NEWTON
PUBLIC SCHOOLS
Equity & Excellence

LINCOLN - ELIOT ELEMENTARY SCHOOL
NEWTON EARLY CHILDHOOD PROGRAM

150 JACKSON ROAD
687 WATERTOWN STREET

EDUCATIONAL PLANNING AND FACILITY ASSESSMENT

Newton Public Schools
Newton, Massachusetts

February 13, 2019

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1.1 Executive Summary

The current Lincoln-Eliot Elementary School at 191 Pearl Street was built in 1939, with additions in 1965 and 1974. It is approximately 51,074 GSF in size, on three levels, and sits on one acre of land. It has a current enrollment of 374 students, with an expected growth over the next five years up to 381 students. In order to meet the school district's capacity challenges, the replacement Lincoln - Eliot School will be sized to accommodate growth beyond its current 18 classrooms and capacity of 396 students, for an expected enrollment of 450 to 490 elementary students in 22-24 classrooms.

The Newton Early Childhood Program (NECP) currently occupies 150 Jackson Road (former Aquinas College). The program was relocated to 150 Jackson Road in 2016 due to space constraints at its former locations at the Lincoln-Eliot School and the Education Center. Currently the program has approximately 200 full time students and utilizes approximately 13 classrooms. The program also serves 100 or more students on a part-time basis for services including speech therapy, occupational therapy or physical therapy. To keep pace with consistent long-term trends of increased need for special education services, the program is anticipated to serve 300-350 students in total and to need 14-16 core classrooms, expanded individual and small group spaces, as well as flexible spaces to be able to respond to community needs.

The Lincoln-Eliot Elementary School / NECP Project is a major priority for the City under its school improvement program, requiring major renovation or replacement as identified in the City's Capital Improvement Plan. The Lincoln-Eliot Elementary School (Lincoln-Eliot) received a rating of 3 for building condition (scale: 1 best condition – 4 worst condition) on the MSBA's 2016 Facility Needs Survey. Similarly, the "Newton Schools Long-Range Facilities Master Plan," updated November 2011, ranked the Lincoln-Eliot School 3.1 for facility condition and 4 for educational space needs (scale of 1 best condition - 4 worst condition; a rating of 3 is defined as fair condition requiring repair or replacement and a rating of 4 is defined as poor condition requiring repair or replacement).

To meet the increasing enrollment, space demands, and physical challenges at the current Lincoln-Eliot School and the NECP program at 150 Jackson Road, the City has undertaken this Feasibility Study to determine the most educationally and fiscally appropriate solution.

This report reflects the educational programming visions for the Lincoln-Eliot Elementary School and Newton Early Childhood Education Program. The visioning workshops with school leadership highlighted essential learning themes, adjacencies, and spaces that each of the programs need for success. Also included in this report are facility evaluations, assessments, and recommendations for the existing buildings located at 150 Jackson Road and 687 Watertown Street.

1.2 Project Directory

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City of Newton
Lincoln Eliot - NECP Project
Feasibility Study/Schematic Design Work Plan

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	2019																					
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			
FEASIBILITY STUDY																						
OPM Selection																						
Designer Selection																						
Feasibility Study - Phase 1 Building Eval & Ed Program																						
Work Group Meeting - Professional Team Intro				√																		
Existing Conditions Inspect & Report																						
Work Group Mtg - Process & Deliverables				√																		
Work Group Mtg - Feasibility Study Work Plan & Schedule					√																	
School Bldg. Committee - Team Intro & Study Workplan					★																	
Ed. Program- Building Program																						
School Committee - LE-NECP Ed. Program Presentation						★																
Ed./Bldg Program Draft Report																						
Work Group Mtg - Program, Bldg Eval, Space Summary						√																
Bldg Evaluation, Program, Concepts Draft Report																						
School Committee - Educational Program Report						★																
Work Group Mtg - Building Needs Matrix						√																
School Bldg. Committee - Building Program Report						★																
City Council - Feasibility Study Phase 1 Report						★																
School Committee - Feasibility Study Phase 1 Report						★																
Work Group Mtg - Prelim Site Matrix							√															
School Bldg. Committee - Prelimin Site Matrix Report							★															
Feasibility Study Phase 1 Report							●	Report - Ex. Conditions, Ed Program, Space Summaries & Blocking Diagrams/Concepts														
Local Funding Action - Feasibility Study Phase 2																						
Feasibility Study - Phase 2 Preferred Options Report																						
Work Group Mtg - Process & Deliverables								√														
Building Development Concepts																						
Traffic Study																						
Work Group Mtg - Building Concepts									√													
Site Study and Evaluations																						
School Bldg. Committee **- Prelim. Bldg Concepts & Traffic**									★													
Design Review Committee - Prelimin. Site Report									★													
Preferred Development & Analysis																						
Work Group Mtg - Progress Report										√												
School Bldg. Committee - Alternative Scheme Review											★											
Design Review Committee - Site Report																						
School Bldg. Committee **- Preferred Alternative Vote**												★										
Schematic Design																						

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Preliminary Approvals Plan & Schedule *October 26, 2018*

TASK:	MEETING DATE:
Draft Education Plans Issued for Professional Team Use	October 1, 2018
School Building Committee/Design Review Committee Presentation • Professional Team Introduction • Review Process & Schedule • Preliminary Site Selection Criteria	October 11, 2018
School Committee Presentation • School Department Preliminary Ed. Programs NECP & Lincoln Eliot School	October 22, 2018
School Committee Presentation • **Ed. Program Vote*** • Current Allocation & Projected Needs Space Summary • Preliminary Space Concepts • Preliminary Site Selection Criteria	November 14, 2018
School Building Committee/Design Review Committee Presentation • Program & Preliminary Space Summaries Vote • Site Selection Analysis	November 15, 2018
City Council Presentation • Feasibility Study Progress Report • Review Ed. Programs & Needs • Preliminary Site Selection Criteria	November 26, 2018
School Committee • Site Selection Analysis	November 28, 2018

SECTION 2A – LINCOLN-ELIOT ELEMENTARY SCHOOL EDUCATIONAL PROGRAM

2A.1 Introduction

Newton Public Schools has established a baseline educational program for all elementary schools in the District. The baseline program is the starting point for the Lincoln- Eliot educational program. This section is a summary of the Educational Program that has been adapted to the Lincoln-Eliot needs and requirements. The Lincoln-Eliot Elementary School Educational Program reflects modifications due to the student population, location, and enrollment, however, the program reflects current overall teaching practices for Newton Public Schools. This study also conducted a one-day educational programming session with members of the Lincoln-Eliot staff and administration to further develop the specific themes and educational modalities that are unique to the Lincoln-Eliot school.

Further information and detail can be found in Section 5 Appendices as follows:

- **A5.1 Newton Public School Cabot Educational Program**
- A5.2 NPS NECP Program
- A5.3 NPS Overview of Special Education
- **A5.4 Lincoln-Eliot Educational Visioning Session**
- **A5.5 Lincoln-Eliot Educational Visioning Session Meeting Minutes**
- A5.6 NECP Educational Visioning Session
- A5.7 NECP Educational Visioning Session Meeting Minutes

Newton Public Schools - Mission

To educate, prepare, and inspire all students to achieve their full potential as lifelong learners, thinkers, and productive contributors to our global society.

Newton Public Schools - Core Values

The following Core Values are guiding principles for the Newton Public Schools. These values represent how we want to "live" within our school communities. Core Values are for children and adults to embrace, internalize, model and live by. They are an expression of what is deep and enduring in our school system.

Excellence:

We will:

- *Set high expectations and standards for all students and staff*
- *Educate the whole child by striving for excellence in academic, artistic, physical, interpersonal and vocational pursuits*
- *Inspire a lifelong love of learning in students and staff*

Innovation:

We will:

- *Be a recognized leader in education and curriculum development*
- *Foster inventiveness, open-mindedness, critical thinking, creativity and collaborative problem-solving in our students and staff*
- *Continuously assess and improve our teaching and learning*

Respect:

We will:

- Create an environment where everyone feels known, safe, and valued
- *Recognize the uniqueness and dignity of individuals of differing race, religion, class, ethnicity, sexual orientation, learning styles and abilities*
- *Build upon the strengths of our diverse community*

Responsibility:

We will:

- *Foster an environment in which all students and adults take responsibility for their individual and collective behavior*
- *Create a culture of collaboration, collegiality and honest communication*
- *Cultivate citizens who contribute to and care about their community and the world*

Newton Public Schools – Goals and Objectives

Each year, the Newton Public Schools identifies strategic district goals. These goals guide the work of administrators, faculty, and staff as they provide high quality academic opportunities for students and create welcoming and supportive school communities. In addition, the district has articulated its mission and core values, which serve as a foundation for the advancement of the Newton Public Schools.

Goal 1: Academic Excellence

The Newton Public Schools are actively cultivating a culture of equity and excellence by creating and sustaining curriculum and instructional practices that lead to high-quality learning for each and every student. We will build the capacity of our educators to meet challenges and opportunities of teaching and learning in a dynamic and evolving environment.

Objectives

- *Provide curriculum and instruction that inspires and engages students*
- *Foster a cycle of continuous instructional improvement through the use of data, collaboration and instructional support*

Goal 2: Educational Equity

Narrow achievement gaps with respect to race, ethnicity and socioeconomic status and increase the achievement of students with special needs.

Objective

- *Create and build upon promising initiatives to meet the needs of all learners and ensure that all students succeed.*

Goal 3: Social and emotional learning, including health and wellness

Ensure all students become knowledgeable, responsible, caring and contributing members of society through evidence-based social and emotional learning from preschool through high school.

Objective

- *Provide broad support for social and emotional learning for all students.*

2A.2 Grade and School Configuration Policies

The Newton Public Schools (NPS) provides educational programs for students in preschool through grade 12. The NPS system-wide K — 12 enrollment is 12,685 students in 2018 —2019. The fifteen elementary schools in Newton educate students from Kindergarten through grade five; the four middle schools serve students in grades 6 through 8; and the two high schools serve grades nine through twelve.

The existing Lincoln-Eliot Elementary School located at 191 Pearl Street services students in Kindergarten through 5th grade. As of October 1, 2018 enrollment (*reported in the November 2018 Enrollment Analysis Report*), was 365 students, which included 16 METCO students.

The following is a summary and adaptation of the Newton Cabot Elementary School Preliminary Design Program that was submitted to the Massachusetts School Building Authority (MSBA) as part of the Preliminary Design Program, dated February 27, 2015. (See Appendix 5.1). With some variation due to programmatic needs at Lincoln-Eliot, this educational program was used to guide the Lincoln-Eliot educational program.

2A.3 Class Size Policies and Enrollment Population

The Newton School Committee and the Newton Teachers Association recognize that class size is an important factor in quality education. Attempts are made to keep class size close to the following:

Grade Level	Class Size Range
Kindergarten — Grade 2	1 — 20
Grade 3 — Grade 5	1 — 23

All classrooms across the grades provide inclusion for students with special needs. It is critical to provide small quiet working areas within these classrooms to meet the educational needs of the inclusion and integrated students. Therefore the class size will ideally be slightly less than typical classes to best accommodate students with special needs in regular classrooms. To maintain student-to-teacher ratio, the District plans for four classrooms per grade to accommodate the need for a larger than normal grade size. Otherwise, a larger than typical class would create a substantial burden on teachers and students. The breakdown per grade based upon the Lincoln-Eliot enrollment of 465 students is:

The chart above demonstrates grades 1 through 5 require three to four classrooms per grade based upon

GOAL CLASS SIZE	K	1	2	3	4	5	Total
Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22-24

77 students per grade. Reducing the number of classrooms to three classrooms per grade would result in a class size of 25 students per classroom. This would exceed the number of students the District is willing to accept per classroom and creates a burden on teachers and students on a daily basis. As discussed during the visioning session, four classrooms per grade allows for an equitable ratio of students and teachers in each classroom. This is consistent with District standards and allows for flexibility and growth within the Lincoln-Eliot School.

2A.4 School Scheduling Method

The Newton Public Schools has articulated specific instructional time allotments for elementary core subjects, which include reading, writing, mathematics, science and technology/engineering, social studies and social curriculum. Specialist programs enhance the core program and provide contractual preparation time for classroom teachers. Specials include art, music/ chorus, physical education, health and wellness, instructional technology, and library/media.

At Lincoln-Eliot, classes begin at 8:30 AM. Grades 1-5 are dismissed at 3:00 PM Monday, Wednesday, Thursday and Friday afternoons, and at 12:30 on Tuesday afternoons. Kindergarten students remain until 3:00 PM two days each week and are dismissed at 12:30 PM three days each week. All students are dismissed at 12:30 PM on Tuesday afternoons. According to the NPS website, all Newton elementary schools will offer full day kindergarten (FDK) in the 2019-2020 school year, and will follow the same schedule as other elementary students in grades one to five.

2A.5 Teaching Methodology and Structure

Teachers implement the Common Core standards, and the rigorous curriculum and assessment expectations set for by the Newton Public Schools. Methods and assessments used by teachers can be found in more detail in Appendix 5.1 – NPS Cabot Educational Program. Below is an outline of the general elementary curriculum:

- Literacy
- Math
- Science and Technology/ Engineering
- Social Sciences
- Social/ Emotional
- ELL
- Foreign Language

2A.6 Teacher Planning

Lincoln-Eliot is organized in teams from kindergarten through grade five. These teams are comprised of regular education, special education, and ELL teachers. They conduct the data cycle as a collaborative team to improve learning for all students in the grade level. The 60-minute Professional Learning Communities (PLC) blocks support the teachers' ability to collaborate within the school day.

2A.7 Flexible Grouping

Regular education teachers engage in flexible grouping methods to meet the instructional needs of their students and as determined by the Professional Learning Communities (PLC). Grouping and regrouping methods take place within classrooms and among grade level classrooms. Regular education, special education and ELL teachers collaborate seamlessly to provide general curriculum, strategic intervention, and intensive intervention in the inclusive environment. Pullout instruction is provided for students who require it, based on their personalized instructional needs within their general curriculum and/or strategic intervention programming. Grade level classrooms are organized within common hallways and adjacent locations. Close proximity is critical in order to achieve the requisite communication and collaboration for flexible grouping methods in a grade level PLC team.

2A.8 Lunch Programs

The Lincoln-Eliot School serves student lunches daily with a point of service operation. Lunch is not served on Tuesdays when all students are dismissed at 12:30pm.

During the visioning session, NPS expressed that the Lincoln-Eliot population would benefit from separate quieter breakout spaces within the cafeteria with flexible seating options. This would accommodate students who need a quieter or smaller space.

2A.9 Technology Instruction Policies and Program Requirements

The Cabot Educational Program offers a variety of instructional technology including Elmo and LCD projectors, Mac desktop computers for student use in the classrooms, printers, iPads for student use, and SMART boards with speakers. In addition, there are also mobile carts of 20-30 Mac laptop computers. A thorough evaluation of the technical needs of Lincoln-Eliot Elementary School should be evaluated as the district upgrades their technology standards.

2A.10 Art/ Music/ Performing Arts

Newton Public Schools encourage a vibrant visual and performing arts program. Within the week, depending on grade level, students at Lincoln-Eliot take visual art class, general music class, chorus, and instrumental music lessons (band and strings). The school also provides band and orchestra ensembles for the upper grades.

The visual art classroom requires a separate closet for material/ equipment storage as well as teacher preparation. Also required is ample space within the classroom for students' artwork in process. The layout of the classroom should separate the worktables from preparation sink areas. Multiple sinks at appropriate student height is required. The visual art classroom needs a technology/ media station (computers with photo/ video editing software and internet access) set-up to serve four to six students located away from paints and clay preparation. There should be ample space for whole class demonstrations and exhibiting artwork on the walls.

2A.11 Physical Education and Outdoor Activities

All students, kindergarten through fifth grade, participate in instructional, quality physical education program twice a week, for 30 minutes each class. The curriculum is presented in accordance with the Massachusetts Frameworks and the National Standards for Quality Physical Education, however still falls short of the recommended time for physical education in elementary schools which is 225 minutes per week. In support of the importance for physical activity as a major necessity for student learning, the district requires that all elementary students participate in recess in its Wellness Policy. Creating outdoor space and indoor space for physical education and activity within the design will be important to the community and to the instructional programming.

2A.12 Special Education

An overview of the Special Education program for the entire district can be found in Appendix 5.3. Inclusion is a core belief and practice in Newton Public Schools. This educational model challenges schools to meet the needs of all students by educating learners with disabilities alongside their non-disabled peers. The environment necessary to nurture and foster inclusion is built upon a shared belief system between general and special education, and a willingness to merge the talents and resources of teachers.

The mission of all of the schools in Newton is to maximize the potential and independence of each student. An inclusive education helps prepare students with disabilities for an integrated adult life and builds an understanding and acceptance within the broader community.

The staff that provides special education services includes special education teachers, inclusion facilitators, aides, behavior therapists and related service providers such as school psychologists, social workers, speech/ language pathologists, occupational therapists and physical therapists. In many cases these positions are shared among more than one school, but together they represent a team-based approach to supporting students and families in need at the elementary school level in Newton.

Special education learning spaces are situated among regular education classrooms. The location of the classrooms allows staff to communicate and collaborate fluidly throughout the day on student needs and programming. The number of students in these classrooms is monitored to ensure that a lower class size is maintained in order to allow the flexible learning requirements of the students.

2A.13 Transportation Policies and Parking

Newton Public Schools provides bus transportation free of charge for all elementary school (K-5) students. Special education transportation services are separate from regular bus transportation. Students arrive and depart to school by bus, van, car, and foot.

The City of Newton has created designated drop-off and pick-up areas at many schools in the city. These school drop off and pick up zones are commonly referred to as “Blue-Zones”.

School drop-off and pick-up zones were designed to allow for improved traffic flow and safer drop off and pick up of students. School drop off zones are in effect Monday through Friday on days that school is in session. The ordinance specifically states:

- No vehicle may park in a school drop off zone from 30 minutes prior to the scheduled start of school until the scheduled start of school.
- No vehicle may park in a school drop off zone from one hour prior to the scheduled end of school until 30 minutes after the scheduled end of school.
- Vehicles may stop in the school drop off zone during the above restricted times to engage in the dropping off or picking up of passengers, which shall not be permitted for a period of longer than one (1) minute.

Parking is allowed in a school drop off zone outside of restricted times. For these drop off and pick up zones to work correctly, the following must occur:

- No vehicles may be parked or left unattended in a school drop off zone during the restricted times. This includes parents waiting for their child to come out of or go into the school.
- No illegally parked vehicles can be waiting near the school, for example in restricted parking areas, within corners, blocking driveways, bus stops, etc.
- Parents should not pick up students when double or tripled parked.
- Students must enter and exit on the sidewalk side of the vehicle.
- Other parking restrictions around the school area must be enforced.

At the existing Lincoln-Eliot at 191 Pearl Street there are approximately 30 on-site staff parking spaces.

2A.14 Programmatic Adjacencies

Functional and spatial relationships and adjacencies are essential to the successful design of a school facility. These relationships between classrooms and programs in the school define the programmatic, functional, spatial, and environmental requirements of the educational facility and become the basis for the design. Schools depend on adjacencies for communication, collaboration, flexible grouping, and teaming. Providing learning tutorial spaces and additional instructional break out rooms are critical in a school with a focus on inclusionary classrooms, requiring specialized instruction and an emphasis on inclusive practices.

During the visioning session, it was discussed that having a "neighborhood" approach per grade was desired for organization and communication. This close proximity would allow for developmentally appropriate break-out spaces and small group discussion areas for learning.

Other core academic spaces such as art, music and library would ideally be within close proximity to the general classrooms to ease transition from space to space as well as limit transition time between classes to maximize the time spent in the classrooms. Most of the special education instruction occurs within the regular education classrooms, however small instructional spaces for specialists and small group

instruction are necessary for optimal learning. These spaces should be flexible and easily accessible from the general classrooms.

Core spaces such as the gymnasium and cafeteria are used by the community, therefore, ease of access for the public is preferred. The cafeteria will ideally have direct access to the play spaces for time before or after lunch.

The following Classroom utilization spreadsheet reflects the Lincoln-Eliot use of 191 Pearl Street during the 2017-2018 school year.

LINCOLN- ELIOT ELEMENTARY SCHOOL (191 PEARL STREET)	**NUMBER OF CLASSROOMS**		
CORE INSTRUCTIONAL SPACE	FULL SIZE CR	SMALL SIZE CR	TOTAL
CORE ACADEMIC SPACES			**20**
General Classrooms	18		
Reading Program/Literacy	1		
Learning Center, ELL, Small Group Instruction		1	
STUDENT SERVICES			**1**
District-wide Special Education			
Small Group Instruction, OT/PT, S&L, Inclusion		1	
ART, MUSIC			**2**
Art Classroom	1		
Music Classroom	1		
TOTAL INSTRUCTIONAL SPACES			
CURRENT UTILIZATION			
2017-18 Enrollment	374		
2017-18 Core Classes	18		
# of Core Classrooms Available	18		
Percentage Classroom Utilization	100%		

2A.15 Security and Visual Access Requirement

All Newton Public Schools require safe access to the school site with safe secondary access for emergency needs. Lincoln- Eliot Elementary School also requires:

- Access Control utilizing a security card access device by authorized staff
- Visual Security of the main entrance utilizing a video monitoring system that will be monitored at the school secretary's desk
- Safe staff parking
- Safe visitor parking
- Safe vehicular student drop off and pick up areas without crossing traffic
- Safe pathways for pedestrians and bicyclists coming from varied directions to the school
- Safe bus access that does not interfere with drop off and pick up traffic
- Safe recess grounds and play fields that can be properly supervised by staff and protected from vehicle traffic
- Visual access of the driveway and parking lots
- Safe access for the kitchen, facility and shipping/ receiving separate from the school traffic to the main entrance
- Safe and appropriate access to the perimeter of the building and play fields

During the visioning session, other essential security concepts were outlined:

- Few and controlled entry/ exit points
- "Gatekeeper" at the front door
- Security at the gym/ cafeteria
- Lock-down provided by suites of learning spaces, small learning communities, and at the gym and cafeteria
- Escape path inherent into the design at each small learning community

2A.16 Overview of Space Program Requirements

It is the District's intention that the Vision and Core Values drive the building project to support best practices in 21st century teaching and learning skills as well as allow the Newton community to meet the evolving needs of education in the future. The Lincoln-Eliot Elementary School has the highest Special Education and English Language Learners student population in the district.

In addition to the adjacencies and policies discussed throughout this Section, the following space program requirements were discussed for the Lincoln-Eliot Elementary School needs:

1. Desired target of 22–25 students per classroom
    - Currently, approximately six to eight students with IEPs per classroom
    - Higher need students are pulled out of the classroom for approximately 20% of the day

2. Breakout spaces/ rooms and Extended Learning Areas
    - Special education breakout groups are six students maximum and require close proximity and adjacency to the classroom
    - Breakout spaces should a flexible open and closed model concept
    - Sound control is important in these spaces
    - Distributed regularly throughout the building
3. Dedicated office spaces
    - Work space for staff
    - Open desks/ flexible use space for itinerant Special Education staff
    - Flexibility generally desirable
    - Staff would prefer designated spaces to store personal items as opposed to keep in the classroom
4. 'Safe/ mindful room', one per floor, ideally located away from stairs
5. Common entry space for the Lincoln-Eliot community and caregivers
6. Meeting spaces for parents, located near the entry
7. Art Room with a kiln
8. Music Room
9. Gym for PE
10. Library
11. Indoor recess space for inclement weather

In conclusion, the following Lincoln-Eliot themes and methods were positively received during in the visioning session, and should be further studied and included in future design concepts:

1. Design for flexibility and inclusiveness
2. Develop small learning communities and learning spaces arranged in clusters
3. Maximize teacher planning space to foster collaboration and interdisciplinary teaching
4. Utilize circulation spaces to offer opportunities for breakout and group learning
5. Provide pick-up/ drop-off and entry to provide improved access and security for families and caregivers

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2A.17 Space Summary Matrix

Following is the space summary that was approved by the School Committee on November 28, 2018.

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot
Preliminary Design Program

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students				EXISTING NEWTON PUBLIC SCHOOLS								
					Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
	ROOM NFA[1]	# OF RMS	area totals	Comments	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES		22 + 2 (SpEd)	**20,700**				**21,472**			**23,450**			**22,690**
(List classrooms of different sizes separately)													
Pre-Kindergarten w/ toilet													
Kindergarten w/ toilet	1,200	4	4,800		1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
General Classrooms - Grade 1-5	**850**	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.	925	18	16,650	925	20	18,500	888	20	17,760
							0			0	General CR Room NFA is average		
ELL Program	300	**2**	600	Due to larger ELL population	298	1	298	150	1	150	250	1	250
SPECIAL EDUCATION			**10,775**				**5,965**			**5,500**			**6,900**
(List rooms of different sizes separately)													
Self-Contained SPED	850	**2**	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program	925	1	925	900	1	900	925	2	1,850
Self-Contained SPED - toilet			0										
Resource Room			0										
Substantially Separate Classroom			0										
Learning Centers (K-2; 3-5)	450	2	900	Currently 1 Learning Center in existing L-E	470	2	940	450	2	900	475	2	950
Breakout Rooms (small group/ individual instruction) 1/grade average. Extended Learning Areas	125	**8**	1,000	Currently 1 Small Group Instruction in existing L-E. Difference due to high needs, assume 1 shared breakout space per 2 calssrooms	121	7	845	125	6	750	125	6	750
OT/PT	475	1	475		511	1	511	450	1	450	475	1	475
Sensory Room/ additional OT/PT	450	1	450									1	
Safe Room/ Mindful Room 1/ academic floor	100	3	300		106	2	212	100	2	200	100	3	300
Speech + Language	150	2	300		298	1	298	150	2	300	250	1	250
Reading Program/ Literacy Room	850	**3**	2,550	Currently 1 Reading Program in existing L-E. Difference due to higher needs and Title 1 school	925	1	925	900	1	900	925	1	925
Inclusion Facilitators (office for 6 adults; 150SF per person)	450	**2**	900	Difference due to higher needs and Title 1 school	238	1	238	150	1	150	300	1	300
Literacy Specialist (Office + teaching area for 6 students)	250	**3**	750	Difference due to higher needs and Title 1 school	176	1	176	125	1	125	250	1	250
Math Coach	250	**3**	750	Difference due to higher needs and Title 1 school	161	1	161	125	1	125	150	1	150
Team Specialist + IEP Conf Room (12 adults)	400	1	400		428	1	428	400	1	400	400	1	400
Psychologist (Office, testing, therapy, storage)	150	1	150		155	1	155	150	1	150	150	1	150
Social Worker (Office, testing, conferences)	150	1	150		151	1	151	150	1	150	150	1	150
													0
ART & MUSIC			**2,650**				**2,608**			**2,725**			**2,575**
Art Classroom - 25 seats	1,000	1	1,000	1 Art Classroom currently in existing L-E	1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150		178	1	178	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1 Music Classroom currently in existing L-E	1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble (Groups 4-10 students)	150	2	300		162	1	162	150	2	300	150	1	150
Music Practice / Ensemble (Groups 4-10 students)					100	1	100	75	1	75	75	1	75
HEALTH & PHYSICAL EDUCATION			**6,300**				**6,105**			**6,300**			**6,300**
Gymnasium	6,000	1	6,000		5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
Gym Storeroom	175	1	175		176	1	176	200	1	200	175	1	175
Health Instructor's Office w/ Shower & Toilet	125	1	125		120	1	120	100	1	100	125	1	125

DATE: 11/14/18

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DRAFT REVIEWED BY D. MORRISSEY 11/13/18

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Lincoln-Eliot
Preliminary Design Program

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students				EXISTING NEWTON PUBLIC SCHOOLS								
					Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
	ROOM NFA[1]	# OF RMS	area totals	Comments	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
MEDIA CENTER			**2,800**				**2,770**			**2,875**			**2,830**
Media Center / Reading Room	2,800	1	2,800		2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
DINING & FOOD SERVICE			**6,960**				**6,321**			**6,663**			**6,960**
Cafeteria / Dining	3,400	1	3,400		3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
Stage	1,000	1	1,000		950	1	950	1,000	1	1,000	1,000	1	1,000
Chair / Table / Equipment Storage	360	1	360		408	1	408	363	1	363	360	1	360
Kitchen	1,700	1	1,700		1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
Staff Lunch Room (1/3 of staff = 60 staff/3)	250	2	500		234	2	468	250	2	500	250	2	500
MEDICAL			**510**				**569**			**510**			**510**
Medical Suite Toilet	60	1	60		73	1	73	60	1	60	60	1	60
Nurses' Office / Waiting Room	250	1	250		306	1	306	250	1	250	250	1	250
Examination Room / Resting	100	2	200		95	2	190	100	2	200	100	2	200
ADMINISTRATION & GUIDANCE			**3,225**				**2,305**			**2,515**			**2,595**
General Office / Waiting Room / Toilet	700	1	700		750	1	750	680	1	680	650	1	650
Teachers' Mail and Time Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisory/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	**1**	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	**1**	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	**1**	1,500	100 students at 15 SF per student									

SECTION 2B – NEWTON EARLY CHILDHOOD PROGRAM EDUCATIONAL PROGRAM

2B.1 Introduction

This Section 2B is a summary of the August 2018 Newton Early Childhood Program (NECP) Draft Educational Program. A full-day educational programming session was held with NECP administarion, staff, and NPS leadership to identify themes and educational modalities specific to the NECP program. NPS evaluated the current integrated preschool educational program and defined the educational activities to be offered for the new preschool space. An ideal program for the NECP Program is a thoughtful, effective educational program that will enable the program to serve a population that includes some of Newton's highest need children ages three to five.

NECP is a District-wide program located at 150 Jackson Road for the past three years. The current program uses thirteen classrooms and is expected that additional classrooms will be needed in the near future to accommodate increased enrollment.

The preschool education program narrative provided to the design team by NPS describes each component of the preschool space summary of needs for the program including core academic spaces, special education, health and gross motor, dining and food service, medical, administration and guidance, custodial and maintenance. The program also address site needs for outdoor play, parent and van drop off as well as parent and staff parking.

Further information and detail can be found in Section 5 Appendices as follows:

- A5.1 Newton Public School Cabot Educational Program
- **A5.2 NPS NECP Program**
- **A5.3 NPS Overview of Special Education**
- A5.4 Lincoln-Eliot Educational Visioning Session
- A5.5 Lincoln-Eliot Educational Visioning Session Meeting Minutes
- **A5.6 NECP Educational Visioning Session**
- **A5.7 NECP Educational Visioning Session Meeting Minutes**

The Newton Public School Mission, Core Values, and Goals/Objectives can be found in Section 2A.1 of this report.

2B.2 Program Overview, Teaching Approach, and Structure

The NECP integrated preschool program is currently located at 150 Jackson Road. NECP offers a wide range of identification, diagnostic, educational, and support services for preschool children. In the 15 to 16 children enrolled per classroom, seven to eight students have moderate to intensive special education needs and approximately eight students are without disabilities. The goal of the program is to address student needs by providing a comprehensive range of services and a consistent, structured and supportive environment throughout the preschool day.

The NECP currently enrolls 213 preschool children in integrated early childhood classrooms or in therapeutic services. Enrollment typically increases during the course of the year. (*November 2018 Enrollment Analysis Report.*) These students then go into the fifteen elementary schools throughout the Newton District.

NECP promotes high quality inclusive preschool education that provides all children with the opportunity to learn with and from each other. All children gain valuable experiences in an environment where children are different in their abilities. NECP's curriculum is based on the Massachusetts Curriculum Frameworks with play as an important vehicle for learning both early academics and social skills. The inclusive program builds a lifelong foundation for respecting human differences. The goal of the program is also to improve school readiness and to support the transition to kindergarten for preschool children with identified special needs.

For typically developing children, all applicants to the preschool classrooms must be at least three years old by August 31st to begin school in September. If space is available children are invited to apply to the program when they turn three during the school year. All classrooms are designed to be mixed age groups. Students are placed in classrooms according to a number of considerations.

Preschool age children may be referred for special education services in a variety of ways. These include referrals from parents, Early Intervention (EI) programs, hospitals, or other professionals. Following evaluation and development of an Individualized Education Program (IEP), students whose special education needs require specialized instruction may be placed in a comprehensive preschool program along with typically developing students who attend the program on a tuition basis.

Related services can also be provided within the classroom. Classroom options include the following:

- Morning integrated classrooms 9:00-12:00 Monday-Friday
- Extended day integrated classrooms 8:30-1:30 four days/week and 8:30-12:00 one day/week
- Self-contained special education classrooms 8:30-2:30 three days/week, 8:30-2:00 one day/week, and 8:30-12:00 one day/week

In addition to classroom-based preschool programming, NECP also provides an array of related services for students who do not necessarily require placement in a classroom, yet are eligible for special education services. These related services may include the following: speech and language therapy, deaf/hard of hearing services, occupational therapy, physical therapy, emotional/behavioral support, orientation and mobility services, and vision services.

2B.3 Class and Group Size Policies

Integrated preschool programs are governed by Education Laws and Regulations contained in 603 CMR 28.06 Special Education, Section 7. These regulations govern the group and class sizes allowable in NECP. The need for services for special education students is great enough in Newton that, given the number of classrooms available, there are seven or eight students with disabilities placed in each classroom. The NECP group size for integrated classrooms is therefore limited to a total of 16 students.

For public school programs that integrate children with and without disabilities, the class size shall not exceed 20 with one teacher and one aide and no more than five students with disabilities. If the number of students with disabilities is six or seven then the class size may not exceed 15 students with one teacher and one aide. NECP uses two Aides with a maximum of 16 students.

NECP Staffing Model

CLASSROOM PROFILE	INSTRUCTION GROUPING	STAFFING	
Sub- Separate classrooms	May not exceed 9 students	One teacher	Aide Specialists
Including 7 or 8 SWDs	May not exceed 16 students	One teacher	Two Aides
Including no more than 5 SWDs	May not exceed 20 students	One teacher	Two Aides

*SWD = Student with disabilities

2B.4 Planning for Enrollment

Conservative planning for future growth of NECP has been incorporated into this Educational Program narrative. Three classrooms are included in the proposed educational program to accommodate future growth (one sub-separate classroom and two integrated classrooms). Enrollment at NECP is based on the number of preschool age children with identified special education needs whose parents seek evaluation and placement. Enrollment in NECP is voluntary, depends upon needs of the population of three year olds in a given year, and typically increases during the year as preschool students are evaluated and referred for services.

Current and historical enrollments have been reviewed to identify trends and other factors that will be pertinent to current planning activities. As of March 1, 2018, NECP is serving a total of 305 students including (Note - March is one of the higher enrollment months as enrollment continues throughout the school year until June at the peak):

- 104 students with special needs
- 90 students who are typically developing
- 111 students receiving related services

The recommendation for a third substantially separate classroom is to accommodate the increase in the population of students with autism spectrum disorder. An additional integrated classroom is also recommended to allow for future enrollment needs of students with special needs.

NECP Enrollment Trend by school year (as of March 1st)

Service Type	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	**2017-2018**
Special Needs	134	119	125	100	123	127	113	107	95	111	**104**
Typically Developing	62	74	89	83	88	89	81	66	75	67	**90**
Related Services	42	42	44	60	40	32	43	41	101	107	**111**
Total	238	235	258	243	251	248	237	214	271	285	**305**

2B.5 Individualized Education Plans

Approximately 65-70% of NECP students have established IEPs in place with the exception of the typically developing students. Special education regulations govern the process of determining eligibility for special education services.

2B.6 Morning Integrated and Extended Day Integrated Classrooms

The NECP curriculum is based on the Massachusetts Curriculum Frameworks, with play as an important vehicle for learning both early academics and social skills. Academic and social skills are woven throughout thematic units developed by the special education teachers. The inclusive program builds a lifelong foundation for respecting human differences.

The schedule and program enrollment of classrooms illustrates the full programming of NECP's thirteen (13) classrooms during school hours.

November 1, 2018 Schedule and Program Enrollment

	Morning Integrated Classroom 9am - 12pm	Extended Day Integrated Classroom with ABA** 8:30am - 1:30pm	STRIDE* Classroom 8:30am - 12pm/ 2pm/ 2:30	Related Services 1-hour sessions	**Total as of Nov. 1, 2018**
Students currently enrolled	161 students (75 special needs + 86 typically developing)			69	**230**
Maximum number of students per classroom	16	16	9	4 - 8	
Number of classrooms	9	2	2		**13**

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate
**ABA = Applied Behavior Analysis

2B.7 Art/ Music

Art and music activities take place in the classrooms and are taught by classroom teachers. Art and music are fully integrated into the developmentally appropriate preschool curriculum. The space summary for the integrated program has classrooms of a sufficient size to accommodate art and music curriculum.

2B.8 Gross Motor and Outdoor Play

In support of the importance of physical activity as a major necessity for preschool student learning and self-regulation, all preschool classrooms include indoor and outdoor gross motor activities and play as part of their daily schedule.

All preschool students enrolled in a classroom program participate in an instructional, quality physical education (PE) program once per week taught by a PE teacher and an adaptive PE teacher.

