad 18-22 program for students who have completed four years of high school but will remain in the Canton Public School system until age 22, as well as non-diploma students.

Students attend the Canton Public Schools elementary schools based on their geographic neighborhoods with some movement between schools based on special education programming. CPS does not participate in School Choice.

The William H. Galvin Middle School sits at the center of the educational system in Canton, accepting students from each of the three elementary schools and preparing the students for entry into Canton High School or another secondary institution. The staff aims to foster social, emotional, and intellectual growth in a safe, inclusive, and academically rigorous environment. The Middle School incorporates programs that meet the needs and explore the potential of each student. It provides teachers and teaching styles that are compatible with intellectual, aesthetic, social, physical, and emotional growth. This work is done in partnership with the Canton community, with a collective effort toward developing students into successful and compassionate citizens who become life-long learners. As such, the School also serves as a nexus of community activities; it is a busy civic center for all of Canton's citizens.

Galvin Middle School currently educates students from grades 6 through 8. The current enrollment of Galvin Middle School is 743 students. Overcrowding is a persistent issue, as there is consistent incremental growth in enrollment in the elementary schools. This pattern of increasing enrollment is persistent throughout the elementary grade levels, as the current first grade enrollment is at 285 students. The overcrowding issue is exacerbated by the fact that the current Galvin Middle School, built in 1972, was designed for a junior high school departmentalized model of education. Overcrowding has been persistent, with every available space in the building used to support programming whether the space is suited to

the program or not. Current best practices, and the current Galvin Middle School model, takes a team-based approach.

As a result of Canton's need for a building that supports the educational plan of the School and this steady increase in the student population, the MSBA has authorized Canton to complete a feasibility study for renovation/expansion or new construction of a Galvin Middle School.

This educational program outlines an educational vision that considers ~~both a 5-8 and 6-8~~ middle school model [based on the decision made by the Canton Public School Committee on December 20, 2023](#). At the core, our educational vision remains the same with [the addition of grade 5 at the middle school](#). We believe that [a 5-8 middle school](#) will alleviate overcrowding issues at all three elementary schools in Canton. Each elementary school is at capacity and when a class section or a program needs to be added due to class size or student need, another teacher is displaced and forced to be a traveling teacher. This is usually a health, art or music teacher. Additionally, the Hansen school is our most overcrowded and each summer we have to cap our class sizes and students who register late are assigned to either JFK or Luce. [When](#) grade 5 moves to GMS, the three elementary schools will have more room for the increased number of students they have been enrolling and the increased programmatic needs that are becoming a need at the elementary level.

Middle School Team Model

The use of teams at the middle school is a research-based practice known to have three benefits: the creation of a small school atmosphere within a large school setting while allowing for fluctuations in enrollment, allowing for dedicated common planning time for teachers, and maintaining a structure that allows for the specific needs of middle school groups to be prioritized.

The current Galvin Middle School has an average enrollment of 750 students. This is a significant jump from the 275 student average at the elementary level. Middle schools use the team-based model to help divide a large population into smaller, more personal groupings. In the team model, each grade is divided into interdisciplinary teams that align students with a small group of teachers that can focus on the needs of the students and create a neighborhood school feel for students and families. At GMS, each grade averages 250 students. Those students are divided into three interdisciplinary teams made up of five content teachers (Math, Science, Social Studies, ELA, World Language) and a special educator. This allows each team to work with 80-85 students each year. There are benefits for both students and families in this model. Students are placed in smaller groups that allow for teachers to build strong relationships with students, social emotional learning, and community development while still being able to access the benefits of a larger school

(physical amenities, shared staff, scheduling). Middle School students range in age from 10-14 - an age group that is distinctly different from both elementary and high school. Early “junior high” based models forced recent elementary graduates into a very complex system that many were not ready to navigate. The current teaming philosophy better meets their social, emotional and maturity needs.

The team-based model is also an effective way to ensure that teachers have consistent common planning time. Currently, teachers at GMS have common planning time on three days out of each seven day rotation. This is possible because of the team-based model. The grades and teams are aligned for 5 periods per day, including the 5 core subjects (ELA, Math, Science, Social Studies and World Language), X Block for Response to Intervention, and electives. Grades also have two blocks dedicated for a rotation of technology and engineering, visual and performing arts, physical education, and health classes. Since all the students are aligned in their core classes by team, this “off-team” time occurs simultaneously by grade. This allows every teacher to have one prep period per day. Common planning time at GMS is well used. On a seven-day rotation, teachers have one curriculum planning day, and two team planning days. Our ability to meet the needs of our school population and our school and District goals is supported by this structure.

As mentioned above, the team-based model allows for the specific needs of middle school students to be met and allows for fluctuations in enrollment. Middle School students have different educational and community needs than their elementary and high school counterparts. They are not “junior” or smaller versions of high school students. They are educationally and emotionally different. Middle School students do not require the highly restrictive environment of one teacher and one classroom that is typical in an elementary school. The content they are learning is becoming more specialized, and they are beginning to develop their own interest in particular subjects. The team model in grades five and six allows for this growth in a secure setting. Using a two-teacher team in grade five allows students to transition between two teachers focused more deeply on two content areas, but also maintains the elementary feel of a dedicated teacher to a small group of students. In grade six, students are ready to move between more classes but can be anxious to traverse a large physical area in a short period of time multiple times a day. The five-teacher team in grades 6-8 allow those transitions to occur in a smaller neighborhood, easing anxiety. By the end of eighth grade, students are ready to launch to a greater level of independence and freedom that comes with high school. That growth occurs over four years and requires the safe and familial atmosphere of a team model.

The current team structure [for grades 6-8](#) of three teams per grade ensures opportunity for students to become a part of the community and have a sense of belonging. As described earlier, this philosophy is based on middle school learner needs and developmental stages.

Per the Unit A educator contract with the Canton Educator Association, our current class size goal is to work toward 60 classroom teachers per 1000 students, or roughly 1 teacher for every 17 students. Using the team-based model allows this increase to occur with no additional staff or space needs in the core subject areas. Fifteen classrooms per grade level for grades 6-8 and 12 classrooms for grade 5 provides appropriate spacing for the student population, even when considering possible enrollment growth.

The team-based model for middle school has been shown through research to be a best practice. It accounts for the specific educational and social emotional needs of middle school aged children, helping them grow from elementary students to high school students. It provides the opportunity for common planning time for teachers and maintains a level of flexibility to account for fluctuations in enrollment. A new GMS would need to maintain the current team model that requires 12 - 15 core academic classes per grade level as detailed above.

Proposed

The ideal middle school design will locate students into grade-level academic neighborhoods each containing three teams [for grades 6-8 and into six two-person academic teams for grade 5](#). This will allow for efficient transitions and unstructured time and create a small school feel, while still allowing for connectivity and collaboration across grade levels and content areas. Additionally, these academic neighborhoods will allow for flexibility with regards to how teams utilize their neighborhood spaces. Flexibility and collaboration were an important focus during educational visioning sessions and will be further delineated later in this document.

Additionally, through our visioning sessions, we determined that according to our values, our specials classes (Wellness, Art, Music, Theater, Technology & Engineering) are essential for students. As such, we hope to make these classes visible and placed in a centralized location, yet, still adjacent to team neighborhoods in order to allow for centralized spilling and interdisciplinary learning. The goal is for teachers to be close enough to be a part of teams. Students may need to move to some central locations within the building for specials classes (i.e. music) but priority goals identified herein include integrating as many topics, activities, and disciplines within the grade-level academic neighborhoods as possible.

We are continuing to explore scheduling opportunities to increase student exposure and choice when it comes to specials. For example, during visioning conversations academic department leaders discussed the idea of an elective specials model for 7th and 8th grade students, in which students are able to choose their arts and wellness classes based on interest. This would allow students greater choice and voice in their schedule, and better prepare students for increased choices in high school.

Daily collaborative time will be provided to each grade level team of teachers to allow for lesson coordination, professional development, conferencing on the needs of students, and analysis of performance and curriculum data. Space to accommodate the Galvin's Professional Learning Communities model is critical to the School's success.

Students are heterogeneously grouped to maintain high expectations for performance, as well as to allow for role-modeling and scaffolding between students. Our math program for Grade 7 and Grade 8 do have accelerated levels. Many core classes include students who receive specialized instruction and English Language Learners, who are consistently mainstreamed while being provided with support services. Whenever possible, these support services will be housed within the academic neighborhoods, as well. These classes are often co-taught by two teachers and are considered inclusion.

The 5-8 Model & Grade 5 Experience

[When we expand](#) to a 5-8 grade model at Galvin Middle School, it will provide additional services to grade five students, as well as consolidate special education resources into locations that are specifically designed to meet the needs of students who have required services. Additionally, several areas of the grade five experience will be enhanced by this change. Adding grade five to GMS would add to the grade five students' much-needed "specials" classes such as World Language, Technology and Engineering, Project Lead the Way programming, Art, Music, and other specialties that are part of the Galvin Middle School curriculum offerings. It also allows grade five teachers to collaborate more closely with 6-8 teachers, enhancing the ability of teachers to work on vertical teams to increase student achievement. The 5-8 middle school model would provide a longer grade span of years in the same school, reducing the frequency of transitions for this specific student population, which needs additional support and connectivity with fewer transitions.

The ~~proposed~~ 5-8 model would allow for an easier transition into the middle school model and would allow for a scaffolded approach to increased student independence and agency as they matriculate through middle school. Additionally, this model would provide flexibility in grades five and six. For example, two-teacher teams would be utilized in grade five to minimize transitions and independent movement throughout the building, with students traveling as a static class to specials. In grade six, the five-teacher team model would be introduced for core subjects and specials, while still minimizing interactions outside of the team neighborhood. At each of Canton's elementary schools, the fifth grade students and staff participate in two-teacher teams. This will not change [when](#) we adopt a 5-8 model.

In the ~~proposed~~ 5-8 model, grades 7 and 8 will continue a more traditional middle school model where students transition for all classes and have access to a larger variety of specials courses.

With a 5-8 middle school model, some aspects of the neighborhood elementary schools will change. Grade 4 students become the leaders, and may take on many of the traditional roles and celebrations. The elementary schools would also benefit from more space, while grade five teachers would benefit from more time for collaboration.

3. CLASS SIZE and CERTIFICATION CONSIDERATIONS

Current

Per the Unit A teacher contract with the Canton Educator Association, our current class size goal is to work toward 60 classroom teachers per 1000 students at the secondary level, or roughly 1 teacher for every 17 students. The current building does not have adequate building space for all classes and programs. At the present time, the Galvin Middle School is at capacity and unable to add additional classrooms or programs due to space constraints. Core subject classes currently average approximately 20 students given that within our teaming model, some math classes in the upper grades are differentiated by level and see a wider range of sizes. Specials classes have a wider range of 20-28 students.

Proposed

The proposed space template for grades 5-8 includes the appropriate number of classrooms to support core instruction, which includes 5 classrooms per team in grades 6-8 and 2 classrooms per team in grade 5. This allows us to preserve our middle school team model with each grade level 6-8 having three full teams and a ~~potential~~ grade 5 having (6) 2-person teams and access to a variety of courses. At an eventual enrollment projection of 1,070 students, this would translate into approximately 270 students per grade, and 18-22 students per classroom.

Teacher Certification

Almost one hundred percent of the current 5th and 6th grade teachers have certifications that fall within the following categories, 1-6, 5-12 subject specific, or All Levels. A few of our staff are dual-certified. [When we](#) move forward with a 5-8 model, [we will](#) review teacher certification with potential fifth grade staff. [We have already met with our current fifth grade educators to begin this conversation.](#) Additionally, as the District hires additional staff or replaces staff who leave, we will be intentional about the certifications required to meet [either the 6-8 or the](#) 5-8 model.

4. SCHOOL SCHEDULING METHODS

Current

The school schedule is revisited annually with the Principal and school-based team. Adjustments are made based upon enrollment, student and programming needs, staffing levels, and contractual agreements around educator preparation and professional development. Starting in Fall 2021, the student day runs between approximately 7:45 a.m. to 2:15 p.m. The Galvin Middle School has an academic schedule that has six 52-minute periods and a 26-minute “X Block”, which allows for Response to Intervention, academic support, and participation in certain elective groups. This block is also used for regularly scheduled social-emotional learning (SEL) and Restorative Justice (RJ) programs and lessons developed and implemented by our teaching staff. Based upon the RTI model, students are assigned to teachers from their core team in this period to receive targeted assistance in Math or ELA when they need additional support, extra practice, clarification, or enrichment. All students have a 25-minute lunch, Art, Music (Band/Chorus/Orchestra/Gen. Music), Wellness, Tech and Engineering, and World Language. Students that do not require RTI receive instruction by a variety of teachers that assist and enrich students in academics, social skills, test preparation, goal setting, student and community leadership, or SEL.

The team-based approach with grade level specials block scheduling allows for teachers to have regular common planning time. This allows for cross-curricular planning, student management, parent meetings, and small group, highly specialized professional development.

Proposed

The grade five schedule would be based on a two-teacher team model, allowing for longer blocks of time to dig deeper into combined subject areas, engage in project-based learning and retain that developmentally appropriate feel to the students’ school day. The schedule for specialist programs will be aligned with the middle school specialist schedule to allow grade five students to take advantage of any potential advanced or extended learning opportunities that may be available in grades six through eight. This also allows for a greater sharing of resources. World Languages would be added to the grade five schedule to enhance the District’s proficiency-based language model. World Languages are an essential component of a 21st century education, and integral to Canton’s mission to create culturally proficient, global citizens. As such, our World Language Department Coordinator is currently studying how to introduce learning languages at the elementary level. Our intent is that students grades K-5 will have some level of language instruction prior to the completion of the new Galvin. This means that [when GMS moves to a 5-8 model](#), [students in grade 5](#) will arrive having some level of exposure and learning about world languages. Enhancing and extending World Language opportunities for students within the 5-8 model is vitally

important to create world-ready students who participate in local, national, and international communities, through acquiring proficiency in multiple languages. By starting earlier in grade five and providing more contact hours in grades 6 and 7, all Canton students will have the opportunity to become eligible for earning the Seal of Biliteracy and becoming truly culturally competent, linguistically proficient, world-ready citizens. The schedule must also include the appropriate staff planning and collaboration time within the established school day. Grade five teachers would also work in the team-based model that allows for daily common planning time.

There will be times when teachers who share the same students will be able to adjust the daily schedule to accommodate project-based and multi-disciplinary instruction that requires longer or shorter periods of instruction. Teaming the same students within common neighborhoods allows for scheduling flexibility for staff. Since students are placed on cross curricular teams, there is flexibility within the “on-team” schedule to do project-based and cross-curricular work.

As we develop our vision, we fully recognize that delivering this educational program within our existing schedule and structures is not always ideal. With that in mind, we are continuing to explore alternatives to traditional definitions of school schedules so our schools become idealized places of deeper teaching and learning. We know we must increase time for teacher collaboration and professional development. Likewise, we must find ways to allow more interdisciplinary opportunities and find ways to balance the exposure to core academic and specials curriculum. We also view the community as a tremendous resource for mentoring our students in our project-based approach.

5. SPATIAL, ORGANIZATIONAL, AND FACILITY DEFICIENCIES IMPACT

The Galvin Middle School is burdened with physical and mechanical deficiencies that affect the social, educational, and psychological well-being of its student population. The dedicated GMS staff work steadily to combat the effects of these deficiencies on a daily basis.

Antiquated Program Organization

Organizationally, Galvin Middle School faces a number of challenges. Originally designed to support departmental school organization, the building does not fit the middle school team structure that the Galvin (and most modern middle schools) currently employs. Team or “neighborhood” organization of middle schools creates smaller, more personalized learning environments, which foster interdepartmental collaboration and support social-emotional learning. These teams also provide a sense of belonging for students, helping them to foster an identity that unites them with their peers and makes them feel supported and secure. The

existing building is not designed to support this teaming structure, and does not provide the neighborhood-based support spaces that make this model truly successful.

Substandard Classrooms

The classrooms at the Galvin Middle School are rife with deficiencies. They are, by and large, undersized, overcrowded, acoustically poor, and lacking ventilation and light (almost half of all classrooms have no windows), creating less-than-desirable teaching and learning conditions. Additionally, an overall lack of classrooms limits the number of electives that can be offered. When trying to build a relevant and cohesive educational program, the outstanding Galvin staff is often hamstrung by a lack of adequate STEAM facilities, which do not have the infrastructure or layout to support the technology and instructional activities typical of a modern STEAM program. The school library space is subdivided into three sections with two of the sections functioning as classrooms. The theater arts program is housed entirely within the school's cafetorium and the school's music program lacks adequate storage space and smaller rehearsal spaces. For students and staff, this is their existence for almost eight hours per day. Canton Public Schools wants to do better for their students, staff and families.

Lack of Collaborative Workspaces

Furthermore, as the Galvin Middle School evolves its pedagogy to meet 21st Century Learning criteria, the school has developed STEAM integration, as well as a robust teacher collaboration protocol, and is implementing more project-based, hands-on instruction for deeper learning. The current building layout provides no dedicated spaces for STEAM-integrated work, project-based work, teacher collaboration or student collaboration, which impacts the scheduling of available teaching and meeting spaces.

Lack of Connectivity and Transparency

The solid-wall corridors and presence of interior classrooms with no windows in the school create a disconnection between what is happening inside the classroom and the rest of the school. Not only does the lack of transparency isolate the classrooms, but it makes the hallways feel sterile and institutional, with no vibrancy or connection to the learning happening within the building.

Poor Organizational Layout

The disorienting layout of the [current](#) school makes security and navigation a challenge. The layout of each of the floors is uneven, meaning that multiple stairwells do not grant access to all floors of the building. The minimal and uninviting community spaces send an unwelcoming message to students, parents, staff and community members. Due to a lack of sprinklers in the corridors, there is an overall lack of opportunity to showcase student work, which is a critical component of fostering a sense of school stewardship, community and

identity. Consistent and safe wayfinding, and bright, welcoming spaces are essential to a student’s feeling of safety and security in their school environment.

Inadequate Student Support Spaces

A cornerstone of 21st Century schools is providing students with a support network to help them to be successful. The current Galvin Middle School lacks appropriate spaces for Health Services, Student Services, Special Education and Administration. While Canton has developed strong programs to provide students with the support they need, the lack of dedicated spaces for these programs in the current building has forced these functions to carve out room wherever they can find it which means they are often housed in remote, disconnected parts of the School, lacking accessible, appropriate spaces for meetings, academic support, testing, and counseling.

6. TEACHING METHODOLOGY AND STRUCTURE

The Galvin Middle School is currently organized into grade-level teams. Each team consists of five core subject teachers (Math, Science, Social Studies, ELA, and World Language) with most teams having a dedicated inclusion special educator. This takes our school of approximately 750 students and distributes them into smaller school environments of 80-90 students each. These smaller, more personalized environments facilitate meaningful relationships between students and teachers and ensure that no students fall through the cracks academically or social-emotionally. Each grade level has three teams and our substantially separate programs are all aligned with a grade level team. Full inclusion for all students is Canton’s goal. In the new building, this structure would be retained as it promotes the social and academic well-being of all students, while promoting equity and inclusion. In a 5-8 middle school model, the team structure may be modified to reduce the number of teachers for grade five students in order to be more developmentally appropriate.

Teacher Collaboration

Galvin Middle School has developed a curriculum and instructional approach based heavily on Project-Based Learning. Success within this model relies on robust teacher collaboration in order to implement more project-based, hands-on instruction and to prevent the inadvertent creation of “knowledge silos”. The new Galvin will provide one independent Teacher Collaboration space per team to support this protocol. The collaboration spaces will be utilized by all grade level teachers and support staff. Teachers who are not assigned to a classroom when the school is fully occupied will have an office space within the teacher collaboration room. These spaces will be designed to promote teacher interaction and collaboration with faculty and staff and will include a copier, works surfaces, kitchenette, and other materials and equipment not appropriate to the classroom setting. These spaces

will be essential to supporting activities for curriculum planning, small seminar meetings, informal and spontaneous gatherings, conference areas, and collaborative work areas.

Student Collaboration

Student collaboration and project-based learning are foundational concepts to 21st Century learning. Student collaboration areas would create space for gatherings or for activities that would be limited or not possible in the classroom setting. For example, to increase student engagement and create an experiential learning opportunity, the three grade 8 ELA teachers have students perform the roles from the plays they cover in class. However, all such performances are restricted to the classroom space meaning that students from the other teams cannot watch one another perform. In a student collaboration space, small groups could each take a scene, practice and design their portion of the play and have ample space to perform and watch their classmates perform. Likewise, our Civic Action Project display day is when all eighth grade students present the results of their year-long interdisciplinary project aimed at increasing community engagement around sustainability measures. Parents/guardians and local officials are invited to attend but, again, presentations are restricted to classroom spaces. The open layout of the planned student collaboration spaces would be more conducive to the collaborative creation, as well as display of student work than a typical classroom. Additionally, on a daily basis these spaces could be used for small break-out groups, testing, alternative workspaces, and places where students might work 1:1 with a teacher or service provider.

Curriculum Delivery

The following chart outlines the curriculum delivery that is currently in place in Canton for grades 5-8. This will be followed by more detailed descriptions and proposed changes that would be facilitated by the proposed new middle school.

Grade 5	
Core Curriculum	Specials
Literacy (Reading, Writing & Phonics)	Music (1x/week)
Math	Health (1x/week)
Science	Physical Education (1x/week)
Social Studies	Art (1x/week)
	Library/Technology (1x/week)

Grade 6	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
Writing	Music (band, chorus, orchestra, or general music) (2x full class and 2x band, chorus, orchestra sectionals during X block)
Reading	Physical Education (2x)
Science	Technology & Engineering (2x)
	World Language (Semester French/ Semester Spanish) (2x)

Grade 7	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
English	Music (band, chorus, orchestra, or music) (3x)
Science	Physical Education (2x)
World Language (Spanish or French)	Technology & Engineering (2x)
	Library/Media (1x)
	Introduction to Theater (1x)

Grade 8	
Core Courses (meet 6 times per 7 day cycle)	Specials Courses (meets x days per 7 day cycle)
Math	Art (2x)
Social Studies	Wellness (2x)
English	Music (band, chorus, orchestra, or general music) (3x)
Science	Physical Education (2x)
World Language (Spanish or French)	Technology & Engineering (2x)
	iDesign (1x)
	Theater Arts Exploration (1x)

Through professional development that has already begun and will continue, we are trying to develop a more project-based, interdisciplinary curriculum and program. The proposed vision for the building would enhance this type of learning for our students. All of the following programming as described would support a project-based curriculum.

Design needs for our core classrooms to support our more progressive approach to education include the following resources which facilitate learning across the curriculum:

- Each classroom would include:
 - A storage closet/cabinets for book storage
 - Movable bookshelves
 - Ample space for flexible seating - tables, standing desks, separate desks and chairs (not attached to one another), learning “nooks” (such as window seats)
 - Multiple in-room charging stations to meet the demands of Canton’s 1:1 technology model
 - Adjustable lighting for reading and performance

- Multiple teaching walls with digital display and access to large vertical whiteboards

English Language Arts (ELA)

The Reading and English Language Arts curricula and courses align with the district's vision, mission, and core values, as well as the Massachusetts State Curriculum Frameworks. We work to teach students to use their developing knowledge of the written, viewed, and spoken word to improve as critical thinkers and communicators. Students gain proficiency in identifying and analyzing the textual decisions authors of all genres make that influence voice, tone, and meaning in literary works. They apply these lessons to their own writing and communication as they move through each course. Ultimately, the work fosters an appreciation for literature and exemplary skills in reading, writing, speaking, listening.

Galvin Middle School teachers [in grades 5-8](#) utilize novels, anthologies, periodicals, eBooks, digital materials, and 1:1 technology for instructional purposes. Text genres include novels and short fiction, drama, poetry, oral tradition, and nonfiction. Teachers assess comprehension through tests and quizzes, project-based learning, text-based open response, narrative, and essay writing.

Literacy standards for writing, grammar, and vocabulary are also directly aligned to the Massachusetts Curriculum Frameworks for ELA and Literacy. ELA teachers plan instruction around common themes, providing students with a strong connection between what they are reading, writing, speaking, and listening about in class and the world in which they live. ELA teachers use common resources, aligned to the new state standards, to develop lessons and assessments that support the theme or unit, including: Prentice Hall Literature textbooks, book clubs (determined by teacher and student interest and need), mobile book carts which support reading choice activities, CommonLit and Newsela as selections, vocabulary from classical roots and text-based vocabulary, Warriner's English Grammar and Composition, First Course, and grade-specific texts.

Math

The Galvin Middle School math department is a collaborative team of highly qualified teachers committed to providing every student with a rigorous mathematical experience. Our standards-based curriculum is grounded in the Massachusetts Department of Elementary and Secondary Education Standards for Mathematics. The math department has made a strong commitment to the integration of technology into our instruction as well as high-quality instructional materials designed to challenge and engage students. Reveal Math™, a core math program for grades 5-8, provides a truly active classroom experience through a seamless approach to blended print and digital delivery. With purposefully integrated technology and plentiful opportunities for students to explore, collaborate, and

reflect, Reveal Math increases both student engagement and students' confidence in their own math abilities. Teachers additionally use IXL, a personalized learning experience for all students. With a comprehensive K-12 curriculum, individualized guidance, and real-time analytics, IXL meets the unique needs of each learner.

Teachers follow curriculum maps for the [grade 5](#), grade 6 math, grade 7 Pre-Algebra, grade 7 accelerated Pre-Algebra, grade 8 Intro to Algebra, and grade 8 accelerated Algebra 1 courses for common pacing, alignment, and assessments. Advanced Math is only offered in 7th or 8th grade. Students may be placed into advanced math using a point system, based on results from the IXL diagnostic exam, a placement exam, test grades, MCAS results, and teacher evaluation of student independence. Parents/guardians have the option to opt out if desired. Parents/guardians may also request an override if one's child was not selected for the accelerated math program. Approximately 35% of grade 8 students take accelerated math. There will be an additional opportunity for students to enroll in Advanced Math in 9th grade, even if they were not enrolled in 8th grade.

[On the Galvin Middle School program of studies website, there is a page dedicated to the placement review process which outlines for students and families that though an educator may recommend a student for a particular math level or course, we encourage them to make a decision based on what's right for the student and family. We encourage students to have conversations with their parents/guardians if they disagree with the recommendation for enrollment or opt out of the advanced math program. Ultimately, we believe this is an important decision for students to make with the support of their families.](#)

Teachers and students have access to workbooks and online digital resources. Every math classroom is equipped with a projector, and access to the internet for interactive whole class lessons including the Google classroom suite, and Reveal Math programs. All students have been provided Chromebooks for in class and home use.

No major programmatic changes are proposed for the Math program. Galvin Middle School will continue to add opportunities for project-based and blended learning work to increase student-centered learning and move away from teacher-directed [learning](#).

Social Studies (Civics/World History)

The GMS Social Studies Department uses the Massachusetts' History and Social Science Curriculum Framework as a foundation for our courses. We use a student-centered approach with the goal of helping students become informed, prepared, and proactive citizens. The curriculum emphasizes historical and critical thinking, a focus on developing literacy skills, opportunities for students to make connections to the material they are learning, and exploring different perspectives. The Social Studies Department fosters active,

empathetic and global citizens who respect varying human experiences. By studying the complexities of the past and learning to be reflective and critical thinkers, students will be prepared to participate in a democratic society and influence the future.

- Students will understand the importance of different perspectives in building a strong community.
- Students will understand the relevance of the past and connection to their own individual lives.
- Through strengthening their reading, writing, speaking and listening skills, students will learn to make arguments, discuss and explain conclusions, and use valid reasoning to support their thinking.

Teachers in [5th](#), 6th and 7th grades are currently piloting the new Massachusetts Investigating History curriculum. This curriculum weaves inquiry-based units featuring geography and ancient civilizations throughout a two-year progression. In 8th grade, students study contemporary Civics, culminating in an end-of-year, multidisciplinary Civics project. Primary sources, periodicals, virtual tours, field trips, web-based research, and teacher-created lessons all contribute to the design and implementation of the Social Studies curriculum. Using primary and secondary sources, students engage in critical thinking as well as evidence based writing, continuously improving on their analytical writing skills. In both system- and site-based professional development, teachers share best practice and supplemental resources. Using the middle school team model, the Social Studies department is often integral in the design of interdisciplinary units that connect history to current events, usually with a social justice lens, and provide students the opportunity to process through writing or discussions. Some examples of classroom practices include virtual reality for students to view other places around the world, discussions connecting historical moments with cultural ideas, and collaborative, student-led inquiry to solve problems or create understanding of events and cultures. The goal is to build active and engaged citizens through the English Language Arts and Social Studies curriculum. There are no proposed changes to the current Civics/History program outside of increasing the opportunities for students to engage in project-based learning.

Science

The Galvin Middle School Science, Technology, and Engineering curricula are designed with the notion that active engagement of middle school students with science and engineering practices is critical. Students engage in learning opportunities to experience the dynamic, interdisciplinary nature of science and technology/engineering. Sixth through eighth grade science and technology/engineering courses are structured in a way that instills wonder in

students about the world around them through engaging and exciting learning experiences. This includes thoughtful hands-on activities, laboratories, investigations, and design challenges as students navigate through Earth, Life, Physical, and Technology/Engineering concepts. At the same time, active engagement in learning promotes a “growth mindset” that allows students to feel they can access content and develop skills, and thus succeed in STE.

All units are written to engage students in the current science content and science practices standards. Each grade level uses a variety of digital and printed text resources to support experiential learning. Pairs and small groups of students engage in scientific practices through hands-on activities, collaborative projects, simulations, design challenges, and science inquiry. The use of video clips, online demonstrations, and media-rich presentations, as well as hands on data collection, dominate the student experience. Science can be connected to all other disciplines and programs at the GMS.

All the larger Science (STE) rooms are designated grade level classrooms that would be used in the same manner as the smaller grade 5/6 rooms. The benefit of having 3 Science labs per grade level would allow for all grade 6, 7 and 8 students to have the appropriate space for hands-on Science labs and experiments. In grade five, the grade 5 teachers would use common planning time to outline the Science pacing and plan, ~~allowing classes to “swap spaces” as needed in order for students to use the lab facilities for those Science classes that need a larger space and access to a sink.~~ At grade five, Science ~~happens~~ daily but involves less intense lab activities than grade 6 through 8 where lab space is needed several times per week. As Galvin Middle School expands its implementation of Project Lead the Way, these spaces would also receive higher utilization for these hands-on project-based activities.

~~Each 5th grade classroom will incorporate design features that support the District’s vision and allow for flexibility for curriculum not yet envisioned. Fixed architectural elements will be located around the perimeter maximizing open floor space for individual or group work. All 5th grade classrooms will include two sinks, supporting hands on and inquiry and project-based learning. Storage amenities will be thoughtfully sized to provide the space for the required curriculum material, but not overly zealous reducing floor area of the room. Writing and display surfaces will be strategically located around the perimeter to foster interactions and learning at all scales. The design plan includes two sinks in each of the 5th grade classrooms - both science specific and general education classrooms to support hands-on and project-based learning. The proposed 850 square foot classrooms will provide adequate space to fully support the delivery of the 5th grade science curriculum.~~

The 5th grade science units will be undergoing a curriculum review process in the next two years. That process will allow us to shift our curriculum units so they are more aligned with the new DESE science MCAS assessments. We are looking to provide more

[phenomenon, performance and project based units around the current fifth grade standards which include driving questions such as: How do living things make in our world? “Water” you doing for your community? Sunshine, Earth-shine, Moon-shine, How do you shine? and What does it “matter”?](#) Our 5th grade teachers are also collaborating with the Museum of Science to provide an engineering unit and receive grant funding through the Youth Engineering Solutions to do a unit on engineering plastic filters.

