



ARROWSTREET

PRELIMINARY DESIGN PROGRAM

MARGARET A. NEARY ELEMENTARY SCHOOL

SOUTHBOROUGH, MA

MAY 21, 2024

PREPARED FOR

NEARY BUILDING COMMITTEE &
MASSACHUSETTS SCHOOL BUILDING AUTHORITY



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Jim Burrows

Project Director

Skanska USA Building Inc.

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21 May 2024

Janet Caron, Project Manager
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109

Southborough Margaret A. Neary – FSA – Preliminary Design Program Submission

Dear Mrs. Caron,

Pursuant to the Module 3 - Feasibility Study requirements and in accordance with Section 8.1.1.2 of the OPM Contract, we have reviewed and coordinated the materials associated with the enclosed Preliminary Design Program Submittal. We certify, to the best of our knowledge, that the information is accurate, complete and in full compliance with the MSBA's Feasibility Study requirements.

The submittal has been attached electronically as requested by the MSBA. We look forward to our next meeting with the MSBA team, in order to review our progress with the program to date.

Please contact us should you have any questions or concerns regarding this submission.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'JB', is positioned above the printed name.

Jim Burrows
Project Director
Skanska USA Building Inc.

MARGARET A. NEARY ELEMENTARY SCHOOL

Preliminary Design Program

May 21 2024

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VOLUME I

3.1.1 INTRODUCTION



Introduction

The Town of Southborough is located in central Massachusetts in Worcester County. It was historically a farming community and maintains a rural charm to this day. Officially incorporated as a town on July 17, 1727, it had ties to the American Revolution, including its own company of Minutemen. In addition to farming, the town was also home to various industrial operations, including the Cordaville Cotton and Woolen Mill, which is known for making blankets during the Civil War.

The Town of Southborough occupies an area of 15.7 square miles and its current population is approximately 10,409 according to the 2020 U.S. Census. Southborough is bordered by Marlborough to the North, Northborough and Westborough to the West, Hopkinton and Ashland to the South, and Framingham to the East.

The Town of Southborough operates three elementary schools that comprise the public schools of Southborough. The Mary E. Finn School currently houses pre-kindergarten through grade 1. The Albert S. Woodward Memorial Elementary School serves grades 2 and 3. And the Margaret A. Neary Elementary School serves grades 4 and 5. In addition, the Town of Southborough operates the Trottier Middle School serving grades 6 through 8. High school students in grades 9 through 12 attend Algonquin Regional High School, which combines students from both Northborough and Southborough.

The Town of Southborough is seeking to improve the Margaret A. Neary School to better serve the student population, including spaces that align with 21st century learning. The current school was originally built in 1970 and has had minimal improvements since. Two modular classrooms were added in 2001.

This Preliminary Design Program (PDP) report summarizes the existing conditions of the Margaret A. Neary Elementary School, documents the District's

educational program and initial space summary, evaluates potential sites and the site development requirements of a proposed project, and identifies preliminary options for a proposed project.

The District is considering three potential enrollment options for the future Margaret A. Neary Elementary School, grades 4-5, grades 3-5, and grades 2-5. The three options would serve the entire school district. In addition, four potential sites were initially identified and shortlisted to two feasible site options for consideration for a new or renovated Margaret A. Neary Elementary School or the existing Albert S. Woodward Memorial School located at 28 Cordaville Rd. These two sites and three grade level configurations resulted in 12 preliminary options. These grade level configurations and sites will be further studied and evaluated in the next phase of the project, the Preferred Schematic Report (PSR).

STATEMENT OF INTEREST SUMMARY

The District submitted a Statement of Interest Summary (SOI) to the MSBA in 2021. The SOI identifies the following Priorities. “Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.” “Replacement or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements” The building has been maintained over the years, but many systems are outdated and nearing their end of life, most notably the roof and electrical system. The building envelope consists of single pane windows, providing a significant source of heat loss and does not align with current energy codes and sustainability goals. Although temporary modular classrooms were added in 2001, the current spaces do not meet programming requirements, especially for special education, literacy programs,

mathematics, ELL intervention, Library/Media Center, and STEAM laboratory. At a minimum, reconfiguration is required to meet the goals of the contemporary educational program and the school district's Strategic Plan.

The SOI is dated June 21, 2021 and is attached to this report as Appendix A Statement of Interest.

INVITATION TO CONDUCT A FEASIBILITY STUDY

The MSBA's Board of Director's invited the Town of Southborough into the Feasibility Study phase for the Margaret A. Neary Elementary School at the April 26, 2023 board meeting. The Board Action Letter is attached in Appendix C - Invitation to Feasibility Study.

STUDY ENROLLMENT

During Eligibility Period, the MSBA and Southborough agreed to study three enrollment options. The District originally proposed a design enrollment for 556 students in grades 2-5. However, the MSBA projections indicated an enrollment growth trend over a 10 year period. A sensitivity analysis was also performed by the MSBA, which resulted in adjustments in the number of students to account for fluctuations to out-of-district enrollment patterns. The final agreed upon study enrollments are as follows:

- Grades 4-5: 305 students
- Grades 3-5: 450 students
- Grades 2-5: 610 students

Currently the Mary E. Finn Elementary School serves pre kindergarten through grade 1, the Albert S. Woodward Memorial Elementary School serves grades 2-3, and the Margaret A. Neary Elementary School serves grades 4-5.

The study enrollment letter and certification is attached in Appendix D - Design Enrollment Certification.

SUMMARY OF PROCESS

After the Invitation to Feasibility Study in June 2023,

the Town of Southborough selected Skanska as its Owner's Project Manager (OPM) in July 2023. Arrowstreet was selected as the Designer in December 2023. Together the team has completed the following:

- Arrowstreet and MLP met with representatives of the District, including administration, faculty, and staff, to develop the Educational Programming needs for the school and held three Educational Visioning Sessions or working meetings. In addition, a public visioning sessions was held.
- Conducted existing conditions analysis for the Margaret A. Neary School. This analysis has been completed based on walk throughs and reviews of existing assessments.
- Reviewed preliminary review of five potential sites, including further analysis of two sites (the existing Neary and Woodward school sites) deemed the most suitable for the new or renovated school.
- Conducted three Community Forums, two conducted in person and one conducted virtually.
- Held eighteen Building Committee meetings

RECENT CAPITAL PROJECTS AT MARGARET A. NEARY ELEMENTARY SCHOOL

Since the completion of construction of the Margaret A. Neary School in 1970, the following capital improvement projects took place:

- 1990 - Complete roof replacement
- 2001 - Addition of (2) temporary modular classrooms
- 2006-2007 - BMS system upgraded to an Automated Logic Control System with remote access
- 2007 - Upgrades to HVAC equipment generator, and electrical system included new clocks and communication system
- 2018 - Voice over IP system installed

TOWN OF SOUTHBOROUGH



TOWN HOUSE · 17 COMMON STREET · SOUTHBOROUGH, MASSACHUSETTS 01772-1662
(508) 485-0710

April 29, 2024

Project Coordinator
Massachusetts School Building Authority
40 Broad Street – 5th Floor
Boston, MA 02109

RE: Capital Budget Statement

At the end of Fiscal Year 2023, the Town of Southborough had total bonded debt outstanding of over \$26.7 million. Of this amount approximately \$24.0 million represents debt of the governmental activities and approximately \$2.7 million represents debt of business-type activities.

The Town's total debt balance, including unamortized bond premiums, decreased by over \$2.9 million. During the fiscal year the Town made regular scheduled maturities of governmental activities and business-type activities debt totaled approximately \$2.6 million and \$0.4 million, respectively. The remaining changes relate to unamortized bond premiums.

Remaining debt principal as of 6/30/24 is projected to be:

Septic Fund	\$177,365
General Fund Town	\$22,480,000
General Fund School	\$731,008
Community Preservation Fund	\$2,830,000
Water Enterprise Fund	\$2,983,582

The Town maintains a bond rating of “AAA” as set by Standard and Poor’s for general obligation debt.

At the Annual Town Meeting in March 2024 the Town authorized a total of \$2,186,000 for Town debt related to Town capital equipment.

State statutes limit the amount of general obligation debt a governmental entity may issue to 5.0% percent of its total assessed valuation. The current debt limitation for the Town is approximately \$152 million, which is in excess of the Town's outstanding general obligation debt. See below:

DEBT STATEMENT
of the
Town of Southborough, Massachusetts

(A) Equalized valuation under G.L. c.58, s.10C as of January 1, 2022		\$3,033,118,400
(B) Debt limit (5%)		\$ 151,655,920
Total outstanding debt	\$ 29,132,365	
Debt authorized but not yet incurred, including this issue	\$ 6,508,000	
(C) Gross debt	\$ 35,640,365	
(D) Amount of outstanding debt which is outside the debt limit	\$ 5,080,365	
(E) Amount of authorized but not yet incurred debt which is outside the debt limit (Itemized on page 2)	\$ 700,000	
(F) Outstanding debt outside the debt limit plus authorized but not yet incurred debt outside the debt limit (D plus E)	\$ 5,780,365	
(G) Net debt subject to the debt limit (C minus F)		\$ 29,860,000
Remaining borrowing capacity under debt limit (B minus G)		\$ 121,795,920

The current timeline is as follows. This is subject to change and contingent on a number of steps throughout the process.

- Feasibility Study – Ongoing through Fall 2024
- Schematic Design – Winter 2024
- Seek Funding from Town – April 2025
- Design Development and Public Bid Process – May 2025 to April 2026
- Construction Begins – May 2026
- Renovated/New School Open – August 2028

The Owner's Architect and Owner's Project Manager have estimated the range of the total project costs to be from \$63,000,000 to \$146,000,000, depending on the options. MSBA grant support is anticipated for this project at an effective reimbursement rate of approximately 18%, which establishes a target budget range for the Owner's share of approximately \$51,660,000 to \$119,720,000.

Please advise if we can be of further assistance.

Project Directory

Town of Southborough - Margaret A. Neary Elementary School

Project Directory

Name	Title	Office Phone	E-mail
Owner's Project Manager			
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Vincent Vadeboncoeur	Field Rep		vincent.vadeboncoeur@skanska.com
Owner			
Neary Building Committee - Voting Members			
Jason Malinowski	Chair & Capital Planning Rep.		jmalinowski@southboroughma.com
Denise Eddy	Vice Chair & Citizen-at-large		deddy@southboroughma.com
Andrew Pfaff	Clerk & Advisory Comm. Rep.		apfaff@southboroughma.com
Roger Challen	School Comm. Rep.		rchallen@nsboro.k12.ma.us
Kathryn Cook	Select Board Rep.		kcook@southboroughma.com
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Town of Southborough - Margaret A. Neary Elementary School

Project Directory

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Educational Consultant				
MLP INTEGRATED DESIGN				
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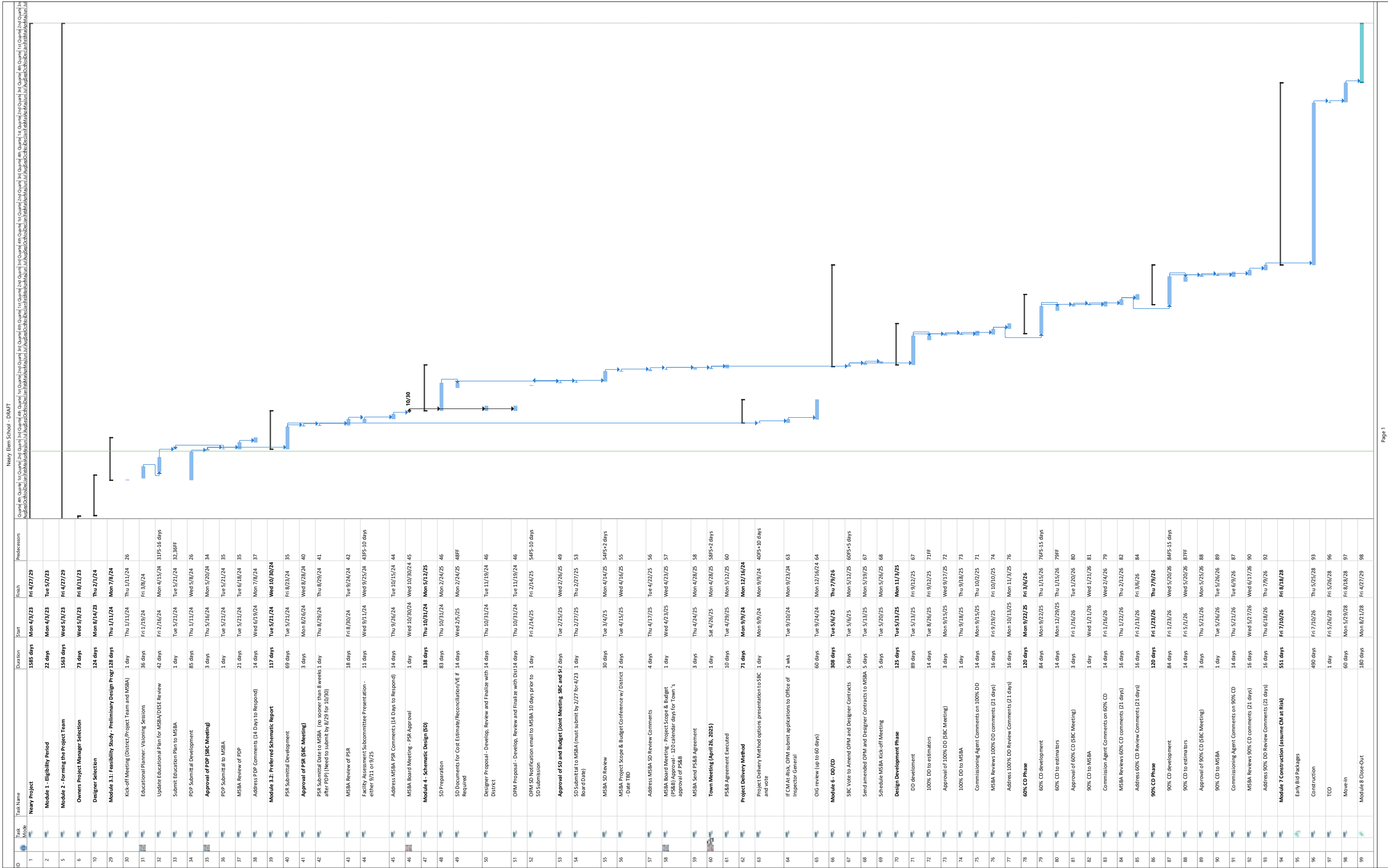
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Irmak Turan				ituran@thorntontomasetti.com
Vamshi Gooje				VGooje@ThorntonTomasetti.com

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Pamela Perini, PSP	Principal Security Consultant	781-788-6674		pperini@pamelaperiniconsulting.com
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Project Schedule



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The Public Schools of Southborough

Educational Plan

Margaret A. Neary Elementary School Building
Project

MODULE 3: PRELIMINARY DESIGN PROGRAM

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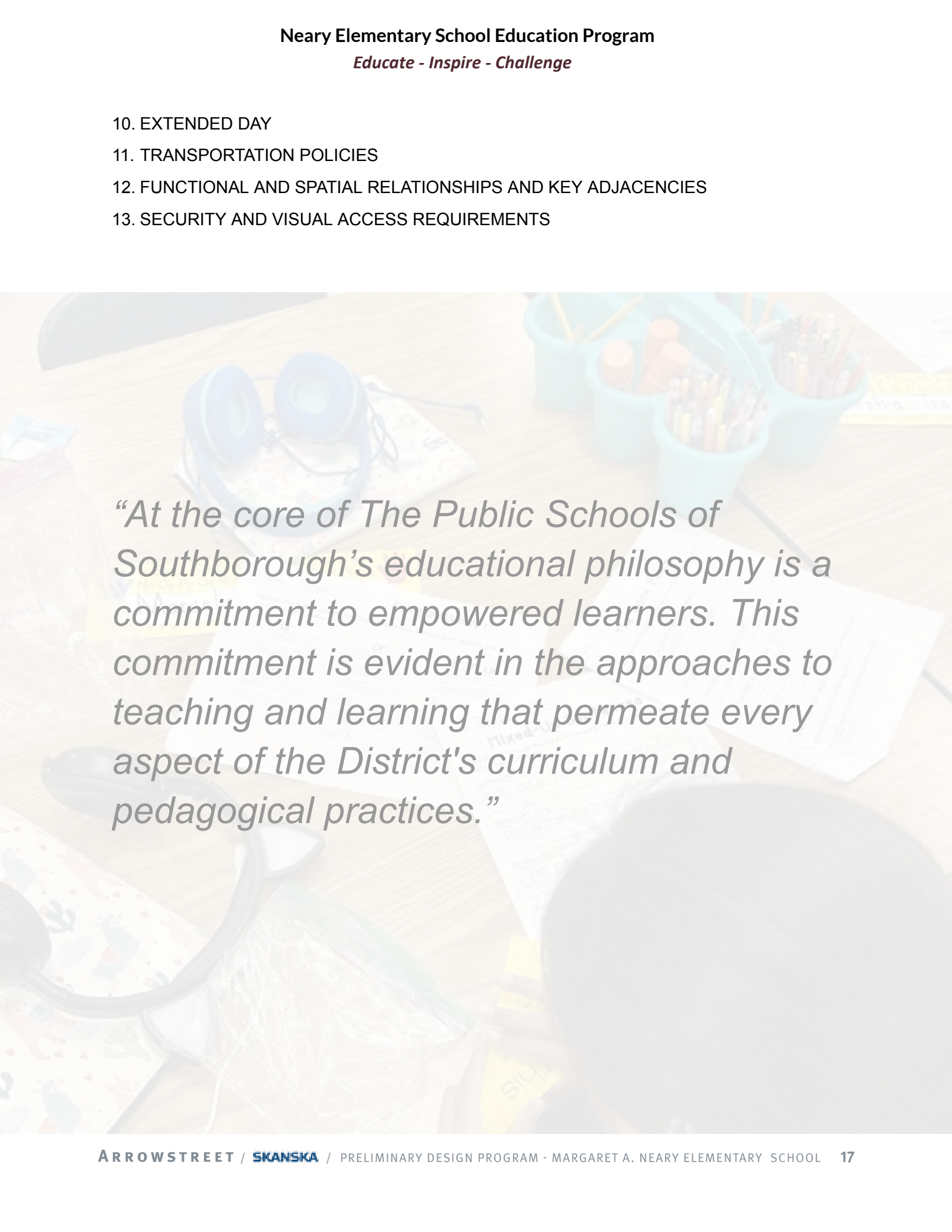
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“At the core of The Public Schools of Southborough’s educational philosophy is a commitment to empowered learners. This commitment is evident in the approaches to teaching and learning that permeate every aspect of the District’s curriculum and pedagogical practices.”

INTRODUCTION

The Public Schools of Southborough, guided by its mission to Educate, Inspire, and Challenge, embarked on a forward-looking journey in the 2019-2020 academic year with the strategic planning process culminating in *Vision 2026: Educate, Inspire, Challenge*. This roadmap, crafted through the collaborative efforts of a broad spectrum of stakeholders—including parents, community members, educators, students, and school and District leadership—sets the course for an educational experience that not only meets today's standards but anticipates the needs and possibilities of tomorrow.

In the subsequent year, the District's commitment to inclusivity and excellence prompted a District equity audit in partnership with an outside consulting group, a critical step toward understanding and enhancing how the District's policies, practices, and systems affect all members of the school community, especially those historically marginalized.

In *Vision 2026: Educate, Inspire, Challenge*, the District articulates the profile of a learner who will navigate the complexities of the modern world as:

Collaborators

- Enrich the learning of self and others through teamwork.
- Solicit and respect diverse perspectives and contributions.
- Seek, contribute, and react to feedback to achieve shared outcomes.
- Recognize and leverage strengths to build collective commitment, action, and understanding.

Critical and Creative Thinkers

- Transfer and connect knowledge and skills to deepen understanding.
- Demonstrate thinking that is clear, rational, open-minded, and informed by evidence.
- Use disciplinary knowledge and skills in routine and innovative ways.
- Make informed decisions, solve problems, and use a variety of tools to deepen learning.

Communicators

- Articulate thoughts and ideas using oral, written, and non-verbal communication skills for a range of purposes and audiences.
- Listen to decipher meaning, including knowledge, values, attitudes, and intentions.
- Use technological skills and contemporary digital tools to explore and exchange ideas.

Socially and Civically Engaged

- Demonstrate personal, civic, and social integrity through ethical and empathetic behaviors.
- Recognize individual and communal impact on others and the natural world.
- Value and embrace diverse cultures and unique perspectives through mutual respect and open dialogue.

Growth-Oriented

Neary Elementary School Education Program

Educate - Inspire - Challenge

- Cultivate positive attitudes and habits about learning.
- Pursue one's own interests and curiosity to experience new learning.
- Consistently improve the quality of one's own thinking by skillfully analyzing, assessing, and reconstructing.
- Persist to accomplish difficult tasks and to overcome academic and personal barriers to meet goals.

Healthy and Balanced

- Develop and demonstrate awareness, sensitivity, concern, and respect to connect with self and others' feelings, opinions, experiences, and cultures.
- Use reflective practices to understand one's personal strengths, challenges, and passions.
- Make choices to support a lifestyle that is healthy, both physically and mentally.
- Demonstrate resilience through the ability to manage emotions, stress, and challenges.

The Public Schools of Southborough's work is anchored by six core values that guide all members of the learning organization: Integrity, Empathy, Inclusivity, Equity, Perseverance, and Respect. These values guide all interactions and inform its policies and practices, ensuring that the educational environment is supportive, challenging, and accessible to all.

To realize the District's vision, the District's work is centered around five strategic objectives:

- Empowering Learners: Implement instructional practices that engage students in developing and demonstrating their knowledge and skills through rigorous, innovative, and relevant learning experiences.
- Equity of Opportunity: Provide all students access to challenging and culturally responsive learning experiences that meet their individual needs.
- Healthy and Balanced Learners: Prioritize the social, emotional, and physical well-being of students.
- Educator Learning and Leadership: Demonstrate continual growth through professional collaboration.
- Finance and Operations to Support Teaching and Learning: Develop, support, and operate sustainable, functional, and well-maintained schools.

In the District's commitment to continuous improvement, it completed an equity audit to better understand and address the disparities within its systems, policies, and practices. Recognizing that true equity is an ongoing process, the District is committed to fostering an environment where every member of the community is equipped to view their roles through an equity lens, continuously working towards an inclusive and equitable educational landscape.

In a time of rapid change and complex challenges, The Public Schools of Southborough remain committed to educating, inspiring, and challenging ALL students to be prepared for a modern world.

Neary Elementary School Education Program

Educate - Inspire - Challenge

The Statement of Interest submitted to the Massachusetts School Building Authority (MSBA) in 2022 articulates that the current Margaret A. Neary Elementary School building only allows for basic functionality and is insufficient for the delivery of the educational program. While maintained over the years, the majority of the facility's building systems and components are nearing the end of life expectancy. To support this determination, the District contracted with Vertex Companies, Inc. to complete a Facilities Conditions Assessment (March 2021). This assessment confirmed the need for renovation or replacement of the roof, electrical, and other building modifications to meet building code requirements. The District's priority is to modernize the Margaret A. Neary Elementary School to a condition that rectifies current deficiencies and satisfies projected future requirements for educational programs, such as spaces with integrity for world language, art, music, science, and technology.

At the core of The Public Schools of Southborough's educational philosophy is a commitment to empowered learners. This commitment is evident in the approaches to teaching and learning that permeate every aspect of the District's curriculum and pedagogical practices. By infusing technology seamlessly into daily activities, the District enables students to explore and pursue their interests and allows teachers to provide all students access to learning. This educational philosophy is further enriched by an integrated curriculum that promotes inquiry-based and interdisciplinary experiences, seamlessly incorporating STEAM (Science, Technology, Engineering, Arts, and Mathematics) principles.

Central to the District's approach is the application of Universal Design for Learning (UDL) principles and a multi-tiered system of support. These frameworks ensure that instruction is accessible and challenging for all learners, providing multiple pathways to understanding, engagement, and expression. By doing so, the District guarantees that every student has the opportunity to exercise agency in their learning journey.

Small group instruction is pivotal to ensure the success of each student. Through targeted and responsive teaching methods, students receive the support and enrichment they need to thrive socially, emotionally, and academically.

Recognizing the essential role of professional collaboration, The Public Schools of Southborough have invested significantly in developing a culture of professional collaboration among educators. Teacher teams are an integral part of our educational ecosystem, regularly convening to analyze achievement data, exchange insights on student work, develop instructional resources, and plan coherent and impactful lessons.

To further support this culture of collaboration, it is essential that a new facility is designed with the dual purpose of enhancing professional collaboration among staff during the school day and providing versatile spaces for educators to engage with families in both private and public settings. A design needs to include spaces that are adaptable and promote effective collaboration.

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In 2022, The Public Schools of Southborough, in collaboration with the Town of Southborough's Capital Planning Committee - School Research Subcommittee, completed a [Grade Level Configuration Evaluation](#). The evaluation took into consideration current facilities, enrollment, and educational programming. The evaluation resulted in a recommendation to study the reduction of the number of elementary school transitions from two transitions to one transition. Currently, elementary students experience school transitions from grades 1-2 and grades 3-4.

As part of the feasibility study, the District is required to study three enrollment alternatives: 1) Grades 4-5, 2) Grade 3-5, and 3) Grades 2-5.

Alternative 1:

Grades PreK-1: Mary E. Finn Elementary School

Grade 2-3: Albert S. Woodward Memorial Elementary School

Grades 4-5: Margaret A. Neary Elementary School

Alternative 2:

Grades PreK-1: Mary E. Finn Elementary School

Grade 2: Albert S. Woodward Memorial Elementary School

Grades 3-5: Margaret A. Neary Elementary School

Alternative 3:

Grades K-1: Albert S. Woodward Memorial Elementary School

Grades 2-5: Margaret A. Neary Elementary School

The District's recommendation, which was considered during MSBA's Eligibility Phase, was the 2-5 grade configuration as it provides benefits, which include:

1. Provides for greater collaboration and vertical curriculum alignment between grades 2-5;
2. Allows and maximizes District resources and builds a greater sense of school community;
3. Reduces the number of school transitions;
4. Provides more opportunity to maximize resources (people and materials);
5. siblings within the grade range to be at the same school, facilitating both bus transportation for children in the same family as well as parental transportation to and from school and/or extended careand;
6. Reduces the amount of time students are on buses and the number of transportation routes, which is a logistical benefit as well as an avoidance of significant additional costs that would require financial resources to be redirected from the educational program (see accompanying document);

Visioning Summary

In the winter of 2024, members of The Public Schools of Southborough – including leadership, staff, parents, and community members – participated in visioning and programming sessions

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led by Educational Planner Mike Pirollo (MLP Integrated Design) and Arrowstreet. Each session was part of a collaborative process designed to inform the Margaret A. Neary Elementary School Massachusetts School Building Authority (MSBA) Feasibility Study and pre-design process.

Utilizing school tours, observational building walk-throughs, program verification meetings, and visioning sessions, participants worked through a step-by-step process aimed at capturing their thinking around the following key areas:

- Educational, architectural, and community goals and priorities
- Child development, including the physical, academic, and social-emotional needs of the elementary learner
- Impacts of various grade configurations and design enrollments
- Vision of teaching and learning, including practices, strategies, programs, and structures
- A vision of the ideal learning environment, including space types, design features, and adjacencies

Overarching Project Goals & Priorities:

At the core of the District's educational vision are a series of overarching goals:

- Students and teachers are at the heart
- Spaces and instructional practices that support innovation in education
- Supporting a climate of belonging, community, connection, and well-being
- Flexible, adaptable space to support equitable and active access
- Opportunities for outdoor and indoor connection
- An academically, financially, and environmentally sustainable building
- Long-term adaptability
- A logical and efficient building

Participants

Name	Title:
Greg Martineau	Superintendent
Stefanie Reinhorn	Assistant Superintendent
Kathleen Valenti	Principal
Steve Mucci	Principal
Clayton Ryan	Principal
Megan Kelty	ELA Coordinator
Helene Desjardins	Assistant Director of Student Support
Jennifer Lipton-O'connor	Coordinator of SEL
Kathy Lizotte	Mathematics Coordinator
Julie Doyle	Director of Instructional Technology
Mary Ellen Duggan	District Wellness Coordinator and Nurse Leader
Selvi Oyola	Director of Multilingual Learners & Equity
Jennifer Henry	Early Childhood Administrator
Jason Malinowski	Neary Building Committee Chairperson
Roger Challen	School Committee Member

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Chelsea Malinowski	School Committee Member
David Finneran	Neary Teacher & STA Representative
Kristin Theve	Neary Teacher
Jen Turieo	Neary Teacher
Lisa Goulet	Woodward Teacher
Jill Henebury	Woodward Teacher
Kristin Peterson	Finn K Teacher (K Team Leader)
Alysun Stephens	Finn Teacher
Nutan Mathew	Specialist
Tiffany Goode	Specialist
Jeanette Morgan	Finn Music Teacher (Specialist Team Leader)
Gela Ebert	ELPAC Co-Chair
Marie Sajous	ELPAC Co-Chair
Sarah Fulton	PTO
Stephanie Iodice	PTO
Kristin Gould	PTO
Matt Gilmore	NSPAC
Andrea Hamilton	NSPAC
Tim Davis	Director of Southborough Recreation
Kathy Cook	Select Board Member
Ryan Newell	Police Chief

GRADE & SCHOOL CONFIGURATION

School Facilities Summary

The Public Schools of Southborough has four school facilities, serving grades PreK-8. All of the District's schools have strong school cultures, exceptional faculties and staff dedicated to students, and parents and guardians who are invested in The Public Schools of Southborough.

Mary E. Finn Elementary School

The Mary E. Finn Elementary School is an early childhood center currently serving students in grades Pre-Kindergarten to Grade One. The building was originally constructed in 1967 and was then renovated and expanded in 2000 to 76,000 square feet. The building's renovation was designed for the District's youngest learners.

Albert S. Woodward Memorial Elementary School

The Albert S. Woodward Memorial Elementary School currently serves students in Grade Two and Grade Three. The building site was the original middle school for Southborough until the P. Brent Trottier Middle School was built in 1998. The original building was torn down and the footprint was used to build the 68,000-square-foot facility, which opened in 2004.

Margaret A. Neary Elementary School

Originally constructed in 1970, the Margaret A. Neary Elementary School currently serves Grade Four and Grade Five. The building is a 62,736 gross square foot facility on a single level located on an eighty-one (81) acre site. The Margaret A. Neary Elementary School is the only

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Southborough school that has not yet been renovated.

P. Brent Trottier Middle School

The P. Brent Trottier Middle School established in 1998 and expanded in 2004 is a 130,000 square foot middle school for students in Grade Six, Grade Seven, and Grade Eight. The three-year experience provides students with the skills and knowledge to be successful in high school.

Current student enrollment in the five schools as of March 2024 is:

School	Current Grade Configuration	Current Enrollment
Mary E. Finn Elementary School (Finn)	PreK-1	260
Albert S. Woodward Memorial Elementary School (Woodward)	2-3	248
Margaret A. Neary Elementary School (Neary)	4-5	282
P. Brent Trottier Middle School (Trottier)	6-8	409

Current

The Margaret A. Neary Elementary School has nineteen classrooms, fourteen of the classrooms are split evenly between fourth and fifth grades, and five of the classrooms are designated as Central Office. Each classroom, designed with a dividing wall for coats and student belongings results in a reduced instructional area. This constraint, coupled with limited storage within classrooms, necessitates the use of additional spaces within the school to house curriculum supplies and materials.

Class sizes at Neary average between 18 to 22 students, yet the infrastructure, particularly in specialty areas like art and music, falls short of optimal educational environments. These subjects are taught in spaces not originally intended for their respective disciplines, affecting the quality of instruction and student engagement. There are no designated spaces for string lessons and instruments can be found lining the hallways. Similarly, the library's inadequate wiring and infrastructure hinder the library media specialist in offering STE infused media classes, failing to align with the educational needs of both teachers and students.

Physical education faces its own set of challenges, with two small gymnasiums that complicate the delivery of indoor PE classes.

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The English Language Development Program relies on modular classrooms that, despite being over two decades old and initially intended for temporary use, are still in operation today. These modules fall short of the spatial and environmental standards required for effective learning.

Special education and related services grapple with spatial constraints, utilizing whatever spaces are available, including areas not designed for instructional purposes. Meetings and administrative tasks often take place in less-than-ideal conditions, such as unheated conference spaces, shared offices, or converted closets used as offices. Grade-level teacher meetings are confined to the limited space of available classrooms.

The electrical infrastructure across Neary is antiquated, with a scarcity of outlets hampering the use of modern technological tools, thereby impacting teaching and learning.

Culinary services are compromised by an inoperative kitchen, including inadequate refrigeration and cooking appliances, requiring the P. Brent Trottier Middle School to function as a satellite kitchen, with meals being transported to Neary.

Lastly, parent pickup and drop-off is currently situated in the main parking lot and presents issues for pedestrian safety.

The District-run Southborough Extended Day Program functions as a before and after-school program for Southborough students. Currently, there is no office space for the program nor designated storage. The extended day educators use a partitioned portion of the faculty lunch room for storage and other make-shift spaces.

In the current grade configuration, school transitions demand significant efforts from the dedicated teachers and staff at Finn, Woodward, and Neary. They invest considerable time and energy in welcoming new families and ensuring a smooth progression for outgoing students. Since each elementary school is a two-year span, grade levels move quickly from entry to exit in the transition process. The process, starting as early as January, involves extensive inter-school meetings aimed at fostering a seamless transition, reflecting the commitment of District educators to student welfare.

However, this essential transitional phase also brings to light certain challenges that impact the efficiency of these endeavors. The different start and end times between schools complicate collaboration, making it difficult to synchronize efforts and share resources. This scheduling discrepancy not only hinders staff coordination but also affects vertical alignment meetings, which are crucial for maintaining continuity in educational objectives and strategies across grades.

For many students and their families, these transitions, although well-intentioned, can result in anxiety and stress. Despite the efforts to ease these shifts, the varied experiences of students indicate that transitions are still emotionally and educationally challenging.

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Parents and guardians, especially those with children across all three elementary levels, often express concerns regarding the logistical difficulties posed by disparate schedules, which complicate daily routines such as drop-offs and pickups.

In response to these challenges, it is essential to explore strategies that can streamline the transition process and enhance collaboration between the schools involved. This may include aligning school schedules to facilitate easier transitions for families and enabling more frequent and effective vertical alignment meetings. By doing so, we can minimize the disruption to students' educational experiences and alleviate the concerns of their families.

Improving the transition experience in The Southborough Public Schools is not just about logistics and scheduling; it is about creating a cohesive, supportive environment that nurtures student growth and reduces anxiety. Through improved communication, collaboration, and coordination, we can ensure that every student feels prepared, supported, and confident as they progress through their elementary school journey.

Proposed:

Design Alternative 1: Grades 4 and 5

School	Grade Span	Alt. 1 Enrollment
Mary E. Finn Elementary School	PreK-1	260
Albert S. Woodward Memorial Elementary School	2-3	248
Margaret A. Neary Elementary School	4-5	305
P. Brent Trottier Middle School	6-8	409

The vision for Margaret A. Neary Elementary School encompasses a redesign to foster an educational environment where every space is purposefully crafted to support and enhance the learning journey.

There is a strong desire within our community for the construction of a school that preserves a close-knit atmosphere. This vision includes the implementation of learning neighborhoods. Such a structural and pedagogical arrangement supports a sense of community even in configurations with multiple grade levels. By embracing this model, we aim to enhance educational experiences in a way that is both innovative and deeply aligned with the values of the Southborough community. More details of the composition of the learning neighborhood follows.

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Classroom design would prioritize flexibility, accommodating diverse groupings of students to support differentiated instruction and collaborative learning projects. Modern infrastructure would be a given, with classrooms outfitted to seamlessly incorporate technology into daily learning, ensuring that students are prepared for the digital age. Furthermore, small group rooms would be located between general education classrooms in each learning neighborhood, to support collaborative group work in break-out spaces and provision of specially designed instruction, academic intervention or extension lessons in close proximity to the classroom. Each learning neighborhood would include a learning commons that would serve as breakout space for differentiated learning and as a gathering space for larger groups of students and teachers. In the learning commons, flexible furniture and appropriate technology would support these goals.

Central to this vision is a library transformed into a modern media center, suited for fostering 21st-century media literacy skills. This space would become the heart of the school, a hub for innovation, learning, and discovery. The traditional library space would be enhanced with multiple learning areas including an adjoining STE classroom to support the specific digital literacy goals and science laboratory needs including sufficient storage for the computing devices, science tools and engineering materials. This space would be staffed by an instructional technology specialist and a library media specialist, both current members of the faculty. The art room would also be located adjacent to the media center and would be fully outfitted for technology infused art and digital literacy projects not only allowing for a STE inquiry focus but also providing for future flexibility in how spaces are used as educational demands and goals evolve. The art room would also be designed to meet the specific needs of the discipline with sufficient storage and space for creative endeavors.

In this design, music classrooms would be specifically planned to cater to their unique instructional needs, equipped with sufficient storage and spacious areas for students to freely explore. The gymnasium would be expansive, accommodating a comprehensive wellness program that nurtures students' physical education (PE), health education, and social emotional development. The gym would have a smaller space that can accommodate adaptive PE as well as yoga and dance.

Special education classrooms would be thoughtfully located in learning neighborhoods adjacent to general education classrooms, promoting inclusivity and allowing for a fluid transition between small-group instruction and mainstream classroom activities. These special education classrooms would include two substantially separate programs and learning centers for students on individualized education plans that require pull-out services. Adjacent to each substantially separate classroom would be a calming room that is available to all students in the learning neighborhoods. Related service providers (OT, PT, SLP) would benefit from designated spaces that ensure privacy and proximity to classroom activities, facilitating collaboration and accessibility. The school would feature dedicated areas for special education team meetings, assessments, and ensuring the highest quality continuum of services and appropriate levels of confidentiality.

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The proposed Neary School would also include designated offices for the school psychologist, team chairperson, and behavior specialist as well as a small group room for meeting with students and a testing space for assessing students. Importantly, there would be a conference room dedicated to special education meetings.

The proposed design would also include an instructional suite to support literacy, math and English Language Development (ELD) instruction. The instructional suite would have offices for the reading and math specialists that could accommodate small group instruction or small professional planning sessions with educators. English Language Development (ELD) teachers would each have a dedicated space sufficient to function as an office and an instructional classroom space for providing Tier 1 English Language Development instruction which must be provided outside the general education classroom. However, placing this classroom in close proximity to the general education classes promotes the inclusive culture to which the community is committed. With increasing numbers of English Language Learners (ELLs) in our community, an ELD classroom would be located between every two learning neighborhoods, able to service two grade levels. By being in close proximity to the learning neighborhoods, we would achieve our goals of inclusivity.

The instructional suite would be adjacent to a teacher collaboration space for each learning neighborhood. Educators would benefit from dedicated spaces for grade-level planning, professional learning, data analysis, and professional collaboration, enhancing the quality of instruction through improved instructional practices as well as shared resources and strategies. Between learning neighborhoods, a staff lunchroom would also serve as a teacher preparation space and provide workstations for educational support professionals and itinerant employees who do not have dedicated offices or classrooms within the building.

The cafeteria would not only house a fully operational kitchen but also offer flexible and efficient dining arrangements, making meal times a more enjoyable and social experience for all students. Furthermore, the redesign of the Neary Office space would prioritize a welcoming atmosphere that underscores the importance of safety, security and confidentiality for the entire school community.

This reimagined Margaret A. Neary Elementary School would stand as a testament to the exceptional teaching and learning that occurs within its walls. Every aspect of the building's design would reflect a commitment to safety, inclusivity, wellness, and the highest standards of educational excellence, creating a nurturing and dynamic environment where students, faculty, and staff can thrive.

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Design Alternative 2: Grades 3-5 at a Consolidated Margaret A. Neary Elementary School and Grade 2 at Woodward Elementary School

School	Grade Span	Alt. 2 Enrollment
Mary E. Finn Elementary School	PreK-1	260
Albert S. Woodward Memorial Elementary School	2	124
Margaret A. Neary Elementary School	3-5	429
P. Brent Trottier Middle School	6-8	409

*The proposed Neary school Design Alternative 2 matches the description for Design Alternative 1 scaled to accommodate three grade levels.

Reconfiguring the grade levels to encompass grades 3-5 at Margaret A. Neary Elementary School presents an opportunity to significantly enhance the educational journey for students. This adjustment promises a multitude of benefits stemming from a more stable and extended period at a single institution. Over the course of three years, students and their families have the opportunity to forge deeper and more meaningful relationships with faculty and staff, fostering a sense of belonging and community that is essential for a supportive learning environment.

This extended tenure at Neary would facilitate unparalleled collaboration among educators across the third, fourth, and fifth grades. Such collaboration is crucial for creating a cohesive and aligned educational experience, enabling teachers to build upon each other's work, share insights, and develop strategies that address the needs of all students more effectively. In turn, this unified approach can significantly enhance the consistency and quality of instruction that students receive.

Furthermore, a three-year span at Neary would allow for a more seamless continuum of services, particularly in areas such as special education. This stability is key for students requiring additional support, as it ensures they have sustained access to familiar resources and personnel dedicated to their success, minimizing disruptions and maximizing the effectiveness of individualized education programs.

The benefits of this grade-level configuration extend beyond the classroom. Neary educators, families and students have an additional year at the Neary school to build relationships and focus on teaching and learning.

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A three-year grade configuration fosters greater curricular coherence. With educators working closely within the same school, there is a greater opportunity to align curricula, ensuring that learning objectives are met sequentially and systematically. This alignment supports a more integrated and comprehensive approach to education, laying a strong foundation for student learning and achievement.

With this proposed reconfiguration, students and families would still experience two school transitions during their time, once from grade 1 to 2 and another from grade 2 to 3. Students and families would experience the Albert S. Woodward Memorial Elementary School for one year as it would house Grade 2.

Design Alternative 3: Grades 2-5 at a Consolidated Margaret A. Neary Elementary School and Woodward Elementary School

Proposed:

School	Grade Span	Alt 3 Enrollment
Mary E. Finn Elementary School	0	0
Albert S. Woodward Memorial Elementary School	K-1	260
Margaret A. Neary Elementary School	2-5	610
P. Brent Trottier Middle School	6-8	409

*The proposed Neary school Design Alternative 3 matches the description for Design Alternative 1 scaled to accommodate four grade levels.

Reconfiguring the grade levels to encompass grades two-five at Margaret A. Neary Elementary School presents an opportunity to significantly enhance the educational journey for students. The benefits include an extended period at a single school and the ability to maximize resources at the Neary School. Over the course of four years, students and their families have the opportunity to forge deeper and more meaningful relationships with faculty and staff, fostering a sense of belonging and community that is essential for a supportive learning environment.

In this configuration, collaboration among educators would span across second, third, fourth, and fifth grades. Such collaboration is crucial for crafting a coherent and aligned educational experience, enabling teachers to build upon each other's work, share insights, and develop strategies that address the needs of all students more effectively. This is true in the arts, music,

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physical education, library media, STE, and health classes, and all other academic subjects. There are also increased opportunities for sustained, embedded professional learning and collaboration. This alignment supports a more integrated and comprehensive approach to education, laying a strong foundation for student learning and achievement.

Furthermore, a four-year span at Neary would allow for a seamless continuum of services, particularly in areas such as special education and English Language Development. This stability is key for students requiring specially designed instruction, as it ensures they have access to familiar resources and personnel dedicated to their success, minimizing disruptions and maximizing the effectiveness of individualized education programs. Additionally, this configuration allows for cross-grade level groupings to support students with intensive special needs and for students to have more appropriate cohorts of peers with whom they work.

The benefits of this grade-level configuration extend beyond the classroom. In this configuration, students would transition once during their elementary school years. As a result, the time investment for transitioning students can be shifted to a focus on teaching and learning.

In summary, transitioning to a grades two-five configuration at Margaret A. Neary Elementary School offers a strategic approach to enriching the educational experience. It also achieves important goals of maximizing collaboration, achieving curriculum coherence, and reducing school transitions by one.

SCHOOL COMMITTEE CLASS SIZE POLICY

Current

The Public Schools of Southborough's [Class Size Policy](#) sets forth guidelines for determining class sizes for core courses in grades K-8, grounded in the school district's Core Values, Mission Statement, and Budget Priorities as established by the School Committee. It takes into account several criteria when deciding on class sizes, including class composition (which encompasses academics, behaviors, emotional support, language needs, and social aspects), class enrollments, educational philosophy, facility and financial constraints, and legal mandates.

The School Committee has recommended desirable class size ranges that vary by grade level: 16-20 students for grades K-2, 16-22 students for grades 3-5, and 18-22 students for grades 6-8, aiming to optimize the learning environment and educational outcomes.

The process for implementing these desirable class size ranges involves a yearly assessment during the budgetary process, where each school's principal, in collaboration with onsite staff, proposes staffing needs to the Superintendent in alignment with the Class Size Policy. Should class sizes exceed these desirable ranges due to various constraints or changes in student numbers, a thorough review process is initiated. This involves gathering input from teachers and administrators to make informed decisions on how to best support the affected classes, possibly including recommendations for additional resources or support. Moreover, should unforeseen conditions arise during the school year that impact the policy's implementation, principals are

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tasked with developing action plans, in consultation with teaching staff, to address these challenges, thereby ensuring that class sizes remain conducive to effective teaching and learning.

Proposed

Regardless of the preferred option, there is not a planned change to the District's Class Size Policy. The District is committed to fostering an inclusive educational setting, as emphasized in its Class Size Policy. Adhering to the policy is essential to accommodate the varied learning profiles present within each classroom, enabling educators to effectively engage and educate every student. Recognizing the legal and ethical mandate for placing students in the least restrictive environment possible, our classrooms have become increasingly diverse. This diversity underscores the importance of smaller class sizes, which are pivotal in allowing teachers to craft and deliver lessons that cater to the unique needs of each student, thereby maximizing their potential. The community is committed to maintaining small class sizes so we will design to remain consistent with the District's policy language, 16-20 students for grades K-2, 16-22 students for grades 3-5, and 18-22 students for grades 6-8.

SCHOOL SCHEDULING METHODS

Current

The process of crafting elementary school schedules is a thoughtful and dynamic exercise, undertaken annually with a commitment to continuous improvement and alignment with the District's educational priorities and District time on learning guidelines. District administrators and school leaders convene in collaborative sessions to ensure that the scheduling framework not only reflects the overarching goals and guiding principles of the District's educational mission but also optimizes the learning experience for every student. This partnership extends to include a dedicated committee of teachers, allowing for a broad spectrum of insights and expertise to guide decision-making, ensuring that the schedules are crafted with a keen awareness of both student needs and educational standards.

Elementary Time on Learning Guidelines

Content Area (K-2)	Minutes each Day (Minimum)	Notes
ELA (Reading and Writing)	120	<i>Integrating Science and History/Social Science, Digital Literacy and Computer Science (DLCS), Social Emotional Learning (SEL)</i>
Mathematics	75	
Science or History/Social Science	45 mins, 3 days per week	<i>Integrating Reading and Writing, DLCS, SEL</i>
Specials/World Language	45 - 60	
Lunch/Recess	Up to 50	

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Snack/ Stretch	Up to 10	
Morning Meeting	30	
	375	

Content Area (Gr. 3-5)	Minutes Per Day (Minimum)	Notes
ELA (Reading and Writing)	120	<i>Integrating Science and History/Social Science, Digital Literacy and Computer Science (DLCS), Social Emotional Learning (SEL)</i>
Mathematics	75	
Science or History/Social Science	45 mins, 3 days per week	<i>Integrating Reading and Writing, DLCS, SEL</i>
Specials/ World Language	45 - 60	
Lunch/Recess	Up to 50	
Snack/ Stretch	Up to 10	
Morning Meeting	30	
	375	

As the student experience is designed, it is done with the understanding of the pace of learning, the importance of balance, and the necessity of providing an environment conducive to social emotional and academic growth. The structured student day is designed to maximize engagement, foster educational exploration, and support the well-being of every learner.

In addition, scheduling endeavors to maximize time for grade-level educators' common planning, data teams, and cross-grade level educator collaboration. Currently, with the varying start and end times, cross-grade collaboration between schools happens infrequently.

The scheduling process within each school adopts a collaborative team-based methodology, emphasizing the strategic timing of grade-level specials to coincide across each grade level. This alignment is designed to provide teachers the opportunity for weekly common planning time, facilitating cross-curricular planning initiatives and enabling a consistent and collective review of data. The approach enhances the coordination and quality of instruction and creates a more unified and integrated educational experience for students. Furthermore, this scheduling strategy benefits service providers by creating dedicated time slots to engage with specific grade levels for specific disciplines as required, ensuring that the needs of all students are met more efficiently and effectively. Through this approach to scheduling, schools are able to optimize instructional support and foster a more cohesive learning environment.