NECP requires a separate early childhood play area in an exterior location adjacent to the preschool program spaces with equipment designed for children at developmental levels of 5 and under, designed for a population with highly varied physical abilities. The playground will also need to be large enough to accommodate up to approximately 45 children, since often there are multiple classrooms using the playground at the same time.

Given the number of students with physical disabilities, the NECP play area will also need to be inclusive of children with significant mobility challenges (e.g. wheelchair-bound) and sensory challenges (e.g. hard of hearing, visually impaired).

In addition to daily time on the outdoor play area, and weekly physical education classes, many preschool students require additional motor breaks throughout their school day. Suspension points allowing for the usage of swings can be found in two of the current classrooms, and are required in four of the new classrooms. In addition, a number of students from all of the classrooms also require the use of the Occupational Therapy (OT) and Physical Therapy (PT) sensory motor rooms for their therapy sessions as well as for motor breaks. The OT and PT sensory motor rooms will also be used for OT and PT evaluations as well as therapy sessions for community students who receive related services.

The space summary for the integrated program has several gross motor/OT/PT spaces.

2B.9 Special Education

An overview of the Special Education program for the entire district can be found in Appendix 5.3. Inclusion is a core belief and practice in the Newton Public Schools. This educational model challenges schools to meet the needs of all students by educating learners with disabilities alongside their non-disabled peers. The environment necessary to nurture and foster inclusion is built upon a shared belief system between general and special education, and a willingness to merge the talents and resources of teachers. The mission of all of the schools in Newton is to maximize the potential and independence of each student. An inclusive education helps prepare students with disabilities for an integrated adult life and builds an understanding and acceptance within the broader community.

Currently in the NECP Program there are two classrooms identified for 'Structured Teaching through Research and Intensive Developmental Experiences' (STRIDE). STRIDE's mission is to provide comprehensive programming for students with autism and related disorders, beginning at age three, using the principles of Applied Behavior Analysis (ABA) to increase independent functioning and decrease maladaptive behavior.

Research consistently shows that early, intensive instruction using the methods of Applied Behavior Analysis helps children with autism learn and reach their full potential. STRIDE has established a unique learning environment for students with significant impairments in the areas of communication, behavior, social skills and academic functioning. Through this program, students can reach their full potential to become active learners and members of their school and broader community. Instruction is delivered individually, through small group activities, and via incidental teaching across settings, with opportunities for supported inclusion as appropriate.

Opportunities to participate in the general education classroom are structured for each student based on the student's areas of strength and need. All activities and programming are designed to provide maximum opportunities for students to generalize their skills, practice social interactions, communication, and recreation skills across settings. The goal of the program is to increase students' independence and skill levels across all domains (academics, social, communication, daily living, leisure, and gross and fine motor) while providing intensive behavioral supports to facilitate appropriate social skills, emotional regulation, and the use of functional alternatives to challenging behavior. These skills are taught and practiced in a variety of settings to promote generalization. The majority of students have a diagnosis of autism. All students require intensive, highly specialized and individualized instruction and support to access learning.

Also in the NECP are two integrated classrooms with Applied Behavior Analysis (ABA) services for students who present with educational and behavioral needs that benefit from highly structured instruction and interventions inclusive of: systematic individualized instruction (e.g. discrete trial training, natural environment training, comprehensive behavior support plans). Applied Behavior Analysis (ABA) is a scientifically validated method to teach a variety of skills and to address challenging behavior. A Board Certified Behavior Analyst (BCBA) provides services and consultation to students and the student's IEP Team and direct service delivery is provided by a behavior therapist, a special education aide with specialized experience and training who implements ABA methods under the direction of a BCBA.

Physical Therapy services are for students whose physical disabilities interfere with their ability to access their educational program and environment, including students with motor and/or functional limitations caused by neurological or orthopedic impairments. Physical therapy services are provided in consultation, one-on-one, small group and in-class formats by physical therapists.

Occupational Therapy is a related service for students who qualify for special education services. Occupational therapy services promote the development of motor, play, social and adaptive abilities of children who experience a wide range of challenges. The OT

evaluation provides information to assist the team in creating an appropriate educational plan to support the student's school participation. Occupational therapy services are provided through consultation, one-on-one, small group and in-class formats by registered occupational therapists (OTR) and/or certified occupational therapy assistants (COTA).

2B.10 Medical

The NECP nurse's suite serves students with significant medical needs who may require daily medical support.

2B.11 ELL

Preschool English Language Learning (ELL) instruction is not provided as a discrete educational strategy as is required at the elementary level. However, a recent new requirement by Massachusetts Department of Elementary and Secondary Education (MA DESE) has added ELL screening for all four year olds. It is possible that ELL services for preschool age children may be added as a requirement in the near future. Currently, ELL services in NECP consist of translation when needed for communication with families.

2B.12 Lunch

The preschool children who attend extended day may opt to participate in the Newton Public School lunch program. Lunch is delivered to participating children. Children eat snack and lunch in their classrooms and no separate lunch space is required. A cafeteria space is not needed for lunching preschool children. A staff lunch room is required.

2B.13 Administration

NECP administration consists of the Program Director, an Administrative Assistant, and support staff. The administrative personnel require a director's office with meeting space, an administrative work area, and secure student file area accessible to both administrative and teacher work spaces. Three confidential parent/staff meeting conference rooms are needed for team and other meetings with parents and staff.

2B.14 Technology Requirements

NECP uses instructional technology to support its educational goals. Wireless access for devices (mostly iPads and Elmos at this age) is required to support the program.

Standard technology access including laptop plug-in stations at flexible professional work spaces and a range of expected administrative technology is necessary to support professional staff work.

2B.15 Transportation and Parking

In the 2017-18 school year, there is a mix of student transportation by individual parents and group vans. Vans carrying a maximum of 5 students arrive and depart several times throughout the day.

In a typical year, of the 200 enrolled students, transportation needs are as follows:

- 65 students attending preschool programs arrive and depart by van, five days per week

- 30 receiving related services students arrive and depart by van, three or four days per week
- 70 students attending preschool programs arrive and depart by private vehicle, five days per week
- 35 related services students arrive and depart by private vehicles, one to four days per week

To support students receiving related services, or are attending programs, or both in some cases, there are numerous vans that arrive and depart throughout the day from 8:30 to 2:30. The main arrival times are 8:30 - 9:00 a.m. and noon/12:30pm. The main departure times are noon, 1:30 and 2:30 p.m.

NECP has a staff of 80 part-time and full-time employees and a total of 61.5 full time equivalents. The chart below details the mix of full time and part-time personnel and estimates parking needs. Part-time staff are typically expected to share parking spaces, but scheduling does not allow that at NECP because the majority of staff all work during the main program morning hours.

FULL-TIME EQUIVALENCY (FY 19)	FY 19 NUMBER OF STAFF
Full-time	35
Part-time	38
Proposed Full and Part-time	8
Total Personnel	81

2B.16 Extended Year Program (Summer)

Extended School Year (ESY) is a 6 week program that is offered for students with disabilities whose IEPs including ESY services to maintain progress toward educational goals. The ESY program is also an integrated program available to the general public on a fee-for-service basis. The mix of students is not as balanced as during the school year. ESY enrollment is about 25% typical and 75% students with disabilities.

2B.17 Future Needs

Preschool Classrooms (15 Children)
While enrollment is almost impossible to forecast, NECP has grown by 4 classrooms in the past 8 years. Enrollment growth is driven by the number of students with disabilities who required service. In an integrated program, governed by MA regulations for group sizes, typical student enrollment must parallel enrollment of students with disabilities. Adding a minimum of two additional preschool classrooms is needed to accommodate anticipated enrollment growth.

Self-Contained Small Group Classrooms
Students placed in the NECP substantially separate classroom require intensive behavioral and communication support and receive almost all of their instruction though the methodology of discrete trial instruction. These services include a combination of supported inclusion, discrete trial training, small group activities, and incidental teaching strategies. The program is based on the principles of ABA focusing on reinforcement systems and consistent behavior management programs.

Children with autism spectrum disorder are one of the highest disability groups served by NECP. Demand for services and level of service needs are both increasing trends. Enrollment is difficult to predict / project but services have been added for this population for each of the past four years.

Small Group Classrooms (8 Children)
Services are provided to small groups of students with disabilities in the afternoon hours within preschool classrooms. Classroom and team meetings also are held in preschool classrooms which restrict other uses such as extending hours to 2:30pm for preschool programming or extended day programming until 2:30 or beyond.

Adding a minimum of six small group classrooms will allow for more efficient use of space. Small group classrooms should be located adjacent to preschool classrooms for staffing reasons. Typically, the same teacher will be teaching preschool in the morning and working with a small group in the afternoon.

Extended Day
Extended day services are not currently available at NECP. Both typical and special education students request longer days; either beyond 12:00 until 2:30 or past 2:30 in the afternoon. Extended Day services require a different blend of Teacher Aide staffing and licensed special education teachers (Teacher Aides can be used more). However, extended day services are required to be fully integrated and additional staffing would be needed depending upon enrollment of students with disabilities and their level of need.

Extended day services would be fee-for-service based for both students with disabilities and typically developing preschool students. Currently students with disabilities do not have an option to extend their time at the program for child care needs beyond the services required by their IEPs. Parents of typically developing students have limited ability to access the longer days they prefer. A wait list is maintained for students in the 9 - 2:00 classrooms while vacancies exist in the 9:00 - noon classrooms. This would be a new source of revenue for the program.

The following chart categorizes the potential for the program expansion.

	Morning Integrated Classroom and Extended Day Integrated Classroom with ABA**	STRIDE* Classroom	Related Services	Program Expansion Total
Student capacity	192 - 224	18 - 27	100 - 125	310 - 376
Maximum number of students per classroom	16	9	4 - 8	
Number of classrooms	12 - 14	2 - 3		14 - 17

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate
**ABA = Applied Behavior Analysis

2B.18 Overview of Space Program Requirements

In addition to the adjacencies and policies discussed throughout this Section, the following space program requirements were discussed during the full-day visioning session and are specific to the NECP needs:

1. OT/PT like to collaborate; consider shared offices separate from therapy area.
2. Pull-out Space from Classrooms is needed for 1:1 instruction and therapy, but need to balance classroom space needs to treat within the classroom as well.
3. Space for Conference critical for team meetings and meetings with families.
4. Need to create a welcoming and calming environment for Parents/Families. The space should be reflective to the cultures of the population.
5. Transition Process and Walk-in Therapies should be provided a waiting area that is separate from the NECP education programs. Size and furnishing should be appropriate for adults and children, including toilet/changing/nursing accommodations and work space.

6. Meeting spaces should create a calming environment with round or oblong tables to avoid creating a position of authority.

7. Special Education program should be located with close proximity to the main entry/offices.

8. Space for Team Specialist who has a separate role from other therapists. Team Specialist coordinates and guides the transition from Early Intervention Program to NECP Program. Team Specialist needs a dedicated office and adjacent conference room for family & transition meetings (10-15 attendees).

9. 3-4 shared conference rooms needed to meet the student population enrollment/transition surge in the Spring.

10. Therapy/specialist offices and conference space(s) should not be combined with therapy space for children.

NECP – future considerations:

1. Need indoor play area, PT Room, PE Room, & Motor Skills Room

2. NECP conducts summer sessions for 6 weeks, Mon.-Thurs, 8:30am-2:30pm in (10) classrooms with outdoor water feature.

3. Air conditioning is required for all indoor spaces.

4. Food Service – Students currently and will in the future eat within the classroom. The current food preparation/delivery service is inconsistent resulting in low participation. On site food preparation/delivery may produce better/consistent meals increasing participation. Extended Day programs may increase participation.

5. Classrooms needs:

   - Break-out space & sub-zones within a classroom.
   - Flexible to adapt to individual and group learning needs
   - Storage
   - Cubbies, within or outside of the classroom for student personal belongings
   - Natural light without glare
   - Sub-Separate classrooms should include cubicles for individualized instruction
   - Sight lines to supervise students
   - Teacher desk/workstation that does not impact learning space
   - Shared space/link for specialized instruction between classrooms that can be part of the classroom or physically/acoustically isolated
   - Provide (2) shared toilets between (2) adjacent classrooms.
   - Security and control are important

2A.19 NECP Space Summary Matrix

Following is the space summary that was approved by the School Committee on December 10, 2018.

11/28/18: UPDATED

11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**0**		**17**	**12,760**	
(List classrooms of different sizes separately)							
Integrated Pre-Kindergarten w/ toilet		9		720	13	9,360	Room SF for 16 students at 45 SF per student (720 SF). Toilets adjacent to and shared by classroom pairs, accounted in Grossing factor (100SF per classroom pair)
Integrated Pre-Kindergarten w/ toilet		2		850	2	1,700	Medically fragile
STRIDE Pre-Kindergarten w/ toilet		2		850	2	1,700	STRIDE
SPECIAL EDUCATION			**0**			**6,450**	
(List rooms of different sizes separately)							
Applied Behavior Analysis (ABA) Classrooms		2		425	2	850	Used throughout the day. Adjacent to each other, near safe space
Safe Space/ Quiet/ Mindful Room		2		100	2	200	One per classroom floor
Small Group/ 1:1 support/ pull out spaces (per 2 CR)		7		200	9	1,800	For morning use; dedicated classroom pull out spaces adjacent to classroom pairs. For afternoon use; small group support space in afternoon. Also located on ground level for morning use.
PT Room		1		1,000	1	1,000	
OT Room/ Motor Skills Room		1		1,000	1	1,000	
Team Specialists		1		200	1	200	Individual office with separate conference table for 6, adjacent to director
Therapist Office (OT/ PT/ Speech)		1.5 CR		50	16	800	16 therapists in one large space at 50 SF per person
Speech and Language Testing				100	3	300	
OT Testing Room				100	1	100	
Psychologist (office + testing +1 student)		1		150	1	150	
Social Worker		1		50	1	50	

11/28/18: UPDATED

11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
HEALTH & PHYSICAL EDUCATION			**0**			**1,950**	
Storeroom				250	1	250	
PE Space/Indoor/ Multipurpose		1		1,700	1	1,700	Dedicated PE Space
DINING & FOOD SERVICE			**0**			**400**	
Staff lunch room		1		400	1	400	
MEDICAL			**0**			**610**	
Medical Suite Toilet				60	1	60	
Nurses' Office / Waiting Room		1		250	1	250	
Examination Room / Resting				100	2	200	
Lactation Room				100	1	100	For staff use
ADMINISTRATION & GUIDANCE			**0**			**2,400**	
Director's Office		1		200	1	200	
Reception / Waiting Room				150	1	150	Toilet with changing table, Lactation Room for community use
Front Office (for parent walk-in)		1		500	1	500	
Conference rooms		2		250	1	250	
Duplicating Room/ Storage				100	2	200	One per floor, separate from the records, but adjacent
Records Room / Teachers' Mail and Time Room		1		200	1	200	Needs to be separate from the main office. Table for layout space
IEP Conference Room (up to 15 people)		1		450	2	900	

11/28/18: UPDATED

11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CUSTODIAL & MAINTENANCE			**0**			**1,150**	
Custodian's Office		1		150	1	150	
Custodian's Workshop/ Storeroom for materials		1		500	1	500	
Custodian's Storage				100	2	200	slop sink and storage per floor for machine
Recycling Room / Trash				100	1	100	Not currently in existing program; may not be needed
Network / Telecom Room				200	1	200	
Total Building Net Floor Area (NFA)						**25,720**	
Proposed Student Capacity / Enrollment						310 - 375	Enrollment increases throughout the year
Total Building Gross Floor Area (GFA)						**38,580**	
Grossing factor (GFA/NFA)						**1.50**	
Extended Day/ After School			**0**			**4,000**	
Dedicated Extended Day classrooms				1,000	4	4,000	Potentially 3 - 4 Extended Day Classrooms
Potential Extended Day Capacity						60 - 80	
Other *(specify)*							

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SECTION 3A – 150 JACKSON ROAD EVALUATION OF EXISTING CONDITIONS

3A.1 Existing Conditions

The current building at 150 Jackson Rd in Newton, Massachusetts was obtained by the City of Newton in 2015 for $15,350,000. The building was formerly used by the Aquinas College until it closed in 2000. The site is 248,884 SF with an existing three-story building that occupies the eastern and southern portion of the site with parking adjacent to the building. The Assessors report identifies the site as 15 Walnut Park. (See GIS Map in Appendix 5.15.)

The building is currently occupied by the Newton Early Childhood Program (NECP). The building consists of an auditorium and cafeteria wing, a central three story classroom wing and a former Convent wing. The NECP program utilizes the lower and middle levels of the central classroom wing. The third floor of the Academic wing and the Convent wing are currently unoccupied. The Cafeteria is used by school administration. The auditorium is used by the community.

The North end of the site is a wooded area with two adjacent houses along Pearl Street. The East and West neighbors are private residential properties. The existing Lincoln-Eliot Elementary School at 191 Pearl Street is located north of the site. Immediately South of the site is the Walnut Park Montessori School and Jackson Elementary School, private schools serving ages 18 months through Grade 6.

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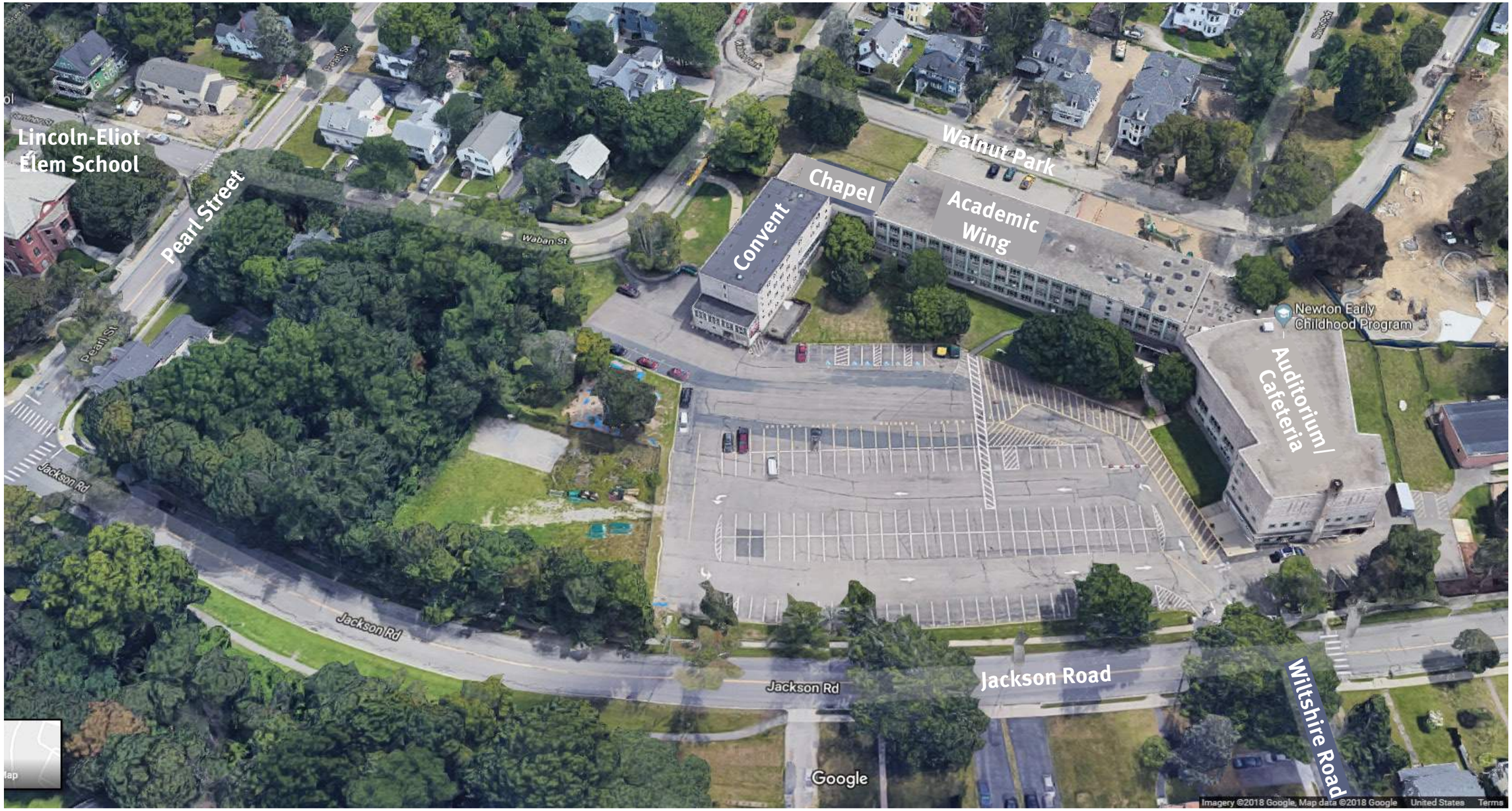
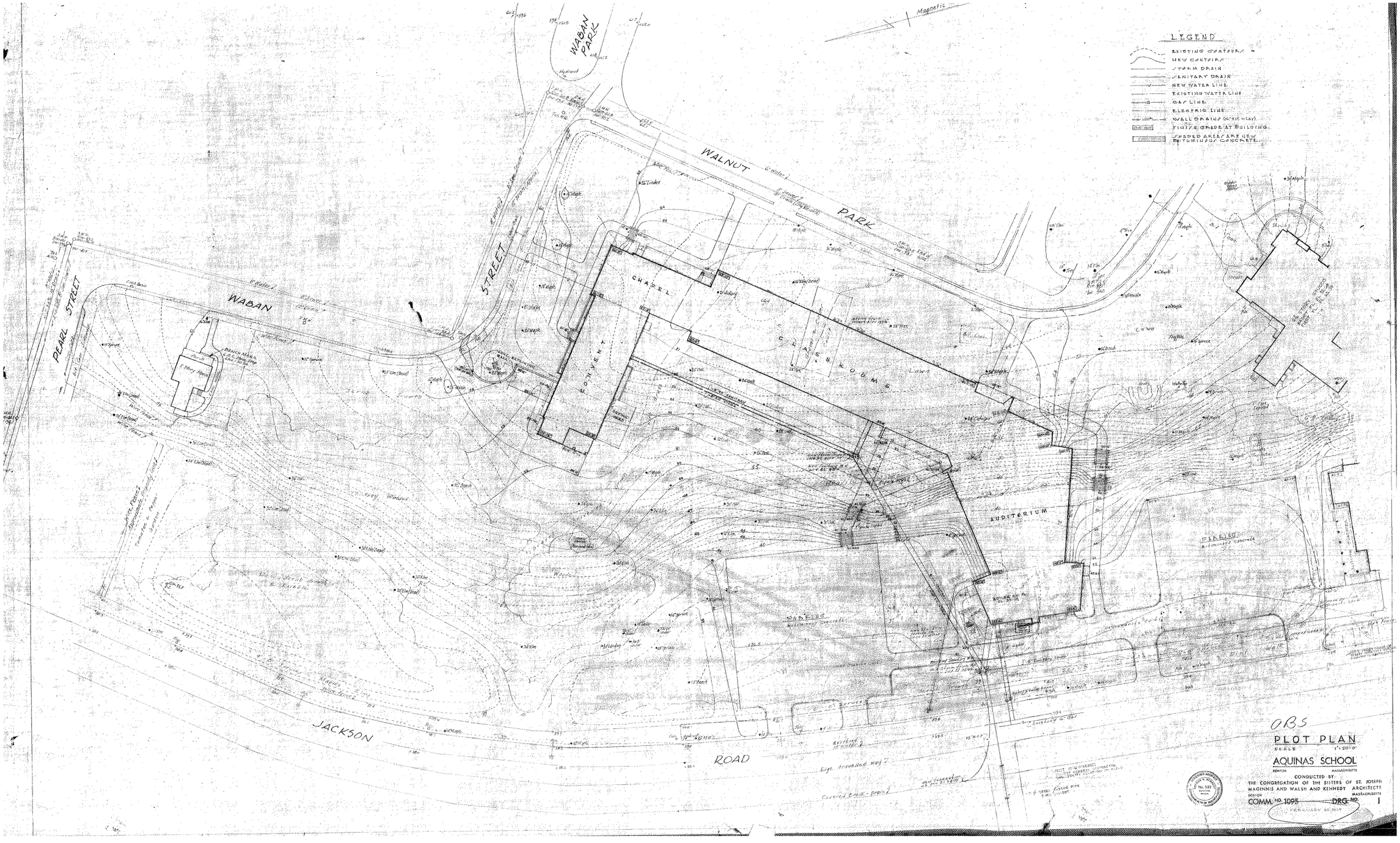
3A.2 Existing Conditions Floor & Site Plans

EXISTING AERIAL



EXISTING CONDITIONS SITE PLAN


LEGEND
EXISTING CONTOURS
NEW CONTOURS
STORM DRAIN
SANITARY DRAIN
NEW WATER LINE
EXISTING WATER LINE
GAS LINE
ELECTRIC LINE
WALL DRAINS (CAST CLAY)
FINISH GRADE AT BUILDING
SHADED AREAS ARE NEW BITUMINOUS CONCRETE
WALNUT PARK
WABAN PARK
PEARL STREET
WABAN STREET
CHAPEL
CLASSROOMS
AUDITORIUM
PARKING
ENTRANCE
JACKSON ROAD
Magnetic
PLOT PLAN
SCALE 1"=20'-0"
AQUINAS SCHOOL
NEWTON MASSACHUSETTS
CONDUCTED BY:
THE CONGREGATION OF THE SISTERS OF ST. JOSEPH
MAGINNIS AND WALSH AND KENNEDY ARCHITECTS
BOSTON MASSACHUSETTS
COMM. No. 1095 DRG. No. 1
FEBRUARY 28, 1964

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3A.3 Zoning & Property Restrictions

Property Development Restrictions
The existing 150 Jackson Road property is available for further development to support Lincoln-Eliot Elementary School program in the existing building. The following is a detailed evaluation of potential development restrictions on the site.

Easements
There were no known easements identified during the initial site survey research.

Protected Resources
The Newton GIS mapping does not identify any protected resources within the site. There are no identified protected rare species areas, vernal pools, flood zones, wetlands restrictions.

Zoning
Referenced in this Zoning section is the Newton City Ordinances, Volume II, Chapter 30: Zoning Ordinance, Updated 12-11-2018, cited as the "City of Newton Zoning Ordinance". The site at 150 Jackson Road (also identified as "15 Walnut Park") is zoned as Public (PUB) Use (see Zoning Map in Appendix 5.19). A school is considered an Institutional Use (Section 2.3.1 Principal Uses Allowed) which is an allowed use in a Public Use District (Section 2.2.1. Public Use District). The use shall be subject to a Site Plan Review (outlined below), and is not otherwise subject to dimensional, parking, or any otherwise applicable zoning requirements. (Section 2.3.1 Principal Uses Allowed)

Site Plan Approval Process
As an educational use, the Lincoln-Eliot School project is subject to the Administrative Site Plan Review (ASPR) process per Section 7.5.2 Process for Religious or Educational Use, of the City of Newton Zoning Ordinance. This process governs the review of uses protected under Massachusetts General Law (MGL) Chapter 40A, Section 3, also known as the "Dover Amendment."

The Planning and Development Department is responsible for overseeing the Administrative Site Plan Review process for "the construction, alteration, enlargement, reconstruction, or change of use of buildings for religious or non-profit educational purposes". The City of Newton follows a Site Plan Approval process through the Rules and Orders of City Council. The Administrative Review Process can take up to 60 days and is summarized in Appendix 5.21 Administrative Site Plan Review Application and Process.

3A.4 Methods & Assumptions

Existing conditions information was obtained from the original drawings of the Aquinas School, dated 1965, satellite images of the site, and Aquinas School 2018 AHERA Inspection Report provided by the Owner. These materials have been supplemented by visual observation of the building and property. A site survey of the property was not available at the time that the existing conditions information was being reviewed.

The following tasks were completed as part of this review:

- The design team, including architectural, structural, mechanical, electrical, plumbing engineers, and the code consultant visited the building and visually assessed the condition

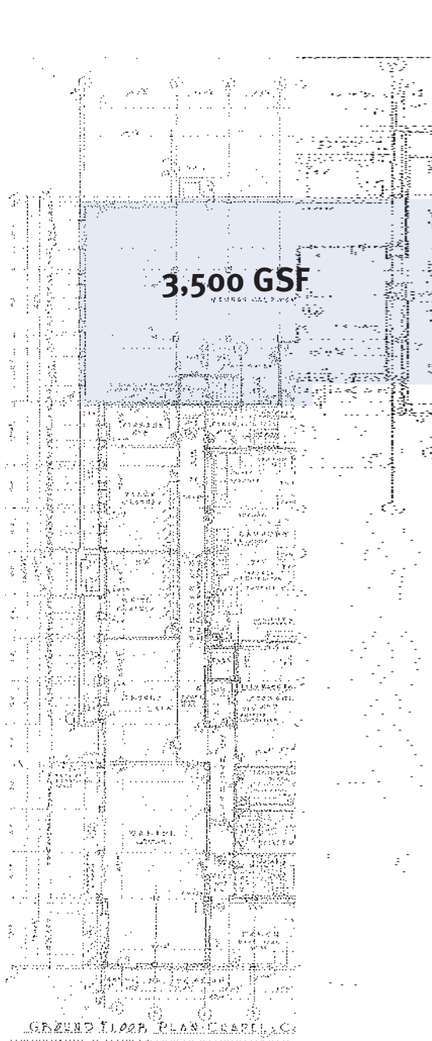
of the existing building and systems. The above team was escorted through the facility by David Stickney, Director of Facilities for Newton Public Schools.

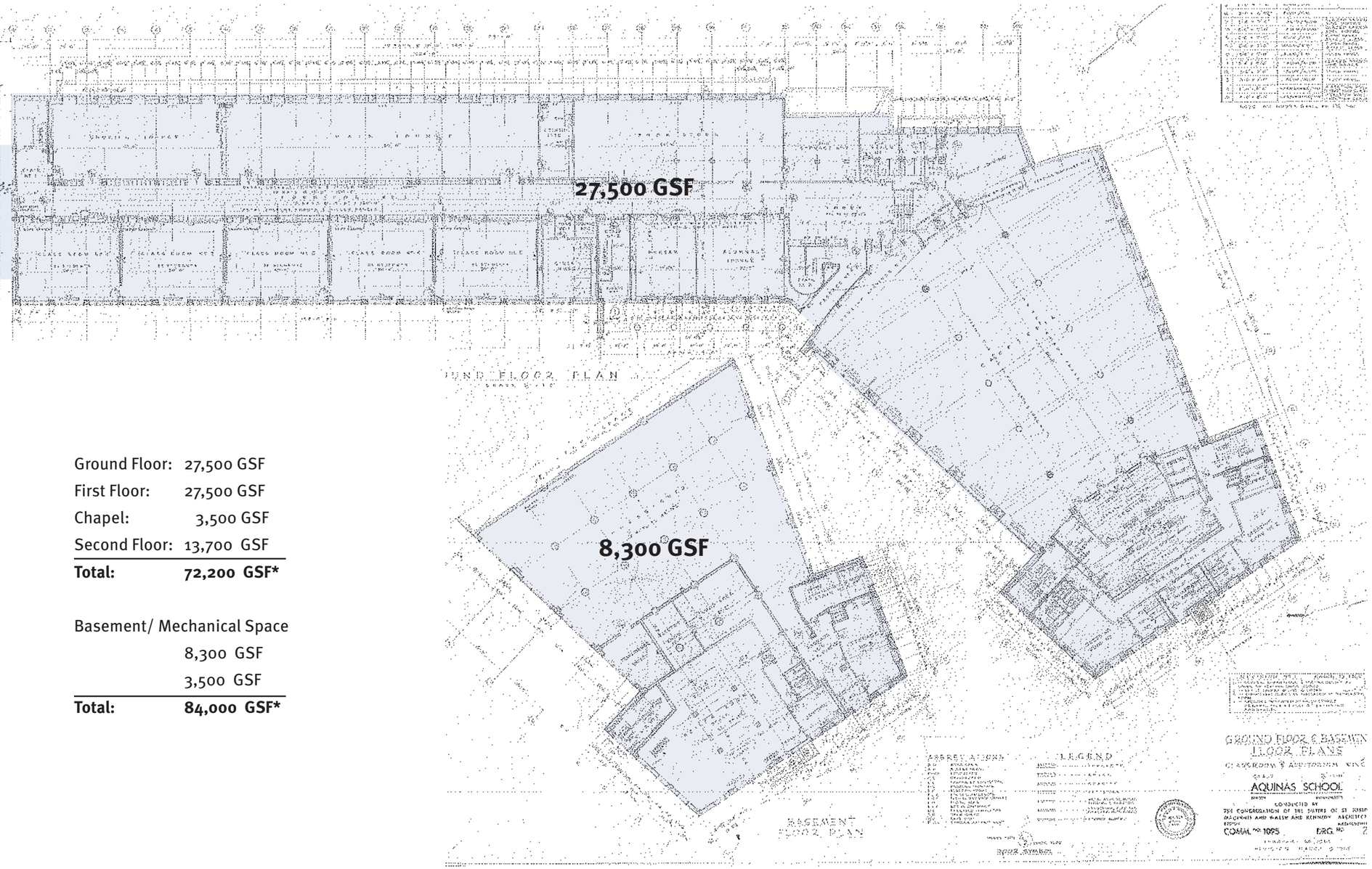
- The civil engineer has reviewed existing site condition.

The following items were not available at the time of the existing conditions review:

- Hazardous materials testing in the building had not been performed. A limited PCB Abatement Plan was executed in 2016 for the completion of the window replacement project. A Soil Release Abatement Measure was prepared by Universal Environmental Consultants for the City of Newton on May 23, 2016.
- A traffic study report had not been performed at the time of this report.