World Languages

The study of world languages provides us with a greater understanding of ourselves, others, our community, and the world. The ability to communicate in another language is an asset for all students. Our proficiency-focused world languages program is guided by the principles of the 2021 Massachusetts World Languages Curriculum Framework, the 2017 NCSSFL-ACTFL Can-Do Statements, and the 2012 ACTFL Proficiency Guidelines. In our world languages courses, students develop cultural competence and communicative proficiency in the interpretive, interpersonal, and presentational modes. Students are provided with comprehensible input and learn strategies to become effective listeners, readers, writers, and speakers. All World Languages courses are taught in the target languages and integrate authentic and adapted cultural resources that are organized around unit themes. Students set personalized language goals and demonstrate their knowledge, skills, and understanding through real-world performance tasks appropriate for the unit and course proficiency targets.

Students are expected to use the target language during class for a variety of functions, such as: making requests, asking for help, giving opinions, and comparing cultural products, perspectives, and/or practices. Communicative tasks focus on using the target language for a specific purpose and in a culturally-appropriate context. Some examples of performance tasks include engaging in conversations to share opinions, conducting oral presentations for an intended audience, reading infographics to make informed decisions, identifying key information from videos and podcasts to convey information, and writing emails to introduce oneself. Student progress toward proficiency is evaluated through real-world language and cultural tasks like those on the proficiency-based ACTFL AAPPL Examination. Student performance is evaluated with rubrics.

World languages classes meet every day for our seventh and eighth grade students and two out of seven days/cycle for our sixth graders. Currently, French and Spanish are offered at the school, but additional languages may be added. World Languages students use the language for daily interactions in class, experience cultures first hand, and are encouraged to use their knowledge of language and cultures beyond the classroom walls. Students are encouraged to become proficient in their home/heritage language and the languages taught and take the AAPPL examination as a way of working toward the MA State Seal of Bilingualism.

All world languages courses have their own ACTFL AAPPL course proficiency targets, which serve as the year-end goals for students. Students regularly self-assess and reflect on their progress toward proficiency to ensure that they are prepared to meet unit and course goals.

Students who study world languages in grades 6-12, explore topics in integrated thematic units; [this model would also be adopted with the addition of grade 5 World Language classes](#). The units differ in complexity, depending on the course and targeted proficiency level.

World languages week is an important activity that takes place each March. Visitors provide cultural programming to classes and to all world languages students. Currently, the library is used for Latin and African dance, African drumming, and other activities. The cafeteria and the gym have been used for cultural assemblies and large-scale events.

World languages teachers teach multiple levels, grades, and languages currently, but may be language, grade and team specific in the new school. Ideally, World languages teachers should form part of the grade level team and be able to have schedules and spaces that allow them to fully participate with ONE grade level team as opposed to multiple grade level teams.

[The Galvin Middle School currently has a staff of six 1.0 FTE world language teachers. World Language classes are part of our core academic curriculum and educational programming. With the expansion of the Galvin to a 5-8 model, we envision World Language teachers each having their own classroom with a full schedule. We also envision adding another 1.0 FTE world language teacher to support grade 5 world language. We also intend for World Language teachers to be incorporated into our grade level groups, and attaching these classrooms to specific grade levels.](#)

Galvin Middle School would like to enhance and extend World Language opportunities for our students by including grade five. Including grade five students in the World Languages program within the 5-8 model would facilitate the development of world-ready students who participate at local, national and international levels. Starting earlier in grade five allows all GMS students to have the opportunity to study a world language. become eligible not only for earning the Seal of Biliteracy but also for truly becoming culturally competent, linguistically proficient, world-ready citizens. The Canton Public Schools is committed to exposing students to world languages earlier and anticipate that this will be achieved in the coming years prior to the opening of a new GMS.

The World Languages Department strives to build curious, compassionate, confident, and autonomous learners who demonstrate a high level of communicative proficiency in at least one language other than English because knowing and using another language builds cultural understanding, empathy, joy, and knowledge about oneself, others, and the world.

The study of world languages at the Galvin Middle School offers students at all levels of proficiency access to rigorous, reflective, responsive, and relevant standards-aligned learning experiences with the necessary support. In world languages classes, students use the target language to:

- communicate with speakers/signers of the target language;
- explore and celebrate the products, practices, and perspectives of multiple cultures;
- compare their own languages and cultures with those of the target communities;
- expand their academic knowledge of other disciplines;
- act to promote equity, global awareness, and multicultural understanding;
- serve, work, and lead in their academic, local, and global communities; and
- become lifelong learners

The World Languages Curriculum Review, which was presented ~~to the Canton~~ to the Canton School Committee on May 11, 2023, highlighted the need for a dedicated language laboratory at GMS that will allow students to practice speaking regularly so that they can build confidence and proficiency in the target language. The space would also be needed to administer quality world languages regular speaking assessments and standardized assessments, such as the AAPPL and STAMP examinations, to prepare students to achieve high levels of language proficiency to qualify heritage language, multi language learners, and district world language learners students for the Massachusetts State Seal of Biliteracy.

[Multilingual learners participate in the World Language Program across grades 6-8, regardless of native language; in incidences where their native language is coincident with World Language course offerings, students have the option to improve their native language skills, or learn a new language. With the addition of World Language in grade 5, multilingual learners would also participate in grade 5 world language classes. Across all grades, participation in the World Language program provides multilingual learners with leadership opportunities in sharing their experiences and supporting others in learning a second language; this in turn could support their acquisition of English Language Skills.](#)

Proposed

Currently, the Galvin Middle School has only three traditional classroom spaces dedicated solely to World Languages instruction. A fourth space has been created within the larger library space, and there are four additional classrooms where World Languages teachers

travel to classrooms with other primary uses. Based on current usage rates, the new school should include 6 classrooms dedicated to use by World Languages teachers based on our middle school teaming philosophy, an enhanced World Languages experience for both grades five and six.

World Language Classrooms Daily Utilization Chart:

309	76.00%	English - 8th, World Language (2)
308	76.00%	Math - 8th, World Language (1), Wellness (1)
310	71.00%	Social Studies - 8th, World Language (1), Wellness (1)
312	76.00%	World Language
313	76.00%	World Language
LIB1	61.00%	World Language
311	78.00%	World Language
208	84.00%	World Language (3), Wellness (3)

Like ELA, math, science, and social studies, world languages classes are core content areas integral to the student experience at the Galvin Middle School. For that reason, students receive world language instruction every day in dedicated and culturally immersive world languages classrooms for the entire school year in grades seven and eight. World languages teachers work with grade level teams and teach the same groups of students that their colleagues in ELA, math, science, and social studies teachers teach. In grade six, we have been able to add World Language as a special, meeting two times in a seven day cycle for every student. Our proposed programming would increase this to daily for grade six students and, [when we](#) move to a 5-8, our fifth grade would receive World Language instruction as a special. This will allow us to continue the experience of our fifth grade students who will, we anticipate, be receiving World Language instruction at the elementary level in the near future.

As such, and according to our interdisciplinary, team-based approach to teaching and learning, the District requests (6) world language classrooms or 2 per grade level along with a dedicated language lab in a ~~5-8~~ middle school model to support our approach of world language as a core academic subject. This dedicated language lab will support programming designed to develop students who receive the Seal of Biliteracy when they graduate from Canton High School.

The design features of the language lab should include the following:

- In a quiet area-used for testing, recording, speaking activities, intercultural field trips, visitors, etc.
- Soundproofing for room
- 30 digital student carrels (glass on front, sound barriers on side)-computers, cameras, Virtuoso software for pairing, recording, groupings, digitizing resources, sending out multiple files to all student stations simultaneously. etc.
- Language lab furniture (comfortable moveable chairs on casters, carrels, etc.)
- White boards. smart board, projector
- Voice amplification system for teachers
- Many outlets throughout for hardwiring lab
- Teacher station on platform overlooking students (teacher should be able to see each student's computer station as they work). Teacher station includes teacher computer, computer camera, printer, doc camera, large desk with storage,
- Separate cabinets for resources and equipment (lab storage)
- Table/work area for pencil sharpener and for other student-facing items like papers, notebooks
- Wall space for student work, posters, etc.

The proposed Galvin Middle School lab design and equipment would mirror the forward-thinking build at Canton High School. The CHS World Languages Lab is one of the most robust technology spaces utilized by large numbers of students on a daily basis to build language proficiency and cultural understanding in the target language. The flexible interface for synchronous and asynchronous learning allows for both personalization and collaboration in the same space. The technology (software and hardware) drives the lab. It is highly efficient and quick, as paired instructional materials – text, audio, video, etc. – are sent to individual students, pairs, and/or students in a matter of seconds. Similarly, audio and video recording and collection of student work are quick and effective because of the hardwired network connection. The Canton High School lab space was built for changes in fast-changing technology, and is monitored and updated regularly as new technology emerges. The GMS language lab will follow this path and utilize the CHS lab as a model. Flexibility will be integral in the design to ensure that as technology evolves, the space can flex to support the advancements.

The proposed Galvin Middle School lab would follow a similar schedule to the World Language Lab at Canton High School. At Canton High School, every World Language teacher rotates through the World Language lab one day per cycle in order to provide immersive language experiences to students using the cutting-edge software available only in the lab.

[The chart below shows usage of the language lab at the high school; at the middle school, each full time teacher would be assigned to the language lab one day per cycle for immersive language practice, with one day open per cycle for proficiency testing.](#)

LANGUAGE LAB SCHEDULE	Drop G Day 1	Drop F Day 2	Drop E Day 3	Drop D Day 4	Drop C Day 5	Drop B DAY 6	Drop A DAY 7
PERIOD 1	A1 block	G1 block	F2 block	E3 block	D4 block	C5 block	B6 block
8:00-8:53 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 2	B1 block	A2 block	G2 block	F3 block	E4 block	D5 block	C6 block
8:57-9:50 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 3	C1 block	B2 block	A3 block	G3 block	F4 block	E5 block	D6 block
9:54-10:47 AM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 3	TEACHER 7	TEACHER 8
PERIOD 4	D1 block	C2 block	B3 block	A4 block	G4 block	F5 block	E6 block
10:51-11:14 AM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
2nd LUNCH 11:18-11:45	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
11:45-12:08	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
12:12-12:35 PM	TEACHER 1	TEACHER 3	TEACHER 3	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 5	E1 block	D2 block	C3 block	B4 block	A5 block	G5 block	F6 block
12:39-1:32 PM	TEACHER 3	TEACHER 2	TEACHER 4	TEACHER 5	TEACHER 6	TEACHER 7	TEACHER 8
PERIOD 6	F1 block	E2 block	D3 block	C4 block	B5 block	A6 block	G6 block
1:36-2:29 PM	TEACHER 1	TEACHER 2	TEACHER 4	TEACHER 2	TEACHER 6	TEACHER 3	TEACHER 8
AFTER SCHOOL	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7

[World Language classrooms would be used to provide primary instruction for world language; these classrooms would also maintain an element of flexibility in case other courses need to be scheduled into them. Just as the World Language Lab is currently used at Canton High School, the GMS World Language Lab would provide a more immersive world language experience, using state of the art software to provide rigorous opportunities for proficiency practice in the target language. Additionally, the lab would provide opportunities for proficiency testing on the ACTFL, in order for students to advance towards the Massachusetts State Seal of Biliteracy.](#)

Academic Support Programming Spaces

Current

There are only two designated academic support spaces for 12 academic support sections. Many teachers use general education classrooms, [the middle section of the library](#), storage spaces, [hallways](#), and other less desirable spaces for small academic support spaces.

Proposed

The proposed spaces would be designed to be an integrated part of the general education teams, and would be accessible by neighborhood. In addition to being used for academic support, these spaces can be used for small group testing, break-out groups for projects, and many other integrated opportunities with general education classes.

Student Guidance and Support Services

Space for guidance will be located in a central part of the building adjacent to the main administrative office for easy access, however, to provide more hands-on and interactive relationships between administration/guidance and the student population, GMS is looking to distribute a portion of the guidance and administrative offices throughout the physical school space. This would be an essential component to create a strong school community within a large space. Students are heterogeneously grouped, except for grades 7 and 8 math, to maintain high expectations for performance, as well as to allow for role-modeling and scaffolding between students. Many core classes include Special Education students and English Language Learners, who are consistently mainstreamed, while being provided with support services. Whenever possible, these support services will be housed within the academic neighborhoods, as well. These classes are often co-taught by two teachers and are considered inclusion.

Multilingual Learners

Multilingual Learners (MLL) are students who are not proficient in speaking English and are developing skills in order to better access the current curriculum. This is done through consultation with teachers, as well as both a push in and pull out model of instruction. Teachers identify possible MLLs based on home language surveys. The WIDA Screener is given to students who speak and understand a language or languages other than English. Qualified students receive comprehensive English language development instruction in all language domains: listening, speaking, reading, and writing. Students at all levels of English proficiency receive instruction that is rooted in researched based methods and uses a variety of resources. Students are given many and varied opportunities to hear, speak, read, and write English.

The goal for all students in our MLL Program is for all students to be scheduled in a manner that will allow them to progress with their peers and eventually test out of the Multilingual Learner Program.

At the high school level, students have to earn a Proficient rating on ELA MCAS in order to earn the Seal of Biliteracy. We choose their programming to support their English instruction in order for them to earn that proficient rating. MEL students have the option to test for the Seal in their home language as early as 9th grade. They have 4 years to repeat the test to demonstrate an Intermediate High or higher rating in the 4 tested domains for the Seal.

Students have the opportunity to demonstrate their proficiency through a portfolio if their home language is not a tested language. The State Seal of Biliteracy is an award provided by state approved districts that recognizes high school graduates who attain high functional and academic levels of proficiency in English and a world language in recognition of having studied and attained proficiency in two or more languages by high school graduation. Our vision is to help students recognize the value of their academic success and see the tangible benefits of being bilingual.

Proposed

In recent years, our population of Multilingual English Language Learners has continued to grow, mirroring trends many districts have experienced throughout the country. The table below illustrates this growth across our district from last year to the start of this year.

Galvin Middle School: Caseload at a "glance"

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS (EL students with disabilities)	SSPs*	total
	4	4	11	19
MLL 2023-2024				
	14	6	9	27

Hansen

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	3	1	2	21
MLL 2023-2024				
	6	1	5	23

JFK

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	7	2	1	28
MLL 2023-2024				
	4	2	4	24

Luce

MLL 2022-2023	Newcomers (1s and 2s)	ELWDS	SSPs	total
	9		4	37
MLL 2023-2024				
	9		11	42

In an effort to remain efficient in our building design yet still plan ahead with current trends, we propose a total of (2) half-sized classroom spaces to accommodate MLL instruction. Much like resource rooms, these spaces would support teachers providing pull out instruction. Likewise, as we continue to push in and support students on-team, we will utilize the small group collaboration spaces within each team for additional support space.

[The need for ML services has grown exponentially in Canton, specifically at the Galvin. We began the year with a 1.0 ML teacher and had to add a second 1.0 ML teacher to meet our student needs. Given the current trends and the addition of fifth grade, we only see the numbers in this population as well as their required services increasing. It is anticipated that we will actually require 3.0 FTE for our ML services. These three teachers will provide both push-in and pull-out services for students. Based on student need, the 3.0 FTE would utilize both spaces throughout the school day.](#)

Design changes needed in a new Galvin Middle School to support and enhance this programming include the following:

- (2) half-sized classrooms; rooms should be adjacent to each other with the ability to open up into one larger classroom to support fluctuating MLL enrollments and needs over the years
- Adjustable lighting,
- Flexible seating to allow for individualized learning and collaboration,
- Technology and space for small groups, 1:1 and station work,
- Easy access to whiteboards in a variety of areas to support instruction,
- Access to the Performance Technology Studio space to allow for presentations, as well as provide opportunities for spoken language in a dramatic and engaging manner for our English Language Learners.

7. TEACHER PLANNING AND COLLABORATION

Through the use of a team-based model, Galvin Middle School is able to provide every teacher in the building at least one non-teaching block per day. Every teacher has a daily prep period, with three periods per 7 day cycle designated for collaborative meetings. Team teachers have designated common planning time (CPT) twice per 7 day cycle. For each seven-day cycle they have one curriculum-based meeting with department colleagues, and two team-based meetings. Specials teachers have two designated common planning meetings per week - both with department colleagues. This model allows for collaborative approaches to learning, as teachers have weekly time to develop and modify instruction, continuous professional development on topics connected to the school improvement plan, as well as designated time to look at students data, discuss at-risk students, and create action plans. Vertical planning occurs twice per month on designated faculty meeting days, as well as on department dedicated half-days throughout the school year. These time periods allow for grades ~~5-8-8~~ (and at times grades 6-12) to create vertical units of study, as well as allow for larger cross-curricular planning. Currently, there are no designated teacher planning spaces at Galvin Middle School. CPT meetings take place in unused classrooms, areas of the library, and anywhere else teachers can find a space.

The grade five schedule would also use a team approach in order to provide daily common planning time. Grade five teachers would develop a similar CPT schedule to the ~~5-8-8~~ model currently in place.

The Galvin is organized into a teaming structure, which provides opportunities for community building among smaller groups of students, collaboration among teachers, and organization of classes to provide differentiated instruction based on student profiles. Ultimately, these teams make a large school feel smaller and increase connection and communication among students and staff. Currently, there are three teams per grade level - “G teams” support multilingual learners, “M teams” support students in our ACCESS program, and “S teams” support students in our Therapeutic Classroom. All teams provide inclusion services to students on IEPs. Currently, the Galvin has only two staff rooms, one of which is located in the office, and one is located next to the library. These workrooms are not nearly large enough to accommodate the 120 staff members which currently work at Galvin Middle School, and are additionally located far away from many teams. At the new Galvin Middle, staff collaboration rooms would be located within grade level teams to facilitate teacher collaboration and communication, as well as provide quiet work spaces on prep periods. These rooms provide a multipurpose space for the following:

- team meetings twice per cycle,
- professional learning community meetings once per cycle
- department meetings once per month
- collaboration space during teacher prep periods, particularly when “home” classrooms are being used
- individual work areas during teacher prep periods, particularly when “home” classrooms are being used
- IEP meeting spaces
- family meeting spaces
- private areas for sensitive or confidential communication with families

There would be a need to create designated planning spaces for teachers in a new Galvin Middle School. Each grade level will be housed in an academic neighborhood, providing opportunities for students and staff to work in a horizontal and vertical interdisciplinary manner that fully integrates Special Education and project-based learning. The teams would also incorporate co-teaching sub-teams, particularly across the Math/Science disciplines and the ELA/Social Studies disciplines. This should include the creation of team collaboration areas within the grade-level academic neighborhoods. Each grade level neighborhood and its included teams should include the full integration of Special Education through the incorporation of SPED classrooms and English Language Learner support services. The goal is to integrate these services into the neighborhoods as much as possible, while remaining mindful of the fact that some of these services (i.e., severe special needs) may require balancing the distance between two grade level neighborhoods. Integrating Special Education services into the neighborhoods will allow the Special Education teachers to become part of a co-teaching solution, and to work collaboratively with the other teachers and teams in the neighborhood.

The teacher collaboration spaces will be utilized at least four out of six periods per day with teacher team and department meetings as well as prep time. The other periods, the room will be available for individual meetings between teachers and students and/or families.

The grade 5 neighborhood should be similar to the grade 6, 7, and 8 neighborhoods, as keeping all academic neighborhoods as flexible and interchangeable as possible will allow for variations and flexibility in future use. However, the grade five neighborhoods should recognize the need for further subdivision into two-teacher teams to reduce transitions.

Additional Professional Development, & Curricular and Personal Development Opportunities

A core value of the Canton Public Schools is to provide high quality learning experiences for all. This includes our adult staff. As such, the district provides opportunities for professional development during and outside the regular school year, including an expansive professional development catalog with virtual and in-person offerings, based on district and school goals, curricular changes, and opportunities related to the maintenance and advancement of licensure and degree status.

Similar to many districts, Canton has early release and full days that are dedicated to teacher professional learning. These learning focuses these days are guided by our Strategic Plan and determined by input from District and school-based administration as well as the District-wide Professional Learning Council that is made up of admin, educators and support staff. This year, some of our areas of focus have been equity, curriculum design and revision, and writing across the curriculum.

In addition to the release time provided, we also provide job embedded professional learning for staff. Sometimes this looks like a consultant or one of our content specialists providing direct instruction for staff who have been released from the classes for a period of time or the day and sometimes it looks like us releasing staff to design curriculum collaboratively during the day. In each of those cases, space in the buildings for this purpose is at a premium so the professional learning space being proposed as part of this educational program will facilitate the adult learning culture we are working to promote.

Examples of additional professional development opportunities provided by the district in the 2023-2024 school year include Restorative Justice training, Reveal math training, Wade Institute for Science Learning courses, Engaging All Students with Differentiated Learning, and Strategies to Enhance Instruction for English Language Learners in the Classroom. Additionally, the District invites staff to submit proposals to do paid curriculum work over the summer and funds multiple teacher-driven endeavors. The district also engages in cyclical program reviews and curricular development and provides opportunities for staff input, review, and professional development as necessary. Staff may also pursue self-initiated professional learning through Novak Education, PBLWorks, IDEAS, Massachusetts Partnership for Youth and Teachers as Scholars, and content-specific programs. Canton Public Schools has also established partnerships with local colleges and universities for staff to earn a Bachelors, Masters, or Doctoral Degree in education and education-related fields at a reduced rate, including programs at Curry College, William

James College, Regis College, and Merrimack College. Furthermore, Canton Public Schools provides course reimbursement for Unit A members of up to \$2,500, per staff member, per year, with an aggregate cap of \$125,000 per year across the district; for Unit E members the district provides \$350 per staff member, per year, with an aggregate cap of \$5,000 per year; these funds are available on a first-come, first serve basis for outside professional development opportunities and graduate credit acquisition. Finally, with the vote to move to a 5-8 building, the District is committed to creating a professional learning community to study best practices for grade reconfiguration and for being a 5-8 middle school, including learning from those already following that model.

Instructional Coaching

The GMS instructional coaching program is designed to provide individual coaching to teachers, including modeling lessons and practicing key features of lessons with teachers. The instructional coach also supports PLC meetings (grade level-department meetings of 4 - 5 adults). Additionally, the instructional coach plans professional development meetings for the whole staff. The goal of the instructional coaching program is to help teachers improve their practice, so that students are more engaged and invested in learning. The instructional coaching program supports all departments and grade levels, including core academics, specials classes, and special education.

The instructional coaching office should feel warm, accessible, and personable. Teachers may stop by for a quick question, snack/coffee break, or a longer meeting. The office should also feel somewhat private - teachers can feel comfortable expressing concerns, problem-solving, and practicing teaching. Additionally, the office should feel quiet (not next to hubs of loud student traffic such as gym, cafeteria, etc.)

Design needs for the Instructional Coaching program include a large office used to hold both individual and small group meetings with educators, and model lessons. The office should be soundproof or sound dampening to increase educator privacy during conversations and include:

- Big external facing windows.
- Adequate space for desk, bookshelf, filing cabinet, comfortable chairs or couch, and larger meeting table.
- Central location in close proximity to teacher meeting and co-working spaces.
- Door can be easily propped open for educators to pop in.
- Separate from administrative and guidance offices.

- Small sink for coffee area.

8. LUNCH PROGRAMS AND DINING

Current

The Galvin Middle School offers three lunch blocks during a typical school day. Currently, all students eat in one large cafeteria with grades 6, 7, and 8 rotating their lunch time every 60 school days. First lunch begins at 11:04 am, second lunch begins at 11:32 am, and third lunch starts at noon, with all lunches over by 12:25 pm. The Galvin Middle School coordinates the overall normal day schedule into six periods. Each day typically includes four academic offerings and two specials offerings. Each day there is a dropped block which means that on some days students will have one fewer core course or one fewer special block. This approach allows one twenty-five-minute period for lunch, including the travel time needed for a student to get to the cafeteria from their classroom or learning space. There is time built into the schedule after each lunch block for students to proceed to their next class. When possible, 3 to 4 tables are selected to eat outside if they wish. The close proximity of the fields allow students to walk, play games, and get fresh air during their lunch period. This short break has increased students' attention and productivity after lunch. Dining staff and Administrative staff associated with supervision are constrained by the cafeteria schedule from 11:04 am to 12:25 pm daily.

[The district confirms that all food incorporated in student breakfasts and lunches conform to food-service and health standards as set forth in 105 CMR 590.000: State Sanitary Code Chapter X - Minimum Sanitation Standards For Food Establishments, as well as comply with the National Child Nutrition Act, National School Lunch Program, and Mass. General Laws c.69 § 1C. All competitive foods and beverages, such as those sold at the school snack bar and in vending machines, comply with nutritional standards and laws, including but not limited to MA law Title XVI, Chapter 111, Section 223.](#)

Proposed

The proposed Galvin Middle School will provide a dining space large enough to accommodate the entire student population [\(grades 5-8\)](#) in two seatings (although, operationally, the District is considering accommodating the student population in two waves – four seatings). This vision is consistent with MSBA guidelines for middle school cafeterias, allows for maximal flexibility and seating capacity in an event setting, and creates more manageable student sizes in the cafeteria at any one moment. In this concept, two grade levels would be in the first wave. While one grade level eats in the cafeteria, the other grade would go to recess. Each grade level would then switch before the second wave with the other two grade levels begins.

Ideally, the seating areas and furnishings of the cafeteria would be consistent with that of academic spaces, allowing the large space to be zoned to support different experiences that differ in their furniture (height, group size, softness/hardness), acoustic properties, and scale. One acoustically separate but visually connected dining space should be carved out of the allotted dining square footage. This space will provide a quieter environment, suitable for smaller groups, students with sensory issues or experiencing recent trauma, or simply students wanting a quieter environment. More and more research suggests that the lunch period can produce high levels of anxiety in many middle school students, so zoning the seating area in this way could help reduce those anxiety levels. All areas, including the acoustically separate space, should be easy to supervise by adults but different enough to provide students a choice for which environment best serves their needs.

With lunch consuming smaller windows of time in the daily schedule, the cafeteria spaces will be available for many other uses, such as peer tutoring sessions, team meetings, small group or grade level assemblies and cultural events. Audio and video conferencing capabilities with movable chairs and tables would allow the School to take full advantage of the square footage usually unused in many schools for long periods of the day. This space could also be capitalized on for many after school activities such as clubs and an area to work in while waiting for the late bus.

Ideally, the dining area would be located next to an adjacent outdoor space for eating during the warmer weather. This would benefit the students by allowing for outdoor time, increasing ventilation, and optimizing the space for other activities while creating more room for eating without increasing the size of the physical building. Easy and safe access to an outdoor play or garden area would benefit students and staff and would be needed to maintain the potential recess time being considered as part of the lunch schedule.

Student-grown foods, supported by both the educational program as well as the community, could be integrated into lesson plans and the school lunch programs. The gardens could be integrated into the desired requirement for outdoor learning and indoor/outdoor connections and could become an integral part of the exterior site design. This immediate source of food production would serve to strengthen the link between healthy fresh food production and consumption in support of the School Wellness Policy. It could also provide an added opportunity for community, business, and neighborhood connections. [In wellness classes, student grown foods could connect to nutrition education topics, identifying the foods that are grown, what nutritional benefits they bring, and how they compare to other popular food choices that students in this age group tend to make. In science classes, a garden could provide opportunities for further standards-aligned project-based learning, including](#)

[the study of: environmental factors which affect plant growth rates, specialized structures which support plant reproduction, and photosynthesis and respiration.](#)

[Student-grown foods could be integrated into lesson plans with guidance from the school nurse and in consideration of student allergies, dietary restrictions, and student health/safety concerns. All food used in the curriculum must meet requirements set forth by the Canton Public Schools Food Allergy Management Policy and Plan, including:](#)

- [reviewing acceptable foods set forth by the Massachusetts Nutrition Evaluation Tool for Schools,](#)
- [identifying students in the classroom with allergies,](#)
- [discussing the allergy and reviewing the allergy with the nurse and reviewing the student's individual health care plan,](#)
- [safeguarding students with food-related issues, before, during, and after this activity,](#)
- [notifying parents/guardians at least 7 days in advance of the intended lesson using the Food in the Curriculum Parent Notification/Approval form,](#)
- [providing parent/guardian access to all food labels,](#)
- [and providing parents/guardians the opportunity to provide an alternative for the child or class.](#)

[In order to ensure the safety of our gardens, we would follow the current practices we use for ensuring safety and security as well as the maintenance of our gardens. Every year, students replenish gardens at the Galvin that have been planted as a result of a project-based learning unit, with plants and flowers that are native to the region. To secure the gardens, we are careful about where the garden is located and use our security cameras to monitor access. Additionally, when students are out working in the garden, they always have adult supervision. Finally, we have staff committed to maintaining the outdoor garden spaces over the summer and during school vacations. Moving forward, we would also like to include a schedule of students who volunteer time during these breaks. We will consider our summer programming for additional help maintaining the garden.](#)

9. TECHNOLOGY PROGRAM & LIBRARY MEDIA

Canton has also established a strong technology program, with the vision of creating a technology-rich teaching and learning environment that encourages collaboration, communication, innovation, and achieves academic and professional proficiency for all students and teachers respectively. All students are provided with District-issued Chromebooks with access to the internet, the TestNav testing app, and G-Suite programs including Google Classroom, Mail, Docs, Slides, and Sheets. Students also have District-provided access to online curricular programs such as Reveal Math, research databases through Ebscohost, and curricular resources such as Newsela, Edulastic, Edpuzzle, and Canva. [For students that do not have internet access at home, we refer students and families to their cable company or the town library for access to internet services, on a need-based](#)

[basis. Our home school interventionists also help families apply for internet access, occasionally accessing Title 1 or McKinney-Vento funding.](#)

Teachers, administrators, and related services providers are also equipped with district-issued laptops with wireless internet access and G-Suite programs. [This year, the](#) Canton school district [has also provided](#) all educational assistants [at the middle school](#) with laptops to support classroom instruction, staff communication, and professional development. All classrooms also have instructional technologies including fixed projectors, speaker systems, and sound systems for multimedia displays. Some classrooms also have printers for teacher use. Teams with students who are hard of hearing also have classroom FM systems to enhance teacher voice projection, based on needs described in student IEPs. The Canton technology program aims to enable students and teachers to use technology to:

- Enhance teaching and learning to meet the learning needs and styles of all students
- Engage in learning anytime, anyplace
- Procure, research, organize and share information
- Think critically and solve problems
- Innovate and create new ideas
- Express themselves effectively and creatively
- Collaborate with other students and teachers anywhere in the world

This program is further supported by the Strategic Plan, which aspires to build a technology ecosystem that is equitable, collaborative, always-on and available everywhere.

[The district will maintain current staffing associated with technology support and repair:](#)

- [1 Director of Technology and Data Analytics oversees all technology across the district](#)
- [1 network administrator provides security, contracting, and networking support across the district](#)
- [1 Instructional Technology Coordinator provides classroom software support at across the district](#)
- [1 IT specialist provides chromebook repair across the district, located at GMS](#)
- [1 IT specialist provides classroom hardware support at GMS](#)

Library & Media

Current

The GMS Library program aligns with the DESE Rubric for Evaluating School Librarians. Grade 7-grade students participate in a research skills course aligned with the MA English Language Arts and Literacy frameworks, as well as the MA Digital Literacy and Computer Science Frameworks. This course introduces students to tools and concepts that will support them in their other academic classes. Topics covered in the research skills class include using the library catalog system, understanding and processing informational texts, database usage, website evaluation, citations, and avoiding plagiarism.