For the successful inclusion of subjects like art, music, physical education, library, and world language classes within the new scheduling framework, the specific design alternative chosen will directly influence the number of dedicated teaching spaces required, as noted in each of the subsections below. This provision is essential to support the scheduling of Specials, guaranteeing that each discipline benefits from an environment designed to meet its distinct

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instructional demands. The decision on the precise number of teaching stations necessary will be based on the design alternative selected, showcasing the District's commitment to offering a balanced and enriched educational experience for students through thoughtfully designed and equipped spaces.

Neary Master Schedule

	Monday		Tuesday		Wednesday		Thursday		Friday	
	Fourth	Fifth	Fourth	Fifth	Fourth	Fifth	Fourth	Fifth	Fourth	Fifth
8:50 - 9:35		Art - Dolan PE - Schwapp Music - Solito Lib/IT - Finnegan	Art - Grosser	PE - Turion, Lib/IT - Wallach	Art - Thorne PE - Finnegan Lib/IT - Ahrens	Music - Collins	Music - Grosser	Lib/IT - Turion, PE - Wallach	Music - Ahrens PE - Finnegan Lib/IT - Thorne	
9:35 - 10:20		Art - Schwapp PE - Dolan Music - Finnegan Lib/IT - Solito	PLC Grade 5/SEL Inf by Grade 4 and Spanish		Lib/IT - Head	Music - Dolan PE - Schwapp	PLC Grade 6/SEL Inf by Grade 5 and Spanish		Lib/IT - Head	Music - Schwapp PE - Dolan
10:20 - 10:30										
10:30-11:05		Art - Wallach Lib/IT - Turion		Art - Solito PE - Finnegan Lib/IT - Schwapp	Lib/IT - Grosser, PE - Fisher	Art - Turion, Music - Wallach	Music - Head	Lib/IT - Schwapp PE - Collins	Lib/IT - Fisher	Music - Turion, PE - Wallach
11:05-12:00			Art - Finnegan Lib/IT - Thorne PE - Ahrens		Lib/IT - Fisher, PE - Grosser, Art - Garbala		Music - Garbala	PE - Finnegan Lib/IT - Solito	Lib/IT - Grosser	
12:00-12:45 Grade 4 Lunch			Fourth Grade Art Studio			Lib/IT - Wallach PE - Turion				PE - Solito Lib/IT - Finnegan
12:45-1:30 Grade 5 Lunch	Art - Fisher PE - Grosser Lib/IT - Garbala		PE - Fisher		Fifth Grade Art Studio		Music - Thorne Lib/IT - Finnegan PE - Garbala			
1:30-2:05	Lib/IT - Finnegan PE - Thorne, Art - Ahrens		PE - Head	Lib/IT - Dolan	Art - Finnegan PE - Solito	Music - Finnegan PE - Thorne Lib/IT - Ahrens			Lib/IT - Garbala	PE - Collins
2:15-3:00	PE - Head	Lib/IT - Collins	Art - Head PE - Garbala	Lib/IT - Collins		Art - Collins	Music - Fisher PE - Ahrens	Lib/IT - Dolan		Band/Orchestra

Woodward Master Schedule

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Albert S. Woodward School Master Schedule					
Time:	2023-2024				
	Monday	Tuesday	Wednesday	Thursday	Friday
8:55 - 9:25		Grade 2 Enrichment	Grade 3 Enrichment		9:00 - CARE Block
9:30 - 10:15	Art: McLean Lib Media: Farrer PE: Serra	Art: Farrer Lib Media: Kelleher PE: McLean	Art: Serra Lib Media: McLean PE: Farrer	Lib Media: Serra Music: McLean PE: Farrer	Lib Media: Coyle PE: McLean Music: Farrer
10:15 - 11:00	Art: Kelleher Lib Media: Farrer PE: Coyle Strings: Lebane	Art: Coyle Lib Media: Kelleher PE: Serra Strings: McLean/Lebane	Lib Media: McLean PE: Kelleher Music: Coyle	Lib Media: Serra Music: Kelleher PE: Coyle	Lib Media: Coyle PE: Kelleher Music: Serra
11:00 - 11:45	Art: Lebane PE: Robinson Music:	Art: Robinson Lib Media: Lebane PE: Hennebury Music:	Lib Media: Hennebury PE: Robinson Music: Lebane	Lib Media: Robinson PE: Lebane Music:	Music: Robinson PE: Lebane
11:45 - 12:30	Art: Hennebury Strings: Kelly	Lib Media: Lebane Strings: Kelly	Lib Media: Hennebury	Music: Hennebury	PE: Hennebury Lib Media: Kelly
Grade 2 Lunch 11:45					
Grade 3 Lunch 12:30					
12:45 - 1:30	Lib Media: Black PE: Guccione	Art: Black	Music: Black PE: Guccione	PE: Black Lib Media: Robinson	Music: Guccione
1:30 - 2:15	Art: Duchane Lib Media: Black PE: Fry Strings: McLean	Art: Fry Lib Media: Duchane Strings: Hennebury	Lib Media: Fry PE: Duchane Strings: Hennebury	Lib Media: Guccione Music: Duchane PE: Fry	Lib Media: Kelly PE: Black Music: Fry
2:15 - 3:00	Art: Kelly Strings: Kelleher	Art: Guccione Lib Media: Duchane Music: Kelly	Lib Media: Fry PE: Kelly Strings: Kelleher	PE: Kelly Lib Media: Guccione Strings: Duchane	PE: Duchane
3:00 - 3:10					

The current scheduling model for supporting students with special needs at Neary and Woodward involves collaboration among classroom teachers and special educators, and the plans for the new Neary School are designed to continue this approach. Emphasizing an inclusive philosophy, the majority of academic support and interventions are scheduled to be integrated within the classroom setting to ensure all students' needs are met in a least restrictive environment. For students requiring a quieter space for concentration or multilingual learners in need of specialized language instruction, additional support outside the classroom is scheduled. Consequently, the new Neary design would include smaller, strategically placed learning spaces within each learning neighborhood for focused and targeted instruction. These spaces would be intentionally located near general education classrooms to optimize learning time for all students, and best support students' schedules.

Additionally, the District acknowledges that the educational landscape of tomorrow may diverge significantly from today's practices. Therefore, it is imperative to prioritize a facility design for forthcoming schools that can adapt to these evolving requirements. An illustrative focus lies in fostering an environment conducive to nurturing students' capacities in digital literacy, communication, and collaboration. Consequently, the District commits to revisiting scheduling procedures and time allocations, ensuring ample opportunities for students to engage in STE

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Learning Labs and dynamic, adaptable spaces. These spaces will empower students to intricately plan, execute, and articulate their learning experiences through flexible configurations tailored to their needs.

Proposed

There are no proposed changes to the Time on Learning expectations or the approach to student and educator schedules. However, the District continues to support educators in collaborating across disciplines for integration across subjects. This is a crucial component of the District's approach to scheduling and professional planning in order to meet the time on learning guidelines and addressing the full array of standards while also provided a well-rounded experience that includes world language and the fine and performing arts. For example, the integration of digital literacy and computer science standards into core subjects may mean that the work that an instructional technology specialists is leading in the STE Lab is co-designed with a general education teacher and addresses social studies standards as well.

Design Alternatives 2 and 3 would impact the start and end time of the school day.

Design Alternative 1: Grades 4-5 at Margaret A. Neary Elementary Elementary School

School	Start Time	School End Time
Finn	9:10 AM	3:25 PM
Woodward	8:55 AM	3:10 PM
Neary	8:45 AM	3:00 PM

Design Alternative 2: Grades 3-5 at a Consolidated Margaret A. Neary Elementary School

School	Start Time	School End Time
Finn	9:10 AM	3:25 PM
Woodward	8:55 AM	3:10 PM
Neary	8:45 AM	3:00 PM

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Design Alternative 3: Grades 2-5 at a Consolidated Margaret A. Neary Elementary School

School	Start Time	School End Time
Woodward (PK-1)	9:10 AM	3:25 PM
Neary (2-5)	8:45 AM	3:00 PM

TEACHING AND LEARNING

Administrative and Academic Organization

Current

At the Margaret A. Neary Elementary School, educators are on grade-level teams, each composed of six to eight teachers responsible for teaching core subjects such as math, science, social studies, and English Language Arts (ELA). However, the building does not support logical groupings of grade level classrooms by teams. The school operates under the guidance of a full-time principal who oversees both the teaching and the academic support staff.

Proposed

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Learning Neighborhoods	0	2	3	4
Administrative Structure	1 principal	1 principal	1 principal 1 AP	1 principal 1 AP

A redesign of the Margaret A. Neary Elementary School would include the introduction of learning neighborhoods to support interconnected learning communities within the school. Each learning neighborhood would have a learning commons equipped with technology and flexible furniture to support small group breakout sessions, collaborative projects, and independent work at times. In addition, small group rooms will be located between general education classrooms to provide a quiet, distraction-free setting for targeted instruction for small groups, collaboration among peers or pull-out services close to the general education setting. Learning centers and substantially separate special education rooms would also be located in the learning neighborhoods to promote a more inclusive environment. These learning neighborhoods would support collaboration, relationship building, and flexible grouping across classrooms. This strategy is aimed at breaking down the barriers presented by the traditional school layout, paving the way for a more inclusive, dynamic, and collaborative educational setting that enriches the learning experience for all students.

In Design Alternatives 2 and 3, the principal would be supported by an assistant principal in leading the school.

Curriculum and Instructional Practices

Overview, Mathematics, English Language Arts/Literacy, Social Studies, Science, Technology, and Engineering, World Languages, Digital Literacy, Computer Science and Instructional Technology, Library Media Science, Visual Arts, Performing Arts, Physical Education and Wellness

Current

The District collaborates closely with educators to design lessons, assessments, and learning environments grounded in the principles of Universal Design for Learning (UDL), ensuring accessibility for all students. This comprehensive framework focuses on setting rigorous goals for all students and designing learning experiences with flexible means for learners to achieve these goals. Educators plan in ways that reduce students' barriers to engaging in learning, recognizing and comprehending knowledge, and demonstrating their understanding and skills.

The existing infrastructure at Neary School, however, limits the flexibility of teaching methods due to its traditional design, which does not accommodate modern educational models emphasizing hands-on projects, group work, and student-driven learning choices.

Proposed

The District will continue to support educators in using the UDL framework to provide inclusive and engaging learning experiences that help students develop into expert learners who exercise agency and increase independence over time. In pursuit of full accessibility, classrooms should be designed with voice amplification systems to support all learners.

In addition, the District is continuing to support the adoption of new high-quality instructional materials in ELA, a multi-year implementation process that involves ongoing professional learning, and preparing to adopt new instructional materials in mathematics in 2025. In addition, the District is planning to update instructional methods in the area of science to align with the state frameworks and a national focus on phenomenon-based science inquiry. The design implications of these curriculum and instruction foci are detailed by discipline below.

Mathematics:

Current

Elementary mathematics education emphasizes providing students with enriching experiences in grade-level math, connecting content standards to mathematical practices. The District's approach to elementary math instruction, delivered by grade-level teachers in general education classrooms for 75 minutes daily, is designed to be inviting and engaging. Students are actively encouraged to engage in mathematical discourse with both their teachers and peers, fostering collaboration, problem-solving skills, and mutual learning. Teachers cultivate an environment that nurtures student confidence and independence, enabling them to become adept

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problem-solvers who can work collaboratively. Educators work with students as a whole class, in small groups and provide opportunities for individual work time. On a daily basis, students interact with a supplemental, adaptive technology on a Chromebook that supports their individual journey to develop conceptual understanding and procedural fluency with math concepts while engaging in productive struggle with challenging puzzles. It is currently challenging to accommodate the different configurations called for by the District's math program in the Neary classrooms.

Proposed

The requirements of an elementary mathematics classroom are diverse, with a wide array of activities occurring throughout the day, week, and month. An adaptable space that provides flexibility for mathematics learning is essential. This includes a large gathering area where students can congregate without desks or chairs to engage in classroom routines like counting exercises, number talks, and strategy sharing. Ideally, this area should be situated near a screen for projecting student work, problems to consider, videos, or other visuals to facilitate mathematical discussions.

There should also be ample space for teachers to work with small groups of students, while other groups engage in activities throughout the room. These groups may utilize manipulatives and vertical whiteboards for problem-solving. Technology should be readily available for explaining concepts, practicing skills, or displaying student work. The classroom space should also support independent work which might involve students working at individual work stations, collaborating at tables, on rugs or floor spaces, standing at counters or working in the learning commons with peers or another educator, such as a math specialist or an educational support professional (ESP) supporting intervention or extension of learning. Some students will choose a distraction-free space in the classroom or a small group room to support their ability to access the learning with a math specialist, a special educator, or an ESP.

English Language Arts/Literacy

Current

Elementary educators use the comprehensive Great Minds' *Wit & Wisdom* core curriculum to deliver ELA instruction. This curriculum provides a robust framework for teaching literacy skills and engaging students in meaningful reading, writing, and oral language experiences.

To ensure a strong foundation in literacy, teachers integrate various instructional approaches and resources. Foundational skills development is supported by programs such as *Project Read Phonics*, *Haggerty Phonemic Awareness*, and *Phonics and Spelling Through Phoneme-Grapheme Mapping*. These resources offer systematic and explicit instruction to help students master essential phonics and spelling concepts.

In the delivery of literacy instruction, teachers employ a diverse range of strategies to cater to the needs of all learners. Whole-class instruction allows for the exploration of complex texts and the introduction of new concepts, fostering shared experiences and discussions among

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students. Small group activities provide opportunities for targeted instruction and differentiated support, allowing educators to address individual learning needs more effectively. Additionally, independent work time encourages students to apply their skills and creativity in reading and writing tasks, promoting autonomy and self-expression.

Teachers may lead whole-class lessons with students seated at desks and chairs, providing structured guidance and direct instruction. Alternatively, teachers may facilitate small group discussions or activities with students gathered on the floor in circles or groups, promoting collaboration and peer interaction. This flexible approach to classroom organization enables educators to adapt their teaching methods to suit the specific objectives of each lesson and the learning preferences of their students.

Overall, the implementation of the *Wit & Wisdom* curriculum alongside targeted foundational skills instruction creates a rich and engaging learning environment for students, fostering their development as proficient readers, writers, and communicators.

Proposed

The District will continue to support educators in implementing the *Wit & Wisdom* curriculum as well as the foundational skills programs currently in use. The District will also seek to create more interdisciplinary lessons where literacy themes overlap with science and social studies topics.

Literacy instruction requires a classroom that is designed to foster a productive learning environment, where teachers serve as facilitators and students develop the essential skills needed for success in secondary school and ultimately the workplace. In addition to traditional classroom spaces, small breakout rooms adjacent to general education classrooms will support differentiation of learning with support from reading specialists, special educators and ESPs. This type of targeted instruction or peer collaboration will also happen in the learning commons and may draw students from multiple general education classrooms.

Flexibility within the classroom layout is paramount to enhance student productivity and foster collaboration and communication. Key design elements include:

- A literacy-rich environment characterized by a diverse array of books spanning various levels and genres. Bookshelves should be accessible at an age-appropriate height, creating an inviting atmosphere conducive to reading.
- Ample wall space for displaying anchor charts, comfortable seating arrangements, abundant natural light, and inviting baskets filled with high-quality literature.
- Provision of audiobooks and headphones to accommodate diverse learning preferences and abilities.
- Access to books in multiple languages to reflect the cultural diversity of the classroom, ensuring that all students feel represented in the reading materials.
- Inclusion of titles that showcase diverse cultures and neurodiversity, allowing children to see themselves reflected in the stories they read.

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- Dedicated space for dramatic interpretations of literature and drama, featuring a stage, microphone, recording technology, and seating for an audience. Dramatization of literature may take place in the classroom or in the learning commons for larger audiences or cross-class groups.
- An adaptable classroom layout that can be easily reconfigured to accommodate different learning activities and group dynamics, facilitating personalized and collaborative learning experiences.

The classroom will incorporate diverse seating options to promote collaboration when students work in small groups or pairs. This includes high tables, low tables, round and square tables, as well as flexible seating choices such as large pillows, couches, bean bags, stools, and tables.

Other essential features encompass a designated space for mini-lessons, read-aloud, and group discussions, complete with a rug and comfortable seating. A small teacher work area with a kidney-shaped table serves multiple purposes for collaborating with students and having supplies readily available. Additionally, reading, writing, and general materials are stored in an easily accessible area, along with access to technology to support instruction and research purposes.

Social Studies

Current

The social studies curriculum is designed to encompass civic knowledge, dispositions, and skills, reflecting the diverse range of disciplinary skills. The curriculum is aligned with Content Standards and Literacy Standards for history and social science, and emphasizes seven practices essential for inquiry and research. The District curriculum strives to empower students to navigate democracy's potential and challenges effectively. Moreover, it prepares them to engage in societies with demographic and cultural diversity. Teachers have developed interdisciplinary units that integrate literacy and social studies standards. Students are developing their reading, writing, listening and speaking, research skills while learning history content. Students are also often engaged with primary sources which may include texts, art, and photographs. When students are working in small groups on projects you will often see some students in the hallways working on the floor or at makeshift work stations.

In addition, teachers currently seek opportunities to integrate Digital Literacy and Computer Science Standards into their science curriculum units.

Proposed

Central to the new design is the provisioning of spaces that are rich with information, imagery, and artifacts relevant to social studies concepts. This approach aims to immerse students in environments where learning materials deepen their understanding and connection to the subject matter. This will be accomplished both in the classroom and in the media center.

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The ideal classroom layout emphasizes flexibility and adaptability, incorporating a variety of work spaces and seating arrangements to facilitate student collaboration. High tables, low tables, round, and square tables are considered essential to accommodate diverse learning and teaching styles, promoting active engagement and interaction among students.

A dedicated area within the classroom will serve as a resource hub, allowing students easy access to materials essential for exploration and learning. The strategic use of wall space for displaying timelines, maps, and charts is highlighted as a method to integrate social studies into daily classroom dialogues, fostering cross-curricular connections. Bookshelves, thoughtfully placed at student-friendly heights, will house a broad range of resources, from historical documents to multimedia, catering to varied reading levels and interests.

Furthermore, the integration of technology is essential to the history curriculum. Accessible technology will not only support instruction and enhance digital literacy but also open doors for students to engage in virtual explorations, craft their timelines, and pursue social studies-related interests in innovative ways.

Teachers will continue to provide opportunities for interdisciplinary study and project based learning. This will continue to include opportunities for the inclusion of Digital Literacy and Computer Science Standards in the social studies lessons. At times this involves robots and other computing devices that are shared across classrooms and use of the learning commons will be a key option to support this. Options to break out into small group rooms between general education classrooms or working in the learning commons where flexible furniture and appropriate technology will support effective learning. The learning commons and breakout rooms will also allow teachers to flexible group students across general education classrooms.

In summary, The Public Schools of Southborough's vision for social studies classrooms marries traditional learning tools with modern technology and flexible design principles.

Science, Technology, and Engineering

Current

Elementary teachers foster engagement in science and technology/engineering (STE) education among their students using Carolina Science curriculum *Engineering is Elementary* (EIE) units developed by the Boston Museum of Science. These units provide STE curriculum that encompasses hands-on activities, investigations, and design challenges, which ignite students' curiosity and cultivate their analytical skills for scientific inquiry. They actively promote student involvement in learning, aiming to instill a growth mindset that empowers students to take ownership of their learning and excel in STE subjects.

In their teaching, elementary teachers prioritize relevance, ensuring that STE education is meaningful and applicable to students' lives. They emphasize the practical application of knowledge and skills to real-world situations, equipping students with the analytical thinking and problem-solving abilities necessary for success in today's world. Additionally, they strive to

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support high levels of achievement for all students, including females, racially and ethnically diverse populations and those with varied learning needs, to create an inclusive learning environment. In addition, teachers currently seek opportunities to integrate Digital Literacy and Computer Science (DLCS) standards into their science curriculum units.

Through purposeful integration of science and engineering practices with core concepts, elementary teachers ensure that students develop increasingly sophisticated skills and are equipped to apply scientific reasoning effectively across various contexts and situations, laying a strong foundation for their future success.

Currently, general education teachers make do with a typical general education classroom as the space where students conduct science and engineering experiments. The instructional technology specialist teaches specific DLCS skills in the general education classroom and brings materials with her for each lesson, moving around the building. In addition, the instructional technology specialist and library media specialist teach DLCS enriched lessons in the library which is not currently properly provisioned for these high-tech activities.

Proposed

Space Summary	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Science Technology and Engineering (STE) Learning Lab	0	1	1	1

The new design would provide adequate space to facilitate experiments and inquiry work within the science, technology, and engineering (STE) curriculum. The design would provide a flexible STE Learning Lab that accommodates various learning activities. General education teachers are responsible for teaching science and engineering lessons, and they would be able to take their students to the STE Learning Lab for hands-on experiments and design projects.

In addition, teachers will continue to integrate Digital Literacy and Computer Science (DLCS) Standards in many disciplines which may involve robots and other computing devices that are shared across classrooms. This could take place in the STE Learning Lab and might involve co-teaching with the instructional technology specialist who has specialized skills in this area and would oversee the STE Learning Lab and this room would be their home-base. In addition, the instructional technology specialists and the library media specialist each teach some of the DLCS standards and technology skills during designated times in the schedule and would do this in the STE Learning Lab and media center. It will be important for the STE Learning Lab to be adjacent to the media center to support this integration of content.

Key design components for the STE Learning Lab include:

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- Provision of water in multiple locations, with at least one deep/work sink to facilitate cleaning and activities such as density investigations.
- The safe availability of electricity at each workstation is crucial for activities involving digital technology.
- Inclusion of large, deep cabinetry units to store STE investigations and large-scale models, along with ample counter space for project setups.
- Adequate room size to allow flexible workstation configurations and whole-group instruction areas, furnished with light-blocking shades for activities involving light and waves.
- Furniture featuring adjustable height tables on wheels and stools promoting core strength, facilitating multiple student group configurations.
- Easy access to outdoor environments and open-air meeting spaces, fostering connections with nature and real-world learning experiences.

The District aims to incorporate STE Learning Labs to enhance teaching and integration of DLCS standards as well as science, technology, engineering with goals to develop critical thinking skills, create coherent learning experiences, and deepen connections to core values of engagement, equity, and wellness.

To the extent possible, learning commons in learning neighborhoods should provide many of the same design features listed below to ensure STE-related learning activities can happen anywhere including classrooms, within extended learning spaces, and in the STE Learning Labs. This would allow multiple classes to engage in this type of learning at the same time throughout the building and not vie for usage of the STE Learning Lab as the only location suitable for STE enriched activities.

The District plans to integrate numerous "green building" features into the improved facility to enhance efficiency and sustainability, intending to label and identify these features as real-world applications of science, technology, and engineering for student understanding.

World Languages

Current

The Public Schools of Southborough provides students in kindergarten and grade one with Spanish classes twice a week for 30 minutes each. The Spanish program provides students the opportunity to learn about others' cultures and develop proficiency in a language other than English at a developmentally critical time. Currently, there is not a dedicated classroom and the educator teaches within each teacher's classroom. This limits the teacher's ability to create a language-rich environment for the students. Spanish classes will be added to second and third grade in 2024-2025 at 60 - 90 minutes per week and to fourth and fifth grade in 2025-2026 for 90 minutes per week.

Proposed

Space Summary	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
World Language Classroom	0	1	2	2

The new design will include a dedicated world language classroom to improve language skills through a language-rich environment that supports small group and whole group lessons as well as individual work space. The language classroom will support students learning and improving their proficiency in Spanish language and have augmented acoustics. The language classroom will have technology, books, and a variety of Spanish language resources that engage students in interactive activities, enhancing their Spanish listening, speaking, reading, and writing skills. The language classroom will be an adaptable classroom layout that can be easily reconfigured to accommodate different learning activities and dynamic group activities including art projects, singing, and dancing to learn about world cultures.

Digital Literacy, Computer Science and Instructional Technology

Current

The Public Schools of Southborough is committed to a 21st century education that is enriched by technology across disciplines. The District has a one-to-one device program that provides all students access to a Chromebook and teachers rely heavily on projection systems, document cameras and augmented acoustics in all disciplines. The Instructional Technology Specialist (ITS) assists teachers in infusing DLCS standards into lessons across disciplines. The ITS also staff's the STE Lab where they will provide direct instruction to students and can support teachers who use the resources available. In addition, the ITS teaches students directly in collaboration with the library media specialist and by pushing into general education classrooms because there is not a dedicated location for this instruction. By having the STE Lab adjacent to the Media Center, this collaboration can be seamless.

Proposed

The vision for a future Neary Elementary School assumes seamless integration of technology throughout the building. The goal is for educators and students to be able to move throughout the building and use projection systems, wifi systems and other technology systems with ease.

Further details about DLCS and technology instruction are detailed in other subjects especially the science, technology and engineering section and the Library Media Sciences section of the academic program descriptions.

Library Media Sciences

Current:

The library at Neary is a pivotal component of students' education. Students visit the library at least twice per week for a curriculum that includes traditional library standards, DLCS standards and a commitment to teaching inquiry skills. The Neary Elementary School has a traditional library which is inadequate in several respects. The space has insufficient lighting and airflow and was not designed for the infusion of digital literacy and computer science in the library curriculum. The library media specialist and the instructional technology specialist often collaborate in this space. In addition, the library is often used for meetings but does not have sufficient seating or an appropriate set-up to comfortably and effectively accommodate staff meetings. Professional development is occasionally held in the library but it is only appropriate for small group professional learning due to the configuration of the space and the limited projection system available despite having significant square footage in the library.

Proposed:

In the digital age, where information is ubiquitous and learning extends beyond traditional classroom walls, the Media Center's role within the educational landscape of The Public Schools of Southborough is pivotal. This evolution reflects the District's broader educational vision, where information literacy becomes a cornerstone, equipping students not just with the ability to gather information but also to critically assess and utilize it effectively across various domains. This approach aligns with the District's commitment to wellness and the holistic development of students, integrating digital citizenship, media literacy, and a love for lifelong learning.

The District's vision for the new school's Media Center transcends traditional boundaries, aspiring to be a dynamic hub that supports the Digital Literacy and Computer Science (DLCS) Standards alongside the AASL/MSLA frameworks. It aims to cultivate an environment where exploratory learning, critical digital literacy, and media literacy skills are not just encouraged but are integral to the student experience. The Media Center will be a hub of creativity and innovation, offering a vast, flexible, and area designed for multifunctional use. The space will also celebrate literature, fostering a lifelong love of reading through engaging read-aloud sessions and literature-based lessons connected to the ELA, Social Studies, and Science Massachusetts State Frameworks. The media center will be alongside a STE Learning Lab that enables students to engage in hands-on activities, integrating content areas and applying technology creatively to solve complex problems. The STE Learning Lab would be supervised by the Instructional Technology Specialist while the media center would be supervised by the library media specialist. These professionals regularly collaborate in the current configuration.

To meet the needs of a diverse student population and reflect society's rich cultural diversity, the Media Center must:

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- Provide a welcoming common area with access to digital devices and flexible seating, allowing students to explore, research, communicate, and collaborate effectively.
- Feature a collection of materials that mirrors a diverse society, supporting inclusive learning experiences.
- Accommodate flexible learning spaces for individual and group instruction.
- Technology will be seamlessly infused, with mobile devices distributed throughout the building to foster a community where information access, collaboration, and independent work are supported.

This envisioned Media Center will be a cornerstone for academic and personal growth.

Visual Arts Programs

Space Summary	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Art	1	1	1	2

Current

At the elementary level, students are engaged in exploring their creativity in visual arts across a diverse range of projects. These projects span various media, including drawing, painting, sculpture, ceramics, textiles, digital art, and interdisciplinary endeavors that weave together elements of STE, humanities, and performing arts. The curriculum prioritizes the development of specific artistic skills while placing a strong emphasis on cultivating lifelong learning skills such as creative problem-solving, observation, teamwork, and exploratory play. The current art room at Neary is a general education classroom that has been converted to an art room and therefore lacks storage and sufficient work space.

Proposed

To realize this educational vision, the visual arts classroom must be a dynamic space that could be used for different teaching methodologies and artistic media. Essential features of this classroom include:

- A spacious, open area with a rug for whole-class discussions and activities.
- Sizable tables with stools to support both collaborative and solo artistic endeavors.
- A suite of equipment including a whiteboard, ceiling-mounted projector, document camera, projection screen, bulletin boards, drying racks, and readily available laptops and tablets.
- Ample storage to keep art materials and student projects organized, including an art workroom with storage and a kiln.
- Provisions for STEAM integration would be facilitated by locating the art room near the media center and STE Learning Lab.

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- Equipped with technology resources to support inquiry and the engineering design process.
- Spaces that facilitate an integration of visual and performing arts throughout the curriculum, the school should feature a dedicated, versatile space—distinct from the cafeteria or gymnasium—for showcasing visual arts, hosting intimate performances, and presenting student projects.

Performing Arts Programs

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Performing Arts (Music)	2	2 (Includes larger performance area)	3 (including 1 large performance area)	3 (including 1 large performance area)

Current

Music education is offered to all students, with classes that enrich the traditional ensemble experiences of chorus, band, and orchestra. The music curriculum offers opportunities for ensemble singing, instrument playing, physical movement, dramatic expression, music reading and writing, analytical listening, and composition.

Students engage in general music education classes once per week. In addition, students in grade three participate in weekly small group instrumental lessons. In grades four and five, many students participate in ensembles, including band, orchestra, and chorus, with instruction encompassing both large-group and small-group instrumental lessons. The band experiences include Blues Band, Beginners Band, and 5th Grade Band as well as full band rehearsals. Between band, orchestra and chorus, there is currently a music ensemble practicing every day either before or after school at Neary. This comprehensive approach not only nurtures musical skills but also enriches the students' cultural and emotional development.

Current levels of participation in music beyond general music class		
Music Activity	Third grade (currently at Woodward)	Fourth and fifth grade (currently at Neary)
Chorus		72
Instrumental lessons	67 students	38 small groups for band 23 small groups for orchestra
Band (rehearse in various configurations)		145

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Orchestra (rehearse both grades together)		65
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The current music rooms at Neary have significant limitations and are in constant use throughout the school days as well as before and after school. One of the music rooms is not ADA accessible due to stairs at the entrance. In addition, there is insufficient storage and therefore musical instruments are often in hallways or the edges of general education classrooms during the school day. There is no performance area so all community music events are hosted at Trottier Middle School.

Proposed

The design would include spaces that are tailor-made for music education, featuring:

- A spacious, adaptable area that is carpeted, with ceilings higher than standard to facilitate a range of activities, including classroom learning, music practice, choral singing, performances for parents and the community, and instrumental instruction. Such a space benefits from extensive acoustic treatments to enhance sound quality and ensure a versatile environment for various musical pursuits.
- Incorporating acoustical enhancements is crucial for protecting students' hearing and enhancing the effectiveness of curriculum delivery. These features are key to creating a conducive learning environment that prioritizes student safety and educational quality.
- A sufficiently large performance area that can accommodate ensemble rehearsals and enable the hosting of both formal and informal concerts, providing students with essential experiences in performance and audience engagement.
- Dedicated spaces for small group lessons, particularly for band and orchestra students, allowing for focused instruction and practice that is critical for developing instrumental skills.
- A designated space for instrument storage.

Wellness - Physical Education And Health

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Physical Education (Gymnasium)	2	1	1	1
Adaptive PE/Yoga	0	1	1	1
Health Classroom	0	1	1	2

Current

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The Public Schools of Southborough prioritize wellness, reflecting this commitment through the District's values. The Wellness Curriculum encompasses health, physical education, social emotional learning, and overall personal wellness, aiming to cultivate physical competencies and enhance fitness among students. The Public Schools of Southborough integrates health education across classroom teaching, nursing, counseling, and physical education. Collaboratively, educators and health professionals develop activities that promote physical, social and emotional health and well-being.

Physical education is a staple of the curriculum for all students from kindergarten through eighth grade. Students in grades K-5 enjoy a 45-minute session twice per week. Physical education takes place in versatile settings, including gymnasiums and outdoor areas such as fields and blacktops.

The school's playground includes play structures, a blacktop area with play lines, and fields. Recess is a dynamic outdoor time for students, utilizing fields, swings, blacktop areas, playgrounds, and nature play spaces. It's also a time for relaxation and nature observation, underscoring the District's holistic approach to wellness and outdoor learning.

Proposed

In the future design, spaces support all aspects of the Wellness Curriculum. To support physical education, the gymnasium will offer a safe environment for both students and spectators. To embody the district's dedication to wellness, the gymnasium's design should integrate specific features tailored to accommodate a wide range of activities.

- Adjustable Basketball Backboards: To cater to various age groups and skill levels, promoting inclusivity and physical development.
- Volleyball Standards: Either wall-mounted or equipped with floor sleeves to facilitate easy setup and versatility for volleyball games and practice.
- Outdoor Fitness Circuit/Stations: Encouraging holistic wellness and physical fitness through a variety of engaging outdoor activities.
- Dedicated Room for Adaptive PE and Yoga: A tranquil, soundproof space for adaptive PE exercises, yoga and relaxation activities, supporting mental and physical well-being adjacent to the gymnasium.
- Dedicated classroom space for health education classes provided by school nurse and health educator in the vicinity of the gymnasium.
- Projection system and appropriate technology to support school assemblies, professional learning and community events in the gymnasium.
- Storage for physical education materials and equipment.
- Separate storage for extended day program equipment and materials.
- Dedicated space for Occupational Therapy and Physical Therapy in close proximity to the gymnasium and the adaptive PE space.

Given the gymnasium's role as a hub for after-school and weekend events, the design must include robust security measures and the ability to access this part of the building without

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having access to the rest of the building. These measures will manage access to the gymnasium and associated facilities, like restrooms, ensuring these areas are secure while still accessible during designated times outside of regular school hours. This thoughtful approach to design will ensure that the gymnasium is a versatile, welcoming, and safe space for the entire school and community.

ACADEMIC SUPPORT PROGRAMMING

Current

The English Language Development (ELD) teacher provides support in the general education classroom and in the “temporary” modular classroom at Neary Elementary School depending on the student’s English proficiency level. Students in the early stages of learning English require Tier 1 language instruction outside the general education classroom for a prescribed number of hours according to the language acquisition regulations. The location of the current ELD classroom is isolated as compared to the general education classrooms and does not contribute to a feeling of inclusivity.

The reading specialist who provides general education support to students in literacy instruction is currently using a general education classroom that also serves as a make-shift science laboratory and is at the farthest end of the building away from general education classrooms. The reading specialist often works with students in hallways when administering assessments or providing intervention supports in order to remain in closer proximity to the general education classrooms.

Proposed

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
English Language Development (ELD) Space	0	1	2	3
Reading Specialist Office	0	1	2	2
Math Specialist Office	0	1	2	2

In the proposed design for Neary Elementary School, an instructional suite would be strategically located in close proximity to the learning neighborhoods to provide general

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education academic supports to students through push-in instruction or through use of the small group rooms situated in the learning neighborhoods. In addition, the instructional suite would be adjacent to the teacher collaboration space since these specially trained educators often meet with grade level teams to support data analysis and curriculum and instructional planning.

English Language Development

With students who are English Language Learners (ELLs) making up 31% of the student body in The Public Schools of Southborough, the provision of designated classroom spaces for small group instruction in the instructional suite will be crucial for delivering an inclusive, effective, explicit, systematic, and sustained systematic English Language Development (ELD) curriculum. This instructional space would be in constant use throughout the school day based on current and projected enrollment, not only by the English Language Development (ELD) teachers, but also potentially by ELL tutors providing targeted small group lessons. ELD teachers would also provide language instruction in small group rooms in learning neighborhoods and in the general education classrooms when appropriate for the students' needs. Additionally, students who are ELLs benefit from extended learning opportunities during the summer and this space would be pivotal for this offering as well.

Reading Specialist

Reading specialists will continue to provide targeted general education support to students and professional learning guidance to educators. A reading specialist office that can also serve as a small group learning space will support this educator and reading tutors in supporting students who often need a distraction-free environment and frequent progress monitoring assessments. In addition, this space will serve as a place for professional collaboration and data analysis with small groups of educators. The reading specialists meet frequently with grade-level colleagues to support their implementation of the Tier 1 and Tier 2 instruction and also collaboratively analyze data so that they can maintain a dynamic approach to the multi-tiered supports.

Mathematics Specialist

The District plans to expand support for students and educators in the area of mathematics by hiring a mathematics specialist in 2025-2026 when the District adopts new high-quality instructional materials. The math specialist will support small groups of students with intervention or extension in the general education classroom, in small breakout rooms, in the math specialist's office. In addition, the math specialist will meet with colleagues to provide professional learning guidance and instructional coaching. This support will be especially important as the District takes on the implementation of new high-quality instructional materials. Again, proximity of the instructional suite to learning neighborhoods will be important to support an inclusive culture and the proximity to the teacher collaboration space will support professional learning goals.

STUDENT SUPPORT SERVICES PROGRAMMING

Current

Special Education services within The Public Schools of Southborough are designed to meet the individualized academic, social, and emotional needs of students who require specially designed instruction or related services to effectively access the educational curriculum. These services are delivered through a collaborative effort between special education and general education teachers, employing evidence-based instructional strategies.

Currently, 17% of the student body requires an Individual Education Program (IEP). The array of special education services are delivered in the least restrictive environment which ranges from full inclusion to substantially separate classrooms, demonstrating a flexible and responsive approach to each student's needs.

At the elementary level, the District embraces various teaching models-including whole group instruction, small group instruction, and one-on-one teaching to support student needs. The curriculum is delivered through specialized programs, pull-out services, and inclusion services, all designed to provide both academic and social-emotional support tailored to student needs.

Currently, some students are in need of the Communication, Access, Socialization, Transition, Learning, and Emotional Regulation (CASTLE) Program. The CASTLE Program provides intensive, specialized instruction throughout the school day to assist students with unique and significant learning challenges. This program is designed to meet the individual needs of each student, utilizing the principles and procedures of Applied Behavior Analysis (ABA) to guide its instructional strategies. Whether within the inclusivity of the general education classroom or through more focused settings for small group or one-on-one instruction, the program emphasizes the use of ABA principles and systematic teaching to enable students to generalize their skills across various settings. **At this time, Neary students in the CASTLE program are placed in a CASTLE classroom in a Northborough elementary school.** Families perceive this to be a challenge because Southborough students are not placed with their Southborough peers in these situations.

Additionally, Southborough elementary students in need of the Therapeutic Learning Program (TLP), which is a specialized academic and therapeutic classroom, tailored for students with emotional, behavioral and social disabilities **are placed in a Northborough elementary school**, apart from their Southborough peers. This comprehensive program offers personalized instruction aimed at addressing the unique learning profiles of each student, coupled with continuous therapeutic support throughout the school day. Key to the TLP's philosophy is the integration of students into inclusive classroom settings whenever possible, providing them with the supports necessary to engage with the curriculum alongside their peers.

The expertise within the special education department is supported by an array of specialists, including speech-language pathologists, school psychologists, occupational and physical

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therapists, board certified behavior analysts, behavior specialists, adaptive physical education teachers, and team chairpersons.

Many of these professionals support the specific Social Emotional Learning (SEL) needs of students. General education teachers use the Second Step curriculum and the Collaborative for Academic Social Emotional Learning (CASEL) framework to guide students' learning in this area. Educators support students in developing SEL competencies through morning meetings, class lessons and integration of topics into all disciplines. The school psychologist, behavior analyst, and behavior specialist support the needs of students on individualized education plans and general education students.

Currently at Neary, the physical spaces allocated for Special Education faculty and related service staff present challenges. Many educators are assigned to shared instructional areas that are hindering the delivery of high-quality, consistent instruction aligned with the District's vision. In addition, special education providers often struggle to secure private spaces for assessments or for confidential parent meetings. The spatial limitations not only affects the quality of instruction but also poses significant accessibility challenges for students with physical disabilities, impacting their ability to participate fully in the school community. Issues such as restricted bathroom access, the inaccessibility of certain rooms like the music room, and limited outdoor play spaces underscore the urgent need for infrastructure enhancements to ensure all students can benefit equally from the educational opportunities provided by The Public Schools of Southborough.

Addressing these infrastructural and spatial challenges is critical for upholding the District's commitment to providing an inclusive, supportive, and accessible learning environment for all students, particularly those requiring specialized education services.

Proposed

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
CASTLE classroom	0	1	1	1
Therapeutic Learning Program (TLP) Classroom	0	1	1	1
Learning Centers	1	2	3	4
Calming Room	2	2	2	2
Testing Room	0	1	2	2
Small Group Meeting Room	0	1	2	2

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The Future Design Needs for the Special Education Program emphasize a strategic integration of special education learning environments within the broader educational framework, ensuring seamless communication and collaboration between special education staff and their general education counterparts. Integration would support even greater levels of inclusivity. The design would include specialized spaces in each learning neighborhood tailored to the unique needs of special education students. Key to this approach is the creation of a small group room between and adjoining to paired academic classrooms to facilitate small group instruction in a manner that minimizes travel and disruption, thereby optimizing the educational experience for these students. Another key feature is the placement of learning centers and substantially separate classrooms within learning neighborhoods. Furthermore, the design calls for the establishment of calming/sensory spaces that would be adjacent to specialized programs, CASTLE and TLP. These spaces are essential for providing a tranquil environment for students needing sensory regulation.

The sensory design of all learning spaces is important. Attention to detail in the selection of views, control of sightlines, and the minimization of potentially disruptive auditory and olfactory stimuli are crucial considerations. These measures aim to create an environment that supports the sensory needs of students, avoiding overstimulation or understimulation. The mechanical and lighting systems are to be meticulously planned to reduce visual distractions, regulate airflow, and minimize ambient noise, incorporating full-spectrum, dimmable lighting solutions to create a visually comfortable space that avoids sensory overload.

The new design would include office space for the school psychologist, certified behavior analyst, behavior specialist, speech and language pathologist, occupational and physical therapists, and the special education team chair. The design would also include a small group room for meeting with small groups of students and a testing space for assessing students as part of the special education process. The design would also include a special education conference room with the space to host up to 15 adults. The conference area will support the functional needs of IEP meetings and special education team collaborations, ensuring that the infrastructure fully supports the department's operational and strategic needs.

This design framework supports a comprehensive approach to creating an inclusive and supportive learning environment for special education students, affirming the district's commitment to fostering academic excellence and personal growth for all students.

The organization and color scheme of the rooms are to be carefully considered to reduce visual clutter and create a serene, engaging learning environment. Proximity and accessibility to other programmatic areas are also critical to ensure ease of access for students and to support optimal acoustic conditions within these special education spaces.

CASTLE Program

Additionally, the design would include a classroom space for a CASTLE Program so that Southborough CASTLE students remain with their peers in town. Central to the CASTLE

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Program is the creation of a personalized curriculum for every student, utilizing the advanced, web-based Autism Curriculum Encyclopedia (ACE) curriculum. This curriculum addresses a comprehensive range of developmental areas, including functional communication, daily living activities, academic skills, use of Augmentative and Assistive Communication (AAC) devices, vocational training, communication strategies, and social-pragmatic skills. The program champions a collaborative team approach to service delivery, comprising a lead special education teacher, educational support professionals, and specialists in speech and language therapy, physical therapy, and occupational therapy. Enhanced by the support of a Board Certified Behavior Analyst (BCBA), Assistive Technology Specialist, AAC consultant, and School Psychologist, the program ensures a holistic educational experience.

In terms of infrastructure, the CASTLE Program necessitates specific design features to support its educational model effectively:

- A versatile classroom that can be divided into two distinct areas for grade-specific teaching and to allow for adaptive instructional group sizes as required.
- Proximity to single-stall restrooms to accommodate privacy and ease of access for students.
- An adjoining calming space for students to de-escalate when necessary, allowing for a smoother transition back into the classroom environment.
- Dynamic workspaces that support one-on-one and small group instruction, enabling personalized learning experiences.
- Multi-sensory work areas are designed to engage students through a variety of stimuli, fostering an inclusive learning environment for all.
- Adaptive use of wall space for educational tools like word walls and visual cues, enhancing memory and learning through accessible whiteboards and other aids.
- Incorporation of the same technological resources found in general education classrooms ensures that students in the CASTLE Program have access to cutting-edge educational tools.
- Through these dedicated spaces and resources, the CASTLE Program aspires to provide a nurturing, effective, and inclusive educational setting that meets the diverse needs of its students, setting the stage for their success both within the school environment and beyond.

The CASTLE classroom would be on the edge of another learning neighborhood with a calming room adjacent that could be accessed, not only by CASTLE students but also by students from other classes in the learning neighborhood. This location would facilitate inclusion when appropriate and support a quieter environment at other times.

The Therapeutic Learning Program (TLP)

The new design would have space for the Therapeutic Learning Program (TLP). The physical environment of the TLP would be designed to be conducive to both learning and emotional support. It encompasses a tranquil space conducive to academic pursuits, areas for students to

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take breaks and engage in self-regulation strategies. The design specifications for the TLP's special education facilities emphasize several key features:

- Accessibility to physical activity spaces, such as a gym, to allow for movement breaks.
- Close proximity to learning neighborhoods to facilitate integration and a sense of belonging.
- An adjoining calming space for students to de-escalate when necessary, allowing for a smoother transition back into the classroom environment.
- Consideration of acoustics to reduce noise disturbances from adjacent areas, creating a quieter, more focused learning environment.
- Close proximity to counseling services in the social-emotional learning suite to ensure students have immediate access to emotional and behavioral support.
- A dedicated sensory room within the TLP, accessible directly from the program area, provides a safe and supportive space for sensory regulation.

The design would foster an inclusive, supportive environment that meets the comprehensive needs of students within the TLP, facilitating their academic achievement and emotional development in a setting that respects and responds to their individual challenges. The TLP classroom would be on the edge of a learning neighborhood with a calming room adjacent that could be accessed, not only by TLP students but also by students from other classes in the learning neighborhood. This location would facilitate inclusion when appropriate and support a quieter environment at other times.

This design framework supports a comprehensive approach to creating an inclusive and supportive learning environment for special education students, affirming the district's commitment to fostering academic excellence and personal growth for all students.

TEACHER PLANNING, COLLABORATION AND PROFESSIONAL DEVELOPMENT

Current

Professional collaboration stands as a cornerstone of the educational philosophy in The Public Schools of Southborough. The schedule is built to support grade-level teams having shared preparation time each week. Despite this commitment to collaborative planning, the District lacks designated teacher planning spaces. Teachers often resort to meeting within their own classrooms, seated at student desks, contingent upon space availability, which is far from ideal.

The District's professional development program is designed to foster growth for educators at every career stage and embedded into their professional experience so that it is sustained and relevant to their daily practice. Elementary teachers weekly convene by grade level and periodically participate in workshops aimed at enhancing teaching efficacy, curriculum implementation and student learning outcomes.

Faculty meetings and district-wide professional development sessions are currently held in less-than-ideal locations such as the building's library, classrooms, or cafeteria. These settings

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often suffer from issues like overcrowding, uncomfortable temperatures, and insufficient technological resources for presentations, detracting from the quality of these important gatherings.

Proposed

	Current	Design Alt 1 (4-5)	Design Alt 2 (3-5)	Design Alt 3 (2-5)
Staff Lunch Room and Teacher Preparation	1	1	2	2
Teacher Collaboration Room	0	2	3	4

In order to foster collaboration among educator teams, the District will provide flexible professional learning spaces for varying size groups. These spaces will empower educators to collaboratively design lessons, units, projects, and investigations. Additionally, they will support ongoing examination of student learning data and the ability to provide timely feedback and support for students. The ongoing analysis of data is a cornerstone of the multi-tiered systems of support that reading specialists, math specialists and SEL professionals guide. These collaboration rooms will also serve as venues for professional development workshops.

These teacher collaboration spaces would be strategically positioned near each learning neighborhood and near the instructional suite to facilitate easy access. By placing these rooms just outside of learning neighborhoods, it may be possible to have a removable wall between teacher collaboration rooms making them adaptable to host larger professional development sessions or staff meetings. It is important that teacher collaboration rooms are distinct from staff lunchrooms which also support teacher preparation such as photocopying, lamination and other tasks. This distinction ensures that teacher collaboration rooms are used exclusively for professional collaboration and not for breaks or social gatherings. The teacher preparation room would also include workstations where educational support professionals and itinerant employees can complete tasks given that they do not have dedicated classrooms or offices.

Future teacher collaboration rooms should include:

- **Smaller, Collaborative Spaces:** Areas where grade-level teams can gather for focused planning sessions, ensuring privacy and promoting efficiency in curriculum development and teaching strategy discussions.

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- **Larger, Open Areas:** Spacious venues equipped for whole-faculty professional development activities, designed to accommodate larger groups comfortably. The larger area may be achieved by joining smaller spaces together.
- **Comfort and Accessibility:** Meeting spaces should offer a comfortable environment, equipped with adequate heating, cooling, and lighting to facilitate year-round use without discomfort.
- **Technological Integration:** Equipping these areas with the latest in presentation technology, including high-quality projectors, sound systems, and internet connectivity to support a wide range of professional development activities.