EXISTING FLOOR PLAN — GROUND FLOOR





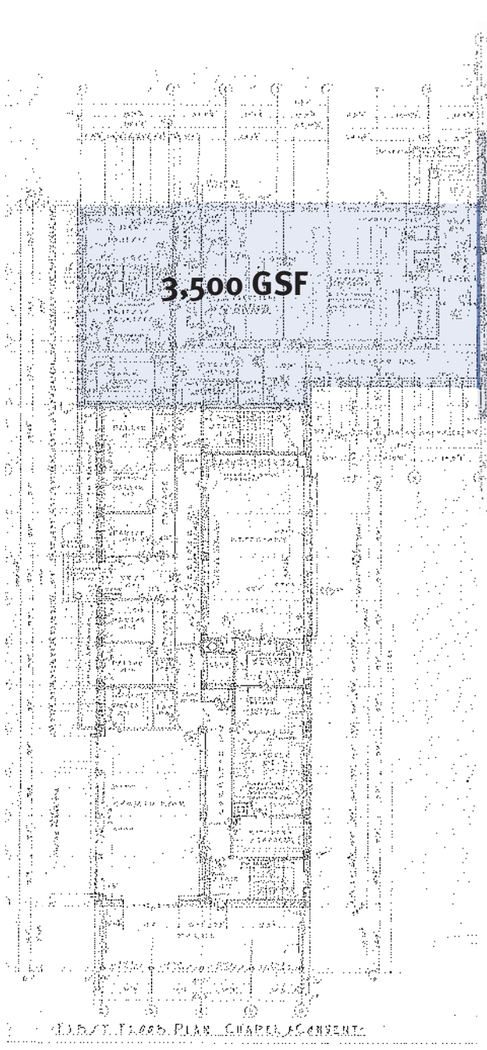
Ground Floor:	27,500 GSF
First Floor:	27,500 GSF
Chapel:	3,500 GSF
Second Floor:	13,700 GSF
Total:	**72,200 GSF***

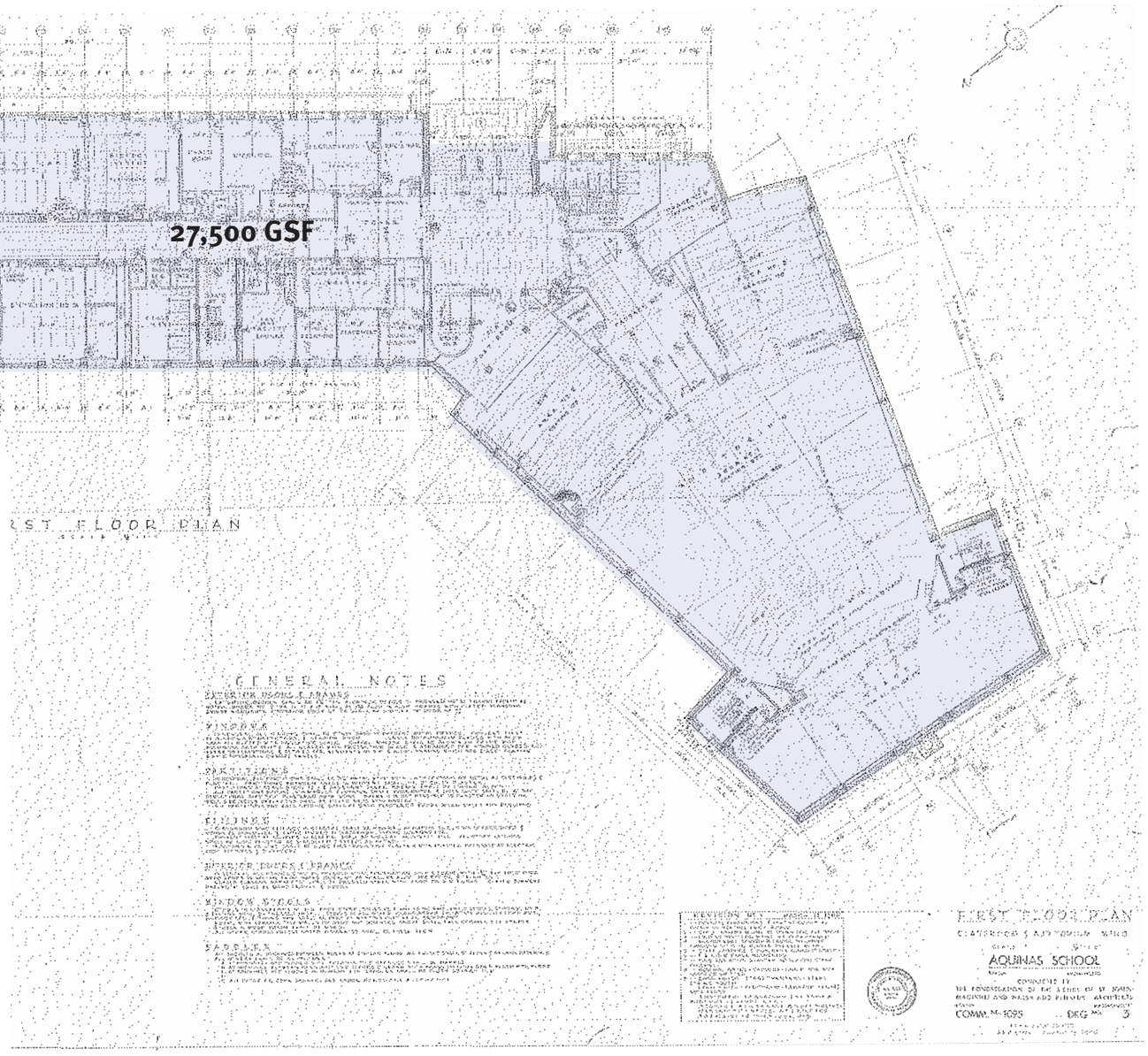
Basement/ Mechanical Space

	8,300 GSF
	3,500 GSF
Total:	**84,000 GSF***

All SF/ GSF is approximate and to be verified

EXISTING FLOOR PLAN — FIRST FLOOR





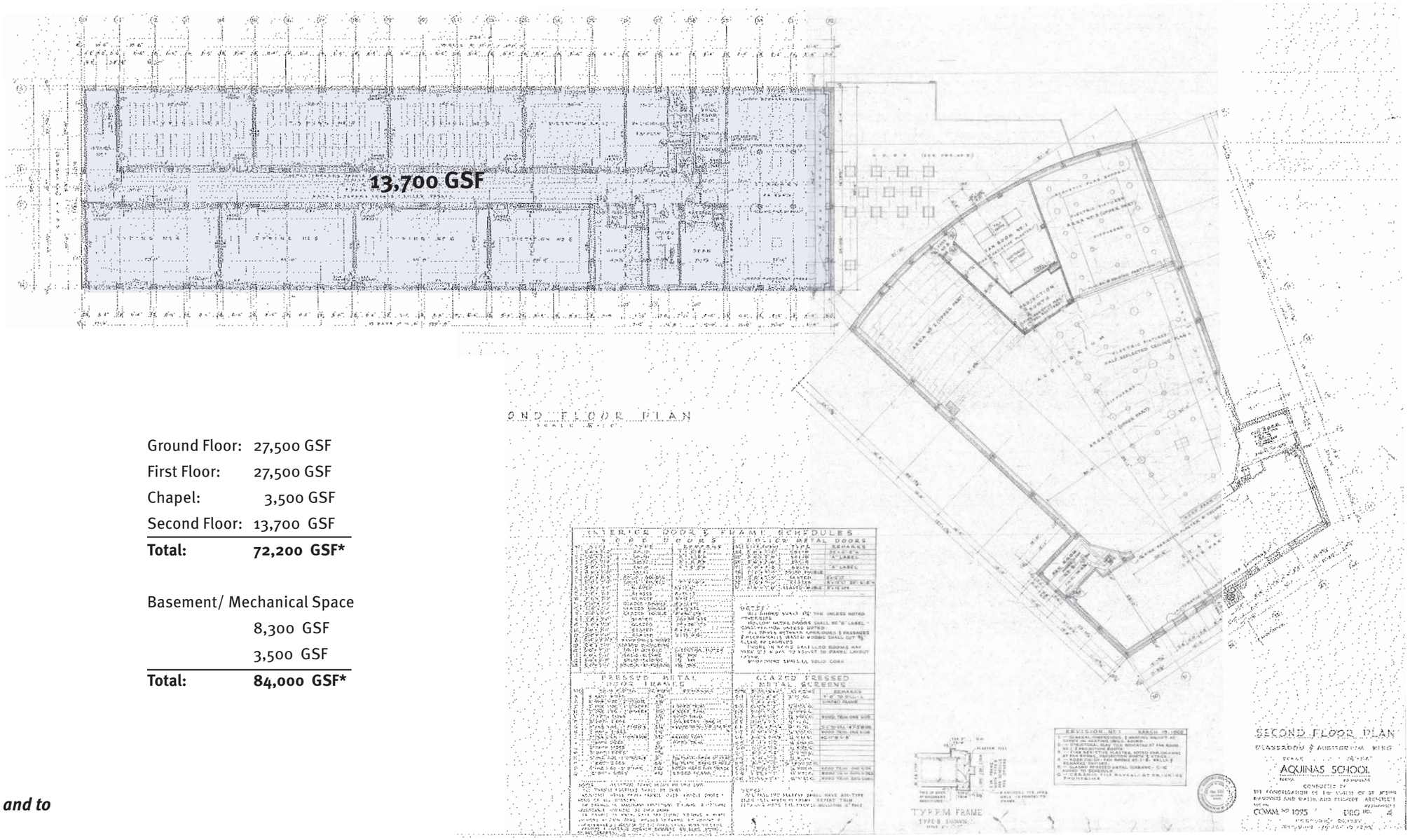
Ground Floor:	27,500 GSF
First Floor:	27,500 GSF
Chapel:	3,500 GSF
Second Floor:	13,700 GSF
Total:	**72,200 GSF***

Basement/ Mechanical Space

	8,300 GSF
	3,500 GSF
Total:	**84,000 GSF***

All SF/ GSF is approximate and to be verified

EXISTING FLOOR PLAN — SECOND FLOOR



Ground Floor:	27,500 GSF
First Floor:	27,500 GSF
Chapel:	3,500 GSF
Second Floor:	13,700 GSF
Total:	**72,200 GSF***

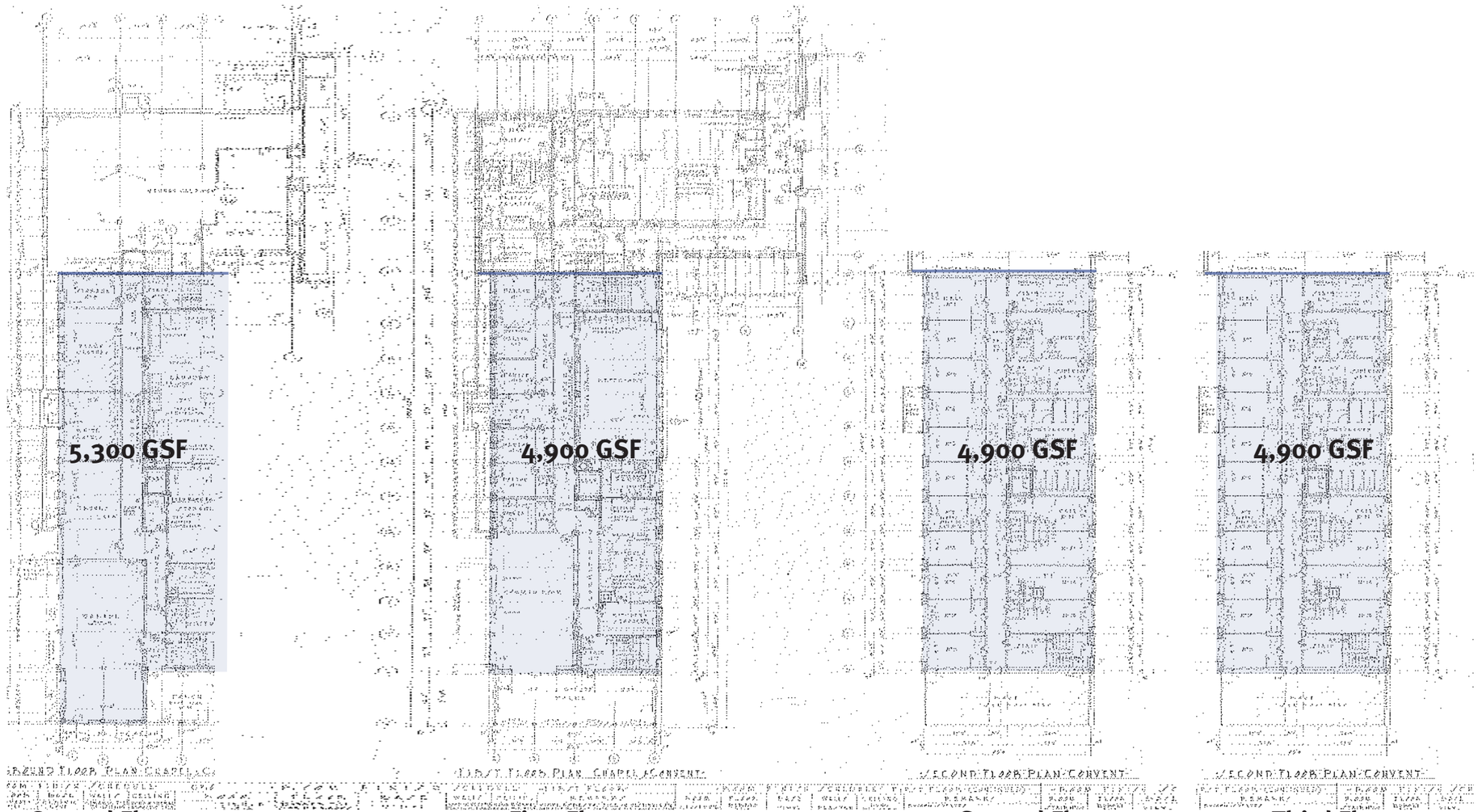
Basement/ Mechanical Space

	8,300 GSF
	3,500 GSF
Total:	**84,000 GSF***

All SF/ GSF is approximate and to be verified

EXISTING FLOOR PLAN — CONVENT WING

Ground Floor:	5,300 GSF
First Floor:	4,900 GSF
Third Floor:	4,900 GSF
Second Floor:	4,900 GSF
Total:	**20,000 GSF***



All SF/ GSF is approximate and to be verified

3A.5 Existing Building Conditions

The existing building at 150 Jackson Road consists of three distinct wings organized in a linear fashion; the cafeteria/auditorium, the central classroom core and the former convent wing. The central classroom core is now partially occupied by the NECP program on the lowest and middle level. The 1965 building is entirely a concrete structure with a brick façade.

Exterior Building Envelope

The building envelope and brick façade is in good condition for its age. There is some evidence of past water leakage on the interior of the building. It is unknown at this time if the building envelope has insulation. Based on visual review of the existing building and the construction drawings, it appears that the existing exterior walls do not meet current energy code requirements or sustainable design goals.

The windows for the academic core and cafeteria wing were replaced in 2016. PCB identified in the areas of the window replacement work was encapsulated or abated at that time. Windows in the existing convent are in poor condition and have poor thermal performance. Exterior doors and threshold are in adequate condition and need to be replaced in some areas.

The third floor of the academic wing and the entire convent wing are currently not in use. Air leaks and cold spots are apparent where mechanical equipment has been removed from the exterior walls.

Interiors

Most of the interior finishes in the building including the doors, ceilings, finish flooring and casework are original to the building and should be replaced or part of an overall upgrade of the building. Finish flooring on the lowest level and middle level in the academic wing where the NECP program is currently being housed has been replaced with VCT and carpet.

Equipment

The existing kitchen located near the existing cafeteria is fully equipped. The appliances appear to be older, and were not operational during the site visit. The existing equipment will likely need to be replaced as part of a building modernization. Terra cotta flooring and ceramic wall tile are in adequate condition. There is an additional kitchen located in the convent that is not in use and does not meet current code standards.

Building Systems

The MEP/FP systems appear original to building and have reached or exceeded their serviceable life. The systems are inefficient and require substantial repairs or upgrades to meet current standards. There is no fire protection/sprinkler system in the building.

The electrical systems have reached their life expectancy and are in poor condition. The interior lighting is possibly original to the building and not energy efficient, nor connected to automated building controls as required by the energy code.

Most plumbing fixtures do not meet current code and are not water efficient. The building will need to be evaluated to address the required number of fixtures to serve the projected population.

The following sections of this report provide more detailed analysis of the existing building structure and building systems from the Design Team.

	150 Jackson Road
Site and Civil	
Observations	
Parking spaces	140
Existing play structures	●
Neighborhood concerns	●
Existing parking lot pavement	◎
ADA accessible site	●
Separation of vehicles and pedestrians	●
Hazardous soils *	●
Wetlands buffer zone (Wetlands Protection Act)	n/a

** 15 Walnut Park, Newton ‹ MA Release Abatement Measure Plan, May 23, 2018*

Architecture and Code	
Observations	
Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	●
Fire protection system	●
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

	150 Jackson Road
Structural	
Observations	
Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	n/a
Concrete spalling	n/a
Noticeable floor deflection	n/a

Plumbing and Fire Protection	
Observations	
Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	●
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	●
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

Legend	
●	Good
◉	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

	150 Jackson Road
Heating, Ventilation, and Air Conditioning (HVAC)	
Observations	
Chiller	●
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

Electrical	
Observations	
Life safety lighting	●
Backup generator	●
Fire alarm system	●
Lighting systems	●
Lightning protection system	●
Tel/ Com and IT Systems	◎
Building communication system	◎
Main switchboard and branch circuit panels	●
Receptacle quantity and quality (GFCI)	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

3A.6 Code & Accessibility Analysis

BUILDING, FIRE & ACCESS, INC.

17 Brian Road ◇ Lancaster, MA 01523

NEWTON SCHOOL

150 JACKSON ROAD

150 JACKSON ROAD, NEWTON, MA 02458

Code Compliance Considerations - Existing Conditions Report

Prepared For:

Arrowstreet, Inc.
Suite 700N
10 Post Office Square
Boston, MA 02109

BFA #180049.000

November 14, 2018

Executive Summary

150 Jackson Road has been reviewed to determine what minimum upgrades are necessary to bring the building into compliance with current codes for fire protection, egress and accessibility.

SUMMARY TABLE –150 JACKSON ROAD	
Uses	Educational, E with Accessory A & B
Special Uses	Auditorium with Stage
Historic	No
Mixed Use Approach	Nonseparated Mixed Use must be Presumed
Risk Category	III
General Building Height & Area	Compliant for Type IB or IIA
Exterior Walls & Openings	Compliant with fire separation distances which allow nonloadbearing walls to be nonrated and have unlimited unprotected openings
Sprinklers	Not Provided, required throughout.
Standpipes	Not Provided, Required throughout and at the stage.
Fire Extinguishers	Required Throughout
Fire Alarm System	Voice alarm system is required throughout
Emergency Responder Radio Coverage	Not required but should be provided throughout
Exits	Compliant
Accessibility	The building is compliant with the $100,000 threshold. The building is not compliant with 521 CMR regarding a number of issues including most public restrooms, accessible routes, door hardware, stair nosings, handrails, etc. With such a low 30% threshold it is likely an appreciable project will require numerous upgrades to make compliant with 521 CMR.
Plumbing Fixtures	Not compliant with current code for student and staff fixture counts.

Building, Fire & Access, Inc.

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INTRODUCTION

BACKGROUND

Arrowstreet, Inc. has retained Building, Fire & Access, Inc. to provide fire protection, life safety, and accessibility consulting services to review the Newton School located at 150 Jackson Road, Newton, MA 02458. This report serves as a Code Compliance Considerations - Existing Conditions Report for the building. More specifically, this report identifies upgrades required to bring the school up to current code in terms of fire protection systems, life safety features and accessibility for persons with disabilities.

APPLICABLE CODES

The following primary codes are currently applicable to Massachusetts construction projects. This report focuses on 780 and 521 CMR considerations.

- **Accessibility**
  - Massachusetts Architectural Access Board (521 CMR).
  - The Americans with Disabilities Act, 2010 ADA Standards for Accessible Design (ADA).

- **Building Code** - Massachusetts State Building Code 9th Edition (780 CMR). 780 CMR is an amended version of the 2015 International Building Code.
  - **Existing Building Code** – 780 CMR Chapter 34. Chapter 34 is an amended version of the 2015 International Existing Building Code (IEBC).
  - **Energy Conservation Code** – 780 CMR Appendix AA. Appendix AA (also known as the Stretch Energy Code) is an amended version of the 2015 International Energy Code (IECC).
  - **Mechanical** - International Mechanical Code, 2015, as adopted by 780 CMR (IMC).
  - **NFPA 13** – 2013 - Standard for the Installation of Sprinklers
  - **NFPA 14** – 2013 - Standard for the Installation of Standpipes
  - **NFPA 72** – 2013 - National Fire Alarm Code
  - **NFPA 25** – 2014 - Standard for the Inspection, Testing & Maintenance of Water Based Fire Protection

- **Fire Code** - Massachusetts Comprehensive Fire Safety Code (527 CMR). Anticipated 527 CMR will be an amended version of the 2015 NFPA 1, National Fire Code.
  - **Electrical Code** - Massachusetts Electrical Code, 527 CMR 12.00. The Massachusetts Electrical Code is an amended version of the 2017 National Electrical Code (NFPA 70).

- **Plumbing** - Massachusetts Fuel Gas and Plumbing Codes (248 CMR). 248 CMR is unique to Massachusetts.
  - **NFPA 54** – 2012 – National Fuel Gas Code with Amendments

- **Elevator** – Massachusetts Elevator Regulations (524 CMR). 524 CMR adopts and amends the 2013 Edition of ASME A17.1, Safety Code for Elevators and Escalators.

ASSUMPTION

The code review and this report have been prepared based on the assumptions that if any hazardous materials are to be located within the building, now or in the future, the amount of such materials will be limited to the exempt amounts permitted by 780 CMR.

Building, Fire & Access, Inc.

ASSESSED VALUE

The assessed value of the building is used in the determination of thresholds which may trigger sprinkler and accessibility compliance. The values used are the building assessed value not including the land value.

- 150 Jackson Road is identified as 15 Walnut Park in the Newton Assessor's database. The 2019 assessed value is $16,627,000.00 for the building and land.

A breakdown of the building only value is needed for a complete review of threshold triggers. The following table contains a summary of threshold values using the total assessed value for the interim.

Location	Assessed Building Value	30%	33%
150 Jackson Road	$16,627,000.00	$4,988,100.00	$5,486,910.00

Table 1- Assessed Value

GENERAL CONSIDERATION

Most of the applicable codes and laws do not contain retroactive provisions with limited exception. Required code upgrades are often based on the extent and/or cost of proposed work. For the purpose of this review, the upgrades identified for fire protection systems, life safety features and accessibility compliance are based on the specific concept to bring the school into compliance with current criteria for fire protection, life safety and accessibility.

RETROACTIVE REQUIRMENTS

In general, 780 CMR & 527 CMR do not have retroactive provisions except as follows:

1. **Maintenance Provisions (780 CMR 102.8 and 527 CMR 1.03)**
   Maintenance provisions can be enforced to require any work necessary to maintain compliance with codes at the time of construction or last substantial renovation.

2. **Existing Means of Egress, Lighting and Ventilation (780 CMR 102.6.4)**
   This provision may be enforced regardless of compliance at the time of original construction or last substantial renovation. The provision is specifically intended to ensure minimally:

   a. Adequate number of exits
   b. Adequate exit capacity
   c. Adequate exit arrangement
   d. Adequate lighting
   e. Adequate ventilation

   If in the opinion of the building code official any of these are not adequate, abatement orders may be issued.

The available exits satisfy the required number of exits (Item 2.a) and the required capacity (Item 2.b.). Item 2.c, adequate exit arrangement is a subjective provision but generally is enforced only for specific notable issues (i.e. locked exits, improper exit enclosure, dangerous guardrails, etc.). The arrangement of exits in the building is satisfactory in my opinion. The existing lighting and ventilation (Items 2.d & 2.e) appear to be adequate and should be considered acceptable if maintained properly.

MASSACHUSETTS GENERAL LAW CHAPTER 148 SECTION 26G

The Massachusetts General Law Chapter 148 Section 26G (M.G.L.c.148 §26G) is the state's enhanced sprinkler law and is applicable because the aggregate area is greater than 7,500 gsf. For existing buildings, the law would be triggered if an addition is made or if a substantial renovation were to occur. A tragic fire event in Newton several years ago served as the impetus for the enhanced sprinkler law.

- The 150 Jackson road building is not compliant with M.G.L.c.148 §26G.

Sprinklers would be required throughout 150 Jackson Road to comply with the law in the event of an addition or substantial alteration exceeding the 33% threshold for building value or 33% of the aggregate area of the building. The remainder of this report presumes sprinklers will be provided throughout.

BUILDING SYSTEMS AND FEATURES

USE AND OCCUPANCY CLASSIFICATION

The building is classified as Educational, E Use. Under the current code, all assembly spaces are considered accessory for the purpose of construction classification and plumbing fixtures. Otherwise, use criteria is applicable based on the respective space.

Educational, E	School
Accessory A-1	Auditorium with fixed seating
Accessory A-2	Cafeteria/Dining
Accessory A-3	Spaces with occupant loads greater than 50… such as libraries, conference rooms)
Accessory B	Offices
Accessory S	Storage

CONSTRUCITON

The existing construction appears to be either Type IIA (1 hour) or Type IB (2 hour) noncombustible construction. More detailed review is required to confirm.

In either case, the building construction is compliant and possible additions could be made with the area limitations of the code without requiring upgrade to the construction. The allowable limits are:

- Type IB, 180 Feet, 6 Stories, UL area
- Type IIA, 85 Feet, 4 Stories, 43,500 gsf/ Story, 87,000 gsf/Aggregate

EXTERIOR WALLS

The fire separation distance setbacks are such that nonloadbearing exterior walls are permitted to be nonrated and have unlimited unprotected openings.

INTERIOR FINISHES

Chapter 8 of 780 CMR regulates interior finish and trim of buildings. Interior finish includes all wall, ceiling and floor finishes, wainscoting and paneling or other finish applied structurally or for acoustical treatment, insulation, decoration or similar purposes (780 CMR 801.1).

WALLS AND CEILINGS

All interior finish and trim must be classified per ASTM E84 as follows:

Interior Finish Classifications		
Classification	Flame Spread	Smoke Development
Class A	0 – 25	0 – 450
Class B	26 – 75	0 – 450
Class C	76 – 200	0 – 450

Table 2 - Interior Finish Classifications

Finishes having a flame-spread rating in excess of 200 or a smoke-developed rating in excess of 450 are not permitted. The following table summarizes required interior finish requirements for walls and ceilings.

Wall and Ceiling Interior Finish Requirements (780 CMR Table 803.9)			
Use Group	Required Vertical Exits and Passageways	Exit Access Corridors and Other Exit ways	Rooms or Enclosed Spaces
E, B	B	C	C
A-2/A-3	B	B	C
S	C	C	C

Table 3 - Interior Finish Requirements

FLOORS

Class II flooring finishes are permitted throughout. All finishes must pass the DOC FF-1 Pill Test or ASTM D2859.

DECORATIONS AND HANGINGS

Combustible decorations and hangings (such as curtains) must pass NFPA 701 and may not cover more than 10% of walls.

527 CMR also contains specifics for schools in terms of hangings and covering of walls with various materials.

Such decorations and hangings are not permitted on exit doors.

FIRE PROTECTION SYSTEMS

The following fire protection life safety systems are required:

1. Sprinklers are required throughout.

2. Standpipes are required in 150 Jackson Road in each stairway, at the stage and such that the travel distance to a hose connection is not more than 200 feet.

3. Fire Extinguishers are required throughout.

4. Voice Alarm Fire Alarm Systems are required throughout.

5. CO Detection is required in each classroom and in rooms where fossil fuels are utilized.

6. Emergency Responder Radio Coverage is required throughout to meet new construction criteria.

EXITS

The egress features available provide adequate egress for the retroactive criteria and technically is compliant. However, many detail criteria are not compliant including:

- Stair Nosings
- Handrails
- Guardrails
- Door Hardware
- Door Propping Devices/Wedges

Any and all work will require complete egress system upgrades to the work area and possibly beyond.

ACCESSIBILITY

CHAPTER 12 – EDUCATION FACILITIES

Educational facilities must comply with 521 CMR, except as specified or modified in 521 CMR 36.00. All administrative spaces, instructional spaces, and areas open to students or the general public must comply with 521 CMR. Lecture halls and classrooms of educational facilities must also comply with Chapter 26.00, Places of Assembly.

KITCHENS IN CLASSROOMS

If provided, kitchens in classrooms must comply with the requirements of 521 CMR 28.00: Kitchens.

SINKS, COUNTERS, AND OTHER WORK AREAS IN CLASSROOMS OR LABORATORIES

At least 5%, with a minimum of one of each type of element, in each classroom or laboratory must comply with 36.4.

RECREATIONAL FACILITIES

All recreational facilities must comply with the requirements of 521 CMR 26.00 Places of Assembly, 49.00 Exercise Machines and Equipment, 54.00 Swimming Pools, Wading Pools and Spas, 56.00 Locker Rooms, and 59.00 Play Areas.

OTHER 521 CMR CONSIDERATIONS

ACCESSIBLE ROUTES

Accessible routes within the site must be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. All public entrances are required to be accessible. It is required that at least one accessible route connect accessible buildings, accessible

facilities, accessible elements, and accessible spaces that are on the same site. As previously noted in the accessible egress section of this report, areas of rescue assistance/areas of refuge are not required in the building (780 CMR 1009.3 Exceptions 2 & 5 and 521 CMR 8.12 Exception 1).

PUBLIC TOILET ROOMS

All public toilet rooms must be accessible. Within the public restrooms, the clear spaces required for the accessible route, the turning space(s) and the fixture(s) is permitted to overlap. Where multiple single user toilet rooms are provided, all must be made accessible except where multiple single user toilet rooms are grouped together and accessed from a common door. Where multiple single user toilet rooms are accessed from a shared door, this arrangement functions as a public toilet room and only one single user toilet room is required to be accessible. This is consistent with the number of toilet stalls that would be required to be made accessible in a conventional public toilet room.

DOORS

All doorways and openings required to be accessible have a clear opening of not less than 32 inches. A minimum clear floor area must be provided on both sides of all non-automatic doors and gates. The minimum space between two hinged or pivoted doors in series must be 48 inches, plus the width of any door swinging into the space. Doors in series must swing either in the same direction or away from the space between the doors.

STAIRWAYS

Stairways must have continuous handrails on both sides of all stairs. Where handrails terminate at the top and bottom of a stair run, they must have extensions. Ends of handrails are either rounded or returned smoothly to the floor, wall, or post. Extensions on handrails that are not attached to walls must be returned smoothly to the floor or a post. Extensions are not required where such extensions would cause a hazardous condition. When a handrail is mounted adjacent to a wall, the clear space between the handrail and the wall must be 1½ inches.

DRINKING FOUNTAINS

Drinking fountains include water coolers. Drinking fountains, when provided, must comply with the following requirements.

1. All drinking fountains shall be accessible and on an accessible route.

2. Either two drinking fountains shall be provided (one hi and one low) or a single combined hi/lo fixture shall be provided.

REACH RANGES

Forward Reach

If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches. The minimum low forward reach is 15 inches.

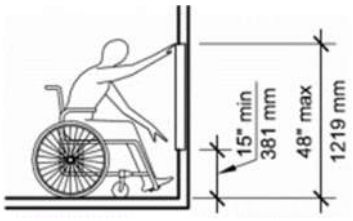

Figure 1 - Forward Reach Limits

If the high forward reach is over an obstruction, reach and clearances shall be as shown below.

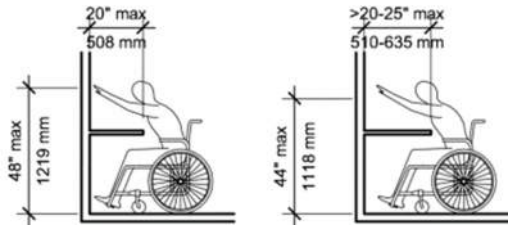

Figure 2 - Maximum Forward Reach Limit over an Obstruction

Side Reach

If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches and the low side reach shall be no less than nine inches (above the floor (See Fig. 6m). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6n.

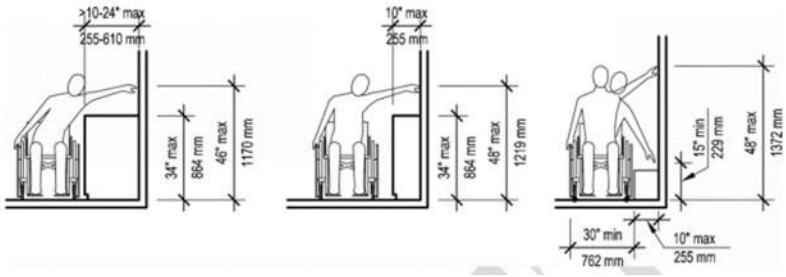

Figure 3 - (521 CMR Figures 6m & 6n) High and Low Side Reach & Maximum Reach over an Obstruction

TRANSACTION COUNTERS

Where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall comply with the following.

a) Location: The counter shall be on an accessible route
b) Length: A portion of the counter shall be at least 36 inches in length and be located closest or nearest the cash register.
c) Height: That portion of the counter shall not exceed 36 inches above the finish floor

PLUMBING FIXTURE REVIEW (248 CMR)

A plumbing fixture review was completed against Section 10:10 (18) and 10:10 (18): Table 1.

The plumbing code requires fixtures to be provided based on the uses in the building and the occupant load established for the uses. The plumbing code contains a number of provisions specific to Educational uses. One of the most impactful provisions is the criterion to require separate facilities for students and staff:

> *248 CMR 10.10 (18) (h) (3) - Separate toilet facilities shall be provided for teachers and other staff employees. These toilet facilities shall be in addition to the requirements of 248 CMR 10.10(18): Table 1, See Educational Use Group E (staff) for teacher occupancy toilet facility requirements.*

In addition, for cafeterias where cooking and/or preparation of food is performed, separate facilities must be provided for cafeteria staff.

PLUMBING FIXTURE FACTORS

The factors for Educational uses are as follows:

Fixture	Kindergarten	Elementary School	Faculty (Staff)	Multi-Purpose
Women's Water Closets	1/20	1/30	1/20	1/200
Men's Water Closets	1/20	1/60	1/25	1/600
Men's Urinals	-	1/60	33% substitution	1/200
Lavatories for Each Sex	1/20	1/60	1/40	1/200
Water Fountains	1/75	1/75	-	-
Service Sinks	One Service Sink is required for each floor			

Table 4 - Plumbing Fixture Factors

DRINKING FOUNTAINS

Hi/lo drinking fountains are required per 521 CMR and ADAAG. Numerous hi/lo fountains utilize separate hi and lo bowls with individual spouts for each bowl. If a "hi/lo" fountain is provided but utilizes a single supply line and a single drain, it has been interpreted to be counted as a single fixture. If however, separate supply and drain lines are provided for each bowl, then it may be counted as two fixtures.

OCCUPANT LOADS

The occupant loads to be used in determining fixtures must be established by the authority having jurisdiction. Frequently, the calculated occupant loads are used in the absence of the approval of the authority to use actual programmed occupancy. In the case of schools, it is not uncommon for actual populations to be used. In these cases, the authority must still provide approval. In recent discussions with the plumbing board staff, it has been noted that in no case should the fixtures provided serve less than 50% of the calculated occupant load. In any case, once the occupant load is established, if the application of the factors results in a fraction, the fraction is to be rounded up.

EXISTING CONDITIONS

The existing fixtures for the various grades and staff are not compliant with current code.

END OF REPORT

Building, Fire & Access, Inc.

3A.7 Existing Civil

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MEMORANDUM

TO: Jessica Bessette, AIA, LEED AP BD+C

FROM: Deborah M. Danik, PE, LEED AP BD+C

DATE: November 2, 2018

RE: 150 Jackson Road, Newton, MA
Existing Conditions Report

Nitsch Project #13033

Nitsch Engineering has performed research of the existing site conditions and anticipated site permitting requirements for the redevelopment of the former Aquinas College site located at 150 Jackson Road (also known as 15 Walnut Park) in Newton, Massachusetts. The site is being evaluated for the use of the relocated Lincoln Eliot Elementary School and potentially the Newton Early Childhood Program (NECP). Information included in this report is based on a site visit on October 5, 2018, review of record plans and compiled documents from Arrowstreet, and the City of Newton and State Geographic Information Service (GIS) data.

A summary of Nitsch's observations and findings are listed below.

SITE CONDITIONS AND OPERATIONS

The existing approximately 5.7-acre site is located in an urban area and bounded by the public road Jackson Road to the west, private properties and access to Pearl Street to the north, the public roads Waban Street and Walnut Park to the east, and a private site to the south. The majority of the site is covered by paved and gravel parking lots located on the west side of the site. The existing building is located on the east side of the site, with the main entrance to the building on the west side adjacent to the main parking lot. The northern portion of the site is densely vegetated and wooded. The existing site generally slopes up from the west along Jackson Road to the high side of the site at the east on Walnut Park. Record documents indicate there is approximately a 25-foot elevation change between the two streets. The majority of the site is steeply sloped, with the building providing the change in elevation from the western portion of the site to the eastern portion of the site.

VEHICULAR ACCESS

The site is accessed by vehicles for parent and bus drop off, those parking at the site, maintenance and operations, and deliveries through one (1) two-way driveway entrance on Jackson Road. Signage and striping direct vehicles once they enter the site, with buses and vans traveling in the right lane to drop off students at the main entrance and other vehicles in the left lane to access the main parking lot. There is no non-bus student drop off area near the building entrance, and non-bus vehicles were observed parking in the main parking lot and walking the students into the building during drop off.

ON-SITE PARKING

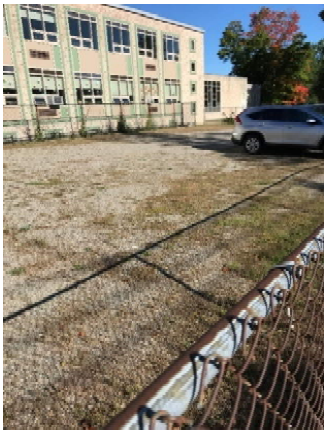
The majority of the non-building and non-wooded portions of the site are taken up by parking lot areas. The main parking lot on the west side of the site has approximately 140 striped parking spaces, including accessible parking spaces. At the time of the site visit, approximately 55% of the parking spaces were full. Signage observed at the site and building personnel indicate that some parking spaces in the main parking lot are used by commuters, who use the site as a daily parking location for access to the nearby Massachusetts

Bay Transportation Authority (MBTA) train. Accessed from the northwest side of the main parking lot, an area that was previously used as a basketball court has been converted to a gravel parking lot with approximately 40 striped parking spaces. At the time of the site visit, 25% of the parking spaces were full. On the northeast side of the parking lot and the north side of the building, there is access to four (4) parking garage doors attached to the building.

Separate from the main parking lot, there are also approximately nine (9) parking spaces located on the south side of the building, which are also accessed by the Jackson Road driveway. Located on the east side of the building and accessed from Walnut Park is an additional unstriped gravel parking lot that appears to be currently used by the abutters on Walnut Park.

There are six (6) signed and striped accessible parking spaces located on the eastern portion of the main parking lot near the main building entrance and the dumpsters. The accessible parking spaces meet the code required number of parking spaces, but the dimensions and grades of the parking spaces and access walkways to the main entrance will need to be evaluated to determine whether the areas meet current code requirements of the Americans with Disabilities Act (ADA) regulations.

The existing main parking lot pavement is old and shows indications of previous repairs including patching, seal coating, and crack sealing. The existing pavement should be further evaluated for rehabilitation given the existing poor condition.



Photos 1 & 2: Gravel parking lots at northwest side of site (left photo) and east side of site (right photo)

Photos 3 & 4: Entrance signage and striping for vehicular access (left photo) and parking garage doors (right photo)

Photos 5 & 6: Main parking lot pavement surface condition (both photos)

PEDESTRIAN ACCESS

Pedestrians can access the main entrance to the site by the driveway on Jackson Road or two (2) pedestrian entrances on Waban Street with one (1) to access to the main parking lot and one (1) to access the building, and three (3) entrances on Walnut Park with one (1) to access to the gravel parking lot and two (2) to access the building. There is no sidewalk to connect the building entrance to the public way sidewalk on Jackson Road along the main parking area and through the main driveway entrance. There also is not a sidewalk adjacent to the bus drop off at the main entrance. The main entrance to the building from the parking lot requires a ramp due to the large grade change from the existing parking area to the entrance door. It does not appear that the existing ramp to the main entrance or the pedestrian entrance to the parking lot from Waban Street meet current ADA regulations due to the slope and lack of level landings.