The GMS Library provides equitable access to resources and informational technology for instructional and recreational use. The GMS library currently houses an expansive collection of both fiction and nonfiction print materials, with 8,768 unique titles and 12,248 total books. All students have access to all levels and genres of books. Over the last five years (excluding the remote COVID year), students checked out an average of 3,809 books per year. The library program also provides access to online middle school research resources, including GALE databases for nonfiction research and Noodle Tools research management program supporting critical thinking.

Throughout all three grade levels, students are welcome. However, with the existing space being used to house two classrooms and our library media course, students have been vocal about having added access to books “in the moment”.

The library supports a multitude of academic programs, including:

- The GMS Marathon Monday schoolwide reading initiative. All students across the school participate in 20 minutes of silent, sustained independent reading (SSR) weekly on Mondays. Students check out books of their choice from the library during their ELA classes or during X block. All students have a goal of reading 26 books throughout the school year.
- [5th and 6th](#) grade teachers bring classes to the library for book checkouts and research projects.
- An annual school-wide book fair provides an opportunity for all students to purchase age-appropriate books; this book fair also generates money to supplement the library budget and expand the student library catalog.
- Teachers co-plan and co-teach classes which provide opportunities for cross-grade and cross-team collaboration and public products within Project Based Learning units (e.g. all three English classes meet in the same space).
- Special educators provide small group and individualized instruction to students with

disabilities in the library. Special educators and related service providers also use the library testing office for special education testing, conducting IEP meetings with families, and providing individual instruction to students.

- Math Buddies intervention program meets in the main library space 2 times per week. 100 students across all three grades and teams participate to provide peer tutoring between 8th and 7th grade students, and 7th and 6th grade students. [We also envision adding math buddies peer tutoring for 5th grade students, provided by 6th graders.](#)
- Grade-level team meetings occur in the main library space on a quarterly basis to facilitate the development of school community and positive school culture.
- Student and staff lunch groups meet in the library, providing a quieter alternative community space to the busy cafeteria and crowded teacher workroom.
- Monthly faculty meetings and monthly faculty PD are held in the library; this is currently the only academic space large enough in the school to host approximately 106 educators.
- World languages week activities (dance, drumming, presentations) occur in the library with the movement of flexible furniture to clear space for large groups of students.
- World Languages competency testing.
- MCAS testing for small groups, individual testing, and extended time testing occur in the library.

Due to limited space and schedule constraints in the current GMS, in 2023-2024, five daily sections of World Language classes, two daily sections of Health Classes and one daily section of Research Skills are housed in the library. These classes are sometimes scheduled concurrently in different sections of the library, limiting ELA, team, and cross-curricular access to the library, as well as limiting student access to library checkouts.

The library also supports a several extracurricular and community programs before, during, and after school, including:

- After school clubs such as Newspaper Club and Mural Club occur in the library.
- The library provides a late bus meeting place.
- Student-school committee meetings provide an opportunity for small groups of students to share feedback on school climate and culture with district administration.

- CAPT meetings (parent-school committee) occur in the library.
- Community events occur in the library on afternoons, nights, and weekends.

The Library/Media Center is currently and will continue to be overseen, scheduled, and maintained by a certified Library Media Specialist, holding a professional library license for grades K-12, with a Master's Degree in Library and Information Science. The Library Media Specialist will continue to attend school-based and self-initiated professional development, state conferences, and meet in professional learning communities with other Canton school librarians to align on district library and book policies. The Library Media Specialist also curates collection development, including selecting appropriate, quality, and diverse books in the library and keeping the library current, and provides reader advisory in order to guide book selection for students. As a classroom teacher, the Library Media Specialist also maintains a safe, welcoming space for all for classes, and provides a space for testing, reading, separate teaching, emotionally safe spaces, and provides flexibility and adaptability to support diverse needs. The Library Media Specialist also designs classroom materials and delivering and assessing instruction, and attends associated professional development opportunities. Finally, the Library Media Specialist attends curricular development sessions and collaborates with classroom teachers during the school day and in professional learning community meetings to co-design and ultimately co-teach classes.

Proposed

As part of the visioning process, members of Canton Public Schools toured a number of recently built learning environments to see educational best practices in action. One tour was to the Lester J. Gates Middle School in Scituate, MA where the educational model includes a decentralized library to boost interdisciplinary, project-based learning.

At Gates the “library experience” is no longer a destination but instead a regular part of the day-to-day academic function. Media commons with book stacks and “zones” for presentation skills development are distributed among each team, not centralized as in a conventional library. This layout intentionally provides tools and resources at hand’s reach to teachers and students rather than at a single destination.

During visioning members of Canton Public Schools also toured the recently built Chapman Middle School in Weymouth, MA where teams surround a centralized commons area designed to support project-based learning. At Chapman, these areas also include sinks, storage, drop down electrical receptacles ~~outlets~~, and flexible furniture with durable tops for STEAM-based activities.

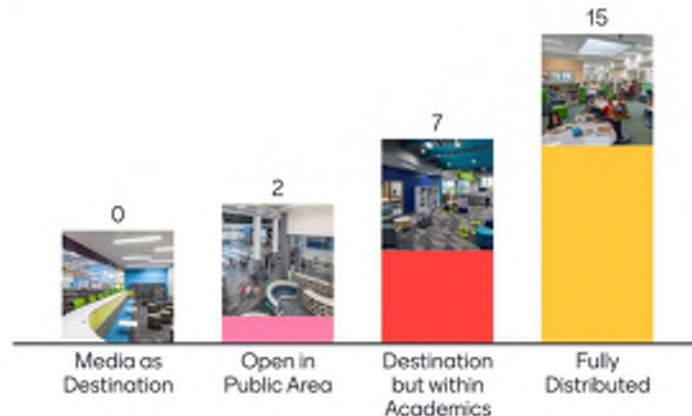
With these precedent learning environments in mind, we continued to explore various academic organizations and contemporary design patterns throughout the visioning process in order to unpack our vision. Specifically, during Visioning Session 4 focused on building

adjacencies and design features we considered the following questions to refine our thinking:

- What program spaces make up a GMS learning community / team pod?
- How might programs like art, media, world language, etc. be embedded within teams to support more experiential spilling or interdisciplinary learning?
- What program spaces might be on the edge/entry of the learning community?
- How can media space(s) and resources best be organized to further support the implementation of deeper learning and project-based experiences?

In Visioning Session 4, we were also shown a spectrum of media experiences from a traditional destination library model to a fully disbursed model like at the Gates MS in Scituate. Participants voted on their top choice, and 63% chose a fully distributed model (as seen in the visioning polling below).

Media Vision



Given the robust usage of our current media program, we look to expand media's reach by [using a hybrid library model to place placing](#) resources and media staff as close to students and teachers as possible, truly making media, literacy, and STEAM the circulation system that brings life to our school, [while also maintaining a centralized library space for diverse](#)

[programming, professional learning, and large school and staff meeting spaces](#). The library should be centrally located and easily accessible from all grade levels within the school. It should act as the school's hub while extending into the neighborhood entrances. For instance, if there are three-story academic neighborhoods, the media center should be positioned on the second floor in such a way that it extends into the surrounding areas. Our proposed vision also includes varied working spaces including collaboration spaces, a multi-use cafeteria space, meeting rooms, teacher collaboration spaces, and direct access to books in the team spaces, which would meet the needs the current GMS library currently fulfills due to a lack of alternative options.

The media experience at a future Galvin Middle School combines the educational models and design features of Gates and Chapman with our own goals of fostering deeper teaching and learning, student voice, adjacency, and interdisciplinary, project-based collaboration. In our vision, ~~-a hybrid media center model would allow some of our library the majority of our allowable media center~~ square footage ~~to will~~ be disbursed into satellite Project-Based Media Commons within each team learning community. This space, within the circulation zone of each learning community, will serve as the connective tissue for each team and among the teams. The space will include movable book stacks, varied breakout/collaboration spaces, a presentation zone, niches and alcoves for one-on-one collaboration, pin-up space, display for works in progress, and design features to support making. The Media and Project Commons would support the full team meetings and multi-class collaborations that currently happen in the library because no other spaces exist.

In addition to the ~~hybrid disbursed~~ media commons in each team area, the District envisions using the remainder of allocated media square footage to create a large [flexible Library Media flex-media](#) space to support a number of different media and academic uses, including but not limited to:

- Small school assemblies
- Multi-grade collaboration (peer/mentor buddy program)
- Math buddies intervention program
- [WorldForeign](#) Language Week
- Book Fair
- Professional [learningdevelopment](#)
- Additional conference space

- Additional space for alternative dining and lunch peer groups for Guidance
- Gallery/display space for exhibitions of learning
- CAPT meetings (parent-school committee)
- After School~~Afterschool~~ clubs

In a way, we have already begun making steps to disbursing our media experience at the existing Galvin Middle School. To support the GMS Marathon Monday schoolwide reading initiative, we have purchased portable book stacks filled with high interest texts and have located them within the hallway of each team area throughout the school. Additionally, classroom teachers have extensive collections of classroom libraries from which students select books in their free time. Our vision is that a hybrid dispersed media experience will further this work already in place so that students are immersed in texts and learning throughout the building and that this model will increase readership even more, while maintaining a central library space with a larger collection of books which could support more expansive research projects, as well as club meetings and a variety of other unique programming throughout the year.

10.PERFORMING ARTS

Music

The current Galvin Middle School Music model includes Band, Chorus, Orchestra, and General Music classes. Students can elect to be in Band, Chorus, or Orchestra (starting in grade 5). All students who do not elect a performing ensemble will be automatically enrolled in general music. Currently, Tthose students in Band, Chorus and Orchestra also take general music.

All classes align with the 2019 Massachusetts Arts Curriculum Frameworks (Create, Perform, Respond, Connect). The four ~~three~~-year program includes music as a vital component of each student's education, while providing an environment for students with various strengths and learning styles.

Through the General Music curriculum, students are given the opportunity to create music and to refine and rework their compositions in collaborative groups. After interpretation and analysis, students then present their work to their peers. Throughout their musical studies, students build a language to respond to musical examples and performances, identifying meaning and intent. Students also connect their musical knowledge to their personal life, historical events, culture, as well as other classes they take throughout the day. Students in 6th grade develop proper technique in xylophone, ukulele, and voice. In 7th grade, students

will continue to use and build their skills on ukuleles and guitars. Students also continue to develop their composition skills and their knowledge of music theory and notation via a variety of assignments using the notation software FlatIO. Students study world music drumming, keyboards, and the Blues. In 8th grade, students will continue to build on the percussion skills that they learned in 7th grade through bucket drumming including keeping time, rhythmic patterns, and drumming tones. They will also experiment with electronic music through composition and musical software using a software program called Soundtrap. Students also continue playing guitar/ukulele, keyboard and drums. Four teachers provide general music education, and classes range in size from 20-30 students.

Performing Ensembles provide another opportunity for students to expand their performing skills through singing and instrument playing with their classmates. Students are introduced to a wide variety of music styles and genres, as well as advanced instruction in music literacy, interpretation, rehearsal techniques, and performance etiquette. GMS provides multiple performance opportunities throughout the year for the members of the band, chorus, and orchestra (strings). Band students play flute, clarinet, bass clarinet, saxophone, oboe, bassoon, trumpet, trombone, euphonium, and tuba, or percussion instruments. Orchestra students play violin, viola, cello, or bass. Chorus members sing in Soprano, Alto, and often tenor/Baritone voice parts. The band and orchestra curricula include instrument specific technique, score reading, audiation, and basic music theory, while the Chorus curriculum includes vocal technique, score reading, audiation, and basic solfege for sight reading. Band, orchestra, and chorus rehearses twice each seven-day cycle. In addition to the full ensemble rehearsal, students attend small group lessons called “sectionals”. There are 3 performing ensemble teachers (band, orchestra, and chorus), and rehearsals by grade level may exceed 50 students. Each of these teachers has their own classroom that is also used as a rehearsal space.

In addition to performing ensembles, students have the opportunity to participate in afterschool activities. GMS ~~offers an acapella group~~~~offers a capella~~ jazz band, ~~wind ensemble~~, and ~~chamber~~ orchestra for students enrolled in daytime performing ensembles. Students in performing ensembles also have the option to participate in after school lessons on site with contracted studio teachers. Appropriate and adequate space for both curricular and extracurricular music programs are a necessity.

Proposed

With the addition of grade 5, students will maintain at least the same amount of music programming, if not more, and have access to higher quality percussion equipment, low string equipment and facilities than is currently available at the elementary level. Given our analysis of the current usage rate of these spaces (chart below), it is likely that adding a 5th grade music program will not require an additional room.

Room	Usage Rate	
220	63.00%	Band/General Music
219	73.00%	Chorus//General Music
221	61.00%	Orchestra//General Music

Design needs for the music program include the following:

- All music rooms should be removed from other parts of the building and have adequate soundproofing.
- All rooms should be large enough to accommodate upwards of 50 students and instruments (band and orchestra) or 80 students on risers (chorus), and ample instrument storage.
- Each room should have extra wide doors for ease of moving equipment.
- Each room should be attached to 3-4 practice rooms with windows for visibility.
- Rooms should have direct access to the auditorium for ease of moving equipment.
- Rooms should be on the first floor with outdoor access for ease of sharing instruments throughout the district.
- Music classrooms should be in close proximity to one another.
- Auditorium, to be used as a shared space with the drama program, for band, orchestra, and choral performances.
- Faucets and sinks to clean the instruments

Drama

Current

The GMS Drama Department follows the Massachusetts Curriculum framework to provide performing arts education in grades 7 and 8. In grade 7, all students take an Introduction to Theatre course, in which students are introduced to acting and the theatre arts. This fast-paced, dynamic class allows students to gain experience in public speaking, creative expression, and collaborative problem solving. Performing subjects include improvisation,

drama games, and scene work. In grade 8, all students take a Theater Arts Exploration course. Students continue to learn Acting and Technical Theatre including exploring play study, scene work, and aspects of Technical Theatre such as Costume Design, Hair & Makeup, Set Construction, Sound & Lighting, and Prop Making. By the end of this course students develop greater self-confidence, empathy, and a strong sense of community with their classmates. The drama program also provides a vital opportunity for the development of students' 21st century skills, including communication, collaboration, creativity, and critical thinking. Students also develop social emotional learning skills through the drama program, including self-awareness and social awareness, through drama games and role playing.

All students are encouraged to audition for the GMS musical, which occurs after school. Auditions are in November and rehearsals run through January and February with the show opening in March. All students who audition are included in the show!

Currently at GMS there is inadequate space for the drama program. Drama classes occur in the cafetorium (a combined cafeteria-auditorium space), and classes may occur during grade-level lunches, separated only by a curtain, causing students in class difficulty to hear instructions, take part in games, and perform. In addition, there is inadequate seating for whole-class instruction, and no projector technology available for teacher use. There is also no teacher workspace in the cafetorium. When our school play is in session, the practice occurs in the cafeteria and on the stage while an after-school program for younger students happens simultaneously in the same space. The final production of the play cannot, at this time, occur at the middle school given the large audience it draws which exceeds fire code.

Proposed

A new or renovated Galvin Middle School would include two separate performance spaces – a performance technology studio and an auditorium – to support the robust performing arts and the level of performance-based, exhibitionary experiences that occur in other core academic and special areas. In a 5-8 middle school model, we are considering expanding our performing arts offering to grade 6 as a way of further scaffolding student exposure to specials and to support the public presentation aspect of the deeper and project based learning experience we are working to provide for students.

The Performance Technology Studio

The Performance Technology Studio would be the home base of the theater arts teacher and would also be a shared space with several other disciplines, including Technology, ELA, History, World Language, and Fine Arts. For example, the Performance Technology Studio would be used by the ELA department to bring plays and other literary texts to life, while also providing small performance spaces for drama, music and other core and unified arts performances. Currently, each grade level uses two or more performance-based texts each

year. Grade 8 studies *A Midsummer Night's Dream*, *The Diary of Anne Frank*, and *Twelve Angry Men* over the course of four weeks. Grade 7 studies *The Monsters are Due on Maple Street* and *A Christmas Carol* over a six-week time period. For both of these units, the Studio could see daily use by three teachers, each teaching four sections. The space could be shared at times or signed out for small class uses such as poetry readings and performance. Additionally, each grade level does a unit on poetry.

The Performance Technology Studio creates utilization potential for up to 6 periods per week for use by teachers from other program areas. Our 1.0 drama teacher currently teaches 24 sections 7th and 8th grade drama over the course of four class periods. The classes currently happen on the stage at the GMS in the cafeteria. When the class meets during the lunch block because of the rotating schedule, the teacher relocates to a different classroom. In the proposed model, this class would extend to grade six, adding two more periods of usage to this space, bringing it to a total of 6 periods out of 7 per day. This space could also allow for use by specials classes, such as Chorus. This space would also be used by the robust Drama program that currently performs one musical each school year.

Design needs for the Performance Technology Studio include:

- Near other performing arts spaces
- Flexible seating for 150-200
- Sound system with sound board, receivers, mics
- Separate tech operator space, accessible from inside space
- Light board with lighting system
- Storage for props etc
- Changing rooms
- Close proximity to restrooms for BOH and FOH
- Dedicated backstage area
- Projector, white board
- Student chairs and chair storage

Auditorium

[The Galvin Middle School currently maintains a cafetorium which is woefully inadequate to support the district's expansive middle school performing arts curriculum. Presently, GMS offers drama courses to grades 7 and 8, and music ensemble to students in grades 5, 6, 7,](#)

and 8; hundreds of students are currently enrolled across these performing arts programs. While drama and large musical ensembles are best suited to practice and performance on the stage, the cafeteria is used for both breakfast and lunch, as well as school assemblies, team and grade level meetings, and other curricular and extracurricular programming. These activities render the cafetorium unusable for drama and music ensemble practice in a shared space, due to the large volume of students and noise level associated with these activities. In many instances, drama classes are displaced to other areas of an already overcrowded building, while multigrade music ensembles are unable to meet due to scheduling conflicts with meals or other large student meetings. This causes disruption to student routines, and also impedes drama class, as regular classrooms are not set up for acting, improv, and movement and theater games. A separate auditorium would allow an intentional and important opportunity for drama classes to meet in a space specifically designed for practice and performance, and provide space for the Galvin's three large musical ensembles (band, choir, and orchestra) to practice together during the school day. This space would also offer expanded opportunities for GMS to offer drama classes in grades 5 and 6.

Historically, the GMS cafetorium is used for an average of 233 nights per year, while the high school auditorium is used for an average of 261 nights per year. More specifically, the GMS cafetorium is currently used afterschool for student clubs, step team, play rehearsal, and talent show rehearsal, all of which compete for space; an auditorium would also allow for expanded after school opportunities for students, including the addition of a musical theater performance, a capella and glee club groups, and additional musical ensembles. Elementary and middle school plays also have an average of 502 attendees per night - this is a far larger audience than any cafetorium option would allow. An auditorium would allow for students to perform at their home school in front of large audiences of parents and community members in an appropriately sized and designed space with ideal lighting, acoustics and seating. The auditorium also doubles as a community resource, providing a beautiful space for town events, meetings, and performances.

A gymatorium is also woefully inadequate for many of the same reasons as stated above. Additionally, with the amount of usage our gymnasiums are far too great to also put our drama course in the same space. We could not have both physical education and drama classes happen simultaneously in the same physical space.

At the third community forum on November 20th, hosted about the GMS building project, of 91 participants, 80 participants voted that Canton Public Schools should invest in an auditorium over other options. The Canton Public School Committee and Building Committee are both fully supportive of a separate auditorium, and unanimously voted at a joint School Committee and Building Committee meeting on December 20, 2023 to move forward with the building of an 800 seat auditorium and stage. This vote included full understanding and recognition that this auditorium would be paid for by the Town of Canton, with an additional associated project cost at a centerpoint of \$16,790,670, and is not eligible for reimbursement by MSBA funding.

The auditorium would be used for the GMS musical performance, as well as a shared space

with the GMS Music program. The auditorium would also provide an alternative space to the high school auditorium for performances and events and a key asset for community use. It will also provide a valuable space for grade-level assemblies with students. In particular, it will allow us to invite guest speakers and presenters who would have access to the presentational tools they would need for impactful messaging and performance.

Design needs for the auditorium include:

- Full stage, curtain
- Adequate wing space for ease of sets
- Light system
- Sound system to support 24 mic channels with receivers and full sound board, wireless mics, mic packs, mic stands, overhead mics
- Fly space above stage for full backdrops, with automated fly bars
- Dedicated changing areas, close to bathrooms backstage and FOH
- Costume storage closet
- Dedicated storage space for stands, risers, chairs
- Large Pit area
- Seating for a minimum of 500
- Tech operating booth at front of house
- Air conditioning
- Projector
- Concession area
- Ticketbooth
- Proximity to exterior entrance
- Moveable concert shells for acoustics
- Large wing space
- Projector, Projector screen
- Vestibule
- Space should be community welcoming, accessible, ramps to stage

- No bar in double doors, large doors for access of sets
- Close proximity to loading dock

11. VISUAL ARTS

Students in grades ~~5-8~~ 6-8 Visual Arts classes create artwork in our hands-on studio art program while engaging in a variety of art-making experiences through drawing, painting, mixed media, ceramics, and sculpture materials. Our curriculum aligns with the Massachusetts Visual Arts standards and nurtures creative thinking, self-expression, and artistic intent as key components for growth in the visual arts. Students find that our art studios are all inclusive learning spaces where every student can find individual success while learning to work collaboratively with their peers. Our vision for the space is one that is warm, welcoming, creative, collaborative, innovative, flexible lighting/furniture for teaching/students, fostering student ownership of the studio spaces - organized with easy access to materials and student storage. Spaces that make student learning in the arts visible and encourage active learning.

Additionally, model inclusion studio classrooms will have adaptive equipment for students with unique learning styles that support accommodations for OT, PT, SEL, and communication needs which will continue to foster and expand our working relationship with our school's ACCESS and Therapeutic programs.

At GMS, as we continue to build our vision for the future of Visual Arts, we envision more opportunities for students to explore expanded forms of art, from 2D and 3D art to digital art and graphic design. As such, we are looking for art rooms to have enough flexibility and robust technology to support multiple art forms. Though we cannot predict what technology will look like 3-5 years from now, we imagine that within a general art space, our students will also be able to use high powered digital devices (i.e. laptops, iPads, etc.) to create more digital and graphic forms of artistic expression.

Design needs for Visual Arts studios include:

Art studio classrooms

- (3) large art studio classrooms with windows, demonstration space/table/area, project tables and stools
 - To support digital/multimedia art, each room should also support the use of digital devices, color printer, scanner, 3D printers, Cricut machines, teacher workstation/desk and projector

- To support high-powered digital devices for students (strong graphic cards, lots of processing power & RAM, HD/2K/4K monitors) with Adobe Creative Cloud software and networked for teacher supervision
- Ample classroom storage for student work and materials, ample counter space, hanging space for student work and instructional visuals, white board.
- 2-3+ sinks with multiple faucets in every studio classroom
- Teacher desk, color printer, and projector in each classroom.
- Easy access to common supply storage area and kiln room.
- Light blocking blinds to help with projection needs during instruction, and ample access to wall outlets for charging and equipment.
- Cubby area to store student belongings.
- Proper ventilation in all spaces to support kiln, electronics, clay dust, and fumes.
- Centralized project work tables
- Storage for equipment/materials,
- Hanging space for student work and instructional visuals, white board, projection screen, green screen, flat-file storage, counter space for materials/equipment.
- Supply storage area with open storage shelves and movable bins for organizing/transporting materials, large flat-file storage drawers, carts for transporting materials, and a prep/work area.
- Kiln Room with a large kiln and open shelves for drying student work.
- Dedicated display spaces/cases/enclosed bulletin boards throughout school to showcase student work.
- Multiple power outlets around the room and in a drop-down format, teacher workstations (for tools that require separation from students for safety purposes, such as paper cutters for example),
- Outdoor access would be optimal, to allow for environmental art as well as opportunities to use the landscape for potential projects,
- Furniture that is flexible by design with art in mind, including high top tables, stools for students, tables that can tilt and recline for drawing,
- Room for a variety of art-specific equipment like light tables and color printers,

- Design of the Art Rooms should have a studio quality, to emphasize the many career areas that incorporate the visual arts,
- Both the Art Rooms and the School should have multiple display areas for student work. The classroom would benefit from shelves or cases to showcase student models and exemplars. Additional spaces in the school should contain cases and bulletin boards to display student's artwork (both 2D and 3D work). Preferably in areas with high student traffic.

12. WELLNESS

Current

The Canton Wellness Department will encourage, educate, and motivate our students to make positive daily decisions and develop healthy lifelong habits.

The Wellness curriculum provides students with the opportunity to develop their physical, mental, and social well being. We provide students with critical learning experiences focused around how to pursue physical well-being, social/emotional learning, mental health, substance use prevention and awareness, human development, stress management, healthy coping skills, nutrition, bullying prevention, advocacy, and transferable life skills. Our program aims to help students develop in 8 unique dimensions of overall wellness in alignment with the SHAPE America National Health and Physical Education Standards. We challenge students to become aware of how their everyday choices impact their overall well-being and the well-being of those around them. Classes are designed to be fun, dynamic, and educational every day. We utilize project-based learning units across all classes, plt4m fitness education, Wayfinder SEL curriculum, and Break Free From Depression. This serves students in their everyday life and choices beyond the walls of class. Project Teammate and Access Health are also connected to Wellness.

Health classes use a project-based learning model and cover several sensitive, but appropriate topics for adolescents in the middle grades. We are hoping for an overall connected space where all things geared toward physical education are in the same area of the building together. We hope to have a fully functional gymnasium that will hold 60-90 or more students at a time to ensure it holds at least 3 physical education classes with storage space and student locker room/restrooms attached. The gymnasium and Wellness spaces are ideally on the first floor with immediate outdoor access for when classes utilize outdoor space. We hope to have a functional fitness and movement education space to facilitate student fitness education in grades [5-8](#). We also hope to have a space for adapted physical education and health to operate in as well that is independent from the other movement or

classroom spaces so that proper equipment and resources can be kept directly in those spaces. Ideally, we would have three classrooms that can be dedicated to health education and that would include the appropriate appliances and set up to support food, cooking and nutrition units. We would greatly benefit from at least 3 health education classrooms to house health education for all students year round in grades 5-8 without the need for any teacher to travel to teach a health class beyond the Wellness classes or area.

Health Room and Physical Education Gymnasium Utilization

The GMS Wellness curriculum consists of both health and physical education. Our wide range of academic and active instruction requires staff to use gym and classroom space, or sometimes a combination of the two based on activities and curriculum.

Currently, students in grades 6-8 Every student at the Galvin takes 2 days of health (a blend of movement- and academic-based activities) and 2 days of physical education in a seven day cycle for the full year, while students in grade 5 take one 45-minute section of physical education and one 45-minute section of health per week. This translates to 12 sections of health and 12 sections of physical education for each grade level (6-8), and an additional 12 sections of health and 12 sections of physical education in grade 5 per week; which this equates to at least two health classes and two physical education classes happening simultaneously. Given our schedule, there are also a few times when three of each course may be occurring at once. When fifth grade is added, at least three spaces for each will be needed to accommodate the additional grade receiving instruction at the same time as grades 6-8.

Proposed

For the proposed Galvin Middle School building, several areas of the facility design are at the forefront of curriculum development and instruction in the Wellness Department:

- The Wellness Department needs physical movement space like a gymnasium or physical fitness space for 3 or more classes of 60-90 students to be in at a time, at least 3 health education classrooms to support health education for all students year round, adapted physical education/movement space, room for equipment, and staff meeting and planning space
- Gymnasium to support 60-90 or more students at once, fitness/physical movement space for fitness education, 3 or more health education classrooms, adapted physical education space, staff office space, equipment storage space, student locker room space
- Open movement space, space for functional fitness education, classroom setting for

health education

- A gymnasium with ample size (at least three - four teaching stations, separated by drop down curtains/dividers) to accommodate large groups of students is essential, and supplements the games and activities in the Physical Education curriculum. The gymnasium should have two full-courts with 9 basketball hoops. A climbing wall and other indoor Project Adventure elements (cargo net, hanging ropes) would also greatly enhance the team-building goals and objectives of the Wellness Department. Three - four teaching stations in the gymnasium will be critical in the 5-8 model for providing Wellness instruction as well as for community usage. The Canton High School athletics uses the middle school gymnasium space as well. Freshman basketball practices daily at the Galvin. In the fall and the spring, when weather requires indoor practices, other sports use the Galvin as well. As noted in the Community Usage section of this document, the current gymnasium at Galvin Middle School is a well-used, valued community asset that many community groups rely upon. Further detail is provided in that section.
- Bleachers for one of the full-court gymnasium spaces to accommodate our intramural and Unified Sports programming. Our students compete in basketball and cheerleading against other schools in the winter. Our teams travel and host teams in our home gym. Additionally, two years ago, we established a Unified Sports basketball team to support our inclusive programming. Our Unified team plays intramurally as well, hosting basketball games that are one of our most well-attended and supported student events.
- Adequate storage space (minimum of two indoor closets and outdoor storage containers) is of high priority. Adequate electrical outlets and a quality sound system in the Gym are two design elements that must also be addressed.
- Additionally, a true Fitness Center -- equipped with age-appropriate cardio and strength training equipment -- should be considered a “must have” in the design of the new building. This fitness center would also serve as an appropriate space for adaptive PE and OT/PT services for Special Education services. The current physical education curriculum includes strength-based units and capitalizes on the use of the PLT4M technology that builds a healthy and life-long love of fitness in students.

Adaptive P.E./Fitness Center

A well equipped fitness center is essential to meet the needs of Galvin's diverse student population. Canton prides itself on its effort to retain the maximum number of students possible within the District, minimizing out of District placements. Part of these school-based programs include occupational and physical therapy and adaptive PE. A fitness center

would provide the appropriate space to meet the needs of students within our various substantially separate programs. Additionally, the fitness center would allow for greater inclusion and participation during general education wellness classes. Middle school is a challenging time for many students and playing games with peers can create anxiety which leads to low or no participation in physical activities. A fitness room that is directly adjacent to the gym would allow the wellness teachers to have individuals or small groups getting exercise in a smaller space during wellness classes. All open blocks would be available for use by Wellness Classes.

13. SPECIAL EDUCATION

Review of the Special Education Rubric and Regulations

Since the previous state review of Canton did not include facilities, the CPS Special Education Department reviewed the rubric for the purposes of this plan. Looking at the four standards for ensuring accessibility, it was found that none of the four standards is being met in full. Currently, there are few designated classroom spaces for inclusion services and substantially separate programs are located in corners of the building. They are close to the main office and nursing office but are not team- or grade-aligned. While the Canton Public Schools provide all necessary equipment for individual student needs, the District is unable to provide non-individualized audio or lighting treatments and must rely on individual FM systems and cloth coverings. For the standard of ensuring equity, the Canton also fails to meet the requirement of Special Education spaces being equal, in physical respects, to general education classrooms.

Most general education classrooms meet basic subject-specific designs; all Science classes are in Science Rooms; STEM Rooms have appropriate equipment. The ACCESS Program room is a prime example of how a space was reallocated without transitioning the space to the appropriate use. The ACCESS room used to be a home economics space, complete with several kitchen stations. Some of the stations were removed, and some left for use by the program, however, the room was not able to be redesigned to best fit the needs of the program. The current building does meet the standard for minimizing stigmatization by not isolating Special Education spaces in one place, and by only serving middle school aged children in the programs at Galvin Middle School.