By prioritizing the creation of these dedicated spaces, The Public Schools of Southborough can further enhance their commitment to professional excellence, fostering an environment where educators are equipped, encouraged, and empowered to grow professionally, for the benefit of students.

LUNCH PROGRAMS

Current

Meals for Neary School students are prepared off-site at the P. Brent Trottier Middle School kitchen, due to Neary's lack of facilities for food preparation and cooking. After preparation, these meals are transported to Neary School, where they are served to approximately 125 students per lunch period in a communal dining area. This setup sees large groups of students moving in and out of the cafeteria space, a bustling hub of activity during meal times.

The District is committed to promoting health and wellness through nutrition, prioritizing the provision of healthy, locally sourced food options. In line with this commitment, the District actively seeks to include locally grown produce in its meal offerings, taking advantage of vegetables harvested from school gardens when possible. There's a vision to further engage students in this initiative by establishing a garden on the grounds of the new school, fostering a hands-on learning experience that connects students directly with the source of their food.

Currently, lunch periods at the District's elementary schools are limited to 20-25 minutes. The cafeteria is a large open space and can be over-stimulating for some students. There are no alternative spaces designed for dining.

Proposed

The new design would include a variety of seating options for students, including smaller breakout spaces to support sensory-sensitive options for students. Furthermore, the new site would include the introduction of on-site kitchen facilities. This would enable the preparation and safe storage of meals within the school, allowing for a wider range of healthy options on the menu. In addition, the new kitchen would provide ample space and design to support traffic flow and strategic service areas organized for efficiency. A new kitchen would also support the

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District's vision of integrating educational programs focused on health, nutrition, and agriculture directly into the students' learning environment.

HEALTH OFFICE

Current

At the Neary School, the health and wellness of students and staff are under the care of a Commonwealth of Massachusetts and Department of Elementary and Secondary Education licensed RN School Nurse, whose responsibilities extend beyond the traditional confines of medication administration and minor health assessments. The Health Office is a critical hub for evaluating and triaging health concerns, liaising with families and healthcare providers, managing health records, conducting screenings for various physical parameters, and addressing the emotional well-being of the school community. Furthermore, the school nurse plays a crucial role in collaborating with district nursing staff on health education, grant writing, and leading emergency response training for staff.

However, the current Health Office space is notably inadequate for the breadth of services required. In the current space, there is no waiting area or provision for isolating contagious individuals. The sole lavatory, doubling as a changing area and staff restroom, cannot meet the diverse needs of the school population, from toilet training to health-related toileting supervision. The absence of a dedicated handwashing sink outside this lavatory further complicates hygiene practices. Additionally, storage space is severely limited, impacting the secure storage of medications and medical equipment. The lack of a private area for confidential conversations with parents or consultations with staff is another significant shortfall.

Proposed

In envisioning a new design for Neary's Health Office, the goal is to create a space that adequately supports the complex health and wellness landscape of the school community. This includes a larger, more versatile area that can accommodate multiple resting spaces, a dedicated waiting area, and isolation zones for contagious students. Essential facility improvements must include lavatories to serve diverse needs effectively, additional sinks for handwashing outside the lavatories, and expanded secure storage for medications and medical supplies. A private consultation area is also critical, ensuring confidentiality and support for sensitive discussions. This enhanced design will align the physical environment of the Health Office with the expansive role of the school nurse, ensuring optimal health and wellness support for the entire school population.

SOUTHBOROUGH EXTENDED SCHOOL CARE

Current:

The district-run Southborough Extended Day (SEDP) Program is designed to serve the needs of the District's students and families before and after school hours. There are dedicated staff for this program that work separately but in concert with school staff. However, although students are enrolled in the program after the end of the school day staff arrives earlier, so a dedicated

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space is needed to accommodate SEDP staff. The chart below depicts well the existing numbers of students supported by the SEDP, as well as the demand for spots in the program both before and after school:

Current SEDP Families Accessing SEDP

Finn (K-1)	Woodward (2-3)	Neary (4,5)
60 Families	75 Families	35 Families

Proposed

In the proposed Neary design there will be an office for the Southborough Extended Day Program that allows for safety regarding access to the school as well as dedicated storage space for materials and equipment.

TRANSPORTATION POLICIES

Current

In The Public Schools of Southborough, transportation is provided at no cost for ALL students in grades K-8. Combining schools or adjusting grade configurations would not increase bus traffic at the schools, but would reduce the bus traffic on the main roads and in the surrounding areas.

Currently, the District operates a fleet that includes 14 full-size buses and one half-size bus, catering to the transportation needs of both regular and Special Education students. As of now, 212 (K-5) students do not qualify (residing within a mile of their respective school) for daily bus transportation provided by the District, however, it is the long-standing practice of the District that all students are offered school bus transportation regardless of their residence's distance from school.

Given that the elementary schools do not serve exclusively neighborhood zones and specialized programs are not uniformly distributed across all schools, the District employs a sophisticated transfer bus system. This system facilitates the movement of students between the three elementary schools for both morning arrivals and afternoon departures. Bus routes are designed to accommodate students attending any of the three schools, utilizing the transfer system. Transportation is organized in two tiers: middle and high school students are transported first, followed by the elementary students, optimizing the efficiency of school commutes.

Proposed

The proposal to consolidate schools would improve the efficiency and complexity of the bus system. By reducing the locations that need to be supported, we will gain valuable AM and PM minutes to reduce the overall commute time. The consolidation would also pool vehicles so that

they could support multiple functions and won't be displaced to the extent they are in the current configuration.

The new school's parking facilities will be designed to meet the daily needs of the school and accommodate community events outside school hours. This planning includes:

- Ensuring safe bus access routes that do not conflict with areas designated for student drop-offs and pickups.
- Maintaining secure and controlled zones for deliveries.
- Designing recess and recreational spaces away from traffic, safeguarding the well-being of students during outdoor activities.
- Optimizing traffic flow to avoid confluence at the same locations during peak drop-off/pick-up times as well as special events.
- Reduce bus route lengths for students and reduce overall school related traffic.

FUNCTIONAL & SPATIAL RELATIONSHIPS

The school's design vision is centered around creating an adaptable environment that reflects the community's values, prioritizes the well-being of its members, and fosters student learning. The aim is for the entire building to maintain a sense of physical unity, with thoughtful consideration given to the internal and external flow, ensuring that the spaces within are conducive to both movement and connection. Student achievements will be proudly displayed throughout, making the celebration of learning a visible and integral part of the school's atmosphere.

The design will include careful choices regarding design aesthetics, natural light, finishes, and furniture, all tailored to create a welcoming and appropriate environment for the students.

The Media Center will be adjacent to STE learning labs and art rooms to support inquiry across disciplines. The school's layout will thoughtfully separate academic areas from spaces designated for community use, an aspect critical for maintaining security and functionality.

Classroom organization will be strategically designed in learning neighborhoods to promote collaboration, with classrooms and specialized education areas distributed throughout the building to support integrated and inclusive education. Small group rooms between general education classrooms will allow for special education academic support and peer to peer collaboration to happen in quiet settings but close to the general education classroom. Furthermore, the learning commons, directly outside of and visible from grade-level classrooms, will also facilitate shared educational initiatives, allowing for flexible grouping of students and targeted instructional experiences. This space might also accommodate multiple classes to gather for presentations, performances, or community meetings.

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Specialty classrooms, including those for art, world language, music, media, and STE will be purposefully located to support interdisciplinary learning. By placing STE Learning Labs and art rooms adjacent to the media center, students will engage in inquiry that bridges these spaces and is supported by multiple educators. In addition, the instructional support suite and teacher collaboration spaces will be strategically located at the edges of learning neighborhoods to support targeted academic support for students as well as embedded and sustained professional learning. The locations of components of the special education program will allow for inclusion and seamless integration, while parts of the program will be situated in a special education suite that allows for confidentiality and distraction-free assessments and support when needed. This layout is intended to enhance cross-disciplinary collaboration and ensure all students have equal access to the rich array of educational resources and opportunities the school offers.

The design would incorporate gathering spaces for various groups within the community. While grade levels or cross-grade level groups might gather in the learning commons of a learning neighborhood, a larger contingent of the school could gather in the auditorium, which will also serve as a music learning space. For whole school or larger community events, the gymnasium will serve as a communal space.

The design would embody the community's overarching objectives and priorities and adhere to the District's core design principles, outlined as follows:

- Purposeful Outdoor Environments: Dedicated spaces outdoors for academic pursuits, social-emotional development, and recreation in a safe and secure manner
- Promoting Unity Across Grade Levels: A focus on fostering connections and a sense of unity within and across different grades.
- Adaptable Learning Environments: Ensuring spaces are versatile enough to accommodate the diverse needs of every learner.
- Forward-Thinking Design: Creating spaces and adopting practices that not only address current educational requirements but are also adaptable to future needs.
- Community and Culture at the Forefront: Envisioning the project as a means to protect, connect, and cultivate the school's community and cultural heritage.
- Foundational Emphasis on Elementary Education: Recognizing elementary education as crucial for laying the groundwork for academic achievement and social-emotional well-being.
- A Model of Sustainability: Championing a school facility that serves as a dynamic educational resource, promoting sustainability and environmental stewardship.
- A Model of Safety and Security: Providing flexibility while maintaining safety and security protocols will be part of the design.

SECURITY & VISUAL ACCESS REQUIREMENTS

Current

The Public Schools of Southborough prioritizes the safety and security of all students and staff, aiming to enhance public safety for all community members who interact with or utilize school facilities. This commitment extends to minimizing risks to individuals and preventing damage or loss to district property. The school has established a comprehensive approach to building security, underscored by the following key elements:

- **Structured Safety and Security Governance:** The district has implemented clear administrative guidelines and policies dedicated to supervising safety and security initiatives across all schools and works closely with the Town's Police and Fire Departments safety officials to coordinate.
- **Continuous Security Assessments:** The district undertakes ongoing evaluations to scrutinize existing security measures, identify any shortcomings, assess the requisite level of security, and propose enhancements.
- **Integrated Security Management:** A multi-faceted approach to security is employed, incorporating diverse communication channels, detailed policies and protocols, physical security measures, staff training, and well-defined response strategies. The buildings are locked throughout the school day, and staff use key access cards to enter the building. This approach fosters collaboration among administrators, staff, parents, and students.
- **Comprehensive Background Checks:** All school personnel, including faculty, staff, volunteers, contractors, and vendors present on school grounds, undergo CORI checks, SORI checks, and FBI Fingerprinting checks to ensure the safety of the school environment. Additionally, staff members are mandated to wear identification badges visibly during school hours.
- **Regular Safety Drills:** The school routinely conducts fire alarm and active intruder drills to guarantee that faculty and staff are proficient in accounting for all students swiftly and effectively.
- **Staff Preparedness Training:** Staff members receive ongoing training to adeptly enact the Emergency Response Plan, ensuring readiness in case of emergencies.
- **Cultivating a Vigilant Community:** The school community, including students, faculty, and staff, is educated and encouraged to remain vigilant and report any suspicious or concerning activities or behaviors.

This comprehensive approach speaks to The Public Schools of Southborough's commitment to creating and maintaining a secure educational environment where learning and growth can flourish unimpeded by concerns for personal safety or property protection.

Proposed

The future design of the school's security system aims to strike a balance between fostering a welcoming atmosphere for students, families, and the broader community and integrating a comprehensive suite of advanced security measures. These features, while not exhaustive, are crucial for ensuring a protected learning environment:

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- **Enhanced Entrance and Lobby Security:** Implement a secure, single-entry door system for each school or program, equipped with a door-release mechanism, intercom, video surveillance, and a sophisticated visitor management system. All additional exterior doors should be locked at the commencement of the school day, with exit-only functionality and surveillance.
- **Dedicated Access Points for Operational Needs:** Ensure separate and safe access routes for kitchen operations, facilities management, and shipping/receiving, distinct from the main entrance, to alleviate congestion and enhance security.
- **Clear and Informative Signage:** Install signage to guide visitors, contractors, and vendors directly to the administration area for secure entry processing. Identification markers on doors and windows, along with evacuation maps in all occupied rooms, will enhance navigation and safety.
- **Defined School Perimeter:** The school's boundaries should be distinctly marked from public areas, with landscaping designed to maintain unobstructed views of the school's exterior for surveillance purposes.
- **Strategically Planned Vehicular Access:** Design vehicular access that incorporates safety measures such as bollards, no-parking zones, and specified drop-off points, ensuring a clear separation between general traffic and buses. Safe routes should be established for pedestrians and cyclists, with unambiguous access for emergency and public safety vehicles.
- **Access Control Systems:** Adopt best practices in access control technologies for entrances to the building, classrooms, and other critical areas to manage entry efficiently.
- **Optimal Exterior Lighting:** Install adequate lighting around walkways, entrances, and parking areas, focusing on reducing spill-over lighting into neighboring areas and maximizing energy efficiency.
- **Coordinated Video Surveillance:** Establish a video surveillance system with clear protocols for operation and maintenance in collaboration with local law enforcement agencies.
- **Segmented spaces for community use (i.e., gymnasium)**

By incorporating these strategic security enhancements in the design, the school not only ensures the safety of its inhabitants but also maintains an inviting environment conducive to learning and community engagement.

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Enrollment Options

305 Enrollment

The 305 Enrollment model includes grade 4 and 5 which are currently housed at the Margaret A. Neary Elementary School.

CORE ACADEMIC

The proposed project contains 18,350 SF of core academic space. This is 4,800 SF above the MSBA guidelines of 13,550 SF, due to additional learning spaces to meet the District's needs.

The existing building currently contains 7 classrooms per grade housing approximately 18 to 22 students per grade. There are an additional 5 classrooms that are designated for use by the District's Central Office.

The district favors a model with learning neighborhoods to promote a tight-knit atmosphere, with community being essential component of their Vision 2026 strategic plan, which includes a profile of graduates that are collaborators who are socially and civically engaged. The District is seeking breakout spaces to allow for flexibility to accommodate diverse groupings of students and learning needs.

In addition to grade level classrooms, core academic spaces include an English Language Development Office, Instructional suite for reading and math, World Language classroom, a Health and Wellness classroom, and a teacher collaboration room. The English Language Development program is currently housed in modular classrooms that provide a sub-par learning environment.

SPECIAL EDUCATION

The proposed project contains 8,960 SF of special education space. This is 4,160 SF above the MSBA guidelines of 4,530 SF to support the District's special education goals.

The variation is due to additional spaces utilized to support the special education program including a calming room, office for speech and language, OT and PT, and adaptive PE. There is also a Social Emotional

Learning Suite including offices for a psychologist, team chair, and behavioral specialist; small group room, testing spaces, and a special education conference room. Currently special education program spaces are in substandard environments including spaces not designed for instruction, unheated conference rooms, and closets converted into offices.

ART & MUSIC

The proposed project contains 6,150 SF of Art & Music space. This is 3,650 SF above the MSBA guidelines of 2,500 SF.

Variations in square footage beyond the MSBA guidelines are due to the addition of instrument storage and a 3,500 SF auditorium. All students are offered opportunities for music education including traditional ensembles of chorus, band, and orchestra. Students are offered opportunities to progress as they grow: third graders participate in small group instrument lessons, and fourth and fifth graders participate in larger ensembles. The auditorium is a response to the desire for a large performance space for the students to showcase their skills, experience performances, and engage with an audience as well as providing large ensemble practice space. Insufficient music storage results in instruments migrating into hallways and on the periphery of core academic classrooms.

HEALTH & PHYSICAL EDUCATION

The proposed project contains 6,450 SF of health & physical education space. This is 150 SF above the MSBA guidelines of 6,300 SF.

The 150 SF variation is due to additional gym storage to support the district's Wellness curriculum inclusive of yoga and adaptive PE in conjunction with more traditional sports activities.

MEDIA CENTER

The proposed project contains 2,045 SF of Media Center space. This is in line with MSBA guidelines of 2,043 SF.

DINING & FOOD SERVICE

The proposed project contains 5,390 SF of dining and food service space. This is in line with MSBA guidelines of 5,394 SF.

MEDICAL

The proposed project contains 510 SF of medical space. This is in line with MSBA guidelines of 510 SF.

ADMINISTRATION & GUIDANCE

The proposed project contains 2,015 SF of administration and guidance space. This is in line with the MSBA guidelines of 2,020 SF.

CUSTODIAL & MAINTENANCE

The proposed project contains 1,900 SF of custodial and maintenance space. This is in line with the MSBA guidelines of 1,905 SF.

OTHER

The proposed project contains 500 SF of other space. This is 500 SF above the MSBA guidelines of 0 SF.

The additional space is for Extended Day Program Storage and Office to support the Extended Day Program, which supports students and families before and after school hours and is run by independent, non-District staff. Extended Day staff arrival prior to the end of the school day necessitates dedicated office space to allow for safe access.

GROSS AND NET

The proposed project contains 52,000 SF of net space. This is 13,248 SF above the MSBA guidelines of 38,752 SF. The proposed gross square footage of the project is 78,000 GSF. This is a multiplication of the net area times the allowed 1.5 grossing factor. This is 23,278 GSF more than the MSBA guidelines of 54,722 GSF.

HEALTH & PHYSICAL EDUCATION	2,480		
Gymnasium	2,480	1	2,480
Gym Storeroom			0
Health Instructor's Office with Shower and Toilet			0
MEDIA CENTER	2,590		
Media Center / Reading Room	2,590	1	2,590
DINING & FOOD SERVICE	5,000		
Cafeteria / Dining	3,135	1	3,135
Stage			0
Chair / Table / Equipment Storage			0
Kitchen	1,410	1	1,410
Staff Lunch Room	455	1	455
MEDICAL	440		
Medical Suite Toilet			0
Nurses' Office / Waiting Room	440	1	440
Examination Room / Resting			0
ADMINISTRATION & GUIDANCE	1,900		
General Office / Waiting Room with Toilet	550	1	550
Teachers' Mail and Time Room			0
Copy Room			0
Records Room			0
Principal's Office with Conference Area	180	1	180
Principal's Secretary / Waiting			0
Assistant Principal's Office			0
Supervisory / Spare Office			0
Conference Room	390	1	390
Guidance Office	210	1	210
Guidance Storeroom			0
Teachers' Work Room	570	1	570
CUSTODIAL & MAINTENANCE	1,140		
Custodian's Office	80	1	80
Custodian's Workshop	1,060	1	1,060
Custodian's Storage			0
Recycling Room / Trash			0
Receiving and General Supply Storeroom			0
Network / Telecom Room			0
OTHER	6,690		
(List rooms separately below)			
Extended Day Program Storage			0
Extended Day Program Office			0
District Office	5,465	1	5,465
District Office Storage	490	1	490
Office	180	1	180
Quiet Corner	125	1	125
After - School	250	1	250
Zen Den	180	1	180

0			6,450			6,450		
		0	6,000	1	6,000	6,000	1	6,000
		0	300	1	300	300	1	300
		0	150	1	150	150	1	150
0			2,045			2,045		
		0	2,045	1	2,045	2,045	1	2,045
0			5,390			5,390		
		0	2,290	1	2,290	2,290	1	2,290
		0	1,000	1	1,000	1,000	1	1,000
		0	300	1	300	300	1	300
		0	1,600	1	1,600	1,600	1	1,600
		0	200	1	200	200	1	200
0			510			510		
		0	60	1	60	60	1	60
		0	250	1	250	250	1	250
		0	100	2	200	100	2	200
0			2,015			2,015		
		0	300	1	300	300	1	300
		0	100	1	100	100	1	100
		0	150	1	150	150	1	150
		0	110	1	110	110	1	110
		0	375	1	375	375	1	375
		0	125	1	125	125	1	125
		0	120	0	0	120	0	0
		0	120	1	120	120	1	120
		0	250	1	250	250	1	250
		0	150	1	150	150	1	150
		0	35	1	35	35	1	35
		0	300	1	300	300	1	300
0			1,900			1,900		
		0	150	1	150	150	1	150
		0	375	1	375	375	1	375
		0	375	1	375	375	1	375
		0	400	1	400	400	1	400
		0	200	1	200	200	1	200
		0	200	1	200	200	1	200
		0	200	1	200	200	1	200
0			500			500		
		0	300	1	300	300	1	300
		0	200	1	200	200	1	200
		0	0	0	0	0	0	0
		0				0	0	0
		0				0	0	0

150		
0	0	0
150	0	150
0	0	0
0		
0	0	0
0		
0	0	0
0	0	0
-2	0	-2
-5	0	-5
0	0	0
0		
0	0	0
0	0	0
0	0	0
1		
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
-5		
0	0	0
0	0	0
0	0	0
0	0	0
-2	0	-2
-3	0	-3
0	0	0
500		
300	1	300
200	1	200
0	0	0
0	0	0
0	0	0

6,300			Excess Physical Education Spaces Policy
6,000	1	6,000	
150	1	150	
150	1	150	
2,043			
2,043	1	2,043	
5,394			
2,288	1	2,288	Based on 2 lunch seatings - 15 NSF per seat
1,000	1	1,000	
302	1	302	
1,605	1	1,605	1,000 NSF for first 300 students + 1 NSF per additional student
200	1	200	20 NSF per student
510			
60	1	60	
250	1	250	
100	2	200	
2,020			
303	1	303	
100	1	100	
150	1	150	
110	1	110	
375	1	375	
125	1	125	
120	0	-	
120	1	120	
250	1	250	
150	1	150	
35	1	35	
303	1	303	
1,905			
150	1	150	
375	1	375	
375	1	375	
400	1	400	
202	1	202	
203	1	203	
200	1	200	
0			
0	0	0	

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450 Enrollment

The 450 Enrollment model includes grade 3, 4, and 5. In this model, grade 3 is being relocated out of the Albert S. Woodward Memorial Elementary School.

CORE ACADEMIC

The proposed project contains 28,350 SF of core academic space. This is 7,250 SF above the MSBA guidelines of 20,200 SF.

The existing building currently contains 7 classrooms per grade housing approximately 18 to 22 students per grade. There are an additional 5 classrooms that are designated for use by the District's Central Office.

The district favors a model with learning neighborhoods to promote a tight-knit atmosphere, with community being essential component of their Vision 2026 strategic plan, which includes a profile of learners that are collaborators who are socially and civically engaged. The District is seeking breakout spaces to allow for flexibility to accommodate diverse groupings of students and learning needs.

In addition to grade level classrooms, core academic spaces include an English Language Development Office, Instructional suite for reading and math, World Language classroom, a Health and Wellness classroom, and a teacher collaboration room. The English Language Development program is currently housed in modular classrooms that provide a sub-par learning environment.

SPECIAL EDUCATION

The proposed project contains 9,890 SF of special education space. This is 5,360SF above the MSBA guidelines of 4,530 SF to support the District's special education goals.

The variation is due to additional spaces utilized to support the special education program including a calming room, office for speech and language, OT and PT, and adaptive PE. There is also a Social Emotional Learning Suite including offices for a psychologist, team chair, and behavioral specialist; small group

room, testing spaces, and a special education conference room. Currently special education program spaces are in substandard environments including spaces not designed for instruction, unheated conference rooms, and closets converted into offices.

ART & MUSIC

The proposed project contains 7,350 SF of Art & Music space. This is 4,775 SF above the MSBA guidelines of 2,575 SF.

Variations in square footage beyond the MSBA guidelines are due to the addition of instrument storage and a 3,500 SF auditorium. All students are offered opportunities for music education including traditional ensembles of chorus, band, and orchestra. Students are offered opportunities to progress as they grow: third graders participate in small group instrument lessons, and fourth and fifth graders participate in larger ensembles. The auditorium is a response to the desire for a large performance space for the students to showcase their skills, experience performances, and engage with an audience as well as providing large ensemble practice space. Insufficient music storage results in instruments migrating into hallways and on the periphery of core academic classrooms.

HEALTH & PHYSICAL EDUCATION

The proposed project contains 6,450 SF of health & physical education space. This is 150 SF above the MSBA guidelines of 6,300 SF.

The 150 SF variation is due to additional gym storage to support the district's Wellness curriculum inclusive of yoga and adaptive PE in conjunction with more traditional sports activities.

MEDIA CENTER

The proposed project contains 2,695 SF of Media Center space. This is in line with the MSBA guidelines of 2,695 SF.

DINING & FOOD SERVICE

The proposed project contains 6,690 SF of dining and

food service space. This is in line with the MSBA guidelines of 6,687 SF.

MEDICAL

The proposed project contains 510 SF of medical space. This is in line with the MSBA guidelines of 510 SF.

ADMINISTRATION & GUIDANCE

The proposed project contains 2,315 SF of administration and guidance space. This is in line with the MSBA guidelines of 2,315 SF.

CUSTODIAL & MAINTENANCE

The proposed project contains 2,050 SF of custodial and maintenance space. This is in line with the MSBA guidelines of 2,050 SF.

OTHER

The proposed project contains 500 SF of other space. This is 500 SF above the MSBA guidelines of 0 SF.

The additional space is for Extended Day Program Storage and Office to support the Extended Day Program, which supports students and families before and after school hours and is run by independent, non-District staff. Extended Day staff arrival prior to the end of the school day necessitates dedicated office space to allow for safe access.

GROSS AND NET

The proposed project contains 66,800 SF of net space. This is 18,038 SF above the MSBA guidelines of 47,862 SF. The proposed gross square footage of the project is 100,200 GSF. This is a multiplication of the net area times the allowed 1.5 grossing factor. This is 27,075 GSF more than the MSBA guidelines of 73,125 GSF.

Margaret A. Neary Elementary School Southborough, MA	EXISTING CONDITIONS		
ROOM TYPE	ROOM NFA ¹	# OF ROOMS	AREA TOTALS
CORE ACADEMIC	14,340		
(List rooms of different sizes separately)			
General Classroom	890	14	12,460
Science, Technology, Engineering (STE) Room	1,000	1	1,000
STE Storage Room (if applicable)			0
Learning Commons (Breakout)			0
English Language Development Office			0
Instructional Suite (Reading, Math)	880	1	880
World Language			0
Health / Wellness			0
Teacher Collaboration Room			
SPECIAL EDUCATION	3,360		
(List rooms of different sizes separately)			
Self-Contained Special Education Classroom			0
Self-Contained Special Education Toilet Room			0
Learning Center (Resource Room)	1,110	1	1,110
Small Group Room			0
Calming Room (adjacent to SCSEC)			0
Office for Speech & Language			0
OT	495	1	495
PT			
Adaptive PE	590	1	590
Social Emotional Learning Suite	1,165	1	1,165
Office (School Psych, Team Chair, Behavior Specialist)			
Small Group Room			
Testing spaces			
Special Ed Team Chair Office			
SPED Conference Room			
Public Day Education Spaces (List rooms separately below)			
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
Collaborative Program Spaces (List rooms separately below)			
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
[Enter room type here]			0
ART & MUSIC	4,055		
Art Classroom (25 seats)	1,000	1	1,000
Art Workroom with Storage and Kiln			0
Music Classroom / Large Group (25-50 seats)	1,895	1	1,895
Music Practice / Ensemble	1,160	1	1,160
Instrument Storage			
AUDITORIUM			

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			28,350			28,350		
		0	950	21	19,950	950	21	19,950
		0	1,080	1	1,080	1,080	1	1,080
		0	120	1	120	120	1	120
		0	750	3	2,250	750	3	2,250
		0	200	2	400	200	2	400
		0	200	4	800	200	4	800
		0	950	2	1,900	950	2	1,900
		0	950	1	950	950	1	950
			300	3	900	300	3	900
0			9,890			9,890		
		0	950	2	1,900	950	2	1,900
		0	75	2	150	75	2	150
		0	500	3	1,500	500	3	1,500
		0	150	12	1,800	150	12	1,800
		0	120	2	240	120	2	240
		0	200	1	200	200	1	200
			600	1	600	600	1	600
		0	600	1	600	600	1	600
			1,500	1	1,500	1,500	1	1,500
			0	0	0	0	0	0
			200	3	600	200	3	600
			200	1	200	200	1	200
			100	1	200	100	1	200
			150	0	0	150	0	0
			400	1	400	400	1	400
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
		0			0	0	0	0
0			7,350			7,350		
		0	1,000	1	1,000	1,000	1	1,000
		0	150	1	150	150	1	150
		0	1,200	2	2,400	1,200	2	2,400
		0	150	1	150	150	1	150
		0	150	1	150	150	1	150
		0	3,500	1	3,500	3,500	1	3,500

VARIATION TO MSBA GUIDELINES		
ROOM NFA ¹	# OF ROOMS	AREA TOTALS
8,150		
0	1	950
0	0	0
0	0	0
-330	3	2,250
200	2	400
200	4	800
950	2	1,900
950	1	950
300	3	900
5,360		
0	-1	-950
15	-1	-30
0	1	500
-350	11	1,300
120	2	240
200	1	200
600	1	600
600	1	600
1,500	1	1,500
0	0	0
200	3	600
200	2	200
100	1	100
150	0	0
400	1	400
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
4,775		
0	0	0
0	0	0
1,200	1	1,200
75	1	-75
150	1	150
3,500	1	3,500

[illegible]

HEALTH & PHYSICAL EDUCATION	2,480		
Gymnasium	2,480	1	2,480
Gym Storeroom			0
Health Instructor's Office with Shower and Toilet			0
MEDIA CENTER	2,590		
Media Center / Reading Room	2,590	1	2,590
DINING & FOOD SERVICE	5,000		
Cafeteria / Dining	3,135	1	3,135
Stage			0
Chair / Table / Equipment Storage			0
Kitchen	1,410	1	1,410
Staff Lunch Room	455	1	455
MEDICAL	440		
Medical Suite Toilet			0
Nurses' Office / Waiting Room	440	1	440
Examination Room / Resting			0
ADMINISTRATION & GUIDANCE	1,900		
General Office / Waiting Room with Toilet	550	1	550
Teachers' Mail and Time Room			0
Copy Room			0
Records Room			0
Principal's Office with Conference Area	180	1	180
Principal's Secretary / Waiting			0
Assistant Principal's Office			0
Supervisory / Spare Office			0
Conference Room	390	1	390
Guidance Office	210	1	210
Guidance Storeroom			0
Teachers' Work Room	570	1	570
CUSTODIAL & MAINTENANCE	1,140		
Custodian's Office	80	1	80
Custodian's Workshop	1,060	1	1,060
Custodian's Storage			0
Recycling Room / Trash			0
Receiving and General Supply			0
Storeroom			0
Network / Telecom Room			0
OTHER	6,690		
(List rooms separately below)			
Extended Day Program Storage			0
Extended Day Program Office			0
District Office	5,465	1	5,465
District Office Storage	490	1	490
Office	180	1	180
Quiet Corner	125	1	125
After - School	250	1	250
Zen Den	180	1	180

0			6,450			6,450		
		0	6,000	1	6,000	6,000	1	6,000
		0	300	1	300	300	1	300
		0	150	1	150	150	1	150
0			2,695			2,695		
		0	2,695	1	2,695	2,695	1	2,695
0			6,690			6,690		
		0	3,375	1	3,375	3,375	1	3,375
		0	1,000	1	1,000	1,000	1	1,000
		0	350	1	350	350	1	350
		0	1,750	1	1,750	1,750	1	1,750
		0	215	1	215	215	1	215
0			510			510		
		0	60	1	60	60	1	60
		0	250	1	250	250	1	250
		0	100	2	200	100	2	200
0			2,315			2,315		
		0	375	1	375	375	1	375
		0	100	1	100	100	1	100
		0	150	1	150	150	1	150
		0	110	1	110	110	1	110
		0	375	1	375	375	1	375
		0	125	1	125	125	1	125
		0	120	0	0	120	0	0
		0	120	1	120	120	1	120
		0	250	1	250	250	1	250
		0	150	2	300	150	2	300
		0	35	1	35	35	1	35
		0	375	1	375	375	1	375
0			2,050			2,050		
		0	150	1	150	150	1	150
		0	375	1	375	375	1	375
		0	375	1	375	375	1	375
		0	400	1	400	400	1	400
		0	250	1	250	250	1	250
		0	300	1	300	300	1	300
		0	200	1	200	200	1	200
0			500			500		
		0	300	1	300	300	1	300
		0	200	1	200	200	1	200
		0						
		0			0	0	0	0
		0			0	0	0	0

150		
0	0	0
150	0	150
0	0	0
0		
0	0	0
0		
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0		
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
500		
300	1	300
200	1	200
0	0	0
0	0	0

6,300			Excess Physical Education Spaces Policy
6,000	1	6,000	
150	1	150	
150	1	150	
2,695			
2,695	1	2,695	
6,687			
3,375	1	3,375	Based on 2 lunch seatings - 15 NSF per seat
1,000	1	1,000	
350	1	350	
1,750	1	1,750	1,000 NSF for first 300 students + 1 NSF per additional student
213	1	213	20 NSF per student
510			
60	1	60	
250	1	250	
100	2	200	
2,315			
375	1	375	
100	1	100	
150	1	150	
110	1	110	
375	1	375	
125	1	125	
120	0	-	
120	1	120	
250	1	250	
150	2	300	
35	1	35	
375	1	375	
2,050			
150	1	150	
375	1	375	
375	1	375	
400	1	400	
250	1	250	
300	1	300	
200	1	200	
0			

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610 Enrollment

The 610 Enrollment model combines grades 2-5 and allows for the elimination of an additional transition between schools for students as they progress through the grade levels. It also reduces the burden on transportation schedules with fewer stops, including a reduction of student time on the buses. Families with multiple children in elementary school will have their students in the same school.

CORE ACADEMIC

The proposed project contains 37,450 SF of core academic space. This is 10,600 SF above the MSBA guidelines of 25,650 SF.

The existing building currently contains 7 classrooms per grade housing approximately 18 to 22 students per grade. There are an additional 5 classrooms that are designated for use by the District's Central Office.

The district favors a model with learning neighborhoods to promote a tight-knit atmosphere, with community being essential component of their Vision 2026 strategic plan, which includes a profile of learners that are collaborators who are socially and civically engaged. The District is seeking breakout spaces to allow for flexibility to accommodate diverse groupings of students and learning needs.

In addition to grade level classrooms, core academic spaces include an English Language Development Office, Instructional suite for reading and math, World Language classroom, a Health and Wellness classroom, and a teacher collaboration room. The English Language Development program is currently housed in modular classrooms that provide a sub-par learning environment.

SPECIAL EDUCATION

The proposed project contains 10,840 SF of special education space. This is 3,290 SF above the MSBA guidelines of 7,550 SF to support the District's special education goals.

The variation is due to additional spaces utilized to

support the special education program including a calming room, office for speech and language, OT and PT, and adaptive PE. There is also a Social Emotional Learning Suite including offices for a psychologist, team chair, and behavioral specialist; small group room, testing spaces, and a special education conference room. Currently special education program spaces are in substandard environments including spaces not designed for instruction, unheated conference rooms, and closets converted into offices.

ART & MUSIC

The proposed project contains 8,500 SF of Art & Music space. This is 3,548 SF above the MSBA guidelines of 4,953 SF.

Variations in square footage beyond the MSBA guidelines are due to the addition of instrument storage and a 3,500 SF auditorium. All students are offered opportunities for music education including traditional ensembles of chorus, band, and orchestra. Students are offered opportunities to progress as they grow: third graders participate in small group instrument lessons, and fourth and fifth graders participate in larger ensembles. The auditorium is a response to the desire for a large performance space for the students to showcase their skills, experience performances, and engage with an audience as well as providing large ensemble practice space. Insufficient music storage results in instruments migrating into hallways and on the periphery of core academic classrooms.

HEALTH & PHYSICAL EDUCATION

The proposed project contains 6,450 SF of health & physical education space. This is 150 SF above the MSBA guidelines of 6,300 SF.

The 150 SF variation is due to additional gym storage to support the district's Wellness curriculum inclusive of yoga and adaptive PE in conjunction with more traditional sports activities.

MEDIA CENTER

The proposed project contains 3,415 SF of Media Center space. This is in line with the MSBA guidelines of 3,415 SF.

DINING & FOOD SERVICE

The proposed project contains 8,141 SF of dining and food service space. This is in line with the MSBA guidelines of 8,141 SF.

MEDICAL

The proposed project contains 610 SF of medical space. This is in line with the MSBA guidelines of 610 SF.

ADMINISTRATION & GUIDANCE

The proposed project contains 2,595 SF of administration and guidance space. This is in line with the MSBA guidelines of 2,595 SF.

CUSTODIAL & MAINTENANCE

The proposed project contains 2,210 SF of custodial and maintenance space. This is in line with the MSBA guidelines of 2,210 SF.

OTHER

The proposed project contains 500 SF of other space. This is 500 SF above the MSBA guidelines of 0 SF.

The additional space is for Extended Day Program Storage and Office to support the Extended Day Program, which supports students and families before and after school hours and is run by independent, non-District staff. Extended Day staff arrival prior to the end of the school day necessitates dedicated office space to allow for safe access.

GROSS AND NET

The proposed project contains 80,711 SF of net space. This is SF above the MSBA guidelines of 19,288SF. The proposed gross square footage of the project is 121,067 GSF. This is a multiplication of the net area times the allowed 1.5 grossing factor. This is 32,617 GSF more than the MSBA guidelines of 88,450GSF.

Margaret A. Neary Elementary School Southborough, MA	EXISTING CONDITIONS		
ROOM TYPE	ROOM NFA ¹	# OF ROOMS	AREA TOTALS
HEALTH & PHYSICAL EDUCATION	2,480		
Gymnasium	2,480	1	2,480
Gym Storeroom			0
Health Instructor's Office with Shower and Toilet			0
MEDIA CENTER	2,590		
Media Center / Reading Room	2,590	1	2,590
DINING & FOOD SERVICE	5,000		
Cafeteria / Dining	3,135	1	3,135
Stage			0
Chair / Table / Equipment Storage			0
Kitchen	1,410	1	1,410
Staff Lunch Room	455	1	455
MEDICAL	440		
Medical Suite Toilet			0
Nurses' Office / Waiting Room	440	1	440
Examination Room / Resting			0
ADMINISTRATION & GUIDANCE	1,900		
General Office / Waiting Room with Toilet	550	1	550
Teachers' Mail and Time Room			0
Copy Room			0
Records Room			0
Principal's Office with Conference Area	180	1	180
Principal's Secretary / Waiting			0
Assistant Principal's Office			0
Supervisory / Spare Office			0
Conference Room	390	1	390
Guidance Office	210	1	210
Guidance Storeroom			0
Teachers' Work Room	570	1	570
CUSTODIAL & MAINTENANCE	1,140		
Custodian's Office	80	1	80
Custodian's Workshop	1,060	1	1,060
Custodian's Storage			0
Recycling Room / Trash			0
Receiving and General Supply			0
Storeroom			0
Network / Telecom Room			0

PROPOSED PROGRAM					
NEW CONSTRUCTION			TOTAL		
ROOM NFA ¹	# OF ROOMS	AREA TOTALS	ROOM NFA ¹	# OF ROOMS	AREA TOTALS
6,450			6,450		
6,000	1	6,000	6,000	1	6,000
300	1	300	300	1	300
150	1	150	150	1	150
3,415			3,415		
3,415	1	3,415	3,415	1	3,415
8,141			8,141		
4,575	1	4,575	4,575	1	4,575
1,000	1	1,000	1,000	1	1,000
403	1	403	403	1	403
1,910	1	1,910	1,910	1	1,910
253	1	253	253	1	253
610			610		
60	1	60	60	1	60
250	1	250	250	1	250
100	3	300	100	3	300
2,595			2,595		
455	1	455	455	1	455
100	1	100	100	1	100
150	1	150	150	1	150
110	1	110	110	1	110
375	1	375	375	1	375
125	1	125	125	1	125
120	1	120	120	1	120
120	1	120	120	1	120
250	1	250	250	1	250
150	2	300	150	2	300
35	1	35	35	1	35
455	1	455	455	1	455
2,210			2,210		
150	1	150	150	1	150
375	1	375	375	1	375
375	1	375	375	1	375
400	1	400	400	1	400
300	1	300	300	1	300
410	1	410	410	1	410
200	1	200	200	1	200

VARIATION TO MSBA GUIDELINES		
ROOM NFA ¹	# OF ROOMS	AREA TOTALS
150		
0	0	0
150	0	150
0	0	0
0		
0	0	0
0		
0	0	0
0	0	0
0	0	0
0	0	0
1	0	1
0		
0	0	0
0	0	0
0	0	0
0		
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0		
0	0	0
0	0	0
0	0	0
0	0	0
-3	0	-3
3	0	3
0	0	0

Date: [Enter Date] Preliminary Design Program			
MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM NFA ¹	# OF ROOMS	AREA TOTALS	COMMENTS
6,300			Excess Physical Education Spaces Policy
6,000	1	6,000	
150	1	150	
150	1	150	
3,415			
3,415	1	3,415	
8,141			
4,575	1	4,575	Based on 2 lunch seatings - 15 NSF per seat
1,000	1	1,000	
403	1	403	
1,910	1	1,910	1,600 NSF for first 300 students + 1 NSF per additional student
253	1	253	20 NSF per student
610			
60	1	60	
250	1	250	
100	3	300	
2,595			
455	1	455	
100	1	100	
150	1	150	
110	1	110	
375	1	375	Conference room shared with Asst Principal
125	1	125	
120	1	120	
120	1	120	
250	1	250	
150	2	300	
35	1	35	
455	1	455	
2,210			
150	1	150	
375	1	375	
375	1	375	
400	1	400	
303	1	303	
407	1	407	
200	1	200	

Margaret A. Neary Elementary School
Southborough, MA

EXISTING CONDITIONS

ROOM NFA ¹	# OF ROOMS	AREA TOTALS
--------------------------	---------------	----------------

PROPOSED PROGRAM

NEW CONSTRUCTION

ROOM NFA ¹	# OF ROOMS	AREA TOTALS
--------------------------	---------------	----------------

TOTAL

ROOM NFA ¹	# OF ROOMS	AREA TOTALS
--------------------------	---------------	----------------

VARIATION TO MSBA GUIDELINES

ROOM NFA ¹	# OF ROOMS	AREA TOTALS
--------------------------	---------------	----------------

Date: [Enter Date]

Preliminary Design Program

MSBA GUIDELINES (DO NOT MODIFY)

(Refer to Educational Facility Planning for additional information)

ROOM NFA ¹	# OF ROOMS	AREA TOTALS	COMMENTS
--------------------------	---------------	----------------	----------

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:

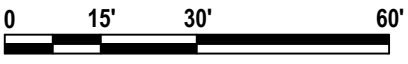
Name of Principal Architect:

Signature of Principal Architect:

Date:

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- ED PROGRAM
- 01_CORE ACADEMIC
 - 02_SPECIAL EDUCATION
 - 03_ART & MUSIC
 - 04_HEALTH & PHYS ED
 - 05_MEDIA CENTER
 - 08_DINING & FOOD SERVICE
 - 09_ADMIN & GUIDANCE
 - 10_MEDICAL
 - 11_CUSTODIAL & MAINTENANCE
 - 12_OTHER
 - 13_NON-PROGRAMMED
 - 14_CIRCULATION



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Evaluation of Southborough Sites

Four town owned parcels were considered for the future Southborough elementary school project.

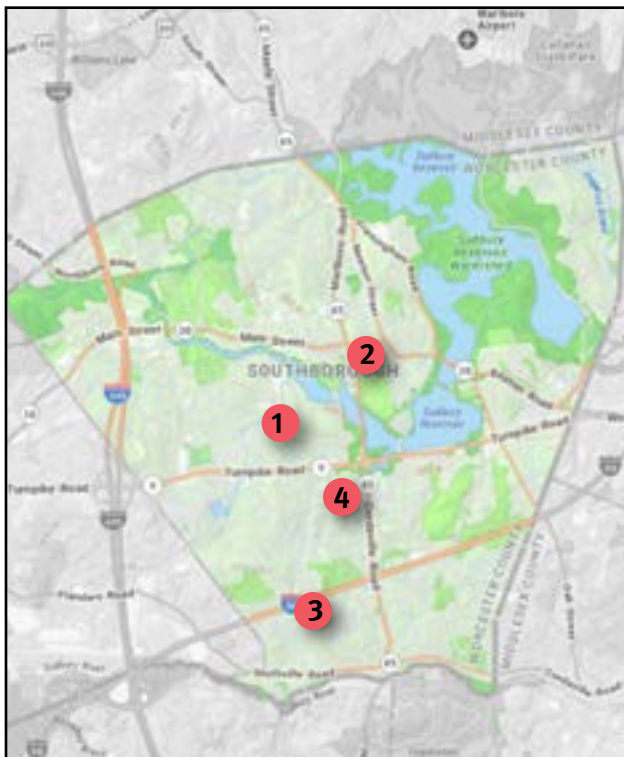
The sites are:

1. 53 Parkerville Rd - The existing Margaret A. Neary Elementary School
2. 28 Cordaville Rd - The existing Albert S. Woodward Memorial School
3. 208 Parkerville Rd - George Mooney Park
4. Parcel 28-0000-004 (Behind the transfer station)
- Town Owned Parcel

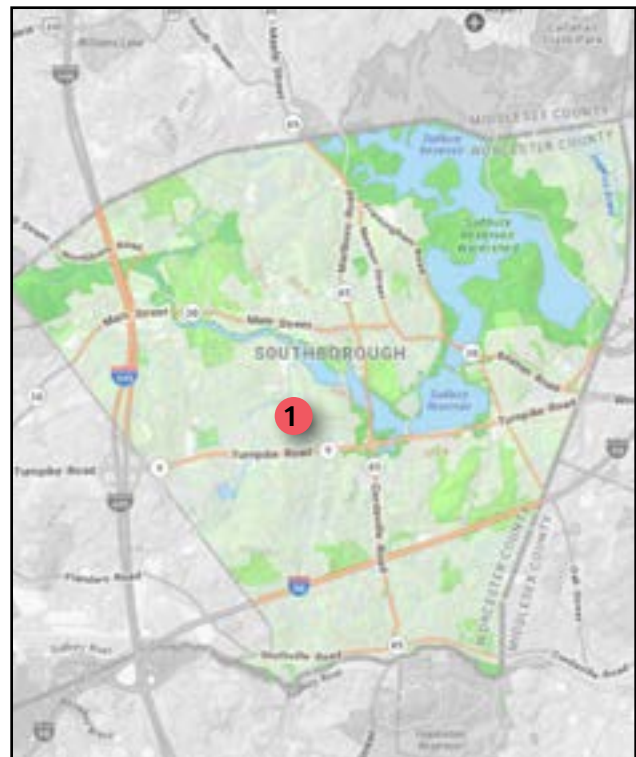
MARGARET A. NEARY SCHOOL

The Margaret A. Neary School is located at 53 Parkerville Road (the site), in the town of Southborough, Worcester County, Massachusetts. It is centrally located north of Rt. 9 near downtown Southborough. The school building is located on approximately 32.6-acres of a single, 80.7-acre parcel (identified by parcel ID 43-0000-018-0), shared with the P. Brent Trottier Middle School to the north. The site is owned by the Town of Southborough.

The existing Neary School occupies a large, open field on the southern side of the site. There are athletic fields immediately to the north of the school which abuts a stand of trees and wetlands, that separate the Neary School from the Trottier School. Parking is located to the southeast of the building. A residential neighborhood abuts the west and south sides of the site.



Overall Locus Map



Margaret A. Neary School Locus Map

The site is part of the watershed that drains the surrounding residential neighborhoods to the Sudbury Reservoir. A small brook that bisects the site from west to east creates wetlands along the northern edge of the athletic fields along the stand of trees. There is also a small stream and wetlands along the southeast side of the site. Due to the proximity to the Sudbury Reservoir, there is a FEMA designated flood zone that follows portions of the stream through the northern part of the site.

Although further study is necessary to map the location of the wetlands and other environmental constraints, it appears that the site can support either an addition to the existing building or construction of new school. No additional legal constraints were discovered.

ALBERT S. WOODWARD MEMORIAL SCHOOL

The Albert S. Woodward Memorial School is located in the central part of Southborough at 28 Cordaville Rd. It is adjacent to the public safety complex. The school building is located on an approximately 11.65

acre parcel owned by the Town of Southborough. No wetlands were identified on the site and it is not an area of critical environmental concern or home to rare species.

Choate Memorial Park is located immediately to the west of the building along Cordaville Road. The park is part of a deeded parcel to the town that has a covenant restriction limiting the use to park or recreational uses only. (See the deed for Parcel A in Appendix E). As a result of the deed restrictions, the park is not available to expand or otherwise construct a new building at the Woodward site.

The Woodward School is located in the Southborough Center Historic District, which is listed in the National Register of Historic Places. The historic district designation could further restrict development on the site and will be reviewed further during the next phase of this study.

GEORGE MOONEY PARK

George Mooney Park is located in the southwest part of Southborough adjacent to the Mary E. Finn



Albert S. Woodward School Locus Map



George Mooney Park Locus Map

Elementary School. The park is home to athletic fields, including dedicated baseball and softball diamonds, tennis courts, and pickleball courts. It is a well utilized center for town recreation.

Several concerns have been identified by the District for the potential use of this property for a new or expanded school.