Pedestrian entrances from Waban Street to access the parking lot and the building do not appear to meet current ADA regulations due to the slope of the walkways and/or stair access into the building. One (1) of the entrances to the building from Walnut Park has been retrofitted with a ramp, in order to provide ADA access up the entrance stairs to the lobby. The ramp should be reviewed for compliance with current ADA regulations.

Photos 7 & 8: Pedestrian access from Waban Street to the main parking lot (left photo) and Waban Street pedestrian access to the building (right photo)

DUMPSTERS/RECYCLING

Trash dumpsters and recycling storage and pickup for two (2) large containers is located in the main parking lot, close to the building and adjacent to the main entrance and the accessible parking spaces.

Photos 9 & 10: Accessible parking spaces and one (1) of the dumpsters located near the main entrance

EXISTING SITE UTILITIES

Bases on observations made in the field and review of record documents, Nitsch's observations and findings are noted below.

WATER

Record documents indicate the building's 4-inch (4") domestic water service enters at the southwest side of the building and connects to the City of Newton water main located in Jackson Street. A water gate cover was observed in Jackson Street in the approximate location of the building service. There were no fire hydrants observed on the private site. There is one (1) hydrant on Jackson Road located approximately in the middle of the western side of the site, and there were no observed hydrants on Waban Street or Walnut Park near the site.

SANITARY SEWER

Record documents indicate that the building's sewer service is routed to the City main by a private sewer main leaves the northern portion of the building, running southerly parallel to the west side of the building and then turning west to connect to the City of Newton sewer main system in Jackson Road. Once connecting in Jackson Road, the City sewer main continues westerly to a main in Wilshire Street. Sewer manholes indicated on record documents with the routing above were observed in the field. Large, mature trees were also observed near the existing sewer main and would need to be evaluated if modifications to the existing sewer main were proposed. Record documents indicate the existing sewer pipe is a 6-inch vitrified cay pipe. Vitrified clay pipe does not meet current code and would need to be replaced if improvements were proposed to the building.

Record documents also note that the sewer service for the abutter to the south of the site connects to the sewer manhole within the private site. A manhole was observed on the abutters property in the approximate location shown on record plans. Additional sewer main video inspection should be conducted to determine the condition existing private main's pipe material, condition of the pipe, and routing of pipe through the site and from abutters.

Photos 11 & 12: Sewer and drain manholes observed at the site in the location noted on record documents (left photo) and large, mature trees located near the existing sewer and drain mains (right photo)

STORM DRAINAGE

Record documents indicate that the building's roof drain service is connected to a closed drainage system and a private drain main running southerly parallel to the west side of the building and then turning west to connect to the City of Newton drain main system in Jackson Road. The private drain main system runs parallel to the private sewer main system. Record documents indicate the existing roof drain pipe is a 10-inch vitrified clay pipe. Drain manholes indicated in record documents were observed in the field. Large, mature trees were also observed near the existing drain main and would need to be evaluated if modifications to the existing sewer main were proposed.

The existing site has minimal existing closed storm drainage facilities onsite according to record documents and site observations. Two (2) catch basins were observed on the western and lower side of the site. One (1) was located in the main parking lot and one (1) was located in the parking lot on the south side of the building. Neither catch basin appeared to provide enhanced level of pre-treatment, and record documents do not indicate that the site has a stormwater management system to mitigate for stormwater peak rates of runoff or stormwater volumes leaving the site. Stormwater that hits the vehicular traveled portions of western side of the site sheet flows westerly to the catch basin or into the landscaped areas adjacent to the Jackson Road property line. No catch basins or a closed drainage system were observed on the eastern side of the site. Stormwater that hits the eastern side of the site sheet flows into the landscaped areas adjacent to Waban Street and Walnut Park.

Stormwater runoff from the site ultimately drains to the Charles River. A redevelopment of the site would require the installation of a stormwater management system to meet the Massachusetts Department of Environmental Protection's Stormwater Standards as it applies to the proposed redevelopment.

Photo 13: One of the observed catch basins on site located near the parking on the south side of the building, covered in leaves

ELECTRIC

Refer to the Electrical Engineer's Existing Conditions report for information about the existing electrical service and site lighting at the site.

TELECOMMUNICATIONS

Refer to the Mechanical Engineer's Existing Conditions report for information about the existing telecommunications service at the site.

GAS/OIL

Record documents indicate an existing underground oil tank at the southwest side of the building near the main driveway entrance. Covers for the underground tank were observed at the surface of the parking lot during the site visit. Record documents also indicate a gas service enters the building at the southwest corner of the building. Refer to the Plumbing Engineer's Existing Conditions report for information about the existing gas and oil services at the site.

SOILS

A Geotechnical Engineering study of the site shall be prepared to provide information about existing soil conditions at the site and recommendations for design and construction at the site. The following record reports may be used as references:

- "ASTM Phase I Environmental Site Assessment and Phase II Limited Subsurface Investigation, Former Aquinas College, 15 Walnut Park, Newton, Massachusetts," prepared by Ransom Consulting, Inc., dated March 3, 2015;
- "Release Abatement Measure Plan, For the Site, Former Aquinas College, 15 Walnut Park, Newton, MA," prepared by Universal Environmental Consultants, dated May 23, 2016; and
- "Revised Polychlorinated Biphenyl Abatement Plan, For the Site, Former Aquinas College, 15 Walnut Park, Newton, MA," prepared by Universal Environmental Consultants, dated March 4, 2016.

The site is listed as a 21E waste site by the Massachusetts Department of Environmental Protection (MassDEP) under DEP Site Number 3-0033782. Based on the Natural Resources Conservation Service (NRCS) Middlesex County Soil Survey, the majority of the site is classified as Urban Land under the Unified Soil Classification (Surface).

PRELIMINARY PERMITTING CONSIDERATIONS

Wetlands Protection Act (310 CMR 10.00)

The Wetlands Protection Act ensures the protection of Massachusetts' inland and coastal wetlands, tidelands, great ponds, rivers, and floodplains. It regulates activities in coastal and wetlands areas, and contributes to the protection of ground and surface water quality, the prevention of flooding and storm damage, and the protection of wildlife and aquatic habitat.

Massachusetts Geographic Information System (MassGIS) Record Information indicates that there are no Wetlands Protection Act resource areas within the project site. Therefore, there are no permits anticipated through the Wetlands Protection Act or the Newton Conservation Commission.

Surface Water Supply Protection (310 CMR 22.20)

The Massachusetts Department of Environmental Protection (DEP) ensures the protection of surface waters used as sources of drinking water supply from contamination by regulating land use and activities within critical areas of surface water sources and tributaries and associated surface water bodies to these surface water sources. A review of the Massachusetts DEP resource layers available on the MassGIS indicates the site is not located within a Water Supply Protection Zone, and appears to not require permitting under 310 CMR 22.20.

National Heritage and Endangered Species Program

A review of the 14th Edition of the Massachusetts Natural Heritage Atlas prepared by the Natural Heritage and Endangered Species Program (NHESP), dated August 1, 2017, indicates that the site is not a Priority Habitat of Rare Species or an Estimated Habitat of Rare Wildlife. Therefore, there are no permits required through the NHESP.

Area of Critical Environmental Concern (ACEC)

A review of the Massachusetts Geographic Information System (MassGIS) indicates that the site is not located within an Area of Critical Environmental Concern.

Floodplain

Floodplain information was obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Map number 25017C0552E, effective June 4, 2010. The site is within an Area of Minimal Flood Hazard Zone X, which is identified as an area outside the 100-year floodplain. Therefore, there are no permits required with respect to the floodplain.

Environmental Protection Agency National Pollutant Discharge Elimination System Permit

Construction activities that disturb more than one acre of land are regulated under the United States Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) Program. In Massachusetts, the EPA issues permits to operators and owners of regulated construction sites. Regulated projects are required to develop and implement stormwater pollution plans (SWPPP) in order to obtain permit coverage. The proposed renovation project will disturb more than one acre of land, therefore, the project will require filing an Electronic Notice of Intent (eNOI) for a Construction General Permit (CGP) and compliance under the NPDES program.

Newton Department of Public Works

The design of the sanitary sewer, water, and storm drainage services and connections to the City of Newton mains will need to be reviewed and approved by the Department of Public Works Water and Sewer Division.

As part of their Site Plan Review process the Department of Public Works will review the water demand and sewer flows for the site as it relates to their water distribution system and sanitary sewer conveyance systems. They will also review the proposed stormwater management design for compliance with their regulations and the Massachusetts Department of Environmental Protection's Stormwater Standards.

Newton Department of Public Works will also review the project for any improvements proposed to the public sidewalks abutting the site or within the public ways.

Massachusetts Environmental Policy Act (MEPA) Regulations (301 CMR 11.00)

Development of this site does not appear to trigger the following MEPA thresholds and will likely not require an Environmental Notification Form (ENF) or Environmental Impact Report (EIR) to be filed with MEPA:

- Land
- Rare Species
- Wetlands
- Water
- Wastewater
- Area of Environmental Concern (ACEC)

3A.8 Existing Structural

150 Jackson Road

Newton, Massachusetts

Structural Assessment

November 2, 2018

Engineers Design Group Inc.
Structural Engineers
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Malden, Ma 02148
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(781)396-9008 (FAX)
EDG@EDGINC.COM

STRUCTURAL ASSESSMENT

The purpose of this report is to describe, in broad terms, the structure of the existing building; to comment on the condition of the existing building; and on the feasibility of renovation and expansion of the building.

Scope

1. Description of existing structure.
2. Comments on the existing condition.
3. Comments on the feasibility of renovation and expansion.

Basis of the Report

This report is based on our visual observations during our site visit on October 5, 2018; a review of the existing drawings of the original construction prepared by the Maginnis and Walsh and Kennedy Architects, dated February 26, 1965.

During our site visit, we did not remove any finishes or take measurements, so our understanding of the structure is limited to the available drawings and observations of the exposed structure and the exterior facade.

Building Description

The school is located on Jackson Road in Newton, Massachusetts. The entire school along with the chapel and convent is a two or three story concrete structure.

The building was originally constructed in 1965 for the Aquinas School, a private Catholic school, and in 2000, it was occupied by the Rashi School. Currently the school is home to an early childhood program for the City of Newton.

The building is organized in a linear fashion. It has a three story academic wing and a three story cafeteria/auditorium wing. The cafeteria is located on a lower level, with a mechanical space below, and the double story auditorium is located at the upper level. The two story chapel and four story convent is located at one end of the school. Due to the topography of the site, the structure has various floor levels connected by internal stairs.

The lower level of the structure is typically a concrete slab on grade. One exception to this is a portion of the slab on the lowest level below the footprint of the auditorium stage, it is a two way reinforced concrete slab supported on reinforced concrete grade beams spanning between concrete piers and footings.

The typical floor and roof slab of the academic wing is a one way concrete rib slab spanning between reinforced concrete beams and columns.

The cafeteria floor is a reinforced concrete flat slab supported on concrete columns.

The auditorium floor is a reinforced concrete slab spanning between wide flange steel beams and columns.

The roof above the auditorium is 2 in. thick light weight concrete plank spanning between structural steel trusses.

The convent and the chapel floor and roof construction is similar to the academic wing construction.

There are no additions to the school since it was originally constructed.

EXISTING CONDITIONS

Based on our observations, the building structure is performing well based on the age of the building. We observed signs of water leakage at a few locations. We observed cracks in the interior masonry walls at some locations. We observed cracks in the exterior masonry façade and signs of past repairs. We observed some minor spalling of concrete at the corners.

We did not observe any signs of foundation settlement. We did not observe any undue vibrations due to footfall on the supported floors.

PROPOSED SCHEMES

Based on our observations and our analysis of the existing drawings, no structural upgrades are required for any proposed scheme that has limited renovation scope and does not require any structural modifications. The extent of the code required structural upgrades is dependent on the extents of the proposed renovations. The following is a description of the compliance methods that may be triggered depending on the extents of the proposed schemes as dictated by other disciplines.

GENERAL CODE CONSIDERATIONS

Primary Structural Code Issues Related To the Existing Structure

If any repairs, renovations, additions or change of occupancy or use are made to the existing structures, a check for compliance with 780 CMR, Chapter 34 “Existing Building Code” (Massachusetts Amendments to The International Existing Building Code 2015) of the Massachusetts Amendments to the International Building Code 2015 (IBC 2015) and reference code “International Existing Building Code 2015” (IEBC 2015) is required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and/or a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, the project will have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:

1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

Comment

The approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing.

Since the existing building contains un-reinforced masonry wall structures, the anchorage of the walls to the floor and roof structure will have to be evaluated if the work area of the project exceeds 50 percent of the aggregate floor and roof area of the building.

Prescriptive Compliance Method

In this method, compliance with Chapter 4 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of this chapter.

Additions

Based on the project scope, the following structural issues have to be addressed:

- All additions should comply with the code requirements for new construction in the IBC.
- For additions that are not structurally independent of an existing structure, the existing structure and its addition, acting as a single structure, shall meet the requirements of the Code for New Construction for resisting lateral loads, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

Alterations

- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations that would increase the design lateral loads or cause a structural irregularity or decrease the capacity of any lateral load carrying structural element, the structure of the altered building shall meet the requirements of the Code for New Construction, except for the existing

lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.

Work Area Compliance Method

In this method, compliance with Chapter 5 through 13 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of these chapters.

In this method, the extent of alterations has to be classified into LEVELS OF WORK based on the scope and extent of the alterations to the existing structure. The LEVEL OF WORK can be classified into LEVEL 1, LEVEL 2 or LEVEL 3 Alterations. In addition, there are requirements that have to be satisfied for additions to the existing structure.

The extent of the renovations (includes Architectural, FP and MEP renovations) for this project exceeds 50 percent of the aggregate area of the building, thus, the LEVEL OF WORK for this project would be classified as LEVEL 3 Alterations. This would require compliance with provision of Chapter 7, 8 and 9 of the IEBC. If the scope of the project includes new additions to the existing structure; this would trigger compliance with provisions in Chapter 11 of the IEBC.

Level 3 Alterations

- Any existing gravity, load-carrying structural element for which an alteration causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations where more than 30 percent of the total floor area and roof areas of a building or structure have been or proposed to be involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building complies with the full design wind loads as per the code requirements for new construction and with reduced IBC level seismic forces.
- For alterations where not more than 30 percent of the total floor and roof areas of a building are involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads at the time of the original construction or the most recent substantial alteration (more than 30 percent of total floor and roof area). If these alterations increase the seismic demand-capacity ratio on any structural element by more than 10 percent, that particular structural element shall comply with reduced IBC level seismic forces.
- Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated.

Additions

- All additions shall comply with the requirements for the Code for New Construction in the IBC.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For additions that are not structurally independent of any existing structures, the existing structure and its additions, acting as a single structure, shall meet the requirements of the Code for New

Construction in the IBC for resisting wind loads and IBC Level Seismic Forces (may be lower than loads from the Code for New Construction in the IBC), except for small additions that would not increase the lateral force story shear in any story by more than 10 percent cumulative. In this case, the existing lateral load resisting system can remain unaltered.

Performance Compliance Method

Following the requirements of this method for the alterations and additions may be onerous on the project because this method requires that the altered existing structure and the additions meet the requirements for the Code for New Construction in the IBC.

PARTICULAR REQUIREMENTS OF COMPLIANCE METHODS

For our project, in order to meet compliance with one of the two compliance methods "Prescriptive Compliance Method" or the "Work Area Compliance Method", we have to address the following:

Prescriptive Compliance Method

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, would not impart any additional lateral loads on the existing structure.

If the proposed alterations are such that the alterations increase the design lateral loads on the existing building or cause any structural irregularity of decrease the lateral load carrying capacity of the building, the structure of the altered building shall meet the requirements of the Code for New Construction in the IBC.

If the proposed additions increase the design gravity load on portions of the existing roof members, these members would have to be reinforced and this incidental structural alteration of the existing structures would have to be accounted for in the scope of the alterations to the existing school and would trigger requirements for alterations.

Alterations

Alterations that would increase the design gravity loads by more than 5 percent on any structural members would have to be reinforced.

If the proposed alterations of the structure increases the demand-capacity ratio of any lateral load resisting element by more than 10 percent, the structure of the altered building or structure shall meet the requirements for the Code for New Construction.

Work Area Compliance Method

Level 3 Alterations

If the proposed structural alterations of an existing structure are less than 30 percent of the total floor and roof areas of the existing structure, we have to demonstrate that the altered structure complies with the loads applicable at the time of the original construction and that the seismic demand-capacity ratio is not increased by more than 10 percent on any existing structural element. Those structural elements

whose seismic demand-capacity ratio is increased by more than 10 percent shall comply with reduced IBC level seismic forces.

If the proposed structural alterations of an existing structure exceed 30 percent of the total floor and roof areas of an existing structure, we have to demonstrate that the altered structure complies with the IBC for wind loading and with reduced IBC level seismic forces.

Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated. If the existing anchorage of the walls to the structure is deficient, the tops of the masonry walls will require new connections to the structure.

Additions

Any proposed additions would be designed structurally independent of the existing structures, thus, they would not impart any additional lateral loads on the existing structures.

Comment

The compliance requirements of the two methods, in most respects, are very similar. The Prescriptive Compliance Method would require that the existing lateral load resisting systems meet the requirements of the Code for New Construction of the IBC, even for small increases of design lateral loads. The requirements of both methods will require anchorage of all existing masonry walls. Based on this, we would recommend the Work Area Compliance Method for the project.

SUMMARY

The existing school structure appears to be performing well. All of the structural components that are visible appear in sound condition.

Any major, proposed renovations and additions would likely require that the structure be updated to meet the requirements for Code for New Construction. This may require addition of some shear walls, connecting the roof diaphragms to the existing masonry walls and the clipping of non-structural masonry walls to the structure. All of the existing masonry walls would have to be adequately connected to the roof structure.

3A.9 Existing Mechanical

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HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

The majority of the building HVAC systems are approximately 52-years-old, in poor condition and have exceeded their expected service life. The main building is currently only heated and ventilated from central heating and ventilation systems. Several rooms are provided with window AC units. The Classrooms, Cafeteria and Auditorium rooms are heated and ventilated by a combination of hot water air handling units, unit ventilators and radiation heating equipment. The administration areas are heated by hot water fin tube radiation and convectors. Hot water is generated by a gas fired boiler plant. The heating plant also serves the Convent/Chapel building, which is heated primarily by hot water radiation heating equipment and air handling units. The Chapel and Rectory also appear to have an air conditioning system installed, however it is our understanding that the system has not be operational in recent years. The building control system is a pneumatic ATC control system, which has continually experienced many air leaks and corresponding temperature control issues. Due to the old age of the HVAC systems and overall poor performance in maintaining proper temperature and ventilation control, we would recommend that the existing building HVAC system is replaced with a new high efficiency HVAC system.

Heating Plant Building:

The building is primarily heated by an oil-fired hot water boiler plant located in the Lower Level Boiler Room. There are two boilers, however one of the boilers is no longer functional and has been abandoned in place. The boilers were originally installed circa 1966, are over 50 years old. and in need of replacement. The operable boiler has had some burner and control work performed on it in more recent years. The boiler provides heating hot water for the building's space heating equipment and air handling units.

The boiler is vented by steel breeching that is routed to a masonry chimney. Combustion air is provided by sheetmetal ductwork that is connected to a wall intake louver and damper assembly. Fuel oil is provided by a 10,000 gallon underground fuel oil tank, and there is a VeederRoot fuel oil tank monitoring panel installed in the boiler room. We are unsure of the age of the fuel oil tank.

There are two (2) 10 HP hot water pumps located in the Lower Level Boiler Room. The pumps circulate hot water from the boilers to the building heating equipment. In addition, there is an inline hot water booster pump which serves the Convent/Chapel hot water heating system. In general, the main hot water pumps appear to be in poor condition, and nearing the end of their expected service life, and the booster pumps appear to be in fair condition as it has been replaced in recent years.

The majority of hot water piping is original to the building and over 50 years old. Several sections of piping appeared to have damage or missing insulation. Several sections of piping and several valves observed appear to show signs of corrosion. Several sections of piping are routed in crawlspace areas or encased within concrete floors. It is our understanding that these sections of piping have experienced leaks over the years and are difficult to access.

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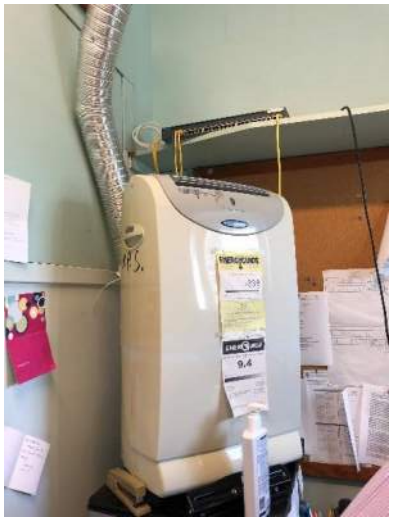
Hot Water Boilers

Hot Water Pumps

Convent Hot Water Circulator Pump

Air Conditioning:

The main building does not have a central air conditioning system. Many rooms are air conditioned by window AC units. The Custodian's office has a portable AC unit installed.



Custodian Office - Portable AC Unit

Window AC Units

The Chapel and Rectory areas appear to have an air conditioning system installed. However, it is our understanding that the system is not utilized. There is a Carrier indoor split chiller installed in the mechanical room which is connected to a ducted air cooled condensing unit that is connected to intake and relief air louvers in the mechanical room. The chiller appears to be in good condition and was installed in recent years. The associated condensing unit appears to be older and in poor condition. The chiller is capable of providing chilled water to the Chapel/Rectory area air handling units.

Chapel – Chiller

Chapel – Air Handling Unit

Administration:

The administration areas are typically heated by a combination of hot water fin tube radiation heating and convectors. The majority of administration offices appear to be ventilated naturally through the use of operable windows, and general exhaust air fan systems.

Hot water Fin tube Radiation

Classrooms:

The majority of classrooms are heated and ventilated by classroom vertical wall mounted unit ventilators with hot water heating. The units appear to be originally installed equipment from 1966, and were manufactured by Nesbitt. The unit ventilators are in poor condition, past their expected service life and in need of replacement. There are approximately 42-unit ventilators located throughout the building (including unit ventilators that serve the Cafeteria). The upper level classrooms and library are no longer occupied. There have been numerous piping and valve leaks associated with the unit ventilators that serve these areas. Several of the unit ventilator filters observed in unoccupied areas were extremely dirty and have been disassembled.

First Floor – Unit Ventilator

Second Floor Unit Ventilator

Exhaust air from most of the classrooms is exhausted by sidewall exhaust grilles that are ducted to roof mounted exhaust fan ventilators. Most of the exhaust fans observed appear to be originally installed equipment and beyond their expected service life.

Cafeteria:

The Cafeteria is heated and ventilated by ten (10) vertical hot water unit ventilators. The unit ventilators are original installed equipment from 1966 and need replacement.

The kitchen is adjacent to the Cafeteria and is served by a kitchen hood exhaust air fan, and associated make-up air unit that serves the kitchen exhaust hood and a dishwasher exhaust system. The kitchen exhaust hood appears to be originally installed equipment that is in poor condition, and the dishwasher exhaust appears to be in good condition and was installed in more recent years.

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Convent Building:

The majority of the Convent building is heated by hot water radiation and convectors. Supplemental electric heating was also installed in areas. The Chapel and Rectory areas of the building are served by air handling units that appear to have both heating and air conditioning capability. However, it is our understanding that the air conditioning system is not utilized. The heating and air handling equipment is originally installed equipment that needs replacement.

Hot Water Convector

Convent Kitchen Range Exhaust Hood

Kitchen Make-up Air Unit

Restrooms:

Restrooms are typically heated by hot water radiation heating and are exhausted by rooftop exhaust air fan systems. Restroom heating and exhaust ductwork appear to be original to the building, generally in poor condition, and in need of replacement. Some new exhaust fans have been installed in recent years.

Corridors and Entryways:

Corridors and entryways are heated by hot water radiation heating equipment that is original to the building. Several fin tube radiation and cabinet unit heater enclosures appear to be missing or damaged.

The majority of corridors are not provided with code-required ventilation.

Hot Water Convector

Exhaust Systems:

The majority of exhaust air ventilation for the building is provided by roof mounted exhaust air fans. Approximately half of the existing exhaust air fans appear to have been replaced in recent years.

Roof Exhaust Fans

Controls:

The building control system is a pneumatic control system. The control system consists of air compressors, air dryer, pneumatic control panels and pneumatic air tubing system. The main control panel was manufactured by Honeywell. The majority of control system components are originally installed equipment and systems. It is our understanding that the control system experiences numerous air leaks and does not provide adequate temperature control for many areas of the building.

ATC Control Panel

Recommendations:

1. The existing HVAC equipment including the boiler plant, classroom unit ventilators, indoor air handling units, older AC condensing units, exhaust fans, intake hoods and hot water radiation heating equipment should be replaced.

2. The existing hot water piping system and associated insulation should be replaced.

3. The existing chilled water piping and insulation should be replaced.

4. The exhaust ductwork system should be replaced.

5. Older exhaust air fans should be replaced.

6. The building pneumatic control system should be replaced with a new DDC building energy management control system.

7. Replacement HVAC systems should incorporate high efficiency equipment and energy conservation measures such as a high efficiency boiler, air conditioning, energy recovery ventilation, demand control ventilation, variable volume air flow and variable flow hot water distribution.

3A.10 Existing Electrical

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ELECTRICAL:

Executive Summary:

In general, the electrical systems have reached their life expectancy and are in poor condition. Life safety lighting is a normally off system and is fed from a generator and is not compliant with today's codes. The fire alarm system is in good condition; however, it is not code compliant and would require a complete replacement. Lighting systems, in general, are in poor condition and typically consist of fluorescent lamps and ballasts in most spaces; the fixtures are antiquated and in poor condition. The facilities service is undersized for any substantial renovation/addition program and the existing distribution system is in poor condition and should be replaced in its entirety.

The lightning protection system has not been modified to provide proper protection; no air terminals are located on any roof top equipment.

The security system consists of access control and an intrusion detection system. The system is in fair condition. The overall security scheme should be reviewed as it is not configured to current security recommended practices for the current occupancy.

The communication system infrastructure is antiquated by today's standards and should be replaced in its entirety.

Electrical Distribution System:

The service is fed from Jackson Road from an overhead utility pole riser to a transformer vault below grade, the service is then fed to the building's Main Electric Room located in the lower level adjacent to the building's Boiler Room.

A 1,200 ampere, 120/208 volt, 3 phase main switchboard is located in the Main Electrical Room. This service is undersized for any substantial renovation/addition program. The current Main Electric Room does not meet current code requirements and the remainder of the branch circuit panels which are mostly installed in corridors are in poor condition and should be replaced. The building contains a single secondary utility meter, meter #5080081 located within the Main Electric Room.

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Main Switchboard

Original Sub-Panel

Original Kitchen Sub-Panel

Utility Meter

Branch Circuits/Wiring Devices:

The quantity of receptacles is not adequate in most spaces. The quantity of technology devices in the classroom is minimal. Excessive use of extension cords is prevalent throughout the school and is considered a safety concern. Circuits are not separated based upon load type. New receptacles have been added in some areas over the years. The convent is setup as residential and would require complete replacement of branch circuitry. Both Kitchens, one that serves the Convent and one adjacent to the Cafeteria, are not in use; however, they are not in compliance with ground fault (GFCI) protection code.

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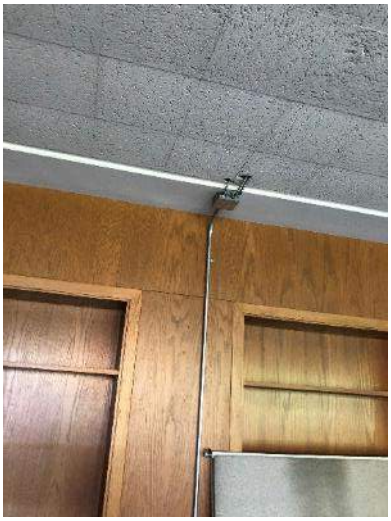
Extension Cord

Added receptacle that is full



Added surface receptacle

Kitchen Non-GFI Receptacle

Interior Lighting System:

Lighting in corridors is typically a surface mounted fluorescent wraparound fixture with a single T8 lamp down the center of the corridor and recessed 2x2 and 2x4 fixtures in lobbies.

Classroom lighting consists of two or three continuous rows of surface mounted fluorescent wraparound fixtures with single cross section T8 lamps. Each row is separately switched. No occupancy sensors are installed in classrooms.

Many fixtures were damaged and missing components, etc. In general, the lighting was in poor condition. Some exit signs are illuminated and are in poor condition. The Convent and Chapel contains obsolete incandescent lighting.

Corridor Lighting

Classroom Lighting

Lobby Lighting

Damaged Light

Convent Light

Exit Sign

Emergency Lighting System:

The emergency lighting throughout the facility is fed via the emergency generator. The emergency lighting system is a normally off system. The custodial staff noted that the light levels were very low. There is no separation of life safety and optional standby loads. The emergency generator is located in the Boiler Room. The generator is beyond its useful life. The emergency system should be replaced in its entirety. Battery units have been added throughout the facility to supplement the failing normally off emergency lighting.

Normally Off Emergency Light Fixture

Generator

New Battery Unit

Generator Nameplate

Site Lighting System:

The lighting at the site consists of building mounted flood lights around the perimeter and utility pole lighting on utility poles. The lighting ranges from poor to good condition depending on when the lights were installed.

Fire Alarm System:

The fire alarm panel has recently been upgraded to an addressable Notifier panel. The system consists of addressable devices and horn strobes. Pull stations are mounted above 54" A.F.F. which is an ADA violation. The coverage of detection devices and the notification method is non-code complaint. The fire alarm system should be replaced in its entirety.

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FACP

Fire Alarm Notification Appliance & Non-ADA compliant pull stations

Classroom Intercom System/Clock System/Security System:

The master clock system is original vintage Lathem LTR 2-3845 and is beyond its serviceable life.

The intercom system consists of a wall mounted speaker and a telephone handset in each classroom.

The handset is mounted above 54" A.F.F. which is an ADA violation. The system is antiquated and beyond its useful life. The paging system should be replaced in its entirety. The paging system is a Bogen Model MCP25A.

Clock/ Speaker

Classroom Handset

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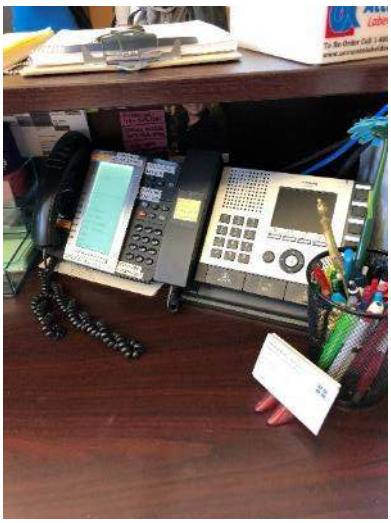
Clock System

Intercom System Head End

An intrusion system is present along with access control at key entry points. The access control system is Lenel and is a district standard. There are also Aiphone video intercoms on key entry points.

Intrusion Keypad

Aiphone



Intercom System

Tel/Data System:

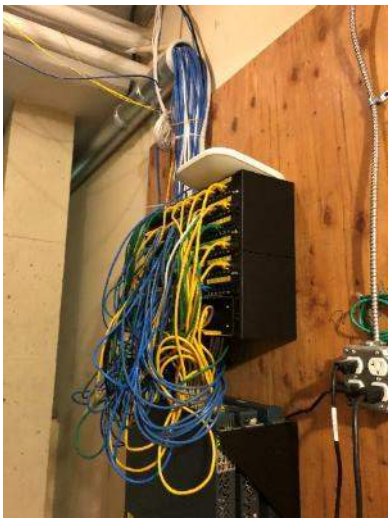
Communication service is fed from a utility pole on Walnut Park Road.

The school has a district fiber optic connection.

There is a single data wiring closet adjacent to the Auditorium that serves all data in the building. Wiring is a combination of CAT5 and CAT6.

A single closet is unable to serve the entire school due to ethernet wiring distance limitations. There is no active data on the third floor for this reason. Wireless access points are limited, there is not 100% coverage in the building.


Mitel VOIP System


MDF Data Rack


Wireless Access Point

Recommendations:

For any substantial renovation/addition program, the following would be recommended:

1. A service upgrade with a new pad mount transformer and 1,200-amp, 277/480 volt service would be recommended, along with a new distribution system with lighting, power, and mechanical panels to serve their respective systems.
2. New energy efficient LED lighting and energy code compliant lighting control system.
3. New fire alarm system with voice evacuation required for E-Use groups.
4. New generator with optional standby and life safety distribution system separated per NEC Section 700.
5. New clock system and IP paging system.
6. Additional IDF closets and new CAT6 tel/data infrastructure.
7. Expansion of existing level access control system as required to meet the security requirements.
8. A new bi-directional antennae system will be required to meet fire department two-way communications requirements.
9. An area of rescue assistance system will be required with all stations at each proposed elevator lobby and a master substation adjacent to the fire alarm annunciator panel.

3A.11 Existing Plumbing/ Fire Protection

AKAL Engineering Inc.

Existing Fire Protection Systems

There is no active fire suppression system in the building located at 150 Jackson Road. Building has no automatic sprinklers, no hose cabinets or fire department standpipes present. The existing kitchen located adjacent to the Cafeteria, has a High Pressure CO_2 system, which appears to be still in use.

High pressure CO_2 System storage tanks

Recommendations:

- If the existing building is renovated to any substantial degree, the entire building needs to be upgraded with fire suppression system per latest Massachusetts Building Code 780 CMR Chapter 9.
- The existing site water service and capacity needs to be evaluated for new requirement and to comply with the latest Commonwealth of Massachusetts building code and the National Fire Protection Association (NFPA).
- Exact static and residual flow values will need to be determined from a hydrant flow test. Fire Pump may be required if the hydrant flow test result shows inadequate flow and pressure.
- A new dedicated fire service to the building will be required from the site and which then feed the automatic fire sprinkler and standpipe systems covered throughout the building.
- NFPA-13 standard would require that all areas of the building shall be protected with wet fire suppression sprinklers. Unheated area will require a dry system.
- NFPA-14 standard would require standpipes in all egress stairs of the building.
- The CO_2 system at the kitchen, adjacent to the Cafeteria, shall be removed and replaced with a kitchen hood system.

AKAL Engineering Inc.

November 2, 2018

Existing Plumbing Systems

The building at 150 Jackson Road has received minimal maintenance on the plumbing systems and equipment over its occupied years. It appears systems will gradually deteriorate due to scale and poor water conditions. Although most of the systems are working adequately at this time, the major equipment and systems are near the end of their useful life. Along with aging systems, many of the systems are not up to current codes. If it is anticipated that if major modifications are planned for this building than the plumbing systems should be considered for an overall upgrade.

Domestic Cold Water

The domestic cold water service entrance to facility is located in the boiler room in the basement. It is 4" in size with a new backflow preventer installed recently. The domestic cold water system consists of copper pipe with soldered fittings. It is expected that the solder used in the system has a significant lead content. A couple of drinking fountains were shut down due to lead content in water. In addition, existing domestic cold water piping appears to be original and in poor condition, has outlived/exceeded its useful life and is not expected to last more than a few years without exhibiting possible failures. Infact, one of the bathrooms in the first floor was closed because of pipe break.

New backflow preventer with concrete block used as support.

Pipe insulation and valves appear to be original, in poor condition. Pipe insulation is possibly asbestos and should be evaluated for abatement. Pipe labels, flow arrows and valve tags are in limited locations throughout the system.

The existing facility has backflow preventer assemblies as required by DEP. Boiler make up water and Dishwasher is protected with backflow preventer for non-potable cross contamination. Janitor sink faucet has no vacuum breaker as required by code. The soap detergent connection to faucet is not protected and violates the plumbing code requirement.

AKAL Engineering Inc.

November 2, 2018

We recommend water quality shall be tested and monitored for any possible lead contamination and corrected if found to be at unsafe levels. If the project involves substantial renovation, we would recommend complete replacement of all domestic water piping, valves and accessories.

Domestic Hot Water

Domestic hot water for the facility is supplied from gas fired hot water boiler and is stored in two (2) 115 gallon storage tanks. The storage tanks appears to be installed in 2007. Original hot water storage tank is abandoned in place. The hot water boiler appears to be original to the building and is located in the boiler room in basement, below the cafeteria.