Current Special Education Program Offerings

Inclusion

The majority of students that receive Special Education services receive them in the inclusion setting. Each grade level has an inclusion program, and they are spread across all nine teams

for maximum integration. Most inclusion students also have a scheduled academic support class that provides assistance in organization, test preparation, skill building and other needs that may be outlined on a student's Individual Education Program (IEP).

Design needs for the inclusion special education program would be:

- A half-size classroom embedded within each team for grade level academic support, including multiple white boards
- Private testing spaces connected to each team, with a window for viewing into the room for supervision, allowing students to focus on testing,
- Office space for itinerant staff members.
- Special education evaluation room

ACCESS Program

Galvin Middle School houses five substantially separate programs. The depth of these programs allows us to retain the majority of all Special Education students within their home school and district, providing them access to their peers and educating them within their community. All of our programs are designed for maximum inclusion, which provides a meaningful educational experience for all of our middle school students. The All Students Can Expand Skill Sets (ACCESS) program provides a highly individualized and modified curriculum for students with Autism spectrum disorders, developmental disability, and/or intellectual impairment. In addition, students in this program exhibit significant impairment in some or all of the following areas:

- verbal communication
- social interaction and pragmatic skills
- comprehension
- behavioral and emotional regulation
- adaptive daily living skills
- ability to acquire new skills

The program utilizes a multi-disciplinary approach to enhance communication, socialization and sensory integration. Visual symbols and augmentative communication are used throughout the classroom to assist students in understanding of classroom activities,

schedules and rules. Emphasis on behavioral based methodologies (i.e. discrete trial, applied behavioral analysis, multi-sensory etc) and the development/strengthening of functional skills are integral components of the program. Low student to teacher ratio maximizes the learning of new skills and reinforces appropriate behaviors. Students are integrated into the general education setting on an individual basis as determined by the team. Students practice activities of daily living, including Cooking, hygiene, access and mobility, and travel training. Students also engage in Engagement in curricular activities in the areas of ELA, math, science, and social studies. Opportunities for inclusion should be beneficial, meaningful, and tolerated by the student. A District behavioral specialist (BCBA), Occupational therapy, Physical therapy, and Speech and Language Pathology consult to the program regularly. These services are grid based according to the students' individual needs and educational plans.

Design needs for the ACCESS special education program would be:

- Flexible classroom space and furniture
- The program supports 8-12 or more students and 3-6 staff- the size of the space is important.
- 2 connected classrooms on the same floor; movable acoustic partition to allow for the rooms to be opened into one large space as appropriate given grouping
 - One room for activities of daily living, including a washer, dryer, sink, refrigerator, stove, and living space
 - One room for academics and groups
- Connected restroom for toileting needs
- Space for students to de-escalate, take breaks and regroup to rejoin the class.
- This program space should be near speech and language and occupational therapy rooms

Therapeutic Classroom

The Therapeutic Classroom (TC) program is a District-wide academic and therapeutic program, addressing the emotional, behavioral and learning needs of students who have an emotional impairment. The TC program provides specialized Instruction by design to target student learning profile, as well as consistent wrap-around therapeutic supports throughout the day. Placement in the TC program is determined by students' IEP goals. Students will have the opportunity to access inclusion classes and the opportunity to learn the same material in a setting with a smaller number of students.

Counseling, guidance, and student services are all connected to support students in this program. The Therapeutic Classroom space should provide a soothing environment to engage in academic growth while supporting emotional needs, a student breakout space, as well as inclusion opportunities with space to process and gain support.

Design needs for the TC special education program would be:

- 2 separate classrooms
- Access to the gym/ opportunities for movement breaks
- Close to single stall bathroom
- Rooms close to each other
- Centrally located between grade level teams

Homebase

Homebase is a general education support to increase student access to the curriculum. It is used as a Tier II and Tier III intervention program. It is designed to aid in the transition back to school from an extended absence. Students entering Homebase receive informal academic support from a general education teacher. The Homebase program also addresses the need for a safe and supportive place when students are experiencing emotional distress. Students may receive short term or in the moment counseling and debriefing as needed.

Design needs for the Homebase program would be:

- Calming space with differentiated seating
- Near a restroom
- Near the nurse
- Close to guidance suite
- Quieter part of the building

Language-Based Program

Language-based learning disability (LBLD) refers to a spectrum of difficulties related to the understanding and use of spoken and written language. LBLD is a common cause of students' academic struggles because weak language skills impede comprehension and communication, which are the basis for most school activity.

Design needs for the Language Based program would be:

- Working space for students access to inclusive environments.
 - Access to typically developing peers
- Ability to work in small break out groups
 - Targeting Phonemic awareness
 - Targeting receptive and expressive language (input and output)
 - Targeted time to work on reading fluency and comprehension
- Multi sensory working spaces
 - Instruction with a kinesthetic approach

Related Services Offerings

Speech

The Speech program is designed to provide social communication support, pragmatic language support, and movement and writing support. The Speech program is a pivotal support for our students with Autism Spectrum needs. These programs support students with other learning needs. Students will engage in small groups to generalize skills across peers. Staff include the speech pathologist and occupational therapist.

Design needs for the Speech program would be:

- A small classroom for small group work to generalize learned skills
- Near or attached to a sensory movement space
- Light and bright
- Access to technology
- A sink to clean up multi sensory activities

Occupational Therapy

Occupational Therapy (OT) program is designed to provide support in the areas of sensory and motor development, manipulation and hand use, visual-perceptual skills, motor

planning and coordination, daily living skills, work skills, organization, and the use of assistive technology and adaptive equipment.

Design needs for the OT program would be:

- A small classroom for small group work to generalize learned skills
- Near or attached to a sensory movement space
- Light and bright
- Access to technology
- A sink to clean up multi sensory activities

Physical Therapy

The Physical Therapy (PT) program is designed to provide support in the areas of motor development, manipulation and hand use, motor planning/ coordination, and implementation and supported use of adaptive equipment. These therapies aid students in movement (gait and balance), flexibility, muscle strengthening, and range of motion.

Design needs for the PT program would be:

- A small classroom for small group work to generalize learned skills (this could be space shared with APE or a Fitness room with breakout space for therapies.)
- Space for storage and maintenance of specialized equipment
- Adjacent to or near space used by Adapted Physical Education or fitness room
- Near or attached to a sensory movement space
- Light and bright
- Access to specialized equipment individualized to students needs
- A sink to clean up multi sensory activities

Adapted Physical Education

Adapted PE provides opportunities for a differentiated physical education experience to address needs with gross motor skills and/or developmental delays.

Counseling/Social Skills Groups

School Psychologists, Adjustment Counselors, Home/School Interventions and Guidance Counselors are responsible for behavioral supports, social skills groups, small group and individualized counseling and consultation with staff and parents. In addition, the School Psychologists conduct psychological testing for evaluations.

Assistive Technology

Assistive technology services directly assist with the selection, acquisition or use of technology devices such as: equipment or product system (software) that can be used to increase, maintain, or improve the functional capabilities of a student with disabilities.

Applied Behavior Analysis Services

Individualized programming for children with Autism Spectrum Disorders using the principles of applied behavior analysis to increase skill acquisition and decrease maladaptive behaviors. Regular review of data and programming, training of staff and regular consultation to classroom and families is provided by a Board Certified Behavior Analyst.

Proposed

There are no proposed programmatic changes for the substantially separate programs at GMS., however each program will, given the recent vote, include our 5th grade students to mirror the services they currently receive at the elementary schools. No programs will be eliminated and no additional programs will be brought back into the District. The increase in numbers of student who require services as part of our specific programs will increase our space needs for special education, ie - two ACCESS classrooms, one for students in grades 5 and 6 and one for students in grades 7 and 8

The ~~5-8 proposed~~ Galvin Middle School would allow for true integration of Special Education services. All inclusion academic support classrooms would be a part of their team pod, appearing as any other classroom in the neighborhood. There would be no signage designating that room for any type of specialized instruction. Galvin would have a half-size special education classroom included within each team to better support the students and allow for greater integration among the overall school design. Small group break out spaces in the team neighborhoods will also support the special education service delivery. Physical inclusion is equally important to inclusion within the classroom. Placement of all Special Education spaces would follow the design of peer and grade integration. Additional related service spaces would also be integrated throughout the building.

Additional Spaces Needed:

- Team Chair Office

- Conference Room for meetings (in addition to guidance and main office conference rooms)
- BCBA office adjacent an ACCESS classroom
- Room with suspension equipment (ability to hang suspension equipment)
- Spaces will be designated for related service providers in the areas of:
 - Speech and Language Pathologists
 - Occupational Therapists
 - Physical Therapists, access to APE space
 - Behavior Specialists, office
 - Adaptive Physical Education
 - School Adjustment Counselors, Counseling suite
 - School Psychologist, etc.
 - Team Chairperson
 - The following related service providers will use small-group spaces within each grade level team as they are shared staff throughout the District:
 - Vision and Hearing Specialists
 - Reading Specialists

The new middle school will include many smaller meeting rooms for individual and small group tutorials, outside therapists, and specialists. These rooms may be used for regular teacher/tutor meetings and for small group testing environments and will be fully immersed within the academic neighborhoods.

14. TECHNOLOGY EDUCATION

The GMS Technology and Engineering curriculum is built with a focus of developing conceptual understanding and real-world problem solving skills through a broad variety of hands-on projects and activities, based on the Project Lead the Way curricula. All GMS students take technology classes 2 days per cycle. Instruction is provided by 2 technology and engineering teachers. Using the Engineering Design Process through a project based learning approach, students engage in relevant and rigorous learning experiences. Technology/engineering grades sixth through eighth students explore, engage and learn

Computer Aided Design, Robotics, Transportation, Manufacturing and Communication Technologies. Teaching and learning experiences include, teacher directed content delivery, thoughtful hands-on activities, phenomena investigations, collaborative group work and projects, and design challenges. Technology and Engineering also allows students to develop 21st century skills, including collaboration, communication, critical thinking, and creativity; therefore tech and engineering can be connected to all programs at GMS.

Beginning in sixth grade with a rigorous Design and Modeling course, Project Lead the Way (PLTW) provides hands-on opportunities for our students to solve real world problems while working through the Engineering Design Process and to learn skills to promote confidence and curiosity. Learning that we can solve problems for others encourages empathy in all we do. With a strong foundation of the design process our students move onto more complex technology systems in seventh grade.

Seventh grade students follow the Energy and the Environment Curricula from PLTW. Students use their logical thinking and problem solving skills to form a deeper understanding of the world around them by exploring communication and transportation systems and technologies. We explore the history and evolution of technology as a way to share ideas, knowledge and materials with others while also focusing on logical problem solving and reasoning. Eighth graders follow the Computer Science for Innovators and Makers curricula from PLTW. By completion of eighth grade, students will demonstrate a fundamental understanding of the Engineering Design Process and necessary skills by participating in our Innovation Summit. Students will explore the world around them and improve or redesign solutions to share with the local community. Students complete 8th grade as competent problem solvers with a sound knowledge of technology, tools and programs and how they relate to and improve their world.

Currently, two technology classes are located on opposite ends of the building. One space is an old carpentry classroom with immobile desks and immobile, non-functioning carpentry equipment. The other classroom has pair desks with unattached chairs, but lacks any storage. In the new GMS, Technology & engineering learning spaces would allow students to create solutions to relevant real world questions and problems through engaging and exciting design challenges. A flexible technology & engineering learning space that would also allow for meaningful collaboration between teachers and students.

Based on this vision and current programming, design needs for the technology and engineering program include:

- Adaptable and flexible classrooms with convenient outdoor access

- Two tech/engineering classrooms close to each other
 - Functional and accessible storage closets for each classroom with space to store student projects mid-work
 - Moveable teacher station/demo table
 - Content delivery space with traditional student desks with unattached chairs
 - Multiple projection options
 - Student inquiry space with large flexible tables or islands
 - Convenient access to electrical outlets, preferably in floor
- 3D printing lab (3D printmaking is part of the PLTW curriculum)
- Convenient outdoor access
- Teacher refrigerator, cooktop, & oven
- Outdoor water feature for water wheel and similar testing

If When grade five is brought into the middle school, we would look to add a fourth PLTW unit designed specifically for these students which would replace their current 5th grade instructional technology/media block.

15. CLUBS

GMS afterschool clubs are an afterschool extracurricular program that is run by staff members. Clubs provide a fun and engaging afterschool community where students can explore activities that interest them and create relationships with peers and staff. This provides an opportunity for students to stay after school to extend their school day. Clubs are currently offered during 3 sessions per school year (fall, winter and spring). Some clubs are 5 weeks, some are 10 weeks or for the entire school year. With the addition of grade 5, these enriching club experiences would also be extended to even more students. GMS clubs include many common teaching and learning experiences. Students stay after school and engage with staff members and peers to extend their school day. In the 2022 - 2023 school year we had over 300 students join at least one club. This year, our fall club session has 290 students registered to participate in 33 different club offerings. If needed students are supported by additional staff to meet their individual needs. Clubs utilize previously existing spaces and systems, including:

- At least 20 different classrooms support a variety of clubs

- Numerous gym spaces provide space for sports clubs (basketball, soccer, pickleball, volleyball, etc.)
- A separate auditorium provides space for performing arts clubs (theater, acting, singing, etc.)
- Numerous outdoor spaces provide space for outdoor sports clubs (soccer, flag football, wiffle ball, golf, etc.)
- Open collaborative spaces support STEAM activities (robotics, lego, art, rocket etc.)

After school buses transport students home.

16. STUDENT SUPPORT SERVICES & ADMINISTRATION

Health Office

Health Services supports student health and academic achievement. Space includes two full-time registered nurses in the Health Office. Mandated Health Screenings are conducted for all students in the Health Office annually. GMS nurses have up to 100 nurse visits a day, students are seen on an as needed basis for illness or injury as well as scheduled visits for medication administration and medical treatments. Health Office should be located close to the Guidance Office as the nurses work closely with the guidance counselors through student referrals

Nursing promotes wellness and health for students. Goals include reducing the time students spend in the Health Office and increasing classroom learning time, completing mandated screenings and health education. Other programs connected to this program are the Guidance Department, The Wellness Department, and Food Services. The vision is a welcoming, warm, comfortable environment with an emphasis on privacy and confidentiality. Students should feel safe and comfortable in the health office environment. Additionally, the health office should provide adequate space to isolate ill and contagious students from well students with ventilation. The nurse's space should be visible from the doorway entry. The health office should also include confidential accessible space for medical meetings. Design needs for the health office would include:

- Two desk/work spaces are needed for each nurse where they are able to view each other for collaboration
- A waiting room for students waiting for nurse assessment
- Two private exam/treatment rooms

- Separate space is needed for 4 beds for injured/ill students
- Private closed space to conduct scoliosis screenings, parent or staff meetings, student emotional support, etc. This can also be used for diabetic treatments. This space would need dividers for privacy
- 2 handicapped accessible restrooms with sinks
- Space for med lock boxes/medical records/medical equipment storage
- Built-in supply closets
- Ventilation and windows

Counseling Department

The Counseling Department consists of seven counselors, three adjustment, three school counselors, a home-to-school interventionist (a certified adjustment counselor) as well as an annual counseling intern from a local graduate program. The counseling department supports our students through the critical middle school years when they are developing their identity and exploring social circles. Counselors play a critical role in supporting faculty in understanding student needs and how they impact students' abilities to be successful. Counselors partner with families to help them manage issues inside and outside of school so that a true partnership forms between school and home. Seven counselors see a wide population of students on a daily basis

Families frequently come in and meet with counselors and teachers to collaborate on student issues. Counselors work collaboratively to provide wraparound services to our most vulnerable youth

Counselors need to provide additional space for students to process emotions and work through issues that are troubling them. Students often come down in pairs when they need to talk about something difficult or troubling. The Counseling office should feel like a welcoming, warm, comfortable environment with an emphasis on privacy and confidentiality.

Design needs for the Counseling Office include:

- 7 counseling offices in the same office suite so that counselors can work collaboratively on student cases, with a waiting open space for students to come and wait for their counselor with an administrative assistant at the front.
- Two confidential, accessible meeting rooms, allowing multiple groups and meetings

simultaneously, specifically during before and after school hours, as well as during X block

- 2 extra offices for the director and interns
- A copier/storage room
- Private bathrooms for students who are crying or escalated, in order to process and deescalate before they go back to class
- A sensory room will provide space for meditation, calming, and de-escalation
- Small kitchen
- Counseling suite should be in proximity to students but also near the main office staff; the guidance suite should not be a direct part of administration, so that students feel safe and comfortable and discipline issues are not overlapping with counseling; ideally, the ideal design solution would include an internal connection between guidance and administration so students in crisis can move from guidance/counseling to the front door or administration in privacy

Administration

The GMS administration is responsible for ensuring safety and operational consistency. The administrative team plans and delivers professional learning sessions for the faculty in order to foster a culture of innovation and dynamic learning. The team needs to be able to host meetings with various stakeholders in the school community on a regular basis in order to make decisions that advance the work of the school as a whole. The administration includes the academic and operational leadership team in the building. Principal, Assistant Principal, Dean of Students, Team Chair, Instructional Coach, and three administrative assistants. The main office of the building should be separate (but not necessarily detached) from the guidance and support offices in the building. Ideally, they would be adjacent to one another with a connecting feature. The main office should enable efficient and secure check-in of guests. Administrative office space should be designed to foster important conversations while ensuring a degree of privacy related to sensitive topics. The main office should include a large, bright reception area so that visitors and invited guests feel welcome.

Design needs for the administrative offices include:

- Each administrator needs a dedicated office space, not necessarily in the same suite
- A large multi-use conference space
- Administrative offices should be adjacent to guidance and support services

offices

17. TRANSPORTATION POLICY

Canton Public School students in grades 5-8 who live more than 2 miles from school are provided bus transportation to their school at no cost. Students who live within 2 miles pay a fee for bus transportation. The number of students needing bus transportation will be determined each summer and could add to some additional bus traffic at the school.

Presently there are 20 buses, five mini-busses, and 25 passenger vans that transport approximately 1,000 regular and Special Education students daily for the Canton Public Schools. At the present time 107 grade five students get transported daily by the Canton Public Schools. We would anticipate this number increasing because students would no longer be attending their neighborhood school and may be traveling further in town to attend the middle school. Students are transported to their respective schools in three tiers, with middle school students picked up and dropped off first, high school students picked up and dropped off second, and elementary students transported to their schools last.

There is an expected increase in cost to moving grade five students to a new middle school because of the geographic location of the school. Mitigation for any increased traffic by buses or cars will be provided at a new Galvin Middle School with improved roadways, clearer signage, improved lighting, and better sight lines for vehicles and pedestrians. There are currently separated bus and car drop off and pick up areas at GMS. To maintain safety and relieve congestion a new Galvin Middle School should also have separate bus and parent/guardian pick up areas.

New or existing walking paths, sidewalks, and crosswalks will be built or upgraded. They will be well lit, clearly marked, and will provide students, staff, and community members safe passage into and out of the building. All transportation and access improvements will be ADA compliant.

Strategically placed bike racks will provide more opportunities for students and staff to use an alternative method of travel to school.

Parking at the new school will be adequate to serve the needs of the school during the day and will also be sufficient to serve the Canton community for town-wide events during out-of-school time.

Additionally, the Town of Canton and the Canton Public Schools will ensure that the Galvin Middle School is designed to ensure:

- Safe access for bus traffic that does not interfere with drop off and pick up traffic
- Safe and controlled access for deliveries
- Recess and recreation areas that are protected from traffic

18. FUNCTIONAL AND SPATIAL RELATIONSHIPS AND KEY ADJACENCIES

Current

Organizationally, Galvin Middle School faces a number of challenges. Originally designed to support departmental school organization, the building does not fit the middle school team structure that Galvin (and most modern middle schools) currently employs. Team or “neighborhood” organization of middle schools creates smaller, more personalized learning environments, which foster interdepartmental collaboration and support social-emotional learning. These teams also help provide a sense of belonging for students, helping them to foster an identity that unites them with their peers and makes them feel supported and secure. The existing building is not designed to support this teaming structure, and does not provide the neighborhood-based support spaces that make this model truly successful.

Furthermore, as the Galvin Middle School evolves its pedagogy to meet up-to-date learning criteria, the School has developed STEAM integration, as well as a robust teacher collaboration model, and is implementing more project-based, hands-on instruction. The current building layout provides no dedicated spaces for STEAM-integrated work, project-based work, teacher collaboration or student collaboration.

Building navigation and location of publicly accessible spaces are also problematic. A network of dark, circuitous internal corridors makes wayfinding in the existing Galvin Middle School difficult. Spaces that are often the destination of outside visitors and parents – such as the gymnasium and medical suite – are located far from the main entrance and create a security issue when visitors need to access these locations. Navigation and layout deficiencies also impact student support services. These services often end up being housed in smaller spaces that are unsuitable, and end up being tucked away in whatever spaces can be carved out for them in an already crowded building.

It is not only the corridors that are dark: The original building was constructed in 1972, at a time when it was considered acceptable to design classrooms without direct access to natural light and ventilation. We now know that student performance is negatively impacted

by the lack of fresh air and sunlight, yet many of the internal spaces in the existing building – classrooms, included – lack this access.

Proposed

The educational visioning sessions provided much insight into the aspects of the proposed educational environment and its ability to support the desired educational program. Many of those concepts are captured in the above-defined requirements for specific program areas. However, there are also overall functional, spatial, and adjacency requirements not mentioned above that are documented below.

During Visioning Session 4, participants reviewed a list of design considerations and space needs identified by stakeholders throughout the visioning process. Using a prioritization strategy called “making the cut”, table groups placed items above or below the “cut line” based on whether or not they thought the item should become a guiding design principle or design feature for a future GMS. Items placed above the line made the cut, and those below the line, did not.

The following guiding design principles and design features are listed in priority order, with those items placed above the cut line receiving one point.

- True teaming via community pods centered around a collaborative space
- Architectural elements to support a calming environment (quiet spaces to compress; softened sightlines in transition spaces; no sharp corners)
- Alternative cafeteria spaces; smaller dining spaces
- Spaces for displaying student work in creative ways
- Breakout spaces in and out of classrooms
- Flexible classrooms spaces that can combine and separate; collapsible walls
- Use of outdoors for more than just learning (eating / breaks)
- Independent workstations outside of classrooms
- Centralized open spaces for gathering with working spaces adjacent
- Culturally-responsive building
- Small group spaces near or attached to classrooms for small breakout

- Teacher planning space
- Accessible building during off times
- Performance space for large and small groups
- Ample gym space to support clubs and interests
- Students entering MS have more defined sensory options
- Multimodal learning stations within classrooms
- PE dedicated outdoor space

The overall functional and spatial layout of the building is built upon the following key concepts and is rooted in our overarching project goals:

- Creation of team learning communities to provide smaller learning environments that will better support personalized learning as well as social, emotional and academic student support.
- Creation of a variety of flexible, adaptable learning spaces within team communities and throughout the building that can be utilized to support teacher collaboration, student collaboration, and hands-on, project-based learning.
- Specials centralized yet adjacent to grade level learning communities to support collaboration and interdisciplinary opportunities among specials and core academic classes
- Media as connective tissue among each learning community
- Visible learning beyond display cases
- Maximize access to natural light and ventilation and create ample opportunities to access outdoor learning spaces.

Team Learning Communities

With the research showing an overwhelming benefit to having more personalized learning environments for students – particularly in the middle school years, the strategy many districts find themselves employing is balancing the operational need to maintain “fewer and newer” buildings by consolidating populations into one location with the educational/social

need to create smaller, more personal learning environments that can cater to individual students' needs.

The foundational organizational unit of Galvin Middle School is the Grade Level Team. While GMS has employed a team structure for some time now, the physical layout of the current building does not support it. The proposed Middle School will provide each team with its own academic learning community. Each of these neighborhoods will serve as the “home base” for their team, providing a more personalized learning and social environment within the context of the larger school.

Each learning community will consist of the following:

- (4) learning studios to support core subjects with a visual presence on the learning commons
- ~~(1) Science lab/room and associated prep space per team ~~(grades 6-8 only)~~ ~~Grade 5 science will happen in the learning studio and the PBL media commons.~~~~
- Special Education-related rooms as required by District programs
- (3) Small group rooms with a visual connection to the learning commons for student collaboration, teacher collaboration, interventions, and testing
- Collaboration space, including PBL Media Commons
- Teacher collaboration and planning space to serve as home base for faculty, specialists, and paraprofessionals
- Bathrooms
- Direct access to an outdoor learning area
- When possible, paired classrooms in each learning community have opportunities to open up to one another via acoustic and magnetic writable movable partitions (specific design to be further explored in later design phases).

Centralized but adjacent to team/grade level learning communities will be the following:

- Instructional and office spaces for professionals delivering support services
- Specials rooms and their associated support spaces – Art, STEAM, etc.

Within each team, classes are assigned neither a teacher nor subject – and educators can choose what space they want to use on a given day. One room per team should have a dedicated kitchen area to support cooking as project-based, interactive learning. For example, a world language class may use the room so students can learn to cook in their native language and health wellness courses can implement food and nutrition units of study.

The three learning communities within each grade level will be organized through a stacked vertical separation. This organization allows for teams within the same grade level to collaborate vertically, and it allows for teams across grade levels to collaborate as well. Though in this model there is not a specific delineation between a lower (5-6) and upper (7-8) school, the district has directed the design team to look for design strategies that will create more synergy among grades 5-6 and 7-8.

Creation of a Variety of Flexible Learning Spaces

A key component of the team neighborhoods is the inclusion of a variety of spaces that support the pedagogical goals of the school. One example provided during visioning was the potential for collaboration between Social Studies, Science, and ELA departments during the 8th grade capstone Civics project. In this months-long inquiry project, students investigate an environmental or social justice issue of their choice and its impacts on both a community level and national or global level. Students then research possible solutions and develop pitches to change community behavior. Ultimately, students create multimedia presentations in small groups which are presented to parents, community, and local government stakeholders during a grade-wide public convention. Open flexible learning spaces could provide a place where the departments could work together to create, practice, and deliver presentations.

The move towards a more project-based instructional style is dependent upon the provision of spaces that support collaborative group work both for students and teachers. The proposed Galvin Middle School will provide a variety of these types of spaces. Academic learning communities will be home to several breakout spaces and design features allowing for learning and collaboration to happen beyond the four walls of the classroom. These spaces and features include the following:

- Small Group Rooms -3 per grade level team for individuals or groups of 2-4 students that may want to spill directly from the classroom or from the larger collaboration space.
- Project-based Learning (PBL) Media Commons - one large collaboration space per team learning community; the district and design team envision these as dynamic, multi-use spaces that serve as environments for breakout, small and large group

instruction, team assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Book stacks and other media and STEAM resources (i.e. sinks and low-tech equipment) related to making and project-based learning would also be located here.

- The use of transparency and adjacency will ensure that these spaces are open, welcoming, well-supervised, and acoustically controlled; movable partitions between classrooms and between classrooms and the large PBL media commons will be explored further in the design process but preference will be made to varying the size and transparency of openings to allow some rooms within each learning community to be more extroverted than others.

In our educational vision, flexibility doesn't end within core academic spaces and the small learning communities. Rather, shared spaces (i.e., gym, cafeteria, auditorium, and performance technology studio) should also be flexible enough to accommodate the needs of the educational program and the community before, during, and after the school day ends. For example, the cafeteria should be flexible enough to serve as a place to eat but also as a place for collaborative, project-based work or professional development. Project-based media commons should be flexible enough to accommodate individual or group study and research and be a place where students can exhibit work and their work for parents and community to see. Since performance-based assessments will be an integral part of our teaching and learning model, any proposed design should allow for the community to interact with students as they demonstrate their command of subject matter and skills through project-based learning exhibitions.

Connection to Outdoor Learning Spaces

The benefits of learning outdoors have been well documented: students perform better academically, have better health, decreased stress, and decreased behavioral issues, to name a few. Connecting curriculum and instruction to outdoor spaces enriches education by providing expanded opportunities to engage students in hands-on, real-world learning.

In addition to taking advantage of on-site outdoor learning spaces, the current Galvin Middle School is situated directly adjacent to a number of athletic fields and surrounding woodland—a town resource which offers a variety of other outdoor learning opportunities, walking paths, and a single outdoor classroom space.

Team Neighborhoods should have direct access to outdoor learning spaces, which will provide additional project space, social space, classrooms, performance space, study areas, recreational space, and other support areas for the educational environment.

Other outdoor learning connections to be incorporated include student dining, Visual Arts, Music and Wellness.

Additional Considerations

Within the public zone, design alternative should support the following:

- Administrative suite immediately adjacent to the main entry of the facility with direct visual access to the building approach and the main entry
- Guidance above administration but connected with an internal stair to support privacy of students in crisis
- Some distribution of administration offices may be desired. This distribution of resources is believed to have some potential benefits in controlling security and discipline.
- Auditorium and performing arts spaces located near the front entry to put programs on display

Within the private zone, design alternative should support the following:

- Each grade level organized into clearly marked but not entirely isolated teams; design should separate students by grade level but still allow for some level of connectivity and collaboration
- When possible, specials classes should be centralized for easy access to grade levels yet still located at the entry to grade level teams to allow interdisciplinary opportunities and collaboration
- Special education distributed throughout all grade level teams to maximize inclusive practices, allow for effective delivery of support services, and reduce travel times for students
- Spatial relationships to support flexibility, student choice, and project-based learning

19.ACCESS AND SECURITY

The security design of the new Galvin Middle School will build upon the current safety and security design of the other buildings across the District. Cameras will be placed throughout the inside and outside of the building and will be tied into the central camera recording

system and software for the District. All exterior doors will be electrified, along with specified interior doors and tied into the district-wide access control system currently in use in other buildings. The security equipment that will be put into place will be designed to be non-intrusive to student learning, while also creating a safe environment that can be secured and monitored both from a central command center and inside the school itself. This equipment will include:

- **Access Control System**

All exterior doors and a select number of interior doors will be electrified, and will be controlled by the same access control system used throughout the District. Staff members will receive identification key cards that will provide access to their building. Specific access schedules will be assigned to staff members based on their job type and access needs. The doors will also be connected to multiple panic buttons in the school and police station, in case of emergency and need for remote lockdown.

- **Security Camera System**

Security cameras will be installed around the entire outdoor perimeter of the school building as well as in entryways, hallways, stairwells, and other select high-traffic interior areas of the school. The School will work with school administrators, school resource officers and the Facilities Department to identify and select the areas in need of security camera installation. Access to the cameras will be given to a select group of administrators and installed on select computers in the School Dependent. All cameras will be tied into Canton's district camera system, in which a minimum of 30 days of recording will be stored. Access to the camera system will also be available in the Facilities Command Center, as well as the dispatch command center in the Canton Police Department.

- **Intrusion Detection System**

The School will also include an intrusion alarm system that includes motion detection, window and door contacts. Multiple alarm zones will be set up around the building with keypad panels. Access to security codes will be given to specific employees dependent upon job function and access needs. When an alarm is triggered, a notification will be sent to the Canton Police Department, as well as to members of Facility Director and school administrators.