- The site is located at the southern end of town and is not proximate to the majority of school age population. Use of the site for a new or expanded school would exacerbate concerns about bus and emergency vehicle access from the rest of town.
- The site is located approximately 150 yards from the Massachusetts Turnpike, creating concerns for potential noise and air quality impact on a future school. In addition, access underneath the highway is limited, creating further concerns about travel logistics to the school from the northern side of town.
- A preliminary review of the deed indicates the park may be protected under Article 97, the Public Lands Preservation Act. This restriction is being further reviewed by the town's counsel and will be confirmed prior to submission of the PSR.
- CPA funding was recently used to upgrade the fields and pickleball courts. Additionally, significant private expense has gone into maintaining the fields.
- A significant cost would incur to relocate the parks and no town owned parcels are available equal in size.

Based on these concerns, the Neary Building Committee has decided to exclude the site as a potential location for a new Neary School or expanded Finn School.

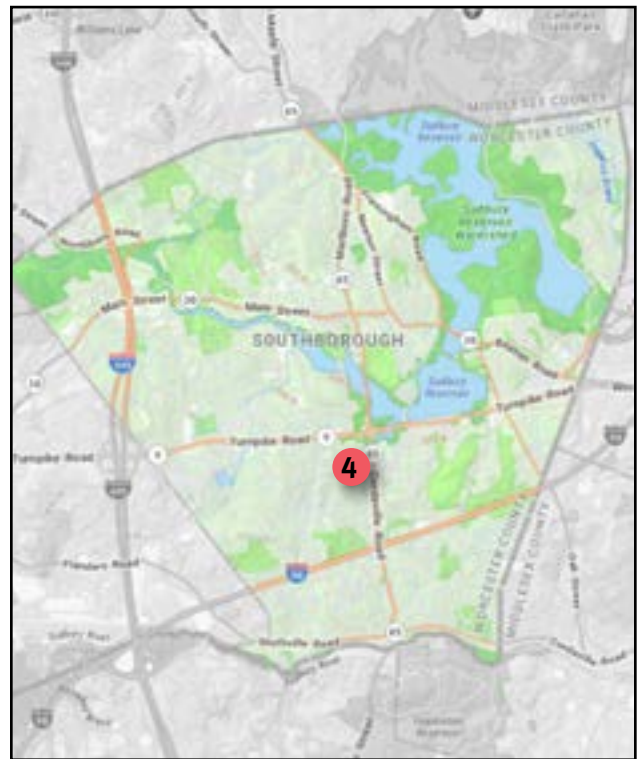
PARCEL 28-0000-004-0

Parcel 28-0000-004-0 is located on Middle Road in central Southborough adjacent to the existing Town of Southborough Transfer Station. The parcel stretches from Middle Road on the west side to the rear of the Transfer Station on the east. Access to the site is limited to Middle Road due to the on-going

activities behind the Transfer Station from Cordaville Road on the east. Portions of the site are relatively steeply sloped, particularly near the street and southern boundary of the parcel.

The parcel was previously evaluated during feasibility studies for the new public safety building. It was disqualified due to its small size and limited access from adjacent streets. The topography creates significant challenges, particularly for athletic fields. The access road is shared by Eversource, the town DPW, and the transfer station. The public safety study explored an option for rear egress but determined that would lead through a rural residential neighborhood with a steep incline. In addition to the grading challenges, site concerns include adjacency to a large wetland with an MWRA easement and close proximity to the septic system for the DPW salt shed.

These same considerations have led the Neary Building Committee to decide the site is not suitable for a new Neary School.



Parcel 28-0000-004-0 Locus Map

Existing Margaret A. Neary Site Evaluation

CONTROL OF SITE & AVAILABILITY FOR DEVELOPMENT

As noted above, the town owned parcel that is the site of the existing Neary and Trottier Schools is quite large with a large stand of trees that forms a natural buffer running west to east that separates the two schools onto separate sites. For the purposes of this evaluation, the description below will focus on the southern portion of the parcel that contains the Neary School, parking lot, and athletic fields.

The Margaret A. Neary Elementary School is a one-story building constructed in 1970. Due to under enrollment, six classrooms have been converted into the District offices for The Public Schools of Northborough and Southborough. In the event of an addition or renovation of the existing building, it is likely that the District offices will be relocated to another facility in town.

The site is improved with (2) modular classrooms, (2) utility/storage sheds, asphalt paved roads and parking areas, a playground, a softball field, a basketball court, a sand volleyball court (3) tennis courts, (5) soccer fields, and landscaped areas. The remaining land consists of forested areas, a small skating pond, and wetlands fed from the nearby Sudbury Reservoir, which divide the parcel on the east/west axis. Please refer to Appendix E. Property Deeds for the property deeds and Appendix F. Existing Conditions Site Survey for the survey of the site, surrounding roads, and parkland.

The Town of Southborough has full access and control of the existing school site for development (refer to the letter from the Office of the Town Solicitor for a legal opinion on the town's ability to use the site). There is one easement along the eastern edge of the property between the school and abutter's properties. The easement does not appear to limit further development of the site.

Considerations of future development of the Site

include the steeply sloping land to the south and west of the existing building, potential wetlands or wet soils surrounding the site, and the impact of construction on existing school operations.

DEVELOPMENT RESTRICTIONS & PERMITS

The property is generally available for further development to support the proposed improvements to the Margaret A. Neary Elementary School. The following is a detailed evaluation of potential development restrictions on the site.

Planning Board and Zoning Board of Appeals

According to the Town of Southborough Zoning Map, the site is located within a residential zoning district (RA), where educational use is allowed. Pending final design of a potential new construction project, it is not anticipated that any zoning relief will be required.

Conservation Commission

Massachusetts GIS system (MassMapper) indicates wetlands along the southeast edge of the property adjacent to the existing town owned park on Parkerville Road. The site is further bisected by wetlands along a small stream that separates the Neary School from the Trottier School to the north. The stream is classified as a river with a 200' required riverfront buffer. A potential vernal pool was identified at the south of the site straddling the boundary with the parcel at 55 Parkerville Rd.

No Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife are noted. FEMA AE flood zones are located along the river and to the east of the access road from Parkerville road and the existing school buildings. Work on the site will likely require oversight from the Southborough Conservation Commission.

Stormwater Management

As noted above, the site provides natural drainage for the surrounding residential properties located to the south and west of the school. There are localized drainage structures in the existing parking lots that outfall to the nearby wetlands. There is no formal storm mitigation system currently in place.

Historic Restrictions

53 Parkerville Rd is not noted in the National Register of Historic Places and does not have a listing in the Massachusetts Cultural Resource Information System (MACRIS) database. It is not located within any of the established historic districts in Southborough. A Project Notification Form (PNF) will be filed with the Massachusetts Historical Commission during the next phase of the project to ensure there are no historical restriction that would impact the renovation or demolition of the existing school building.

National Pollutant Discharge Elimination System (NPDES)

Any potential construction project may require filing a NPDES construction general permit with the EPA for disturbance of an area of more than one acre of land. The Contractor awarded the contract would be responsible for filing the NPDES General Permit and preparing a project- specific Storm Water Pollution Prevention Plan (SWPPP). The Contractor must submit a Notice of Intent 14 days prior to any earth-disturbing activities.

Massachusetts Environmental Policy Act (MEPA)

It is not anticipated that a renovation, addition or new construction project will trigger any thresholds for MEPA regulations. A full analysis will be performed as part of the next phase of this study.

Accessibility

On February 23, 2024, representatives from KMA visited the site at 53 Parkerville Rd. to perform a comprehensive accessibility audit. Any deficiencies from the Massachusetts Architectural Access Board (MAAB) requirements in 521 CMR and the Americans with Disabilities Act (ADA) should be corrected as part of any building renovation.

The accessibility audit identified the following deficiencies:

- Insufficient number of accessible parking spaces, excessive cross slopes, and lack of curb cuts along bus lanes.
- Oversized thresholds, insufficient door widths, and hardware deficiencies at the main entrance and egress doorways.
- Door clearance, width and hardware deficiencies throughout the building. Inaccessible drinking fountains and inaccessible toilet fixtures in the multi-user toilets.
- Furniture deficiencies and lack of accessible seating locations in the cafeteria and classrooms.

Refer to Appendix G. Accessibility Evaluation - Itemized Deficiencies for detailed report on existing conditions.

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Existing Conditions Report

EXISTING BUILDING CODE AND MAAB COMPLIANCE REPORT

Code Red Consultants has prepared this memorandum as part of the feasibility study for the Neary Elementary School project located at 53 Parkerville Road in Southborough, MA. This memorandum is intended to summarize major fire and life safety requirements associated with the project, and facilitate the development of the Preliminary Design Program (PDP). A comprehensive Chapter 34 Investigation & Evaluation Report will be developed as the proposed project becomes further refined.

The information included within this memo is based on existing drawings and a building survey conducted by Code Red Consultants on February 22, 2024, which included a review of the major fire and life safety features within the building. Accessibility features were not evaluated as part of the survey.

Applicable Codes

Code references in this memo are from the Massachusetts State Building Code (780 CMR), the Massachusetts State Existing Building Code (MEBC), and the Massachusetts Comprehensive Fire Safety Code (527 CMR 1.00).

The 10th Edition of the **Massachusetts State Building Code** effective date is tentatively planned for Q2 of 2024 with a 6-month concurrency period. Any project filing for permit after this date will require compliance with the 10th Edition of 780 CMR. This new state code is based on the 2021 editions of the I-Codes with state-specific amendments. The code considerations outlined within this report are based on the 9th Edition of 780 CMR currently in effect.

Existing Building Description

The Neary Elementary School building is 1-story in height and has a footprint of approximately 60,000 square feet. The building was originally constructed in 1968. Two small modular classrooms were constructed as an addition following original construction MEP renovations occurred within the building in 2009, including upgrades to the HVAC and electrical systems.

A building separation was not observed between the original building and the modular addition, so both portions are considered a single building from a code perspective. The school contains classrooms, offices, a cafeteria, a library, and two recreational gymnasium spaces and serves students in grades 1 through 5. It is our understanding that the school also functions as a day care. Table 1 summarizes additional existing building information. Figure 1 includes an aerial view of the building.

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CODE CONSULTING - FIRE PROTECTION ENGINEERING - CONSTRUCTION ADMINISTRATION - PERFORMANCE-BASED DESIGN

TABLE 1: EXISTING BUILDING SUMMARY

Use and Occupancy:	Group E, Educational ¹ , Group A-2, Assembly, and Group A-3, Assembly
Construction Type:	The building consists of masonry exterior walls, CMU interior walls and steel structural components. The original 1968 drawings indicate wood as part of portions of floor assemblies and the roof deck. Combustible construction was also observed in the floor assembly of small MEP spaces and in a nonbearing partition. The construction type of the defaults to Type IIIB construction.
Height & Area:	1 story above grade and a footprint of 60,000 square feet.
Automatic Sprinkler System:	The building is not protected with an automatic sprinkler system or standpipe system.
Fire Alarm System:	The building is equipped with a fire alarm and detection system consisting of the following components: <ul style="list-style-type: none"> • Visual & audible notification, • Smoke detection, and • Manual pull stations.
Means of Egress:	Exits are provided to the exterior serving common spaces/corridors throughout the building.
Exit Signage and Emergency Lighting:	Emergency lighting and illuminated exit signs were observed to be provided in the building.

1. It is assumed that the day care program does not include children younger than 2.9 years, which would otherwise result in a Group E, Day Care Facility (780 CMR 308.6.1).



FIGURE 1: BUILDING SITE OVERVIEW

Project Description

As part of the feasibility study for the project, new construction and renovation options are being considered:

1. *Renovation & Addition:* Major renovations throughout the existing building that could consist of the construction of an addition providing uses consistent with that of the existing building.
2. *New Construction:* Demolition of the existing building and construction of a new elementary school.

Classification of Work

The following details work classifications under consideration for the renovation option (MEBC – Work Area Method).

Renovation & Addition

This scope of work is classified as a **Level 2 Alteration** and an **Addition**. If the renovation scope of work includes work areas that make up more than 50% of the building area, the project would be classified as a **Level 3 Alteration** (MEBC Chapter 9). It is our understanding that no change of occupancy is planned.

- **Level 2 Alteration** – Includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment in less than 50% of the aggregate building area.
- **Level 3 Alteration** – Apply where the work area exceeds 50% of the aggregate building area.
- **Addition** – Includes an extension or increase in floor area, number of stories, or height of a building structure.

Use and Occupancy

The building consists of classrooms, gymnasiums, a library, offices, and building support spaces. The posted certificate of inspection indicates that the building contains **Group E, Educational, Group A-2, Assembly, and Group A-3, Assembly** occupancies.

It is our understanding that the day care uses in the building are classified as part of the Group E, Educational occupancy in accordance with 780 CMR 305.2.

The building has a non-separated mixed use occupancy approach.

Construction Type

Renovation & Addition

The 1968 original drawings indicate that the building is constructed with masonry exterior walls and steel framing, which is consistent with what was observed on site. Corridors are generally constructed with CMU throughout. Combustible construction was observed in small MEP spaces and the 1968 drawings indicate plywood at select locations. A small modular structure constructed as an addition consists of masonry exterior walls and noncombustible structure. A building separation was not observed between the existing building and the modular addition. The construction type of the building defaults to **Type IIIB** construction due to the combustible construction. However, if the wood construction is removed, the building would be permitted to be classified as **Type IIB** construction under the current edition of 780 CMR.



FIGURE 2: MASONRY EXTERIOR WALLS



FIGURE 3: PLYWOOD ROOF AND STEEL STRUCTURE

The following table outlines the minimum fire resistance rating for building elements throughout Type IIIB construction.

TABLE 2: FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS (TYPE IIIB)

Building Element	Type IIIB (Existing)
Primary Structural Frame	0 Hour
Interior Bearing Walls	0 Hour
Exterior Bearing Walls	2 Hours
Exterior Nonbearing Walls	Refer to the Exterior Walls Section
Floor Construction and Secondary Members	0 Hour
Roof Construction and Secondary Members	0 Hour

New Construction

The construction type of the new building option is required to be based on the proposed height and area. Refer to the following section for limitations to consider for Type IIB construction (unprotected, noncombustible construction).

Height and Area

If an Addition is proposed to be constructed, evaluation of height and area limitations applicable to new construction is required (MEBC 1102).

The footprint of the existing building is 60,000 square feet and one story in height.

Table 3 outlines the area limitations for sprinklered and unsprinklered Type IIIB/ IIB buildings containing Group A-2, Group A-3, and Group E Occupancies. Area increases for 100% open frontage are included.

TABLE 3: NEW CONSTRUCTION AREA LIMITATIONS - TYPE IIB & IIIB

Use Group	Allowable Height [Unsprinklered]	Allowable Height [Sprinklered]	Allowable Footprint Area [Unsprinklered]	Allowable Footprint Area [Sprinklered]
A-2/ A-3	2 stories/ 55 ft.	3 stories/ 75 ft.	16,625 ft ²	45,125 ft ²
E	2 stories/ 55 ft.	3 stories/ 75 ft.	25,375 ft ²	68,875 ft ²

The existing building does not comply with the height and area limitations since it is not sprinklered throughout. If an addition is proposed for the building, sprinklers are required to be provided throughout the existing and new portions of the building to comply with the height and

area limitations, or a compliant building separation (i.e. fire wall or pedestrian walkway) is required between the existing building and new addition.

A separated, mixed-use approach could be applied to the building to increase the allowable footprint. This approach would not require a rated separation between Group A and Group E occupancies (780 CMR Table 508.4).

Exterior Walls

New or altered exterior walls as a result of any renovation or addition are required to be evaluated in accordance with 780 CMR 602 & 705.8.

The following table indicates the fire-resistance ratings and unprotected opening limitations for nonbearing exterior walls based on fire separation distance (780 CMR 602 & 705.8):

TABLE 4: EXTERIOR WALL RATINGS AND UNPROTECTED OPENINGS PERMITTED BASED ON FSD
TYPE IIIB (NONSPRINKLERED)

Fire Separation Distance (ft.)	Fire-Resistance Rating	Allowable area
$0 \leq X < 5$	1 Hour	Not Permitted
$5 \leq X < 10$	1 Hour	10%
$10 \leq X < 15$	1 Hour	15%
$15 \leq X < 20$	1 Hour	25%
$20 \leq X < 25$	1 Hour	45%
$25 \leq X < 30$	1 Hour	70%
$X \geq 30$	0 Hours	No Limit

- 20 ft. of fire separation distance is required for unlimited openings and nonrated exterior walls for Type IIIB buildings that are sprinklered throughout.
- 10 ft. of fire separation distance is required for unlimited openings and nonrated exterior walls for Type IIB buildings.

For the purposes of applying the above table, fire separation distance is measured to one of the following: (1) closest interior lot line, (2) centerline of a street, alley, or public way, or (3) an imaginary line between two buildings on the property.

Based on GIS mapping, a minimum of 280 feet of fire separation distance is maintained to adjacent lot lines around the perimeter of the building. No structures on the same lot are located such that the fire separation distance would be reduced.

Interior Finishes

New interior finishes are required to comply with 780 CMR Chapter 8. All existing interior finishes within the exits/ corridors in the work area in the existing building are required to comply with the code for new construction (MEBC 803.4). If the proposed work area exceeds 50% of the floor area, all interior finishes within exits/ corridors serving the work area are required to comply with 780 CMR (MEBC 803.4.1).

On site, decorations were observed to be mounted on walls in classrooms and corridors. Regardless of the scope of work, it is recommended that paper decorations be reviewed throughout to ensure these materials are within the allowable limits and locations.

- Paper materials displayed in classrooms are not permitted to exceed 50% of the total wall area where buildings are sprinklered throughout (527 CMR 20.2.4.4.3). Otherwise, paper materials are permitted for up to 20% of the total wall area.

- Paper materials displayed in corridors are not permitted to exceed 50% of the surface area of any wall in buildings sprinklered throughout, or 10% if the building is not sprinklered (527 CMR 20.2.4.4.4).
 - Paper materials are required to be positioned in such manner to avoid concentration of materials to reduce flame spread in the event of a fire.
 - Groupings of materials are not permitted to exceed a maximum horizontal measurement of 12 feet and a maximum vertical measurement of six feet.
 - Groups of paper material are permitted as long as there is space between each group equal to at least ½ the horizontal width of the largest adjacent group.
- Paper materials are not permitted to cover an egress door or be placed within 5 ft. of an egress door (527 CMR 20.2.4.4.).



FIGURE 4: CLASSROOM WALL DECORATIONS



FIGURE 5: CORRIDOR WALL DECORATIONS

Fire Protection Systems

The existing building is not equipped with a sprinkler system. Sprinkler protection is required as part of the project as outlined below:

- A new building is constructed with any of the following (780 CMR Table 903.2)
 - Group E fire area that exceeds 12,000 sf, or an area below the level of exit discharge.
 - Group A-2 fire area that exceeds 5,000 sf, 100 occupants, or an area below the level of exit discharge.
 - Group A-3 fire area that exceeds 5,000 sf, 300 occupants, or an area below the level of exit discharge.
- If an addition is constructed to the existing building without a compliant building separation, an automatic sprinkler system is required to meet the area limitations (780 CMR 506.2).
- If the work area exceeds 50% of the area on a given floor, the work area is required to be provided with sprinklers (MEBC 804.2.2).
- If the scope of work is considered a 'major alteration' based on MGL Ch. 148 Sec. 28G. Massachusetts General Law Ch. 148 Sec. 26G requires every building or structure, including major alterations thereto, which totals more than 7,500 gross square feet, to be protected throughout with an automatic sprinkler system. The law does not implicitly define what constitutes a 'major alteration.' An advisory document published by the Sprinkler Appeals Board in 2009 expands upon the application of this MGL to existing buildings, i.e. what should constitute 'major alterations.' This document summarizes that an existing building is

required to be protected with sprinklers where all of the following four conditions are satisfied:

1. Building gross square footage is more than 7,500 sf;
2. Sufficient water and water pressure exist to serve the system;
3. The nature of work to the building is considered as “major”, including any one or more of the following:
 - a. The demolition or reconstruction of existing ceilings or installation of suspended ceilings;
 - b. The removal and/or installation of sub flooring, not merely the installation or replacement of carpeting or finished flooring;
 - c. The demolition and/or reconstruction or repositioning of walls or stairways or doors; or
 - d. The removal or relocation of a significant portion of the building’s HVAC, plumbing, or electrical systems involving the penetration of walls, floors, or ceilings.
4. The scope of work is proportional to the cost/benefit of sprinkler installation. To evaluate whether this is satisfied, the advisory document lists either of the following as thresholds for requiring sprinkler protection (evaluated over a 5-year period):
 - a. Work affects 33% or more of the total gross square footage; or
 - b. Total cost of the work (excluding cost to install a sprinkler system) is equal to or greater than 33% of the assessed value of the building, as of the date of permit application.

The 2020 advisory document by the Sprinkler Appeals board notes that buildings owned by the Commonwealth are generally not subject to the provisions of 26G. However, buildings that are owned by state authorities or other similar entities created by Legislature, may not necessarily be considered “state owned”.

Fire Alarm & Detection System

The building is equipped with a zoned fire alarm and detection system. The fire alarm control panel (FACP) is located in the office space adjacent to the main entrance vestibule from the parking lot. Fire alarm devices observed throughout the building include smoke detection, manual pull stations adjacent to exits, and audible/visual notification appliances. The system is not provided with emergency voice/alarm capabilities. The fire alarm and detection system is required to be extended/reconfigured to provide full coverage as part of any renovation (780 CMR 907.2.3 Exception 1 & 527 CMR 1.00, 13.7.2.3.1.2).

All new fire alarm devices and any modifications to the existing fire alarm system are required to meet new construction requirements of NFPA 72 (2013 Edition) and 527 CMR relative to their installation. Group E buildings are also required to be provided with an emergency voice/ alarm communication system (780 CMR 907.2.3).

Means of Egress

Existing means of egress are required to be maintained in accordance with 527 CMR 1.00 & 780 CMR 102.8.

Deficiencies observed relative to the existing means of egress serving the building are outlined below. These existing conditions are permitted to remain unless deemed hazardous by the

building official or otherwise required to be corrected per 521 CMR or the MEBC. Note that this is not an exhaustive list of all existing egress deficiencies in the building.

- Portions of the corridors and most doors serving the corridors are not provided with a fire resistance rating, latch, and closer. For unsprinklered educational buildings, corridors are required to be 1-hour rated (780 CMR 1020.1).
- Exit doors are not provided with the required level landings on both sides, and slopes were observed on the exterior sides of doors (780 CMR 1010.1.6).
- Egress doors throughout the building have clear openings less than the required 32 inches (780 CMR 1010).
- Missing or noncompliant/nongraspable handrails serving exterior ramps and stairs were observed (780 CMR 1014.1 & 1014.3).

Alterations to the means of egress are required to comply with the code for new construction (MEBC 702.6). Where an addition to the existing building is constructed, the new and existing means of egress or egress components serving the addition are required to comply with 780 CMR Chapter 10 for new construction. The following include some of the major requirements, based on the building being fully sprinkler protected:

- The means of egress is required to be sized using 0.2" per occupant for stairs and 0.15" per occupant for other egress components (780 CMR 1005.3.1 & 1005.3.2). This assumes the building is being sprinklered and provided with an emergency voice/alarm communication system as part of the renovation scope. **With these factors, the existing exit doors serving the building provide an egress capacity of 2,126 occupants. If either of the systems are not installed, the egress capacity is limited to 1,595 occupants.**
- The number of occupants required to be calculated in accordance with 780 CMR Table 1004.1.2. Factors anticipated to be used on this project are listed in Table 5. The occupant load is permitted to be increased from the occupant load established for the given use where all other requirements of 780 CMR are met (780 CMR 1004.2).

TABLE 5: OCCUPANT LOAD FACTORS

Function of Space	Occupant Load Factor
Assembly, Unconcentrated (Tables & Chairs)	15 net
Classrooms	20 net
Vocational Shops/Labs & Library Reading Rooms	50 net
Fitness Space/Lockers	50 gross
Office & Library Stacks	100 gross
Commercial Kitchen	200 gross
Storage Areas/ MEP Rooms	300 gross

As the scope of work for the project is developed, egress capacity is required to be maintained in accordance with 780 CMR Chapter 10.

- A single means of egress is permitted from any space where the occupant load or common path of travel distances are less than that specified in the following table (780 CMR 1006.2.1):

TABLE 6: SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

Occupancy	Maximum Occupant Load	Maximum Common Path of Travel Distance
A / E	49	75 feet

- Exit access travel distances are not permitted to exceed 250 ft. (780 CMR 1017.2).
- Where two exits or exit access doorways are required from any portion of the exit access as outlined above, the exit doors or exit access doorways are required to be placed a distance apart equal to not less than 1/3 of the length of the maximum overall diagonal dimension of the building or area served in a building that is sprinklered throughout (780 CMR 1007.1.1 Exception 2). The separation distance increases to at least 1/2 the length of the maximum overall diagonal dimension for buildings that are not sprinklered throughout.
- Corridors serving Group E occupancies on a floor with an occupant load of 100 or more are required to have a clear width of at least 72" (780 CMR Table 1020.2).
- Dead-end corridors are not permitted to exceed 20 ft. for Group A occupancies and 50 ft. for Group E occupancies (780 CMR 1020.4).

Plumbing

248 CMR 10.00, *Uniform State Plumbing Code*, regulates the minimum number of plumbing fixtures. The requirements set forth in 248 CMR 10.10(15) Table 1 apply to plumbing system installation, alteration, or extension projects where a plumbing permit is required. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the population as established by the authority having jurisdiction.

TABLE 7: PLUMBING FIXTURE FACTORS

Use Group	Toilets		Urinals	Lavatories Each Sex	
	Female	Male		Female	Male
Elementary Students	≤100: 1 per 25 >100: add 1 per 50	≤100: 1 per 25 >100: add 1 per 50	50% max. substitution	1 per 25	
Educational Staff	1 per 20	1 per 25	33% max. substitution	1 per 20	
Assembly (Gathering/Gymnasium)	≤200: 1 per 25 201-500: 1 per 50 >500: 1 per 100	≤200: 1 per 50 201-500: 1 per 100 >500: 1 per 100	50% max. substitution	1 per 50	

One drinking fountain per restroom set and one service sink per floor is also required.

The posted certificate of inspection for the school indicates that the maximum program load is 600 educational occupants throughout the facility. The gymnasium and cafeteria are each limited to 180 occupants. **Table 8 outlines the required number of plumbing fixtures for students based on the anticipated enrollment. As the scope of work is further developed, the maximum program load of the building should be confirmed, including staff and after-hours events, to determine the number of required plumbing fixtures.**

TABLE 8: PLUMBING FIXTURE CALCULATIONS

Classification	Number of Occupants	Water Closets		Male Urinals ¹	Lavatories	
		Female	Male		Female	Male
K-12 School (Student)	305	5.05	5.05	2.53	6.10	6.10
Total Required Fixtures		6	6	3	7	7
K-12 School (Student)	450	6.50	6.50	3.25	9.00	9.00
Total Required Fixtures		7	7	3	9	9
K-12 School (Student)	610	8.10	8.10	4.05	12.20	12.20
Total Required Fixtures		9	9	4	13	13

1. Permitted to be substituted for required male water closets.

Fire Department Access

Fire Department access roads are required to be provided and maintained such that any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building (527 CMR 18.2.3.2.2). This is permitted to be increased to 250 feet if the building is fully sprinklered.

The design of the access road is required to comply with the following:

- Have an unobstructed width of not less than 20 feet and vertical clearance of 13 feet 6 inches (527 CMR 18.2.3.5.1).
- Have a minimum inside turning radius of at least 25 feet unless otherwise required by the fire official (527 CMR 18.2.3.5.3.1).
- Have a gradient that does not exceed 10% (527 CMR 18.2.3.5.6.1).
- Dead-ends in excess of 150 feet in length are required to be provided with approved provisions for the fire apparatus to turn around.
- Required to be capable of supporting the imposed loads of fire apparatus and provided with an all-weather driving surface (527 CMR 18.2.2.1.1).

Accessibility

Buildings in Massachusetts are subject to compliance with the 521 CMR and the ADA.

ADA Standards

ADA requires altered portions of an existing building to be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADA 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADA requirements state that the upgrade to the path of travel is disproportionate to the project *when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area*. Primary function areas are not limited to public use areas and may include lobbies, offices, meeting rooms, etc. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

- An accessible entrance
- An accessible route to the altered area
- At least one accessible restroom for each sex or a single unisex restroom

- Accessible drinking fountains
- Accessible telephones


521 CMR

521 CMR Section 3.3 contains the following scoping requirements for work occurring in existing buildings. The costs referred to the scoping requirements below are cumulative for all work to the building within a rolling 36-month period:

1. If the work occurring within the building is less than \$100,000, then only the working being performed is required to comply with 521 CMR.
2. If the work costs more than \$100,000 but less than 30 of the full and fair cash value of the building then in addition to the work being performed, the following accessible features are also required to be provided in the building:
 - a. Accessible entrance
 - b. Accessible toilet room
 - c. Accessible drinking fountain (if provided)
 - d. Accessible public telephone (if provided)
3. If the work, and all permitted work within a 36 month rolling window, costs more than 30% of the full and fair cash value of the building (prorated based on public spaces), then all public portions of the building are subject to the requirements of 521 CMR.

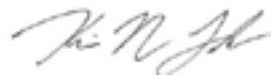
If you have any comments or questions on the contents of this letter, please do not hesitate to contact us.

Prepared By:



Matthew Nicastro

Reviewed By:



Kevin N. Lynch, P.E.

Structural Conditions

The existing building is a one-story masonry structure supported on spread footings with CMU bearing walls and open web steel joists supporting a poured gypsum roof deck. The existing structural drawings indicate an expansion joint along the courtyard which separates the classroom portion of the building from the gymnasium and cafeteria portion of the building. It is unclear from the existing drawings the extent of CMU reinforcing and seismic restraint. Likely both conditions will require further investigation and, potentially, remedial reinforcing if the building is renovated.

The building is generally in good condition. Miscellaneous mortar deterioration, concrete spalling, and cracking was observed throughout the building which should be repaired as part of any

general maintenance effort. If the building is renovated, the structural system will need to be evaluated for compliance with current building code requirements.

The diagram below describes the extent of bearing walls. Any renovation Options would need to carefully consider the structural impact and associated cost of removing any of these walls.

Please see the Structural Report on the following pages.



Existing Bearing Wall Diagram

INTRODUCTION

This narrative, prepared by Lim Consultants, Inc., describes the Margaret Neary Elementary School's existing building structure, noting existing conditions and observed structural deficiencies. It also provides a discussion of code requirements related to potential renovation options based on Chapter 34 of the 10th Edition (draft) of the Massachusetts State Building Code (MSBC). The findings in this narrative are based on:

- Observations during a site visit on February 22, 2023, by the staff of Lim Consultants, Inc.
- Existing drawings of the building prepared by Korslund, LeNormand & Quann, Inc. Architects of Norwood, Massachusetts, dated Nov 18, 1968.

EXISTING STRUCTURE

The existing building is a one-story constructed in 1969. An access road from Parkerville Road provides access to this building and a middle school building which is located further ahead on this access road. The front face of the building is in the northeast direction facing the access road. Per existing construction documents, the building is divided into Part A, Part B, and a courtyard in the middle. Part A on the northwest side comprises classrooms, faculty rooms, a library and an auditorium. Part B on the southeast side comprises the main entrance, classrooms, kindergarten classrooms, a cafeteria, a kitchen, playrooms, and storage rooms. An expansion joint is called out between the two parts of the building in the existing foundation plan and roof framing plan. The total building footprint is approximately 70,000 square feet.



The perimeter of the building is supported by concrete frost walls based on the original drawings, and confirmed by field observations. Per the existing drawings, foundation frost walls only have horizontal bars. Some of the shallower wall footings have no reinforcement. At the interior, haunched footings are provided where there are bearing walls above.

The first floor is a 4-inch thick concrete slab on grade with a 12 inches thick gravel base. The auditorium entrance from the corridor near the main entrance is a concrete stair built on a framed concrete slab supported by a concrete beam on one side and a CMU wall on the other.

The superstructure is a one-story building with a framed roof. The roof structure is constructed with a poured gypsum deck with formboards on bulbtees. The bulbtees span between the open web steel joists. The roof pops up in the center of both part A and part B of the building. In part A the pop-up is in the auditorium and library area. In part B the pop-up is in the playrooms and storage area. At both pop-ups, the roof cantilevers with steel joists over the CMU bearing walls. All the roof steel joists bear on CMU walls except in the areas where the corridor turns direction. At those areas the joists are supported by the W-shaped steel beams as the joists spanning direction changes at the turns. The steel beams at the corridor turns are bearing on CMU walls. Where the joists bear directly on CMU walls, the walls are extended up to the roof deck with bricks between the joist bearings for diaphragm engagement and deck edge support. The existing drawings do not show any reinforcement in the CMU wall, further investigation will be required to field verify the reinforcement.

The exterior façade is a 4-inch brick veneer tied back to the CMU walls. The top of the façade is a continuous band of precast concrete. The precast band is a square-shaped beam with a continuous seat at the top for steel joists and a lip at the bottom that goes over the CMU wall. The precast beams also span between the exterior window and door openings and are supported on the CMU wall with pin anchors.

The existing drawings do not define an explicit structural lateral system for the building. The lateral loads of the building are carried by the inherent stiffness of the CMU walls - acting as shear walls despite not detailed to present day masonry shear wall requirements. Since the date of construction predates the adoption of the first edition of the Massachusetts State Building Code in 1975, it is unlikely that the structural design accounted for earthquake loading.

Observed Conditions

The majority of the structure is obscured by ceiling tiles. At a few select locations, ceiling tiles were removed to expose the structure for observation. Based on what we could observe during the walk-through, the overall condition of the existing structure is good. If this building were to be renovated, further investigations would be required to assess the condition of concealed structures associated with the renovation. The following conditions were noted:

1. On the courtyard exterior wall adjacent to the main entrance, a precast band beam has a few spalls in the concrete. We recommend chipping out loose spalls, applying a bonding agent, and infilling with a high-strength mortar.



Figure 1 – Spalls in Precast Band Beam

2. On the right side of the main entrance door, a crack in the brick veneer was observed. We recommend repairing the crack by cutting out loose mortar and repointing with fresh mortar.



Figure 2 – Crack in Brick Veneer

3. On the southeast face of the exterior façade, near a playground equipment door, a step crack has started to form through the joints of the brick veneer. We recommend recaulking the joint between the precast beam and the top of the brick veneer to avoid any precast beam load bearing on the veneer.



Figure 3 – Diagonal Crack Building on Brick Veneer

4. At the south corner of the building, a diagonal crack in the foundation wall was observed. We recommend epoxy pressure injection to seal the cracks.



Figure 4 – Diagonal Crack in Foundation Wall Corner.

5. On the northwest face of the building, caulking was missing from a small portion of a vertical wall joint. Fill the joint with new caulking



Figure 5 – Missing caulking at a Wall Joint

6. On the roof, at a few locations water puddles were observed. We recommend evaluating the roof slope to avoid future ponding of water.



Figure 7 – Water Puddles on Roof

BUILDING CODE REQUIREMENTS ON RENOVATION AND ADDITION

The study will evaluate different schemes of rebuilding a new school building or preserving a part of the existing structure and building a new addition. Renovation and addition will conform to Chapter 34 of MSBC, which is the Massachusetts-amended version of the future International Existing Building Code 2021 (IEBC).

IEBC permits three compliance methods: Work Area Method, Prescriptive Method or Performance Method. On a given project, all aspects of compliance must use the same method. For the purposes of this discussion, the Work Area Method is proposed.

1. Renovation

In addition to repairing the existing structural defects, structural work will include modifications to support the proposed architectural, mechanical, electrical, plumbing, and fire protection (MEP/FP) upgrades. The scope of the structural modification will be determined by the scope of architectural and MEP/FP renovations.

Using the Work Area method, if the floor area is reconfigured by more than 50%, the proposed renovation will likely be classified as a Level 3 Alteration. If the floor area is reconfigured by less than 50%, the proposed renovation will likely be classified as a Level 2 Alteration. No change of use is envisioned. The code considerations are as follows:

Level 3 Alteration**1) Requirements on Gravity Load Supporting System**

According to IEBC, all existing structural members – bearing walls, floors (including roof), and foundation must be assessed for capacity under the proposed design gravity loads. Any stress increase in the existing members, including cumulative effects of renovation since original construction, must be limited to 5 percent; all new structural members must comply with the requirements of the current International Building Code (IBC). When the 5 percent limit is exceeded, the existing structural members must be evaluated and reinforced if necessary to support the increased loading.

For example, if the renovation requires adding new equipment on a roof or floor, the gravity load will be altered. If introducing openings in load-bearing walls, the load paths in the wall will be altered. The affected members will need to be evaluated as a result, and new structural supports and/or reinforcement of existing members will be required if existing members are found inadequate.

2) Requirements on Lateral Load Resistance System

For Level 3 Alteration, IEBC requires an engineering evaluation and analysis that establishes the structural adequacy of the altered structure to be performed. If the proposed structural work involves more than 30% of the areas tributary to the vertical load carrying components, the renovation will be a Substantial Structural Alteration; otherwise the renovation will be a Limited Structural Alteration.

For a Substantial Structural Alteration, the altered structure is required to comply with the IBC for wind loading and for reduced IBC level seismic loading. This would result in a major upgrade of the existing structural system. Design efforts should be made to limit the scope of structural modifications in order to avoid the lateral resistance system upgrade.

For a Limited Structural Alteration, any existing lateral load-resisting structural element whose demand-capacity ratio with the alteration considered is more than 10% greater than its demand-capacity ratio with the alteration ignored shall comply with the reduced IBC level

seismic forces. If the demand-capacity ratio increase does not exceed 10%, the proposed upgrades on lateral load carrying members will not be required. Similar to the gravity load increase calculation, the demand-capacity ratio evaluation will include cumulative effect since the original construction of the building.

In Margaret Neary Elementary School, the masonry walls are acting as shear walls to resist lateral loads. In order to avoid seismic upgrades or reinforcement, the walls cannot be removed or weakened with openings or penetrations by more than 10%.

In the event that seismic reinforcement is necessary, it can be achieved by introducing steel framing around new openings, constructing new concrete or CMU shear walls, or new steel braced frames that include diagonal braces, steel beams, and steel columns, and concrete foundations. To re-establish proper load paths to transfer the diaphragm forces to the foundation, seismic reinforcement may not be limited to the locations or bays where weakened structures occur.

3) Diaphragm Anchorage to Structural Walls

There are three conditions that would trigger diaphragm anchorage per the MSBC. If any of these triggers are met, the connection between the roof or floor diaphragms and the masonry wall must be analyzed to take the IBC level reduced seismic loads. If found inadequate, reinforcement of the diaphragm-wall connection with shear connectors, clip angles, or studs will be necessary on the entire building.

The first trigger is specified in IEBC section 906.4. It applies to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Building has reinforced concrete or masonry walls
- Has a flexible diaphragm
- Is in seismic design categories D or worse

The second trigger is specified in IEBC section 906.5. It applies to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Building contains unreinforced masonry
- Is in seismic design categories B or worse

The third trigger is specified in IEBC section 707.3.2 and amended by MSBC section 302.7. It applies to building alterations which meet all of the following:

- Re-roofing work is planned for at least 50% of the roof
- Building is located where the ultimate design wind speed is greater than 130 mph and the building is Risk Category IV per table 1609.3 of IBC 2021

For this project, the second trigger will apply. The building is a level 3 alteration, the building contains unreinforced masonry bearing walls, and is in seismic design category B.

4) Diaphragm Anchorage to Non-Structural Walls

Per IEBC section 906.7, the unreinforced non-bearing masonry partitions within the work area must be anchored to the diaphragm must be analyzed to resist present day IBC level out-of-plane seismic loads. If found inadequate, the partitions must be removed, or grouted

with additional reinforcement to comply with IBC level seismic loads. Clip angles will also be required to brace the head of the partition walls.

The provisions of IEBC Section 906.7 apply to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Has unreinforced masonry partitions
- Is in seismic design categories B or worse

For this project, the provisions of IEBC Section 906.7 will likely apply. The renovation is likely a level 3 alteration, the seismic design category will be B or worse (assuming site class D), and there are unreinforced masonry partitions.

Level 2 Alteration

1) Gravity Load Supporting System

According to IEBC, all new structural members must be designed to comply with the requirements of the current edition IBC. For any existing element supporting additional loads, the affected element must meet or be upgraded to meet the current code unless the stress increase is less than 5% for the altered building compared to the original condition. Any element whose capacity is reduced by the alteration must comply with Code requirements for new construction.

2) Lateral Load Supporting System

The IEBC states that any existing lateral load-resisting structural element whose demand-capacity ratio with the alteration considered is more than 10% greater than its demand-capacity ratio with the alteration ignored shall comply with the reduced IBC level seismic forces.

If the demand-capacity ratio increases by more than 10% due to weakening/removal of lateral members, increased seismic mass, increased wind area, etc., the structure will require re-analysis and reinforcement where necessary. If the demand-capacity ratio increase does not exceed 10%, the proposed upgrades on lateral load carrying members will not be required.

As stated in the existing structural system section, the building was likely designed without consideration of seismic loads. Any re-assessment or re-analysis of the lateral system will likely lead to building wide upgrades to meet new reduced level IBC seismic forces. It is therefore recommended that the proposed alterations affecting lateral load carrying elements be minimized such that the 10% threshold is not exceeded.

3) Diaphragm Anchorage to Structural Walls

There are three triggers for diaphragm anchorage per the MSBC. If any of these triggers are met, the connection between the roof or floor diaphragms and the masonry wall must be analyzed to take the IBC level reduced seismic loads. If found inadequate, reinforcement of the diaphragm-wall connection with shear connectors, clip angles, or studs will be necessary on the entire building.

The first trigger is specified in IEBC section 906.4. It applies to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Building has reinforced concrete or masonry walls
- Has a flexible diaphragm

- Is in seismic design categories D or worse

The second trigger is specified in IEBBC section 906.5. It applies to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Building contains unreinforced masonry
- Is in seismic design categories B or worse

The third trigger is specified in IEBBC section 707.3.2 and amended by MSBC section 302.7. It applies to building alterations which meet all of the following:

- Re-roofing work is planned for at least 50% of the roof
- Building is located where the ultimate design wind speed is greater than 130 mph and the building is Risk Category IV per table 1609.3 of IBC 2021

The provisions of IEBBC Section 906.4 and Section 906.5 are not applied to Level 2 alteration, and the building is not in Risk Category IV.

4) Diaphragm Anchorage to Non-Structural Walls

Per IEBBC section 906.7, the unreinforced non-bearing masonry partitions within the work area must be anchored to the diaphragm must be analyzed to resist present day IBC level out-of-plane seismic loads. If found inadequate, the partitions must be removed, or grouted with additional reinforcement to comply with IBC level seismic loads. Clip angles will also be required to brace the head of the partition walls.

The provisions of IEBBC Section 906.7 apply to building alterations which meet all of the following:

- Level 3 alteration (defined as reconfiguration of space in over 50% of building area)
- Has unreinforced masonry partitions
- Is in seismic design categories B or worse

The provisions of IEBBC Section 906.7 are not applied to Level 2 alteration.

2. Addition / New Construction

An addition to the existing building will comply with Chapter 11 of IEBBC. The following requirements will apply:

a) Vertical Addition

Adding an intermediate floor or a floor over the existing roof would be considered as a vertical addition. The building's entire structural system is to be evaluated for the proposed gravity and lateral load impact. Besides the increased gravity loading, the existing structure is required to support IBC level wind and seismic loads brought by the addition.

b) Horizontal Addition

Requirements on a horizontal addition that is structurally connected to an existing building are similar to those on a vertical addition. To avoid evaluation, reinforcement, or upgrade of the existing structure, a horizontal addition is recommended to be structurally independent from the existing building. An independent addition will be designed as a new building, complying with the IBC.

Architectural Conditions

Exterior Envelope

Completed in 1970, the exterior walls are a brick veneer, backed by masonry-block construction, with exposed, painted, masonry block on the interior face. Patterning at the exterior brick is a Common Bond with a Flemish bond every 6th course serving to tie the veneer back to the masonry block. According to the record drawings, the original wall construction did not include any insulation at the exterior, only thru-wall flashing at the base of the walls and at punched openings. When some of the classrooms were converted to District office, the exterior walls of those rooms were furred out and insulated walls along the interior face.

Visual observations show little sign of efflorescence, deterioration or wear of masonry joints, though there is some staining from corrosion of adjacent materials in some areas.

There is little evidence of water infiltration through the exterior walls, however, it has been observed that moisture and water infiltration has occurred at various exterior doors and windows throughout the building. Should any portion of the existing building be preserved as part of an addition/renovation option, further investigation of materials and construction methods is required to improve thermal performance and mitigation of air and water infiltration.



EXTERIOR FACADE

The red-brick masonry veneer is punctuated with several precast concrete accents along the building exterior. Most notably, are the details that accent the windows which include, vertical precast elements, window sill blocks, exposed-aggregate precast panels below windows, and precast panels above windows at the cafeteria. A deep, precast band at the top of the exterior wall connects the masonry wall and the roof around much of the building perimeter except at the double-height spaces (gymnasium, library, cafeteria) and the back-of-house area at the building's southwest face. Further investigation on how to maintain or preserve these elements is required should an addition/renovation option be preferred.

Additionally, there are intake louvers spaced around the building exterior, which serve the perimeter unit heaters in classroom and office spaces. The brick above these louvers is newer than the surrounding brick, which was most likely replaced when the units were upgraded in 2009.

The roof is constructed with a poured gypsum deck over 1-inch formboard and supported by steel trusses. The roof construction over the back-of-house and boiler room is the only portion of roof built with a concrete waffle slab. The roof perimeter is finished with an aluminum gravel-stop, though it is unclear whether this is the original coping. The original gravel

roof was replaced in 1990, and is now covered with a rubberized, EPDM roofing membrane. Several patches are present along the roof and require "constant maintenance" as leaking is a persistent problem for the facility. Some ponding was reported at various locations despite the number and distribution of roof drains, but as there are no parapets, the depth of any standing water is minimal. The sloped roof trusses provide the required pitch to roof drains. Given the condition of the existing roof as well as the lack of adequate insulation, complete replacement is recommended in any addition/renovation option.

Lastly, two modular classrooms were added to the building in 2001. This pair of classrooms is permanently attached to the building at the northwest facade, facing the playground and playing fields. Access to the modular classrooms is through an enclosed corridor and ramp. The exterior of the modular classrooms is clad in faux-brick and vinyl paneling. The modular classroom roof is a simple, pitched roof with asphalt shingles.

Exterior Openings

Exterior entrances are constructed of aluminum storefront with single-pane glazing and narrow-lite, hollow metal doors. The main entry features (2) pairs of fully-glazed, aluminum storefront doors, leading to the entry vestibule. All the exterior storefront framing



EXTERIOR ENTRANCE DOOR



INTERIOR VESTIBULE DOORS



shows varying levels of corrosion and wear. Evidence of water infiltration is also present, as the salt used to treat the sidewalks in the winter is contributing to corrosion at the base of the storefront. All the public entrances have a vestibule and the inner doors at these locations feature wire safety glass.

Non-public entries include several hollow-metal doors that access back-of-house and utility areas. There are (2) steel, roll-up doors which each access interior storage areas at the southwest and southeast facades. Ornamentation at and around doors and entries is minimal. Given the age of the doors and frames, and the inefficiency of single-pane glazing, replacement would be recommended in any addition/renovation option.



Existing windows are aluminum-framed, single-pane units with either fixed glazing or in many instances, a lower operable vent. Several windows in classrooms and offices have been modified to permanently hold window unit air conditioners. There is evidence of water infiltration at several windows, including warped and swollen window seats, corrosion, and staining.

Interiors

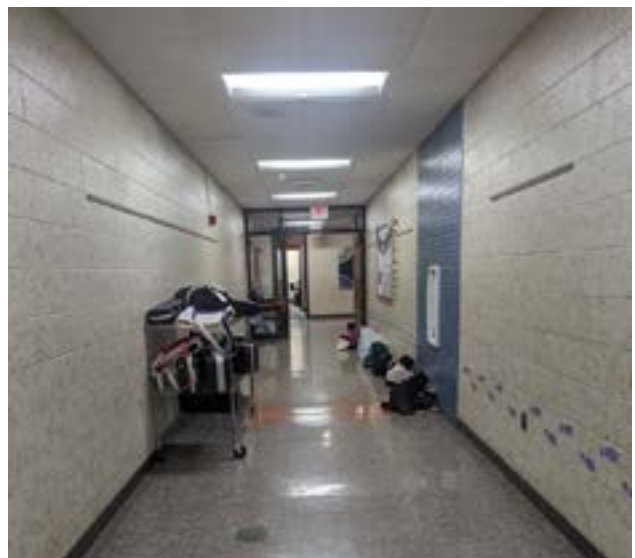
Interior finishes throughout the building appear



to be in good shape and have been well-maintained, despite their age. As the interior partitions are primarily masonry block construction, there is very little evidence of wear or abuse. The paint on these walls appears to be original. The painted masonry block is consistent throughout the building except in some areas there are ceramic tile accent elements behind drinking fountains. Bathrooms are finished with floor-to-ceiling ceramic tile. Other finishes include acoustic panels in classrooms and the library, wooden acoustic paneling in the library and band room. Some rooms have been divided by a gypsum board partition to create additional office and breakout spaces and (5) sets of classrooms are divided with operable, acoustic partitions with pass-through doors.