155 Gallon storage Tanks

Original storage tank abandoned in place

Hot water Heater

Hot water heater tag

Pipe insulation and valves appear to be original and in poor condition. Asbestos pipe insulation is suspected. Pipe labels, flow arrows and valve tags were not installed. Separate backflow preventers for non-potable hot water to the dish washer is installed. The temperature of the hot water supply is maintained through master thermostatic mixing valve. No problem with pressure, quality and hot water temperature were reported during our site visit. However, due to the pipe age, there is a probability that the water service line could be deteriorated and lead containing solder may exist in

the fittings or contain high lead content brass pipe. We recommend pressure test and water quality test and monitor for any possible lead contamination. If the project involves substantial renovation, we would recommend complete replacement of all domestic water piping, valves and accessories and install dual temperature system which would be required to satisfy code requirements for occupant fixtures (bathroom sinks) to discharge hot water at a temperature no greater than 110-112°F for safety reasons, whereas the service fixtures (janitor's sinks, kitchenette sinks, etc) are required to have hot water temperatures in excess of 120°F for sanitation reasons. The two temperature tempering system can be addressed via a separate pipe system or locally at individual fixtures.

Fuel – Natural Gas

There are two gas service entrances and are installed inside the building. One serves the old convent area boilers and convent kitchen appliances. The other gas service has two meters with one serving the emergency generator and the other serving the hot water heater, boilers and kitchen appliances near the cafeteria. Gas piping within the mechanical boiler room appears to be in fair condition.

Gas meters in boiler room, below cafeteria

Gas meter in the old convent area

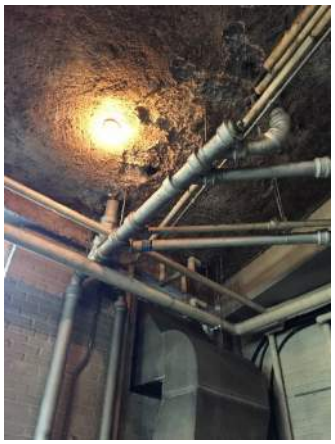
Sanitory Waste and Vent

The sanitary sewer flow is by gravity and exits the building to a municipal sewer system at three locations with two 5” cast iron lines and one 4” cast iron line. Soil piping observed was a combination of extra heavy cast iron, with bell and spigot joints. Visible vents are galvanized steel with threaded fittings. The existing sewer piping, hangers in boiler rooms of building are in fair condition. No separate kitchen waste system is present in the facility.

There are two above ground grease interceptors in the kitchen near the cafateria and one above ground grease interceptor in the kitchen at the old convent. Point-of-use grease traps are located in the kitchen at the pot sink and there is no evidence of exterior grease interceptors. Art room sink does not have inline plaster trap as required per code.

AKAL Engineering Inc.

November 2, 2018



Cast Iron Waste pipe

Greese interceptor in kitchen, near cafeteria

Greese interceptor in convent side

Greese interceptor in kitchen, near cafeteria

Waste pipe in boiler room

floor drain in boiler room

AKAL Engineering Inc.

November 2, 2018

Storm Drainage

The building has a flat roof with different levels and roof drains for storm drainage. Storm drainage piping is original and has outlived/exceeded its useful life. It is not expected to last more than a few years without exhibiting widespread problems and possible failure. The roof drains all seem to be bad condition. The drains consisted of cast metal dome tops with cast iron bodies and some were not clamped to the roof. Piping observed was No-Hub cast iron soil pipe and fittings. No problems with the roof drain system were observed. If areas have had blockages in the past we would recommend video inspection of those, underground lines to verify their condition and address them accordingly.

Roof drain above school

Roof drain above old convent

Roof drain above school

Roof drain above cafeteria

AKAL Engineering Inc.

November 2, 2018

Plumbing Fixtures

Most of the fixtures are of original vintage condition. All observed fixtures are not of water saving type. Due to the fixture age, maintenance is routinely required on faucets, toilet fill valves, to keep fixture operational. Water closets are not of consistent style in the building. All fixtures are wall mounted type. Most of flush valve are not equipped with water conserving 1.6 gallon per flush type valve. The lavatory sinks are of the wall hung type and has manual faucet. The faucets are not metered and do not comply with latest water conservation requirement. Majority of toilets are not equipped with ADA / MA accessibility compliance toilet fixtures. Urinals have flush valve. The existing buildings plumbing systems will need to be verified for adequacy in quantity based on planned occupancy use. Drinking fountains observed are not ADA compliant. There are no sinks in classrooms. In the kitchen near the cafeteria, three-bowl pot/scullery sink has above ground grease trap connection prior to regular sanitary connection. Janitor closets in the facility has wall mounted utility sinks. The faucet of janitor sink has no vacuum breaker for backflow prevention. The old convent building has showers, which are not used.

Lavs at the boy's room

Urinal in boy's room

Water closet and lavatory in toilet room

Lavs in boy's room

AKAL Engineering Inc.

November 2, 2018

Drinking fountain

Sinks in old labs

Mop sink in janitor's closet

Three-bowl pot/scullery sink in kitchen, near cafeteria

Cleaning room mop sink in convent

Shower room in convent

During a substantial renovation and addition project, code would require that all the water closets, lavs, etc. be modified to be of the water conservation type and that of those, a certain percentage would be required to be ADA complaint. In addition, water of the appropriate temperature would be required to be supplied to fixtures whether by a dual temperature piping system or with the use of tempering valves and/or fixtures.

AKAL Engineering Inc.

November 2, 2018

Summary of Existing Systems

- Existing building does not have a sprinkler/standpipe system. Any substantial renovation to the building will need to provide a new sprinkler/standpipe system.
- The domestic hot/cold water pipes are lead soldered and water shall be periodically tested for quality. The hot water boiler is original to building and near its useful life. Any substantial renovation will need to upgrade the systems.
- The waste/vent system are original to the building and kitchen waste is not seperated. Any substantial renovation will need to upgrade the systems.
- The storm piping system are original to the building and some storm drains are not securely clamped. Any substantial renovation will need to upgrade the systems.
- Most plumbing fixtures are original to the building and near its useful life. Any substatial renovation will need to meet ADA /energy code requirements and plumbing fixture quantity will be required to be reviewed to meet population counts.
- Recommend video inspection of underground sanitary and storm piping to verify their condition and address them accordingly.

SECTION 3B – 687 WATERTOWN STREET
EVALUATION OF EXISTING CONDITIONS

3B.1 Existing Conditions

The current building at 687 Watertown Street in Newton, Massachusetts was built in 1964 as "Horace Mann School". The site is a 69,433 SF lot size with an existing three-story, 41,019 Gross Building Area SF building at the center of the site according to the Assessors report card, see Appendix 5.18.

The building is currently used as a Kindergarten through Fifth grade elementary school for approximately 400 students (*November 2018 Enrollment Analysis Report*). Currently there are five temporary modular classrooms located at the south-east corner of the building. Due to the sloped site, entry to the building is at the north and south ends of the middle level, which currently have program for administration and classrooms. Originally an 'open concept' school building, the upper level is primarily classroom space, with some administrative areas. The middle level is classroom and administration, and the lowers level is a multi-purpose room, gymnasium, storage, and food service area. There is no cafeteria in the building; therefore students eat lunch in their classrooms. Students may purchase lunches from the lower level prep kitchen.

The site is situated on the corner of Albemarle Road and Watertown Street. North of the site is a drive aisle to the school administration parking lot with 20 parking spaces. Across from the drive aisle is the Albemarle Playground which is used by the current elementary school and open to the community. The neighbor to the East of the site is the Boys and Girls Club of Newton, with an adjacent parking lot. Albemarle Road is to the West of the site, and Watertown Street boarders the South.

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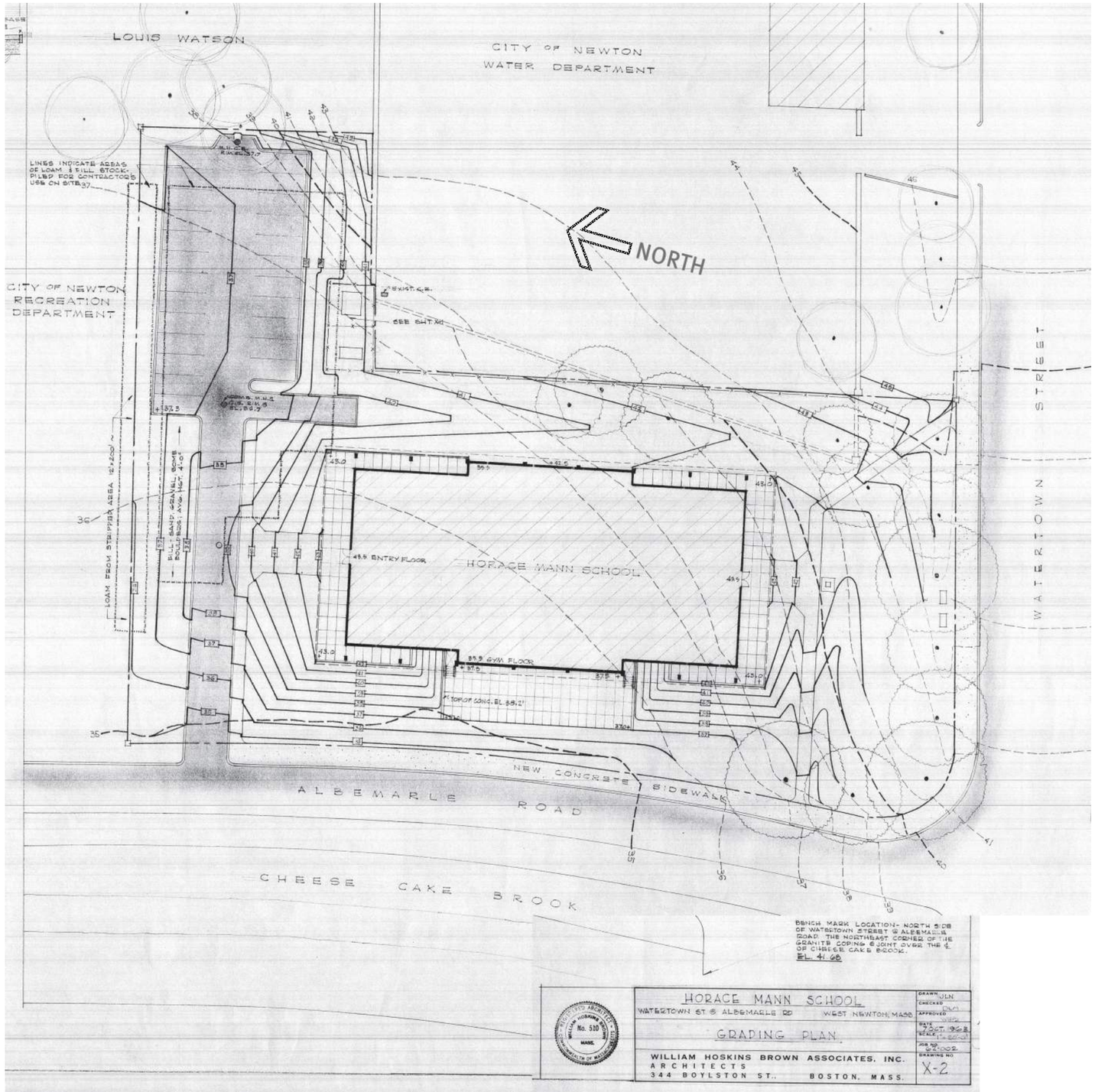
3B.2 Existing Conditions Floor and Site Plans

EXISTING AERIAL


LOUIS WATSON
CITY OF NEWTON
WATER DEPARTMENT
NORTH
CITY OF NEWTON
RECREATION
DEPARTMENT
LINES INDICATE AREAS OF LOAM & FILL STOCK-PILED FOR CONTRACTORS USE ON SITE
SEE SHT X-1
WATERTOWN STREET
HORACE MANN SCHOOL
48.9 ENTRY FLOOR
43.0
35.9 GYM FLOOR
37.5
1" TOP OF CONC. EL. 38.21'
NEW CONCRETE SIDEWALK
ALBEMARLE ROAD
CHEESE CAKE BROOK
LOAM FROM STRIPPING AREA 12"±DEEP
FILL: SAND, GRAVEL, STONE BOULDERS; AVG. HGT. 4'-0"±
BENCH MARK LOCATION- NORTH SIDE OF WATERTOWN STREET @ ALBEMARLE ROAD. THE NORTHEAST CORNER OF THE GRANITE COPING @ JOINT OVER THE ℄ OF CHEESE CAKE BROOK.
EL. 41.68
HORACE MANN SCHOOL
WATERTOWN ST & ALBEMARLE RD WEST NEWTON, MASS
GRADING PLAN
WILLIAM HOSKINS BROWN ASSOCIATES, INC.
ARCHITECTS
344 BOYLSTON ST., BOSTON, MASS.
DRAWN JLN
CHECKED DAO
APPROVED WHB
DATE 7 OCT 1963
SCALE 1"=20'-0"
JOB NO. 6306.02
DRAWING NO. X-2

3B.3 Zoning & Property Restrictions

Property Development Restrictions

The 687 Watertown Street school is currently occupied by the Horace Mann Elementary School. When the renovations of the Cabot Elementary School are completed in September 2019, the Cabot Elementary School population will move out of the existing Carr School at 225 Nevada Street, allowing the Horace Mann population to move to the 225 Nevada Street location for their permanent location. The 687 Watertown Street property then becomes available for further development to support the Newton Early Childhood Program. The following is a detailed evaluation of potential development restrictions on the site.

Easements

There were no known easements identified during the initial site survey research. A full site survey will be completed in a subsequent phase of the project.

Protected Resources

The Newton Geographic Information System (GIS) indicates that a large portion of the site is located in the River Protection Act Area, including a wetlands buffer zone and the 200-foot Riverfront area associated with Cheese Cake Brook. Redevelopment of the site will require permitting through the Newton Conservation Commission and under the Department of Environmental Protection's Wetland Protection Act. The site is not identified as protected by the Water Supply Protection Zone, Priority Habitat of Rare Species, Estimated Habitat of Rare Wildlife, or Area of Critical Environmental Concern (ACEC).

Floodplain

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the site is within an Area of Minimal Flood Hazard Zone X, which is identified as an area outside the 100-year floodplain. Therefore, there are no permits required with respect to the floodplain.

Zoning

Referenced in this Zoning section is the Newton City Ordinances, Volume II, Chapter 30: Zoning Ordinance, Updated 12-11-2018, cited as the "City of Newton Zoning Ordinance". The site at 687 Watertown Street is zoned as Public (PUB) Use (see Zoning Map in Appendix 5.20). A school is considered an Institutional Use (Section 2.3.1 Principal Uses Allowed) which is an allowed use in a Public Use District (Section 2.2.1. Public Use District). The use shall be subject to a Site Plan Review (outlined below), and is not otherwise subject to dimensional, parking, or any otherwise applicable zoning requirements. (Section 2.3.1 Principal Uses Allowed)

Site Plan Approval Process

As an educational use, the Lincoln-Eliot School project is subject to the Administrative Site Plan Review (ASPR) per Section 7.5.2 Process for Religious or Educational Use, of the City of Newton Zoning Ordinance. This process governs the review of uses protected under Massachusetts General Law (MGL) Chapter 40A, Section 3, also known as the "Dover Amendment."

The Planning and Development Department is responsible for overseeing the Administrative Site Plan Review process for "the construction, alteration, enlargement, reconstruction, or change of use of buildings for religious or non-profit educational

purposes". The City of Newton follows a Site Plan Approval process through the Rules and Orders of City Council. The Administrative Review Process can take up to 60 days and is summarized in Appendix 5.21 Administrative Site Plan Review Application and Process.

3A.4 Methods & Assumptions

The following summary of existing conditions information was provided by the City of Newton:

- Original blueprint drawings of the Horace Mann School, dated October 7, 1963, by William Hoskins Brown Associates Inc, Architects
- Modular Classroom construction drawings at Horace Mann, dated November 17, 2011, by HMFH Architects, Inc.
- Window Replacement Bid Documents at Horace Mann, dated March 14, 2013, by Knight, Bagge and Anderson Architects (KBA Architects)
- Modular Classroom Bid Documents at Horace Mann, dated April 11, 2013, by HMFH Architects, Inc.
- AHERA 3-year Re-inspection, dated December 10, 2015 by FLI Environmental
- EPA- AHERA 6 month Asbestos Re-inspection, dated May 17, 2018, by FLI Environmental
- Site Contamination Summary Fact Sheet re: Fuel Oil Spill Cleanup DEP RTN 3-16552 (Appendix 5.22)
- Test Report of Roof Cores, dated October 9, 2018, by Universal Environmental Consultants

The following list of recent capital projects was provided by the Newton Public Building Department:

- In 1986, a hot applied built up roof system was installed.
- In 2002, two modular classrooms were moved and installed on the north side of the school.
- In 2006, a new gas fired steam boiler was installed to supplement the existing 1970 steam boiler that is used in emergencies only.
- In 2007, one modular classroom was constructed on the north side of the school.
- In 2011, one modular classroom was constructed on the north side of the school.
- In 2012, a fire suppression system was installed throughout the school. *http://www.newtonma.gov/civicax/bids/inc/blobfetch.aspx?blobid=41859*
- In 2012, a new unisex fully accessible restroom was constructed next to the main office.
- In 2013, one new modular classroom was constructed on the northeast side of the school. It was added to the four existing modular classrooms at the school. *http://www.newtonma.gov/civicax/bids/inc/blobfetch.aspx?blobid=51244*
- In 2013, the windows were replaced throughout the school. *http://www.newtonma.gov/civicax/bids/inc/blobfetch.aspx?blobid=49913*
- In 2013, the asbestos containing tile (ACT) and mastic was removed from the hallways and closets on the second floor.

- In 2014, the asbestos containing tile (ACT) and mastic was removed from the hallways and closets on the main floor.
- The vast majority of the asbestos containing tile (ACT) and mastic has been replaced with vinyl composition tile (VCT) in the remainder of the school over the past 5 years. The most recent AHERA inspection report is dated May 17, 2018

The following tasks were completed as part of this review:

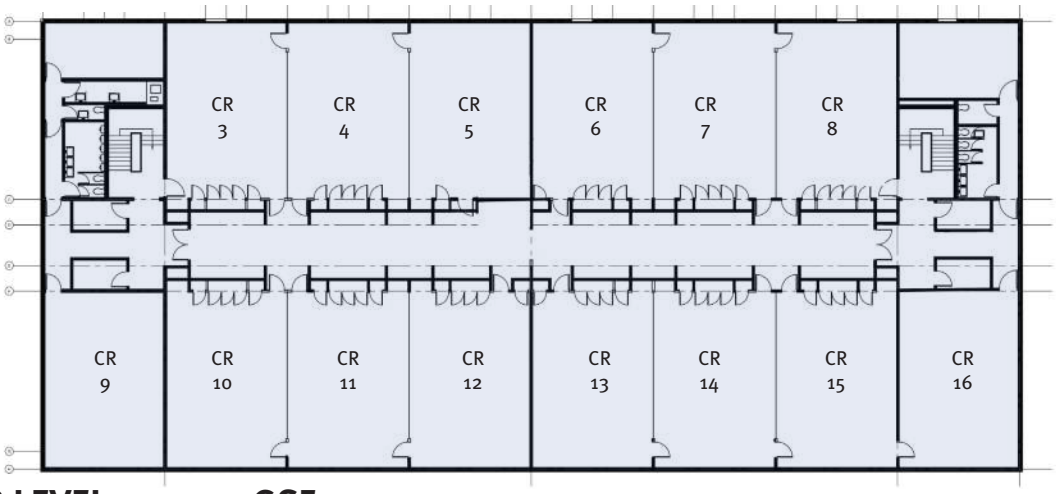
- The design team, including architectural, structural, mechanical, electrical, plumbing engineers, and the code consultant visited the building and visually assessed the condition of the existing building and systems.
- The civil engineer has reviewed existing site conditions

The following items were not available at the time of the existing conditions review:

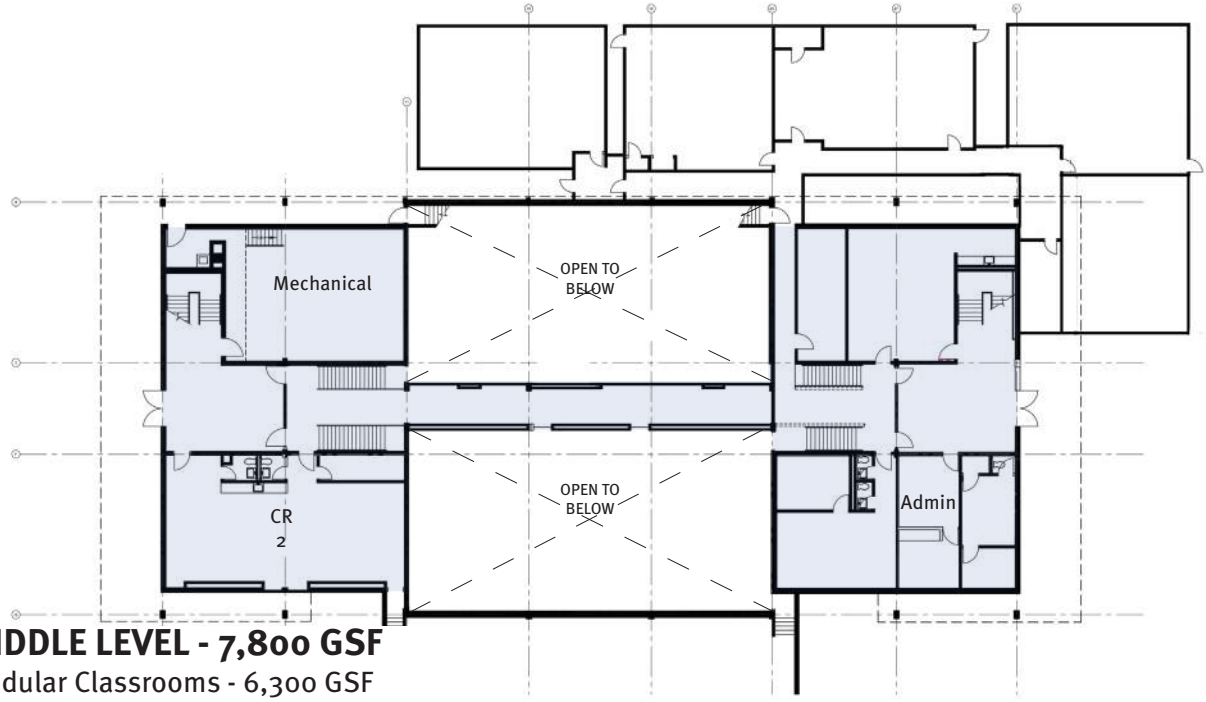
- A site survey of the property was not available at the time that the existing conditions information was being reviewed.
- A traffic study report had not been performed at the time of this report.

EXISTING FLOOR PLANS

**All SF/ GSF is approximate and to be verified*

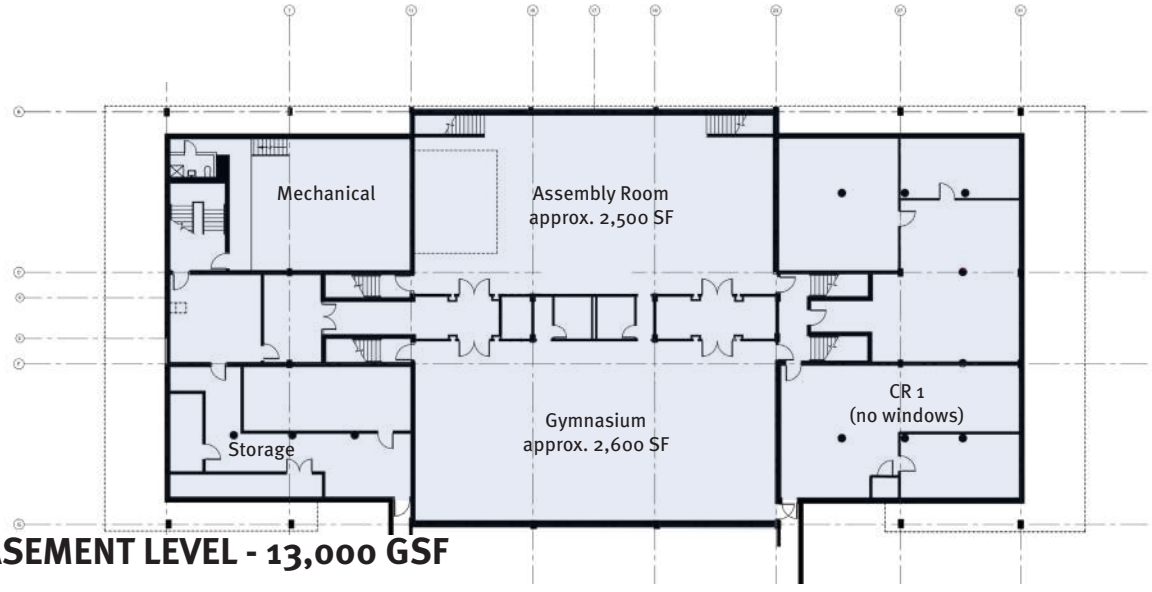


UPPER LEVEL - 17,200 GSF



MIDDLE LEVEL - 7,800 GSF

Modular Classrooms - 6,300 GSF



BASEMENT LEVEL - 13,000 GSF

3B.5 Existing Building Conditions

The building at 687 Watertown Street is located at the corner of Albemarle Road and Watertown Streets. The rectilinear building consists of two levels above grade, and a lower level that is partially below grade. The upper level cantilevers over the ground level on all sides.

Site

In response to a fuel oil spill cleanup on site (see Site Contamination Summary, Appendix 5.22), the most recent groundwater sampling completed in February 2017 indicates compliance with applicable cleanup standards at all locations with the exception of two areas. One of these areas is located under the basement concrete slab foundation, and the other outside the building near the front entrance and parking lot. Further analysis of the site and grading is discussed in Section 4.

Exterior Building Envelope

The cornerstone on the building shows that the building was constructed in 1964, and appears to be in adequate condition for its age. The building envelope is a brick veneer with concrete window surrounds at the upper level. The middle level is composed of CMU. Reinforced concrete columns support the upper level. There is some evidence of displaced masonry and spalling concrete around the exterior concrete piers and walls. It is unknown at this time if the building envelope has insulation. Based on visual review of the existing building and the construction drawings, it appears that the existing exterior walls do not meet current energy code requirements or sustainable design goals.

The windows, and some exterior doors, were replaced in 2013. PCB in the areas of the windows was abated at that time.

Interiors

There have been some recent improvements to the interior, although a majority of the interior finishes in the building, including the doors, ceilings, fixtures, and casework, are original to the building, in poor condition and should be replaced.

Accessibility deficiencies were identified in several areas of the building, including:

- need for an elevator,
- door opening clearances,
- door hardware sets,
- toilet rooms/ plumbing fixture clearances, quantity, and access,
- stair and walkway railings,
- stair nosing,
- no protected egress path (stairs are open from floor-to-floor)
- signage
- secondary corridors are too narrow (3 feet)

Accessibility upgrades will be required if the extent of the proposed renovations exceed 30% of the value of the building (521 CMR 3.3 Existing Buildings)

Also, the AHERA 6-Month Periodic Surveillance Re-Inspection completed 4/25/2018 lists several areas where there are possible asbestos containing materials in the building, including 9'x 9' floor tiles and heating system insulation.

Building Systems

The majority of the building HVAC systems appear original to the building and have reached or exceeded their serviceable life. The systems are inefficient and require substantial repairs or upgrades to meet current standards and energy efficiency.

The fire protection/sprinkler system in the building was installed in 2012.

The electrical systems have reached their life expectancy and are in poor condition. The interior lighting was observed to be not energy efficient, or connected to automated building controls as required by the energy code.

Most plumbing fixtures and accessibility clearances do not meet current code and are not water efficient. The building will need to be evaluated to address the needed number of fixtures to serve the projected population.

The following sections of this report provide more detailed analysis of the existing site, building structure, and building systems from the Design Team.

	687 Watertown Street
Site and Civil	
Observations	
Parking spaces	22 On site
Existing play structures	●
Neighborhood concerns	Unknown
Existing parking lot pavement	◎
ADA accessible site	●
Separation of vehicles and pedestrians	◎
Hazardous soils *	Unknown
Wetlands buffer zone (Wetlands Protection Act)	●

Architecture and Code	
Observations	
Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	◎
Fire protection system	◎
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

	687 Watertown Street
Structural	
Observations	
Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	●
Concrete spalling	●
Noticeable floor deflection	●
Plumbing and Fire Protection	
Observations	
Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	◎
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	n/a
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

	687 Watertown Street
Heating, Ventilation, and Air Conditioning (HVAC)	
Observations	
Chiller	n/a
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

Electrical	
Observations	
Life safety lighting	n/a
Backup generator	●
Fire alarm system	●
Lighting systems	◎
Lightning protection system	n/a
Tel/ Com and IT Systems	●
Building communication system	●
Main switchboard and branch circuit panels	◎
Receptacle quantity and quality (GFCI)	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

3B.6 Code & Accessibility Analysis

BUILDING, FIRE & ACCESS, INC.

17 Brian Road ◇ Lancaster, MA 01523

NEWTON SCHOOL
687 WATERTOWN STREET
687 WATERTOWN STREET, NEWTONVILLE, MA 02460
Code Compliance Considerations - Existing Conditions Report

Prepared For:

Arrowstreet, Inc.
Suite 700N
10 Post Office Square
Boston, MA 02109

BFA #180049.000

November 14, 2018

Executive Summary

687 Watertown Street has been reviewed to determine what minimum upgrades are necessary to bring the building into compliance with current codes for fire protection, egress and accessibility.

SUMMARY TABLE – 687 WATERTOWN STREET	
Uses	Educational, E with Accessory A & B
Special Uses	None
Historic	No
Mixed Use Approach	Nonseparated Mixed Use must be Presumed
Risk Category	III
General Building Height & Area	Compliant for Type IIB
Exterior Walls & Openings	Compliant with fire separation distances which allow nonloadbearing walls to be nonrated and have unlimited unprotected openings
Sprinklers	Provided Throughout
Standpipes	Not Required
Fire Extinguishers	Required Throughout
Fire Alarm System	Voice alarm system is required throughout
Emergency Responder Radio Coverage	Not required but should be provided throughout
Exits	Compliant
Accessibility	The building is compliant with the $100,000 threshold. The building is not compliant with 521 CMR regarding a number of issues including most public restrooms, accessible routes, door hardware, stair nosings, handrails, etc. With such a low 30% threshold it is likely an appreciable project will require numerous upgrades to make compliant with 521 CMR.
Plumbing Fixtures	Not compliant with current code for student and staff fixture counts.

Building, Fire & Access, Inc.

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Building, Fire & Access, Inc.

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INTRODUCTION

BACKGROUND

Arrowstreet, Inc. has retained Building, Fire & Access, Inc. to provide fire protection, life safety, and accessibility consulting services to review the Newton School at located at 687 Watertown Street, Newtonville, MA 02460. This report serves as a Code Compliance Considerations - Existing Conditions Report for the building. More specifically, this report identifies upgrades required to bring the school up to current code in terms of fire protection systems, life safety features and accessibility for persons with disabilities.

APPLICABLE CODES

The following primary codes are currently applicable to Massachusetts construction projects. This report focuses on 780 and 521 CMR considerations.

- **Accessibility**
  - Massachusetts Architectural Access Board (521 CMR).
  - The Americans with Disabilities Act, 2010 ADA Standards for Accessible Design (ADA).

- **Building Code** - Massachusetts State Building Code 9th Edition (780 CMR). 780 CMR is an amended version of the 2015 International Building Code.
  - **Existing Building Code** – 780 CMR Chapter 34. Chapter 34 is an amended version of the 2015 International Existing Building Code (IEBC).
  - **Energy Conservation Code** – 780 CMR Appendix AA. Appendix AA (also known as the Stretch Energy Code) is an amended version of the 2015 International Energy Code (IECC).
  - **Mechanical** - International Mechanical Code, 2015, as adopted by 780 CMR (IMC).
  - **NFPA 13** – 2013 - Standard for the Installation of Sprinklers
  - **NFPA 14** – 2013 - Standard for the Installation of Standpipes
  - **NFPA 72** – 2013 - National Fire Alarm Code
  - **NFPA 25** – 2014 - Standard for the Inspection, Testing & Maintenance of Water Based Fire Protection

- **Fire Code** - Massachusetts Comprehensive Fire Safety Code (527 CMR). Anticipated 527 CMR will be an amended version of the 2015 NFPA 1, National Fire Code.
  - **Electrical Code** - Massachusetts Electrical Code, 527 CMR 12.00. The Massachusetts Electrical Code is an amended version of the 2017 National Electrical Code (NFPA 70).

- **Plumbing** - Massachusetts Fuel Gas and Plumbing Codes (248 CMR). 248 CMR is unique to Massachusetts.
  - **NFPA 54** – 2012 – National Fuel Gas Code with Amendments

- **Elevator** – Massachusetts Elevator Regulations (524 CMR). 524 CMR adopts and amends the 2013 Edition of ASME A17.1, Safety Code for Elevators and Escalators.

ASSUMPTION

The code review and this report have been prepared based on the assumptions that if any hazardous materials are to be located within the building, now or in the future, the amount of such materials will be limited to the exempt amounts permitted by 780 CMR.

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ASSESSED VALUE

The assessed values of the building is used in the determination of thresholds which may trigger sprinkler and accessibility compliance. The values used are the building assessed value not including the land value.

- The Newton Assessor's database identifies 687 Watertown Street has a 2019 assessed value is $16,824,500.00 for the building and land.

A breakdown of the building only value is needed for a complete review of threshold triggers. The following table contains a summary of threshold values using the total assessed value for the interim.

Location	Assessed Building Value	30%	33%
687 Watertown Street	$16,824,500.00	**!B3 Is Not In Table**	**!B3 Is Not In Table**

Table 1- Assessed Value

GENERAL CONSIDERATION

Most of the applicable codes and laws do not contain retroactive provisions with limited exception. Required code upgrades are often based on the extent and/or cost of proposed work. For the purpose of this review, the upgrades identified for fire protection systems, life safety features and accessibility compliance are based on the specific concept to bring the schools into compliance with current criteria for fire protection, life safety and accessibility.

RETROACTIVE REQUIRMENTS

In general, 780 CMR & 527 CMR do not have retroactive provisions except as follows:

1. **Maintenance Provisions (780 CMR 102.8 and 527 CMR 1.03)**
   Maintenance provisions can be enforced to require any work necessary to maintain compliance with codes at the time of construction or last substantial renovation.

2. **Existing Means of Egress, Lighting and Ventilation (780 CMR 102.6.4)**
   This provision may be enforced regardless of compliance at the time of original construction or last substantial renovation. The provision is specifically intended to ensure minimally:

   a. Adequate number of exits
   b. Adequate exit capacity
   c. Adequate exit arrangement
   d. Adequate lighting
   e. Adequate ventilation

   If in the opinion of the building code official any of these are not adequate, abatement orders may be issued.

The available exits satisfy the required number of exits (Item 2.a) and the required capacity (Item 2.b.). Item 2.c, adequate exit arrangement is a subjective provision but generally is enforced only for specific notable issues (i.e. locked exits, improper exit enclosure, dangerous guardrails, etc.). The arrangement of exits in the building is satisfactory in my opinion. The existing lighting and ventilation (Items 2.d & 2.e) appear to be adequate and should be considered acceptable if maintained properly.

Building, Fire & Access, Inc.

MASSACHUSETTS GENERAL LAW CHAPTER 148 SECTION 26G

The Massachusetts General Law Chapter 148 Section 26G (M.G.L.c.148 §26G) is the state's enhanced sprinkler law and would be applicable to the building because it has an aggregate area greater than 7,500 gsf. For existing buildings, the law would be triggered if an addition is made or if a substantial renovation were to occur. A tragic fire event in Newton several years ago served as the impetus for the enhanced sprinkler law.

- 687 Watertown Street complies with M.G.L.c.148 §26G.

The remainder of this report considers the provision of sprinklers throughout.

BUILDING SYSTEMS AND FEATURES

USE AND OCCUPANCY CLASSIFICATION

The building is classified as Educational, E Use. Under the current code, all assembly spaces are considered accessory for the purpose of construction classification and plumbing fixtures. Otherwise, use criteria is applicable based on the respective space.

Educational, E	School
Accessory A-2	Cafeteria/Dining
Accessory A-3	Spaces with occupant loads greater than 50… such as libraries, conference rooms, gymnasiums without spectator seating)
Accessory B	Offices
Accessory S	Storage

CONSTRUCITON

The existing construction appears to be either Type IIB (0 hour). More detailed review is required to confirm.

The building construction is compliant and possible additions could be made with the area limitations of the code without requiring upgrade to the construction. The allowable limits are:

Type IIB, 75 Feet, 3 Stories, 79,500 gsf/ Story, 237,000 gsf/Aggregate

EXTERIOR WALLS

The fire separation distance setbacks are such that nonloadbearing exterior walls are permitted to be nonrated and have unlimited unprotected openings.

INTERIOR FINISHES

Chapter 8 of 780 CMR regulates interior finish and trim of the building. Interior finish includes all wall, ceiling and floor finishes, wainscoting and paneling or other finish applied structurally or for acoustical treatment, insulation, decoration or similar purposes (780 CMR 801.1).