- **School Emergency Notification System**

The School will install an emergency notification system that will interface with the VOIP phone system, PA system and school computers, which will allow for

system and software for the District. All exterior doors will be electrified, along with specified interior doors and tied into the district-wide access control system currently in use in other buildings. The security equipment that will be put into place will be designed to be non-intrusive to student learning, while also creating a safe environment that can be secured and monitored both from a central command center and inside the school itself. This equipment will include:

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Kids' Camp is a longstanding tradition in Canton, involving over a thousand Canton children and young adults and hundreds of families. The weeklong outdoor camp, which generally runs in the first week of July and is open to every Canton resident, is free of charge. There are a number of adult supervisors and coordinators, but it is largely student-led by counselors who work with different camper age groups. Every section of the Galvin field space is used, including the large hill in the front as a water slide, affectionately named Splash Mountain.

Canton Youth Soccer uses the Galvin fields throughout the fall and spring, for practices and games. In Fall 2023, there are 480 participants on the travel team and 455 involved on the in-town teams, for a total of 935 participants. Last year, the total was 885. Last spring, Canton Youth Soccer had 834 participants.

Additionally, the Fine Arts and Athletic Departments use the Galvin for several different community events (concerts, rehearsals, practices, games, meets, etc.) for grades elementary through middle school.

The various youth leagues identified in the list above rely heavily on the Gym and outdoor space at the Galvin. Without being able to utilize a Gym the size Galvin currently has, and the number of fields currently offered, the sports programming for youth in Canton will be negatively impacted. Space is already a scarce commodity in Canton, between the various Town and community organizations that are seeking safe places to provide programming to residents and students. More space for these programs is needed, not less.

The first two organizations on this list -- the Recreation Department and the Health Department -- are especially strong partners and collaborators of Canton Public Schools. They work with CPS to bring programming, resources, and opportunities to our students as well as to the broader community.

The Recreation Department works with Cole-Harrington to offer after school programming for elementary school students, half-day enrichment programs on early dismissal days, and intramural sport options. CPS also offers a number of middle school interscholastic athletic programs including cross-country, cheerleading, and basketball so this partnership is key in providing students opportunities and exposure to athletics. We are looking to expand offerings middle school athletic offerings in the spring as well. The Recreation Department also offers basketball clinics and volleyball clinics, bringing together the coaches at the Canton High school with Galvin Middle School students interested in those programs. Additionally, the Recreation Department runs Community Service groups targeting middle school students and requires space at Galvin after school to do this.

The Recreation Department uses the Galvin site for most of their summer camps and programs that run from the end of June until mid- August. There are between 250-300 students weekly, grades K-8th grade, involved in these summer programs at the Galvin site. Without all these spaces, the offering of the Recreation Department to the town's youth would be impacted.

The Canton After School Program currently conducts programs for elementary students at the middle school. After school options for middle school students exist through our menu of staff-supervised extracurricular clubs and teams. Recently, discussions have begun to create a middle school academic support program after school at the Galvin. The afterschool program will need to be extended to the new building. The program would be able to use the existing spaces in the new building and any storage needs could be emotional regulation programming to the youth at Galvin (for example: yoga, fitness programming, meditation). Ideally having more breakout spaces with more flexible seating or a Wellness Center would help after school programming achieve its community-wide goals.

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B Facilities Assessment Subcommittee

Presentation DRAFT

The following slides shall be presented to the MSBA's Facilities Assessment Subcommittee in March of 2024.

C
CANTON

Galvin Middle School
Facilities Assessment
Subcommittee
Preferred Schematic Report
March 13, 2024

Agenda:

- Site Analysis
- Educational Vision
- Architectural Response to Educational Vision
- Preferred Schematic Option 9e

Option 9E

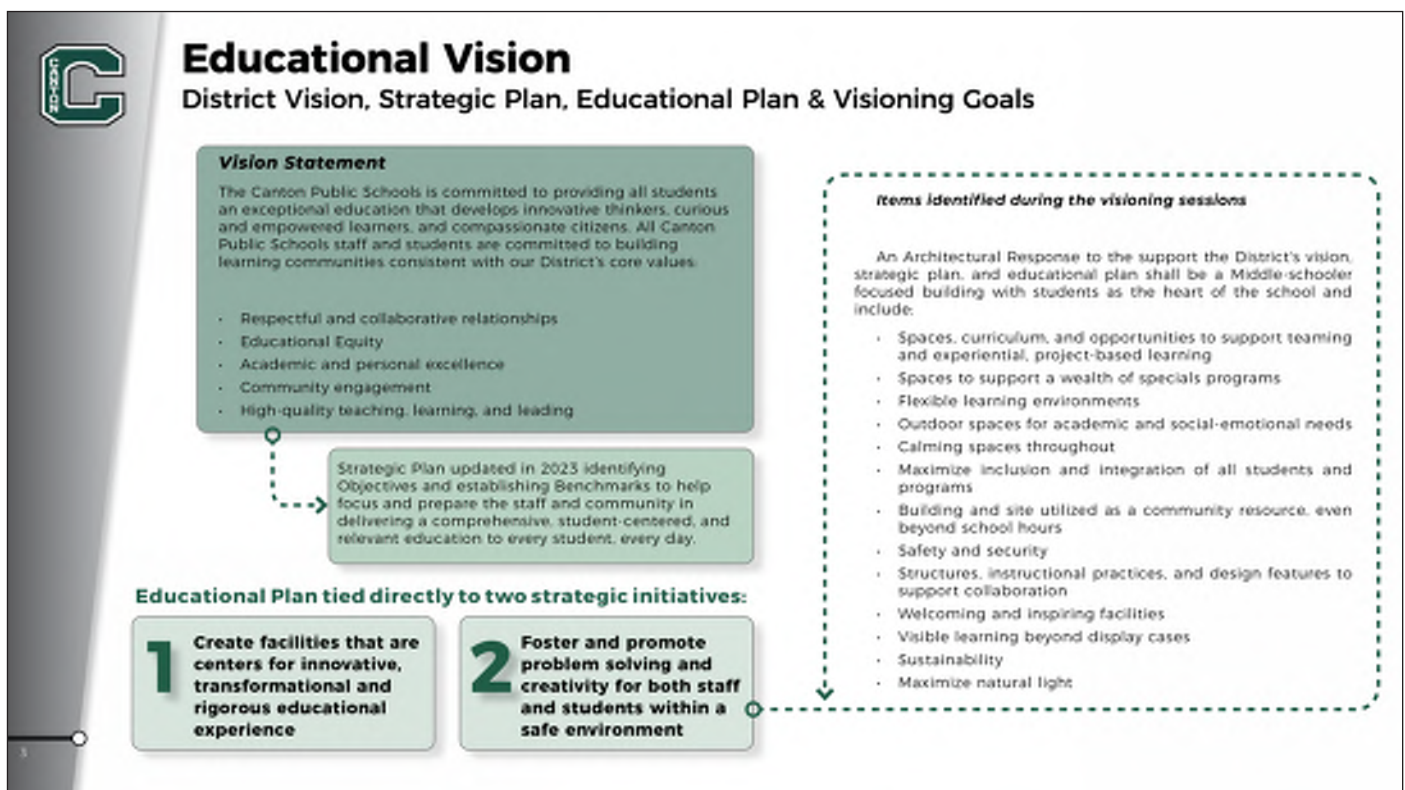
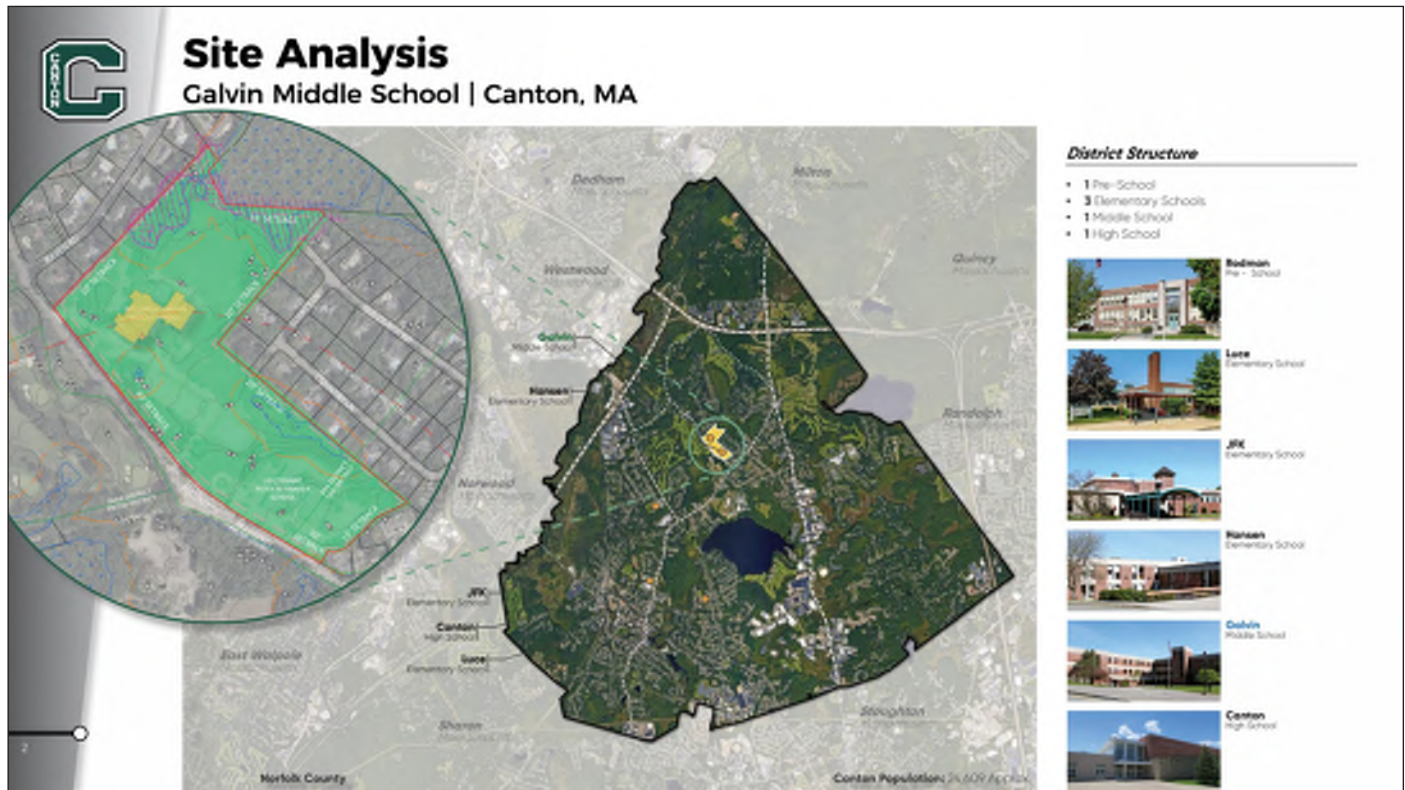
Demolition: 131,903 sf
New Construction: 218,350 sf
Total Project Size:
218,350 sf

Canton Public Schools // LeftField Project Management // Ai3 Architects, LLC


LeftField
THE RIGHT PARTNER FOR PROJECT MANAGEMENT

i3

APPENDIX B



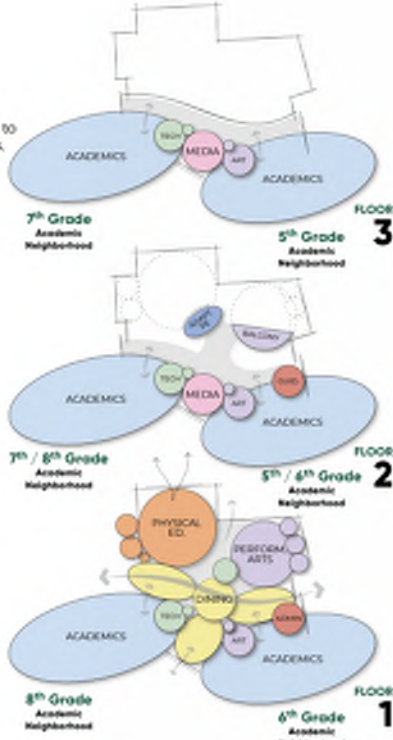
APPENDIX B



Educational Vision

Architectural Response

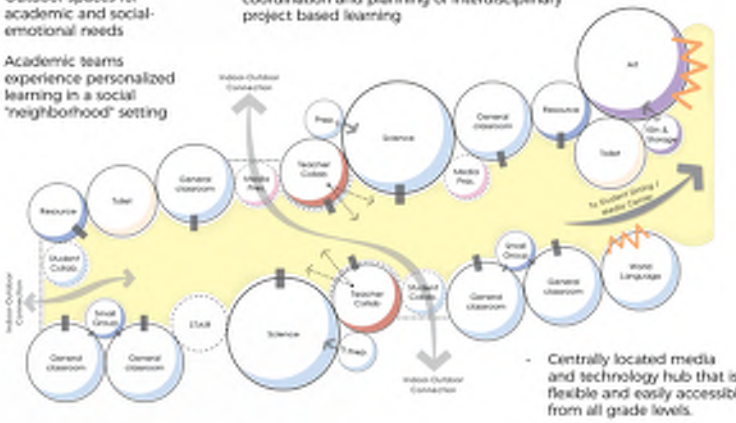
- Clear program layout with natural light in corridors and transparency into program spaces
- Outdoor spaces for academic and social-emotional needs
- Academic teams experience personalized learning in a social "neighborhood" setting
- Welcoming and flexible common spaces adjacent to classrooms to promote collaboration and group discussion
- Teacher collaboration spaces to support the coordination and planning of interdisciplinary project based learning
- State-of-the-art STE rooms to support hands-on activities, collaborative projects, simulations, and design challenges
- Centrally located media and technology hub that is flexible and easily accessible from all grade levels.
- Flexible general academic classrooms to support co-teaching for inclusion
- Specialized instruction and English Language Learners services integrated within the academic neighborhood
- Small group rooms for project team collaboration, student led work, peer mentoring, and personalized student support




FLOOR 3
7th Grade Academic Neighborhood | 5th Grade Academic Neighborhood

FLOOR 2
7th / 8th Grade Academic Neighborhood | 5th / 6th Grade Academic Neighborhood

FLOOR 1
8th Grade Academic Neighborhood | 6th Grade Academic Neighborhood

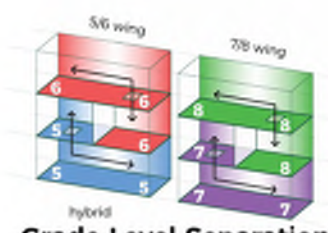




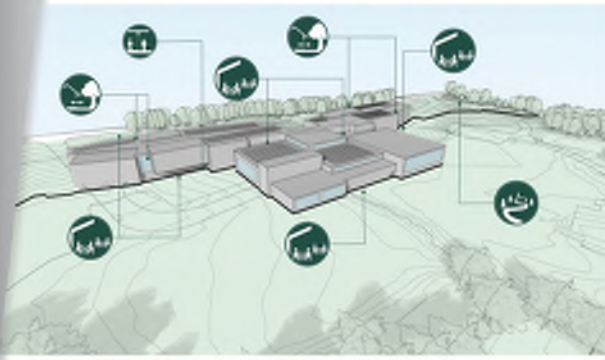
Educational Vision

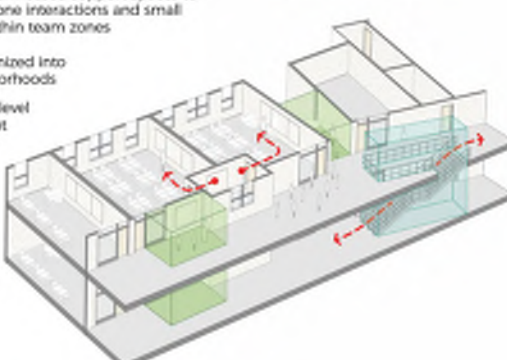
Architectural Response

- 800 seat auditorium to provide large instructional space and support the vibrant performing arts program
- Music spaces that support teaching and ensemble work
- Administration, guidance, and nurse are centrally located and provide campus oversight
- Integrated special education spaces within general learning areas
- Art and Technology/engineering spaces are adaptable, flexible, and directly adjacent to academic wings to support STEAM curriculum connections
- Strong indoor / outdoor connections through direct access, transparency, natural daylight and views
- State-of-the-art STE rooms to support hands-on activities, collaborative projects, simulations, and design challenges
- Neighborhood team-based support spaces to allow for one-on-one interactions and small group services within team zones
- Grade-levels organized into academic neighborhoods
- Controlled grade-level separation without creating isolation



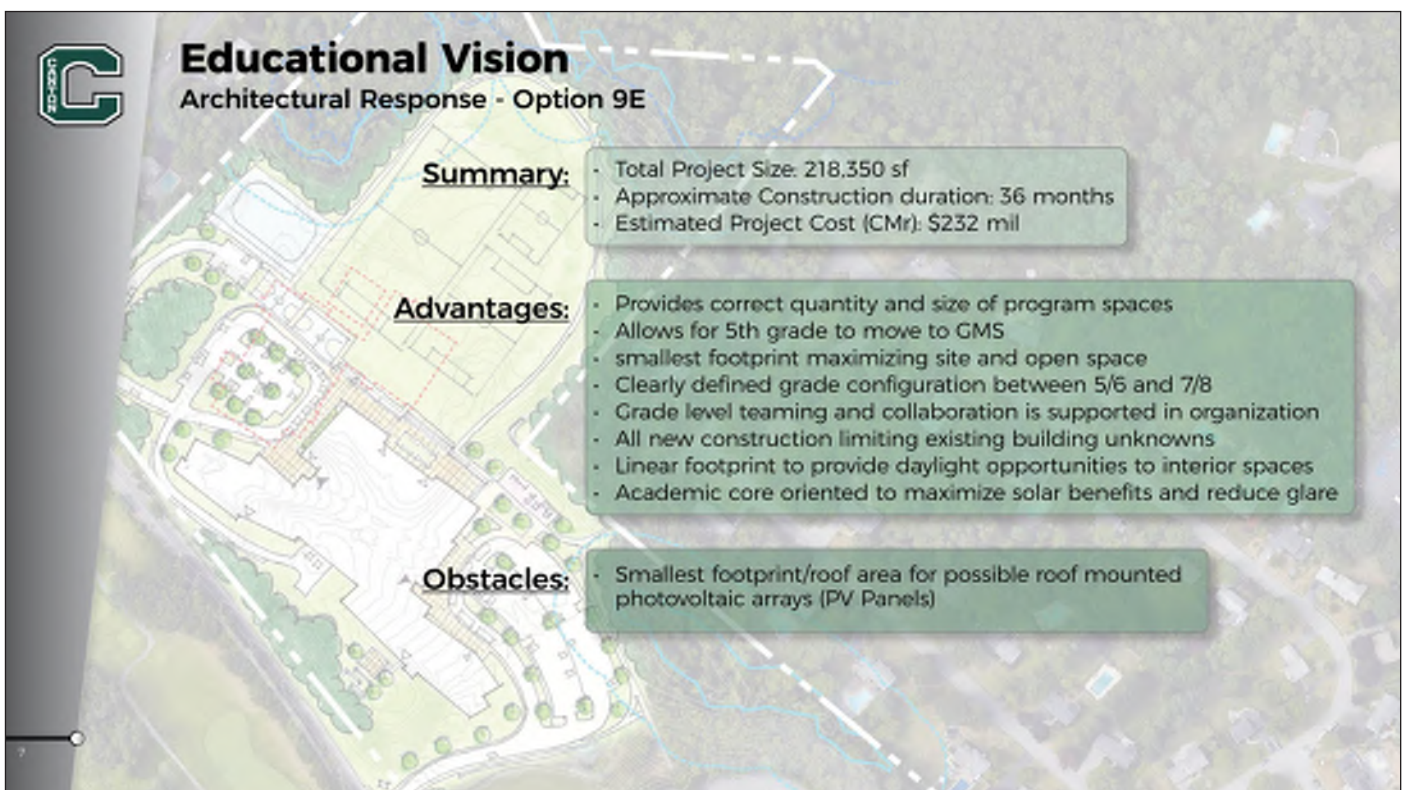
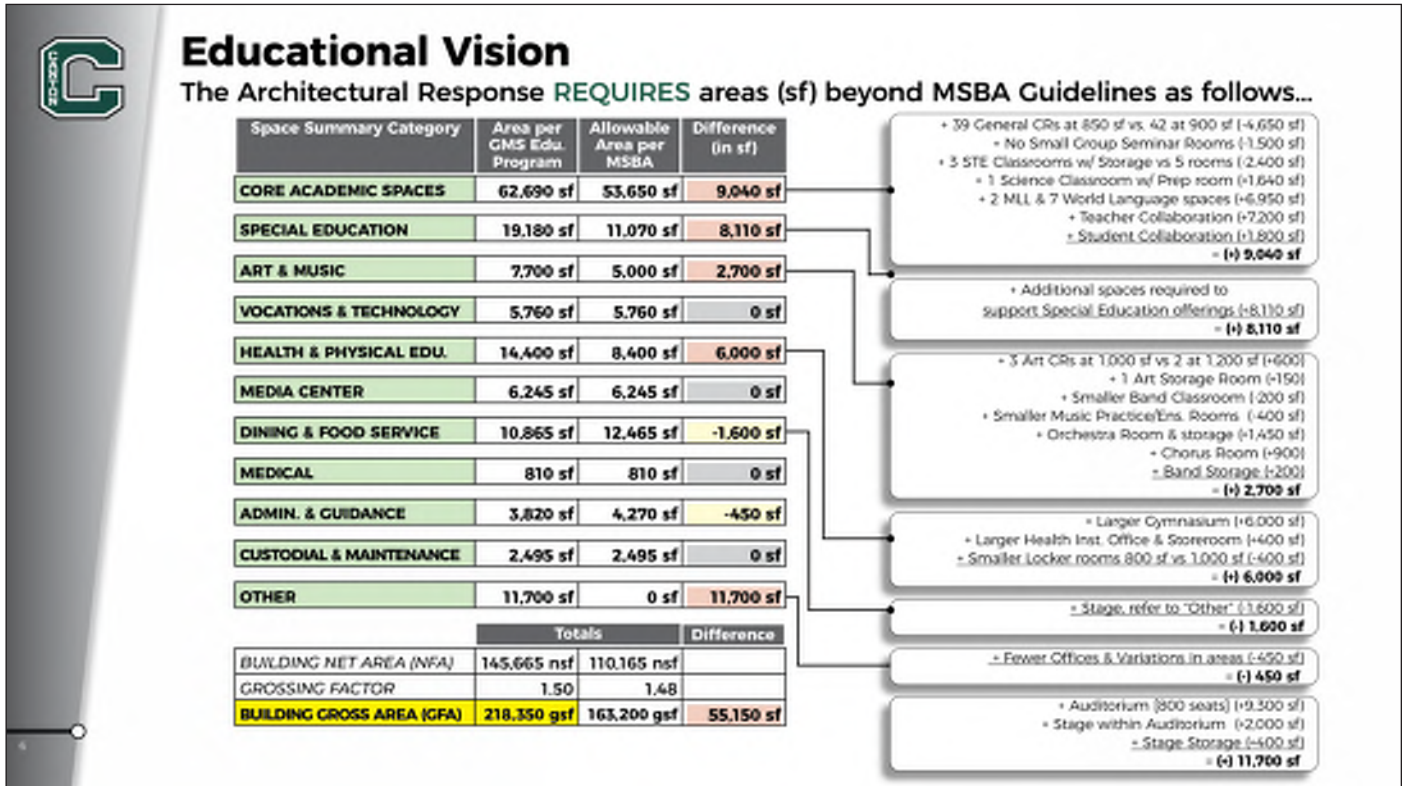
Grade Level Separation



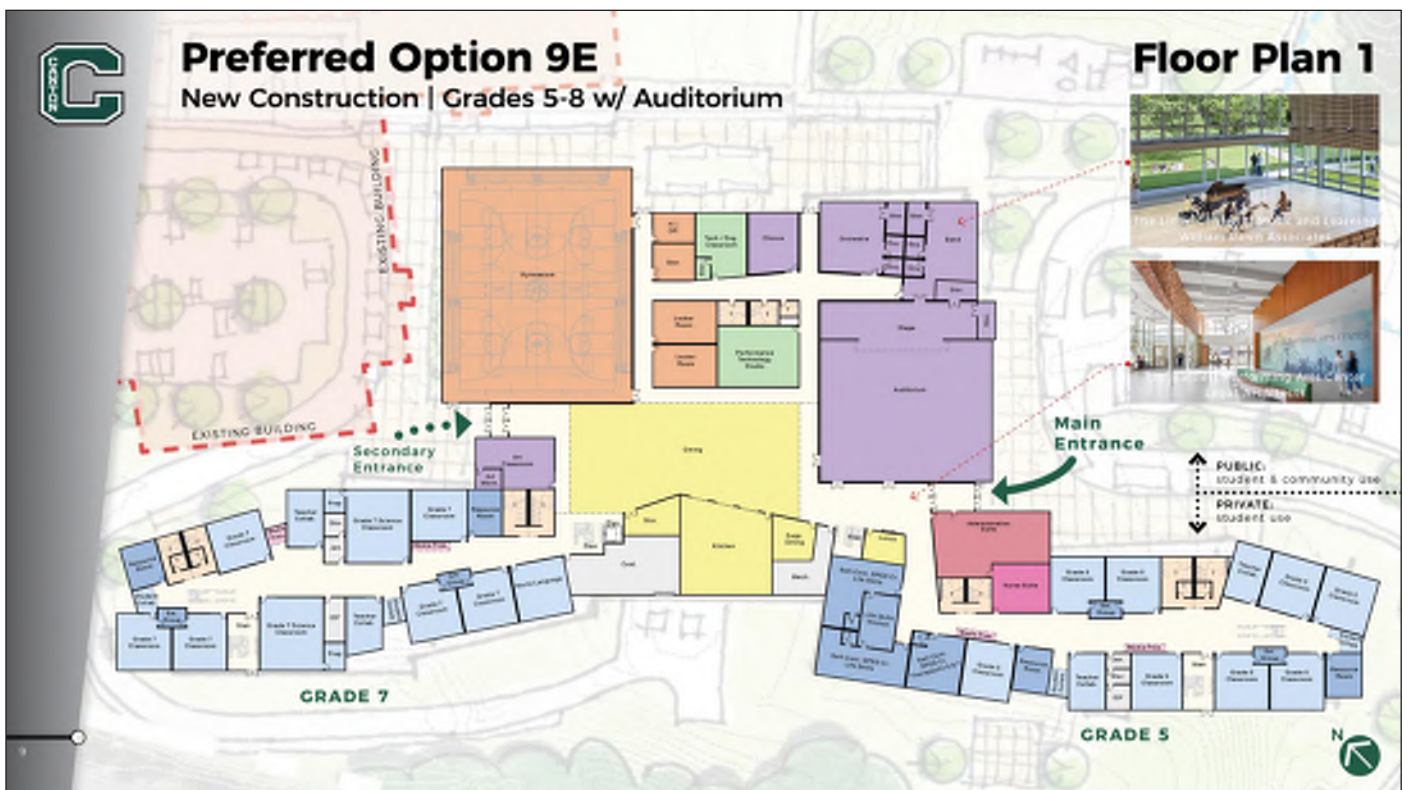
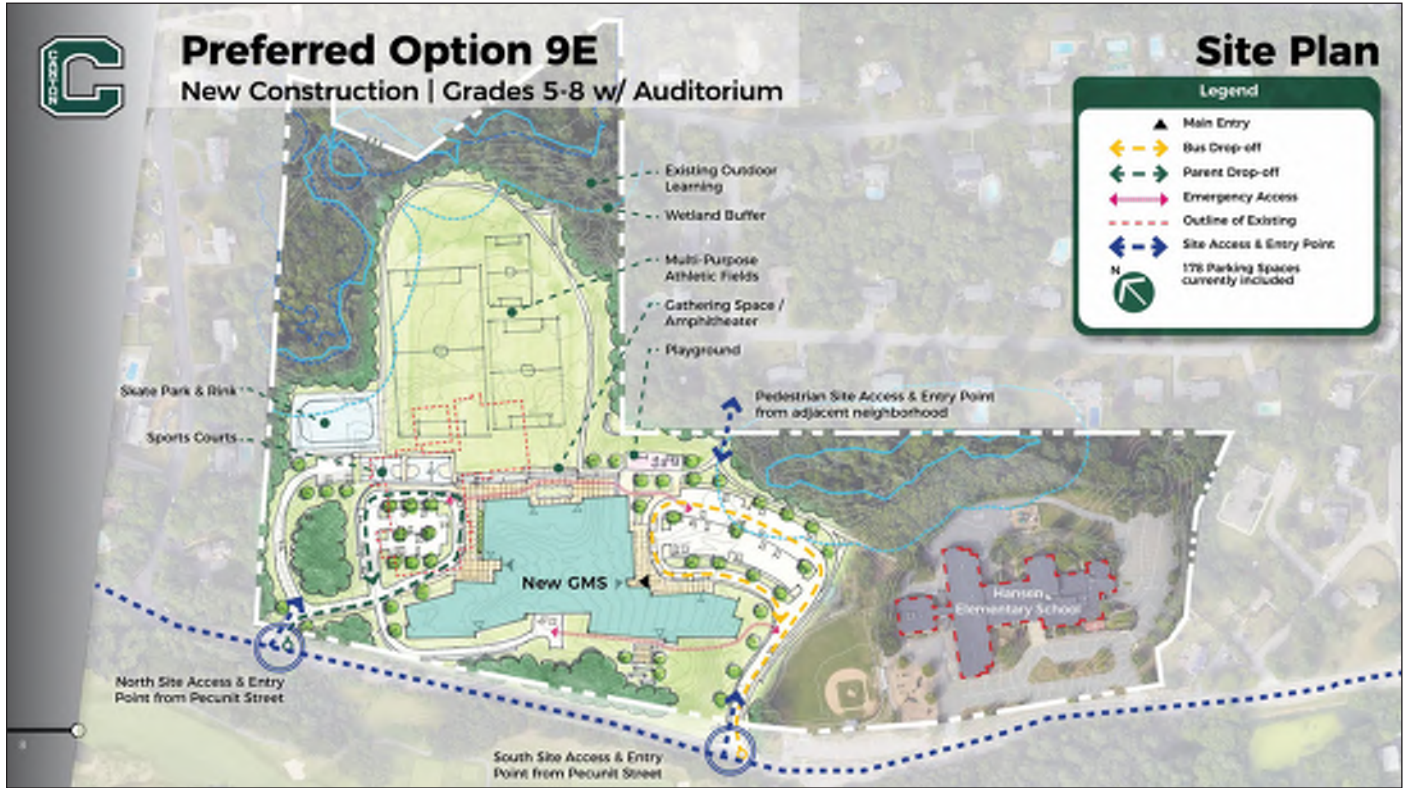


- Open and flexible dining space to allow for zoning to support different experiences and uses through the school day