Flooring throughout the school is mainly VCT tile with asbestos-containing-mastic. Select areas, such as the spaces around classroom sinks still feature ceramic tile, however the original ceramic tile in bathrooms was either replaced or covered with resinous flooring. The two gymnasiums are covered with a composite play surface, offices and quiet areas are finished with carpet as is the tiered flooring in the band room. The kitchen area is covered in what appears to be the original quarry tile and is showing signs of wear and cracking throughout.

Ceilings throughout the entire building are spline



TOP LEFT View into the courtyard

MIDDLE LEFT Stairs from the corridor to the music room

BOTTOM LEFT Tiered risers on the interior of the music room

TOP RIGHT Classroom move-able partition

MIDDLE RIGHT Storage in the corridor

BOTTOM RIGHT Typical classroom



LIBRARY



GYMNASIUM



SERVERY



DISHWASHER



TYPICAL BATHROOM

acoustic ceiling tile. Much of the tile is original and most likely contains asbestos. There is little evidence of staining from ongoing roof leaks as building maintenance is frequently replacing broken or stained tiles.

Equipment & Kitchen

The existing kitchen servery was originally designed and equipped as a full-service cooking kitchen, but is now utilized as a warming kitchen due to the lack of adequate cold storage (both walk-in units have failed beyond a cost-effective repair and are now used as dry storage). Meals are prepared at the Trottier Middle School (located on the north portion of the project site) and delivered to the building to be warmed and served through one of the (2) servery lines. Current equipment includes a pair of warming ovens, (1) commercial refrigerator, (2) standard-grade refrigerators, (2) milk coolers, several serving carts and tray storage, prep sinks, and a full-service dish washing area. Any project option should include a new, full-service kitchen and servery.

Stairs & Vertical Circulation

The building is a single story, so there are not public accessible stairs or an elevator. The majority of the existing building is accessible with the exception of the band room which has tiered seating accessed via (2) stairways at each corner of the space. There are (6) 7-inch tiered risers within the space which result in an approximately 42-inch level change from floor to the top tier.

The other two stairs located within the building are not meant for public use; one is located within the boiler room at the back of house, and the other is located within a library storage room leading to an attic above.

Lastly, there is a single ramp which leads from the corridor at the northwest corner of the building to the modular classrooms. No other vertical circulation is utilized throughout.

Building Systems Condition

The MEP/FP engineers visited the building to observe the condition of the HVAC, plumbing, fire protection and electrical systems. In general, the systems are in good repair but are substantially past their anticipated service life. The following is a brief summary of the building systems and the engineers' observations.

The building is heated by a hot water system that was substantially upgraded in 2009. Natural gas fired boilers provide hot water to unit ventilators and air handling units. A direct digital control (DDC) system was installed in 2009. Due to the age and performance of the system, it is recommended that the system be replaced in any major building renovation, including providing improvements to the indoor air ventilation system.

The plumbing systems (domestic water supply and sanitary drainage) are in fair condition but reaching the end of their service life. The plumbing fixtures are not water efficient and, in many instances, not accessible. The building does not have a fire protection system which would be required in the event of any major renovation or addition.

The existing electrical system is generally original though the switchgear was replaced in 2011. The systems are generally adequate but should be upgraded or replaced in the event of a major building renovation or addition. The fire alarm system has also been upgraded from the building construction but is not code compliant due to lack of voice evacuation.

Refer to the existing conditions reports by GGD for the evaluation of the existing MEP systems, including recommendations for future upgrades or replacement.

Please refer to full MEP report on the following pages.



HEATING, VENTILATION & AIR CONDITIONING (HVAC)

Executive Summary:

While well taken care of and in operational condition, the building heating, ventilation, and air conditioning (HVAC) systems are antiquated, have exceeded, or are nearing, their useful expected service lives. The building HVAC systems generally consist of Natural Gas fired heating hot water boilers, heating hot water (HHW) coil unit ventilators, HHW coil indoor air-handling units, and general exhaust systems. While the exact date of boiler installation was not readily available it is assumed the boilers were installed within 5 years of the 2009 HVAC renovations. The boiler plant is providing adequate overall heating to the building, with much of the heating system piping and terminal equipment, such as unit ventilators, convectors, radiators, and fin tube radiation heating having undergone substantial renovations circa 2009. The building control system appears to have abandoned pneumatic controls in favor of direct digital controls (DDC) with the 2009 HVAC renovations. Therefore, it is our recommendation that the building HVAC system should be replaced in its entirety as part of any proposed major building renovation and repair project. In addition, in order to provide code required ventilation, a higher degree of thermal comfort for the building and improve energy efficiency, we would recommend that the replacement HVAC system have upgraded features such as improved ventilation, lower operating sound levels, higher energy efficiency, and potentially be provided with the addition of air conditioning and/or dehumidification throughout the building since it is currently only heated and ventilated.

Heating System:

The majority of the building is heated by a gas-fired heating hot water plant. The heating hot water plant consists of two (2) cast iron, gas fired heating hot water boilers that were manufactured by Buderus (Model Logano GE615). The boilers appear to be in fair physical and operating condition, based on appearance and level of corrosion. The boilers are approximately 15 years old and should have 10 to 15 more years of service according to ASHRAE's Equipment Life Expectancy Chart. The boilers each have a heating capacity of 3,389 MBH output with a dual-fuel Gordon-Piatt boiler burner, model S10_1-GO-30. The boilers provide a heating hot water and glycol mixture throughout the building serving classroom unit ventilators, heating and ventilation units, convectors, cabinet unit heaters and fin tube radiation heating. The heating hot water system is provided with a glycol make-up unit to prevent freezing of coils and to add the appropriate water/glycol mixture to the system should any water leak or otherwise be lost from the system. The boilers appear to be equipped with code-required low water cut-off and operating safety controls. Dual Base-mounted pumps split the duty of circulating HHW to HHW terminal heating units and air handling units.

Combustion air for the boiler plant is brought into the boiler room through combustion air ducts associated with an external sidewall louver, combustion air fan with dedicated controls, as well as louver control dampers. Combustion gases are discharged from the boilers through an insulated combustion gas flue, to an adjacent masonry chimney which terminates above the roof. Combustion flue insulation should be tested for asbestos prior to any work being performed.

Heating hot water piping is routed from the boiler room to and from the building heating hot water terminal heating equipment. Most of the piping is original to the 1970 building construction and has been reused for the 2009 HVAC renovations.

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The Auditorium, Library, and general Corridor spaces are also provided with a local heating hot water re-circulating air handling units (AHU) to supplement the heating capability of the terminal heating units. The air handling units were replaced along with the other terminal units in the 2009 HVAC renovation. The mechanical mezzanine that housed these air handling units was not accessible at the time of the site visit.



Existing Steam Boiler Plant



Typical Hot Water Pumps



Glycol Make-up System



Insulated Boiler Venting to Chimney

Air Conditioning:

Air conditioning throughout the building is provided by through-wall/window, freestanding, or split system air conditioning units. Through-wall/window and freestanding air conditioners operate with onboard controls while the split systems are provided with a wireless thermostat remote control. Condensate generated by the split systems is pumped either outside or to mop sinks. Some classroom spaces are additionally equipped with ceiling mounted destratification fans to assist in cooling and space air circulation.

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Typical Window Air Conditioner



Typical Freestanding Air Conditioner



Indoor Terminal of Split Unit



Split System Wireless Remote Thermostat



Typical Outdoor Terminal of Split Unit



Ceiling Mounted Destratification Fans

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Ventilation:

Ventilation for most spaces throughout the building is provided with horizontal, or vertical, heating hot water unit ventilators. This includes general offices, classrooms, gymnasium, and cafeteria. Spaces equipped with unit ventilators are provided with louvered through-wall intakes, or are ducted up to roof hoods for outside air. Exhaust fans are provided throughout the building to offset the outside air introduced into the spaces via unit ventilators. The classroom areas are generally inclusive of exterior wall unit-ventilators, while spaces such as the gymnasium utilize ceiling suspended horizontal unit ventilators. Both types of ventilator deliver a mixture of heated re-circulation and outdoor air to the space during occupied hours. The hot water control valve within the unit ventilators is typically controlled by a local wall mounted space thermostat.

The Library, Auditorium, and Corridor spaces are provided with hot water heating and ventilation air handling units located in a mechanical mezzanine near the library, not accessible at the time of visit. The air handling units serving these spaces are recirculation type units with full outside and exhaust capabilities. Heating and ventilating air handling units are controlled by local zone level thermostat control. Meanwhile, the kitchen is equipped with its own make-up air unit and dedicated exhaust fan.



Typical Unit Ventilator w/ OA Louver



Typical Exhaust/Relief Grille



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Typical Through Wall Louver



Typical Ceiling Suspended Unit Ventilator



Typical Relief Hood



Roof Mounted Exhaust Fans



Kitchen Make-up Air Unit

Kitchen Range Exhaust Hood

Entryways, Hallways, Toilet Rooms:

Entryways, hallways, storage areas, and toilet rooms are typically heated by cabinet unit heaters, convectors, or HHW fin-tube radiators.

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Typical Hot Water Convector



Typical Hot Water Fin Tube Radiation

Exhaust Air Systems:

The building classroom, administration offices, library, auditorium, gym and toilet room areas are exhausted by exhaust air fan systems. Exhaust systems that serve these areas generally terminate at various roof exhaust fans or roof hoods. Exhaust fan systems were replaced in the 2009 HVAC renovation. Even with the renovations within the past 15 years, it would still be recommended to replace current exhaust fan systems within the next 5-10 years.

HVAC Controls:

The building pneumatic control system has been replaced in favor of a standalone direct digital control system consisting of control panels, sensors/thermostats, and wiring. The control system appears to be operating to its designed capability. However, several additional renovations have subdivided spaces requiring auxiliary systems for temperature control. Further, there is no central building management system (BMS) to monitor overall building operations and assist in troubleshooting HVAC related issues.



HHW Plant Control Panel



Controllers within Control Cabinet

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Typical Room DDC Sensors



Abandoned Pneumatic Control Compressor



Abandoned Pneumatic Control System Gauges



Abandoned/Cut Pneumatic Control Lines

Recommendations:

While the building HVAC systems appear to have been well maintained throughout the years, the existing HVAC system is of an antiquated type, further the present system is nearing the end of its expected useful service life with an expectancy of 5-10 years per the ASHRAE Equipment Life Expectancy Chart. While the most simplistic system renovation/replacement would be to replace the existing boilers and maintain the existing heating hot water systems, consideration to the equipment nearing end of life, and recent mechanical code requirements for higher energy efficiency and ventilation systems requiring energy recovery, we recommend that the building HVAC system is replaced in its entirety. A new HVAC system will provide code required ventilation and a higher degree of thermal comfort throughout the building. We recommend the following HVAC system scope:

- A lifecycle cost analysis should be performed during the early design stages of the project. A minimum of three HVAC system replacement options should be studied in terms of first, operating and maintenance/replacement costs over the study period to determine the system with the lowest

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cost of ownership. To meet current and future electrification goals we recommend the following HVAC system option be considered as one potential option.

- Demolish and remove all existing HVAC systems and equipment.
- Blank off & seal all existing unit ventilator outdoor air intake grilles and restore the envelope in each of these locations to maintain code-required thermal heat transfer resistance.
- Hot Water Heating Plant: Provide a new electric high efficiency modular Air-source to Hydronic Heat Pump unit that shall be located on grade outdoors within an enclosed area. New primary and secondary hot water pumps sets shall be provided and arranged in a primary standby manner to distribute hot water from the air source heat pump unit to building terminal heating equipment via a new insulated hot water piping distribution loop. The distribution pumps shall be provided with EC motors or VFDs.
- Terminal Heating Equipment: New insulated hot water piping shall be distributed from the plant to a combination of terminal hot water heating equipment. The majority of occupied classroom and office areas shall be provided with heating only fan coil units equipped with EC Motors for fan speed control. Entry areas and stairwells shall be provided with cabinet unit heaters. Utility rooms and storage areas with exterior exposures shall be provided with unit heaters. Corridors and areas with extensive exterior exposure areas shall be provided with fin tube radiation heating.
- Ventilation Systems: Provide new indoor-mounted 100% outdoor air localized ventilation systems with energy recovery ventilation units (ERV) with split air source VRF (variable refrigerant flow) heat pump condenser units. The indoor ERV units shall be equipped with supply and return/exhaust fans equipped with VFDs or EC motors, Refrigerant heating/cooling coils, MERV-14 final filter, MERV-8 pre and exhaust filters, economizer control, recirculation air dampers, static pressure control, and demand control ventilation. There shall be separate ERV units for Classrooms and adjacent teacher support and circulation areas, Administration Areas, Cafeteria and Gym Areas. The Classroom areas shall be served by multiple ERV units that shall be designed based on heating/cooling load exposures. Where possible the ERV units shall be connected to common outdoor air and exhaust air duct systems to minimize building envelope penetration.
- Each of the indoor ERV units shall be piped with insulated refrigerant piping to dedicated outdoor air source heat pump condenser units. The outdoor heat pump units shall be of the inverter scroll compressor "VRF" unit design.
- The ERV units shall be designed to provide air conditioning or partial air conditioning (dehumidification) to the majority of building areas. The Administration and Cafeterias areas shall be provided with "full" air conditioning to maintain 75 deg F on a design cooling day, whereas the Gym and Classroom and related Teacher support areas shall be designed for partial air conditioning to maintain a temperature of 78-80 deg F on a design cooling day.
- Code required exhaust for the majority of building areas, including toilet rooms, shall be provided through the localized energy recovery ventilation (ERV) systems.

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- Dedicated exhaust air fan systems shall be provided for Kitchen exhaust air and Janitor's closet areas.
- New VAV (variable air volume) terminal boxes with temperature and demand control ventilation shall be provided for each classroom, teacher support room and the office areas. Enthalpy controls shall be provided to shut down mechanical cooling systems when operable windows are opened during hot and humid outdoor air conditions.
- Supplemental split Air Source heat pumps shall be provided to serve IT server rooms and closets.
- The existing building control systems shall be removed and a new direct digital automatic temperature control (ATC) and building energy management system (BMS). The new ATC/BMS system shall be web accessible, include energy metering, and shall be capable of being integrated into the Town-wide energy management system.

Recommendations (Add-Reno or New Construction Project):

We recommend the following HVAC system scope as part of an Addition Renovation or New Construction project:

- A lifecycle cost analysis should be performed during the early design stages of the project. A minimum of three HVAC system replacement options should be studied in terms of first, operating and maintenance/replacement costs over the study period to determine the system with the lowest cost of ownership. Based on our understanding of the Town's electrification goals we recommend the following HVAC system option be considered as one potential option.
- Demolish and remove all existing HVAC systems and equipment.
- Blank off & seal all existing unit ventilator outdoor air intake grilles and restore the envelope in each of these locations to maintain code-required thermal heat transfer resistance.
- Ground Source Wellfield: A new closed loop geothermal wellfield shall be provided to serve the building HVAC system and domestic hot water heating system. The final number and depth of wells shall be determined during later design stages by a geothermal wellfield engineer based on site conditions and cost considerations. A preliminary estimate would be for thirty five (35) 600 ft deep wells that provide a capacity of approximately 5 tons heating/cooling each. Each well should be 20-25 ft from each other, and a minimum of 10 feet from the building or other utility lines. The ground source water distribution system shall serve two different loops. Each groundwater loop shall be provided with a pump set arranged in a primary-standby manner and each pump shall be equipped with VFDs or EC motors. One loop shall serve a Hot Water Heating plant loop and the other loop shall serve the building ventilation air handling heat pump units loop. The ground water piping loops located within the building shall be insulated.
- Ground source to Hot Water Heating Plant: Provide new electric high efficiency modular (non closed coupled) Ground water source to Hydronic Hot Water Heat Pump Generator units that shall be located indoors with a mechanical room area. New hot water pumps sets shall be provided and

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arranged in a primary standby manner to distribute hot water to/from the heat pump units to the building terminal heating equipment via a new insulated hot water piping distribution loop. The ground water and hot water system distribution pumps shall be provided with EC motors or VFDs.

- **Terminal Heating Equipment:** New insulated hot water piping shall be distributed from the plant to a combination of terminal hot water heating equipment. The majority of occupied classroom and office areas shall be provided with finned tube radiation heating (Renovation Areas) or radiant ceiling heating panels (Addition/New Construction). Entry areas and stairwells shall be provided with cabinet unit heaters. Utility rooms and storage areas with exterior exposures shall be provided with unit heaters. Corridors and areas with extensive exterior exposure areas shall be provided with fin tube radiation heating.
- **Ventilation Systems:** Provide new indoor mounted 100% outdoor air localized ventilation systems with energy recovery ventilation units (ERV) with ground source water heat pump sections. The indoor ERV units shall be equipped with supply and return/exhaust fans equipped with VFDs or EC motors, Ground water to Refrigerant heat exchanger and heat pump section, MERV-14 final filter, MERV-8 pre and exhaust filters, economizer control, recirculation air dampers, static pressure control, and demand control ventilation. There shall be separate ERV units for Classrooms and adjacent teacher support and circulation areas, Administration Areas, Cafeteria and Gym Areas. The Classroom areas shall be served by multiple ERV units that shall be designed based on heating/cooling load exposures. Where possible the ERV units shall be connected to common outdoor air and exhaust air duct systems to minimize building envelope penetration.
- The ERV units shall be designed to provide air conditioning or partial air conditioning (dehumidification) to the majority of building areas. The Administration and Cafeterias areas shall be provided with “full” air conditioning to maintain 75 deg F on a design cooling day, whereas the Gym and Classroom and related Teacher support areas shall be designed for partial air conditioning to maintain a temperature of 78-80 deg F on a design cooling day.
- It is proposed that building addition and new construction Classrooms and adjacent teacher support and circulation areas, Administration Areas, Cafeteria and Gym Areas are served by a displacement ventilation air system which consists of low wall supply displacement air diffusers and ceiling mounted return/exhaust air registers. Spaces within renovated portions of the existing building would be provided with over-head delivery ventilation systems in-lieu of displacement, as the renovation envelope improvements and the existing special availability may not support the use of a displacement system.
- Code required exhaust for the majority of building areas, including toilet rooms, shall be provided through the localized energy recovery ventilation (ERV) systems.
- Dedicated exhaust air fan systems shall be provided for Kitchen exhaust air (if provided) and Janitor’s closet areas.
- New insulated galvanized sheetmetal ductwork shall be provided to connect the ERV units supply and return ductwork to each space. New VAV (variable air volume) terminal boxes with temperature and demand control ventilation shall be provided for each classroom, teacher support

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room and the office areas. Enthalpy controls shall be provided to shut down mechanical cooling systems when operable windows are opened during hot and humid outdoor air conditions.

- Unitary type ground water source heat pumps shall be provided to serve IT server rooms and closets.
- Domestic hot water heating systems shall be pre-heated by the building hot water heating loop and a ground source heat pump system shall be utilized to provide additional heating of DHW heating. The DHW storage tank heat exchangers and heat pumps shall be by Plumbing.
- A new direct digital automatic temperature control (ATC) and building energy management system (BMS). The new ATC/BMS system shall be web accessible, include energy metering, and shall be capable of being integrated into the Town-wide energy management system.

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ELECTRICAL

Executive Summary:

The existing electrical systems of this facility range from original vintage, to more recent upgrades / additions installed including 2011 vintage switchgear and some upgraded LED lighting. The fire alarm system is also recent however is not compliant with current code.

The electrical service is adequate in capacity and voltage characteristics for the present load demand of the building. However, the existing service will have to be upgraded in a Base Repair that includes an all electric mechanical system upgrade, or for any major renovation/Addition. The new Service will be sized to 15W/SF.

Life safety lighting and exit signs are in fair condition and seem to be compliant.

Fire alarm system is not compliant with current code. Voice evacuation is not present.

Systems upgrading in an existing facility results in extensive use of surface raceways where wiring cannot be run concealed resulting in a construction premium.

It is our recommendation, taking in consideration the age, capacity and general conditions of the existing equipment, that all electrical systems should be replaced with new energy efficient code compliant systems under a major renovation program.

Electrical Distribution System:

The primary service of the building is fed underground to a pad mounted transformer adjacent to the boiler room. The building is metered at the transformer meter #25140165.

The secondary service of the building consists of a 1200A, 120/208V, 3-Phase, 4 Wire with the main serviced disconnect located within the boiler room. The main service breaker then serves the main distribution panel “MDP-A and “MDP-B” in the main electric room. The main service is sized for approximately 6.6W/SF. The majority of the electrical distribution system was upgraded in 2011, is manufacturer by Eaton and is of the circuit breaker type. The equipment is in good condition. There are some original vintage branch circuit panelboards still in operation.

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Pad Mounted Transformer



Utility Meter



Main Service Disconnect



"MDP" Main Distribution Panel



2011 Vintage Panelboard



2011 Vintage Mechanical Panelboards

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Original Vintage Panelboard

Interior Lighting:

Many areas of the building have been retrofit with LED lamps or have had fixtures replaced with LED type, with integral occupancy sensor/daylight harvesting sensors.

Corridor lights generally consists of 2'x4' recessed LED fixtures with integral sensors.



Corridor Fixture



Corridor Fixture

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The kitchen contains surface mounted two lamp cross section fluorescent wraparound fixtures with LED lamps.



Kitchen

The office area has surface mounted 1'x4' light fixtures with fins.

Classroom lighting consists of (3) rows of 2 lamp cross section linear fluorescent wraparound light fixtures that have been retrofit with LED lamps. Light switches are built into and part of the Simplex clock/speaker cabinet.



Linear Fluorescent Wraparound Fixtures



Simplex Clock/Speaker Cabinet

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Cafeteria has 2'x4' recessed LED fixtures with integral sensors.



Cafeteria Lighting

There are a number of light fixtures that have missing lenses.



Fixtures Missing Lens

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The gymnasium contains 4 lamp cross section fluorescent T5HO 2'x4' surface mounted high bays with a wire guard. Each fixture contains an integral occupancy sensor.



Gym Lighting

The school does not have an automated lighting control system. There are sensors integral to the upgraded LED fixtures. The majority of spaces are line voltage switching. The large assembly spaces do have low voltage switches that control circuits via lighting contactor panels. The low voltage controls are beyond their serviceable life.

Exterior Lighting:

Exterior lighting consists of utility pole mounted LED fixtures with integral control



Site Area Light Fixture



Exterior Canopy Light

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Emergency Standby System:

The emergency lighting throughout the facility is fed via a diesel generator. The building is also equipped with battery units and self-contained battery exit signs.

The generator is a diesel fired generator, 120/208 Volt, 3-Phase, 4 Wire, manufactured by Caterpillar and is located outside at the rear of the building.



Generator

There is separation of the life safety and optional standby loads. The automatic transfer switches are located in the electrical room and are manufactured by Caterpillar.



Transfer Switch

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Exit Sign



Exit Sign

Fire Alarm Systems:

The fire alarm consists of an Edwards addressable panel. The FACP is located in the admin area of the main lobby. The fire alarm system does not contain voice evacuation.



FACP



Pull Station/Horn Strobes

The system consists of original pull stations and horn/strobes, smoke and heat detectors.

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There is a fire alarm master box located on pole #17 at Huckins Avenue that notifies the fire department of a fire or a fire alarm activation.



Smoke Detector



Low Energy Cable

Low energy fire alarm wiring is used throughout the building.

Currently, the fire alarm system does not meet code, as it does not contain voice evacuation and does not utilize speakers for notification of the audible alarm. This is required for an E-Use Group Building.

Branch Circuits/Wiring Devices:

The receptacle coverage is inadequate in most spaces. Typical classrooms have two or three receptacles, new receptacles have been added in many classrooms to support Classroom A/V.

Extension cords are used throughout classrooms and offices due to lack of receptacles. The use of extension cords for permanent wiring is a code violation.

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New Receptacle



Extension Cords



Receptacle for Window A/C



Kitchen Receptacle

Typically branch circuits are not separate based upon load type. The existing receptacles are in fair/poor condition.

There are no tamper resistant receptacles installed in kindergarten areas.

Receptacles have been added to support Window A/C units.

GFCI protection is missing in the kitchen.

Miscellaneous/Communications/Security Systems:

The building does not contain lightning protection.

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The building does not contain a BDA system.

Recommendations:

1. Main Distribution Panel “MDP” and all 2011 vintage sub-panels are in good condition, however the capacity at 6.6W/SF is inadequate for a substantial renovation. Therefore a new primary service, and new secondary service should be provided. The service will be sized to 15W/SF at 277/480V (for all-electric HVAC system) the 2011 equipment can be backfed and re-used. Replace the entire electrical distribution system with new, Existing branch circuits to connect to new panels in areas of minor renovation.
2. Provide automatic lighting control system in combination with automatic dimming sensors throughout.
3. Replace non-LED lighting to LED source and provide dimming photo sensor within areas with natural daylight to dim fixtures automatically.
4. Provide occupancy sensors within each space to conserve energy and meet current energy code.
5. Provide LED wall mounted fixtures with full cutoff for all exterior doors for exit discharge.
6. A larger exterior diesel emergency generator approximately 350kW with sound attenuated enclosure should be provided (all electric HVAC options). Light fixtures and LED exit signs should be installed to serve all egress areas such as corridors, intervening spaces, toilets, stairs, and exit discharge exterior doors. The administration area lighting and selected receptacles should be connected to the emergency generator. Where the HVAC system selected is mixed fuel the existing generator can be re-used.
7. The generator should be sized to include life safety systems, fire safety systems, heat pumps, circulating pumps, refrigeration equipment and communications systems, etc. It is anticipated that the generator will be sized to 8W/SF to accommodate the aforementioned loads.
8. A system of new automatic transfer switches and panelboards should be provided (if an electric HVAC system option is selected).
9. The existing fire alarm system is non-code compliant and should be replaced with new addressable system with voice evacuation in compliance with code.
10. Provide additional receptacles in all classrooms and offices.
11. Provide additional GFCI receptacles in areas required by code.
12. Provide tamper resistant receptacles in kindergarten areas to comply with code.

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13. There is no lighting protection system in the facility. It is our recommendation that one should be installed.
14. A BDA system should be installed to support police and fire department frequencies.

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PLUMBING

Executive Summary:

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, Kitchen waste and vent system, storm drain piping, and natural gas. Municipal water and a Septic System service the building.

Most of the plumbing systems are original to the building and its additions. Portions of the system have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, are nearing their useful life. The school plumbing systems could continue to be used with maintenance and replacement of failed components; however other non-dependent decisions will likely force the plumbing upgrade. Due to its age, completely new water piping systems are recommended. The copper piping is in fair condition but is nearing its life expectancy.

The plumbing fixtures are in fair condition. Attempts have been made to make bathroom fixtures accessible, however, most of the plumbing fixtures do not meet current accessibility codes. In general, the fixtures appear to have served their useful life. The Current Access Code requires accessible fixtures wherever plumbing is provided. In terms of water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures need to be water conserving type fixtures. All new plumbing fixtures are recommended.

Cast iron is used for sanitary and storm drainage. Rainwater from roof areas is collected by interior rain leaders which appear to discharge to a below grade site drainage system. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

New domestic water heating systems with thermostatic mixing valves are recommended.

Fixtures:

The water closets are either wall hung or floor mounted, vitreous china fixtures with manually operated flush valves.

Urinals are wall hung vitreous china with manually operated flush valves.

Lavatories are wall hung vitreous china. The lavatories have been retrofitted with two-handle hot and cold-water faucets.

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Water Closet



Urinals



Lavatories

Drinking fountains consist of wall hung vitreous china fountains.

There are no electric water coolers in the school.

Janitor's sink are generally terrazzo floor receptors. Faucets are equipped with vacuum breakers.



Drinking Fountain



Mop Receptor

Kitchen area fixtures are in good condition. The pot washing sink is fitted with an on-the-floor grease interceptor.

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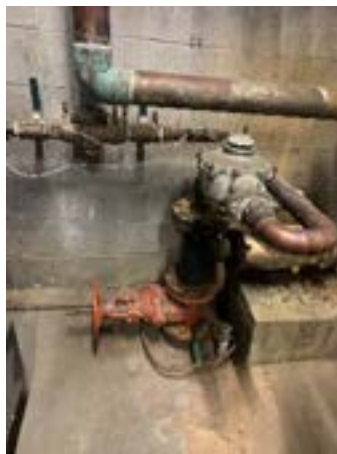


Pot Sink

Water Systems:

The main domestic water service is located in the Basement Mechanical Room. The service is 4" in size and includes a 3" meter and pressure reducing valve. The main domestic cold-water distribution is 3" in size. The majority of the domestic distribution piping is located above the ceiling throughout the facility.

Piping, where exposed, appears to be copper with sweat joints. The majority of the piping is insulated. Gate valves are utilized for isolating the original water piping system.



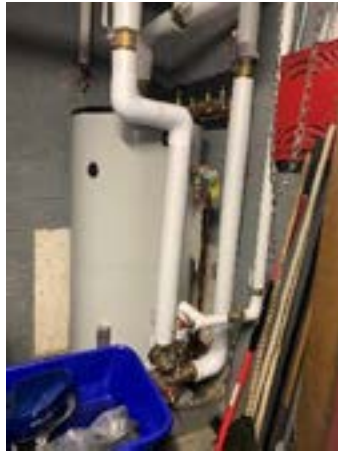
Water Service



Water Meter

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The main domestic hot water in the building is generated from a gas-fired boiler with indirect storage tank located in the Mechanical Room. The hot water system is not recirculated. There is no thermostatic mixing valve at the water heater, but there are multiple thermostatic mixing valves located throughout the building to serve the lavatory fixtures in the Boys and Girls Core Toilet Rooms.



Water Heater



Mixing Valve

Domestic hot water for the Kitchen areas is generated through a gas-fired, tank type water heater. The water heater has a gas input of 200,000 BTU/HR and the capacity of the water heater is 67 gallons. There are multiple electric tank type water heaters located near the Toilet core areas, each with a power input of 2,000 watts and a storage capacity of 20 gallons.



Gas Water Heater



Electric Water Heater



Electric Water Heater

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Gas:

An elevated pressure natural gas with an exterior gas meter is supplied to the building. Natural gas is distributed on the roof from this location. The gas is serving boilers, rooftop units, water heater and Kitchen equipment.

Gas piping is black steel with a combination of screwed and welded joints and fittings depending on the time of installation.

Natural gas is provided for kitchen cooking equipment. The kitchen supply is not equipped with an automatic shutoff valve.



Gas Service



Gas on Roof

Drainage Systems:

Cast iron is used for sanitary and storm drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.



Roof Drain



Vent Through Roof

Neary Elementary School
Southborough, MA
Fire Protection Existing Conditions Systems Report
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FIRE PROTECTION:

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing school building over 12,000 square feet which undergoes major alterations, or a building addition, must be sprinklered. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

Also, according to this section of M.G.L., any work performed, even if under separate contracts or building permits, within a 5-year period must be included in the aggregate construction cost to determine the applicability of M.G.L. This includes sitework and building renovations, whether done separately or together.

A hydrant flow test will be required to determine if adequate Municipal water supply is available.

Existing Security Report

As part of the review of the existing conditions of the Neary Elementary School, the security consultant, Pamela Perini Consulting, toured the school with the District leadership to assess existing security conditions. The security report is confidential and will be issued under separate cover to the District and public safety providers.

ENVIRONMENTAL CONDITIONS

Prior to the submission of this report, the following testing and studies have been completed at the site: preliminary geotechnical desktop review, hazardous materials survey, geoenvironmental, Environmental Site Assessment and preliminary traffic studies.

GEOTECHNICAL CONDITIONS

Lahlaf Geotechnical Consulting, Inc. (LGCI) performed an initial review of the underlying geological conditions using superficial geologic maps and performed four (4) geotechnical borings at the site. The borings in two locations encountered fill for a depth of approximately six feet over an existing layer of sand and gravel.

In the event of construction of an addition or new building, the existing fill will need to be removed and replaced with structural fill. Please refer to Appendix H. Geotechnical Preliminary Desktop Review for the full report.

ENVIRONMENTAL SITE ASSESSMENT

Preliminary testing of the soil was performed by PEER Engineering coincidentally with the Geotechnical borings. Groundwater was observed at depths ranging from 2' to 4' below the ground surface.

HAZARDOUS MATERIALS

A preliminary hazardous materials assessment was performed by PEER Consultants in April 2024. Locations of hazardous materials are documented in their report included in Appendix J. Hazardous Materials Report.


TRAFFIC

Traffic conditions at the existing Neary school was analyzed over a multi-week study. Preliminary findings indicate that the existing school operations are currently accommodated on site, with no reliance on the adjacent roadway. Parent/guardian activity is managed on site and the school currently provides approximately 188 marked spaces within its on site parking lot which adequately accommodates the school activity.

MEMORANDUM

DATE: May 17, 2024

TO: Katy Lillich, AIA
Arrowstreet
10 Post Office Square, Suite 700N
Boston MA 02109

FROM: Robert J. Michaud, P.E. – Managing Principal 
Daniel A. Dumais, P.E. – Senior Project Manager

RE: **Proposed Margaret A. Neary School Expansion Project – Existing Conditions**
53 Parkerville Rd, Southborough, MA

MDM Transportation Consultants, Inc. (MDM) has prepared this initial traffic memorandum for the existing Margaret Neary Elementary School located at 53 Parkerville Road in Southborough, Massachusetts. The location of the Site relative to the adjacent roadway network is shown in **Figure 1**. This memorandum quantifies existing school operations based on field observations, traffic data collection and analysis of weekday peak school traffic activity and summarizes existing off-street parking within the school's parking field.

Existing Conditions

For the 2023/2024 school year Margaret Neary Elementary School had an existing enrollment of 260± students in grades 4 and 5 and 50± staff. The existing school layout and parking areas are shown in **Figure 2**. The existing school operations are as follows:

- *School Operations.* The general hours of operation for the school are 8:45 AM to 3:00 PM Monday through Friday. The morning drop-off period generally begins at 8:25 AM and the students are dismissed at 3:00 PM for afternoon pick-up.
- *Drop-Off Period.* The drop-off period generally occurs from 7:45 AM to 8:45 AM. Parent/guardian vehicles associated with drop-off activity generally occurred along the sidewalk in the designated drop-off area that is marked along the western portion of the parking field near the main entranceway. The parent/guardian vehicles then exited the school via the main driveway. The maximum queue observed in the live parent drop-off line was approximately 7 vehicles during the morning drop-off period.

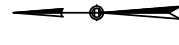


Figure 1

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Site Location

Date: May 2024
Dwg No. 1334 TA.dwg
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North

Scale: Not to Scale

Figure 2

Existing Site Layout

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Date: May 2024
Dwg No. 1334 TA.dwg
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School bus activity associated with drop-off activity was observed to enter the main driveway, loop around the back of the building, and drop-off students near the basketball courts. The school buses then exit the school out the bus loop entrance driveway. Pedestrian and bicycle counts indicate a portion of the student population walk or bike to school with a bicycle rack located near the main entranceway.

- *Pick-Up Period.* The pick-up period generally occurs from 2:45 PM to 3:45 PM on typical school days. Parent/guardian vehicles associated with drop-off activity were observed to occur via parking within the main parking field. The parents would generally walk to the sidewalk near the main entranceway for dismissal of students from staff. The maximum observed vehicles parked associated with parent pickup was approximately 60 vehicles during the afternoon pick-up period

School bus activity associated with drop-off activity was observed to enter the bus loop driveway wait for students to load and then exit the bus loop driveway. The school buses were observed to begin to exit the school around 3:08 PM. The maximum number of queued buses was observed at 5 buses which occurred prior to the 3:08 bus departure. Pedestrian and bicycle counts indicate a portion of the student population walk or bike to school with a bicycle rack located near the main entranceway.

- *Staff Levels.* Staff includes approximately 50± total staff members which includes administrative staff and teachers. The school also uses a number of support staff, part time staff, and occasional volunteers.
- *School Bus/ Van Activity.* Approximately 13 school buses and 1 van service the school during the weekday morning drop-off period and afternoon pick-up periods. The van was observed to utilize a handicap access in the front of the school. During the morning drop-off period and afternoon pick-up period up to 6 full size buses were observed on the property at the same time.
- *After School Programs.* The school operates an after school program after the regular dismissal time of 3:00 PM. Observations indicate a parking demand of approximately 17 vehicle associated with the peak parent/guardian pick-up activity from the after school program which occurred between 4:15 PM and 4:45 PM.

BASELINE TRAFFIC CHARACTERISTICS

An overview of existing (Baseline) traffic volume characteristics for the existing school operations for the existing Margaret Neary Elementary School is provided below.

Baseline Traffic Data

Traffic volume data was collected in March 2024 during the weekday morning period (7:00 AM - 9:00 AM) and weekday afternoon period (2:45 PM to 6:00 PM) periods to coincide with peak traffic activity of the school. The resulting Baseline weekday morning drop-off period and weekday afternoon pick-up period traffic volumes for the study intersections are depicted in **Figure 3**. Turning movement counts which include passenger vehicles, school buses, heavy vehicles, pedestrians, and bicycles are provided in the **Attachments**.

Existing Trip Generation – Margaret Neary Elementary School

Existing site trips generated by the Neary Elementary School were observed during critical school activity periods including the weekday morning drop-off period and weekday afternoon pick-up period on Wednesday March 13, 2024 between 7:45 AM – 8:45 AM and 2:45 PM – 3:45 PM. A detailed trip generation summary for the Site, based on the existing student enrollment of 260± students and approximately 50± staff at the school, including a breakdown of vehicular trips and school bus/van activity is presented in **Table 1** and described below.

TABLE 1
OBSERVED NEARY SCHOOL TRIP-GENERATION

Period	Student/Parent Auto	Staff/ Auto	School Bus	Total
<i>Weekday Morning Drop-Off Period (7:45-8:45 AM):</i>				
Enter	117	46	13	177
<u>Exit</u>	<u>117</u>	<u>0</u>	<u>13</u>	<u>131</u>
Total	234	46	26	308
<i>Weekday Afternoon Pick-Up Period (2:45-3:45 PM):</i>				
Enter	72	0	13	85
<u>Exit</u>	<u>72</u>	<u>30</u>	<u>13</u>	<u>115</u>
Total	144	30	26	200

¹Peak hour trips based on empirical trip generation data provided by the Neary Elementary School and observations on Wednesday, March 13, 2024.

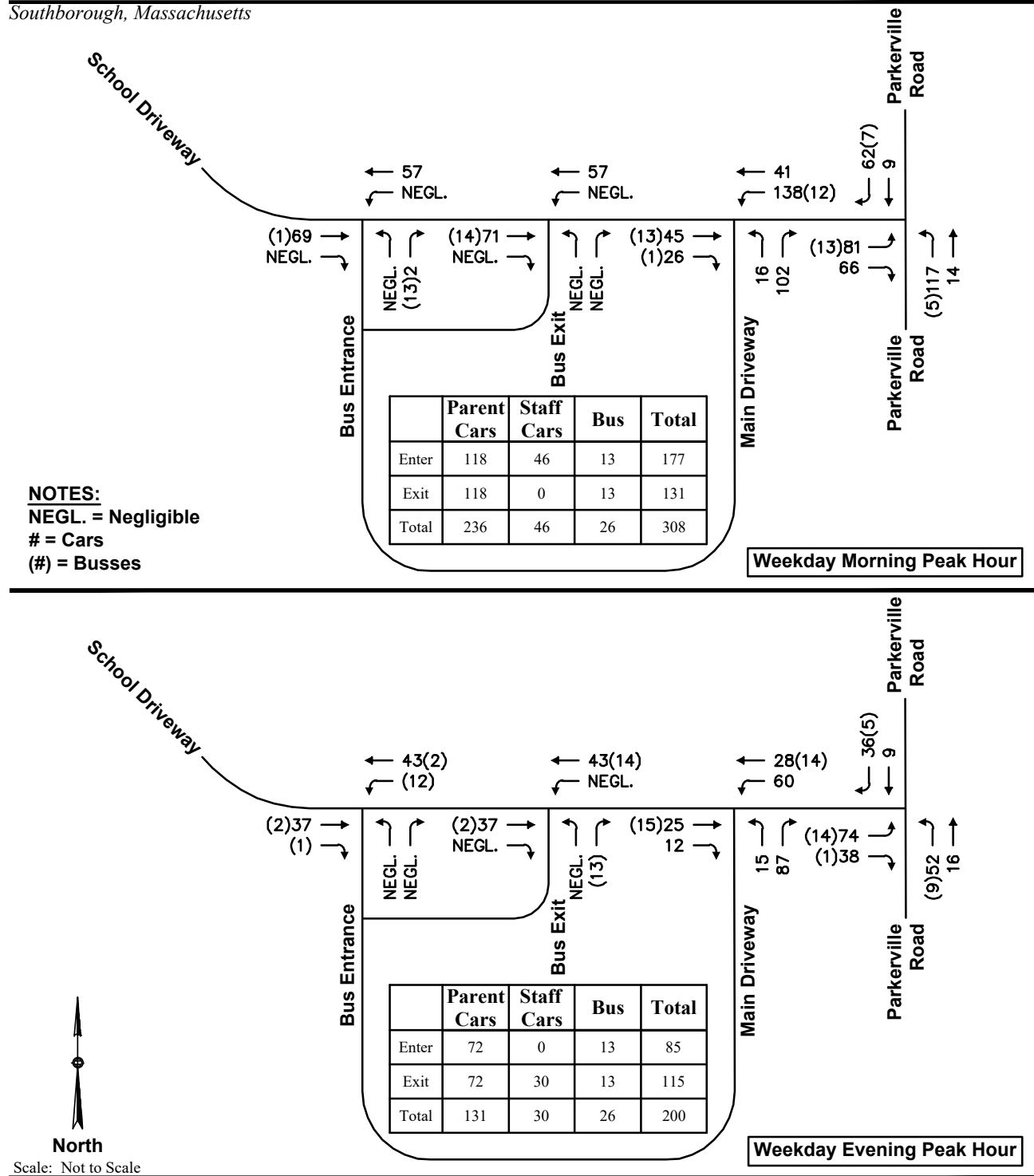


Figure 3

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

2024 Baseline Conditions Weekday Peak Hour Volumes

Date: May 2024
Dwg No. 1334 TA.dwg
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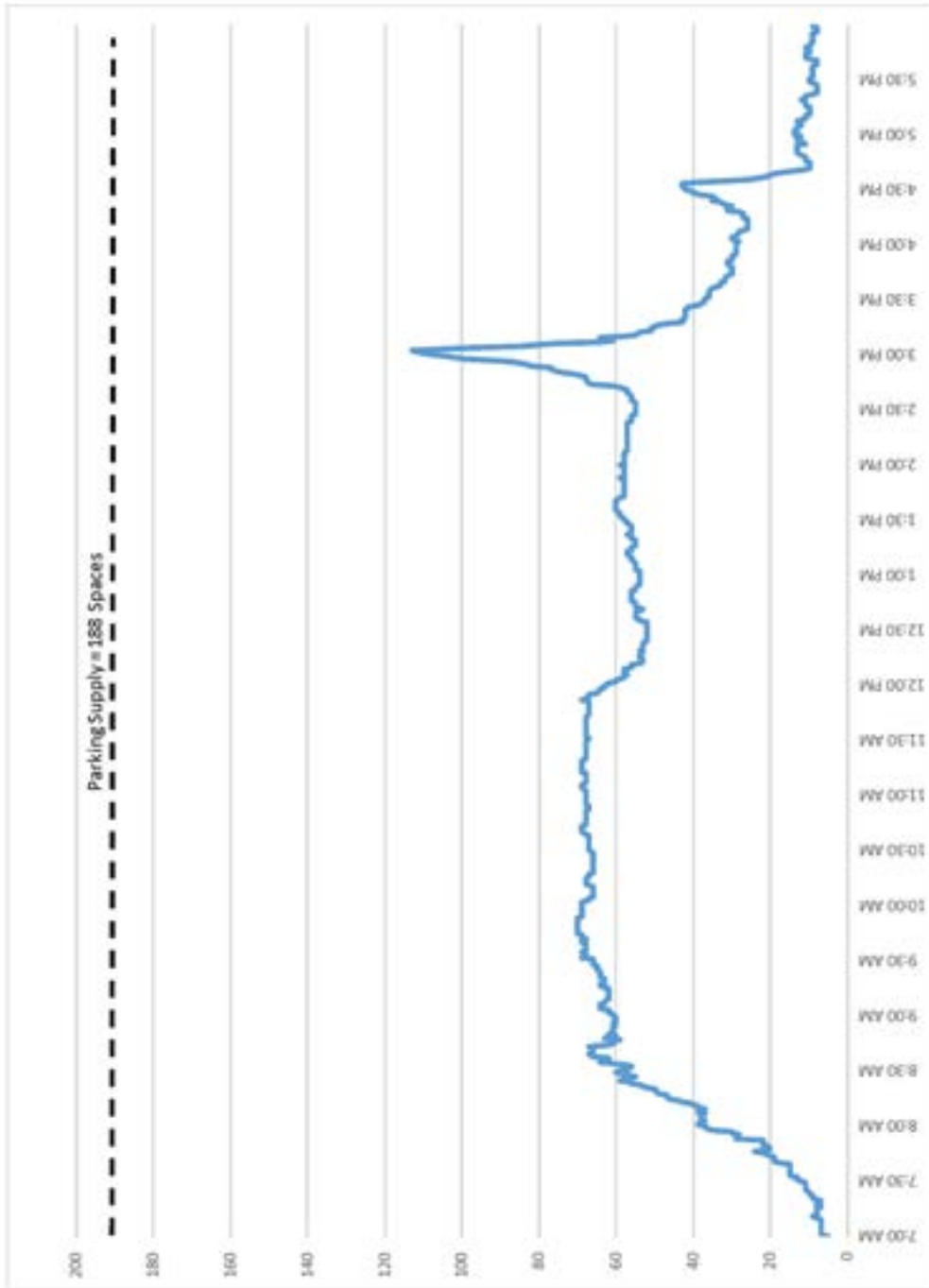
As presented in **Table 1**,

- *Weekday Morning Drop-Off Period.* Trip generation during the critical weekday morning drop-off peak hour was 308 vehicle-trips (177 entering and 131 exiting), including 118 parent/guardian drop-off vehicles, 13 school buses and 46 staff vehicles. Parent/guardian vehicles associated with drop-off activity generally occurred along the sidewalk in the designated drop-off area that is marked along the western portion of the parking field near the main entranceway. The parent/guardian vehicles then exited the school via the main driveway. The maximum queue observed in the live parent drop-off line was approximately 7 during the morning drop-off period and the maximum number of concurrent buses on site was less than 5 full size buses.
- *Weekday Afternoon Pick-up Period.* Trip generation during the weekday afternoon peak hour was 200 vehicle-trips (85 entering and 115 exiting), including 72 parent/guardian pick-up vehicles, 13 school buses, and 30 staff vehicles. Parent/guardian vehicles associated with drop-off activity were observed to occur via parking within the main parking field. The parents would generally walk to the sidewalk near the main entranceway for dismissal of students from staff. The maximum observed vehicles parked associated with parent pickup was approximately 60 vehicles during the afternoon pick-up period and the maximum number of concurrent buses within the bus loop was 6 full size buses.

PARKING DEMAND

Existing peak parking demands at the Site were reviewed based on a parking survey conducted on Wednesday, March 13, 2024. On-site parking for the school currently includes 188± spaces. The parking activity associated with the Neary School between 7:00 AM and 6:00 PM is shown in **Figure 4** with detailed parking observations are included in the **Attachments**. The parking data indicates the following characteristics:

- *Before School.* Off-street peak parking demands for the Neary School were observed to gradually increase from negligible parked vehicles at 7:00 AM to approximately 60 vehicles at 8:30 AM.
- *Core School Day Period.* During the core school hours (8:45 AM and 2:30 PM) up to 70± parked vehicles were observed within the lot. At 12:00 noon the parking within the lot drops slightly from 70 vehicles to closer to 55 vehicles prior to the dismissal period with parents beginning to arrive around 2:30 PM.



- *Pick-Up Period.* Off-street peak parking demands for the Neary School were observed to gradually increase from 55 vehicles at 2:30 PM until 113 vehicles at dismissal at 3:00 PM. The resulting maximum parent/guardian demand was observed at approximately 60 vehicles.
- *After School Care.* The after school program was observed to result in a parking demand of approximately 17 vehicle associated with the peak parent/guardian pick-up activity between 4:15 PM and 4:45 PM.