WALLS AND CEILINGS

All interior finish and trim must be classified per ASTM E84 as follows:

Interior Finish Classifications		
Classification	Flame Spread	Smoke Development
Class A	0 – 25	0 – 450
Class B	26 – 75	0 – 450
Class C	76 – 200	0 – 450

Table 2 - Interior Finish Classifications

Finishes having a flame-spread rating in excess of 200 or a smoke-developed rating in excess of 450 are not permitted. The following table summarizes required interior finish requirements for walls and ceilings.

Wall and Ceiling Interior Finish Requirements (780 CMR Table 803.9)			
Use Group	Required Vertical Exits and Passageways	Exit Access Corridors and Other Exit ways	Rooms or Enclosed Spaces
E, B	B	C	C
A-2/A-3/A-4	B	B	C
S	C	C	C

Table 3 - Interior Finish Requirements

FLOORS

Class II flooring finishes are permitted throughout. All finishes must pass the DOC FF-1 Pill Test or ASTM D2859.

DECORATIONS AND HANGINGS

Combustible decorations and hangings (such as curtains) must pass NFPA 701 and may not cover more than 10% of walls.

527 CMR also contains specifics for schools in terms of hangings and covering of walls with various materials.

Such decorations and hangings are not permitted on exit doors.

FIRE PROTECTION SYSTEMS

The following fire protection life safety systems are required:

1. Sprinklers are required throughout.
2. Standpipes are not required.
3. Fire Extinguishers are required throughout.
4. A Voice Alarm Fire Alarm System is required throughout.
5. CO Detection is required in each classroom and in rooms where fossil fuels are utilized.
6. Emergency Responder Radio Coverage is required throughout to meet new construction criteria.

EXITS

The egress features available provide adequate egress for the retroactive criteria and technically is compliant. However, many detail criteria are not compliant including:

- Stair Nosings
- Handrails
- Guardrails
- Door Hardware
- Door Propping Devices/Wedges

Any and all work will require complete egress system upgrades to the work area and possibly beyond.

ACCESSIBILITY

CHAPTER 12 – EDUCATION FACILITIES

Educational facilities must comply with 521 CMR, except as specified or modified in 521 CMR 36.00. All administrative spaces, instructional spaces, and areas open to students or the general public must comply with 521 CMR. Lecture halls and classrooms of educational facilities must also comply with Chapter 26.00, Places of Assembly.

KITCHENS IN CLASSROOMS

If provided, kitchens in classrooms must comply with the requirements of 521 CMR 28.00: Kitchens.

SINKS, COUNTERS, AND OTHER WORK AREAS IN CLASSROOMS OR LABORATORIES

At least 5%, with a minimum of one of each type of element, in each classroom or laboratory must comply with 36.4.

RECREATIONAL FACILITIES

All recreational facilities must comply with the requirements of 521 CMR 26.00 Places of Assembly, 49.00 Exercise Machines and Equipment, 54.00 Swimming Pools, Wading Pools and Spas, 56.00 Locker Rooms, and 59.00 Play Areas.

OTHER 521 CMR CONSIDERATIONS

ACCESSIBLE ROUTES

Accessible routes within the site must be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. All public entrances are required to be accessible. It is required that at least one accessible route connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site. As previously noted in the accessible egress section of this report, areas of rescue assistance/areas of refuge are not required in the building (780 CMR 1009.3 Exceptions 2 & 5 and 521 CMR 8.12 Exception 1).

PUBLIC TOILET ROOMS

All public toilet rooms must be accessible. Within the public restrooms, the clear spaces required for the accessible route, the turning space(s) and the fixture(s) is permitted to overlap. Where multiple single user toilet rooms are provided, all must be made accessible except where multiple single user toilet rooms are grouped together and accessed

from a common door. Where multiple single user toilet rooms are accessed from a shared door, this arrangement functions as a public toilet room and only one single user toilet room is required to be accessible. This is consistent with the number of toilet stalls that would be required to be made accessible in a conventional public toilet room.

DOORS

All doorways and openings required to be accessible have a clear opening of not less than 32 inches. A minimum clear floor area must be provided on both sides of all non-automatic doors and gates. The minimum space between two hinged or pivoted doors in series must be 48 inches, plus the width of any door swinging into the space. Doors in series must swing either in the same direction or away from the space between the doors.

STAIRWAYS

Stairways must have continuous handrails on both sides of all stairs. Where handrails terminate at the top and bottom of a stair run, they must have extensions. Ends of handrails are either rounded or returned smoothly to the floor, wall, or post. Extensions on handrails that are not attached to walls must be returned smoothly to the floor or a post. Extensions are not required where such extensions would cause a hazardous condition. When a handrail is mounted adjacent to a wall, the clear space between the handrail and the wall must be 1½ inches.

DRINKING FOUNTAINS

Drinking fountains include water coolers. Drinking fountains, when provided, must comply with the following requirements.

1. All drinking fountains shall be accessible and on an accessible route.

2. Either two drinking fountains shall be provided (one hi and one low) or a single combined hi/lo fixture shall be provided.

REACH RANGES

Forward Reach

If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches. The minimum low forward reach is 15 inches.

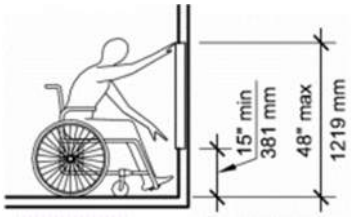

Figure 1 - Forward Reach Limits

If the high forward reach is over an obstruction, reach and clearances shall be as shown below.

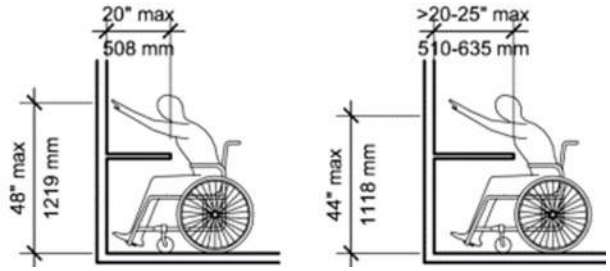

Figure 2 - Maximum Forward Reach Limit over an Obstruction

Side Reach

If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches and the low side reach shall be no less than nine inches (above the floor (See Fig. 6m). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6n.

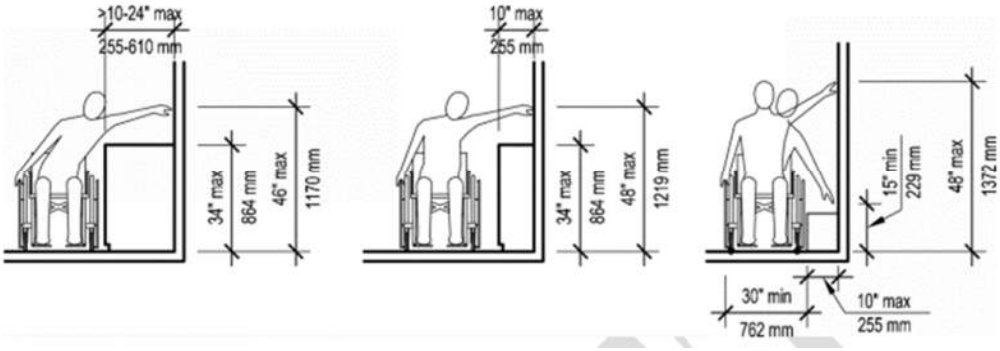

Figure 3 - (521 CMR Figures 6m & 6n) High and Low Side Reach & Maximum Reach over an Obstruction

TRANSACTION COUNTERS

Where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall comply with the following.

a) Location: The counter shall be on an accessible route
b) Length: A portion of the counter shall be at least 36 inches in length and be located closest or nearest the cash register.
c) Height: That portion of the counter shall not exceed 36 inches above the finish floor

PLUMBING FIXTURE REVIEW (248 CMR)

A plumbing fixture review was completed against Section 10:10 (18) and 10:10 (18): Table 1.

The plumbing code requires fixtures to be provided based on the uses in the building and the occupant load established for the uses. The plumbing code contains a number of provisions specific to Educational uses. One of the most impactful provisions is the criterion to require separate facilities for students and staff:

> *248 CMR 10.10 (18) (h) (3) - Separate toilet facilities shall be provided for teachers and other staff employees. These toilet facilities shall be in addition to the requirements of 248 CMR 10.10(18): Table 1, See Educational Use Group E (staff) for teacher occupancy toilet facility requirements.*

In addition, for cafeterias where cooking and/or preparation of food is performed, separate facilities must be provided for cafeteria staff.

PLUMBING FIXTURE FACTORS

The factors for Educational uses are as follows:

Fixture	Kindergarten	Elementary School	Faculty (Staff)	Multi-Purpose
Women's Water Closets	1/20	1/30	1/20	1/200
Men's Water Closets	1/20	1/60	1/25	1/600
Men's Urinals	-	1/60	33% substitution	1/200
Lavatories for Each Sex	1/20	1/60	1/40	1/200
Water Fountains	1/75	1/75	-	-
Service Sinks	One Service Sink is required for each floor			

Table 4 - Plumbing Fixture Factors

DRINKING FOUNTAINS

Hi/lo drinking fountains are required per 521 CMR and ADAAG. Numerous hi/lo fountains utilize separate hi and lo bowls with individual spouts for each bowl. If a "hi/lo" fountain is provided but utilizes a single supply line and a single drain, it has been interpreted to be counted as a single fixture. If however, separate supply and drain lines are provided for each bowl, then it may be counted as two fixtures.

OCCUPANT LOADS

The occupant loads to be used in determining fixtures must be established by the authority having jurisdiction. Frequently, the calculated occupant loads are used in the absence of the approval of the authority to use actual programmed occupancy. In the case of schools, it is not uncommon for actual populations to be used. In these cases, the authority must still provide approval. In recent discussions with the plumbing board staff, it has been noted that in no case should the fixtures provided serve less than 50% of the calculated occupant load. In any case, once the occupant load is established, if the application of the factors results in a fraction, the fraction is to be rounded up.

EXISTING CONDITIONS

The existing fixtures for the various grades and staff are not compliant with the current 248 CMR criteria.

END OF REPORT

Building, Fire & Access, Inc.

3B.7 Existing Civil

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MEMORANDUM

TO: Jessica Bessette, AIA, LEED AP BD+C

FROM: Deborah M. Danik, PE, LEED AP BD+C

DATE: November 2, 2018

RE: 687 Watertown Street, Newton, MA
Existing Conditions Report

Nitsch Project #13033.3

Nitsch Engineering has performed research of the existing site conditions and anticipated site permitting requirements for the redevelopment of the existing Horace Mann School located at 687 Watertown Street in Newton, Massachusetts. The site is being evaluated for the use of the relocated Newton Early Childhood Education Program. Information included in this report is based on a site visit on October 5, 2018, review of record plans and compiled documents from Arrowstreet, and the City of Newton and State Geographic Information Service (GIS) data.

A summary of Nitsch's observations and findings are listed below.

SITE CONDITIONS AND OPERATIONS

The existing approximately 1.6-acre site is located in an urban area and bounded by the public road Albemarle Road and Cheese Cake Brook to the west, a City of Newton public park to the north, a private site to the east, and the public road Watertown Street to the south. The site is comprised of the existing building, landscaped and pedestrian areas, and a parking lot. The building abuts Watertown Street and Albemarle Road, with landscaped frontage. The parking lot is located on the northeast side of the site. The existing site generally slopes up from the northwest along Albemarle Road and Cheese Cake Brook to the high side of the site at the southeast corner on Watertown Street. Record documents indicate there is approximately a 10-foot elevation change between the west and east sides of the site, with the highest point of the site at the southeast. The majority of the site is steeply sloped, with the building sitting higher on the site to meet the Watertown Street elevation.

VEHICULAR ACCESS

The site is accessed by all vehicles for parking, operations and maintenance, and deliveries through one (1) two-way driveway entrance on Albemarle Road. The driveway runs from Albemarle Road along the north side of the building to the parking lot on the northeast side of the site. There is a signed student drop off/pick up location adjacent to the school on Albemarle Road for use during certain hours.

ON-SITE PARKING

There is an existing parking lot on the northeast side of the site with 22 striped parking spaces, including one signed and striped accessible parking space, accessed from the Albemarle Road driveway. The accessible parking space meets the code required number of parking spaces, but the dimensions and grades of the parking spaces and access walkways to the main entrance will need to be evaluated to determine whether the areas meet current code requirements of the Americans with Disabilities Act (ADA) regulations. At the time of the site visit, all parking spaces were full, except the accessible parking space. There are also public parking

spaces along Albemarle Road adjacent to the park and near the school. At the time of the site visit, many of the public parking spaces were full.

The existing paved main parking lot pavement is in poor condition and shows indications of previous repairs including patching, seal coating, and crack sealing. The existing pavement should be further evaluated for rehabilitation given the existing condition.

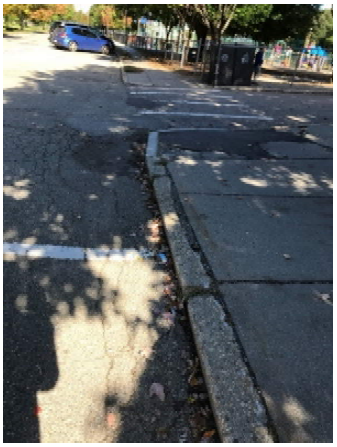
Photos 1 & 2: Parking lot layout and pavement condition (left photo) and driveway pavement condition (right photo)

PEDESTRIAN ACCESS

Pedestrians can access the main entrance of the building from walkways connected to Albemarle Road on the southwest side of the site and Watertown Street on the southeast side of the site. Accessible pedestrian access to the lower level of the building is signed and available at the middle of the building on Albemarle Road. There is a sidewalk along the portion of the private driveway providing pedestrian access from Albemarle Road to the door on the north side of the building. Pedestrians also use additional sidewalks in this area to cross the private driveway to access the playground on the north side of the site. There is a large elevation change between the sidewalk and the building door, and there does not appear to be an access route that meets current Americans with Disabilities Act (ADA) regulations.

Portions of the existing public way sidewalk on Albemarle Road are in poor condition, especially near the accessible entrance location and at the curb ramps near the driveway crossing. The cement concrete sidewalk has been patched with asphalt and is uneven and does not appear to meet ADA regulations.

Photos 3 & 4: Elevation change between the private driveway and the building located on the left (both photos)



Photos 5 & 6: Sidewalk condition near Albemarle Road accessible entrance (left photo) and at driveway curb cut (right photo)

DUMPSTERS/RECYCLING

Trash dumpsters and recycling storage and pickup for two (2) large containers is located in a separated loading area adjacent to the parking lot.

Photo 7: Dumpsters in loading area

EXISTING SITE UTILITIES

Bases on observations made in the field and review of record documents, Nitsch's observations and findings are noted below.

WATER

Record documents from 1963 indicate the building's 2.5-inch (2.5") domestic water service enters at the northeast side of the building and connects to the City of Newton water main located in Albemarle Street. A water gate cover was observed in the private driveway, which does not match the location shown on the record plan. Additional investigation will be required to determine water service upgrades that may have been completed at the site. There were no fire hydrants observed on the private site. The closest hydrant to the site is located on Watertown Street east of the site.

SANITARY SEWER

Record documents indicate that the building's sewer service connects to the City of Newton sewer manhole on the main in Albemarle Road from the northwest side of the building. Record documents indicate the existing sewer pipe is a 6-inch (6") vitrified cay pipe. Vitrified clay pipe does not meet current code and would need to be replaced if improvements were proposed to the building.

STORM DRAINAGE

Record documents indicate that the building's main roof drain service is connected to a closed drainage system and a private drain main running westerly on the northern portion of the site and in the driveway. The closed drainage system from the parking lot discharges to Cheese Cake Brook via a piped connection and headwall. Record plans indicate that roof runoff from building additions on the site are collected via roof leaders and splash to grade to infiltrate into crushed stone systems at the surface.

The closed drainage system on the site is comprised of two (2) catch basins within the paved parking area and conveyance piping and manholes which convey stormwater westerly through the site. Neither catch basin appeared to provide enhanced level of pre-treatment, and record documents do not indicate that the site has a stormwater management system to mitigate for stormwater peak rates of runoff or stormwater volumes leaving the site. Stormwater that hits the non-vehicular areas of the site sheet flows into landscaped areas. Stormwater runoff from the site is discharged to Cheese Cake Brook and ultimately to the Charles River.

The project site is located adjacent to Cheese Cake Brook and is located within a wetland buffer zone and the 200-foot Riverfront area associated with Cheese Cake Brook. Due to the site's proximity to these wetland resource areas, a redevelopment of the site would require the installation of a closed drainage system to mitigate stormwater runoff quality and quantity from the site to meet the City of Newton Conservation Commission Regulations and the Massachusetts Department of Environmental Protection's Stormwater Standards. Cheese Cake Brook has a Total Maximum Daily Load (TMDL) limit for pathogens.

Photo 8: One of the observed catch basins on site located in the east side of the parking lot.

ELECTRIC

Refer to the Electrical Engineer's Existing Conditions report for information about the existing electrical service and site lighting at the site.

TELECOMMUNICATIONS

Refer to the Mechanical Engineer's Existing Conditions report for information about the existing telecommunications service at the site.

GAS/OIL

Record documents indicate an existing underground oil tank at the northeast side of the building near the driveway. Covers for the underground tank were not observed at the surface of the site during the site visit. Record documents also indicate a gas service enters the building at the northeast corner of the building. Refer to the Plumbing Engineer's Existing Conditions report for information about the existing gas and oil services at the site.

SOILS

A Geotechnical Engineering study of the site shall be prepared to provide information about existing soil conditions at the site and recommendations for design and construction at the site.

The site is listed as a 21E waste site by the Massachusetts Department of Environmental Protection under Site Number 3-0016552. Based on the Natural Resources Conservation Service (NRCS) Middlesex County Soil Survey, the majority of the site is classified as Udorthents, loamy under the Unified Soil Classification (Surface).

PRELIMINARY PERMITTING CONSIDERATIONS

Wetlands Protection Act (310 CMR 10.00)

The Wetlands Protection Act ensures the protection of Massachusetts' inland and coastal wetlands, tidelands, great ponds, rivers, and floodplains. It regulates activities in coastal and wetlands areas, and contributes to the protection of ground and surface water quality, the prevention of flooding and storm damage, and the protection of wildlife and aquatic habitat.

Massachusetts Geographic Information System (MassGIS) Record Information indicates that there are Wetlands Protection Act resource areas within the project site the site including a wetlands buffer zone and the 200-foot Riverfront area associated with Cheese Cake Brook. A redevelopment of the site will require permitting through the Newton Conservation Commission under the Department of Environmental Protection's Wetland Protection Act.

Surface Water Supply Protection (310 CMR 22.20)

The Massachusetts Department of Environmental Protection (DEP) ensures the protection of surface waters used as sources of drinking water supply from contamination by regulating land use and activities within critical areas of surface water sources and tributaries and associated surface water bodies to these surface water sources. A review of the Massachusetts DEP resource layers available on the MassGIS indicates the site is not located within a Water Supply Protection Zone, and appears to not require permitting under 310 CMR 22.20.

National Heritage and Endangered Species Program

A review of the 14th Edition of the Massachusetts Natural Heritage Atlas prepared by the Natural Heritage and Endangered Species Program (NHESP), dated August 1, 2017, indicates that the site is not a Priority Habitat of Rare Species or an Estimated Habitat of Rare Wildlife. Therefore, there are no permits required through the NHESP.

Area of Critical Environmental Concern (ACEC)

A review of the Massachusetts Geographic Information System (MassGIS) indicates that the site is not located within an Area of Critical Environmental Concern.

Floodplain

Floodplain information was obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Map number 25017C0552E, effective June 4, 2010. The site is within an Area of Minimal Flood Hazard Zone X, which is identified as an area outside the 100-year floodplain. Therefore, there are no permits required with respect to the floodplain.

Environmental Protection Agency National Pollutant Discharge Elimination System Permit

Construction activities that disturb more than one acre of land are regulated under the United States Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) Program. In Massachusetts, the EPA issues permits to operators and owners of regulated construction sites. Regulated projects are required to develop and implement stormwater pollution plans (SWPPP) in order to obtain permit coverage. The proposed renovation project will disturb more than one acre of land, therefore, the project will require filing an Electronic Notice of Intent (eNOI) for a Construction General Permit (CGP) and compliance under the NPDES program.

Newton Conservation Commission

The Newton Conservation Commission administers the requirements of the State Wetlands Protection Act and ensures the protection of Massachusetts' inland and coastal wetlands, tidelands, great ponds, rivers, and floodplains. It regulates activities in coastal and wetlands areas, and contributes to the protection of ground and surface water quality, the prevention of flooding and storm damage, and the protection of wildlife and aquatic habitat.

Massachusetts Geographic Information System (MassGIS) Record Information indicates that there are Wetlands Protection Act resource areas within the project site the site including a wetlands buffer zone and the 200-foot Riverfront area associated with Cheese Brook Creek. A redevelopment of the site will require permitting through the Newton Conservation Commission.

Newton Department of Public Works

The design of the sanitary sewer, water, and storm drainage services and connections to the City of Newton mains will need to be reviewed and approved by the Department of Public Works Water and Sewer Division. As part of their Site Plan Review process the Department of Public Works will review the water demand and sewer flows for the site as it relates to their water distribution system and sanitary sewer conveyance systems. They will also review the proposed stormwater management design for compliance with their regulations under the Massachusetts Department of Environmental Protection's Stormwater Standards.

Newton Department of Public Works will also review the project for any improvements proposed to the public sidewalks abutting the site or within the public ways.

Massachusetts Environmental Policy Act (MEPA) Regulations (301 CMR 11.00)

Development of this site does not appear to trigger the following MEPA thresholds and will likely not require an Environmental Notification Form (ENF) or Environmental Impact Report (EIR) to be filed with MEPA:

- Land
- Rare Species
- Wetlands
- Water
- Wastewater
- Area of Environmental Concern (ACEC)

3B.8 Existing Structural

687 Watertown Street

Newton, Massachusetts

Structural Assessment

November 2, 2018

Engineers Design Group Inc.
Structural Engineers
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EDG@EDGINC.COM

STRUCTURAL ASSESSMENT

The purpose of this report is to describe, in broad terms, the structure of the existing building; to comment on the condition of the existing building; and on the feasibility of renovation and expansion of the school.

Scope

1. Description of existing structure.
2. Comments on the existing condition.
3. Comments on the feasibility of renovation and expansion.

Basis of the Report

This report is based on our visual observations during our site visit on October 5, 2018; a review of the existing drawings of the original construction prepared by William Hoskins Brown, dated October 1963.

During our site visit, we did not remove any finishes or take measurements, so our understanding of the structure is limited to the available drawings and observations of the exposed structure and the exterior facade.

Building Description

The building is located on Watertown Street, Newton, Massachusetts. The entire school is a two story, steel and concrete structure with a full lower level housing the boiler room and other school program spaces.

The building was constructed in 1963. The roof is wood fiber panels supported on steel bulb tees. The bulb tees span between wide flange steel beams and wide flange steel columns. The floor is a 3 in. thick concrete slab on top of wood fiber panels and bulb tees (used as forms for the concrete slab) spanning between wide flange steel beams and columns. The portion of the floor above the lower level is a one way concrete rib slab spanning between reinforced concrete beams and steel columns. The lowest level is a concrete slab on grade. The exterior walls and columns are supported on reinforced concrete foundations.

There are no permanent additions to the building since it was originally constructed; and, there have not been any major renovations since the time of the original construction. Single story modular structures have been added to house additional classrooms.

687 Watertown Street
Newton, Massachusetts

Structural Assessment

EXISTING CONDITIONS

Based on our observations, the building structure is performing adequately based on the age of the building. We observed signs of past water leaks at some locations. We observed cracks in the interior and exterior masonry walls. We observed some displaced bricks and precast concrete elements in the façade. We observed that the exterior patio slab has heaved at several locations. We also observed spalling concrete around exterior concrete piers and walls.

The second floor slab and framing at the front of the building along Watertown Street cantilevers 12 feet from an interior column line. The second floor framing members also support columns above supporting the roof framing. We observed noticeable deflections in the second floor framing at the cantilevered framing area.

We did not observe any undue vibrations due to footfall. We did not observe any signs of foundation settlement.

The modular structures are functioning well, but are assumed to be removed or demolished for the project.

PROPOSED SCHEMES

Based on our observations and our analysis of the existing drawings, no structural upgrades are required for any proposed scheme that has limited renovation scope and does not require any structural modifications.

Addition of Photovoltaic Panels are being considered being located on the existing roof. It is likely that the existing roof structure may have to be reinforced to support the weight of the photovoltaic panels; unless, very light photovoltaic panels weighing up to 3PSF are selected for the building.

One of the schemes being considered is to construct an intermediate level in the existing double story gymnasium and music room. Construction of this intermediate floor will be considered an addition, this will require new columns and footings within the existing gymnasium and music room to support the new floor. This addition will trigger upgrades to the existing lateral load resisting system which may require addition of new masonry shear walls.

Some of the schemes may require a new elevator within the footprint of the building or an exterior elevator constructed as an addition to the building. Construction of the new elevator within the building may trigger upgrades to the existing structure and may require underpinning of existing foundations supporting existing walls and columns, depending on its proximity to the proposed elevator. The exterior elevator addition could be separated by way of an expansion joint from the existing structure, thus avoiding any mandatory upgrades to the existing structure.

687 Watertown Street
Newton, Massachusetts

Structural Assessment

The extent of the code required structural upgrades is dependent on the extents of the proposed renovations. The following is a description of the compliance methods that may be triggered depending on the extents of the proposed schemes as dictated by other disciplines.

GENERAL CODE CONSIDERATIONS

Primary Structural Code Issues Related To the Existing Structure

If any repairs, renovations, additions or change of occupancy or use are made to the existing structures, a check for compliance with 780 CMR, Chapter 34 "Existing Building Code" (Massachusetts Amendments to The International Existing Building Code 2015) of the Massachusetts Amendments to the International Building Code 2015 (IBC 2015) and reference code "International Existing Building Code 2015" (IEBC 2015) is required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and/or a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, the project will have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:

1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

Comment

The approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing.

Since the existing building contains un-reinforced masonry wall structures, the anchorage of the walls to the floor and roof structure will have to be evaluated if the work area of the project exceeds 50 percent of the aggregate floor and roof area of the building.

Prescriptive Compliance Method

In this method, compliance with Chapter 4 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of this chapter.

Additions

Based on the project scope, the following structural issues have to be addressed:

- All additions should comply with the code requirements for new construction in the IBC.
- For additions that are not structurally independent of an existing structure, the existing structure and its addition, acting as a single structure, shall meet the requirements of the Code for New Construction for resisting lateral loads, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

Alterations

- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations that would increase the design lateral loads or cause a structural irregularity or decrease the capacity of any lateral load carrying structural element, the structure of the altered building shall meet the requirements of the Code for New Construction, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.

Work Area Compliance Method

In this method, compliance with Chapter 5 through 13 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of these chapters.

In this method, the extent of alterations has to be classified into LEVELS OF WORK based on the scope and extent of the alterations to the existing structure. The LEVEL OF WORK can be classified into LEVEL 1, LEVEL 2 or LEVEL 3 Alterations. In addition, there are requirements that have to be satisfied for additions to the existing structure.

The extent of the renovations (includes Architectural, FP and MEP renovations) for this project exceeds 50 percent of the aggregate area of the building, thus, the LEVEL OF WORK for this project would be classified as LEVEL 3 Alterations. This would require compliance with provision of Chapter 7, 8 and 9

of the IEBC. If the scope of the project includes new additions to the existing structure; this would trigger compliance with provisions in Chapter 11 of the IEBC.

Level 3 Alterations

- Any existing gravity, load-carrying structural element for which an alteration causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations where more than 30 percent of the total floor area and roof areas of a building or structure have been or proposed to be involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building complies with the full design wind loads as per the code requirements for new construction and with reduced IBC level seismic forces.
- For alterations where not more than 30 percent of the total floor and roof areas of a building are involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads at the time of the original construction or the most recent substantial alteration (more than 30 percent of total floor and roof area). If these alterations increase the seismic demand-capacity ratio on any structural element by more than 10 percent, that particular structural element shall comply with reduced IBC level seismic forces.
- Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated.

Additions

- All additions shall comply with the requirements for the Code for New Construction in the IBC.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For additions that are not structurally independent of any existing structures, the existing structure and its additions, acting as a single structure, shall meet the requirements of the Code for New Construction in the IBC for resisting wind loads and IBC Level Seismic Forces (may be lower than loads from the Code for New Construction in the IBC), except for small additions that would not increase the lateral force story shear in any story by more than 10 percent cumulative. In this case, the existing lateral load resisting system can remain unaltered.

Performance Compliance Method

Following the requirements of this method for the alterations and additions may be onerous on the project because this method requires that the altered existing structure and the additions meet the requirements for the Code for New Construction in the IBC.

687 Watertown Street
Newton, Massachusetts

Structural Assessment

PARTICULAR REQUIREMENTS OF COMPLIANCE METHODS

For our project, in order to meet compliance with one of the two compliance methods "Prescriptive Compliance Method" or the "Work Area Compliance Method", we have to address the following:

Prescriptive Compliance Method

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, would not impart any additional lateral loads on the existing structure.

If the proposed alterations are such that the alterations increase the design lateral loads on the existing building or cause any structural irregularity of decrease the lateral load carrying capacity of the building, the structure of the altered building shall meet the requirements of the Code for New Construction in the IBC.

If the proposed additions increase the design gravity load on portions of the existing roof members, these members would have to be reinforced and this incidental structural alteration of the existing structures would have to be accounted for in the scope of the alterations to the existing school and would trigger requirements for alterations.

Alterations

Alterations that would increase the design gravity loads by more than 5 percent on any structural members would have to be reinforced.

If the proposed alterations of the structure increases the demand-capacity ratio of any lateral load resisting element by more than 10 percent, the structure of the altered building or structure shall meet the requirements for the Code for New Construction.

Work Area Compliance Method

Level 3 Alterations

If the proposed structural alterations of an existing structure are less than 30 percent of the total floor and roof areas of the existing structure, we have to demonstrate that the altered structure complies with the loads applicable at the time of the original construction and that the seismic demand-capacity ratio is not increased by more than 10 percent on any existing structural element. Those structural elements whose seismic demand-capacity ratio is increased by more than 10 percent shall comply with reduced IBC level seismic forces.

If the proposed structural alterations of an existing structure exceed 30 percent of the total floor and roof areas of an existing structure, we have to demonstrate that the altered structure complies with the IBC for wind loading and with reduced IBC level seismic forces.

Existing anchorage of all unreinforced masonry walls to the structure have to be evaluated. If the existing anchorage of the walls to the structure is deficient, the tops of the masonry walls will require new connections to the structure.

Additions

Any proposed additions would be designed structurally independent of the existing structures, thus, they would not impart any additional lateral loads on the existing structures.

Comment

The compliance requirements of the two methods, in most respects, are very similar. The Prescriptive Compliance Method would require that the existing lateral load resisting systems meet the requirements of the Code for New Construction of the IBC, even for small increases of design lateral loads. The requirements of both methods will require anchorage of all existing masonry walls. Based on this, we would recommend the Work Area Compliance Method for the project.

SUMMARY

The existing school structure appears to be performing adequately. All of the structural components that are visible appear in sound condition. We observed displaced masonry and precast concrete elements in the façade. We observed exterior patio slabs that have heaved. We also observed concrete that is spalling around exterior concrete piers and walls. We observed noticeable deflections in the cantilevered floor framing area. We did not observe any undue vibrations due to footfall. We did not observe any signs of foundation settlement.

Any major, proposed renovations and additions would likely require that the structure be updated to meet the requirements for Code for New Construction. This may require addition of some shear walls, connecting the roof diaphragms to the existing masonry walls and the clipping of non-structural masonry walls to the structure. All of the existing masonry walls would have to be adequately connected to the roof structure.

3B.9 Existing Mechanical

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HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

General:

The majority of the building HVAC systems are approximately 54-years-old, in poor condition and have exceeded their expected service life. The main building is currently only heated and ventilated from central heating and ventilation systems. Some rooms are provided with window AC units. The modular classrooms are heated, ventilated and air conditioned by packaged rooftop units. The Classrooms, Library, Gym and Assembly rooms are heated and ventilated by a combination of hot water air handling units, unit ventilators and fin tube radiation. The administration area is heated by hot water fan coil units and hot water fin tube radiation. Hot water is generated by a gas fired boiler plant. The Administration area, Gym and Assembly room were originally air conditioned by an indoor water-cooled chiller and cooling tower system that was removed many years ago. At that time the existing piping system was converted from dual temperature to hot water use. The building control system is a pneumatic ATC control system, which has continually experienced many air leaks and corresponding temperature control issues. Due to the old age of the HVAC systems and overall poor performance in maintaining proper temperature and ventilation control, we would recommend that the existing building HVAC system is replaced with a new high efficiency HVAC system.

Heating Plant Building:

The building is primarily heated by a hot water boiler plant. There are two gas boilers. One boiler is a HB Smith 28A cast iron section boiler which appears to have been installed circa 1999 and is 19 years old. The other boiler is a HB Smith 450 Mills cast iron section boiler that appears to be originally installed equipment and over 50 years old. The newer boiler appears to be in fair condition, while the older boiler appears to be in poor condition. Both boilers are equipped with PowerFlame burners, which were installed circa 1999 and are rated for 2,200 MBH natural gas input. The boilers have an estimated I=B=R hot water heating output of 1,477 MBH. The boiler provides heating hot water for the building's space heating equipment and air handling units.

The boiler is vented by steel breeching that is routed to a masonry chimney. Combustion air is provided by sheetmetal ductwork that is connected to a wall intake louver and damper assembly.

There are three (3) inline floor mounted hot water pumps located in the Boiler Room. Two of the pumps have 7.5 HP motors and one of the pumps has a 3 HP motor. The larger pumps appear to be serving the hot water loop that was previously a dual temperature heating/cooling loop that serves air handling equipment, and the smaller pump appears to serve a hot water radiation heating loop. The pumps are constant flow and are not equipped with variable speed drives. The pumps circulate hot water from the boilers to the building heating equipment. In general, the pumps appear to be in poor condition, and nearing the end of their expected service life.

The majority of hot water piping is original to the building and over 50 years old. Several sections of piping appeared to have damage or missing insulation. Several sections of piping and several valves observed appear to show signs of corrosion. Several sections of piping are encased within concrete floors. It is our understanding that these sections of piping have experienced leaks over the years.

Hot Water Boilers

Hot Water Pumps – 7.5 HP

Hot Water Pump – 3 HP

Air Conditioning:

The building does not have central air conditioning system. A 90-ton water cooled chiller and cooling tower system was originally installed to provide air conditioning for the Gym, Assembly and Administration areas of the building. However, it is our understanding that that system was removed many years ago. Some rooms in the main building are air conditioned by window air conditioning units. The Modular classrooms are heated, ventilated and air conditioned by packaged rooftop units which appear to range from fair to good physical condition.

Modular Classroom - Packaged Rooftop Units

Administration:

The Administration areas and Conference rooms are heated by a combination of hot water fan coil units and hot water radiation heating that are original to the building. There are approximately five (5) fan coil units located in these areas.

Classrooms and Library:

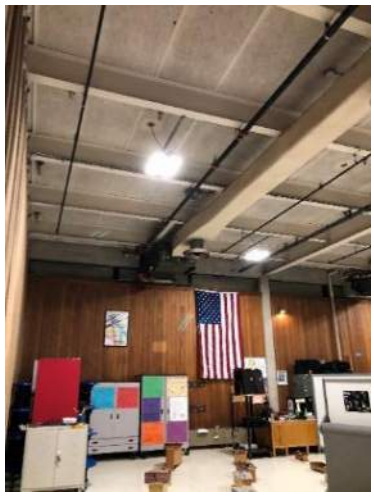
Classrooms and the Library are heated and ventilated by classroom vertical wall mounted unit ventilators with hot water heating. The units appear to be originally installed equipment from 1964, manufactured by Nesbitt. The unit ventilators are in poor physical condition and past their expected service life and in need of replacement. There are approximately eighteen (18) unit ventilators located throughout the building. Most classrooms also have supplemental hot water fintube radiation heating that is installed within the classroom exterior wall casework enclosures.

Hot Water Unit Ventilator

Exhaust air from classrooms is exhausted by exhaust grilles that are ducted to roof mounted exhaust fan ventilators. Many of the exhaust fans observed appear to be originally installed equipment and beyond their expected service life. Some exhaust fans do appear to have been replaced in recent years.

Assembly (Multi-Purpose) Room:

The Assembly (Multi-Purpose) room is served by three (3) indoor air handling units with a hot water heating coil. The units are originally installed equipment, circa 1964, in poor condition, and need replacement. The units have an estimated capacity of 1,600 cfm each. The units are connected to ductwork and with sidewall mounted diffusers. Return air is provided through intake openings at the bottom of the units. The diffusers and ductwork appear to be dirty. Exhaust air is provided by roof mounted exhaust fans. The Assembly room is also heated by perimeter hot water radiation heating.