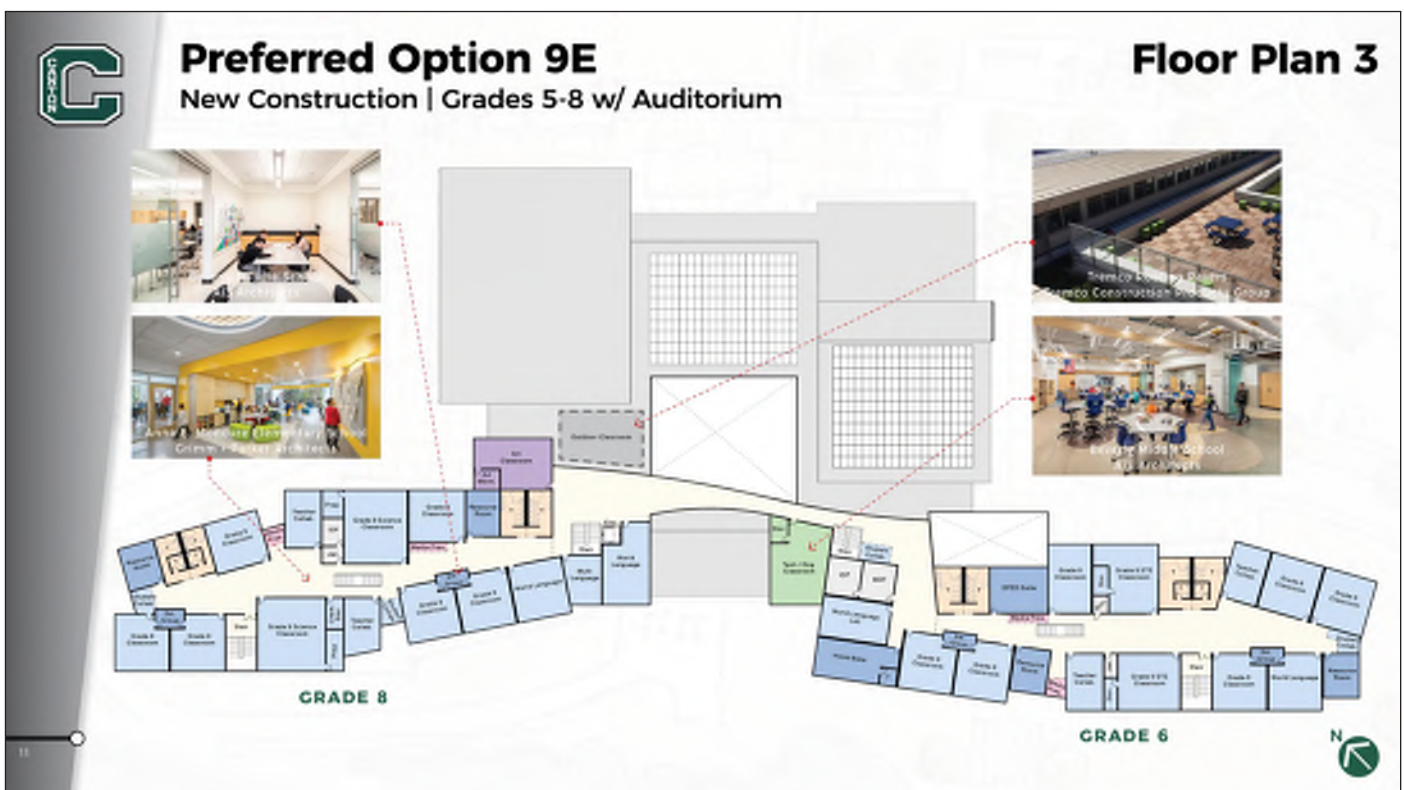
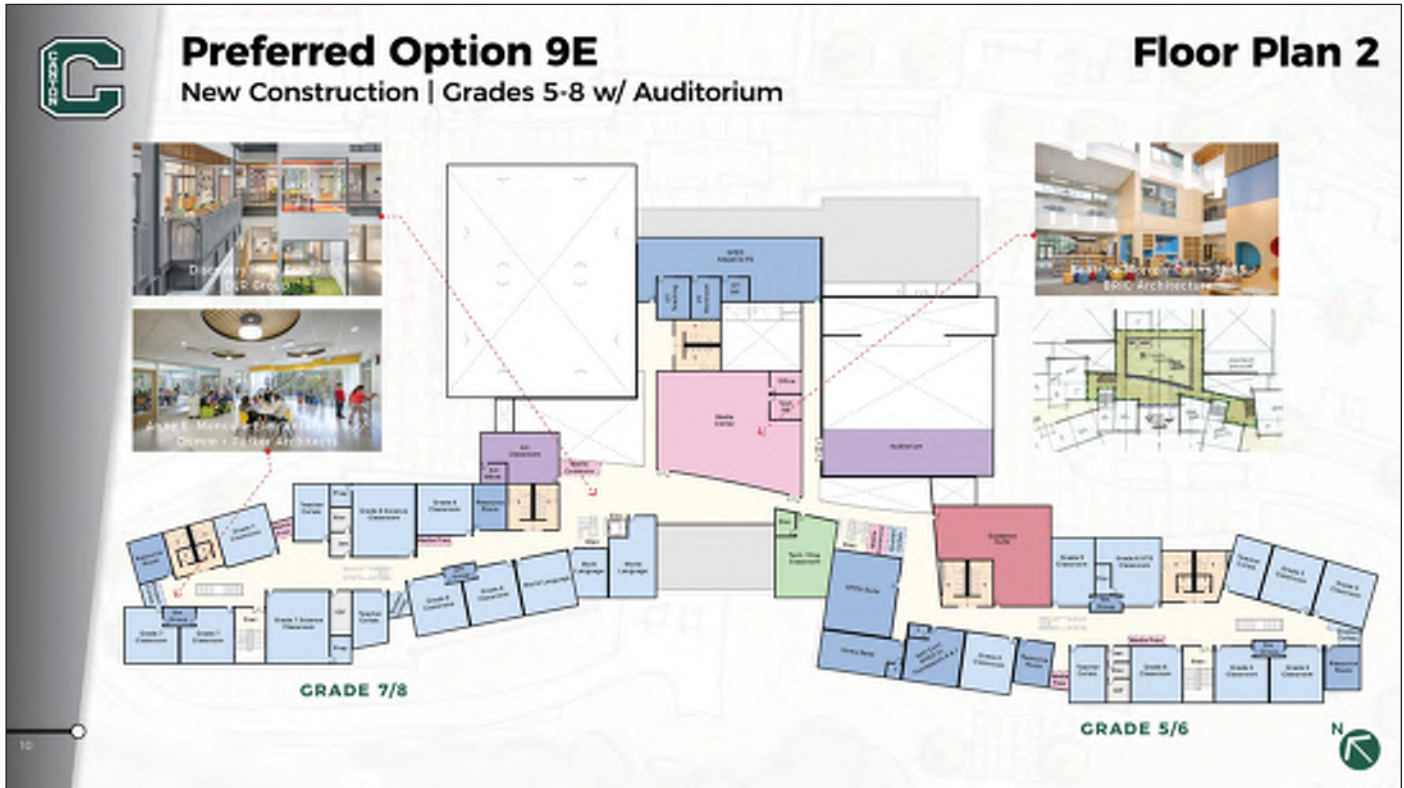
APPENDIX B




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APPENDIX B

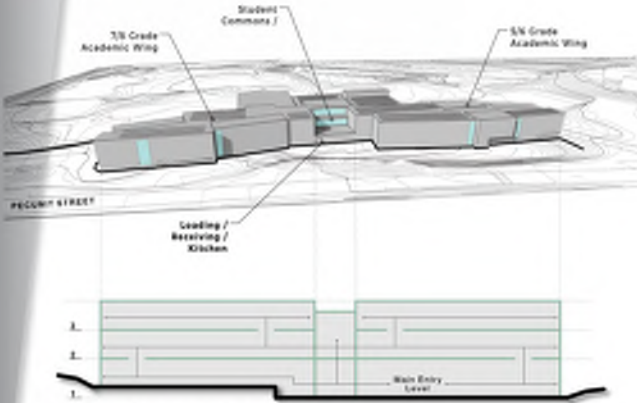


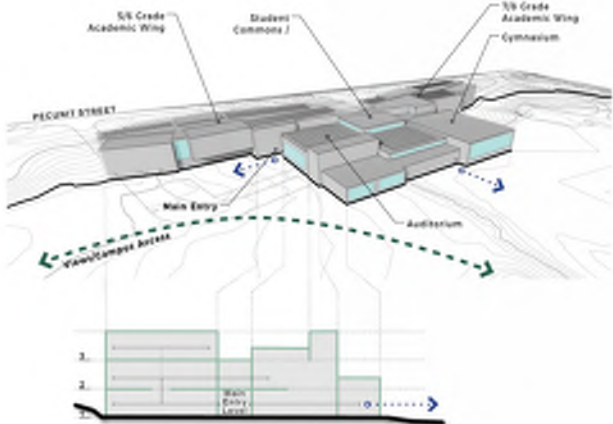
APPENDIX B



Preferred Option 9E

Massing







Option 9E - Building Massing

- 3-story academic core
 - located against Pecuni Street where the largest grade change occurs
- 2-story public zone
 - building steps down in massing as it approaches public outdoor spaces
- Building is organized efficiently, both vertical & horizontal
- Strategic location of access points and views to create a campus with Hansen Elementary School

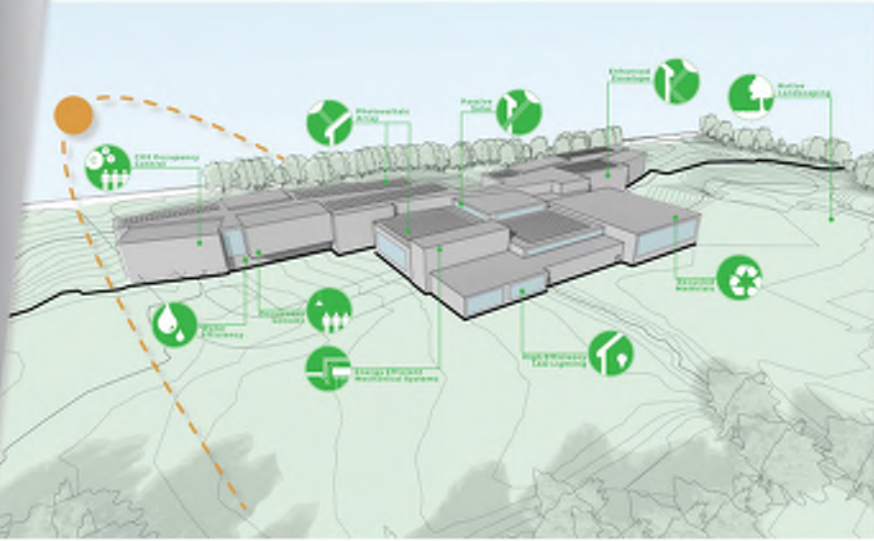
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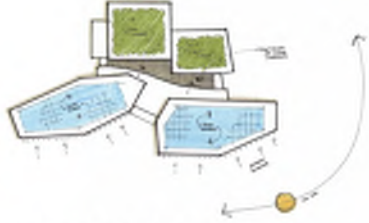




Preferred Option 9E


Sustainability





Promoting Sustainability:


- Using on-site renewable energy
- Protecting existing wetlands
- Stormwater Control / Bioretention
- Incorporating green & solar roof areas
- Energy Efficient building orientation
- Reducing heat island effect
- Including outdoor learning areas
- Restoring natural features



13


APPENDIX B

Preferred Option 9E Community Outreach




project website


multiple community forums




informative postcard



virtual polling




43 Participants
 Yes 28 (65%)
 No 9 (21%)
 Unsure 6 (14%)



91 Participants
 a) Invest in an Auditorium 80 (88%)
 b) Include Cafeteria only 3 (3%)
 c) Include Gymnasium only 4 (5%)
 d) No preference 1 (1%)
 e) Unsure at this time 3 (3%)

Are you open to the idea of modifying the grade configuration of Galvin to include 5th grade?
 Should Carron invest in an auditorium, include the partially reimbursed "cafeteria", or the partially reimbursed "gymnasium" in the project?



Preferred Option 9E Summary of Preliminary Design Pricing

Options	A Total Gross Square Feet	B Square Feet of Renovated Space (cost*/sf)	C Square Feet of New Construction (cost*/sf)	D Site, Building, Takedown, Haz. Mat. Cost*	E Estimated Total Construction** (cost*/sf)	F Estimated Total Project Costs
Option 1 (6-8) Base Repair/ Code Upgrade	131,903 sf	N/A	N/A	\$4.1 M	\$76.7 M (\$581.50/sf)	\$95.9 M
Option 7a (5-8) Add/Reno	213,473 sf	131,903 sf (\$371.33/sf)	81,570 sf (\$588.70/sf)	\$15.8 M	\$181.1 M (\$848.27/sf)	\$226.3 M
Option 7b (5-8) Add/Reno	222,630 sf	36,600 sf (\$401.07/sf)	186,030 sf (\$498.18/sf)	\$16.4 M	\$198.6 M (\$892.15/sf)	\$248.2 M
Option 9b (5-8) New Con.	218,350 sf	N/A	218,350 sf (\$869.68/sf)	\$16.8 M	\$189.9 M (\$869.68/sf)	\$237.4 M
***Option 9e (5-8) New Con.	218,350 sf	N/A	218,350 sf (\$852.87/sf)	\$18.6 M	\$186.2 M (\$852.87/sf)	\$232.8 M

*Marked Up Construction Costs
 **Does not include construction contingency
 ***District's Preferred Solution
 Estimated Total Project Costs include 25% for soft costs.

© Evaluation of Building Code Compliance

Massachusetts State Building Code: 780 CMR, Life Safety and Interior Environment Issues

The Massachusetts State Building Code (780 CMR) has been updated and amended several times since the construction of the Galvin Middle School building. The State Board of Building Regulations and Standards frequently updates and amends its regulations. These codes are in place to maintain life safety and occupancy comfort. Based on these regulations, the following items were found to be in non-compliance:

- Occupied spaces (classrooms) currently provide a single entrance from within an egress stairway
- Fire separation assembly between Use Group E (Educational) and Use Group A-3 (Assembly - Cafeteria, Gymnasium) (one hour fire separation required).
- Handrail and guardrail at egress stairways
- Electrical panels in cafetorium, kitchen, health classroom, and corridors
- Boiler and adjacent electrical room do not have a tested one-hour rated fire separation assembly from each other and existing spaces above.
- Occupied spaces without natural ventilation (780 CMR 1203.4)
- Occupied spaces without natural light (780 CMR 1205.0)
- Air-borne sound that does not meet the minimum sound transmission class (780 CMR 1207.0)
- Egress stairway enclosures, including door assemblies, require a minimum one-hour fire separation assembly

- Two means of egress from spaces having an occupant load of greater than 50
- No sprinkler system in the building
- Wired glass in doors

Code Requirements for Alterations to Existing Building

Massachusetts State Building Code (2015 International Existing Building Code with Massachusetts Amendments (IEBC)) states that it is the intent of the Code to provide flexibility to permit the use of alternative approaches to achieve compliance with the minimum requirements to safeguard the public's health, safety, and welfare in-so-far as they are affected by the repair, alteration, or addition of an existing building.

Section 104.4.2 of the IEBC states that for buildings previously occupied, "The legal occupancy of any building existing on the date of the adoption of this Code shall be permitted to continue without change, except as is specifically covered in this Code, the International Fire Code, or the International Property Maintenance Code, or as is deemed necessary by the code official for the general safety and welfare of the occupants and the public."

The goal of the code review is to assess the Middle School's existing conditions, noting what would be required to be updated in the event of a comprehensive renovation, as well as the building's ability to expand in a manner necessary to meet the programmatic needs of a middle school serving either 760 students (for a 6-8 configuration) or 1020 students (for a 5-8 configuration). Further code analysis should be performed as the project develops.

APPENDIX C

Applicable Codes

Building

780 CMR, Massachusetts State Building Code (MSBC) 9th Edition (2015 International Building Code (IBC) and 2015 International Existing Building Code (IEBC))

Energy Efficiency

2015 International Energy Conservation Code with Massachusetts Amendments (IECC)

Buildings shall be designed and constructed in accordance with the 2015 International Energy Conservation Code (IECC), as amended by the Massachusetts State Building Code 780 CMR 13.00. These amendments apply to the IECC and to ANSI / ASHRAE / IESNA 90.1-2013. IECC Chapter 4 (Commercial Energy Efficiency) must be adhered to as this building is a Commercial Building.

Accessibility

521 CMR: Massachusetts Architectural Access Board Regulations

Elevator

524 CMR: Massachusetts Elevator Code (2004 ASMEA17.1)

Fire Prevention

527 CMR: Massachusetts Fire Prevention Regulations (2012 NFPA 1)

Plumbing Code

248 CMR: Massachusetts Plumbing Code

Electrical Code

527 CMR 12.00: Massachusetts Electrical Code (2017 National Electrical Code)

Mechanical Code

2009 International Mechanical Code (IMC)

Use And Occupancy Classification

Educational (E), Assembly (A-1, A-2, and A-3)

Current Construction

Type 2A, Unprotected, Non-Combustible, Non-Separated Mixed Use (original building)

Type 5B, Combustible, sprinklered (modular classrooms)

Building Height and Allowable Stories (Table 504)

This is measured from the Grade Plane to the average height of the highest roof surface. The original building can be classified as a three-story building which complies with the maximum allowable height of 65 feet for Type 2A Construction.

Refer to the Architectural Evaluation within this report for details and photos related to code issues. ♦

D Accessibility Evaluation

Overview

Requirements for handicap accessibility in building planning and design were non-existent in the 1970s when this building was originally designed. However, on January 26, 1992, the Department of Justice implemented Title III of the Americans with Disabilities Act (ADA) into Public Law.

This legislation “prohibits discrimination on the basis of disability by private entities in places of public accommodation.” The legislation requires all new places of public accommodation, including schools, to be designed and constructed so as to be readily accessible to and usable by persons with disabilities.

Existing structures being renovated that exceed 30% of the equitized assessment of the building or its replacement value must fully comply with the regulations for new construction. Additionally, on September 1, 1996, the Commonwealth of Massachusetts developed its own accessibility regulations: 521 CMR Architectural Access Board (AAB), which in some instances is more restrictive than ADA guidelines. The ADA and AAB regularly update and amend their regulations.

As defined in the AAB Regulations, the Galvin Middle School building is defined as an “Educational Facility”. The access regulations in section 12.1 define an “Educational Facility” as a public and private school, nursery, pre-school, day care facility, colleges and universities, libraries, galleries, museums, and training facilities. All Educational Buildings with spaces that are open to the public are required to be accessible.

“Full Compliance” in the AAB Regulations requires that all public entrances and at least two exits from the

building be accessible, that there be an accessible route throughout all public areas of the building, and that classrooms and offices be in full compliance with the AAB Regulations. In addition, synchronized fire alarm strobe lights are required throughout the building, and assisted listening devices must be available for the hearing impaired.

Over the years, building maintenance and capital improvements have provided the Galvin Middle School with incremental accessibility upgrades. It now has a higher level of accessibility than when it was built, however there are still many non-compliant items.



Science sinks that do not meet accessibility req's



Office sink that does not meet accessibility req's

APPENDIX D

Based on the federal and state regulations described above, the following items were found to be in non-compliance or not accessible to the disabled:

521 CMR 6.00: Space Allowance and Reach Ranges

Forward Reach

If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches. Hardware to operate awning windows in classrooms exceeds acceptable reach range height.



Range controls in Life Skills classroom



Exposed piping under sink in Life Skills classroom

521 CMR 12.00 Educational Facilities

Sinks, Counters, and Other Work Areas

At least 5%, with a minimum of one of each type of element, must be made accessible within a space. Countertops and sinks in classrooms must provide clear floor space, knee clearances, and meet specific height requirements to be considered accessible. Countertop heights for sinks are adequate; however, none of the fixtures meet knee clearance requirements due to exposed piping. The majority of faucets provide accessible lever type hardware, but a few faucets still require upgrade.

The technology education class-room does not provide an accessible height workstation. The range / oven unit in the Life Skills classroom does not provide accessible controls.

Where sinks are provided in teacher break rooms, accessible height and knee clearances are not provided.

The check-in counter at the Library circulation desk does not meet the accessible height or knee clearance requirements.

521 CMR 14.00 Places of Assembly

Accessible Seating and Wheelchair Spaces

No accessible seating is provided at the retractable spectator bleachers in the gymnasium.

Assisted Listening Systems

Places of assembly within the existing school are the gymnasium and cafeteria. An assembly area that accommodates at least 50 people must have a permanently

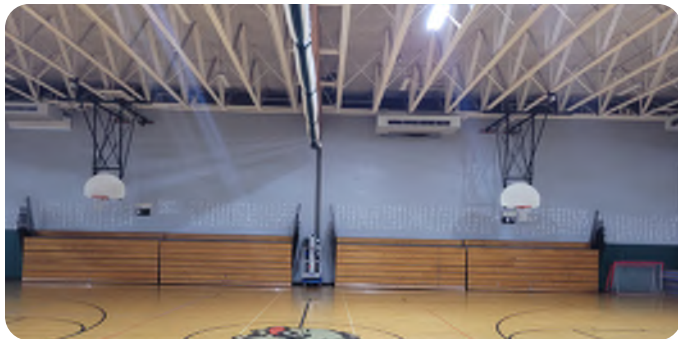
APPENDIX D

installed assistive listening system and signage to notify of the system. No signage is visible, and no listening system is installed.

521 CMR 19.00 Recreational Facilities

Locker Rooms

There must be a 36" wide accessible route around all lockers, including between benches and lockers. In the Girl's and Boy's Locker Rooms, either non-compliant, or no benches exist. No accessible bench seats are provided. There are no accessible showers in either the girls' or boys' locker rooms.



No accessible seating at Gymnasium bleachers



Slope and cross slope at exterior approach to main entrance

521 CMR 20.00 Accessible Route

Accessible Route from Parking Lot

Every building should have clear identifiable designated accessible parking spaces (number based on max building occupants) within a certain distance from the main entrance. The existing site includes 148 lined parking spaces, of which 7 are accessible. Additional coordination with the Town is required to confirm the appropriate required parking capacity, but for the current number of overall spaces provided, the 7 accessible spaces meet and exceed the AAB requirements for accessible spaces. The route from those spaces to the main entrance should be fully ADA compliant and follow the guidelines set



Lack of door operators at main building entrance

APPENDIX D

forth by the International Building Code. An accessible route from the parking lot to the main building entrance has been identified, but it appears to exceed the maximum allowable slope, and in some locations, maximum allowable cross slope as well. In addition, there are non-ADA compliant drain covers present in walkways and paved areas.

Area of Rescue Assistance

Each area of rescue assistance shall be identified by a sign that states "area of rescue assistance" and displays the international symbol of accessibility. The sign shall be illuminated when exit sign illumination is required. No areas of rescue assistance are currently identified. Signage shall also be installed at all inaccessible exits and where otherwise necessary to clearly indicate the direction to areas of rescue assistance. This signage is not provided. Stair 2 lacks fire separation from corridors and provides no area of rescue.

Protruding Objects

Objects projecting from walls with their leading edges between 27 inches and 80 inches above the finished floor shall protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles and shall not have sharp or abrupt edges. A wall-mounted fire extinguisher protrudes more than 4" into the path of travel.

Free-standing objects mounted on posts or pylons may have a maximum overhang of 12 inches measured between 27 inches and 80 inches above the finished floor. A display case utilizes posts but protrudes more than 12" from the corridor wall. While many drinking fountains have been upgraded to accessible models, in some locations these accessible models have been installed in such a manner that they protrude more than 4" into the path of travel.



Non-compliant paving at ramp



Display case protruding >12" from corridor wall

APPENDIX D

521 CMR 21.00 Floor Surfaces**Level Changes**

Changes in level grade are not allowed unless a ramp, walkway, or other means of vertical access is provided. The single elevator in an inaccessible location makes the connections between floors non-complaint due to lack of accessible means of egress.

The existing interior ramp at stair 5 exceeds a slope of 1 in 12, and the ramp railing is interrupted by a cabinet unit heater.

Several exterior egress doors do not discharge to an accessible route due to elevated concrete landing pads at these exits.



Egress utilizes a 4" step, making it inaccessible

521 CMR 26.00 Doors & Doorways**Maneuvering Clearance**

All entries into classrooms require clear floor space adjacent to latch side of door for entry and exit. For the pull side, the requirement is 18 inches of clear floor space, while on the push side of a door the requirement is 12 inches of clear floor space. Additionally, doors located in a recess of more than 6 inches deep shall have clear



Excessive ramp slope and interrupted railing



Drinking fountain projects >4" into path of travel

APPENDIX D

floor space. Said clear floor space shall be measured within 6 inches of the door.

Many doorways in the building, including classroom entries and doors to access toilet rooms do not provide the required approach clearances. In some locations, door actuators have been installed.

Door Hardware

Door hardware has been upgraded throughout the building to compliant lever-type hardware. Doors opening into hazardous areas shall have door-opening hardware which is knurled or has a roughened surface to give tactile warning to persons with visual impairments. Existing door hardware leading to spaces such as



Classroom entry lacks push clearance



Existing stair railings



Classroom entry lacking pull clearance



Safety stripes lacking at stair runs

APPENDIX D

the loading dock, mechanical rooms, and electrical rooms that are non-compliant must be revised.

521 CMR 27.00 Stairs

Handrails and guardrails

Stairs lack complaint guardrails and uninterrupted continuous inner rails. Safety stripes are lacking at the top and bottom of stair runs.

521 CMR 30.00 Public Toilet Rooms

Many toilet rooms appear to have accessible toilet stalls with the required clear floor space, grab bars, water closet, and appropriate height of controls and accessories. However, the single-user toilet room in the nurse's suite lacks a lavatory, clear floor space, and door approach clearance.

In many locations, hot water and drain pipes for lavatories are not insulated or guarded.



Toilet sinks are not fully accessible and lack pipe guards

521 CMR 36.00 Drinking Fountains

Where only one drinking fountain is provided on a floor it shall be accessible. A single drinking fountain can be installed by the use of a "high-low" fountain. Where more than one drinking fountain is provided on a floor, one in each location shall be accessible and shall be on an accessible route. Where a drinking fountain



Typical toilet room interior



Non-accessible drinking fountain with signage

APPENDIX D

is cantilevered in a recess, the recess shall be not less than 30 inches wide.

The exterior drinking fountain is not accessible and is not on an accessible route. Most interior drinking fountains have been upgraded to accessible models. The six remaining non-accessible fountains have signage directing users to the nearest accessible fountain.

Each of the inaccessible features listed above has an impact on the ability of disabled students or members of the community to access various spaces throughout the school independently. Disabled persons may include students with permanent handicap conditions, students that are temporarily disabled from athletic activity, and parents, staff, or other visitors that could have any form of disability. ♦

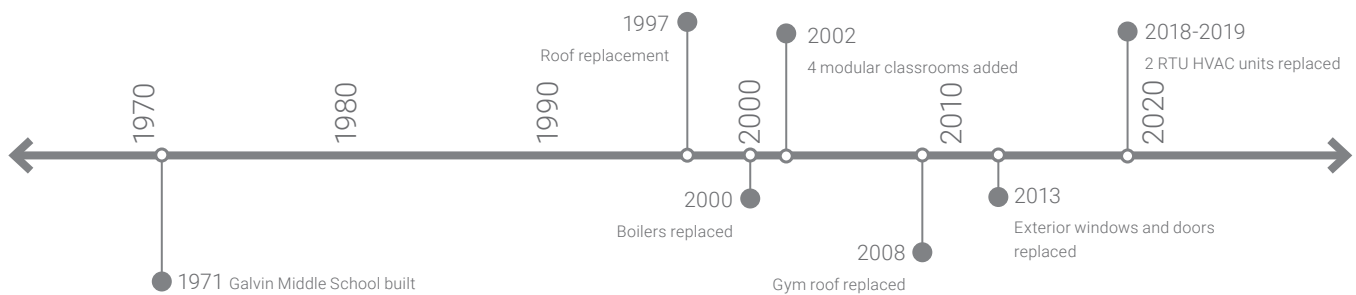
E Architectural Evaluation

Overview

The Galvin Middle School building was completed in 1971. The building is located on a 33.8 acre site that also hosts the Cole-Harrington Kindergarten Enrichment Center and the Lieutenant Peter M. Hansen Elementary School. The building shares its site with fields used by multiple community organizations, an outdoor skating rink, baseball field, two basketball courts, and two playgrounds. The site is located off Pecunit Street, an arterial street connecting Washington Street and Elm Street on a northwest-southeast axis. The Galvin Middle School is organized along the same axis and faces the primary approach drive, fields, and the neighboring elementary school. The site is abutted by heavily wooded residential neighborhoods, wetlands, open space, and a country club, all of which provide a variety of attractive green vistas. There are parking lots to the northwest and southeast of the school, so a visitor's approach enjoys views of the fields and the main entrance to the school. The specific parameters and amenities of the site are further detailed within the specific site report herein.

The following capital improvements have occurred since initial construction:

- 1997 - The main building's roofs were replaced.
- 2000 - Boiler replacement.
- 2002 - Modular classrooms were added to address capacity issues.
- 2008 - Gymnasium roof replacement.
- 2013 - All exterior windows and doors were replaced (except for loading dock door).
- 2018/19 - 2 of the 3 RTU units were replaced.



APPENDIX E

Exterior Review

Foundation

The building is constructed on a cast-in-place reinforced concrete slab with drop panels on a foundation consisting of reinforced cast-in-place concrete spread footings. The lowest level consists of a five inch thick concrete slab on grade. Intermediate level slabs are 4" thick reinforced concrete. Steel beams rest on interior steel columns and on bearing plates at perimeter locations. The roof of the main school building is cast in place concrete. The gymnasium roof is precast concrete planks. The structural evaluation in this report should be referred to for additional information. Concrete pads at

exterior building exits cause a 4" level offset in some egress locations. This would need to be addressed with additional ramping as part of a comprehensive renovation. Deterioration is occurring at the top of some foundation walls, and there is concrete spalling in some locations. There is impact damage at the southeast corner of the foundation. Repairs to damaged areas should be addressed as part of major renovations. Repairs and increased redundancy in the roof drainage system may reduce future deterioration of the foundation walls if water falling from roof edges is contributing to damage at the top of foundation walls.



Concrete spalling at foundation



Concrete foundation wall



Staining on concrete



Damage at loading dock

APPENDIX E

Exterior Walls

The original construction documents indicate that the exterior envelope of the building consists of face brick, one inch air cavity, and concrete masonry unit back-up support with a 1/2" parge coat. Some repointing has been performed on the northwest elevation. The mortar in many of the rowlock joints at window sill locations has failed, allowing moisture to infiltrate below the sill. The exterior is due for major exterior restoration including repointing on selected facades, repointing of rowlock joints at window sills, resealing of control joints, repair / replacement of failed lintels, and resealing above lintels. Cleaning of stained areas / mold growth on

north-facing facades is also recommended. Observed areas of efflorescence were very limited, and it is likely that roof replacement, flashing and sealant maintenance, and the required lintel and sill repairs would address the underlying moisture issues



Lintel with failed sealant



Failed mortar & moisture infiltration at rowlock sill



Mold and staining on bricks



Example of bricks that require repointing



Complete failure of control joint sealant

APPENDIX E



Damage at precast mitered corner

causing the efflorescence. These activities, combined with a modest amount of repairs and renovations to damaged areas of masonry and precast panels, would allow the building's exterior wall system to perform in a water-tight manner for many years.

The lack of insulation at the exterior walls is insufficient for protecting against heat loss and gain. For the temperate climate of Massachusetts, exterior wall insulation should be at least three inches thick to provide the required R-Value for an exterior wall. Not only is this important in reducing heating loads in the winter, but it would



Damage to precast at southeast corner

also reduce drafts, temperature swings, and inconsistent temperatures within the building. It would also reduce cooling loads in warmer months and generally provide a more energy efficient and comfortable interior building environment. The lack of insulation in the exterior wall system would need to be addressed to meet current energy code requirements as part of any proposed comprehensive renovation of the building, although to do



Damaged brick



Patch / repair requiring remediation

APPENDIX E

so would reduce the size of interior rooms by several inches at every exterior wall, and require the services of a building envelope consultant to avoid common problems encountered when retrofitting insulation to masonry buildings in a climate zone that experiences freeze-thaw cycles.