CONCLUSIONS

Review and evaluation of existing Neary School operations indicate that the existing school operations are currently accommodated on-site with no reliance on the adjacent roadway. The parent/guardian activity to be managed on-site include approximately 117 parent vehicles during the weekday morning drop-off period and approximately 72 parent vehicles during the afternoon pick-up period. The resulting observed queues include 7 parent vehicles during the drop-off period and 60 parent vehicles during the pick-up period. The peak parking activity at the site was observed at 70± parked vehicles were observed within the lot during the core school operating hours and 113± parked vehicles during the critical weekday afternoon pick-up period. The school currently provides approximately 188 marked spaces within its on-site parking lot which adequately accommodates the school activity.

ATTACHMENTS

- ☐ Traffic Volume Data
- ☐ Parking Data

□ Traffic Volume Data

N/S: Neary Driveway
E/W: Bus Entrance Driveway
Southborough, MA

File Name : 1339 Neary Dwy at Bus Entrance AM
Site Code : 1339
Start Date : 3/13/2024
Page No : 1

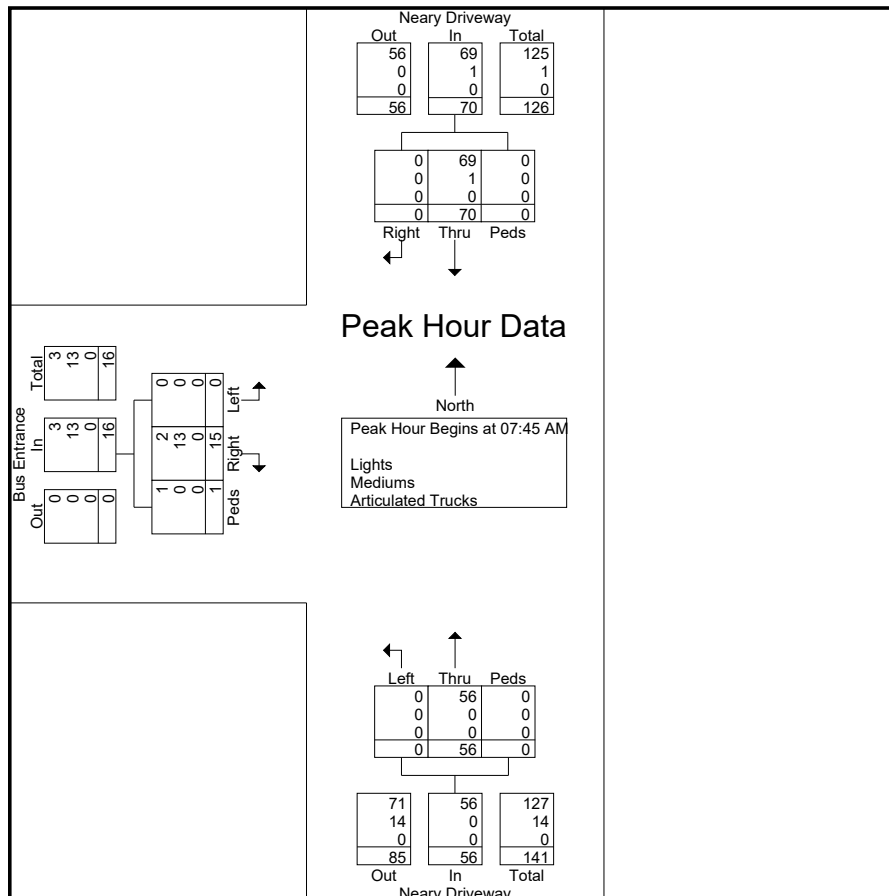
Groups Printed- Lights - Mediums - Articulated Trucks

Start Time	Neary Driveway From North				Neary Driveway From South				Bus Entrance From West				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
07:45 AM	0	47	0	47	41	0	0	41	0	0	1	1	89
Total	0	47	0	47	41	0	0	41	0	0	1	1	89
08:00 AM	0	7	0	7	5	0	0	5	0	0	0	0	12
08:15 AM	0	7	0	7	3	0	0	3	2	0	0	2	12
08:30 AM	0	9	0	9	7	0	0	7	13	0	0	13	29
Grand Total	0	70	0	70	56	0	0	56	15	0	1	16	142
Apprch %	0	100	0		100	0	0		93.8	0	6.2		
Total %	0	49.3	0	49.3	39.4	0	0	39.4	10.6	0	0.7	11.3	
Lights	0	69	0	69	56	0	0	56	2	0	1	3	128
% Lights	0	98.6	0	98.6	100	0	0	100	13.3	0	100	18.8	90.1
Mediums	0	1	0	1	0	0	0	0	13	0	0	13	14
% Mediums	0	1.4	0	1.4	0	0	0	0	86.7	0	0	81.2	9.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0

N/S: Neary Driveway
E/W: Bus Entrance Driveway
Southborough, MA

File Name : 1339 Neary Dwy at Bus Entrance AM
Site Code : 1339
Start Date : 3/13/2024
Page No : 2

	Neary Driveway From North				Neary Driveway From South				Bus Entrance From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	47	0	47	41	0	0	41	0	0	1	1	89
08:00 AM	0	7	0	7	5	0	0	5	0	0	0	0	12
08:15 AM	0	7	0	7	3	0	0	3	2	0	0	2	12
08:30 AM	0	9	0	9	7	0	0	7	13	0	0	13	29
Total Volume	0	70	0	70	56	0	0	56	15	0	1	16	142
% App. Total	0	100	0		100	0	0		93.8	0	6.2		
PHF	.000	.372	.000	.372	.341	.000	.000	.341	.288	.000	.250	.308	.399
Lights	0	69	0	69	56	0	0	56	2	0	1	3	128
% Lights	0	98.6	0	98.6	100	0	0	100	13.3	0	100	18.8	90.1
Mediums	0	1	0	1	0	0	0	0	13	0	0	13	14
% Mediums	0	1.4	0	1.4	0	0	0	0	86.7	0	0	81.3	9.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0



N/S: Neary Driveway
E/W: Bus Entrance Driveway
Southborough, MA

File Name : 1339 Neary Dwy at Bus Entrance PM
Site Code : 1339
Start Date : 3/13/2024
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks

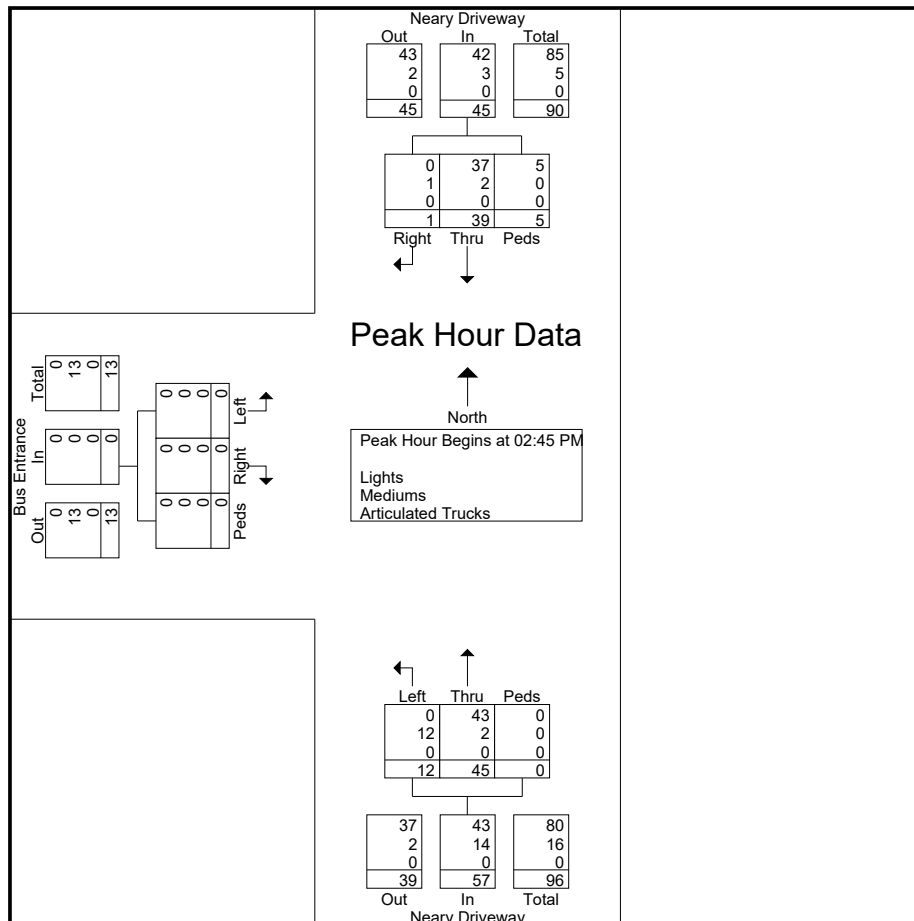
	Neary Driveway From North				Neary Driveway From South				Bus Entrance From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
02:45 PM	1	10	0	11	2	4	0	6	0	0	0	0	17
Total	1	10	0	11	2	4	0	6	0	0	0	0	17
03:00 PM	0	6	0	6	23	2	0	25	0	0	0	0	31
03:15 PM	0	1	0	1	13	6	0	19	0	0	0	0	20
03:30 PM	0	22	5	27	7	0	0	7	0	0	0	0	34
Grand Total	1	39	5	45	45	12	0	57	0	0	0	0	102
Apprch %	2.2	86.7	11.1		78.9	21.1	0		0	0	0		
Total %	1	38.2	4.9	44.1	44.1	11.8	0	55.9	0	0	0	0	
Lights	0	37	5	42	43	0	0	43	0	0	0	0	85
% Lights	0	94.9	100	93.3	95.6	0	0	75.4	0	0	0	0	83.3
Mediums	1	2	0	3	2	12	0	14	0	0	0	0	17
% Mediums	100	5.1	0	6.7	4.4	100	0	24.6	0	0	0	0	16.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0

28 Lord Road, Suite 280
Marlborough, MA

N/S: Neary Driveway
E/W: Bus Entrance Driveway
Southborough, MA

File Name : 1339 Neary Dwy at Bus Entrance PM
Site Code : 1339
Start Date : 3/13/2024
Page No : 2

	Neary Driveway From North				Neary Driveway From South				Bus Entrance From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:45 PM													
02:45 PM	1	10	0	11	2	4	0	6	0	0	0	0	17
03:00 PM	0	6	0	6	23	2	0	25	0	0	0	0	31
03:15 PM	0	1	0	1	13	6	0	19	0	0	0	0	20
03:30 PM	0	22	5	27	7	0	0	7	0	0	0	0	34
Total Volume	1	39	5	45	45	12	0	57	0	0	0	0	102
% App. Total	2.2	86.7	11.1		78.9	21.1	0		0	0	0		
PHF	.250	.443	.250	.417	.489	.500	.000	.570	.000	.000	.000	.000	.750
Lights	0	37	5	42	43	0	0	43	0	0	0	0	85
% Lights	0	94.9	100	93.3	95.6	0	0	75.4	0	0	0	0	83.3
Mediums	1	2	0	3	2	12	0	14	0	0	0	0	17
% Mediums	100	5.1	0	6.7	4.4	100	0	24.6	0	0	0	0	16.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0



E/W: Neary Driveway
NB: Neary Bus Loop
Southborough, MA

File Name : 1339_Neary_Dr_at_Bus_Loop_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

Start Time	Neary Driveway From East				Neary Bus Loop From South				Neary Driveway From West				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
07:00 AM	11	0	0	11	0	0	0	0	0	12	0	12	23
07:15 AM	20	0	0	20	0	0	0	0	0	6	0	6	26
07:30 AM	42	0	0	42	0	0	0	0	0	31	0	31	73
07:45 AM	41	0	0	41	0	0	1	1	0	47	0	47	89
Total	114	0	0	114	0	0	1	1	0	96	0	96	211
08:00 AM	5	0	0	5	0	0	0	0	0	7	0	7	12
08:15 AM	3	0	0	3	0	0	0	0	0	9	0	9	12
08:30 AM	7	0	0	7	0	0	0	0	0	22	0	22	29
08:45 AM	2	1	0	3	1	0	0	1	0	3	0	3	7
Total	17	1	0	18	1	0	0	1	0	41	0	41	60
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
11:15 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
11:45 AM	2	0	0	2	0	0	2	2	0	2	0	2	6
Total	4	0	0	4	0	0	2	2	0	4	0	4	10
12:00 PM	2	0	0	2	0	0	1	1	0	0	0	0	3
12:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
12:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	4	0	0	4	0	0	1	1	0	3	0	3	8
02:45 PM	8	0	0	8	0	0	0	0	0	10	0	10	18
Total	8	0	0	8	0	0	0	0	0	10	0	10	18
03:00 PM	23	2	0	25	7	0	0	7	0	6	0	6	38
03:15 PM	13	6	0	19	6	0	0	6	0	1	0	1	26
03:30 PM	7	0	0	7	0	0	5	5	0	22	0	22	34
03:45 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
Total	45	8	0	53	13	0	5	18	0	32	0	32	103
04:00 PM	4	0	0	4	0	0	1	1	0	1	0	1	6
04:15 PM	0	0	0	0	0	0	4	4	0	3	0	3	7
04:30 PM	5	0	0	5	0	0	3	3	0	2	0	2	10
04:45 PM	1	2	0	3	1	0	1	2	0	1	0	1	6
Total	10	2	0	12	1	0	9	10	0	7	0	7	29
05:00 PM	3	1	0	4	1	0	1	2	0	1	0	1	7
05:15 PM	1	0	0	1	1	0	3	4	0	5	1	6	11
05:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	1	0	1	2	0	2	4	0	2	0	2	7
Total	5	2	0	7	4	0	6	10	0	9	1	10	27
Grand Total	207	13	0	220	19	0	24	43	0	202	1	203	466
Apprch %	94.1	5.9	0		44.2	0	55.8		0	99.5	0.5		
Total %	44.4	2.8	0	47.2	4.1	0	5.2	9.2	0	43.3	0.2	43.6	
Lights	190	4	0	194	5	0	24	29	0	182	1	183	406
% Lights	91.8	30.8	0	88.2	26.3	0	100	67.4	0	90.1	100	90.1	87.1
Mediums	14	8	0	22	13	0	0	13	0	17	0	17	52
% Mediums	6.8	61.5	0	10	68.4	0	0	30.2	0	8.4	0	8.4	11.2

28 Lord Road, Suite 280
Marlborough, MA

E/W: Neary Driveway
NB: Neary Bus Loop
Southborough, MA

File Name : 1339_Neary_Dr_at_Bus_Loop_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 2

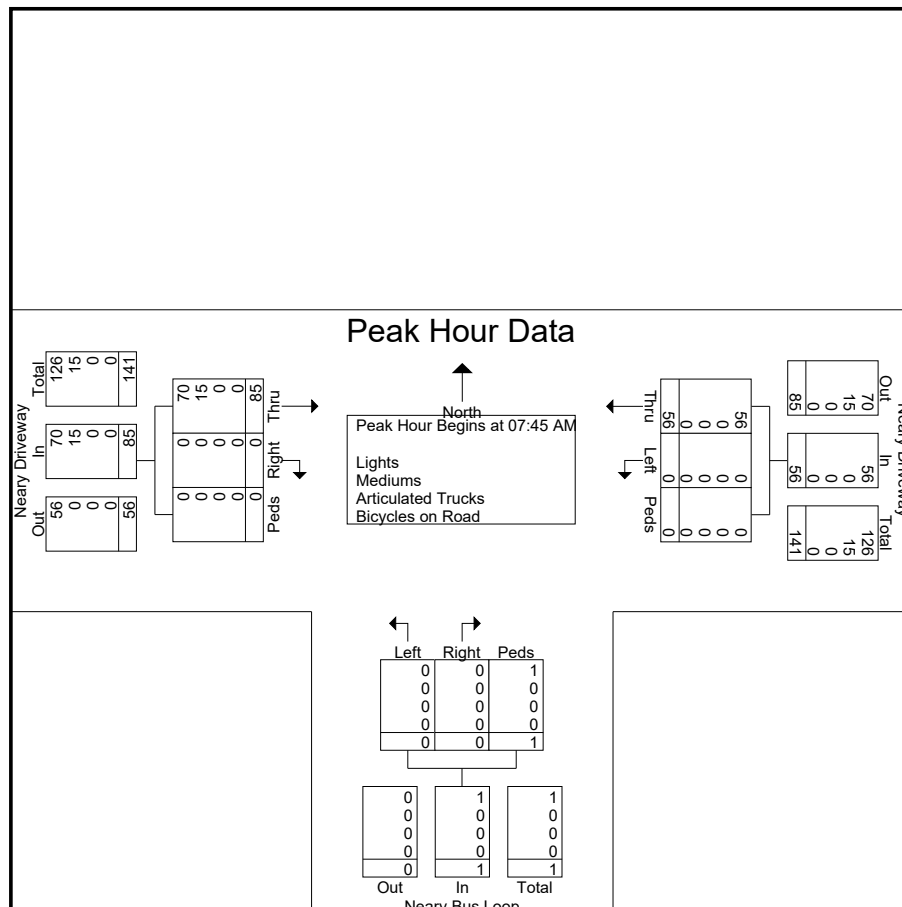
Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

	Neary Driveway From East				Neary Bus Loop From South				Neary Driveway From West				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	3	1	0	4	1	0	0	1	0	3	0	3	8
% Bicycles on Road	1.4	7.7	0	1.8	5.3	0	0	2.3	0	1.5	0	1.5	1.7

E/W: Neary Driveway
NB: Neary Bus Loop
Southborough, MA

File Name : 1339_Neary_Dr_at_Bus_Loop_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 3

	Neary Driveway From East				Neary Bus Loop From South				Neary Driveway From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	41	0	0	41			1	1		47	0	47	89
08:00 AM	5	0	0	5	0	0	0	0	0	7	0	7	12
08:15 AM	3	0	0	3	0	0	0	0	0	9	0	9	12
08:30 AM	7	0	0	7	0	0	0	0	0	22	0	22	29
Total Volume	56	0	0	56	0	0	1	1	0	85	0	85	142
% App. Total	100	0	0		0	0	100		0	100	0		
PHF	.341	.000	.000	.341	.000	.000	.250	.250	.000	.452	.000	.452	.399
Lights	56	0	0	56	0	0	1	1	0	70	0	70	127
% Lights	100	0	0	100	0	0	100	100	0	82.4	0	82.4	89.4
Mediums	0	0	0	0	0	0	0	0	0	15	0	15	15
% Mediums	0	0	0	0	0	0	0	0	0	17.6	0	17.6	10.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0

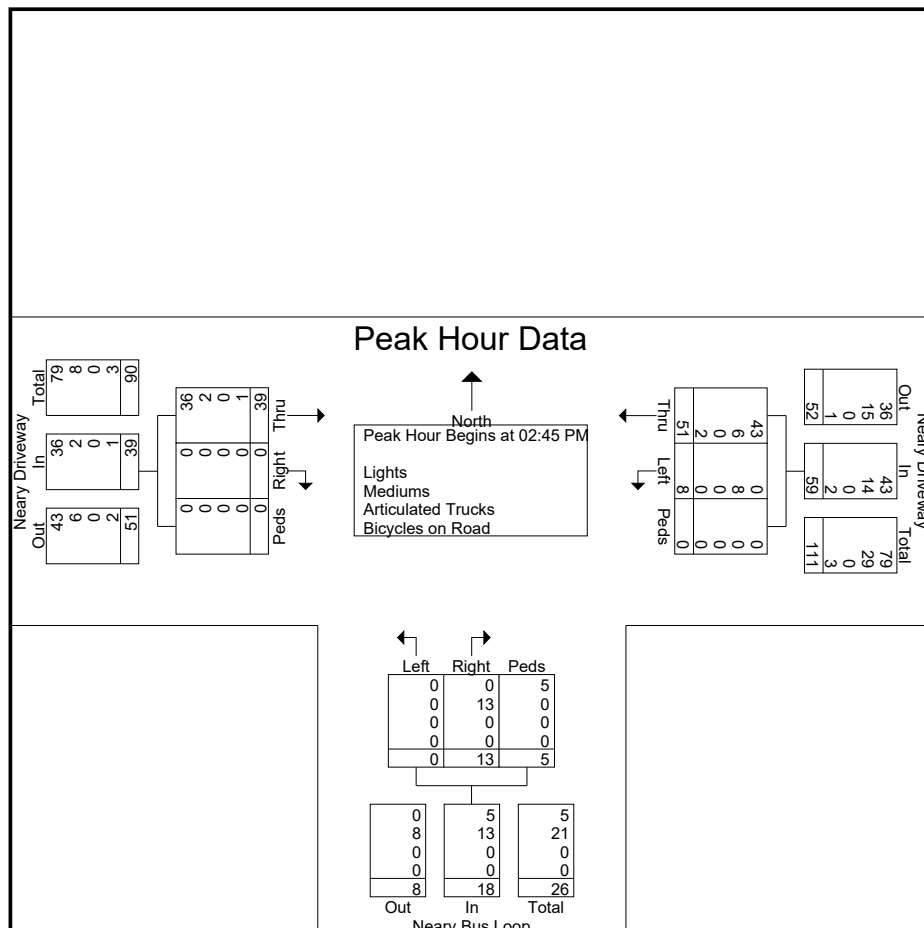


28 Lord Road, Suite 280
Marlborough, MA

E/W: Neary Driveway
NB: Neary Bus Loop
Southborough, MA

File Name : 1339_Neary_Dr_at_Bus_Loop_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 5

	Neary Driveway From East				Neary Bus Loop From South				Neary Driveway From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:45 PM													
02:45 PM	8	0	0	8	0	0	0	0	0	10	0	10	18
03:00 PM	23	2	0	25	7	0	0	7	0	0	0	0	38
03:15 PM	13	6	0	19	6	0	0	6	0	1	0	1	26
03:30 PM	7	0	0	7	0	0	5	5	0	22	0	22	34
Total Volume	51	8	0	59	13	0	5	18	0	39	0	39	116
% App. Total	86.4	13.6	0		72.2	0	27.8		0	100	0		
PHF	.554	.333	.000	.590	.464	.000	.250	.643	.000	.443	.000	.443	.763
Lights	43	0	0	43	0	0	5	5	0	36	0	36	84
% Lights	84.3	0	0	72.9	0	0	100	27.8	0	92.3	0	92.3	72.4
Mediums	6	8	0	14	13	0	0	13	0	2	0	2	29
% Mediums	11.8	100	0	23.7	100	0	0	72.2	0	5.1	0	5.1	25.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	2	0	0	2	0	0	0	0	0	1	0	1	3
% Bicycles on Road	3.9	0	0	3.4	0	0	0	0	0	2.6	0	2.6	2.6



28 Lord Road, Suite 280
Marlborough, MA

E/W: Neary Driveway
NB: Neary Parking Lot
Southborough, MA

File Name : 1339_Neary_Dr_at_School_Lot 245
Site Code : 1339
Start Date : 3/13/2023
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks

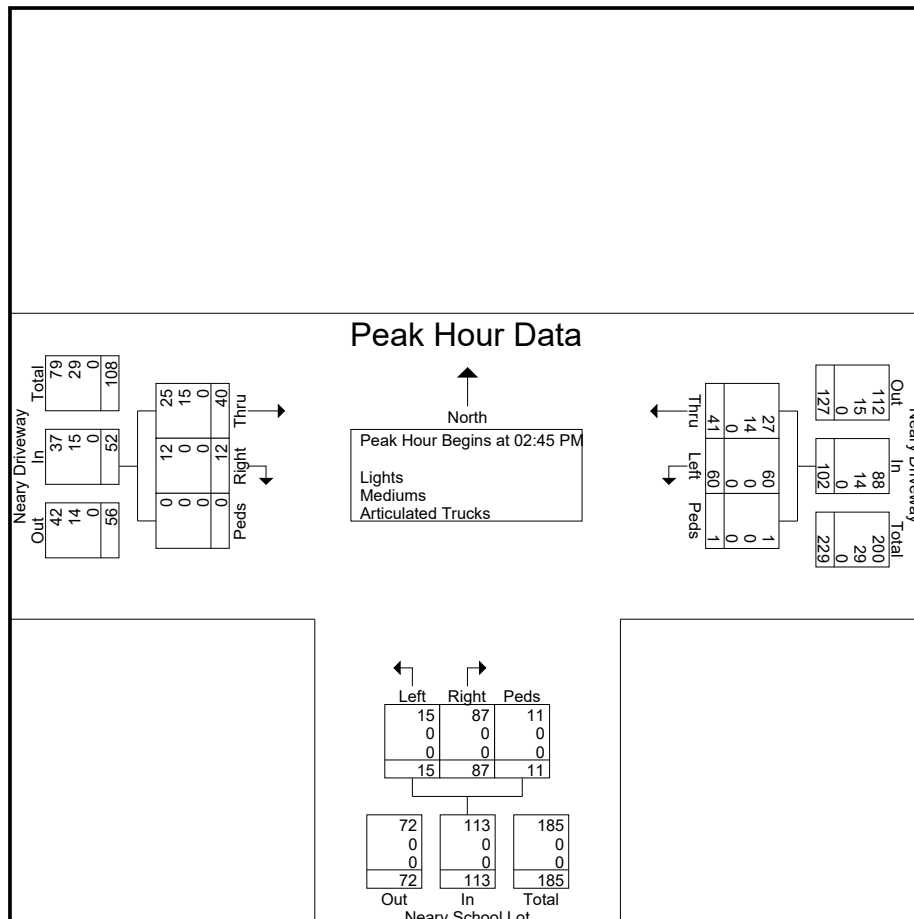
Start Time	Neary Driveway From East				Neary School Lot From South				Neary Driveway From West				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
02:45 PM	6	38	1	45	2	0	0	2	10	0	0	10	57
Total	6	38	1	45	2	0	0	2	10	0	0	10	57
03:00 PM	10	21	0	31	63	14	6	83	1	12	0	13	127
03:15 PM	18	1	0	19	15	1	0	16	1	6	0	7	42
03:30 PM	7	0	0	7	7	0	5	12	0	22	0	22	41
03:45 PM	1	1	0	2	2	0	0	2	0	3	0	3	7
Total	36	23	0	59	87	15	11	113	2	43	0	45	217
04:00 PM	1	3	0	4	2	3	1	6	0	1	0	1	11
04:15 PM	0	14	0	14	4	0	3	7	3	0	2	5	26
04:30 PM	1	6	0	7	33	4	3	40	1	1	0	2	49
04:45 PM	3	5	0	8	3	1	2	6	1	1	0	2	16
Total	5	28	0	33	42	8	9	59	5	3	2	10	102
05:00 PM	3	6	0	9	8	0	1	9	0	2	0	2	20
05:15 PM	0	2	1	3	3	1	5	9	1	2	2	5	17
05:30 PM	1	2	0	3	2	0	1	3	1	0	0	1	7
05:45 PM	0	4	0	4	6	1	0	7	1	3	0	4	15
Total	4	14	1	19	19	2	7	28	3	7	2	12	59
Grand Total	51	103	2	156	150	25	27	202	20	53	4	77	435
Apprch %	32.7	66	1.3		74.3	12.4	13.4		26	68.8	5.2		
Total %	11.7	23.7	0.5	35.9	34.5	5.7	6.2	46.4	4.6	12.2	0.9	17.7	
Lights	37	103	2	142	150	25	27	202	20	38	4	62	406
% Lights	72.5	100	100	91	100	100	100	100	100	71.7	100	80.5	93.3
Mediums	14	0	0	14	0	0	0	0	0	15	0	15	29
% Mediums	27.5	0	0	9	0	0	0	0	0	28.3	0	19.5	6.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0

28 Lord Road, Suite 280
Marlborough, MA

E/W: Neary Driveway
NB: Neary Parking Lot
Southborough, MA

File Name : 1339_Neary_Dr_at_School_Lot 245
Site Code : 1339
Start Date : 3/13/2023
Page No : 2

	Neary Driveway From East				Neary School Lot From South				Neary Driveway From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:45 PM													
02:45 PM	6	38	1	45	2	0	0	2	10	0	0	10	57
03:00 PM	10	21	0	31	63	14	6	83	1	12	0	13	127
03:15 PM	18	1	0	19	15	1	0	16	1	6	0	7	42
03:30 PM	7	0	0	7	7	0	5	12	0	22	0	22	41
Total Volume	41	60	1	102	87	15	11	113	12	40	0	52	267
% App. Total	40.2	58.8	1		77	13.3	9.7		23.1	76.9	0		
PHF	.569	.395	.250	.567	.345	.268	.458	.340	.300	.455	.000	.591	.526
Lights	27	60	1	88	87	15	11	113	12	25	0	37	238
% Lights	65.9	100	100	86.3	100	100	100	100	100	62.5	0	71.2	89.1
Mediums	14	0	0	14	0	0	0	0	0	15	0	15	29
% Mediums	34.1	0	0	13.7	0	0	0	0	0	37.5	0	28.8	10.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0



MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

E/W: Neary Driveway
NB: Neary Parking Lot
Southborough, MA

File Name : 1339_Neary_Dr_at_School_Lot_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

	Neary Driveway From East				Neary School Lot From South				Neary Driveway From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
07:00 AM	11	5	0	16	2	0	0	2	0	12	0	12	30
07:15 AM	19	6	0	25	2	1	0	3	0	6	0	6	34
07:30 AM	43	13	0	56	7	1	1	9	4	27	0	31	96
07:45 AM	38	36	0	74	24	4	0	28	9	38	0	47	149
Total	111	60	0	171	35	6	1	42	13	83	0	96	309
08:00 AM	2	34	0	36	28	3	0	31	4	3	0	7	74
08:15 AM	3	28	0	31	11	3	0	14	7	2	0	9	54
08:30 AM	1	52	0	53	39	6	0	45	7	14	0	21	119
08:45 AM	2	9	0	11	12	2	2	16	2	2	2	6	33
Total	8	123	0	131	90	14	2	106	20	21	2	43	280
11:00 AM	0	4	0	4	3	0	0	3	0	2	0	2	9
11:15 AM	2	0	0	2	1	0	0	1	0	0	0	0	3
11:30 AM	0	1	0	1	2	0	0	2	0	0	0	0	3
11:45 AM	1	2	0	3	5	2	0	7	2	0	0	2	12
Total	3	7	0	10	11	2	0	13	2	2	0	4	27
12:00 PM	1	1	0	2	10	1	1	12	0	0	0	0	14
12:15 PM	0	2	0	2	1	2	0	3	0	1	0	1	6
12:30 PM	1	3	0	4	2	0	0	2	2	0	0	2	8
12:45 PM	1	1	0	2	2	0	0	2	0	0	0	0	4
Total	3	7	0	10	15	3	1	19	2	1	0	3	32
03:00 PM	10	21	0	31	63	14	6	83	1	12	0	13	127
03:15 PM	18	1	0	19	15	1	0	16	1	6	0	7	42
03:30 PM	7	0	0	7	7	0	5	12	0	22	0	22	41
03:45 PM	2	1	0	3	2	0	0	2	0	3	0	3	8
Total	37	23	0	60	87	15	11	113	2	43	0	45	218
04:00 PM	1	3	0	4	2	3	1	6	0	1	0	1	11
04:15 PM	0	14	0	14	4	0	3	7	3	0	2	5	26
04:30 PM	1	6	0	7	33	4	3	40	1	1	0	2	49
04:45 PM	4	5	0	9	3	1	2	6	1	1	0	2	17
Total	6	28	0	34	42	8	9	59	5	3	2	10	103
05:00 PM	3	6	0	9	8	0	1	9	0	2	0	2	20
05:15 PM	0	2	1	3	3	1	5	9	1	5	2	8	20
05:30 PM	1	2	0	3	2	0	1	3	1	0	0	1	7
05:45 PM	0	4	0	4	6	1	0	7	1	3	0	4	15
Total	4	14	1	19	19	2	7	28	3	10	2	15	62
Grand Total	172	262	1	435	299	50	31	380	47	163	6	216	1031
Apprch %	39.5	60.2	0.2		78.7	13.2	8.2		21.8	75.5	2.8		
Total %	16.7	25.4	0.1	42.2	29	4.8	3	36.9	4.6	15.8	0.6	21	
Lights	148	249	1	398	298	50	31	379	46	132	6	184	961
% Lights	86	95	100	91.5	99.7	100	100	99.7	97.9	81	100	85.2	93.2
Mediums	18	13	0	31	1	0	0	1	1	28	0	29	61
% Mediums	10.5	5	0	7.1	0.3	0	0	0.3	2.1	17.2	0	13.4	5.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	6	0	0	6	0	0	0	0	0	3	0	3	9
% Bicycles on Road	3.5	0	0	1.4	0	0	0	0	0	1.8	0	1.4	0.9

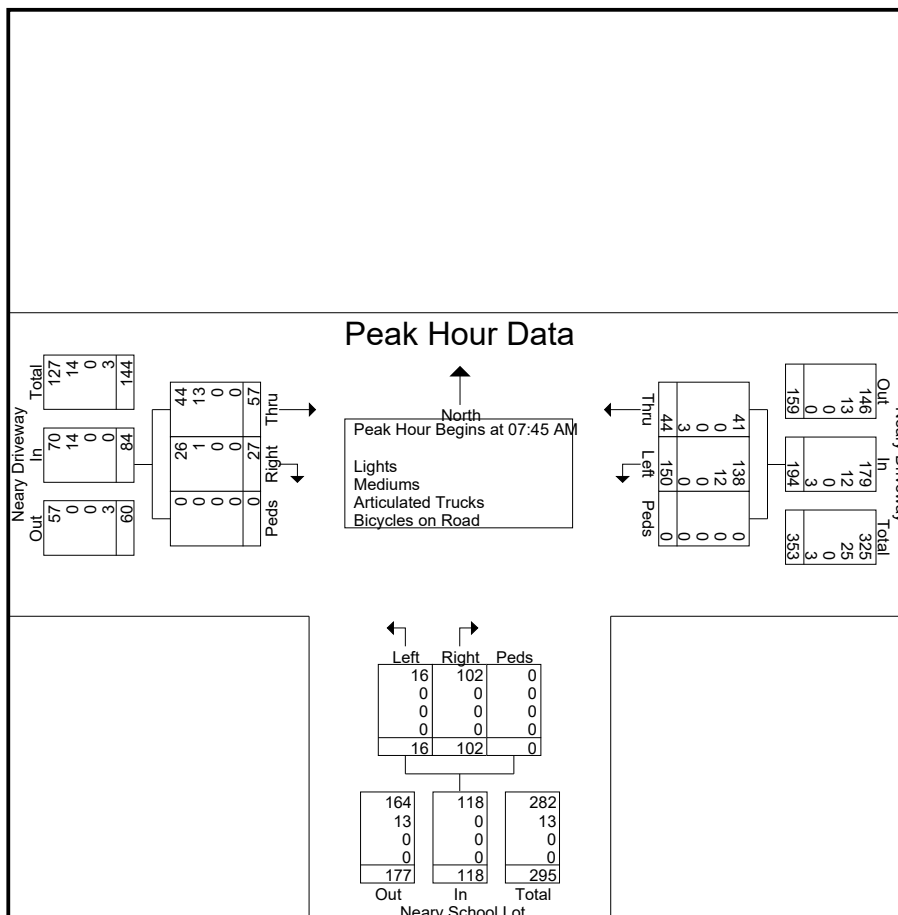
MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

E/W: Neary Driveway
NB: Neary Parking Lot
Southborough, MA

File Name : 1339_Neary_Dr_at_School_Lot_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 3

	Neary Driveway From East				Neary School Lot From South				Neary Driveway From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	38	36	0	74	24	4	0	28	9	38	0	47	149
08:00 AM	2	34	0	36	28	3	0	31	4	3	0	7	74
08:15 AM	3	28	0	31	11	3	0	14	7	2	0	9	54
08:30 AM	1	52	0	53	39	6	0	45	7	14	0	21	119
Total Volume	44	150	0	194	102	16	0	118	27	57	0	84	396
% App. Total	22.7	77.3	0		86.4	13.6	0		32.1	67.9	0		
PHF	.289	.721	.000	.655	.654	.667	.000	.656	.750	.375	.000	.447	.664
Lights	41	138	0	179	102	16	0	118	26	44	0	70	367
% Lights	93.2	92.0	0	92.3	100	100	0	100	96.3	77.2	0	83.3	92.7
Mediums	0	12	0	12	0	0	0	0	1	13	0	14	26
% Mediums	0	8.0	0	6.2	0	0	0	0	3.7	22.8	0	16.7	6.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	3	0	0	3	0	0	0	0	0	0	0	0	3
% Bicycles on Road	6.8	0	0	1.5	0	0	0	0	0	0	0	0	0.8



N/S: Parkerville Road
EB: Neary Driveway

File Name : 1339_Parkerville_at_Neary_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

Start Time	Parkerville Road From North				Parkerville Road From South				Neary Driveway From West				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
07:00 AM	2	0	0	2	2	14	0	16	6	8	0	14	32
07:15 AM	5	3	0	8	4	19	0	23	2	5	0	7	38
07:30 AM	5	1	0	6	3	48	0	51	16	11	0	27	84
07:45 AM	14	2	0	16	9	52	0	61	33	30	0	63	140
Total	26	6	0	32	18	133	0	151	57	54	0	111	294
08:00 AM	21	5	0	26	2	21	0	23	16	20	0	36	85
08:15 AM	11	1	0	12	1	16	0	17	1	11	0	12	41
08:30 AM	23	1	0	24	2	28	0	30	14	30	1	45	99
08:45 AM	4	3	0	7	4	10	0	14	8	14	0	22	43
Total	59	10	0	69	9	75	0	84	39	75	1	115	268
11:00 AM	2	3	0	5	0	2	0	2	1	3	0	4	11
11:15 AM	2	2	0	4	3	0	0	3	0	2	0	2	9
11:30 AM	0	1	0	1	2	1	0	3	1	0	0	1	5
11:45 AM	3	0	0	3	2	2	0	4	1	3	0	4	11
Total	7	6	0	13	7	5	0	12	3	8	0	11	36
12:00 PM	1	6	0	7	7	1	0	8	4	8	0	12	27
12:15 PM	1	1	0	2	3	1	0	4	3	0	0	3	9
12:30 PM	3	2	0	5	2	1	3	6	2	1	1	4	15
12:45 PM	1	1	0	2	8	1	0	9	0	2	0	2	13
Total	6	10	0	16	20	4	3	27	9	11	1	21	64
02:45 PM	17	2	0	19	5	24	0	29	3	0	0	3	51
Total	17	2	0	19	5	24	0	29	3	0	0	3	51
03:00 PM	15	2	0	17	5	20	3	28	16	55	0	71	116
03:15 PM	8	4	0	12	2	11	0	13	7	15	0	22	47
03:30 PM	2	1	0	3	4	4	4	12	12	15	1	28	43
03:45 PM	2	6	0	8	3	0	0	3	3	6	0	9	20
Total	27	13	0	40	14	35	7	56	38	91	1	130	226
04:00 PM	2	4	0	6	6	3	2	11	1	2	0	3	20
04:15 PM	12	6	0	18	6	4	3	13	3	2	0	5	36
04:30 PM	1	3	0	4	9	5	1	15	9	26	0	35	54
04:45 PM	4	5	0	9	4	5	1	10	0	1	0	1	20
Total	19	18	0	37	25	17	7	49	13	31	0	44	130
05:00 PM	4	2	0	6	10	7	0	17	2	10	0	12	35
05:15 PM	1	4	0	5	2	1	1	4	0	5	0	5	14
05:30 PM	1	2	0	3	6	3	2	11	1	1	1	3	17
05:45 PM	3	5	0	8	6	1	0	7	3	5	2	10	25
Total	9	13	0	22	24	12	3	39	6	21	3	30	91
Grand Total	170	78	0	248	122	305	20	447	168	291	6	465	1160
Apprch %	68.5	31.5	0		27.3	68.2	4.5		36.1	62.6	1.3		
Total %	14.7	6.7	0	21.4	10.5	26.3	1.7	38.5	14.5	25.1	0.5	40.1	
Lights	151	70	0	221	120	282	20	422	167	263	6	436	1079
% Lights	88.8	89.7	0	89.1	98.4	92.5	100	94.4	99.4	90.4	100	93.8	93
Mediums	13	6	0	19	1	22	0	23	1	28	0	29	71
% Mediums	7.6	7.7	0	7.7	0.8	7.2	0	5.1	0.6	9.6	0	6.2	6.1

28 Lord Road, Suite 280
Marlborough, MA

N/S: Parkerville Road
EB: Neary Driveway

File Name : 1339_Parkerville_at_Neary_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 2

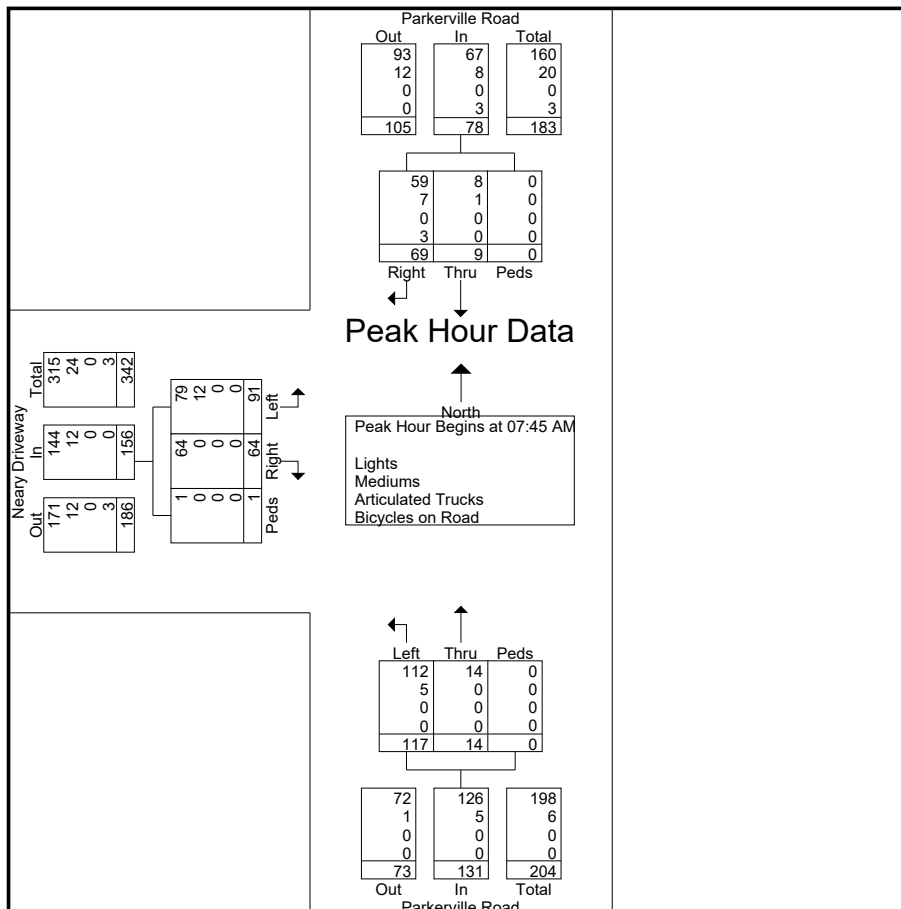
Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

	Parkerville Road From North				Parkerville Road From South				Neary Driveway From West				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	6	2	0	8	1	1	0	2	0	0	0	0	10
% Bicycles on Road	3.5	2.6	0	3.2	0.8	0.3	0	0.4	0	0	0	0	0.9

N/S: Parkerville Road
EB: Neary Driveway

File Name : 1339_Parkerville_at_Neary_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 3

	Parkerville Road From North				Parkerville Road From South				Neary Driveway From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	14	2	0	16	9	52	0	61	33	30	0	63	140
08:00 AM	21	5	0	26	2	21	0	23	16	20	0	36	85
08:15 AM	11	1	0	12	1	16	0	17	1	11	0	12	41
08:30 AM	23	1	0	24	2	28	0	30	14	30	1	45	99
Total Volume	69	9	0	78	14	117	0	131	64	91	1	156	365
% App. Total	88.5	11.5	0		10.7	89.3	0		41	58.3	0.6		
PHF	.750	.450	.000	.750	.389	.563	.000	.537	.485	.758	.250	.619	.652
Lights	59	8	0	67	14	112	0	126	64	79	1	144	337
% Lights	85.5	88.9	0	85.9	100	95.7	0	96.2	100	86.8	100	92.3	92.3
Mediums	7	1	0	8	0	5	0	5	0	12	0	12	25
% Mediums	10.1	11.1	0	10.3	0	4.3	0	3.8	0	13.2	0	7.7	6.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	3	0	0	3	0	0	0	0	0	0	0	0	3
% Bicycles on Road	4.3	0	0	3.8	0	0	0	0	0	0	0	0	0.8

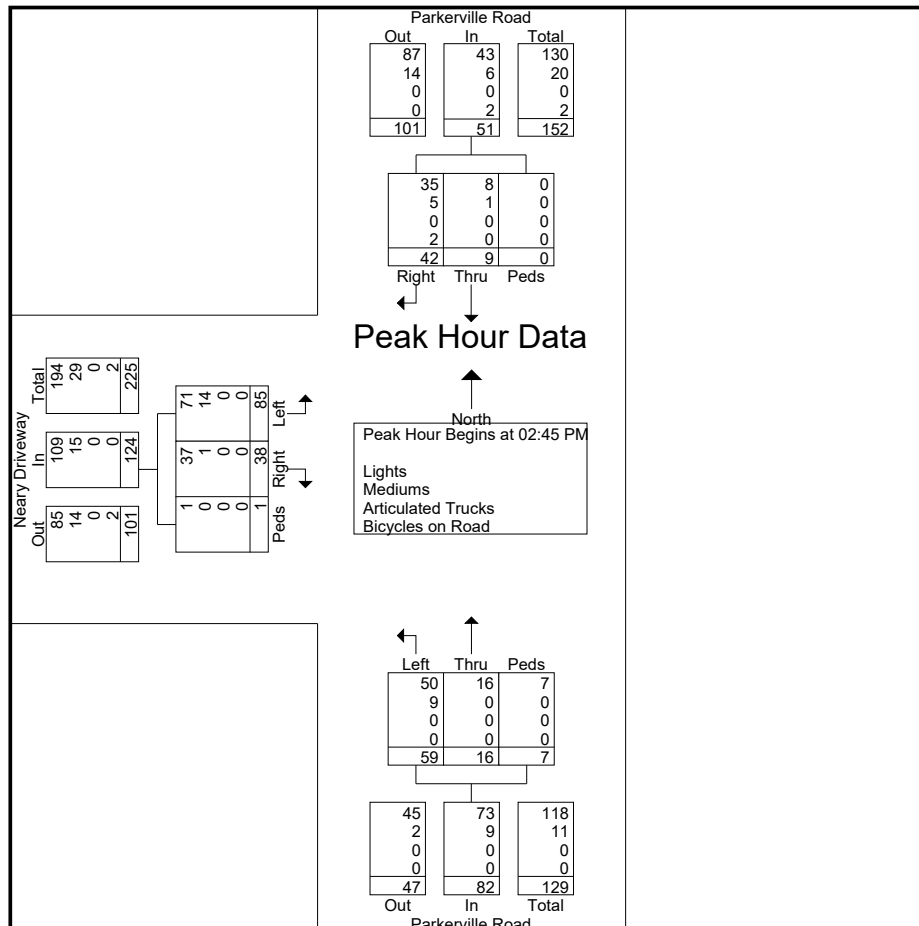


28 Lord Road, Suite 280
Marlborough, MA

N/S: Parkerville Road
EB: Neary Driveway

File Name : 1339_Parkerville_at_Neary_03-13-2024
Site Code : 1339
Start Date : 3/13/2024
Page No : 5

	Parkerville Road From North				Parkerville Road From South				Neary Driveway From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:45 PM													
02:45 PM	17	2	0	19	5	24	0	29	16	55	0	71	116
03:00 PM	15	2	0	17	5	20	3	28	7	15	0	22	47
03:15 PM	8	4	0	12	2	11	0	13	12	15	1	28	43
03:30 PM	2	1	0	3	4	4	4	12	38	85	1	124	257
Total Volume	42	9	0	51	16	59	7	82	30.6	68.5	0.8		
% App. Total	82.4	17.6	0		19.5	72	8.5						
PHF	.618	.563	.000	.671	.800	.615	.438	.707	.594	.386	.250	.437	.554
Lights	35	8	0	43	16	50	7	73	37	71	1	109	225
% Lights	83.3	88.9	0	84.3	100	84.7	100	89.0	97.4	83.5	100	87.9	87.5
Mediums	5	1	0	6	0	9	0	9	1	14	0	15	30
% Mediums	11.9	11.1	0	11.8	0	15.3	0	11.0	2.6	16.5	0	12.1	11.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Road	2	0	0	2	0	0	0	0	0	0	0	0	2
% Bicycles on Road	4.8	0	0	3.9	0	0	0	0	0	0	0	0	0.8



□ Parking Data

Study Name 1339 Neary Lot Parking
Start Date 03/13/2024
Start Time 7:00 AM
Site Code 1339

Channel Direction	Direction	Direction	Peak Parking
	Entering	Exiting	Demand
7:00 AM	5	2	9
7:15 AM	6	3	11
7:30 AM	17	8	20
7:45 AM	45	28	37
8:00 AM	38	31	44
8:15 AM	30	14	60
8:30 AM	48	45	67
8:45 AM	10	13	63
9:00 AM	4	2	64
9:15 AM	5	1	66
9:30 AM	7	4	69
9:45 AM	1	1	70
10:00 AM	3	4	69
10:15 AM	0	2	68
10:30 AM	4	2	69
10:45 AM	1	1	68
11:00 AM	4	3	69
11:15 AM	0	1	69
11:30 AM	1	2	68
11:45 AM	4	8	69
12:00 PM	1	11	63
12:15 PM	2	3	54
12:30 PM	5	2	55
12:45 PM	1	2	56
1:00 PM	4	2	57
1:15 PM	3	2	57
1:30 PM	4	3	60
1:45 PM	1	1	59
2:00 PM	1	2	59
2:15 PM	0	2	57
2:30 PM	11	0	66
2:45 PM	41	3	104
3:00 PM	21	74	113
3:15 PM	2	16	51
3:30 PM	0	7	37
3:45 PM	1	2	31
4:00 PM	2	5	30
4:15 PM	18	4	40
4:30 PM	7	37	43
4:45 PM	6	4	13
5:00 PM	6	8	14
5:15 PM	4	4	12
5:30 PM	3	2	11
5:45 PM	5	7	11

3.1.5 SITE DEVELOPMENT REQUIREMENTS

Introduction

The existing school is located at 53 Parkerville Road in Southborough MA. The Margaret Neary Elementary School shares a site with the Trottier Middle School, giving the site a campus atmosphere. The Neary portion of the site is bordered by Clifford Street and private residential properties on the southern side, by Deerfoot Road on the western side and by Trottier Middle School on the northern side. The two schools share an entrance drive from Parkerville Road. To the south of the entrance drive, running parallel to Parkerville Road there is a park that was constructed on top of a former sanitary landfill, which was recently turned into a dog park.