Multi-Purpose Room Air Handling Unit

Gymnasium:

The gymnasium is served by two (2) indoor air handling units with hot water heating coil. The units are originally installed equipment, circa 1964, in poor condition, and need replacement. One of the unit's hot water piping is disconnected and may no longer be fully operational. The units have an estimated capacity of 3,200 cfm each. The units are connected to ductwork and with sidewall mounted diffusers. Return air is provided through intake openings at the bottom of the units. The diffusers and ductwork appear to be dirty. Exhaust air is provided by roof mounted exhaust fans. The Gymnasium is also heated by perimeter hot water radiation heating.

Gym – Air handling Units and Ductwork

Gym Fintube Radiation Heating

Restrooms:

Restrooms are typically heated by hot water radiation heating and are exhausted by rooftop exhaust air fan systems. Restroom heating and exhaust systems appear to be original to the building, generally in poor condition, and in need of replacement.

Corridors and Entryways:

Corridors and entryways are heated by hot water radiation heating equipment that is original to the building. Several sections of fin tube radiation and cabinet unit heater enclosures appear to be soiled and damaged.

The majority of corridors are not provided with code-required ventilation.

Entryway Unit Heater

Corridor Fintube Heating

Exhaust Systems:

The majority of general exhaust air ventilation is provided by rooftop exhaust air fans. The majority of the fans appear to be originally installed equipment that need of replacement. Some roof exhaust fans have been replaced in recent years. Overall, there appears to be ten (10) roof fans. Many of the exhaust air duct runs are furred into the ceiling construction which makes access to these ducts difficult. Many exhaust grilles appear to be soiled.

Roof Exhaust Fan

Controls:

The building control system is a pneumatic control system. The control system consists of air compressors, air dryer, pneumatic control panels and pneumatic air tubing system. The main control panel was manufactured by Powers. The majority of control system components are originally installed equipment and systems. The system currently experiences many air leaks, which leads to higher building energy usage and poor temperature control for many areas of the building.

Control Panel

Room Thermostat

Air Compressor

Recommendations:

1. The existing HVAC equipment including the boiler plant, classroom unit ventilators, indoor air handling units, older Modular rooftop AC units, exhaust fans, intake hoods and hot water radiation heating equipment should be replaced.

2. The existing hot water piping system and associated insulation should be replaced.

3. The exhaust ductwork system should be replaced.

4. The building pneumatic control system should be replaced with a new DDC building energy management control system.

5. Replacement HVAC systems should incorporate high efficiency equipment and energy conservation measures such as a high efficiency boiler, high efficiency air conditioning, energy recovery ventilation, demand control ventilation, variable volume air flow and variable flow hot water distribution.

3B.10 Existing Electrical

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ELECTRICAL:

Executive Summary:

In general, the electrical systems have reached their life expectancy and are in poor condition with an exception to the fire alarm system. Life safety lighting and exit signs are fed from a generator and are not compliant with today's codes. The fire alarm system has been recently upgraded and complies with current codes. Lighting systems, in general, have been updated in the last ten years, some to LED and most to fluorescent. Some lighting controls have been introduced as well. The fixtures are mostly antiquated and in poor condition. The facilities service is undersized and the existing distribution system is in poor condition and should be replaced in its entirety.

The security system consists of access control and an intrusion detection system. The system is in fair condition. The overall security scheme should be reviewed as it is not configured to current security recommended practices.

The communication system infrastructure is antiquated by today's standards and should be replaced in its entirety.

Electrical Distribution System:

The service is fed from Watertown Street, Pole 31-49 then routes through a manhole. It appears that the primary service runs beneath the added modular classroom building. The utility transformer could not be located while at the site. There is a question as to its location and it seems as if it may be in a vault below grade.

Utility Pole where power is fed from

Utility Pole Marker

Electrical Primary Manhole

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Modular Building that primary passes under

An 800 ampere, 120/208 volt, 3 phase main switchboard is manufactured by ITE installed in 1964 and is located in the Mechanical Room. The line side of the service runs exposed through the room for approximately fifteen feet. The integral automatic transfer switch has been replaced. This service is undersized and there is no room for expansion on this system. The buss has been tapped (3) times to serve a sub-panel and the two modular classrooms. Enclosed circuit breakers have been installed on the rear of the switchboard which will restrict access. There have been some panel replacements; however, the original panels that are active are in poor condition and beyond their useful life.

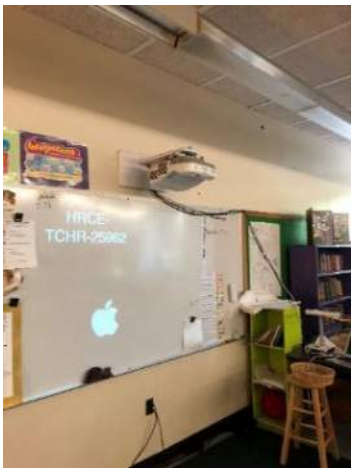
Main Swtichboard (All photos)

Rear of Switchboard

Original Sub-Panel

Branch Circuits/Wiring Devices:

The quantity of receptacles is not adequate in most spaces. The quantity of technology devices in the classroom is minimal. Excessive use of extension cords is prevalent throughout the school and is considered a safety concern. Circuits are not separated based upon load type.



Typical Classroom Workstation

Interior Lighting System:

Lighting in corridors is typically provided by surface mounted fluorescent wraparound fixtures with a single T8 lamp, running continuous down the center of the corridor.

Classroom lighting consists of two or three continuous rows of surface mounted fluorescent wraparound fixtures with single cross section T8 lamps, as well as, classrooms with upgraded LED lighting. Wireless Lutron occupancy sensors and wall switches with dimming has been added in most classrooms.

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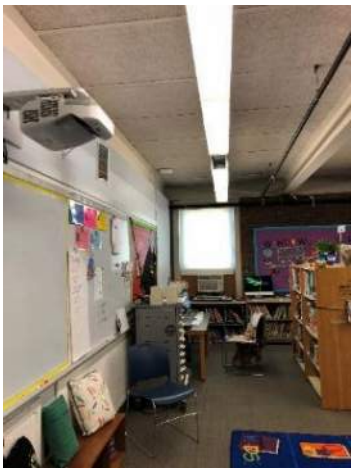
The Gymnasium consists of LED high bay fixtures. No wire-guards are installed on gym fixtures.

Many fixtures were damaged with missing components, etc. Generally, the lighting was in poor condition. Exit signs are illuminated and are in fair condition.


Corridor Lighting (recessed)


Corridor Lighting (surface)


Classroom Lighting (fluorescent)


Classroom Lighting (LED)


Gym Lighting


Canopy Lights

Lutron Controls

Exit Sign

Emergency Lighting System:

The emergency lighting throughout the facility is a combination of lights fed via the emergency generator and emergency battery units. There is no separation of life safety and optional standby loads which is not compliant with current code, however, emergency battery units have been added throughout. The emergency generator is located within the Mechanical Room. The generator is a 30 kW, natural gas fired unit, manufactured by Cummings Onan and is beyond its useful life. The emergency system should be replaced in its entirety.

Generator

Site Lighting System:

The lighting at the site consists of building mounted flood lights around the perimeter and canopy lighting.

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Fire Alarm System:

The fire alarm panel is a Notifier with voice evacuation. The system has recently been upgraded and is in good condition.

FACP

Classroom Intercom System/Clock System/Security System:

The master clock system is manufactured by Simplex and is beyond its serviceable life.

The intercom system consists of a wall mounted speaker and a telephone handset in each classroom. The paging system is a Valcom system. The head end is in fair condition; however, existing original speakers and wiring were reused.

The handset is mounted above 54" A.F.F. which is an ADA violation. The paging system should be replaced in its entirety.

Speaker

Handset

Master Clock

Clock

Paging System Headend

An intrusion system is present along with access control at key entry points. The access control system is manufactured by Lenel and is a district standard. There are also Aiphone Video Intercoms at key entry points.

Proximity Reader & Video Intercom Station

Intercom Master Station

Lenel Access Control Panel

Tel/Data System:

The school has a district fiber connection terminated in the School's I.T. closet.

There is a single data wiring closet that serves the entire building. Wiring is a combination of type CAT5 and CAT6.

The building is equipped with an antiquated digital Mitel phone system.

Wireless access points are limited. It does not appear that the school contains 100% coverage.

The school is equipped with a two-way radio system for communication.

Fiber optics

Tel/data wiring rack

Two-way radio

Telephone system

Recommendations:

For any substantial renovation / addition program the following would be recommended:

1. A service upgrade with a new padmount transformer and 1,600 amp, 120/208 volt, 3 phase, 4 wire service would be recommended, along with a new distribution system with lighting, power and mechanical panels to serve their respective loads.

2. New energy efficient LED lighting and an energy code compliant lighting control system.

3. The existing fire alarm system can be expanded to accommodate any renovation/addition.

4. New generator with optional standby and life safety distribution system separated per NEC Section 700.

5. New Clock System and IP Paging System.

6. Additional IDF closets and new CAT6 tel/data infrastructure.

7. Expansion of existing Lenel access control system which would be required to meet the security requirements.

8. A new Bi-Directional Antennae system will be required to meet the security requirements.

9. An Area of Rescue Assistance system will be required with call stations at each proposed elevator lobby and a master station adjacent to the fire alarm annunciator panel.

3B.11 Existing Plumbing/ Fire Protection

AKAL Engineering Inc.

Existing Fire Protection Systems

A new wet sprinkler system was installed in the building in 2012. This was installed by tapping into the domestic water service entance, before the water meter. There is no separate fire water service to the building. The building is not fully protected by sprinkler system as required by current codes. No sprinklers were provided in the exterior canopies below second floor. Also a couple of rooms in the modular addition area are not sprinklered.

Water service entrance with backflow

Sprinklers in corridor

Exterior canopy with no sprinklers

Interior room with no sprinklers

Recommendations:

- If the existing building is renovated to any substantial degree, the entire building needs to be upgraded with fire suppression system per latest Massachusetts Building Code 780 CMR Chapter 9.
- Exact static and residual flow values will need to be determined from a hydrant flow test. Fire Pump may be required if the hydrant flow test result shows inadequate flow and pressure.

AKAL Engineering Inc.

November 2, 2018

- A new dedicated fire service to the building will be required from the site and which then feed the automatic fire sprinkler systems covered throughout the building.
- NFPA-13 standard requires that all areas of the building shall be protected with wet fire suppression sprinklers. Unheated area will require a dry system.

Existing Plumbing Systems

The building at 687 watertown street has received minimal maintenance on the plumbing systems and equipment over its occupied years. It appears systems will gradually deteriorate due to scale and poor water conditions. Although most of the systems are working adequately at this time, the major equipment and systems are near the end of their useful life. Along with aging systems, many of the systems are not up to current codes. If it is anticipated that if major modifications are planned for this building than the plumbing systems should be considered for an overall upgrade.

Domestic Cold Water

The combination fire and domestic cold water service entrance to facility is located in the boiler room in the first floor. It is 4" in size with no back flow preventer as required by current codes. The domestic cold water system consists of copper pipe with soldered fittins. It is expected that the solder used in the system has a significant lead content. The existing domestic cold water piping appears to be original and in poor condition, has outlived/exceeded its useful life and is not expected to last more than a few years without exhibiting possible failures.

Domestic water service entrance with no backflow preventer

Water pipes with insulation

Pipe insulation and valves appear to be original, in poor condition. Pipe insulation is possibly asbestos and should be evaluated for abatement. Pipe labels, flow arrows and valve tags are in limited locations throughout the system.

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The existing facility do not have a backflow preventer assembly as required by DEP. Backflow flow preventer could not be located at boiler make up water connection for non-potable cross contamination. Janitor sink faucet has no vacuum breaker as required by code. The soap detergent connection to faucet is not protected and violate the plumbing code requirement.

We recommend water quality shall be tested and monitored for any possible lead contamination and corrected if found to be at unsafe levels. If the project involves substantial renovation, we would recommend complete replacement of all domestic water piping, valves and accessories.

Domestic Hot Water

Domestic hot water for the facility is supplied from a single 50 Gallon electric hot water heater tank. The electric water heater was installed in 2007 and replaced the original gas fired hot water heater, which is abandoned in place.

Old water heater

New water heater tag

Pipe insulation and valves appear to be original and in poor condition. Asbestos pipe insulation is suspected. Pipe labels, flow arrows and valve tags were not installed. No master thermostatic mixing valve is identified at hot water supply piping. No problem with pressure, quality and hot water temperature were reported during our site visit. However, due to the pipe age, there is a probability that the water service line could be deteriorated and lead containing solder may exist in the fittings or contain high lead content brass pipe. We recommend pressure test and water quality test and monitor for any possible lead contamination. If the project involves substantial renovation, we would recommend complete replacement of all domestic water piping, valves and accessories and maintain hot water temperature system which would satisfy code requirements for occupant fixtures.

Fuel – Natural Gas

The gas service entrance is located in the boiler at the first floor and is installed inside the building. This feeds the emergency generator and the roof top HVAC units in the modular addition area. Gas piping within the mechanical boiler room appears to be in fair condition.

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Gas meter in boiler room

Gas feed to RTU's

Sanitory Waste and Vent

The sanitary sewer flow is by gravity and exit the building to a municipal sewer system with a 6" cast iron line. Soil piping observed was a combination of extra heavy cast iron, with bell and spigot joints. Visible vents are galvanized steel with threaded fittings. The existing sewer piping, hangers in boiler rooms of building are in fair condition.

There is no kitchen in the school. Art room uses a mop sink and does not have inline plaster trap as required per code.

Waste pipe in basement

Waste pipe withmop sink connection

Storm Drainage

The building has a flat roof with roof drains for storm drainage. Storm drainage piping is original and has outlived/exceeded its useful life. It is not expected to last more than a few years without exhibiting widespread problems and possible failure. Some roof drains appear to be in poor condition. The drains consisted of cast metal dome tops with cast iron bodies and some were not

securely clamped to the roof. Piping observed was No-Hub cast iron soil pipe and fittings. Rain water puddles were observed near some roof drains. If areas have had blockages in the past we would recommend video inspection of those, underground lines to verify their condition and address them accordingly.

Roof drain

Roof drain with water puddles

Plumbing Fixtures

Most of the fixtures are of original vintage condition. All observed fixtures are not of water saving type. Due to the fixture age, maintenance is routinely required on faucets, toilet fill valves, to keep fixture operational. Water closets are not of consistent style in the building. All orignal fixtures are wall mounted type. Some water closets were replaced recently and are of floor mounted type. Most of flush valve are not equipped with water conserving 1.6 gallon per flush type valve. The lavatory sinks are of the wall hung type and has manual faucet. The faucets are not metered and do not comply with latest water conservation requirements. Toilets are not equipped with ADA / MA accessibility compliance toilet fixtures. Urinals have flush valve. The existing buildings plumbing systems will need to be verified for adequacy in quantity based on planned occupancy use. Drinking fountains observed are not ADA compliant. Janitor closets in the facility has wall mounted utility sinks. The faucet of janitor sink has no vacuum breaker for backflow prevention. Most of the exterior hosebibs are broken.

Boy's room Urinals

Boy's room Lavatories

New Floor mounted WC

Janitor's mop sink

Stainless steel drinking fountain

Mop sink connection

During a substantial renovation or addition project, code would require that all the water closets, lavs, etc.. be modified to be of the water conservation type and that of those a certain percentage would need to be ADA complaint. In addition, if a kitchen is added, water of the appropriate temperature would need to be supplied to fixtures whether by a dual temperature piping system or with the use of tempering valves and/or fixtures.

Summary of Existing Systems

- Existing building has a partial sprinkler system tapped from the domestic water service. Any substantial renovation to the building will need to provide a complete sprinkler system with a separate fire water service from street.
- The domestic hot/cold water pipes are lead soldered and water shall be periodically tested for quality. The hot water heater is electric and not energy efficient. Any substantial renovation will need to upgrade the systems.
- The waste/vent system are original to the building. Any substantial renovation will need to upgrade the systems.
- The storm piping system are original to the building and one of the roof drain was leaking previosly. Any substantial renovation will need to upgrade the systems.
- Most plumbing fixtures are original to the building and near its useful life. Any substantial renovation will need to meet ADA/energy code requirements and plubing fixture quantity will be required to be reviewed to meet population counts.
- Recommend video inspection of underground sanitary and storm piping to verify their condition and address them accordingly.

SECTION 4 – SITE DEVELOPMENT REQUIREMENTS/ CONSIDERATIONS

4.1 150 Jackson Road Site Analysis

Property Description

150 Jackson Road is the former Aquinas College building, located in the north-east section of Newton, in the Nonantum neighborhood. Built in 1965, the building consists of three wings; the main academic wing, auditorium/ cafeteria wing, and the convent wing.

Situated in a primarily residential neighborhood, there is a wooded area to the north of the property with residential neighbors to the north-east, east, and west. South of the property is the Jackson Walnut Park School, a private school serving ages 18 months through Grade 6.

Parking and Vehicular Circulation

The current preschool program utilizes the large parking lot with access from Jackson Road for visitor parking and a dedicated drop-off lane for the 6 – 15 vans that service the preschool. Entry to the building from the large parking lot is at the lowest level. There is an additional, smaller parking lot along Walnut Park that is used by staff. The entry point to the building from this smaller parking lot is one level above the lower level.

Athletic Fields/Outdoor Spaces

There is an existing playground located adjacent to the building along the east and Walnut Park. This is age appropriate for the current preschool program, and should be evaluated for appropriate age use. Currently, there are no athletic fields or enclosed green space.

Site Typography

The site is generally sloped from east to west, with the lower level of the main academic wing partially below grade along the east. The site is suitable for potential additions and/or new construction. The convent wing also is partially below grade towards the east.

4.2 687 Watertown Street Site Analysis

Property Description

687 Watertown Street is currently the Horace Mann Elementary School, located in the northern section of Newton, in the Newtonville neighborhood. Built in 1964, the site is located at the intersection of Watertown Street and Albemarle Road, adjacent to Cheese Cake Brook. Along the north side of the site is a drive aisle to the school administration parking lot with 20 parking spaces. Across from the drive aisle is the Albemarle Playground which is used by the current elementary school and open to the community. The neighbor to the East of the site is the Boys and Girls Club of Newton, with an adjacent parking lot.

Parking and Vehicular Circulation

On-site parking is limited. The following parking availability on and surrounding the site was provided by the Newton Public Buildings Department:

- 20 parking spaces on site in an existing lot, north-east and adjacent to the existing school
- 93 head end east side of Albemarle between the school and Harry Gath Memorial Pool
- 72 parallel on west side of Albemarle between the school and Harry Gath Memorial Pool

- Approximately 80 parallel parking spaces within 400 feet along Edinboro Street, Page Road, Walker Street, and Albemarle Road (South of Watertown)

A full traffic and parking study will be performed in a subsequent phase of the project to refine the options and parking counts.

Athletic Fields/Outdoor Spaces

Albermarle Field is located immediately north of the site and provides baseball diamonds, sports fields, basketball and tennis courts, a swimming pool, and green space. The section closest to the school has a playground that is used by the existing elementary school students and by the public during non-school hours.

Site Typography

From Albemarle Road, the site slopes up approximately 7 feet to reach the entry along the north of the building, located at the middle level of the three-stories. The site from the south side of the building towards Watertown Street is essentially flat with minimal grade change. The upper level is primarily classroom space, with some administrative areas. At the lower level, the East portion is below grade and used as a multi-purpose room, the West portion along Albemarle Road is gym space with exterior access.

4.3 Alternate Sites Considered

Several alternate sites for the proposed preschool and elementary school programs were considered as part of this study, including:

- DPW Operations Center at 74 Elliot Street
- Senior Center at 345 Walnut Street
- The 'Stable' at 90 Crafts Street

Most of these sites were previously evaluated for potential re-use during feasibility studies performed for the Cabot Elementary School in 2015.

Since the existing buildings were not originally built for educational purposes, there would be the need for a greater investment to modify the existing buildings to meet the schools educational needs. It is also anticipated that the buildings would require substantial building systems, code, and general building upgrades.

It was also noted that all three sites are outside the boundary of the Lincoln-Eliot district. In addition, use of any of these three sites would require relocating existing city operations, and have additional limitations as follows:

	74 Elliot Street	345 Walnut Street	90 Crafts Street
Existing Program	DPW Operations Center	Senior Center	Stable
Site and Building specific considerations	• Relocate and/or consolidate DPW Operations • Environmental clean up of site	• Relocate Senior Center • Historic Building (former Branch Library) • Small site	• Relocate and/ or consolidate DWP Operations • Historic Building • Small site • Environmental clean up of site

For these reasons, this study does not recommend the use if these sites for the proposed NECP and Lincoln-Eliot programs. In addition to 687 Watertown Street and 150 Jackson Road, two other sites were considered for the NECP and Lincoln-Eliot: the Education Center at 100 Walnut Street, and the existing Lincoln-Eliot Elementary School at 191 Pearl Street. Each of these buildings was originally constructed as a school so may require less changes to the interior spaces to accommodate the NECP and Lincoln-Eliot programs. It is anticipated that these buildings would require significant building systems, code, and general building upgrades.

The following is a summary of the existing buildings, current uses, and issues involved with re-use for NECP and Lincoln-Eliot programming

	150 Jackson Road	687 Watertown Street	100 Walnut Street	191 Pearl Street
Existing Program	NECP	Horace Mann Elementary School	Education Center	Lincoln-Eliot Elementary School
Site and Building specific considerations	• Gymnasium needed for Elem School program • Elevator needed and other ADA upgrades	• Cafeteria needed for Elem School program • Elevator needed and other ADA upgrades	• Cafeteria and Gymnasium needed for Elem School program • All or multiple existing programs to be relocated: - Ed Programs - Admin.Offices - IT services and mainframe	• Multi-level/ multiple stairs • Poor layout • Disjointed additions • Lack of secure access • Limited site/ parking/ bus queuing

As part of this study, a more detailed analysis of the alternate site and buildings was prepared with input from City and School administrators and is summarized on the following chart. Based on this analysis, this study recommend use of 687 Watertown Street for NECP and 150 Jackson Road for the Lincoln-Eliot School.

4.4 Criteria Evaluation Matrix

The four considered sites were analyzed and characterized on the following criteria to determine the location for the NECP, Lincoln-Eliot Elementary School, and possibly co-locating the programs on each of the sites.

Lincoln-Eliot and NECP SITE Criteria — **Preliminary SITE Options/ Criteria Evaluation Matrix**

12/13/2018

● Favorable ⊙ Neutral ○ Unfavorable Costs: 0, $, $$, $$$, $$$$, $$$$$

* Note: All design options will meet current building codes.

Site Criteria	Potential Alternatives										
	Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
	150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
Ranking:	Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
Associated Costs:	$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$
General, Building and Site Facts											
1 Projected student enrollment	775 - 840	465	310 - 375	775 - 840	465	310 - 375	465	310 - 375	775 - 840	465	310 - 375
2 Classroom Count	38 - 41	24	14-17	38 - 41	24	14-17	24	14-17	38 - 41	24	14-17
3 Approx. targeted educational program (Total Building Gross Floor Area)	122,500 GFA	84,000 GFA	38,500 GFA	122,500 GFA	84,000 GFA	38,500 GFA	84,000 GFA	38,500 GFA	122,500 GFA	84,000 GFA	38,500 GFA
4 Approximate Gross Square Feet (from assessor database)	99,500 GSF			51,000 GSF			41,000 GSF		74,000 GSF (incl. annex)		
5 Approximate size of site (from assessor database)	5.7 acres			approx 1.3 acres			1.6 acres		3.8 acres		
6											
Site											
1 Maximizes efficient use of site	○	●	○	○	○	○	○	●	○	●	●
2 Provides safe pedestrian circulation and access, promotes walk-ability	○	●	●	○	●	●	○	○	○	○	○
3 Avoids Legal restrictions, City owned land	●	●	●	●	●	●	●	●	●	●	●
4 Site acquisition/ legal issues, privately owned land	●	●	●	●	●	●	●	●	●	●	●
5 Optimizes outdoor program space and green space/ Playground	○	●	●	○	●	●	●	●	○	○	○
6 Optimizes safety and efficiency of on arrival and dismissal	○	●	●	○	○	○	○	●	○	○	○
7 Separates bus, van, and automobile circulation	○	●	●	○	○	○	○	⊙	○	○	⊙
8 Does not increase demand for on street parking	○	●	●	○	⊙	○	⊙	○	○	○	○
9 Provides sufficient parking for teachers, staff + visitors	○	●	●	○	○	○	●	●	○	○	○
10 Minimizes off-site traffic impact	○	●	⊙	○	⊙	○	○	⊙	○	○	○
11 Avoid potential wetlands	●	●	●	●	●	●	○	○	●	●	●
12 Avoids Environmental conditions/ identified Haz Mats	○	○	○	○	○	○	○	○	⊙	⊙	⊙
13 Minimize tree removal and preserve trees	○	⊙	●	○	●	⊙	⊙	⊙	●	●	●
14											
Educational											
1 Meets educational program for all students + design enrollment	○	●	●	Does not fit the program		○	○	●	○	●	●
2 Provides flexibility for future growth	○	●	●	○	○	●	○	●	○	●	●
3 Optimizes configuration and adjacency of teaching spaces	○	●	●	○	○	○	●	●	○	●	●
4 Programmatic consistency with prior school projects	○	●	⊙	○	○	⊙	○	⊙	○	●	⊙
5											

Lincoln-Eliot and NECP SITE Criteria — **Preliminary SITE Options/ Criteria Evaluation Matrix**

12/13/2018

● **Favorable** ⊙ **Neutral** ○ **Unfavorable** **Costs: 0, $, $$, $$$, $$$$, $$$$$**

* Note: All design options will meet current building codes.

	Site Criteria	Potential Alternatives										
		Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
		150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
		Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
	Ranking:	Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
	Associated Costs:	$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$
Community												
1	Provides space for community use	●	●	●	●	●	●	●	●	●	●	●
2	Accommodates extended day programs	○	●	●	○	●	●	⊙	⊙	○	●	●
3	Minimize long term impacts to the community	○	⊙	⊙	○	⊙	⊙	○	●	○	○	⊙
4	Disruptions to school and neighbors during construction	○	⊙	●	○	○	●	○	○	○	○	○
5												
Existing Building												
1	Building systems conditions	○	○	○	○	○	○	○	○	○	○	○
2	Building envelope conditions	●	●	●	●	●	●	⊙	⊙	○	○	○
3	Energy performance	●	⊙	⊙	●	⊙	⊙	⊙	⊙	○	○	○
4	ADA compliance	○	○	○	○	○	○	○	○	○	○	○
5	Code compliance	○	○	○	○	○	○	○	○	○	○	○
6	Requires minimal interior renovations to meed Ed Program	○	⊙	●	○	⊙	●	⊙	⊙	○	○	○
7												
Cost and Schedule												
1	Relative capital cost	○	●	●	○	○	○	○	●	○	○	○
2	Maintains long range capital improvement sequence	○	●	○	○	⊙	○	○	●	○	○	○
3	Avoids investment in temp or additional facilities	○	●	○	○	●	○	○	●	○	○	○
4	Avoids extending project schedule	○	●	○	○	●	○	○	●	○	○	○
5												
Additional Criteria												
1												
2												
3												
4												

SECTION 5 – APPENDICES

5.1 NPS Cabot Educational Program

PART 2: EDUCATIONAL PROGRAM

CABOT ELEMENTARY SCHOOL EDUCATIONAL PROGRAM

Newton Public Schools provides a rigorous educational program for elementary students in kindergarten through grade five. Cabot Elementary School is a diverse school, with a growing population of English language learners, and has a strong sense of community and support, celebrating its uniqueness through curriculum, arts and ongoing community service involving students and families.

Cabot has a 5th grade co-taught model staffed by a full-time regular education teacher, a special education teacher and a full-time intern from a local university. This team works to differentiate instruction with a focus on reading strategies across the curriculum. Specialized 1:1 reading instruction and all other academic supports are delivered in the classroom environment requiring additional classroom space that minimizes pull out services.

The English Language Learner Program (ELL) consistently has approximately 25-30 students per year. Small groups of students meet with the ELL teacher several times a week both in and outside the classroom for direct English instruction.

Cabot, similar to all Newton schools, embraces inclusion. It is a school where teachers collaborate to provide best practice instruction and proactive forms of intervention both in and outside the regular classroom. Teaming is central to how the Cabot School community collaborates, and a spirit of inclusive community is core to the culture of the school. Professional Learning Communities and Response To Intervention blocks of time are regularly scheduled at Cabot. Teachers meet weekly to assess data from formative assessments and to plan for lessons for Flexible Grouping Times.

The Newton Public Schools including the Cabot Elementary School has long been a participating district in the METCO Program. There are currently 20 Boston students at Cabot, with several new students enrolling in the program in grades K-1 each year, as 5th grade students move to the middle school. These students and their families are fully included in the Cabot community.

Cabot's community service program is a valuable asset to the school culture. Annual community service and outreach programs include:

- Cabot Fair
- Cabot Clean-up Day
- Family Dance
- Spring Fling
- Birthday Wishes
- Treats for Troops
- War Memorial Fund Raiser

- Clothes / Gifts Drive for the Holiday
- Summer kindergarten Play dates
- Food Collection for the Newton Food Pantry/Turkey Trot
- Fall Community Picnics
- Pancakes and P J's Breakfast
- Invention Invasion
- Spelling Bee for grades K through five

GRADE AND SCHOOL CONFIGURATION POLICIES

The Newton Public Schools provides educational programs for students in grades preschool through grade 12. As of October 1, 2014, there were 12,601 students enrolled in the Newton Public Schools. The fifteen elementary schools in Newton educate students from kindergarten through grade five; the four middle schools serve students in grades 6 through 8; and the two high schools serve grades 9 through 12. The Cabot School stands seventh in elementary enrollment size out of fifteen total elementary schools. The Cabot School enrollment totaled 418 students as of October 1, 2014. Students attend the Newton elementary and middle schools in their geographical neighborhoods.

The students at Cabot School proceed to grade 6 at F.A. Day Middle School. Students at Day Middle School are served in grades 9 through twelve by Newton North High School.

An integrated preschool program is housed both at the Education Center (10 classrooms) and at the Lincoln Eliot Elementary School (2 classrooms). This program serves students with special needs as well as typically developing children.

CLASS SIZE POLICIES

The Newton School Committee and the Newton Teachers Association recognize that class size is an important factor in quality education. While recognizing that a steadily increasing enrollment in Newton is coupled with limited space in our school buildings, the School Committee in their FY14 budget guidelines stated, "we ask the Administration to come up with creative staffing mechanisms that offset higher class sizes by improving the adult-student ratio and protect student learning, particularly in the core curriculum. Special efforts should be made to keep class size smallest in grades K – 2." Therefore, attempts are made to keep class size close to the numbers listed below:

- Kindergarten-Grade 2: 1-20
- Grades 3-5: 1-23

In addition there is one co-taught classroom in grade 5, which serves as an integrated classroom with a regular education teacher, a special education teacher and a full-time intern. All other classrooms across grades provide inclusion for students with special needs. It is critical to provide small quiet working areas within these classrooms to meet the educational needs of the inclusion and integrated students. Therefore the class size will ideally be slightly less than the typical classes in order to best accommodate the students with special needs in the regular classrooms. To maintain the student-to-teacher ratio it is strongly recommended that there be four classrooms per grade to accommodate the need for a larger than normal grade size. Otherwise a larger than typical class would create a substantial burden on the teachers and students. The breakdown per grade based upon an enrollment of 480 students is as follows:

GOAL Class Size	K	1	2	3	4	5	Total
# Students	80	80	80	80	80	80	480
Average # students/class	**20**	**20**	**20**	**23**	**23**	**23**	
# of classrooms	4.0	4.0	4.0	3.5	3.5	3.5	22.4
Round	4	4	4	4	4	4	24
Total Classrooms/Grade	**4**	**4**	**4**	**4**	**4**	**4**	**24**

Based upon the class size goal and in recognition of the integrated and inclusionary approach to special education, any larger than normal grade would create a substantial burden on the teachers and students in the classrooms. The chart above demonstrates grades 3 through 5 requiring 3.5 classrooms per grade based upon 80 students per grade. Reducing the number of classrooms to three classrooms per grade would result in a class size of over 26 students per classroom. This would exceed the number of students acceptable per classroom and create a burden on the teachers and students on a daily basis. Therefore it is essential to increase the number of classrooms to four per grade to allow for an equitable ratio of students and teachers in each classroom. Likewise this allows for flexibility and growth within the Newton Public Schools. Therefore the number of required classrooms based on an enrollment of 480 students is as follows:

- Kindergarten — 4 classrooms
- Grade 1 — 4 classrooms
- Grade 2 — 4 classrooms
- Grade 3 — 4 classrooms
- Grade 4 — 4 classrooms
- Grade 5 — 4 classrooms

TOTAL — **24 Classrooms**

SCHOOL SCHEDULING METHOD

The Newton Public Schools has articulated specific instructional time allotments for elementary core subjects, which include reading, writing, mathematics, science, social studies and social curriculum. Specialist programs both enhance the core program and provide contractual preparation time for classroom teachers. These time allotments per week are as follows:

- Reading - 300-450 minutes
- Writing - 120-200 minutes
- Mathematics - 225-300 minutes
- Science/Tech Engineering - 90-120 minutes
- Social Studies - 45-120 minutes
- Social Curriculum - 30 minutes
- Art – 45 minutes (K); 50 minutes (1-4); 60 minutes (5)
- Music – 30 minutes (K-2, 4-5); 45 minutes including Recorder (3) Chorus – 45 minutes (4), 60 minutes (5)
- Physical Education, Health and Wellness - 60 minutes
- Instructional Tech/Library – 30 minutes (K-5)

The Newton School Committee recognizes the importance of providing adequate numbers of specialist teachers in both elementary and secondary schools. Elementary specialist teachers are defined as Art, Music, Physical Education, and Library-Media. These programs are a vital component of the complete educational program that are both a value and expectation of the Newton Public Schools to offer all students. Appropriate and adequate space should be part of the design for these programs.

Article 43: “Elementary Preparation Time” of the collective bargaining agreement states that elementary teachers are entitled to a 30-minute duty-free and meeting free lunch period. In addition, elementary classroom teachers are scheduled for a minimum of 165 minutes of preparation time per week for teachers.

The current specialist sections at Cabot Elementary are as follows:

- Art - Nineteen 45-50 minute blocks are taught by one Art teacher (1.0 FTE) while two 45-50 minute blocks are taught by a second part-time Art teacher (0.1 FTE).
- Music – Twenty-one 30 minute blocks of general music, 4th grade band lessons and the Cabot band ensemble are all taught by one Music teacher (1.0 FTE), 4th grade chorus is taught by a one part-time (0.1FTE) music teacher.

- Band or String - In addition to general classroom music and 4th and 5th grade chorus, students in 4th grade may elect to take introductory band or string instrument. Instrumental lessons are small group, pullout lessons during the school day. Students in 5th grade or other grades who are already proficient on an instrument may elect to participate in the Cabot band or orchestra. The ensemble groups each meet once per week for 45 minutes. Chorus is compulsory for 4th and 5th grade students and is scheduled within the school day. The 4th grade chorus runs for 45 minutes, once per week and the 5th grade chorus runs for 60 minutes, once per week. General music class meets once per week for grades K-2 and 4-5. The 3rd grade meets for 45 minutes and includes compulsory instruction on the recorder.
- Physical Education, Health, and Wellness - Thirty 30-minute blocks are taught per week by one Physical Education teacher (1.0 FTE) with twelve 30-minute blocks taught by a second part-time (0.4 FTE) Physical Education teacher.
- Library/Media - The Cabot School Library is currently staffed for five days of the week (1.0 FTE). The Library/Media teacher teaches a total of twenty-one 30-minute blocks during each school week. Unscheduled blocks are designated as flextime and for technology assistance. Library flextime is designed to provide unscheduled blocks of time during the school day for collaboration between the library teacher and the classroom teacher. Classes, accompanied by the classroom teacher, can use the library and its' resources for the purpose of research and inquiry in connection to the classroom curriculum. As the "first line of defense" Technology Assistance time, 20 minutes per day, is part of the library schedule and provides time for troubleshooting as well as one to one instruction for teachers in the management and use of technology tools and equipment.
- Instructional Technology - Instructional technology is integrated into the classrooms and is supported by a part-time Instructional Technology teacher (0.4 FTE). Currently, there is no substantially separate computer laboratory in Cabot School. This is consistent with all elementary schools in Newton.

TEACHING METHODOLOGY AND STRUCTURE (E.G., ACADEMIES, DEPARTMENTS, HOUSES, TEAMS, ETC.)

Cabot School engages in Professional Learning Communities (PLC). The school is organized in six teams from kindergarten through grade five. These teams are comprised of regular education, special education and ELL teachers. They conduct the data cycle as a collaborative team to improve learning for all students in the grade level. The 60-minute PLC blocks support their ability to collaborate within the school day. The regularly scheduled 30-45 minute grade

level intervention blocks provide direct instruction to small groups of students focusing on specific skill development in literacy and math. The teachers implement the Common Core standards, and the rigorous curriculum and assessment expectations set forth by the Newton Public Schools. Below is an overview of the general elementary curriculum, methods and assessments used by teachers.

LITERACY

There is explicit reading instruction in a variety of modes in every grade, continually engaging students at several distinct levels of challenge: an *instructional level*, just at the edge of the student's ability at that point in time, a *challenge level* offering harder material and an *independent level* using easier material to work on fluency and expression and to practice comprehension strategies.