Roof

The entire roof area of the main academic building was replaced in 1997 with a Sarnafil white PVC roof system. The same system was used to replace the gymnasium roof in 2008. The original building roof was not insulated, but it is presumed that insulation was added during these replacement projects.

This type of PVC roofing membrane lasts approximately 30 years. The main roof is now 27 years old, and the gymnasium roof is 15 years old.

Any plans for a comprehensive renovation in the future should include complete replacement of the main academic building's roof system. While the current roof membrane material is at 90% of its expected life, it is not yet failing in multiple locations. However, the roof can only perform as well as the joints, seams, edges, and penetrations are detailed

and installed. The school currently has numerous roof leaks indicated by stained, buckling, and damaged ceiling tiles and trash cans placed to collect water in various spaces including classrooms. Poorly sealed penetrations can be observed at the roof.

The ballasted solar panel system appears to be causing ponding on the roof which calls into question the adequacy of the roof structure to support the weight of the panels and ballast. It is also possible that no recovery board was installed over the insulation. Without this rigid overlay to distribute loads, the insulation cannot properly support the weight of solar panels without compressing and deforming.

Any roof replacement work would need to include investigation into the root cause of the sanding and ponding so that it can be addressed. Roof replacement would also provide an opportunity to increase the quantity of insulation at the roof, as energy code performance standards have increased since 1997.

The numerous leaks and associated water intrusion into the building is causing not just water damage, but also problems with mold, humidity, and indoor air quality which can trigger asthma and other health



Damaged bricks



Ponding and sagging on roof

APPENDIX E

problems. This leads to increased staff and student absenteeism and poorer learning outcomes.

In addition, water intrusion under the roof fascia at the library entrance has caused staining of the precast panels in that location.

At the time of construction, the gymnasium roof will be at 2/3 of its expected life; more detailed evaluation is needed to determine if replacement should be included or deferred as part of this project.

The modular addition (4 classrooms) was added in 2002 and has its original roof.

Windows

In 2013, the exterior windows of the building were replaced with thermally-broken fixed and operable (awning) aluminum windows and aluminum storefront IGUs (insulated glazing units). The extended aluminum sills cover a large portion of the row lock masonry sills, but do not fully extend to the edge of the brick, leaving some of the mortar exposed to weathering and deterioration that has caused leaks.

The windows remain in excellent condition and are candidates for preservation / re-use in a comprehensive renovation unless they are determined to not meet current energy standards.



Replacement window with sill extension



Replacement window and doors at main entrance



Classroom replacement windows



Typical exterior service door showing some fading

APPENDIX E

Exterior Doors

With the exception of the original loading dock door, all the exterior doors were replaced in 2013. Doors incorporating glazed sidelights and transoms were replaced with thermally broken aluminum storefront units with insulated glazing. Solid and vision panel doors were replaced with FRP (fiber reinforced polymer) doors in the original hollow metal frames. The doors are in good condition with light signs of wear including faded paint, dents and chips. The original hollow metal frame at the loading dock door has minimal rust. Many

doors do not have a canopy, which exposes them to the harsh New England elements. This accelerates deterioration and increases water incursion during wind-blown rain events. There are few card readers and no operators at exterior doors. The addition of canopies, security enhancements, and accessibility upgrades are recommended as part of a comprehensive renovation.

Louvers and Grilles

Louvers include grilles for classroom unit ventilators and intake / exhaust louvers for the kitchen and mechanical areas. Most



Rust at loading dock railings



Mechanical louver in good condition



Original door at loading dock



Failing sealant at grille

APPENDIX E

louvers are in good condition. Some have new sealant; some have failing sealant that needs replacement.

Ladders and Railings

There is surface rust on roof ladders. Metal railings at the loading dock have significant rust and deterioration at post bases. ♦

APPENDIX E

Interior Review***Floors***

The majority of the building's original floor finishes included 9" x 9" Vinyl Asbestos Tile (VAT) in the corridors, classrooms, cafeteria, and offices. Although efforts by the maintenance staff have kept these floors in generally good condition, the overall appearance of this 50+ year old flooring is dingy and aged. Moreover, asbestos is considered a hazardous material when not fully intact. Areas of tile showing cracking, chipping, and settling are of special concern. Especially for a school, abatement is recommended in

order to avoid the possibility of the product becoming friable. Some heavy traffic areas and classrooms have replaced the VAT with modern, non-hazardous 12" x 12" VCT. With the exception of where it is used in toilet rooms, the replacement VCT is generally in good condition.

Other flooring in the building includes broadloom carpet in a few classrooms and the library, painted concrete in the larger technology classroom and maintenance areas, quarry tile in the kitchen / food service areas, and ceramic tile in the toilet rooms. A few toilet rooms have VCT instead of ceramic tile flooring. In these toilet rooms, the VCT is lifting up due to water damage.

The carpet in the library and adjacent upper technology classroom is at least 8 years old. There are tears, damage, and buckling in a few locations. High traffic areas are showing wear. It is broadloom carpet, and would require complete replacement with a comprehensive renovation.

The stairs are a combination of scored steel tread edges with flush inlaid VAT and VAT at landings. Conditions are generally good, with some cracked VAT due to settling or age. In one location, large portions of tiles are missing on a landing, creating a



Tripping hazard at stair



VAT in lobby with cracking



Damaged VAT at threshold

APPENDIX E

tripping hazard. There is some light rust on treads and risers.

Painted concrete flooring in the fitness and lower technology classroom is in fair to poor condition. The concrete is relatively smooth and only requires minor patching, but the paint is completely worn away in many locations.

Ceramic tile flooring ranges from good to failed conditions. Tile flooring is failed in the locker room showers and there are extensive areas of mortar patching. In toilet rooms, the original mosaic tile flooring is still sound in many locations, but there is also settling of the substrate which has caused cracking and loose / missing tiles in many locations, especially at floor drains.

The original quarry tile in the kitchen / food service areas is still in good condition but requires a deep cleaning.

The composition gymnasium floor was replaced approximately 10 years ago with a hardwood sports floor that is in very good condition. The new floor is slightly higher than adjacent corridor, stair, and room flooring. Floor transition spaces within the gym at each door compromise the total available area for exercise. In a comprehensive renovation, it may be possible to raise or feather the flooring levels in the two adjacent gym storerooms, stair landings, and entry corridors to address this condition and create a fully level athletic floor in the gym.



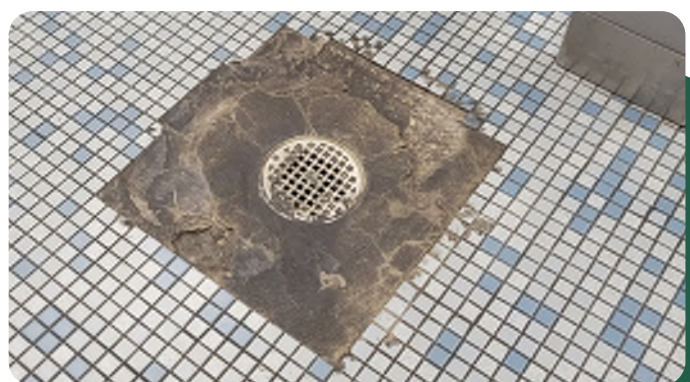
Lifting VAT in toilet room



Damaged floor tile in toilet room



Painted concrete floor in Tech Ed. classroom



Damaged tile at toilet room drain

APPENDIX E

The original parquet wood stage floor shows signs of wear and staining but is otherwise in good condition. It would likely remain but receive refinishing as part of a comprehensive renovation project.

Interior Walls

Interior walls are primarily painted concrete masonry units (CMU). In most locations, any modern retrofitted amenities requiring power or data (such as interactive whiteboards) all have surface raceway or conduit. Classroom and office CMU walls often have exposed piping as well. The presence of so many surface-mounted items on classroom walls limits teaching and display space, which are paramount in learning spaces. The interior CMU surfaces

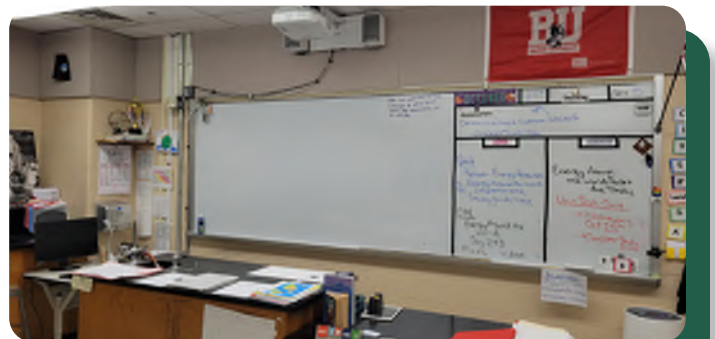
throughout the building are generally in very good condition and appear to have been recently painted. In very limited cases, there is minor cracking or damage which can be patched or sealed and repainted.

A few interior partition walls are plaster on metal studs. Four classrooms and two offices have operable walls. The classroom partitions have a dark woodgrain vinyl finish that is dented and peeling in various locations. The office partition has a light fabric-textured vinyl finish in generally good condition.

Lobbies and stair enclosures have interior brick veneer over CMU. The majority of the brick is in very good condition. In the few locations with damage or cracking,



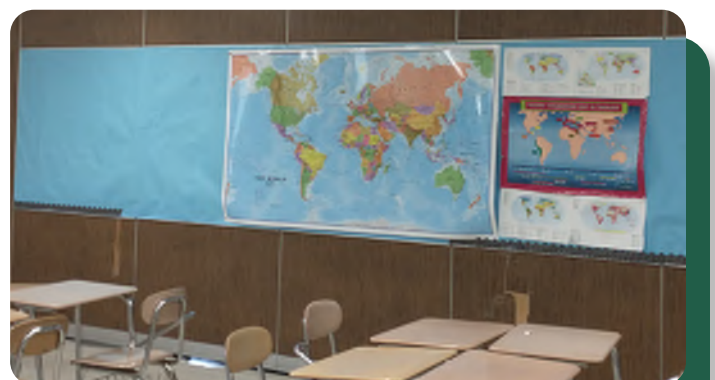
Wood athletic floor in gym with level transitions



CMU classroom teaching wall



Original parquet stage floor in cafeteria



Operable classroom divider with surface damage

APPENDIX E

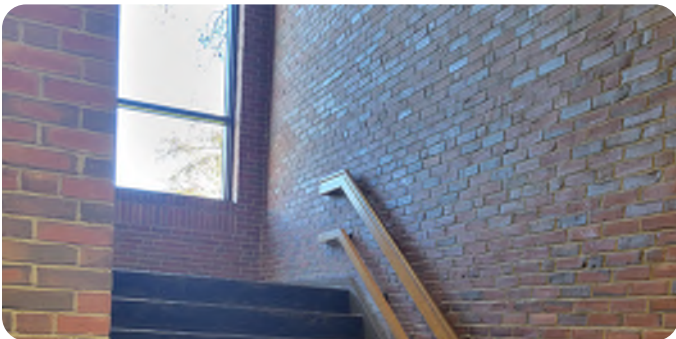
cracks may be sealed or damaged bricks replaced with attic stock.

Water fountain niches, toilet rooms, and the kitchen have floor to ceiling ceramic tile, all generally in good condition. In some toilet rooms, the tile has been painted and the paint is peeling off, especially near the floor.

Except for the music classrooms, which have sand-filled CMU partitions, the majority of classrooms have hollow CMU partitions. Additional evaluation would be required during a comprehensive renovation to determine both acoustical separation needs to limit sound transmission, and acoustical treatment needs to reduce excessive reverberation in learning spaces.

Some classrooms have acoustic panels on walls near the ceiling, but staff have covered them with posters and teaching materials, reducing their efficacy. Commissioning activities following a comprehensive renovation project could include user training / information sessions on acoustical treatments in classrooms.

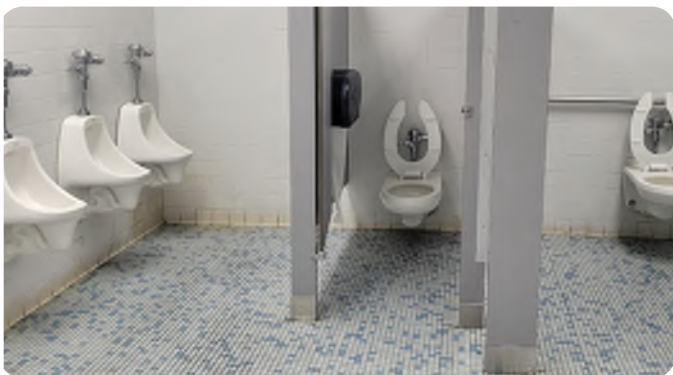
The walls in the gymnasium are painted CMU with retractable wood bleachers on one side and wall pads encircling the lower wall portion of the rest of the space. The wood bleachers show signs of wear and tear. The walls of the space do not have any acoustical treatment for absorbing or reflecting sound in the space. Piping and wiring is exposed.



Brick interior walls at stairs are in good condition



Acoustical wall panels in science classroom



Paint peeling away from tiles on toilet room walls



Typical academic corridor with CMU walls & lockers

APPENDIX E

The cafetorium walls are painted CMU. There are no acoustical treatments on the walls for absorbing sound in this space.

The corridor walls within the classroom areas of the building are lined with full-height lockers, a very “Industrial Revolution” practice which is no longer prevalent in middle school design. Without the lockers, corridors in a modern middle school can be more highly utilized for small group learning, tutoring, and independent study.

Interior Doors

The interior natural finish flush wood doors with hollow metal frames throughout the school are original. Many of them show signs of wear and chipped paint but are in good to fair condition. Light use doors such as those connecting classrooms are in good condition. These older doors provide very little acoustical separation between the corridor and classroom when compared to modern doors and construction standards.

Many of the vision panels and sidelites contain wired glass, which was allowed

when the building was constructed; however, it is now a known safety concern due to increased breakage risk and it is not allowed under current building codes. The doors from the corridor to the egress stairs may also lack compliance with modern codes; as part of a comprehensive building renovation, the required fire ratings of all existing doors would be studied, and some doors would be replaced as necessary. All wire glass would also be replaced with the appropriate glazing type for the particular size of opening and required fire separation.

In service areas of the building, doors consist of painted hollow metal doors and frames. The condition of these doors varies. Some are candidates for painting and some for replacement.

The original door hardware has been replaced. However, as regulations have continued to evolve over the recent past, some of the door hardware remains non-compliant and is further discussed in the handicap accessibility portion of this report.



Door to Guidance Suite



Typical classroom door

APPENDIX E

Ceilings

There are a variety of ceiling systems throughout the building including lay-in 2x4 acoustic ceiling tiles (ACT), lay-in “Tectum” type acoustical ceiling panels, and suspended metal pan ceilings in service areas. All of these rely on a suspended metal grid that supports the tiles / panels. In some locations, the metal grid is rusting.

The condition of the lay-in ACT and tectum panels varies; some show water damage and stains indicating both plumbing and roof leaks. Some tiles have been replaced with tiles that do not match adjacent tiles. Some are broken or sagging. Many of the sagging tiles are associated with

soffits that enclose mechanical equipment. These locations would be good candidates for replacement with sag-resistant GWB soffits. The suspended metal pan ceilings are generally in poor condition due to a combination of damage and rust.

There are painted exposed concrete slab ceilings in the locker rooms and some service areas. The gymnasium ceiling is exposed precast concrete plank. All of these appear to be in good condition, although modern gymnasiums typically employ ceiling types that are NRC rated to reduce reverberation, which is a particular problem in gymnasiums.

Acoustical ceiling or wall treatments would better enhance the sound quality of these learning environments as the multiple layers of paint on the ceiling tile have likely compromised much of their acoustical qualities.

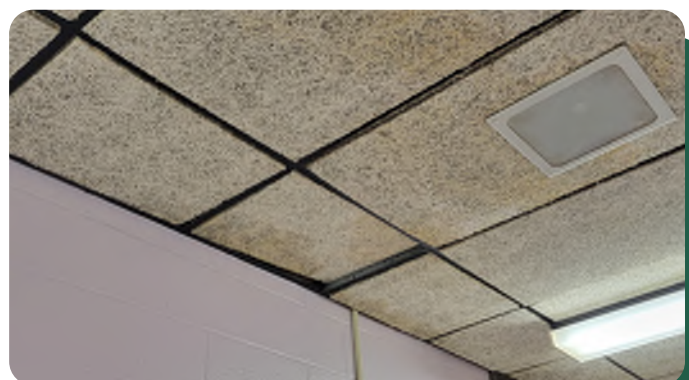
A comprehensive renovation would require an acoustical evaluation of educational, assembly, and support spaces to determine any additional requirements for ceiling acoustical materials and treatments.



Ceiling in Library



Mix of ACT and “Tectum” ceiling tiles in corridor



Damaged ceiling tiles in corridor

APPENDIX E

Because the building has no sprinkler system and code would require the building to be fully sprinklered as part of a major renovation, the suspended ceilings would need to be removed and replaced to enable the installation of a fire suppression system.

Stairs

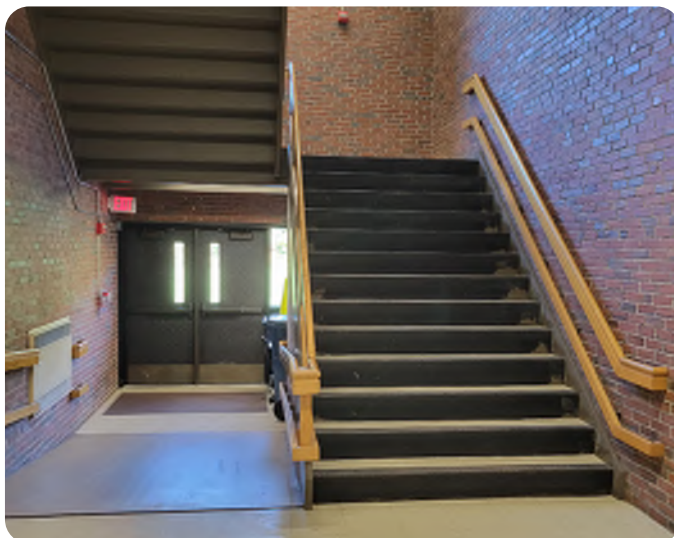
With the progression of building codes and life safety standards, the egress stairs that were once deemed safe are no longer compliant. In order to be in compliance, the stair modifications include: guardrails at the code compliant height, providing continuous handrails, providing intermediate handrails for any stair greater than 60" in width, and adding vertical or horizontal railing elements to disallow the passage of a 4" diameter sphere through the stair railing. Detailed and in-depth explanations / restrictions can be found under Section 10 of the current building code.

In addition to compliance issues, damage and deterioration on the stairs is evident. A number of floor tiles are chipped or otherwise damaged. These are tripping hazards that need to be addressed. There are also instances of rust and stained / chipped paint on the stringers, risers, and scored metal nosings. Stair risers and landings are not adequately marked for safety and for accessibility to users with low vision.

Fixtures and Equipment

The majority of toilet compartments have been replaced and are in good condition. Six compartments original to the building remain and are candidates for replacement.

The student lockers in the corridors are in good condition, but the lockers in locker rooms have rust and impact damage to doors and frames.



Handrails are not continuous



A 4" sphere can be passed through the stair rails

APPENDIX E

Most but not all classrooms have projectors and interactive white boards; however, some original chalkboards remain and need to be replaced. The use of chalk adversely impacts classroom air quality and can trigger asthma in some students and staff.

Much of the classroom and library casework is original to the building with conditions varying from acceptable to poor. While many classrooms have partially upgraded casework and sinks to meet accessibility standards, more upgrading is needed, especially in the science

classrooms. It should be noted that general classrooms lack sinks, and several science classrooms also lack sinks.

The casework in the choral, band, and orchestra classrooms is very limited and not well-configured to support music and instrument storage. The instrument storage room has stock metal shelving with open fronts and sides and no internal dividers or compartmentalization. ♦



Life Skills classroom has original casework



Metal shelving at Orchestra storage room

F Structural Evaluation

The purpose of this report is to describe, in broad terms, the structure of the existing building; to comment on the condition of the existing building; and on the feasibility of renovation and expansion of the school.

Scope

- Description of existing structure.
- Comments on the existing condition.
- Comments on the feasibility of renovation and expansion.

Basis of the Report

This report is based on our visual observations during our site visit on July 20, 2023; a review of the existing drawings of the original construction for the school dated October 29, 1971 prepared by Rich, Lang & Cote, Inc.

During our site visit, we did not remove any finishes or take measurements, so our understanding of the structure is limited to the available drawings and observations of the exposed structure and the exterior facade.

Building Description

The school is located on Pecunit Street in Canton, Massachusetts. The entire school is essentially a three story, steel and concrete structure.

The original school was constructed in 1971 and there have not been any major renovations or addition to the existing structure from the time of original construction. The typical roof structure is concrete slab spanning between composite wide flange steel girders and steel columns. The roof of the Gymnasium is precast concrete plank spanning between steel bulb tees supported on open web steel joists which in turn span in between wide

flange steel beam girders and steel column. Some of the columns between the first and second floor are reinforced concrete columns and they transition to wide flange steel columns above the second floor. The lowest level slab is a concrete slab-on-grade. The foundations supporting the columns and the exterior walls of the structure are reinforced concrete foundations.

Existing Conditions

Based on our observations, the school structure is performing well. We observed signs of water leakage at a few locations. We observed cracks in the exposed concrete slab on grade at a few locations. We did not observe any positive connections between the non-structural masonry partitions and the structure. We observed a few cracks in the exterior masonry façade and signs of past repairs.



Typical floor slab viewed from Mechanical room

APPENDIX F

We did not perceive any undue vibrations at the supported floors nor did we observe any signs of foundation settlement.

Proposed Schemes

Based on our observations and our analysis of the existing drawings, no structural upgrades are required for any proposed scheme that has limited renovation scope and does not require any structural modifications. The extent of the code required structural upgrades is dependent on the extents of the proposed renovations. The following is a description of the compliance methods that may be triggered depending on the extents of the proposed schemes as dictated by other disciplines.

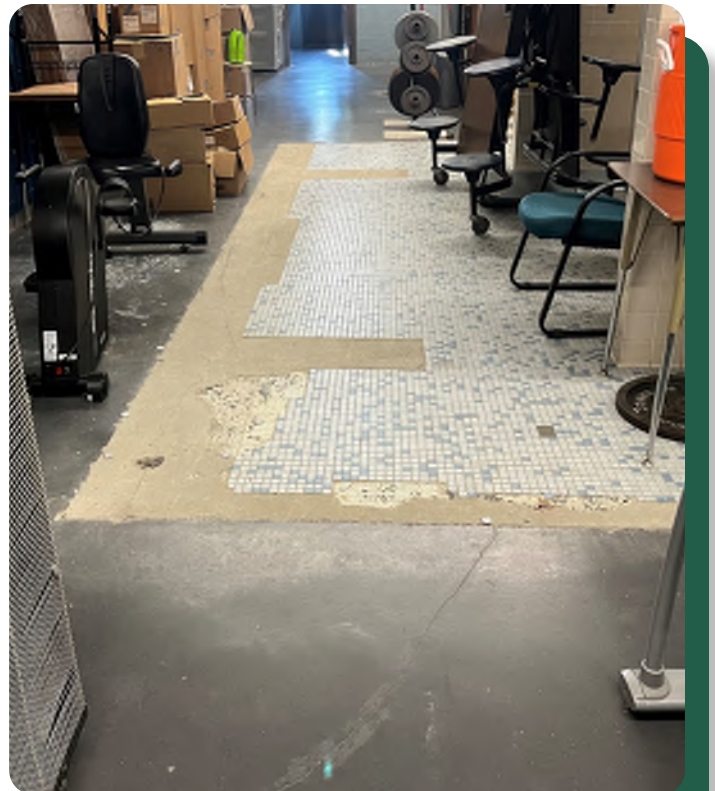
General Code Considerations

Primary Structural Code Issues Related To the Existing Structure

If any repairs, renovations, additions or change of occupancy or use are made to the existing structures, a check for compliance with 780 CMR, Chapter 34 “Existing Building Code” (Massachusetts Amendments to The International Existing Building Code 2015) of the Massachusetts Amendments to the International Building Code 2015 (IBC 2015) and reference code “International Existing Building Code 2015” (IEBC 2015) is required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and / or



Typical gymnasium roof framing



Example of cracks in slab on grade

APPENDIX F

a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, the project will have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:

1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

Comment

The approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing.

Since the existing building contains un-reinforced masonry wall structures, the anchorage of the walls to the floor and roof structure will have to be evaluated if the work area of the project exceeds 50 percent of the aggregate floor and roof area of the building.

Prescriptive Compliance Method

In this method, compliance with Chapter 4 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of this chapter.

Additions

Based on the project scope, the following structural issues have to be addressed:

- All additions should comply with the code requirements for new construction in the IBC.
- For additions that are not structurally independent of an existing structure, the existing structure and its addition, acting as a single structure, shall meet the requirements of the Code for New Construction for resisting lateral loads, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

Alterations

- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

APPENDIX F

- For alterations that would increase the design lateral loads or cause a structural irregularity or decrease the capacity of any lateral load carrying structural element, the structure of the altered building shall meet the requirements of the Code for New Construction, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.

Work Area Compliance Method

In this method, compliance with Chapter 5 through 13 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of these chapters.

In this method, the extent of alterations has to be classified into LEVELS OF WORK based on the scope and extent of the alterations to the existing structure. The LEVEL OF WORK can be classified into LEVEL 1, LEVEL 2 or LEVEL 3 Alterations. In addition, there are requirements that have to be satisfied for additions to the existing structure.

The extent of the renovations (includes Architectural, FP and MEP renovations) for this project exceeds 50 percent of the aggregate area of the building, thus, the LEVEL OF WORK for this project would be classified as LEVEL 3 Alterations. This would require compliance with provision of Chapter 7, 8 and 9 of the IEBC. If the scope of the project includes new additions to the existing structure; this would trigger compliance with provisions in Chapter 11 of the IEBC.

Level 3 Alterations

- Any existing gravity, load-carrying structural element for which an alteration causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations where more than 30 percent of the total floor area and roof areas of a building or structure have been or proposed to be involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building complies with the full design wind loads as per the code requirements for new construction and with reduced IBC level seismic forces.
- For alterations where not more than 30 percent of the total floor and roof areas of a building are involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads at the time of the original construction or the most recent substantial alteration (more than 30 percent of total floor and roof area). If these alterations increase the seismic demand-capacity ratio on any structural element by more than 10 percent, that particular structural element shall comply with reduced IBC level seismic forces.
- Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated.

Additions

- All additions shall comply with the requirements for the Code for New Construction in the IBC.

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- Any existing gravity, load-carrying structural element for which an addition or its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For additions that are not structurally independent of any existing structures, the existing structure and its additions, acting as a single structure, shall meet the requirements of the Code for New Construction in the IBC for resisting wind loads and IBC Level Seismic Forces (may be lower than loads from the Code for New Construction in the IBC), except for small additions that would not increase the lateral force story shear in any story by more than 10 percent cumulative. In this case, the existing lateral load resisting system can remain unaltered.

Performance Compliance Method

Following the requirements of this method for the alterations and additions may be onerous on the project because this method requires that the altered existing structure and the additions meet the requirements for the Code for New Construction in the IBC.

Particular Requirements of Compliance Methods

For our project, in order to meet compliance with one of the two compliance methods “Prescriptive Compliance Method” or the “Work Area Compliance Method”, we have to address the following:

Prescriptive Compliance Method

Additions

The proposed additions would be designed structurally independent of the

existing structures, thus, would not impart any additional lateral loads on the existing structure.

If the proposed alterations are such that the alterations increase the design lateral loads on the existing building or cause any structural irregularity or decrease the lateral load carrying capacity of the building, the structure of the altered building shall meet the requirements of the Code for New Construction in the IBC.

If the proposed additions increase the design gravity load on portions of the existing roof members, these members would have to be reinforced and this incidental structural alteration of the existing structures would have to be accounted for in the scope of the alterations to the existing school and would trigger requirements for alterations.

Alterations

Alterations that would increase the design gravity loads by more than 5 percent on any structural members would have to be reinforced.

If the proposed alterations of the structure increases the demand-capacity ratio of any lateral load resisting element by more than 10 percent, the structure of the altered building or structure shall meet the requirements for the Code for New Construction.

Work Area Compliance Method

Level 3 Alterations

If the proposed structural alterations of an existing structure are less than 30 percent of the total floor and roof areas of the existing structure, we have to demonstrate that the altered structure complies with the loads applicable at the time of the original construction and that the seismic demand-

APPENDIX F

capacity ratio is not increased by more than 10 percent on any existing structural element. Those structural elements whose seismic demand-capacity ratio is increased by more than 10 percent shall comply with reduced IBC level seismic forces.

If the proposed structural alterations of an existing structure exceed 30 percent of the total floor and roof areas of an existing structure, we have to demonstrate that the altered structure complies with the IBC for wind loading and with reduced IBC level seismic forces.

Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated. If the existing anchorage of the walls to the structure is deficient, the tops of the masonry walls will require new connections to the structure.

Additions

Any proposed additions would be designed structurally independent of the existing structures, thus, they would not impart any additional lateral loads on the existing structures.

Comment

The compliance requirements of the two methods, in most respects, are very similar. The Prescriptive Compliance Method would require that the existing lateral load resisting systems meet the requirements of the Code for New Construction of the IBC, even for small increases of design lateral loads. The requirements of both methods will require anchorage of all existing masonry walls. Based on this, we would recommend the Work Area Compliance Method for the project.

Summary

The existing school structure appears to be performing well. Most of the structural components that are visible appear in sound condition. We observed minor cracks in the slab on grade.

Any major, proposed renovations and additions would likely require that the structure be updated to meet the requirements for Code for New Construction. This may require addition of some shear walls, connecting the roof diaphragms to the existing masonry walls and the clipping of non-structural masonry walls to the structure. All of the existing masonry walls would have to be adequately connected to the roof structure. ♦

G Mechanical Evaluation

Boiler Plant:

The building is heated by two (2) gas fired boilers. One boiler is a cast iron boiler manufactured by the Smith model 28A, equipped with Webster burner. The second boiler is a more modern, high efficiency condensing type as manufactured in 2000 by Viessmann, model G7 / 1-D, fitted with a Weishaupt burner. The Smith boiler has a capacity of 2,867 MBH and the Viessmann boiler has a maximum input of 3,361 MBH.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- The boilers are in good condition and appear to be well maintained. However, it should be noted that they are twenty-three (23) years old, which is considered 75% (approx.) of their service life

Recommendations:

- Continue to provide proper maintenance per manufacturer's recommendations.

The boilers provide hot water for heating to the building which is pumped by a combination of in-line and base mounted end suction pumps. These sets are arranged in a primary / stand-by configuration. If the primary pump was to fail the stand-by would engage.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- Overall, the pumps appear to be in fair condition and appear to have received proper maintenance.

Recommendations:

- None other than continuing to perform proper manufacturer's recommended maintenance.

Controls

The automatic temperature controls system is a combination of pneumatics and direct digital controls (DDC). Compressed air is supplied by a duplex air compressor fitted



Gas fired boilers



Pump set

APPENDIX G

with an air dryer. Individual classroom unit ventilators are still controlled pneumatically while newer rooftop units and boilers are controlled via electronic controls.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- Overall, the system is functional and appears to be in fair condition. However, pneumatic controls are an outdated means of providing temperature control and managing energy.