SITE ORIENTATION

The combined site encompasses 80.7 acres and the Neary School occupies the southern half of the site. The school sits in the center of it's portion of the site. The parcel of land and is bounded on all sides by vacant land, residential neighborhoods and recreational space.

TOPOGRAPHY

The existing school is located in the low land, roughly at the center of its portion of the site, and below the surrounding residential neighborhoods. This land that was infilled at the time of the school construction and the surrounding area slopes up on three sides.

SOILS

The land where the school is sited was infilled at the time of construction with the surficial geologic map of the site indicating that the natural soils and in the general vicinity of the site consist of coarse deposits and swamp deposits. The sampled topsoil ranged between 0.8 and 1.2 feet in depth. A layer of fill was encountered beneath the topsoil at the two borings in the play field north of the school. The fill at these locations extended to depths of about 6 feet beneath the ground surface. The samples in this layer were described as mostly silty sand. A third sample location on the southwest of the play field

encountered subsoil at 2 feet below the ground surface and is described as poorly graded sand with silt.

These initial borings indicate that the infilled soil will need to be removed to a depth of approximately 5 feet and replaced with structural fill to support any new construction. Topsoil should be removed from the entire construction area, including the building footprint and the paved areas. Sampled soils show that the soil is less than RCS-1 criteria and does not show any detection for pesticides, herbicides, gasoline and/ or diesel.

WETLANDS & FLOOD RESTRICTIONS

The site is bisected by a waterway and wetlands area. There are also wetlands to the east of the building, between the parking area and the park. The wetlands are identified in the town's GIS maps and our preliminary understanding is to maintain a 200 foot setback. The team has begun a conversation with the Conservation Commission about understanding their requirements and wetlands so this will be an important consideration that will be further delineated during the PSR.

Groundwater is observed to be high across the site, evidenced by groundwater present in all four test borings at depths ranging between 2 feet and 4.2 feet beneath the ground surface.

RARE SPECIES AND CULTURAL RESOURCES

No rare species or cultural resources are noted on the Massachusetts GIS MassMapper for this site.

STRUCTURES & FENCES

Structures

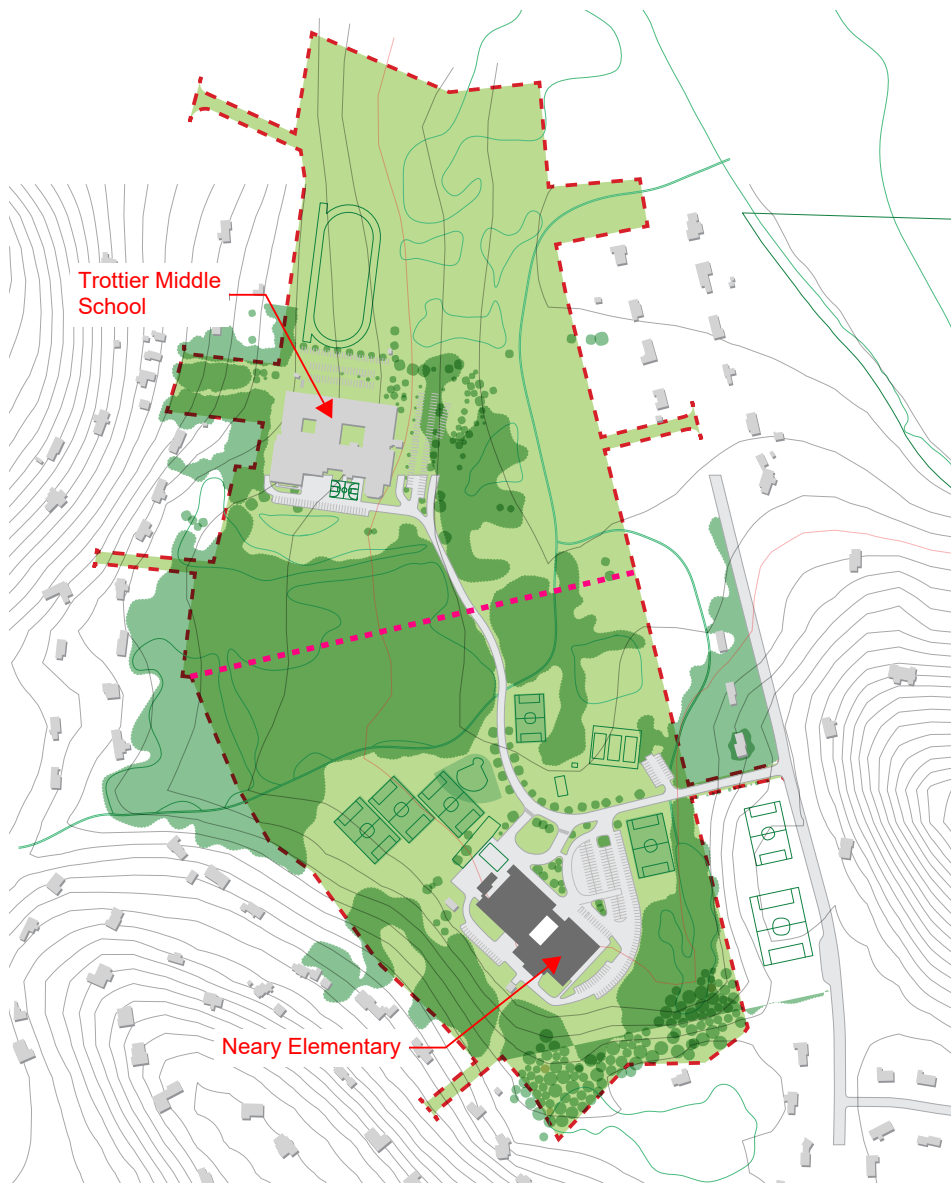
There is an existing septic system on the site including an underground tank and a leach field. The tank is located to the south of the school building, under the access drive. The leach field is located in the bermed slope west of the building. There are three monitoring wells currently installed at the low end of this slope. The septic system is believed to be undersized and will likely need to be relocated.

There are two small sheds located behind the school. The northernmost shed is in use for facilities storage while the second, smaller shed is currently closed due to water damage.

Fences

Given the school's remote location, there are currently few fences on the site. There is a low fence along the entry drive, defining the edge of the play field and preventing balls or people from entering the drive aisle, and the tennis court is surrounded by high fences to contain balls.

BELOW Existing site plan of school



ATHLETIC FIELDS & OUTDOOR SPACES

There are currently several fields and play areas on the site. The playground is located to the northeast of the school building. There are tennis courts to the north of the entrance drive and a soccer field to the south of the drive. The open field to the north of the building has an informal softball field and is seasonally striped for three additional soccer fields.

ACCESS & CIRCULATION

There is an entrance drive from Parkerville Road that is shared with Trottier Middle School. There is a turnoff for parking and drop off with a second entrance for the bus loop. A service drive that circles the building, providing access to the rear of the building for deliveries.

PARKING & PAVING

There is a parking lot adjacent to the building with 132 parking spaces.

EMERGENCY VEHICLE ACCESS

Emergency vehicles enter the site by way of the shared entry drive from Parkerville Road. There is currently access to all sides of the building by the service drive that circles the building. Also refer to the Fire Department Access section of the 'Existing Building Code and MAAB Compliance Report' for more information related to emergency vehicle access requirements.

ACCESSIBILITY REQUIREMENTS

Site accessibility in any future project will need to be carefully considered. Creating a safe and accessible path to the building from both bus and parent drop off will be critical to the student population.

Please refer to the civil existing conditions review in Appendix for more details on current accessibility barriers.

CODE REQUIREMENTS

With a relatively open site on a large parcel of land, the building setbacks and wetland setbacks will be the most restrictive aspect of the site.

ZONING SETBACKS & LIMITATIONS

The following setbacks apply to the Residential A zoning district:

- Max FAR: .18
- Minimum Lot Area: 43,560 SF
- Minimum Front Yard: 35 FT
- Minimum Side Yard: 25 FT, 10 feet for accessory buildings and swimming pools
- Minimum Rear Yard: 50 FT, 10 feet for accessory buildings and swimming pools
- Minimum lot frontage: 150 FT
- Maximum # of Stories: 2.5
- Maximum height: 35'

EASEMENTS

There are no easements on the site.

SAFETY & SECURITY REQUIREMENTS

The school has not reported any security concerns, however, due to the age of the building, the security system is out of date. For example, there are a limited number of card readers, and it is unclear if all perimeter doors are monitored. Any proposed project will require a comprehensive upgrade to the security system.

UTILITIES

Refer to civil existing conditions review for utilities descriptions on the following pages.



SITE FEASIBILITY ANALYSIS

Preliminary Site Review

Green International Affiliates, Inc. (Green), working as the civil engineering subconsultant to Arrowstreet, performed a preliminary site review of the Neary Elementary School site located at 53 Parkerville Rd, Southborough, MA. Green performed the following research and data collection as part of the preliminary site assessment:

- Site visit on May 15, 2024
- Research for environmental impacts on or adjacent to the site using MassMapper
- Research for floodplain information at, or adjacent to, the site at the Federal Emergency Management Agency (FEMA) website (<http://www.fema.org>)
- Review of plans and records provided by Arrowstreet

The following report outlines a summary of those findings.

Neary Elementary School

A. Location

Overall, the school is comprised of three one-story brick building segments which are connected by hallways. The total lot area is approximately 80.7 acres which includes the access road, Neary Elementary School, Trottier Middle School, and associated play fields. The Neary Elementary School has a long main drive entrance off Parkville Road which continues to Trottier Middle School (see attached Figure 2).

B. Natural Physical Features & Environmental Impacts

The site is in a suburban residential area and centrally located within the Town of Southborough. The Neary School main parking lot is adjacent to a wetland identified on MassMapper as a shallow marsh (see Figure 3). The lot is located within a 100-year Flood Zone according to the FEMA Flood Map 25027C0666F (see Figure 4). The location of the 100-year Flood Zone is in between the Neary Elementary School and the Trottier Middle School. It is not anticipated that the 100-year Flood Zone will be within the proposed project limits. The project site is not located within any areas designated as an Estimated Habitat of Rare Wildlife and a Priority Habitat of Rare Species by the Natural Heritage & Endangered Species Program (NHESP).

The topography on site generally slopes down from the east, west, and south to a low point within the site. The low point discharges to a ditch that continues sloping down to the north and eventually leads to the Sudbury Reservoir. The high elevation of the east side site is approximately elevation 288' (Parkerville Road) and 296' (soccer field over landfill), the high elevation of the west side of the site is approximately elevation 312' (Clifford Street), the high elevation of the south side of the site is approximately elevation 305' (at 55 Parkerville property line), and the low elevation of the site

SITE FEASIBILITY ANALYSIS

prior to discharging to the ditch is approximately elevation 267' (near main parking lot entrance). The approximate elevations were taken from MassMapper.

C. Parking and Vehicular Circulation

There is a two-way access road off Parkerville Road that leads to a parking lot with a drop off area at the front of the school. West of the parking lot there is a looped drop off area separate from the parking lot. The access road continues north to Trottier Middle School and eventually connects to Deerfoot Road.

There are two designated parking lots for the school. The main parking lot in the front and side of the school provides 161 parking spaces, four accessible parking spaces, and a drop-off area. In between the school building and the parking lot there are landscaped grass areas and sidewalks. There is another parking lot at the back of the school which includes 17 parking spaces. The pavement at the side and back of the building is in very poor condition.

Northeast of the main parking lot there are tennis courts with a parking lot. This parking lot provides 16 parking spaces. There are sidewalks that travel from the tennis court parking lot to the school building entrances. This can be used as overflow parking.

If additional parking is desired, a parking study is recommended to determine the appropriate number of parking spaces needed to meet the school's parking demand.



Main Parking Lot and Drop of Area



SITE FEASIBILITY ANALYSIS



Side Parking Lot



Back Parking Lot

D. Site Accessibility

Parkerville Road has a sidewalk only on the east side of the roadway north of the access road and sidewalks on both sides of the roadway south of the access road to the site. There are curb ramps near the access road to allow pedestrians to cross Parkerville Road. The sidewalk on the west side of Parkerville Road continues west along the access road to the Neary School.

SITE FEASIBILITY ANALYSIS

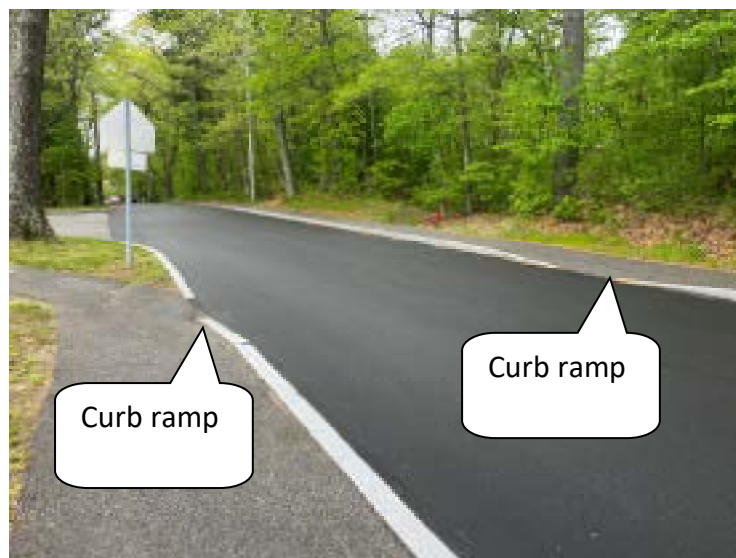
The access road has a sidewalk only on the south side of the road until the tennis court parking lot. Then, there are sidewalks on both sides of the access road to the main parking lot entrance where the north sidewalk ends. The north sidewalk does not have any curb ramps or crosswalks associated with it to connect to other sidewalks. The north sidewalk starts at the tennis court parking lot and the tennis court parking lot does not have any accessible parking spaces. The south sidewalk continues west then splits in three directions one traveling southwest to the main parking lot and the front entrance, the second traveling northwest to the looped drop off area, basketball courts, and side entrance, and the third continuing along the access road toward the Middle School.

There is a sidewalk that starts at Clifford Street and travels toward the back (southwest) portion of the building. This sidewalk travels down a steep hill and does not appear to be ADA compliant.

The drop off area sidewalks and sidewalk entrances to the building are cement concrete sidewalks. The access road, Parkerville Road, and Clifford Street sidewalks are bituminous concrete.

The main entrances are flush with the sidewalk. There are some side and rear entrances that have a step or stairs to enter the building. Coordination with the school should be performed to confirm which entrances need to be ADA compliant.

The curb ramps throughout the site do not have detectable warning panels. The curb ramps should have detectable warning panels installed at all curb ramps to meet ADA requirements. The sidewalk along the accessible parking spaces should be assessed to confirm ADA compliance. It appeared to have a steep ramp and small level landing. An accessibility report and survey should be prepared for the site to confirm ADA compliance.



Curb Ramps at Parkerville Road and Access Road

53 Parkerville Rd, Southborough, MA
Neary Elementary School Renovation
May 17, 2024



Green International Affiliates, Inc.
100 Ames Pond Drive, Suite 200 Tewksbury, MA 01876
T: (978) 923-0400 | www.greenintl.com

SITE FEASIBILITY ANALYSIS



Sidewalks Along Access Road from Tennis Parking Lot



Main entrance into Neary Elementary School

SITE FEASIBILITY ANALYSIS



Accessible parking spaces in Main Parking Lot

E. Utilities

Sewer

The 1998 As Built Septic System record plan shows a gravity sewer line leaving the southwest corner of the bump out in the back of the building. The sewer enters a treatment chain which consists of a 15,000-gallon septic tank, fast filter system, 10,000-gal pump chamber, and leach field. The pump chamber pumps the effluent out using two 4" PVC SDR 26 force mains to the leach field. The leach field is located on top of a hill along the west property line and northwest of the building.

The 1968 drawings show the sewer line leaving the building in the same location as the 1998 record drawings and entering a septic tank/pump chamber in a similar location to the 15,000 gal septic tank shown in the 1998 drawings. But, the 1968 drawings do not have an additional septic tank or fast filter system. The 1968 drawing show the effluent being pumped to a leach field southwest of the building. It was not clear from the plans if the leach field from the 1968 drawings was removed or is abandoned in place.

The condition and capacity of the existing sanitary sewer system is not currently available and may require further desktop and field investigation to confirm. Since the population of the school is not expected to grow significantly, it is assumed the current sewer system capacity is sufficient for the proposed conditions.

The 1995 Site Assessment drawings indicate that there is a large sanitary landfill under the soccer fields that are adjacent to Parkerville Road and the access road.



SITE FEASIBILITY ANALYSIS

Water

The 1968 record plans indicate there is a 6" water main within Clifford Road. The water service line for the building is connected to the main using a 6" tapping sleeve and valve. There is also a 6"x 8" inducer installed to upsize the service to an 8" water line. The 8" water service runs parallel to the walkway from Clifford toward the southwest corner of the building then bends north around the west and north sides of the building. The water line continues into the access road towards Parkerville Road. The 1968 drawings show the water line dead ending in the access road near the main parking lot, but the 1998 drawings show the water line continuing down the access road towards Parkerville Road. The 1998 drawings are cut off at the access road so, it is unknown if the water line is looped by connecting into a water main within Parkerville Road.

The 1968 record plan shows a 4" water line branching off the 8" water line and feeding the west side of building. This is the only location where the building has a water service coming into the building. The 1997 record plan also only shows one water service line entering the building, but it is in a different location on the west side of the building. Further investigation is required to confirm the water service's location.

There are two existing hydrants, one located on the west side of the building and the other on the east site of the building.

The exact age, condition, and material of the water main and service is unknown and may require further investigation. The existing water services that connect to the building are shown on the 1968 record plans, therefore we assume the pipes may need to be replaced given their age. A hydrant flow test is recommended to determine the amount of water available in the public system to serve the site for fire protection and domestic use.

Electrical Service

The 1997 record plan shows overhead wires from Clifford Street running parallel to the sidewalk toward the west side of the building. There are overhead wires that connect to the west side of the building and the garage behind the building. There are underground electrical and telephone conduits that connect to the west side of the building. The underground electrical and telephone conduits run around the west and north sides of the building and onto the access road towards the Middle School. The records do not show any electrical and telephone conduits along the access road towards Parkerville Road. Although, it is likely there are electrical conduits because the access road has lighting installed.

Per the 1995 Site Assessment record plan, there is an AT&T easement that crosses the site between the two soccer fields parallel to Parkerville Road.



SITE FEASIBILITY ANALYSIS

Site Drainage

There are a few closed drainage systems consisting of catch basins and drain manholes throughout the site.

Per the 1968 record plans, one closed drainage system starts northwest of the building and runs southeast until it is beyond the building limits. This collects runoff from the back of the building including grass landscaped areas, parking area, and drive aisle area via sheet flow. The closed drainage system turns east toward a low area. There are three catch basins within the low area to collect runoff. This low area is heavily vegetated, and the catch basins were not observed. This area is identified as a wetland on MassMapper. Therefore, overflow from the wetland enters the closed drainage system via the three catch basins. The closed drainage system turns north and collects runoff from the main parking lot and a portion of the access road via gutter flow. The closed drainage system outfalls to a ditch southwest of the skating pond.

Per the 1968 record plans, there is another closed drainage system that starts northwest of the building. One portion starts north of the building near the baseball fields and runs south to the main drain line. Another portion starts west of the building and runs north to the main drain line. These two portions collect landscaped grass area and sidewalks. Another branch of the closed drainage system that connects to the main drain line consists of two pipes leaving the east side of the building which are from roof drains. The main drain line runs north of the building, to the east, and outfalls at the same ditch as the first closed drainage system southwest of the skating pond. Per the 1997 record plans, there is another portion of the drainage system that collects runoff from the access road north of the building via gutter flow and is connected to the main drain line.

Per the 1997 record plans, the last closed drainage system runs west along the access road from near Parkville Ave and around the tennis courts to the ditch southwest of the skating pond. The plan does not show Parkville Ave, so it is not clear if this part of the closed drainage system within Parkville Ave. Further investigation is required to confirm runoff from Parkville Ave discharges to this location.

It appears that the drainage from the site, discharges to the ditch southwest of the skating pond. Then, it fills up the skating pond via a culvert. Any excess water bypasses the skating pond via the ditch or overflows out of the pond and back into the ditch at the northwest corner of the pond. The ditch continues to the north beyond the site limits. There are additional drainage systems within the parcel that discharge to the ditch but are outside the proposed project limits.

No stormwater treatment systems were observed on site during the field visit, which appears to coincide with the record plans.

The existing drainage system will require analysis during the design phase to determine whether it provides adequate stormwater management. Stormwater mitigation and/or treatment may be



SITE FEASIBILITY ANALYSIS

necessary if there is an increase in impervious area, which is dependent on the final proposed site design. Subsurface infiltration or detention chambers and above-ground infiltration or bioretention basins are possible stormwater management systems that may be installed based on the final proposed site layout. It is assumed that Phase II of this project will not rule out the ability to infiltrate stormwater runoff generated from the site; however, geotechnical testing to establish estimated seasonal high groundwater is required.

Roof drainage for the school was not visible from the site visit. The 1997 record plans show two drainage pipes leaving the front of the building and enters the closed drainage system. The 1968 record plan shows the same two roof drains, but it also has a third roof drain. Further investigation of the roof drainage system may be required. The existing roof drainage will require analysis during the design phase to determine whether it provides adequate stormwater management.

On the day of our site visit (May 15, 2024), weather conditions were cloudy, and it rained earlier that day. There was some puddling and standing water observed in the side and back parking lot areas. The main parking lot and tennis parking lot had minor puddling.

Gas

The 1997 record plans show there is a gas line installed along the access road. The records do not show the gas line branching off and feeding the building. The 1968 record plans show there is a 1,000 gallon underground low-pressure gas storage tank on the west side of the building. This feeds the west side of the building with a 1" gas service. Further investigation will be required to confirm the gas service for the building.

53 Parkerville Rd, Southborough, MA
Neary Elementary School Renovation
May 17, 2024



Green International Affiliates, Inc.
100 Ames Pond Drive, Suite 200 Tewksbury, MA 01876
T: (978) 923-0400 | www.greenintl.com

SITE FEASIBILITY ANALYSIS

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FIGURES

53 Parkerville Rd, Southborough, MA
Neary Elementary School Renovation
May 17, 2024



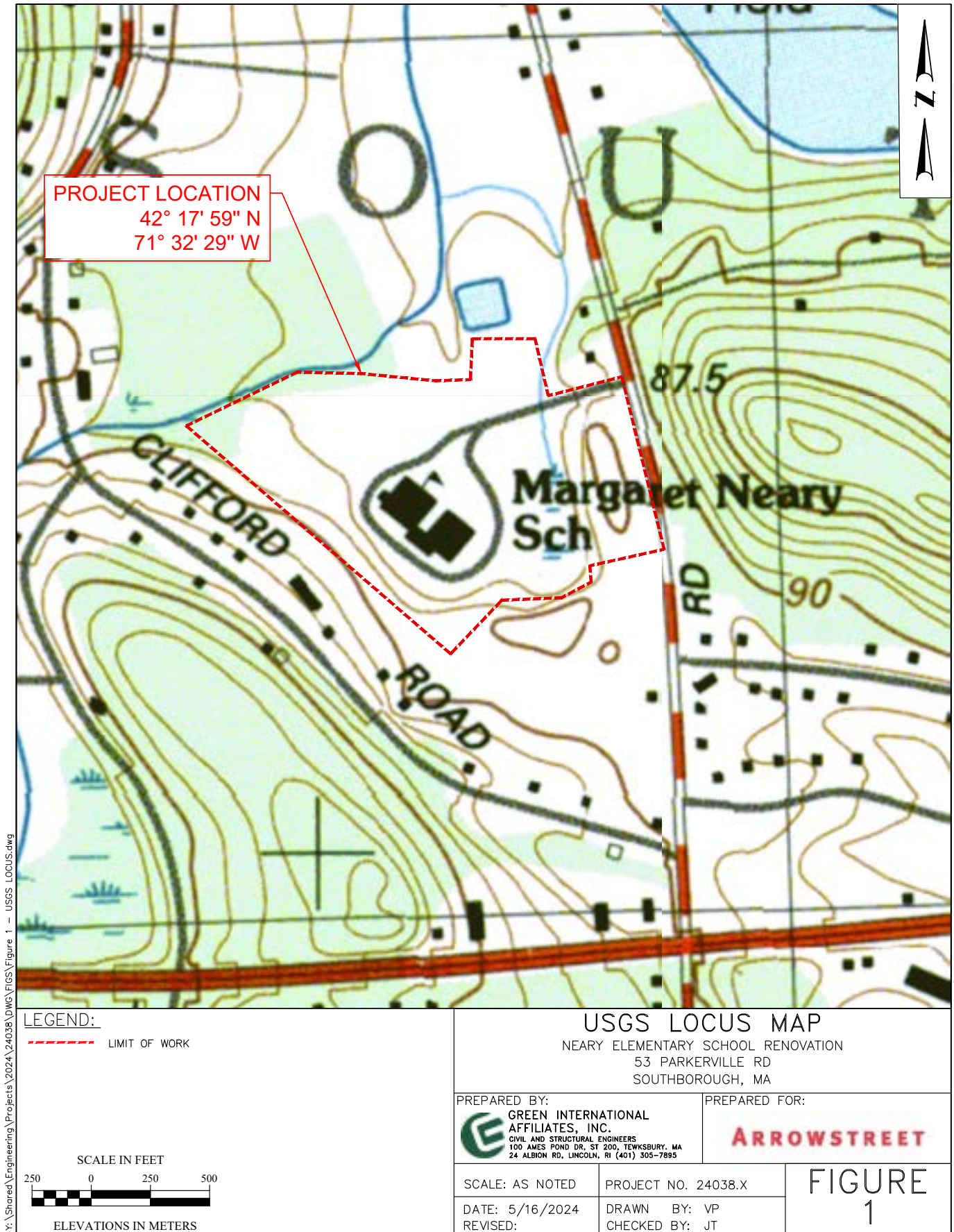
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SITE FEASIBILITY ANALYSIS

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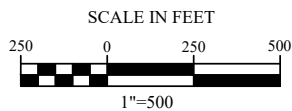


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LEGEND:

 LIMIT OF WORK



NOTE: DATA TAKEN FROM MASSGIS

AERIAL LOCUS MAP

NEARY ELEMENTARY SCHOOL RENOVATION
53 PARKERVILLE RD
SOUTHBOROUGH, MA

PREPARED BY:



GREEN INTERNATIONAL
AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS
100 AMES POND DR, ST 200, TEWKSBURY, MA
24 ALBION RD, LINCOLN, RI (401) 305-7895

PREPARED FOR:

ARROWSTREET

SCALE: AS NOTED

PROJECT NO. 24038.X

DATE: 5/16/2024
REVISED:

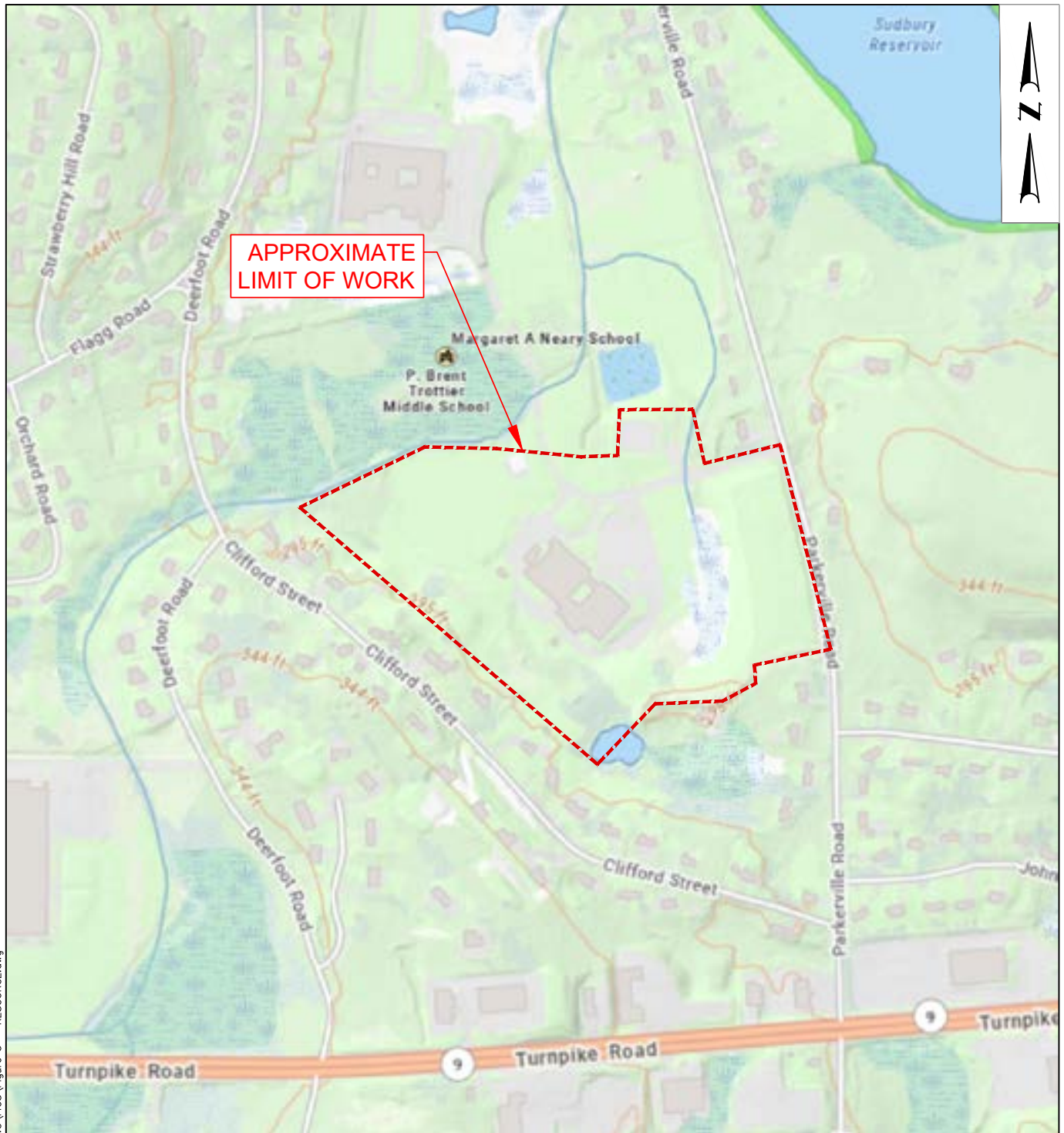
DRAWN BY: VP
CHECKED BY: JT

**FIGURE
2**

Y:\Shared\Engineering\Projects\2024\24038\DWG\FIGS\Figure 2 - AERIAL.dwg



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LEGEND:
 LIMIT OF WORK

SCALE IN FEET

 1"=500

NOTE: DATA TAKEN FROM MASSGIS

RESOURCE LOCUS MAP NEARY ELEMENTARY SCHOOL RENOVATION 53 PARKERVILLE RD SOUTHBOROUGH, MA	
PREPARED BY: GREEN INTERNATIONAL AFFILIATES, INC. CIVIL AND STRUCTURAL ENGINEERS 100 AMES POND DR, ST 200, TEWKSBURY, MA 24 ALBION RD, LINCOLN, RI (401) 305-7895	PREPARED FOR:
SCALE: AS NOTED DATE: 5/16/2024 REVISED:	PROJECT NO. 24038.X DRAWN BY: VP CHECKED BY: JT
FIGURE 3	



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National Flood Hazard Layer FIRMette



71°32'42"W 42°17'57"N



LEGEND:

--- LIMIT OF WORK

NOT TO SCALE

FIRMETTE MAP

NEARY ELEMENTARY SCHOOL RENOVATION
53 PARKVILLE RD
SOUTHBOROUGH, MA

PREPARED BY:



**GREEN INTERNATIONAL
AFFILIATES, INC.**
CIVIL AND STRUCTURAL ENGINEERS
100 AMES POND DR, ST 200, TEWKSBURY, MA
24 ALBION RD, LINCOLN, RI (401) 305-7895

PREPARED FOR:

ARROWSTREET

SCALE: AS NOTED

PROJECT NO. 24038.X

DATE: 5/16/2024

DRAWN BY: VP

REVISED:

CHECKED BY: JT

**FIGURE
4**

Y:\Shared\Engineering\Projects\2024\24038\DWG\FIGS\Figure 4 - FIRMETTE.dwg

EXISTING CONDITIONS: LANDSCAPE ARCHITECTURE TERRAIN

EXECUTIVE SUMMARY

The Margaret A. Neary Elementary School is located in a residential neighborhood in Southborough, Massachusetts. The elementary school building is positioned in the southeast portion of the property with the Trottier Middle School Building in the northwest, with a dense wooded area and a large wetland area between the two schools. The topography is relatively flat within the immediate area of the elementary school including the open field space and parking lot adjacent to the building. Notable grade changes occur along the property's perimeter, featuring both low-lying wetland areas and hills leading toward the Middle school and adjoining neighborhoods. Access into and out of the site (by vehicles, pedestrians, and/or bicycles) offers a wonderful opportunity for connectivity to the adjoining neighborhood; however, ADA accessibility will need to be evaluated during the project's development.

SITE CONDITIONS – LANDSCAPE

Upon entering the school's property from Parkerville Road (via the eastern vehicular entrance), visitors are first met by a sign (right-hand side of the road) noting directions to the Neary Elementary School and Trottier Middle School. Visitors are then met by a low fieldstone wall (left side of the road) with a large granite slab inscribed with the two school names (please refer to the images on the right and below). The sign's red background paint is worn, and cracks are visible in the wood. New signage and an updated plant bed would enhance the school's frontage, while also providing a visual and material connection to the future school building improvements (i.e.: with similar materials such as stone, brick, metal, and color variations, etc.).





The entrance driveway is lined with established evergreen trees that transition into deciduous trees within the property. A sidewalk runs along one side of the driveway, linking the elementary school to the middle school, which is located further up the driveway. A grove of trees exists between the parking lot and the northeast portion of the building. The main entrance door into the school is framed by two Weeping Cherry trees and a single bench placed along a wide central walkway. An assortment of tree varieties lines the front of the building. While the trees appear to be in good condition, a licensed arborist should be consulted to evaluate the health and safety of the trees to confirm their anticipated life span and to confirm that they will not be a hazard to users (i.e.: damaged limbs, evidence of disease, etc.).

Further along the entrance drive (along the left side of the road), visitors are met by a large, open surface parking lot (situated in front of the elementary school) and an expansive recreational field space. The drive then continues through a densely wooded area to the middle school. The concrete curbs and bituminous concrete pavement around the school are in disrepair with significant cracks evident in several locations, likely due to snow removal and vehicular traffic.



As visitors arrive on the northeast side of the building, they can park their vehicle(s) in a bituminous concrete parking lot, which maintains the only designated accessible parking spaces onsite (four total spaces). The visitors are then led to the main entrance of the building via a concrete sidewalk that is in good condition. The concrete sidewalk is present along the front of the building, connecting the building's main entrance to the hardcourt play area and the bituminous concrete service drive. Student drop-off is designated within the main parking lot along the concrete sidewalk indicated by pavement markings and supplemental orange cones.



Along the northwest side of the building exists a hardcourt play area featuring a full-sized basketball court, two half-sized basketball courts, and hardcourt graphics (including four square, a number line, and a map of the United States). The backboards of the two half-basketball courts have signs of wear, including discoloration, and should be replaced. Both the full-sized basketball court and the hardcourt graphic are worn and should be repainted. At the end of the hardcourt play area exists a large, solid roof shade structure with storage, a water fountain, and three picnic tables (all non-ADA). The shade structure should be repainted; the water fountain is in poor condition and should be replaced; the picnic tables appear to be in good condition.



Adjacent to the hardcourt play area exists a 5 to 12-year-old play structure, a two-bay swing set with belt swings, and a single-bay swing set with a belt and an ADA swing seat. The playground area surface material is mostly comprised of wood chips, with a separate concrete section leading to rubber tiles that provide an accessible route to the play equipment. The play equipment is in good condition. The wood chips from the play area have migrated onto the neighboring hardcourt surfaces and open lawn areas. The rubber tiles are starting to show signs of wear and should be replaced.



Beyond the hardcourt play area and playground, exists an expansive open space that hosts two soccer fields, a softball field, and a baseball field. The lawn appears to be in good condition; however, the softball and baseball fields are showing signs of wear and need re-grading within the skinned area. Continuing north of the open space area, a dense, mature woodland lies between the elementary school and middle school campuses. The woodlands also contain an expansive wetland and stream that feeds into the Sudbury Reservoir, according to the state's GIS data.

**EXISTING CONDITIONS
LANDSCAPE ARCHITECTURE**

**THE MARGARET A. NEARY ELEMENTARY SCHOOL
FEASIBILITY STUDY – PRELIMINARY DESIGN PROGRAM**



A bituminous concrete pathway runs along the southern edge of the open space area, starting at the hardcourt space and continuing west, up a gradual hill into the woodland. Another pathway is located at the rear of the school building, leading from the western corner of the rear parking lot, up a moderately steep hill, and then connecting the local neighborhood streets to the southwest of the school. Both pathways are worn, containing several large cracks with lawn encroaching on the missing sections of the pathway.



The rear of the building operates as the service zone for the school, containing some additional parking, two large dumpsters, a loading dock-type entry, a small freestanding two-door garage, and miscellaneous utility boxes. To the right of the loading dock is a small, raised lawn area with a few picnic tables. The raised lawn area has a concrete retaining wall (approximately 3'-0" in height, with a chain link fence along all four sides). The chain link fence is leaning and contains remnant vegetation debris that has been cut from its primary growth.

**EXISTING CONDITIONS
LANDSCAPE ARCHITECTURE**

**THE MARGARET A. NEARY ELEMENTARY SCHOOL
FEASIBILITY STUDY – PRELIMINARY DESIGN PROGRAM**

Throughout this parking and service zone, it would be useful to introduce various types of built and/or vegetative screens to serve as visual buffers to the unsightly mechanicals; perhaps a louver fence or black, vinyl-coated chain link fence with scrim inserts, to effectively screen the utilities from visual and physical (safety and access) perspectives. In addition, it would be necessary to create a thoughtful pedestrian and vehicular circulation plan that deters users (specifically the students) away from these utility and service zones for safety purposes.

Continuing toward the east, around the other side of the school property, visitors encounter another parking lot, which borders a cleared, lawn hillside that slopes down to a low-lying wetland area. Puddling water was documented in this section of the parking lot and throughout the service zone. A careful analysis of the existing soils, topography, and drainage patterns will need to be completed to ensure proper drainage post-construction.





An additional, multi-use field is located east of the building (adjacent to the main parking lot area) and bordering a wetland area. Another multi-use field is located further east, uphill, along Parkerville Road, and on the other side of the wetland. This field is located on another parcel that was noted as the location of a former landfill and is presumed to be out of the scope of the proposed project.

Specific Issues

Recommendations

<p>We would consider several species of mature deciduous trees throughout the campus to be specimens that should be preserved as part of a future scope of work (upon verification by a licensed arborist). This may cause a challenge when it comes to site grading and the location of a potential building addition. PLEASE REFER TO IMAGE 1 BELOW</p>	<p>Utilize best management practices relative to the site grading and the placement of proposed elements (walkways, courtyards, outdoor classrooms, etc.) to strategically alter the site in a manner that will allow us to preserve as many specimen trees as possible.</p>
<p>The existing school signage along Parkerville Road is outdated.</p>	<p>Replace with new school signage.</p>
<p>Lack of irrigation on site will likely result in compromised plant establishment and longevity.</p>	<p>If the longevity of the plant material is a priority, then we recommend the use of native plants that require minimal water, in addition to an irrigation system that can be used during extended periods of drought.</p>
<p>Concrete curbs and bituminous concrete walkways throughout the property are damaged and/or in disrepair. PLEASE REFER TO IMAGES 2 AND 3 BELOW</p>	<p>Replace the walkways, curbs, and access routes to provide for even, ADA-accessible, and well-drained surfaces.</p>
<p>Numerous dedicated furnishings and memorials exist on site. PLEASE REFER TO IMAGES 4 AND 5 BELOW.</p>	<p>The preservation and potential relocation of these dedicated furnishings and memorials will require careful attention.</p>
<p>Some of the site furnishings and amenities are outdated and potentially hazardous for use. PLEASE REFER TO IMAGES 6 – 10 BELOW</p>	<p>Remove and replace with new site features and amenities (outlined below are anticipated quantities that will be further refined upon design development): (15) Bicycle Racks (6) Picnic Tables (5) Wooden Courtyard Benches (2) Basketball Hoops New Playground Equipment Accessible Route Site Lighting (Pedestrian and Vehicular) Irrigation System</p>

EXISTING CONDITIONS
LANDSCAPE ARCHITECTURE

THE MARGARET A. NEARY ELEMENTARY SCHOOL
FEASIBILITY STUDY – PRELIMINARY DESIGN PROGRAM



Image 1



Image 2



Image 3



Image 4



Image 5



Image 6

EXISTING CONDITIONS
LANDSCAPE ARCHITECTURE

THE MARGARET A. NEARY ELEMENTARY SCHOOL
FEASIBILITY STUDY – PRELIMINARY DESIGN PROGRAM



Image 7



Image 8



Image 9



Image 10

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3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

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School Assignment Policies & Alternative Spaces

SCHOOL ASSIGNMENT POLICIES

Students are assigned to school based on grade level in the following configuration:

School	Grade Configuration	Current Enrollment
Mary E. Finn Elementary School	PreK-1	260
Albert S. Woodward Memorial Elementary School	2-3	248
Margaret A. Neary Elementary School	4-5	282
P. Brent Trottier Middle School	6-8	409

CAPACITY OF OTHER SCHOOLS

There is not space available in the Town owned schools that can accommodate the projected student population for the consolidation of grade configurations in either 3-5 or 2-5 scenarios.

TUITION AGREEMENTS

The School District does not have any tuition agreement in the Preschool through eighth grade levels with neighboring school districts.

BUILDING ACQUISITION & ALTERNATE SITES

There are no buildings in the Town of Southborough that are available for rent, lease, or purchase that would accommodate the projected student population.

Alternatives

A naming convention has been developed to identify and track the various alternatives. The naming convention is as follows:

A series - Base Repair

B series - Addition / Renovation

C series - New Construction

Base Repair Options

OPTION A.1 - BASE REPAIR AT NEARY – 305 ENROLLMENT

As required by the MSBA in Module 3, the Design Team developed a Base Repair option that upgrades the existing Neary building and repairs the systems with no additional space added. This alternative would incorporate space that is currently being used by District Administrative offices, and would require modulars for phasing. The building would be larger than required, however, the layout would be inefficient.

Scope of Work

The scope of work required under a Base Repair includes the entire 62,756 square foot building, including 5,645 square feet of space currently occupied by the District Administration Offices.

- Code Upgrades
 - » Fire suppression system
 - » New addressable Fire Alarm system
 - » New illuminated exit signage and code signage
 - » New life safety lighting, interior and exterior
- Accessibility upgrades
 - » Entry ramps
 - » Accessible pathways
 - » New door hardware throughout and reconfiguration as required for clearances
 - » New drinking fountains
- Toilet room upgrades, including new partitions and all new accessible, high efficiency fixtures
- » Casework corrections for height, knee clearance, etc.
- Asbestos remediation at the following:
 - » Sealant at all exterior windows and doors
 - » Sealant at gypsum board
 - » Original floor tiles and mastic
 - » Mastic at replaced floor tiles
- Replacement of the existing mechanical system. Ventilation and distribution system to local units would mirror recommendations for a major renovation. Central plant assumed to be code minimum energy performance air source heat pump heat recovery chiller under Base Repair in lieu of ground source heat pumps.
- In addition to all new plumbing fixtures and drinking fountain as covered under accessibility upgrades, replace all domestic water piping and provide new shut off valves
- New hot water heaters
- New security system, including door contacts
- New exterior doors, hardware, and weather stripping - including card readers to tie into new security system
- New master time clock system
- New speaker and public address system
- New electrical systems, including new panels, distribution, lighting & controls with automatic dimming, and devices
- New automatic transfer switches and panel boards for life safety systems
- Install additional power outlets to serve the needs of modern school technology and alleviate unsafe conditions with power strips
- Install additional data outlets
- Repair and cleaning of exterior walls, including re-pointing, new fascia, and flashing repairs
- Abatement of hazardous materials

- New interior finishes, including new flooring, wall tile, paint, and ACT ceilings
- New roofing throughout, including new insulation to bring assembly up to current code requirements
- It is anticipated that additional insulation would not trigger a load in excess of 5% of the existing load
- New smart vapor retarder, insulation, and interior finish on existing to remain exterior walls to meet current Energy Code
- New triple glazed thermally broken aluminum windows in existing rough openings
- Resurfacing of bus loops, parking areas and sidewalks, including accessibility upgrades as described in Accessibility Report.

Educational Program Analysis

A Base Repair will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- Gym space is undersized.
- Existing classrooms are slightly undersized. When breakout spaces are added they become extremely undersized.
- The Educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. In order to have an open area for the Learning Commons it would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

While this option provides the required square footage, it is inefficiently laid out and does not adequately meet some of the Educational Goals.

Phasing

Students would be required to move to modulars or another space while renovation takes place.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$45.6 million for the Base Repair option. This is approximately \$684/ sf. Total project costs are estimated to be approximately \$59-62 million.

Advantages

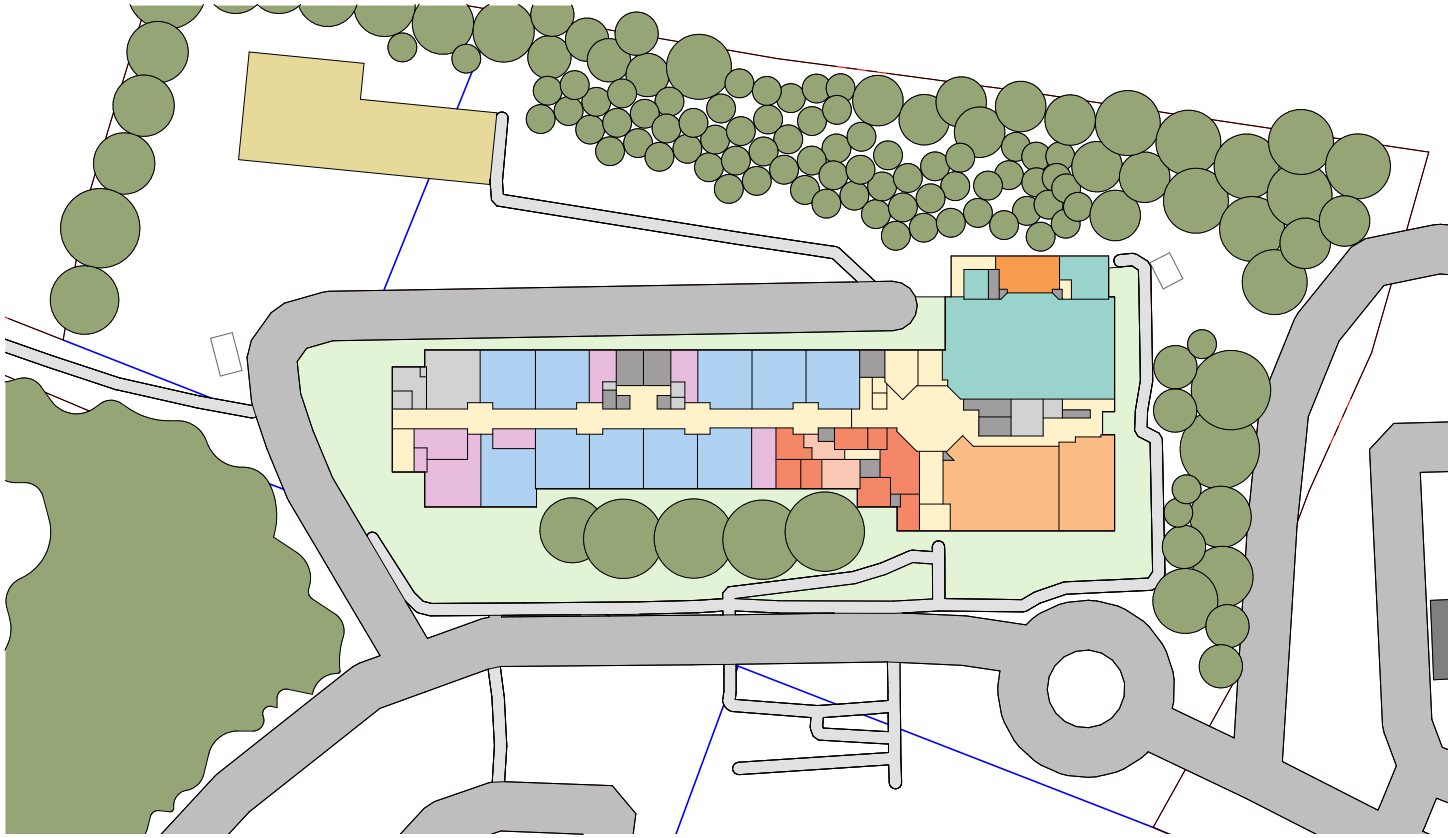
Reuse of existing structure.

Disadvantages

- The geometry of the existing building, with bearing walls along most corridor walls, doesn't lend itself to the Learning Commons approach.
- Spatial needs are not met according to Educational Plan.
- Some Special Education spaces are not co-located with their neighborhood.



Option A.1 - Base Repair at Neary – 305 enrollment



Option A.2 - Base Repair at Woodward – 450 enrollment

OPTION A.2 - BASE REPAIR @ WOODWARD

Scope of Work

The Woodward school was constructed in 2002 as new construction, so it is in relatively good repair. The scope of work required under a renovation would likely be classified as a Level 2 alteration, but would not increase the enrollment beyond the current enrollment of approximately 250 students.

Scope of work would include all of the work under the Base Repair, plus the following:

- Demolition of the select areas including existing non structural partitions and doors and installation of new partitions and doors to accommodate the new program layout. See plans for locations and extent.
- New smart vapor retarder, insulation, and interior finish on existing to remain exterior walls to meet current Energy Code
- New triple glazed thermally broken aluminum windows in existing rough openings
- Upgrade of the mechanical system to meet the current code (stretch code). Provide alternate pricing for Ground Source Heat Exchange (GSHE) system.
- Complete reworking of all electrical, controls, data, and security systems

Educational Program Analysis

A Base Repair will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- The Educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. In order to have an open area for the Learning Commons it would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

While this option provides the required square

footage, it is inefficiently laid out and does not adequately meet some of the Educational Goals.

Phasing

Students could remain in place during construction of the classroom wing.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$49.2 million for the Base Repair option. This is approximately \$678/ sf. Total project costs are estimated to be approximately \$64-66 million.

Advantages

- Reuse of existing structure.

Disadvantages

- The projected occupancy of students plus staff exceeds the allowed occupancy of the building per the Building Permit. Therefore, a Base Repair with no additional space is not viable.
- The geometry of the existing building doesn't lend itself to the Learning Commons approach.
- Spatial needs are not met according to Educational Plan.
- Some Special Education spaces are not co-located with their neighborhood.

Addition/Renovation Options

OPTION B.1 - ADDITION / RENOVATION AT NEARY - 305 ENROLLMENT

Educational Program Analysis

This option will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- The gym space is undersized.
- Existing classrooms are slightly undersized. When breakout spaces are added they become extremely undersized.
- The educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. The Learning Commons would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

The Addition/Renovation would provide enough

space in the existing school to accommodate the entire educational program, however inefficiently.

Phasing

Construction could be performed in one or two phases. The Gym / Auditorium wing could be constructed while the building is occupied, however, the renovation of the northern half of the building would need to be segregated from the central portion during construction. Students would need to be relocated into modulares or another space while the classroom wing is under construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$82.4 million for the Base Repair option. This is approximately \$928/ sf. Total project costs are estimated to be approximately \$103-107 million.

Advantages

Reuse of a portion of the existing building.

Disadvantages

Doesn't meet Educational Plan.



OPTION B.2- ADDITION / RENOVATION AT NEARY - 450 ENROLLMENT

Educational Program Analysis

This option will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to

- The educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. The Learning Commons would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

The Addition/Renovation would provide enough space in the existing school to accommodate the entire educational program, however inefficiently.

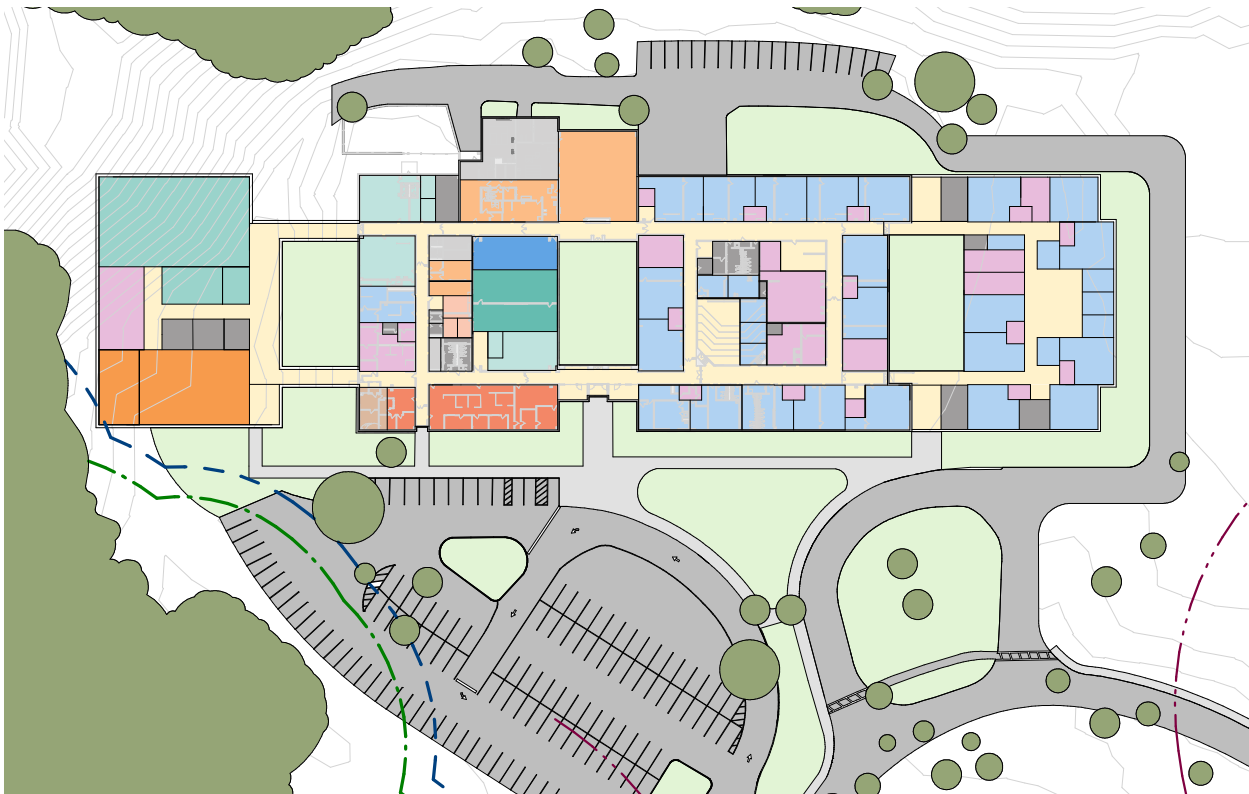
Phasing

Construction could be performed in one or two

phases. The Gym / Auditorium wing could be constructed while the building is occupied, however, the renovation of the northern half of the building would need to be segregated from the central portion during construction. Students would need to be relocated into modulares or another space while the classroom wing is under construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$99.4 million for the addition/renovation option. This is approximately \$917 / sf. Total project costs are estimated to be approximately \$124-129 million.



OPTION B.3 - ADDITION / RENOVATION AT WOODWARD - 450 ENROLLMENT

Educational Program Analysis

This option will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- Gym space is undersized.
- Existing classrooms are slightly undersized. When breakout spaces are added they become extremely undersized.
- The educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. The Learning Commons would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

The Base Repair would not provide enough space in the existing school to accommodate the entire educational program, however inefficiently.

Phasing

Construction could be performed in one or two phases. The Gym / Auditorium wing could be constructed while the building is occupied, however, the renovation of the northern half of the building would need to be segregated from the central portion

during construction. Students would need to be relocated into modulars or another space while the classroom wing is under construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$95.2 million for the addition/renovation option. This is approximately \$918/ sf. Total project costs are estimated to be approximately \$119-124 million.

Advantages

- Reuse of the existing building.
- Gym is right-sized and co-located with other Physical Education spaces.
- One grade in the New Addition will have Learning Commons according to the Educational Plan.

Disadvantages

- The existing site is already constrained. The additional parking required would displace a playground which would be need to be reconstructed elsewhere on the site.
- The existing classroom wing would not meet educational goals to include Learning Commons.
- Upgrades to the envelope of the building to meet Stretch Code would be extensive and expensive.



Level 1



Level 2

OPTION B.4 - ADDITION / RENOVATION AT NEARY - 610 ENROLLMENT

Educational Program Analysis

This option will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- Gym space is undersized.
- Existing classrooms are slightly undersized. When breakout spaces are added they become extremely undersized.
- The educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. The Learning Commons would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

The Base Repair would not provide enough space in the existing school to accommodate the entire educational program, however inefficiently.

Phasing

Construction could be performed in one or two phases. The Gym / Auditorium wing could be constructed while the building is occupied, however, the renovation of the northern half of the building would need to be segregated from the central portion during construction. Students would need to be relocated into modulars or another space while the classroom wing is under construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$114.2 million for the addition/renovation option. This is approximately \$882 / sf. Total project costs are estimated to be approximately \$143-149 million.

Advantages

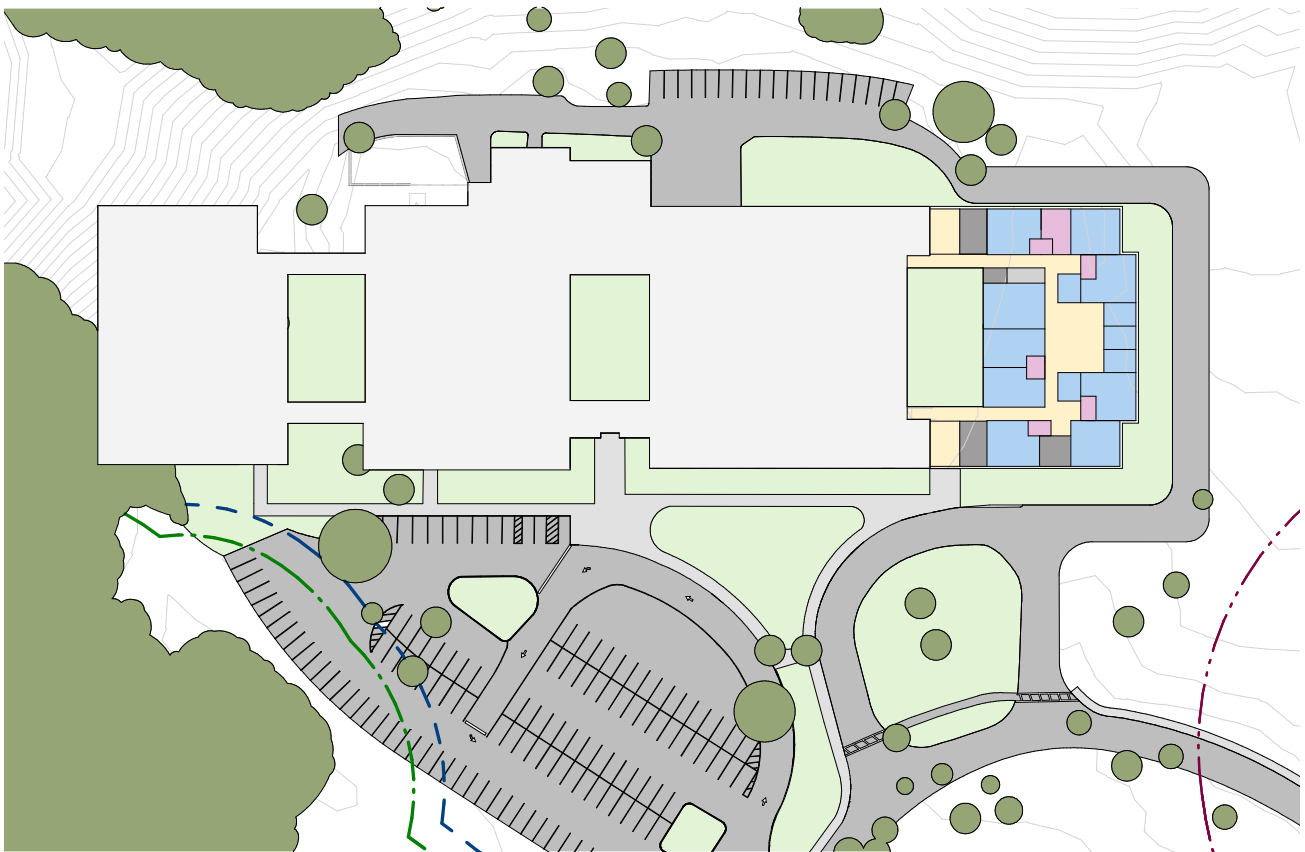
- Reuse of the existing building.
- Gym is right-sized and co-located with other Physical Education spaces.
- Two grades in the New Addition will have Learning Commons according to the Educational Plan.

Disadvantages

- The existing site is already constrained. The additional parking required would displace a playground which would be need to be reconstructed elsewhere on the site.
- The existing classroom wing would not meet educational goals to include Learning Commons.
- Upgrades to the envelope of the building to meet Stretch Code would be extensive and expensive.



Level 1



Level 2

OPTION B.5 - ADDITION / RENOVATION AT WOODWARD - 610 ENROLLMENT

Educational Program Analysis

This option will not be able to address the educational challenges imposed by the existing building. These challenges include but may not be limited to:

- Gym space is undersized.
- Existing classrooms are slightly undersized. When breakout spaces are added they become extremely undersized.
- The educational Plan suggests grouping classrooms into neighborhoods by grade and including a Learning Commons space to be shared by neighborhood. The Learning Commons would require structural reinforcing to remove a bearing wall.

Space Summary Analysis

The Base Repair would not provide enough space in the existing school to accommodate the entire educational program, however inefficiently.

Phasing

Construction could be performed in one or two phases. The Gym / Auditorium wing could be constructed while the building is occupied, however, the renovation of the northern half of the building would need to be segregated from the central portion during construction. Students would need to be relocated into modulars or another space while the classroom wing is under construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$113.4 million for the addition/renovation option. This is approximately \$870/ sf. Total project costs are estimated to be approximately \$142-147 million.

Advantages

- Reuse of part of the existing building

Disadvantages

- Doesn't meet Educational Plan



Level 1



Level 2

New Construction Options

OPTION C.1 - NEW CONSTRUCTION AT NEARY – 305 ENROLLMENT

Educational Program Analysis

New Construction would meet goals laid out in the Educational Plan.

Space Summary Analysis

The MSBA space summary estimated size for this Option is 78,000 square feet.

Phasing

The new building could be constructed while the existing building remains in place. Parking and site access for construction vehicles would need to be managed during construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$84.1 million for the addition/renovation option. This is approximately \$1017/ sf. Total project costs are estimated to be approximately \$105-109 million.

Advantages

- New construction would fully meet the goals as laid out in the Educational Plan.
- Allows new school to be constructed with minimal impact to existing school operations.
- Improves site circulation and allows for separated bus and parent drop off zones.

Disadvantages

- Higher cost per square foot



OPTION C.2 - NEW CONSTRUCTION AT NEARY - 450 ENROLLMENT

Educational Program Analysis

New Construction would meet goals laid out in the Educational Plan.

Space Summary Analysis

The MSBA space summary estimated size for this Option is 100,200 square feet.

Phasing

The new building could be constructed while the existing building remains in place. Parking and site access for construction vehicles would need to be managed during construction.

Preliminary Costs

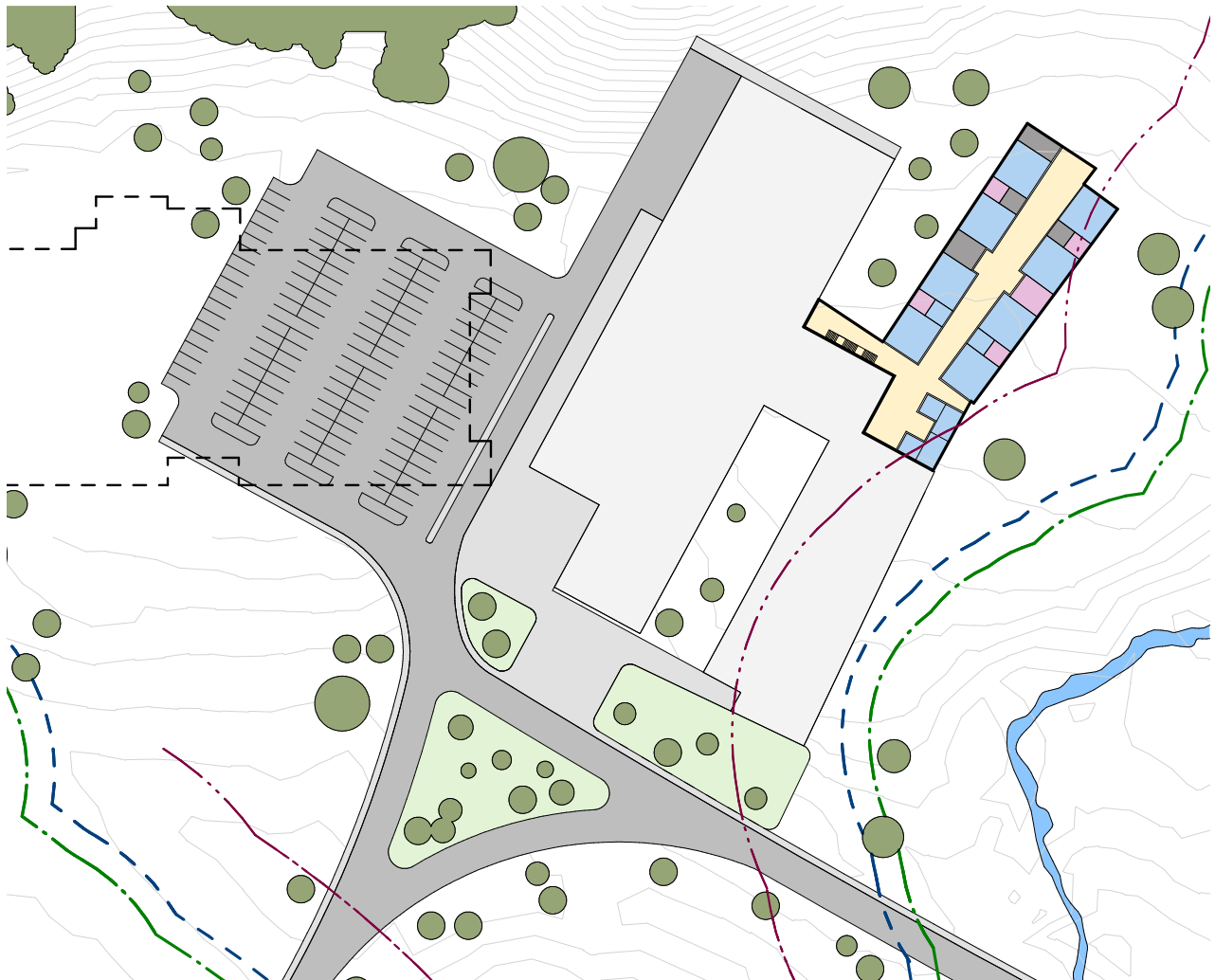
Preliminary pricing from PM&C estimates a construction cost of \$99.1 million for the addition/renovation option. This is approximately \$933/ sf. Total project costs are estimated to be approximately \$124-129 million.

Advantages

- New construction would fully meet the goals as laid out in the Educational Plan.
- Allows new school to be constructed with minimal impact to existing school operations.
- Improves site circulation and allows for separated bus and parent drop off zones.

Disadvantages

- Higher cost per square foot



OPTION C.3 - NEW CONSTRUCTION AT WOODWARD - 450 ENROLLMENT

Educational Program Analysis

New Construction would meet goals laid out in the Educational Plan.

Space Summary Analysis

The MSBA space summary estimated size for this Option is 100,200 square feet.

Phasing

The new building could be constructed while the existing building remains in place. Parking and site access for construction vehicles would need to be managed during construction

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$98.4 million for the addition/renovation option. This is approximately \$926 / sf. Total project costs are estimated to be approximately \$123-128 million.

Advantages

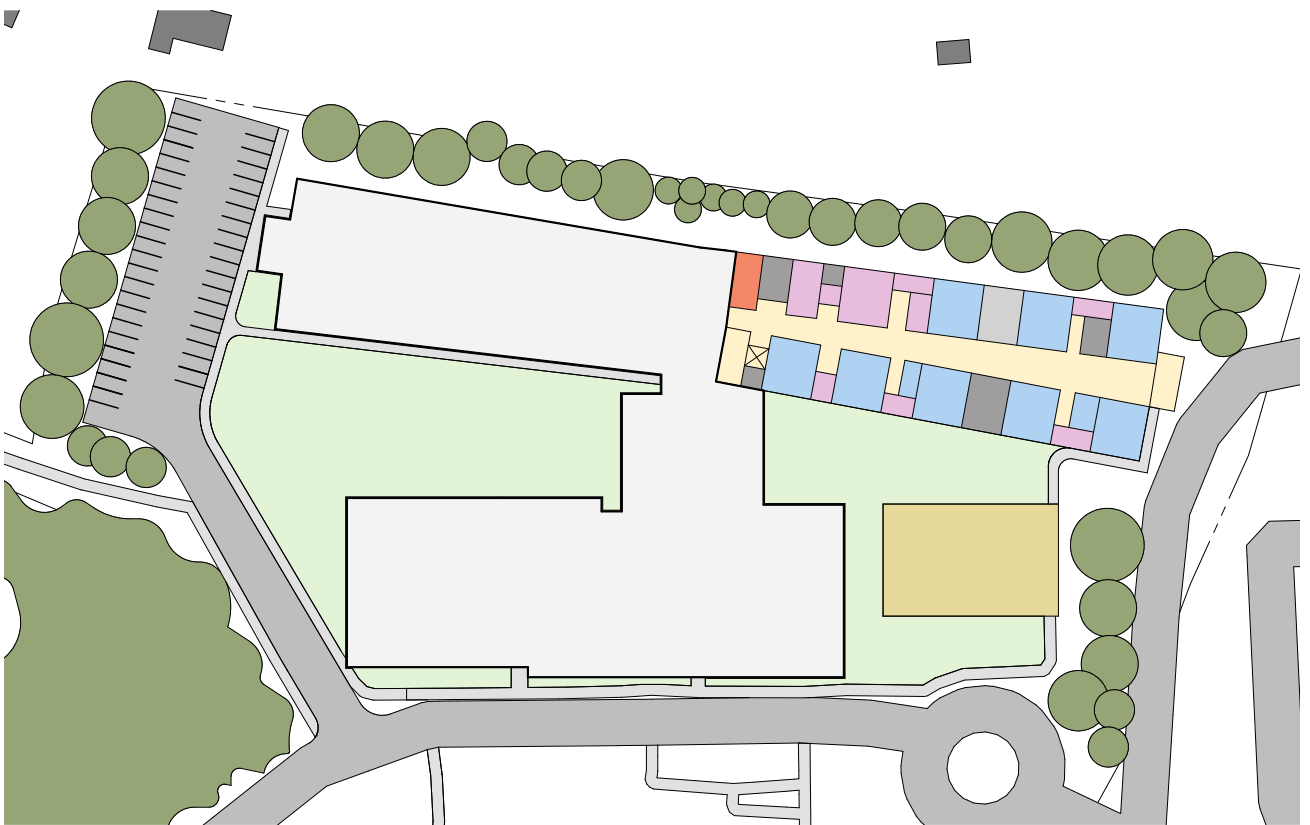
- New construction would fully meet the goals as laid out in the Educational Plan.
- Allows new school to be constructed with minimal impact to existing school operations.
- Improves site circulation and allows for separated bus and parent drop off zones.

Disadvantages

- Higher cost per square foot



Level 1



Level 2

OPTION C.4 - NEW CONSTRUCTION AT NEARY - 610 ENROLLMENT

Educational Program Analysis

New Construction would meet goals laid out in the Educational Plan.

Space Summary Analysis

The MSBA space summary estimated size for this Option is 121,070 square feet.

Phasing

The new building could be constructed while the existing building remains in place. Parking and site access for construction vehicles would need to be managed during construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$112.7 million for the addition/renovation option. This is approximately \$878 / sf. Total project costs are estimated to be approximately \$141-146 million.

Advantages

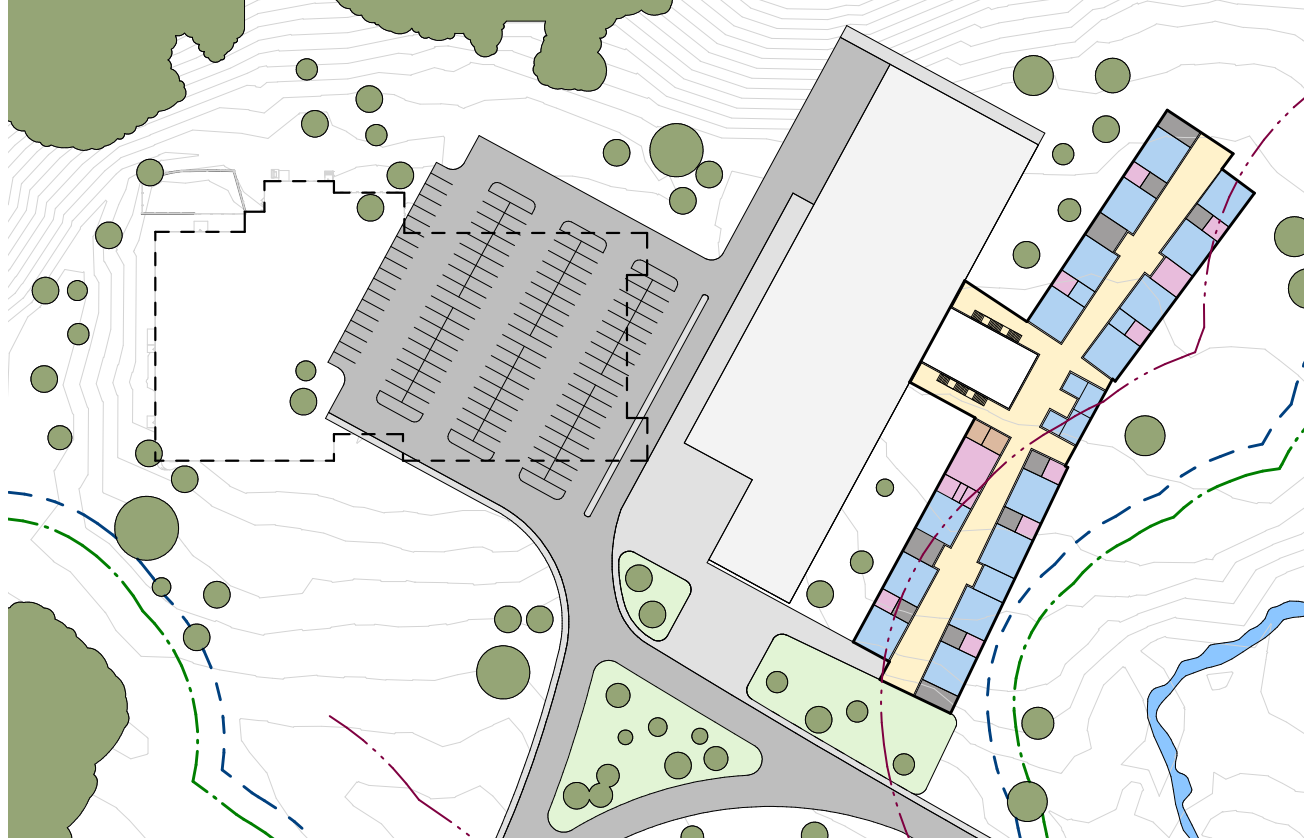
- New construction would fully meet the goals as laid out in the Educational Plan.
- Allows new school to be constructed with minimal impact to existing school operations.
- Improves site circulation and allows for separated bus and parent drop off zones.

Disadvantages

- Higher cost per square foot



Level 1



Level 2

OPTION C.5 - NEW CONSTRUCTION AT WOODWARD

Educational Program Analysis

New Construction would meet goals laid out in the Educational Plan.

Space Summary Analysis

The MSBA space summary estimated size for this Option is 121,070 square feet

Phasing

The new building could be constructed while the existing building remains in place. Parking and site access for construction vehicles would need to be managed during construction.

Preliminary Costs

Preliminary pricing from PM&C estimates a construction cost of \$111.7 million for the addition/ renovation option. This is approximately \$871/ sf. Total project costs are estimated to be approximately \$140-145 million.

Advantages

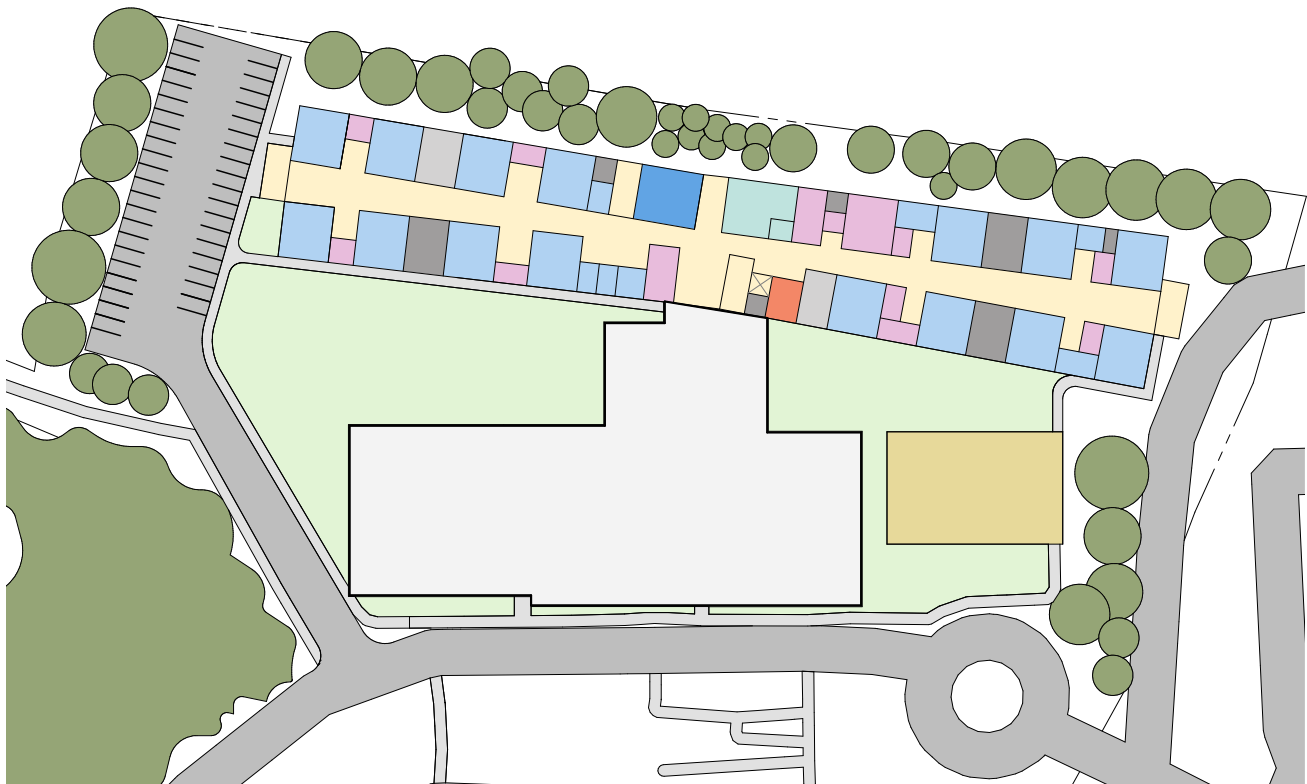
- New construction would fully meet the goals as laid out in the Educational Plan.
- Allows new school to be constructed with minimal impact to existing school operations.
- Improves site circulation and allows for separated bus and parent drop off zones.

Disadvantages

- Higher cost per square foot



Level 1



Level 2

Summary of Preliminary Pricing

PM+C performed preliminary pricing on the options. The full pricing information dated May 15, 2024 can be found in Appendix L. Preliminary Cost Estimate Summaries.

At this stage pricing is for comparative purposes and should not be considered an absolute value of a potential project.

Each project has unique factors that drive costs. For this project, preliminary factors that impact the project costs are:

- Hazardous Materials abatement
- Upgrades to existing related to new Stretch Energy Code including replacement of windows with triple glazing and additional insulation at exterior walls.
- Construction Manager at Risk
- Soil conditions and high ground water
- Phasing and swing space

OPTION		\$/SF	CONSTRUCTION ESTIMATE	PROJECT RANGE
A.1	Base Repair - Neary 305 Enrollment	\$685	\$45,556,472	\$59-62 million
A.2	Base Repair - Woodward	\$678	\$49,182,892	\$64-66 million
B.1	Addition/ Renovation - Neary 305 Enrollment	\$949	\$82,443,486	\$103-107 million
B.2	Addition/ Renovation - Neary 450 Enrollment	\$928	\$ 100,380,453	\$125-130 million
B.3	Addition/ Renovation - Woodward 450 Enrollment	\$918	\$95,231,541	\$119-124 million
B.4	Addition/ Renovation - Neary 610 Enrollment	\$883	\$114,244,902	\$143-149 million
B.5	Addition/ Renovation - Woodward 610 Enrollment	\$870	\$ 113,377,776	\$142-147 million
C.1	New Construction - Neary 305 Enrollment	\$1017	\$84,077,951	\$105-109 million
C.2	New Construction - Neary 450 Enrollment	\$933	\$99,102,705	\$124-129 million
C.3	New Construction - Woodward 450 Enrollment	\$926	\$98,390,665	\$123-128 million
C.4	New Construction - Neary 610 Enrollment	\$878	\$112,646,984	\$141-146 million
C.5	New Construction - Woodward 610 Enrollment	\$871	\$111,738,533	\$140-145 million

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Please find the certified Local Actions and Approvals
Certification on the following pages.

May 21, 2024

Ms. Mary Pichetti
Director of Capital Planning
40 Broad Street
Boston, MA 02109

Dear Ms. Pichetti:

At its meeting on Monday, May 20, 2024 the Neary School Building Committee voted the following:

The Neary School Building Committee voted unanimously to authorize Skanska to submit the Preliminary Design Program to the Massachusetts School Building Authority on behalf of the Neary School Building Committee.

Motion by: xx

Second by: xx

Roll call:

For: Xx, xx, xx *voted in affirmative* (#)

Opposed: *None*

Abstained: *None*

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FINAL NOTARIZED COPY**

Respectfully submitted:

Jason Malinowski, Chair
Neary School Building Committee

MAY 2024

TOWN OF SOUTHBOROUGH



TOWN HOUSE · 17 COMMON STREET · SOUTHBOROUGH, MASSACHUSETTS 01772-1662
(508) 485-0710

Appendix 3D

Module 3 Local Actions and Approval Certification

May 20, 2024

Ms. Mary Pichetti
Director of Capital Planning
40 Broad Street
Boston, Massachusetts 02109

Dear Ms. Pichetti:

The Town of Southborough Margaret Neary Elementary School Building Committee ("NBC") has completed its review of the Feasibility Study Preliminary Design Program (PDP) for the Margaret Neary Elementary School project (the "Project"), and on May 20, 2024, the NBC voted to approve and authorize the Owner's Project Manager to submit the Feasibility Study PDP related materials to the MSBA for its consideration.

A copy of the NBC Vote Certification, which includes the specific language of the vote and the number of votes in favor, opposed, and abstained, is attached.

Please find below a complete list of the Margaret Neary Elementary School Building Subcommittee meetings held to discuss and/or present to the public material related to the Project. Most meetings were held Remotely with Zoom Technology and all notices posted by the Margaret Neary Elementary School NBC on their website:

<https://www.southboroughma.gov/AgendaCenter>

Since the MSBA's Board of Directors invited the district to conduct a Feasibility Study on April 26, 2023, the NBC has held **17** meetings regarding the proposed project, in compliance with the state Open Meeting Law. The NBC held **2** in person public forums and **1** virtual open forum. These meetings include:

May 8, 2023: Remote Zoom Technology at 7:00pm

Agenda

- a) Update on Entrance of MSBA Feasibility Phase
- b) Updates to Committee Charge
- c) Membership updates – recruitment and thank you
- d) OPM Selection Subcommittee
 - Form Subcommittee and vote on charge
 - Voted to approve the OPM selection subcommittee charge as presented. It was presented that there members should consist of the three voting members and two ex-officio members.
 - Appoint voting and non-voting members to the sub-committee from NBC membership
 - Voted to appoint the Chair of the Neary Building Committee, the School Committee representative that services on the Neary Building Committee, Denise Eddy, Andrew Pfaff, Mark Davis as voting members and the Assistant Superintendent of Operations and the School Director of Finance as ex-officio non-voting members.

May 16, 2023: Remote Zoom Technology at 7:00pm

Agenda

- a) Organization of Subcommittee and introduction of SC Representative
 - Voted to Elect Jason Malinowski as Chair of the OPM Subcommittee and Denise Eddy as Vice Chair of the OPM Subcommittee.
- b) Review OPM Selection Process
- c) Review and vote on draft request for OPM services "RFS OPM"
 - Voted for the OPM Subcommittee approve the request for services with the edits discussed this evening and give authorization to Rebecca Pelligrino and Keith Lavoie as the MCPPO certified and are welcomed to consult with the Chair to make any scriveners updates as they do a final pass.

June 6, 2023: Remote Zoom Technology at 9:00am

Agenda

- a) Discussion and approval of the request for proposals/request for services (RFP/RFS) with MSBA comments incorporated.
 - Voted for the Neary Building Committee accept the request for services document that has been drafted by this team and reviewed by MSBA and authorized the school administration to start procuring services related to this starting June 7, 2023.

July 13, 2023: Remote Zoom Technology at 7:00pm

Agenda

- a) Update on OPM Contract Award.
- b) Update on OPM Contract Negotiations.
 - Voted for The Neary Building Committee – OPM Subcommittee instructs the district to not have Vertex Companies LLC., be their selection to the Massachusetts School Building Association.

July 18, 2023: Remote Zoom Technology at 7:00pm

MAY 2024

Agenda

- a) Vote on Recommendation from NBC – OPM Subcommittee on OPM Finalist
 - Voted to put forward Skanska USA Building, who was the choice of the OPM Subcommittee for the Neary Building Committee as its Owner Project Manager.
 - Voted that the whole Committee directs the negotiations and the awarding of the contract to Vertex Companies LLC if they do not come to terms with Skanska USA Building, so the Committee will not need to come back for another vote.

August 21, 2023: Remote Zoom Technology at 7:00pm

Agenda:

- a) Dissolve OPM Subcommittee
 - Voted to dissolve the OPM Subcommittee.
- b) Election of Vice Chair
 - Voted to appoint Denise Eddy as Vice Chair of the Neary School Building Committee.
- c) OPM's Update on Next Steps and Project Timeline
- d) Formation of Subcommittee and appointment of members
 - Designer Selection Subcommittee
 - Finance Subcommittee
 - Communications Subcommittee
- e) Authorization for Designer Selection Subcommittee to work with OPM and provide direction to issue Designer Selection RFS
 - Voted to authorize the Designer Selection Subcommittee after review by legal counsel to work with the OPM and provide direction to issue the Designer Selection RFS.

October 2, 2023: Remote Zoom Technology at 7:30pm

Agenda:

- a) Designer selection RFS Process update from OPM
- b) Formation of Communications subcommittee and appoint of members
 - Voted to accept the Communications Subcommittee charge however, amend the membership to be as follows, Neary Building Committee, School Representative, and one other member of the full Neary Building Committee and have one School Administration Ex-Officio member and the principals of the Neary School and/or Woodward School.
 - Voted to change the composition of the Finance Subcommittee to include Andrew Pfaff, Kathryn Cook, and Mark Davis.
- c) Discussion on OPM next steps.

October 30, 2023: Remote Zoom Technology at 7:30pm

Agenda:

- a) Subcommittee reports
 - Designer Selection Subcommittee – update on Designer RFS responses and next steps
 - Finance Subcommittee – Review and potential approval of policies.

- Voted to support the recommendation of the Finance Subcommittee that during the feasibility phase they approve all invoices received and also have the authority to act on any change orders up to \$100,000.
- Communications Subcommittee – Review of communications plan and next steps for community update.

January 9, 2024: Remote Zoom Technology at 6:30pm

Agenda:

- a) Review and vote on Arrowstreet Designer Contract
 - Voted to approve Arrowstreet Inc. fee for basic services scope in the amount of \$596,000 as detailed in the proposal dated January 5, 2024, adjusted for acknowledgment of involvement of the Board of Health and the landfill testing on-site or adjacent to the property and as authorized by the MSBA designer selection panel vote on December 19, 2023. Additionally, this vote is to authorize the town of Southborough to execute the MSBA designer service-based contract with Arrowstreet Inc.
- b) Arrowstreet Team Introductions
- c) Feasibility Study Overview and Next Steps – Presented by Skanska and Arrowstreet
- d) Updates and Progress reports from Subcommittees
 - Designer Selection Subcommittee – no update
 - Finance Subcommittee – planning to approve Skanska's invoices for November and December at the next meeting and discuss the development of a financial model and its implementation.
 - Communications Subcommittee – received quote for a website creator and discussing ways to engage community.

January 29, 2024: Remote Zoom Technology at 7:00pm

Agenda:

- a) Campaign Finance Law Presentation by the Office of Campaign and Political Finance
- b) Dissolve Designer Selection Subcommittee
- c) District leadership team to work with OPM/Designer
 - Voted, for purposes of communication with the OPM, Skanska/Designer in between meetings, that this Committee accepts the Chair, School Committee rep, and Select Board representative as the District leadership team."
- d) Authorization for Communications Subcommittee to engage website designer.
 - Voted to hire the company for a max of/not to exceed \$10,000.
- e) Update on educational visioning process and key dates

February 5, 2024: Remote Zoom Technology at 7:00pm

Agenda:

- a) Subcommittee Reports
 - Finance Subcommittee – only approving invoices from Skanska and discussing the budgeting process.
 - Communication Subcommittee – draft communication has been created to advertise the open forums and run the communication by the Campaign Finance Division.
- b) Project Update from Arrowstreet and Skanska – site survey scheduled during February break. Community forums scheduled for February 29 and March 11.

MAY 2024

The preliminary design program is set to be submitted to the MSBA in May. Skanska reviewed the budget process including Arrowstreet's contract amount and website cost. Follow-up from Campaign Finance Presentation – confirmed Campaign Finance is able to provide a link.

- c) Discussion of Open Forums

March 4, 2024: Remote Zoom Technology at 7:30pm

Agenda:

- a) Subcommittee Reports
 - Finance Subcommittee – no updates.
 - Communications Subcommittee – discussed launching website by the end of the month.
- b) Project Update from Arrowstreet and Skanska – reviewed completed items in the past 30 days and the schedule for the next month. Next community forum scheduled for April 11.

NEW BUSINESS:

- a) Discussion on the 12 design configurations that MSBA wants to ensure that the design team is reviewing and providing for in the Feasibility Study. Committee to review the 12 potential scenarios to make sure nothing is missing and then let MSBA know that Arrowstreet and Skanska are working through all the possible scenarios with the Committee's acknowledgment.
- b) Arrowstreet supplemental services.
 - Voted to approve the Neary School Summary of Supplement Services for a total of \$101,698.
- c) Discuss feedback from Open Forums
- d) Community Survey Release
 - Voted to approve the Neary Building Committee Grade Level Configuration Survey as presented.

March 25, 2024: Remote Zoom Technology at 7:00pm

Agenda:

- a) Subcommittee Reports:
 - Finance Subcommittee – approving invoices and reimbursement reports have begun getting submitted to the State.
 - Communications Subcommittee – meeting again on 3/26 to discuss the website launch, frequently asked questions, and the survey.
- b) Status and update report from the Skanska and Arrowstreet.

NEW BUSINESS:

- a) Arrowstreet presented on the Building Performance. Each committee member and ex officio members shared their top two or three measures they believe are essential for the project's design.

April 1, 2024: Remote Zoom Technology at 7:30pm

Agenda:

UNFINISHED BUSINESS:

- a) Follow-up discussion from 3/25/2024 Building Performance presentation
 - Questions for Arrowstreet team – none
 - Approve charge for Sustainability Subcommittee and appoint sub-committee members.
 - Vote: Sustainability Subcommittee Charge
 - Voted to adopt the Sustainability Subcommittee charge and appoint Chris Evers, Mark Davis, and Roger Challen as voting members and Keith Lavoie as non-voting members.

OPM/ DESIGNER UPDATES:

- a) Review Executive Summary of Existing Conditions / Base Repair
- b) Summary of Educational Planning Outcomes
- c) Review of MSBA Space Summaries
 - Discussion on potential spaces that are eligible for MSBA reimbursement.

SUB-COMMITTEE REPORT(S):

- a) Finance Subcommittee
- b) Communications Subcommittee will meet to approved the list of Frequently Asked Questions to be posted on the website and it was noted that the survey received over 300 responses.

May 9, 2024: Remote Zoom Technology at 7:30pm**SUB-COMMITTEE REPORTS:**

- a) Finance Subcommittee
- b) Communications Subcommittee
- c) Sustainability Subcommittee.

OPM/DESIGNER UPDATES

- a) Budget and Schedule Update
- b) Site Plan Options Update
- c) Review of Initial Cost Estimates. Skanska and Arrowstreet presented on the preliminary cost estimate and project budget ranges for the 12 options.

May 16, 2024: Remote Zoom Technology at 7:30pm**Agenda:**

- a) Voted to remove alternative sites from consideration at this phase. The alternative sites are the land adjacent to Finn School, land adjacent to Transfer Station, and Deerfoot Road.
- b) Review and potential vote on PDP submission to MSBA. Voted to postpone vote until Monday, May 20, 2024 Meeting.

May 20, 2024: Remote Zoom Technology at 8:00pm**Agenda:**

The Neary School Building Committee voted unanimously to authorize Skanska to submit the Preliminary Design Program to the Massachusetts School Building Authority on behalf of the Neary School Building Committee.

In addition to the NBC meetings listed above, the district held 3 public meetings, which were posted in compliance with the state Open Meeting Law, at which the Project was discussed. These meetings include:

MAY 2024

**Public Forum #1 February 29, 2024 (Live and recording posted on website)
In person at 6:00pm at Trottier School Auditorium**

Topics of discussion:

- MSBA Process Overview
- Project Schedule
- Feasibility Study
- Existing Conditions Survey
- Next Steps
- Q&A

**Public Forum #2 April 11, 2024 (Live and recording posted on website)
In person at 6:00pm at Trottier School Auditorium**

Topics of discussion:

- MSBA Process Overview
- Project Schedule
- Feasibility Study
- Educational Visioning
- Next Steps
- Q&A

Public Forum #3 May 7, 2024 at 7:30pm (Virtual and recording posted on website)

Topics of discussion:

- MSBA Process Overview
- Project Schedule
- Feasibility Study
- Educational Visioning
- Next Steps
- Q&A

End of Meeting Minutes Summary

The presentation materials for each meeting, meeting minutes, and summary materials related to the Project are available locally for public review at the following website link <https://www.southboroughma.gov/AgendaCenter>

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 Jason Malinowski, Chair of Neary School Building Committee jmalinowski@southboroughma.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.

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By: Mark Purple

Title: Chief Executive Officer

Date:

By: Gregory Martineau

Title: Superintendent of Schools

Date:

By: Jason Malinowski

Title: Chair of the Neary School Building Committee

Date:

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VOLUME II
APPENDICES