Recommendations:

- Any renovation project should include removal of the pneumatic controls and include an update / upgrade to a full DDC system, which can provide good operational flexibility and optimize energy consumption.

HVAC System:

Classrooms:

Classrooms are heated and ventilated by classroom unit ventilators (UV). Outside air is supplied to the unit ventilators via wall louvers located below the windows or through roof hoods. Each unit ventilator has a hot water heating coil, filters, outside / return air dampers and supply fans. Valves and damper actuators are pneumatic. The classroom unit ventilators were manufactured by AAF / Herman Nelson.

General exhaust for the classrooms is provided by a system consisting of an exhaust grille located in each room and exhaust ductwork and either roof exhaust fans or utility fan sets.

Deficiencies as it relates to current Codes:

- None observed. However, ventilation codes have changed significantly since when this school was built and



Pump set



Typical Classroom Unit Ventilator

APPENDIX G

outside airflow measurements would be required to confirm whether or not these units can provide an outside air flow rate to meet current code.

Condition:

- The unit ventilators appear to be in good working order and properly maintained. However, they have outlived their useful service life.

Recommendations:

- The district should consider replacing these units as part of any renovation project.

Gymnasium:

The gymnasium is heated and ventilated by seven (7) horizontal unit ventilators manufactured by AAF / Herman Nelson, which are suspended from the gymnasium roof structure. Each unit ventilator has a hot water heating coil, filters, outside / return air dampers and supply fans. Valves and damper actuators are pneumatic.

General exhaust is handled by dedicated exhaust fans and a system of exhaust ductwork and low wall exhaust grilles.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- Overall, the unit ventilators and exhaust fans appear to be in good condition and appear to have received proper maintenance. However, this equipment has outlived its useful service life.

Recommendations:

- The district should consider replacing these units as part of any renovation project.

Administration:

The Administration area is heated, cooled and ventilated by combination of perimeter fin tube radiation and newer packaged rooftop units as manufactured by Carrier Corporation. The new rooftop units are replacement units and are installed on curb adapters.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- Overall, the rooftop units appear to be in good condition and appear to properly maintained.

Recommendations:

- None other than continuing to perform proper manufacturer's recommended maintenance.



Gymnasium Horizontal Unit Ventilators

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Media Center:

The Media Center is heated and ventilated by four (4) unit ventilators (UV). Outside air is supplied to the unit ventilators via wall louvers located below the windows or through roof hoods. Each unit ventilator has a hot water heating coil, filters, outside / return air dampers and supply fan. Valves and damper actuators are pneumatic. The unit ventilators were manufactured by AAF / Herman Nelson and Daikin.

Deficiencies as it relates to current Codes:

- None observed. However, ventilation codes have changed significantly since when this school was built and outside airflow measurements would be required to confirm whether or not these units can provide an outside air flow rate to meet current code.

Condition:

- The unit ventilators appear to be in good working order and properly maintained. However, with the exception of the

Daikin unit, they have outlived their useful service life.

Recommendations:

- The district should consider replacing these units as part of any renovation project.

Cafetorium:

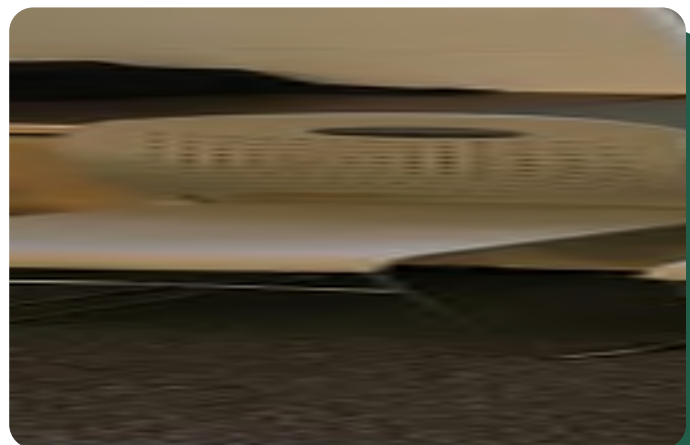
The Cafetorium is heated and ventilated by five (5) unit ventilators (UV). Outside air is supplied to the unit ventilators via wall



Original AAF / Herman Nelson Unit Ventilator



Packaged Roof Top Unit



Replacement Daikin Unit Ventilator

APPENDIX G

louvers located below the windows or through roof hoods. Each unit ventilator has a hot water heating coil, filters, outside / return air dampers and supply fan. The unit ventilators were manufactured by Daikin and appear to be replacements and are not original vintage.

Deficiencies as it relates to current Codes:

- None observed. However, ventilation codes have changed significantly since when this school was built and outside airflow measurements would be required to confirm whether or not these units can provide an outside air flow rate to meet current code.

Condition:

- Overall, the UVs appear to be in good condition and appear to have received proper maintenance.

Recommendations:

- None other than continuing to perform proper manufacturer's recommended maintenance.
- Unit replacement may be required within the next 5 to 10 years.

Toilet Rooms:

The toilet rooms are exhausted through a system of ceiling grilles, ductwork and roof mounted centrifugal exhaust fans. Although operational, the exhaust fans have outlived their useful service life. ♦



Cafetorium Unit Ventilator

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H Electrical Evaluation

Electric Service:

The primary electric service which originates from a riser conduit on an electric utility company pole feeds the pad mounted electric utility company transformer via underground conduit / cabling. The transformer is located on the site within a fenced in area, with overgrown vegetation. The electric utility company meter is located in the Main Electric Room.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- The electric service from visual observation appears to be in poor condition.

Recommendations:

- Two new building electric services should be provided via two electric utility company pad mounted transformers

with primary electric service conduits in concrete duct banks and secondary electric service cabling / conduits in concrete duct banks.

Normal Power System:

The switchboard is fed by the electric utility company transformer via underground conduit / cabling. The switchboard is rated at 1200 amps at 277/480 volt, three phase, four wire. It has a main circuit breaker and feeds panelboards and transformers located in the throughout the building. The distribution sections of the switchboard are made up of circuit breakers. The normal power distribution is primarily manufactured by Zinisco, with various other manufacturer's.

Deficiencies as it relates to current Codes:

- Electrical circuits for kitchen equipment under hoods are not protected by shunt trip circuit breakers as required by Code.



Transformer



Switchboard

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Condition:

- The normal power system by visual observation appears to be in poor condition.

Recommendations:

- New power distribution should be provided throughout the building. If the goal is a Net Zero all-electric building then the preliminary load calculations indicate that the two switchboards should be rated at 4000 amps (100% rated) at 277/480 volt, three phase, four wire.

Emergency Power System:

The building has a 277/480 volt, three phase, four wire, 150 kW diesel generator as manufactured by Katolight which is located within the Mechanical Room.

The generator provides emergency power upon loss of normal utility power via one automatic transfer switch and

panelboards in the Mechanical Room and in other Electric Rooms. The ATS is manufactured by Asco and is rated at 400 amps. The loads in the emergency panelboards and optional standby panelboards are mixed and are not properly separated as required by the National Electrical Code.

Deficiencies as it relates to current Codes:

- The loads in the emergency panelboards and optional standby panelboards are mixed and are not properly separated as required by the National Electrical Code.
- Emergency and optional standby panelboards are required to be protected by surge suppressors.

Condition:

- The emergency power system by visual observation appears to be in poor condition, and as described above does not meet current Codes.



Sub Electric Room



Meters

APPENDIX H

Recommendations:

- A new diesel fuel generator with a sound attenuated, weatherproof enclosure is recommended to comply with the National Electrical Code.
- New surge suppressors should be provided for emergency and optional standby panelboards.
- New panelboards and an automatic transfer switch dedicated to emergency loads should be provided.
- New panelboards and an automatic transfer switch dedicated to optional standby loads should be provided.

Fire Alarm:

The fire alarm control panel is located in the Maintenance Office and is an addressable Honeywell Silent Knight Model 6820. The fire alarm communicator also located in the Maintenance Office alerts the Fire Department when the fire alarm system is initiated. The building appears to

be completely covered throughout by heat and / or smoke detectors. The fire alarm system consists of remote annunciators, smoke detectors, carbon monoxide detectors, heat detectors, duct smoke detectors, pull stations, magnetic door holders, strobes, and horn / strobes.

Deficiencies as it relates to current Codes:

- The building utilizes horn / strobes for notification, therefore it does not comply with the International Building Code as speaker / strobes are required to provide voice evacuation throughout the building.

Condition:

- The fire alarm system by visual observation appears to be in good condition, however as described above does not meet current Codes.



Generator, Emergency Panel, and ATS



Generator Nameplate

APPENDIX H



Fire Alarm Control Panel

Recommendations:

- A new fire alarm system is recommended for the building which would include voice evacuation as required by the International Building Code.

Lighting:

Interior

The interior lighting consists of mostly fluorescent lighting fixtures with some upgraded LED lighting fixtures. Exit signs provide for direction to paths of egress.

Condition:

- By visual observation, the interior fluorescent lighting fixtures appear to be in poor condition, while the LED lighting fixtures appear to be in good condition.

Recommendations:

- New LED lighting fixtures should be provided to replace existing fluorescent lighting fixtures.



Digital Communicator

Exterior

Lighting consists of wall mounted and pole mounted LED lighting fixtures.

Condition:

- The exterior lighting by visual observation appears to be in good condition.

Recommendations:

- None.

Lighting Controls

Interior lighting is controlled by local wall switches, some wall mounted combination switch / occupancy sensors, and wall / ceiling mounted occupancy sensors.

Exterior lighting is controlled by time clock.

Deficiencies as it relates to current Codes:

- The current building switching does not meet the International Energy Conservation Code as it is Auto-On. Manual-On is required in most areas,

APPENDIX H

except in Corridors, Stairs, and Toilet rooms.

- Automatic daylight harvesting is required as per the International Energy Conservation Code.

Condition:

- The lighting controls by visual observation appears to be in fair condition, however as described above, does not meet current Codes.

Recommendations:

- The lighting control system should be replaced with new to comply with the International Energy Conservation Code.

Receptacles:

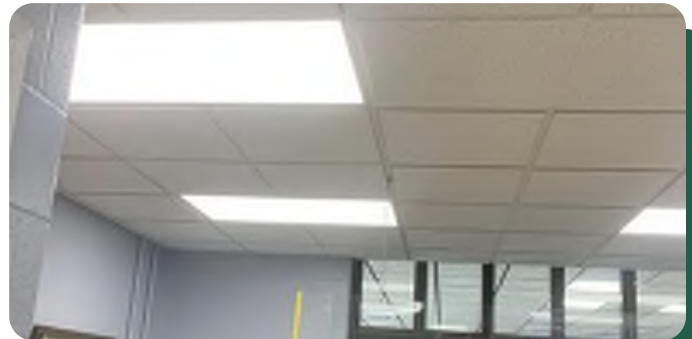
Receptacles are ground type, with some GFCI type throughout the building. Receptacles have been added over the years through the use of EMT conduit with surface boxes, tele-power poles, plugmold, and wiremold.

Deficiencies as it relates to current Codes:

- Receptacles in the Kitchen require GFCI protection where equipment plugs in via cord and plug and is either 125-250 volt single phase 150 volts or less to ground 50 amps or less, or 208 volt three phase 100 amps or less as per National Electrical Code.



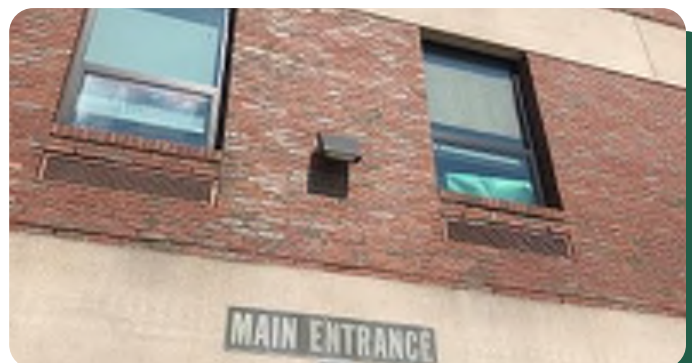
Fluorescent Lighting Fixtures



LED Lighting Fixtures



Pole Site Lighting Fixture



Wall Mounted Lighting Fixture

APPENDIX H

- Receptacles are not tamper resistant type as required by the National Electrical Code.

Condition:

- Receptacles by visual observation appear to be in fair condition, however as described above, do not meet current Codes.

Recommendations:

- New receptacles in the Kitchen should be provided as required by the National Electrical Code.
- New tamper resistant type receptacles should be throughout the building.

Lightning Protection:

The building does not have a lightning protection system.

Recommendations:

- Although it not required by Code, a lightning protection system is recommended which would include air terminals on the roof with downlead conductors to ground and surge protection.

Bi-directional Amplifier System:

The building does not appear to have a bi-directional amplifier system.

Recommendations:

- A bi-directional amplifier system is probably required unless testing proves that Police and Fire Department radios have required signal levels as dictated by the International Building Code. A bi-directional amplifier system would include an amplifier and cabling above ceilings.

Wiring:

Wiring is made up of MC cabling, FA MC cabling, EMT, Rigid, and PVC conduit.

Mass Notification System:

The building does not have a Mass Notification System.

Recommendations:

- Although it is not required by Code, a Mass Notification System is highly recommended for Schools. A Mass Notification System would consist of control panels, info alarm graphic annunciators and controllers, addressable speakers, and amber lens strobes. ♦

1 Plumbing Evaluation

Water service:

The 6-inch domestic water service enters the mechanical room and reduces to 4" before connecting to the 4" Compound water meter. After the water meter the piping passes through a 4" Pressure reducing valve mounted approx. 12" above the finished floor.

Deficiencies as it relates to current Codes:

- Water service to be protected by a backflow preventer.

Condition:

- The water service, associated water meter & Main shut off valves appear to be in poor condition. As they look to be original to the school. There has been a new PRV station added or replaced recently and appears to be in good working condition.

Recommendations:

- It is recommended a proper backflow preventer be added to the service to protect the town's water system, and at that time it would be recommended to replace the schools main service valve.

Domestic Hot Water System:

The school is provided with (2) different forms of water heating. Both systems appear to be in working condition, and serviced. The main water heating system is provided from (2) 119 Gallon indirect water heaters. These water heaters appear to be the main school's hot water source during the winter months of the school's operation. These tanks look to be in working order, but are past their life expectancy. As a secondary water heating source, the school is provided with (2) 75,000 BTU Gas fired water heaters, with a storage capacity of 75 Gallons. These water heaters are tied back into the main water mains that are feed to the school's main mixing valve.



Water Service

APPENDIX I

Deficiencies as it relates to current Codes:

- None Observed

Condition:

- In general, the water heating system is operational, but with 2 different systems to maintain, the school would benefit from an updated system that would meet the school's year-round hot water needs.

Recommendations:

- Continue to provide proper maintenance per manufacturer's recommendations.

Water piping:

The water piping is mainly copper piping joined by soldering techniques. The majority of the building is insulated,

with some locations having incomplete insulation.

Condition:

- In general, the majority of the water piping and associated insulation has exceeded its life expectancy.

Sanitary systems:

The sanitary system collects waste from all fixtures throughout the building and distributes said waste to the town sewer system. It is unknown how many exit points are located in this building. The sanitary piping consists of Cast iron & PVC piping for indirect waste.

Deficiencies as it relates to current Codes:

- None observed.



Indirect Water Heaters



Gas Fired Water Heaters

APPENDIX I

Condition:

- In general, the majority of the sanitary piping appears to be in fair condition, with locations that have been recently renovated or repaired with piping in good condition.

Lab Waste systems:

The existing school does not currently have a central acid neutralization tank or point of use tanks at the classroom sinks. The Science classroom sinks consisted of epoxy sinks, with outdated faucets. Some faucets have been replaced with newer faucets without vacuum breakers. Emergency eyewashes are provided at the sink. The sinks are piped with glass piping & fittings.

Deficiencies as it relates to current Codes:

- The lab waste system is dependent on the chemicals being used by the school staff. If the chemicals used are deemed to be hazardous, a lab waste Neutralization system may be required by code

Condition:

- In general, the majority of the science classroom fixtures have out lived their life expectancy, and are in poor condition.

Recommendations:

- It would be recommended that a proper neutralization tank be added at each sink, with polypropylene piping to replace the outdated glass piping.

Storm systems:

The main school storm drainage is made up of cast iron piping & roof drains

with no overflow system. The storm drains exit the building by gravity and ties into the site storm system.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- In general, the storm drainage piping appears to be in fair condition. The roof drain domes are in good shape and providing a level of protection to the storm system.

Recommendations:

- It would be recommended that the concrete pavers associated with the solar panels be replaced, as they are breaking down, and the concrete debris are being wasted down the main storm system, at this point it is likely that the storm piping is starting to build up with concrete debris creating a potential blockage.

Gas system:

- The gas meter is located at the back of the school building. The service is



Science Classroom Sink

APPENDIX I



Roof Drain



Deteriorating Concrete Pavers on Roof

provided with a pressure regulator pre-gas meter outside the building, as well as a dedicated line to feed the natural gas generator. The gas main enters the mechanical room and then distributes throughout the building to various gas fired pieces of equipment such as the boilers, and Water heaters.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- In general, the gas system appears to be in fair condition. The service itself

is in good condition, but the piping downstream of the exterior gas service regulators, which distributes throughout the building, has exceeded its lifespan.

Recommendations:

- It would be recommended the existing exposed gas piping outside be cleaned and painted with a fresh coat of rust inhibitive paint to extend the life of the gas service & Piping.

Kitchen waste:

The existing kitchen consists a three-pot sink, Prep Sinks, and multiple hand-washing sinks. The kitchen equipment



Natural Gas Generator



Gas Service and Meter

APPENDIX I

looked to be gas at one point and now has been replaced with Electric Cooking equipment. The existing 3-pot sink is provided with a Grease interceptor, and newer water booster heater.

Deficiencies as it relates to current Codes:

- Kitchen prep-sink is hard piped to the kitchen sanitary system. Prep sink are to be indirectly drained with air gap to floor drain to prevent possible sewage & fumes back up into fixture were food is being prepared.

Condition:

- In general, the majority of the kitchen waste piping appears to be in poor condition.

Plumbing fixtures:

Water closets:

Wall hung with manual flush valves, and Sloan sensor flush valves.

Urinals:

Wall hung with manual flush valves, and Sloan flush valves.



Three-pot Kitchen Sink Station

Lavatories:

Wall hung with a mix of manual faucets, and wall hung China or drop-in China sinks.

Water coolers:

A mix of original recessed stainless-steel bubblers & Elkay single level water cooler with bottle filler.

Emergency Stations:

Floor mounted emergency shower & eyewash stations.

Floor drains:

Variety of nickel bronze & stainless-steel floor drains / floor sinks, depending on application.

Utility Sinks / Mop Service Basin:

Mop basin with manual faucets.

Deficiencies as it relates to current Codes:

- None observed.

Condition:

- It appears that most bathroom flush valves are still using manual flush valves in poor condition. Some of the flush valves on water closets and urinals have been replaced with since the school was built & are in fair condition.
- It appears most bathroom faucets are still using manual faucets in poor / fair condition. ♦

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J Fire Protection Evaluation

General Evaluation:

The existing School is not protected by an automatic sprinkler system.

Code Compliance Assessment:

- Per the State Building Code, the facility is required to be fully sprinklered. The facility is not in Compliance with the existing Building Code.

Recommendations:

- Install a complete automatic sprinkler system. The existing water supply must be evaluated to determine flow and pressure capacities for the proposed fire protection system.

Applicable Codes and Regulations:

780 CMR, Ninth Edition

Chapter 9, Fire Protection Systems, Table 903.2: Buildings of Use Group E greater than 12,000 square feet shall be provided with a complete automatic sprinkler system designed in accordance with NFPA 13. This requirement negates alternatives or exceptions allowed under Section 901.2 where a partial system may be installed or alternative means of compliance may be considered.

Chapter 34, Existing Structures (International Existing Building Code 2009), Section 102.2.1.1: When existing buildings or portions thereof undergo additions or alterations, M.G.L. c. 148, § 26G may apply with respect to automatic sprinkler requirements. Requirements of this statute are enforced by the Fire Official.

M.G.L. c. 148 § 26G: Every building or structure, including any additions or major alterations thereto, which totals in the aggregate, more than 7,500 gross square feet in floor area shall be protected

throughout with an adequate system of automatic sprinklers in accordance with the provisions of the State Building Code.

“Major Alterations” has been defined in an advisory memorandum issued by the State Automatic Sprinklers Appeals Board as where the scope of work affects 33 percent or more of the total gross square footage or the costs not including sprinkler installation are estimated to be 33 percent or more than the assessed value of the building. ♦

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K Technology Evaluation

A description of the existing technology and security conditions at the Galvin Middle School is detailed below. Recommended upgrades or changes regarding a renovation or new construction will be enumerated in future technology narratives.

Switches

The current switching environment at the Galvin Middle School is chassis Aruba switches. The owner states these are currently reliable. Current network cabling is a mix of Category 5 and Category 5e. Some cabling is 20 years old, and most of it is reliable.

Phone System

The current phone system is by Mitel. It has a mix of Category 3 analog phones and Voice over IP (VoIP) phones. The system

is 4-5 years old and reliable. Mitel is the phone system in use across the district, and would be considered proprietary for any renovation or new construction. Every classroom currently has a desk phone and the system is integrated with the public address system (PA) to allow building pages using the phone system.

Public Address System

The PA system is a Telecor XL system, approximately 5 years old. It is reliable but these systems are approaching end of life and parts will become scarce over the next 5 years. There are no call buttons or emergency page buttons in the classrooms. The clock system needs to be frequently resynched. There are digital clocks currently in classrooms and offices. Exterior PA speakers are surface mounted horns, without enclosures. Telecor is a district



Data port availability



MDF

APPENDIX K

standard and will likely be considered proprietary.

Wireless

The wireless access points are by Ruckus. They are 3-5 years old and many are not in ideal locations in the classroom. There are plans in place to move the access points to better locations in the classrooms. Ruckus is a district standard, and may be considered proprietary. Current coverage and deployment locations are adequate. There is no outdoor wireless coverage currently in place.

IPTV

A video distribution system (other than streaming internet video) is not in use in the building.

Mass Notification System (MNS)

A mass notification system is not in use in the building. The PA system is used for emergency notifications, but a PA system is not supervised at the end points like a certified mass notification system.

Security Overview

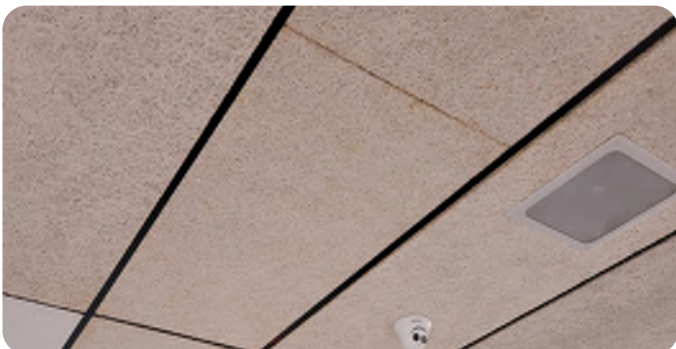
The intrusion system is by Napco (standardized in the district), and is approximately 3 years old. The system is reliable but some entries do not have motion detectors inside the building to monitor security breaches. Ground floor classrooms do not have motion detectors, and roof hatches do not have contacts. All exterior door contacts are tied into the intrusion system. Door contacts are



IT break fix area



Card reader



Corridor PA speaker



Classroom Clock

APPENDIX K

currently not tied into the access control system. Without contact integration with access control, with the intrusion system off during the day, staff and administration on the premises would not be aware of a forced or left open exterior doorway during occupied hours.

Access control is by Keyscan, and is approximately 10 years old. The system is reliable but limited in use. There are 4 to 5 doors with card access. The video entry system is by Hikvision, which is currently on the banned list of video surveillance products in the USA. There are two video entry systems in place; one at the main entry and one at the library entry. The freezer and fridge alarms are tied into access control for alerting staff when high temp conditions occur. There are no panic buttons deployed in the building to initiate an immediate lockdown with automatic reporting to emergency responders.

Video surveillance is a mix of different camera types. Video Insight is the current Video Management System, but this system has limited functionality. There are no software maps in use. Software maps allow the user to simply click a camera for its view anywhere in the building. The elevator does not have camera coverage. Hallways are covered, but the administration and badging area does not have camera coverage. Most entries into the building have camera coverage. The parking area and fields do not have video surveillance. There are some camera dead spots in stairwells. The full building perimeter is not covered. Currently, there is approximately 15 days of video storage using an on-premise recorder. There are no video analytics in use.



Wireless device



Projection and Speakers in Cafetorium

APPENDIX K

Classroom Technology

Interactive projectors are currently in use in the classrooms. These are about 8 years old. Function and reliability are leaning toward replacement over the next year or so. An AirTame unit is in use in the classrooms to provide wireless audio / video to the projectors. There are also hardwired USB and HDMI cables to the projectors. The media center has one ceiling mounted projector (non-interactive). There is another projector location in the media center, but it does not have a projector. Voicelift for the teacher is not in use in the building. All classrooms have an IPEVO presentation camera. Typical teaching devices are an iPad or laptop. Science labs utilize wireless devices. Each classroom has one wall with

a few surface mounted data drops; the data is not dispersed around the room. There is not enough hard wired data in the media center.

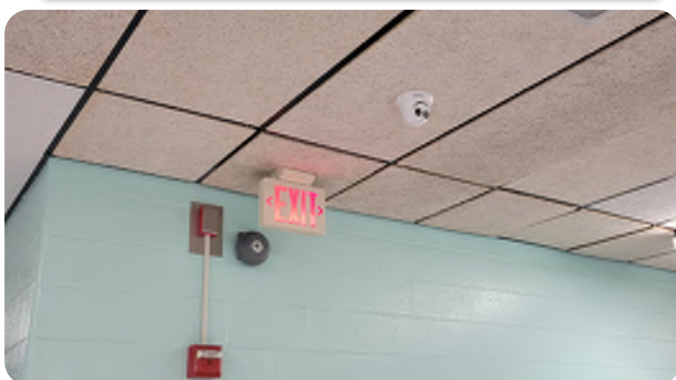
Information Technology Support

The IT break fix area is very small. More space is needed, as technology requirements have grown in the school. Rack space and cooling is sufficient in the main technology room of the school. A network cable color scheme is not in use.

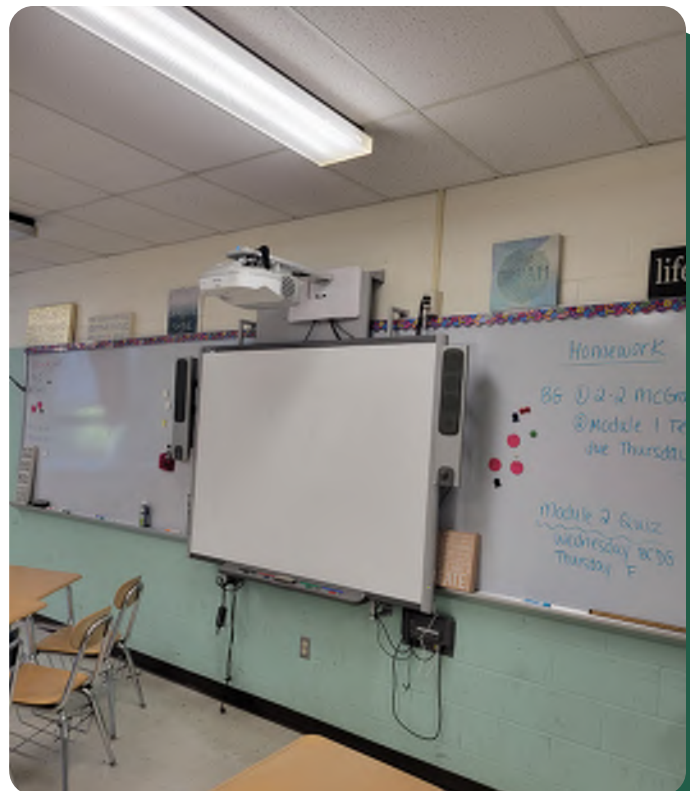
There are no plans to reuse any existing equipment; reliable equipment at the time of decommissioning would be distributed elsewhere in the district. ♦



Exterior security camera



Corridor security camera



Classroom interactive board and projector

APPENDIX K



Typical telephone unit in classroom



Projection capabilities in the Media Center



Raceway and technology ports in classroom

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L Evaluation of Energy Code Compliance

Energy Conservation

Buildings shall be designed and constructed in accordance with the 2015 International Energy Conservation Code (IECC), as amended by the Massachusetts State Building Code 780 CMR 13.00. These amendments apply to the IECC and to ANSI / ASHRAE / IESNA 90.1-2013. IECC Chapter 4 (Commercial Energy Efficiency) must be adhered to as this building is a Commercial Building. According to 2015 IECC Chapter 3 – Climate Zones, the existing Galvin Middle School site is in Climate Zone 5 (as is the entire state of Massachusetts).

The Galvin Middle School building was constructed in 1971. The emergence of a new energy code in 2000, which promoted an increased knowledge of exterior building envelope construction techniques and materials, has dramatically changed the way in which buildings are designed to deal with energy efficiency issues. Massachusetts State Building Codes 3407.1 and 3407.2 require that alterations of an existing building in which the use group is not changed, must comply to the energy conservation values detailed in Table 3407 of the code for any building elements (walls, windows, doors, roofs, or mechanical systems) which are altered during renovation.

The following are the 2015 IECC thermal requirements for a building envelope. “ci” is an abbreviation for continuous insulation.

- Roof - R30ci
- Walls (above ground) - R13+7.5ci
- Floors - R10ci
- Slab on Grade - R10

Deficiencies

Occupants have reported that spaces in the building are both too hot and too cold. Some spaces lack air conditioning, and some classroom unit ventilators are original to the building. The ventilation exhaust systems throughout the building are all original and at end of life. These failing systems do not support acceptable indoor air quality. The exterior walls of the building have no insulation and are composed of brick veneer with a 1” air cavity and CMU backup. It is assumed that roof insulation was added to the building during the 1997 roof replacement.

The IECC requires an R-13 and R-7.5 continuous insulation on the exterior walls. A significant retrofit would be required just



Exterior grille for unit ventilator at classroom, typ.

APPENDIX L

to bring the values up to Code minimum, and interior spaces would become smaller due to the thickness of the added insulation, furring, and new wall finishes to enclose the insulation.

Unit ventilators are the source of heat for typical classrooms. Unit ventilators were designed specifically for K-12 applications. For 70 or 80 years, they were the widely accepted solution for classroom heating and cooling. Over the past decade, the prevalence of operational and comfort problems, as well as an interest in moving away from gas-powered systems for renewable energy, have caused unit ventilators to phase out of popularity. In addition, unit ventilators dating from the original construction of the building exceed acceptable thresholds for background classroom noise and contribute to reduced learning outcomes. Some classrooms have

newer unit ventilators which are quieter and perform better, but many still employ the older units.

Some classrooms that lack air conditioning have window AC units, but these are a significant source of air infiltration, excessive background noise, and the small units employed are insufficient to meet classroom cooling loads. Some areas of the building are air conditioned by RTUs (roof top units).

The two main entrances to the school have double doors that open directly to the exterior with no vestibule. This causes excessive thermal transfer in all seasons, and increased humidity entering the building in the warmer months. For this reason, current building codes do not allow primary entrances without vestibules. ♦



Classroom with unit air conditioner



Building entrance with no vestibule

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