Specific instructional components at each grade level include:

- Primary: interactive read aloud, shared reading, guided reading, independent reading, and phonics / word study.
- Intermediate: interactive read aloud, shared reading, guided reading (including strategy lessons, book clubs and literature circles), independent reading, and word study.

There is an emphasis on independent reading and the development of a lifelong reading habit; this includes nightly reading by all students in grades 1 - 8 and accountability by teachers through reading logs and folders.

Explicit writing instruction - *Units of Study, Lucy Caulkins; common writing prompts and scoring methods* that includes focused experiences in all genres, and both written and oral feedback from teachers:

- All grades: authorship experiences that emphasize conferring, revising, editing, publishing and celebrating creative efforts
- Intermediate: focus lessons on a variety of rhetorical and stylistic issues including specific narrative and expository techniques, planning and organizing, rich language, elaboration; serious examination of sentence structure and sentence boundaries; emphasis on writing as a tool to enhance learning and thinking in all subject areas

Assessment practices include: running records and system-wide instruments (primary: Phonemic Awareness Assessment (MJ Adams); Phonics: *Fundations Unit Assessments*; Comprehension: *Guided Reading, Fountas and Pinnell; Comprehension Tool Kit, Stephanie Harvey;* Spelling and Phonics*: Words Their Way, Templeton, Johnston, Bear & Invernizzi; the Developmental Reading Assessment ;)* Expressive

Language assessment, formal and informal reading inventories (intermediate: Benchmark Assessment System; *Guided Reading, Fountas and Pinnell; Comprehension Tool Kit, Stephanie Harvey; Words Their Way, Templeton, Johnston, Bear & Invernizzi.*

Tier 2 Intervention includes: Fountas and Pinnell Intervention Program skills inventories:

- Reading folder (should include log of all independent reading choices, small group book selections, reading responses, self-assessments and reflections, and, possibly, informal assessment data)
- Writing folder (should include a table of contents, all drafts, assessment instruments such as rubrics and writing prompts, self-assessments and reflections)
- Parent-student-teacher conferences that focus on collections of student work (portfolios, reading/writing folders, etc.) and progress over time relative to standards

Integration with Social Sciences and Science:

- Social Sciences and ELA Integrated Units of Study developed by Newton Public Schools: Biography American Geography and History; World Geography
- Science and ELA Integrated Units of Study developed by Newton Public Schools; Seeds of Science Roots of Reading

Although most of the reading and writing instruction takes place within the classroom environment, smaller work areas are necessary to facilitate individualized instruction, both in 1:1 and small group settings. Areas designed inside and outside the classroom are preferred.

MATH

Students learn mathematics in whole class, small group, and partner configurations. The curriculum includes a variety of hands-on activities and many materials that require space to store in each classroom. There is a math specialist working with classroom teachers who utilizes a small office as most time is spent coaching teachers in their classrooms.

SCIENCE AND TECHNOLOGY/ ENGINEERING

Teachers implement a hands-on science and engineering curriculum that requires the use of kit materials and student science notebooks. Each grade level uses water as a material in their curriculum so sinks are required. Additionally, space for storage of science materials, for set-up and use of the materials for investigation or experimentation, are required.

Storage for the science kits when not in use is needed.

SOCIAL SCIENCES

Students engage in a history/social sciences curriculum that wherever possible integrates with the informational skills components of the new Mass Frameworks for English Language Arts (incorporating the Common Core Standards). It is important that there be wall space available for maps and educational posters/displays as well as ample storage capacity for books and other content materials.

SOCIAL/EMOTIONAL

Open Circle, taught in grades K-2 by classroom teachers, and Steps to Respect, taught in grades 3-5, represent social Emotional Curriculum. The Responsive Classroom program is also used in a number of classrooms. Classroom teachers present Responsive Classroom methodology daily in a 10-15 minute “Morning Meeting”. No additional space is required to fulfill this component of the educational program however an area of the classroom will be zoned for morning meeting and other like functions.

ELL

There are currently 25 English learners enrolled at Cabot that are supported by an ELL teacher (0.8 FTE) and an ELL aide (1.0 FTE). The model is push in and pull out depending on a student’s English proficiency. Students at the entering and developing stage need a designated ELL learning classroom.

FOREIGN LANGUAGE

The Newton Public Schools does not offer foreign language instruction at the elementary level.

TEACHER PLANNING AND ROOM ASSIGNMENT POLICIES

Below is a description of the ideal planning and room assignment policies as well as how the Cabot School is currently organized due to space limitations.

The ideal grade level classroom formation would neighbor one another to offer close proximity for collaboration, communication and flexible grouping. Other core academic spaces such as art, music and library would ideally be within close proximity to the general classrooms to provide ease of transition from space to space as well as limit the transition time between classes to maximize the time spent in the classrooms.

Other core spaces such as the gymnasium and cafetorium are also used by the community therefore ease of access for the public is preferred. The cafetorium

will ideally be located on the first floor with direct access to the play spaces for time before or after lunch.

Most of the special education instruction at the Cabot School occurs within the regular education classrooms, however small instructional spaces for specialists and small group instruction are required. These spaces should be easily accessible from the general classrooms.

The original three story Cabot School was constructed in 1928 with a single story addition in 1957. In addition, there are currently four modular classrooms also located on the first floor.

Two kindergarten classrooms are located in modular classrooms which are of adequate size however they are temporary in nature. The other kindergarten classroom is located in the 1957 addition however it is remote from the other two kindergarten classrooms. Grade 1 classrooms are located on the second floor with grade 4 classrooms, but due to space constraints, one grade 4 classroom is not in proximity to the others. One section of fourth grade is located on the first floor, which is less than ideal and is a result of the limitations imposed by current space. Grade 2 and grade 3 classrooms are organized on the third floor. Grade 5 classrooms are located on the first floor however one of the classrooms is remote from the others providing it challenging for collaborative team teaching. This configuration is less than ideal due to flexible grouping needs of the students. Overall, Cabot School has clustered classrooms in neighboring proximity to one another and attempts to work within the space constraints posed by the architecture of the design.

Art and music classrooms are located in modular classrooms on the first floor however there is insufficient space for art and music materials which are housed in storage units in the corridors. The library resides in a space that was originally designed as a classroom. It serves all the students in the school for both instruction and research. As the school population has increased, the library area has been redesigned to accommodate a number of instructional programs that now share the space. The library also serves as the office area for a number of part-time staff members such and IT specialist. The library all serves as a computer area with 12 desktop computers that are used by students and teachers throughout the school day.

Most of the special education instruction occurs within the regular education classrooms. However, there is one Learning Center available for pullout instruction. This space currently houses three Learning Center teachers, physical therapist and a speech/language pathologist. There is one shared space for the Literacy Program, ELL and Math Coach also carved out of the Learning Center. The Inclusion Facilitators' space is a small 15' x 11' room and the Team Specialist and Occupational Therapist share a small room next to the lunch room.

The staff for mental health services share one small room creating challenges for testing, counseling individuals and groups as well as meetings with parents. In

addition there is a lack of meeting space for monthly IEP meetings for the 14 inclusion students and the bi-weekly PLC meetings.

At Cabot band, chorus and general music lessons take place in the music room. Strings instruction takes place in the lunch room.

There is 1.0 FTE music teacher for general music and instrumental lessons and a 0.1 FTE music teacher for chorus. Due to lack of space and fire code restrictions there is no opportunity for the entire school to gather for school assemblies except in the gym.

FLEXIBLE GROUPING

Regular education teachers engage in flexible grouping methods to meet the instructional needs of their students and as determined by the professional learning communities. Grouping and regrouping methods take place weekly within classrooms and among grade level classrooms. Regular education, special education and ELL teachers collaborate seamlessly to provide tier one (general curriculum), tier two (strategic intervention) and tier three (intensive intervention) in the inclusive environment. Pullout instruction is provided for students who require it, based on their personalized instructional needs within tier two and tier three programming. There is shared responsibility among the faculty for all students' success. Grade level classrooms are organized within common hallways and adjacent locations. Close proximity is critical in order to achieve the requisite communication and collaboration for flexible grouping methods in a grade level PLC team. Current architectural aspects of the Cabot School preclude the necessary adjacencies to ensure team proximity.

LUNCH PROGRAMS

There is cafeteria lunch room that was designed as a classroom in the existing Cabot School. This poses significant challenges for students, scheduling, dining, transitions and staffing support. Presently, Cabot School runs six lunch sessions with two grades eating in their classrooms. The warming kitchen was created out of space in the lobby area and is not adjacent to the cafeteria.

Whitson’s Culinary Group provides food service. Parents set up online lunch accounts and pre-pay meals. All students have a bar scan.

Cabot School serves up to 400 student lunches daily. This is a point of service operation so students can select a choice and their account is adjusted. A student’s account can indicate a specific allergic warning or set restrictions on choices by parents.

Currently, Cabot School has a staff of one cook and two attendants who work in a reheat service kitchen. Six lunches are served each day, except Tuesday, when the students are dismissed at 12:30, and eat lunch at home. Lunch service begins at 11:20 a.m., with the last lunch concluding at 1:50 p.m. The number of

students within each lunch ranges from 63 to 80 students. Lunch shifts are organized by individual grade level, with K and 5th grade eating in the classrooms. Over half the lunch shifts have complex, overlapping transitions. Each lunch period utilizes one serving line, where students use a bar code system when purchasing their lunch. The current location is inadequate in terms of space and sound issues.

TECHNOLOGY INSTRUCTION POLICIES AND PROGRAM REQUIREMENTS (LABS, IN-CLASSROOM, MEDIA CENTER, REQUIRED INFRASTRUCTURE, ETC.)

Cabot School currently offers the following instructional technology:

- Kindergarten
  - Elmo and LCD projector
  - 1 - 2 Mac desktop computer for student use per classroom
  - 5 iPads for student use per classroom
- Grade 1
  - 5 shared iPads per classroom
  - Elmo and LCD projector
  - Printers
  - 1 to 2 Mac laptop/desktop computers for student use per classroom
- Grade 2
  - Elmo and LCD projector
  - 5 iPads for student use per classroom
  - 1 to 2 desktop computers for student use per classroom
  - Printers
- Grade 3
  - Elmo and LCD projector
  - 5 Mac laptop computers for student use per classroom
  - 1 to 2 desktop computers for student use per classroom
- Grade 4
  - Elmo and LCD projector
  - 5 Mac laptops for student use per classroom
  - 1 to 2 desktop computers for student use per classroom
  - Printers - one shared in the grade level
- Grade 5
  - Elmo
  - 5 Mac laptop computers for student use per classroom
  - 1 to 2 desktop computers for student use per classroom
  - 2 SMART Boards in each classroom with speakers
  - 2 classroom have an Epson Short Throw projector
  - Printers - 2 shared in the grade level

In addition, each floor has one mobile cart of 20-30 Mac laptop computers, the school has 10 additional iPads and the Library has 5 iPads.

- Library
  The library is equipped with an Elmo and an LCD projector on a cart. A shared color laser printer and a shared BW printer are located in the library. Students and teachers have access to 12 desktops. There is a current generation desktop at the circulation desk for checkout. The school library also has a Flip video camera. A 27" TV with a VCR/DVD player is housed in the school library. A laptop cart of 8 laptops is part of the school library. Through the district's membership in the state library system the school library has access to an online encyclopedia (Encyclopedia Britannica) and InfoBits (Gale Database). Through the school library, all teachers and students have access to BrainPop/BrainPop Jr., Teachingbooks.net, Pebble Go Databases, Tumblebooks (eBooks.)

There is an Acceptable Use Policy for students and staff in the district. All staff members participate in an annual, mandatory training regarding the district policy. Parents are asked to review the Acceptable Use Policy with their children, sign and return the district form to the main office. All students receive instruction in the Acceptable Use Policy during the first two months of the school year.

ART/ MUSIC / PERFORMING ARTS

The Newton Public Schools has a vibrant visual and performing arts program. Within the week, all students at Cabot take one 45-50 minute visual art class, grades K-2 and 4-5 take one 30-minute general music class, 3rd grade has one 45 minute class, and 4th and 5th grades take chorus for 45 and 50 minutes each week. Instrumental music lessons (band and strings) are available for students in 4th grade in weekly 30-minute group lessons. The school also provides Band and Orchestra ensembles for grade 5 students and others for one 45-60 minute rehearsal per week. In 2014-15, 40 4th grade students are taking band or strings lessons, another 12 students perform in orchestra and 26 students perform in the band. There is one music classroom at Cabot with minimal storage space. Two instrumental music teachers serve Cabot to teach lessons and lead ensemble rehearsals. The chorus teacher is at the school one day a week when lessons occur simultaneously with one teaching in the music classroom and the other teaching in the lunch room. One large music classroom accompanied by one smaller instrument storage room/small group lesson space is desirable to support the music program. The large classroom should provide ample open floor space for dance and movement activities as well as flip form risers for organized seating/standing for singing activities. The music classroom should be equipped with a console piano.

Cabot hosts a variety of music concerts (choral and instrumental) throughout the school year. Occasionally, the students perform a variety show or musical theatre production. Performances take place in the gymnasium, sometimes disrupting PE instruction. A cafetorium with an ample stage is a preferred location for performing arts. Built in steps or risers between the cafetorium floor and the stage is desirable for preventing the need to move flip form risers from the music classroom. A cafetorium also allows for the stage to be used for music/performance rehearsals before and after lunch as well as for school wide performances and presentations held for students and parents throughout the year. The cafetorium should be equipped with a console piano.

Cabot currently has one art classroom with the majority of the storage in open shelves surrounding the room and in the corridor outside the room, one sink, a kiln cage in one corner, with natural lighting. Cabot requires an art classroom with ample natural light and with enough space for the largest class to seat a maximum of four students per table. The visual art classroom requires a separate storage closet for material/equipment storage as well as teacher preparation. The visual art classroom requires ample storage capacity within the classroom for students' artwork in process. The layout of the classroom should separate the worktables from preparation/sink areas. Multiple sinks at appropriate student height is required. A separate kiln room attached to the classroom is required. The visual art classroom needs a technology/media station (computers with photo/video software and Internet access) set-up to serve 4-6 students and away from paints and clay preparation. There should be ample space for whole demonstrations and exhibiting exemplary artwork on the walls.

In the corridor outside the visual art classroom as well as corridors throughout the school, there should be ample wall space designed for student artwork to be exhibited, including a 3D wall case centrally located in the school.

PHYSICAL EDUCATION AND OUTDOOR ACTIVITIES

All students, K-5, participate in instructional, quality physical education program twice a week, for 30 minutes each class. The curriculum is presented in accordance with the Massachusetts Frameworks and the National Standards for Quality Physical Education however still falls short of the recommended time for physical education in elementary schools, which is 225 minutes per week. Cabot has 1.4 FTE physical educators. Adapted Physical Education classes meet once a week in the gymnasium and one-on-one support services with in the classroom are provided once week

In support of the importance for physical activity as a major necessity for student learning, the district requires that all elementary students participate in recess in its state enforced Wellness Policy.

Outdoors, Cabot has a number of play areas including the adjacent Cabot Park maintained by the city Parks and Recreation Department. The immediate park

area contains a baseball diamond, softball diamond and soccer field and open space for recess. This park is used mainly by the school during school hours, but is shared with local preschool programs and neighbors. A number of neighborhood athletic groups use the park when school is not in session. In addition, playground areas are available for student use on school property. The Playground is adjacent to the park and the school and is considered the main playground for the school. There are 6 swings, a main play lot with slides, hanging apparatus, and climbing structures. There is a blacktop area that contains 2 foursquare courts. This is also the gathering area for families at arrival and dismissal. The configuration of a main playground area, a Tot Lot, a blacktop area, and an open play area are recommended in future design for the school.

SPECIAL EDUCATION

In 2013-2014 the percentage of students at Cabot School with special needs was 13.4% and below the district percentage of 19.6% (the state average is 17.1%).

Inclusion is a core belief and practice in the Newton Public Schools. This educational model challenges schools to meet the needs of all students by educating learners with disabilities alongside their non-disabled peers. The environment necessary to nurture and foster inclusion is built upon a shared belief system between general and special education, and a willingness to merge the talents and resources of teachers.

The mission of all of the schools in Newton is to maximize the potential and independence of each student. An inclusive education helps prepare students with disabilities for an integrated adult life and builds understanding and acceptance within the broader community.

The staff that provides special education services includes special education teachers, inclusion facilitators, aides, behavior therapists and related service providers such as school psychologists, social workers, speech/language pathologists, occupational therapists and physical therapists. In many cases these positions are shared among more than one school, but together they represent a team-based approach to supporting students and families in need at the elementary level in Newton.

Students at the Cabot School are supported through a variety of teaching models - co-teaching, team teaching, flexible grouping, small group instruction, and individualized instruction. Teachers believe that all learners should be provided differentiated forms of instruction and recognize that all students learn in different ways, rates, and timeframes. To that end, the Cabot School continually adapts its staffing support, instructional methodologies, and assessment practices to meet student needs.

Tiered levels of instruction provide the regular education foundation of Cabot School's continuum of service model. Cabot Staff provides tiered levels of

instruction to all students (Tier One - the regular classroom curriculum; Tier Two - strategic levels of instruction; Tier Three - intensive levels of instruction usually at an individualized level.) If a student demonstrates academic and/or social/emotional/behavioral concerns despite thorough RTI procedures, the teacher refers the student to the building Teacher Support Team. This Team supports teachers in implementing additional strategies.

Special education services at Cabot School range from the least restrictive (for example, in class support services to a more restrictive (significant amount of multiple services out of the regular education classroom). Cabot School offers rooms available for pullout small group and individual instruction provided by special education teachers and inclusion facilitators who support inclusion for students with significant disabilities. Related service providers include speech/language pathologists, an occupational therapist, a physical therapist, a psychologist, and a social worker. Teachers of deaf/hearing impaired students and vision-impaired students also support students with these disabilities in accessing the curriculum.

The Cabot School utilizes the co-teaching model, taught by a special education teacher and a regular education teacher, to support students with special needs. This classroom includes regular education students and students with special needs enrolled at Cabot. Students with special needs are supported academically and socially through small group and individual teaching, modifications of the curriculum, and classroom accommodations. The goal of the program is to address students' multiple needs by providing a comprehensive range of services and a consistent, structured, and nurturing environment throughout the school day.

Special education learning spaces are situated among regular education classrooms. The location of the classrooms allows staff to communicate and collaborate fluidly throughout the day on student needs and programming. The number of students in these classrooms is monitored to ensure that a lower class size is maintained in order to allow the flexible learning requirements of the students.

In addition to the fully inclusive model throughout Newton, the district has several substantially separate classrooms located in elementary, middle, and high schools which provide more intensive programming. Two classrooms in the Cabot educational program are required for the location of one of the district wide programs. These classrooms will support a cohort of students with similar learning needs and allow for these students to be included in the programs and school life at Cabot. These classrooms will provide flexibility for the ongoing programming to meet student needs in the current and future district population.

TRANSPORTATION POLICIES

Newton Public Schools provides bus transportation free of charge for all elementary school (K-5) students. Special education transportation services are separate from regular bus transportation.

Cabot Elementary School has one district bus and one Boston bus for METCO students. Students who are bused are dropped off in a live, bus drop-off lane between 8:00 a.m. and 8:20 a.m. daily. Monday, Wednesday, Thursday and Friday, school dismisses at 3 p.m. and on Tuesdays, school dismisses at 12:30 p.m. due to weekly professional development for teaching staff. Approximately 68 students are bused. Approximately 50% of the remaining students walk with the other 50% that are driven to school. The school staff provides safety and supervision on the school property during arrival and dismissal times. The city Police Department provides two crossing guards in the vicinity of the school on Cabot Street between Parkview Avenue and Bridges Avenue and on East Side Parkway.

FUNCTIONAL AND SPATIAL RELATIONSHIPS AND KEY PROGRAMMATIC ADJACENCIES

Cabot School is the second Newton elementary school, having been built in 1928. It has served the Cabot Park area in Newton as a neighborhood school for the past nine decades. Its location has made it a fixture in the community, tightly sited, but adjacent to the city owned Cabot Park. This neighborhood location has encouraged many families to walk with their children, gathering outside the school before arrival and at dismissal.

Functional and spatial relationships and adjacencies are key to the successful design of the new facility. These relationships between classrooms and programs in the school define the programmatic, functional, spatial, and environmental requirements of the educational facility and become the basis for the design at the next phase. Cabot School depends on adjacencies for communication, collaboration, flexible grouping, and teaming. Providing learning areas both in and outside classrooms for small group work, individual tutorial spaces, and additional instructional break out rooms are critical in a school with a focus on inclusionary classrooms, requiring specialized instruction and an emphasis on inclusive practices.

Community is a core value among students, staff and parents. Cabot School is a warm and inviting place for children, staff and families. The PTO and parent volunteers are actively involved in before, during and after school programs. Cabot requires a welcoming main office and community arrival space that accommodates the high morning influx of families who walk or get dropped off by parents at school arrival, as well as the active dismissal procedures. The students, faculty and parent community value and require a space for the entire school to gather, both as a common space to gather and celebrate learning and

as an area to spotlight the arts through assemblies and performances. A functional dining facility with a reasonable capacity is a need of the school. After school, we provide space for a K-5 extended day program that operates until 6:00 p.m. Up to 175 students participate in this program on a regular basis Monday through Friday.

The Cabot School is a relationship-oriented community, that practices and values inclusive partnerships and mutual support in all aspects of the school community. This is the overall spirit of the school that will drive the design of the facility.

SECURITY AND VISUAL ACCESS REQUIREMENTS

Cabot Elementary School requires a safe main driveway entrance access to the school site with safe secondary access for emergency needs. Cabot Elementary School also requires:

- Access Control utilizing a security card access device by authorized staff
- Visual Security of the main entrance utilizing a video monitoring system that will be monitored at the school secretary's desk.
- Safe staff parking
- Safe visitor parking
- Safe vehicular student drop off and pick up areas without crossing traffic (called a "blue zone" in Newton)
- Safe pathways for pedestrians and bicyclists coming from varied directions to the school
- Safe bus access systems that do not interfere with drop off and pick up traffic
- Safe recess grounds and play fields that can be properly supervised by staff and protected from vehicle traffic
- Visual access of the driveway and parking lots
- Safe access for kitchen, facility and shipping / receiving separate from school traffic to the main entrance
- Safe and appropriate access to the perimeter of the building and play fields

DRAFT EDUCATIONAL PROGRAM
NEWTON EARLY CHILDHOOD PROGRAM

INTRODUCTION

The Newton Public Schools (hereafter, NPS) evaluated the current integrated preschool educational program and defined the educational activities to be offered for the new preschool space as part of the Lincoln-Eliot Elementary School and Early Childhood Center proposed at 150 Jackson Road. The collaborative process included many meetings and discussions with the Deputy Superintendent of Schools, Assistant Superintendent for Student Services, Newton Early Childhood Program Director, Newton Early Childhood Program lead teachers and related services staff members, NPS Facilities Director, NPS Director of Business and Planning and other school leaders and stakeholders. Although pre-planning work has been done, and the educational program for preschool has been thoroughly reviewed at this time, the program will benefit from additional review with the full project team.

The review process has been extensive, starting with an ideal program for the Newton Early Childhood Preschool Program (hereafter, NECP). The program was modified to conform with realistic budget assumptions and to align with DESE guidelines relevant for early childhood program spaces. The outcome is a thoughtful, effective educational program that will enable NECP to serve a population that includes some of Newton's most highes need children age three to five.

The preschool education program narrative supports each component of the preschool space summary of all categories of rooms and sizes needed for the program including core academic spaces, special education, health and gross motor, dining and food service, medical, administration and guidance, custodial and maintenance. The program also address site needs for outdoor play, parent and van drop off as well as parent and staff parking.

PROGRAM OVERVIEW, TEACHING APPROACH AND STRUCTURE

NECP promotes high quality inclusive preschool education that provides all children with the opportunity to learn with and from each other. All children gain valuable experiences in an environment where children are different in their abilities. NECP's curriculum is based on the Massachusetts Curriculum Frameworks with play as an important vehicle for learning both early academics and social skills. The inclusive program builds a lifelong foundation for respecting human differences. The goal of the program is also to improve school readiness and to support the transition to kindergarten for preschool children with identified special needs.

For typically developing children, all applicants for our preschool classrooms must be at least three years old by August 31st to begin school in September. If space is available children are invited to apply to the program when they turn three during the school year. All

classrooms are designed to be mixed age groups for the most part. Students are placed in classrooms according to a number of considerations; two classrooms are reserved to included mostly three year olds and two classrooms include mostly four year olds transitioning to kindergarten. Students age eligible to attend kindergarten (five years old on or before August 31st) are not eligible to attend NECP.

Preschool age children may be referred for special education services in a variety of ways. These include referrals from parents, Early Intervention (hereafter, EI) programs, hospitals, or other professionals. The referral process may include information-gathering with the parent and a community preschool teacher, as well as observations of the child either at home or in the classroom setting.

Following evaluation and development of an Individualized Education Program (hereafter, IEP), students whose special education needs require specialized instruction may be placed in a comprehensive preschool program along with typically developing 'role model' students who attend the program on a tuition basis. Specialized instruction is highly individualized and may include applied behavior analysis (hereafter, ABA) programming and social pragmatics skills development. Related services can also be provided within the classroom. Classroom options include the following:

- Morning integrated classrooms 9:00-12:00 Monday-Friday
- Extended day integrated classrooms 8:30-1:30 four days/week and 8:30-12:00 one day/week
- Self-contained special education classrooms 8:30-2:30 three days/week, 8:30-2:00 one day/week, and 8:30-12:00 one day/week

In addition to classroom-based preschool programming, NECP also provides an array of related services for students who do not necessarily require placement in a classroom, yet are eligible for special education services. An average typical breakdown of students by type of service received is:

- 200 students in programs
- 120 students receiving related services only

These related services may include the following: speech and language therapy, deaf/hard of hearing services, occupational therapy, physical therapy, emotional/behavioral support, orientation and mobility services, and vision services. Services are provided on an as needed basis, scheduled several times per week by appointment. Note that some students can be in classroom programs and also receive related services. Related services only students may or may not attend community-based private preschool/daycare programs.

CLASS AND GROUP SIZE POLICIES

Integrated preschool programs are governed by Education Laws and Regulations contained in 603 CMR 28.06 Special Education, Section 7. These regulations govern the group and class sizes allowable in NECP. The need for services for special education students is great enough in Newton that, given the number of classrooms available, there are seven or eight students with disabilities placed in each classroom. **The NECP group size for integrated classrooms is therefore limited to a total of 16 students.** For 2018-2019 there is are two sub-separate classroom at NECP with a group size of nine students. A summary chart and an excerpt from the regulations are included below:

NECP STAFFING MODEL

CLASSROOM PROFILE	INSTRUCTION GROUPING	STAFFING	
Sub-separate classrooms	May not exceed 9 students	One Teacher	Aide Specialists
Including 7 or 8 SWDs	May not exceed 16 students	One Teacher	Two Aides
Including no more than 5 SWDs	May not exceed 20 students	One Teacher	Two Aides

EXCERPT FROM 603 CRM 28.06 Special Education

28.06: Placement and Service Options

(7) Programs for young children. The school district shall ensure programs are available for eligible children three and four years of age. Such programs shall be developmentally appropriate and specially designed for children ages three and four years.

(a) The requirements of 603 CMR 28.00 shall apply to the extent that they can be adapted to reflect the fact that such children may not be receiving services in the public school.

(b) School districts are encouraged to accept referrals from the Department of Public Health, other agencies, and individuals for young children when or before the child turns two-and-one-half years old in order to ensure continuity of services and to ensure the development and implementation of an IEP for eligible children by the date of the child's third birthday in accordance with federal requirements.

(c) The school district may elect, consistent with federal requirements as outlined at 34 CFR §300.323(b), to use the format and services of the Individualized Family Service Plan (IFSP), if appropriate, for an additional year as a means of transitioning eligible children to public school services.

(d) The Team may allow a child to remain in a program designed for three and four year old children for the duration of the school year in which the child turns five years old (including the summer following the date of the child's fifth birthday).

(e) Type of Setting - Inclusionary. Inclusionary programs for young children shall be located in a setting that includes children with and without disabilities and shall meet the following standards:

1. Services in such programs may be provided in the home, the public school, Head Start, or a licensed childcare setting.

2. For public school programs that integrate children with and without disabilities, the class size shall not exceed 20 with one teacher and one aide and no more than five students with disabilities. If the number of students with disabilities is six or seven then the class size may not exceed 15 students with one teacher and one aide. (Note: NECP uses two Aides and the above staffing model.)

(f) Type of Setting - Substantially Separate. Substantially separate programs for young children shall be those programs for three and four year olds that are located in a public school classroom or facility that serves primarily or solely children with disabilities. Substantially separate programs shall adhere to the following standards:

1. Substantially separate programs shall be programs in which more than 50% of the children have disabilities.

2. Substantially separate programs operated by public schools shall limit class sizes to nine students with one teacher and one aide.

PLANNING FOR ENROLLMENT

Conservative planning for future growth of NECP has been incorporated into this Educational Program narrative. Three classrooms are included in the proposed educational program to accommodate future growth (one sub-separate classroom and two integrated classrooms). Enrollment at NECP is based on the number of preschool age children with identified special education needs whose parents seek evaluation and placement. Enrollment in NECP is voluntary, depends upon needs of the population of three year olds in a given year, and typically increases during the year as preschool students are evaluated and referred for services.

Current and historical enrollments have been reviewed to identify trends and other factors that will be pertinent to current planning activities. As of June 1, 2018, NECP is serving a total of 305 students including (Note - June is an enrollment peak as enrollment continues throughout the school year):

- 104 students with special needs
- 90 students who are typically developing
- 111 students receiving related services

NECP enrollment history is shown below for the past six years since 2009-10. Trends in the disability types of children served by NECP are also reviewed. For example, there has been an increase in certain disability types including autism spectrum disorder (hereafter, ASD) over the last several years. A summary chart with this information is shown below.

The recommendation for a third substantially separate classroom is to accommodate the increase in the population of students with ASD. An additional integrated classroom is also recommended to allow for future enrollment needs of students with special needs. The enrollment below is as of the end of each year, as enrollment in NECP trends upward throughout the year dependent upon the number of students referred for evaluation and recommended for services.

SERVICE TYPE	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
Preschool Program	134	119	125	100	123	127	113	107	95	111	104
Preschool/Role Model	62	74	89	83	88	89	81	66	75	67	90
Related Services	42	42	44	60	40	32	43	41	101	107	111
TOTAL	238	235	258	243	251	248	237	214	271	285	305

Enrollment Trends for students with the three most frequent disability types are shown below:

Nature of Disability	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
Autism	28	23	24	32	31	30	36	36			33
Communication	25	22	17	29	33	30	26	26			29
Developmental Delay (ages 3 to 9 only)	103	117	108	93	83	79	71	71			106

The Space Summary includes spaces for preschool classrooms to satisfy the above group size limitations required by state law (see below for details by individual type of space). Two classrooms at minimum are included to accommodate future growth (one sub-separate classroom and one integrated classroom.

EVALUATION AND SCREENING

When a parent/guardian has concerns about their child's development, they contact the NECP director to determine what next steps are appropriate. Often, following a discussion about the concerns, additional written information is gathered from the parent/guardian and the child's teachers in order to make the most appropriate recommendations. In many cases, the child is observed in his/her educational setting and an early childhood consulting teacher collaborates with the child's educators to develop and implement strategies for facilitating development. In some cases a child is referred for a formal evaluation through NPS following an initial discussion or after implementing strategies in the classroom.

When a child is receiving EI services, the EI service coordinator along with the parents develops a referral packet to send to NPS. Upon receipt, the NECP director works collaboratively with the EI Team and family to schedule a Transition Planning Conference (TPC) to be held at least three months before the child's third birthday to discuss appropriate evaluations and the evaluation process. This timeline ensures that evaluations and the child's eligibility for continued services will take place before the child turns three and an effective transition to NECP can occur.

NECP engages in ongoing Child Find as required by the Department of Elementary and Secondary Education. This includes consultation to community-based private preschool/daycare programs, as well as partnership with local advocacy groups designed to provide resources for hard to reach populations, such as the Newton Partnership and the Community Partnership for Children and Families. Moreover, NECP hosts an annual

citywide screening day designed to identify preschool age children who may need to be evaluated to determine eligibility for special education services.

In addition to classroom spaces which are used for screening, the space summary includes spaces for program director, psychologist, social worker, team specialist, and small evaluation/instruction rooms.

INDIVIDUALIZED EDUCATION PLANS

All students at NECP have established IEPs in place with the exception of tuition paying typically developing 'role model' students (about 65-70% of NECP students have IEPs). Special education regulations govern the process of determining eligibility for special education services. Evaluations are done with required written consent from the parents. Once the formal evaluation process has been completed, all participants meet to form a Team to determine eligibility for special education services. The Team includes the parents, NPS evaluators and if applicable community preschool teachers, early intervention therapists, etc... If a child is found eligible for special education services, a plan that describes the child's learning profile, instructional needs, appropriate goals, and educational placement is developed by the Team. The specific services, settings for service delivery, and providers are detailed in the IEP.

The Space Summary includes spaces for psychologist, social worker, and IEP conference space.

MORNING INTEGRATED AND EXTENDED DAY INTEGRATED CLASSROOMS

The NECP curriculum is based on the Massachusetts Curriculum Frameworks, with play as an important vehicle for learning both early academics and social skills. Academic and social skills are woven throughout thematic units developed by the special education teachers. The inclusive program builds a lifelong foundation for respecting human differences.

Morning and Extended Day Integrated Programs: The typical program day includes arrival, free play, teacher choice and activity center, morning circle, bathroom, snack, large/small group instruction, story, and good-bye circle. In addition, classrooms attend weekly music group and Physical Education classes. Embedded in each daily activity are opportunities for exposure to key early learning experiences, such as math, literacy, and science activities. These daily activities also embed opportunities for learning motor imitation (e.g. hand motions and signs) as well as reinforcement of early learning skills (e.g. counting, sequencing, rhyming etc.).

Afternoon-only Preschool Classroom Programs:

Social Pragmatics: Two types of social pragmatics groups are designed to support students who require additional, small group opportunities to learn and practice social pragmatics skills. The "ABA social pragmatics" groups do not include typically developing students, and are run by behavior therapists with oversight from a Board Certified Behavior Analyst

(BCBA) with as many as four students. The social pragmatics groups are small integrated groups run by a special education teacher with the support of an aide with as many as eight or more students. The curriculum areas include recognizing/identifying feelings, learning and utilizing social thinking concepts, developing problem solving strategies, identifying the size of the problem, and more.

ABA Discrete Trial: Students who require additional opportunities to practice discrete skills are paired with one or more other students and a behavior therapist. Students in these groups eat lunch together, then break into dyad/triad groupings to work on concrete skills using ABA teaching methodologies.

Specialized instructional groups including speech/language therapy (3x90 minutes/4x90 minutes): There are students who require a combination of specialized instruction and speech and language services in a format that provides highly intensive instructional time. These students attend either three or four afternoons per week. The schedule includes lunch as well as activities that are typical of a preschool classroom day (e.g. circle time, free play, and small group time). All of the students in these groups are on IEPs, and the group can include as many as eight or more students. This program is staffed by a special education teacher, a speech and language pathologist, and one classroom aide.

Speech and Language Groups: There are students attending community preschool programs who require support for targeted speech-language skills (e.g. articulation, expressive language skills, receptive language skills, communication etc.). These groups include eight students with services provided by a speech-language pathologist and one classroom aide.

Academic Groups: The academic groups are small integrated groups run by a special education teacher with the support of an aide with as many as eight or more students. The curriculum areas include targeting developmentally appropriate academic skills in a small group environment such as solidifying concepts of colors, shapes, as well as addressing greater curriculum areas such as literacy, math and more.

The current utilization of classrooms illustrates the full programming of NECP's thirteen (13) classrooms during school hours.

CR	ROOM UTILIZATION IN MORNING	ROOM UTILIZATION IN AFTERNOON	GROUP SIZE / NOTES	STAFFING
#1	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Social Pragmatic groups 12-2pm	8, Integrated	Same teaching staff all day
#2	Morning Integrated classroom (9am-12pm)	3x90 and 4x90 Groups (specialized instruction/SLP co-taught) M, W, TH, F 12:30-2pm, 2pm parent meetings	12, Not Integrated, Therapeutic Group	Same teaching staff all day

#3	Morning integrated classroom (9am-12pm)	3x90 Group (specialized instruction/SLP co-taught) M, W, F 12:30-2pm, 2pm parent meetings	12, Not Integrated, Therapeutic Group	Same teaching staff all day
#4	Substantially Separate classroom 8:30-2:30pm M, TH, F 8:30-2 W, 8:30-12 T	Substantially Separate classroom 8:30-2:30pm M, TH, F 8:30-2 W, 8:30-12 T	9 students on IEPs	Same teaching staff all day
#5	Substantially Separate classroom 8:30-2:30pm M, W, TH, F 8:30-2, 8:30-12 T	Substantially Separate classroom 8:30-2:30pm M, W, TH, F 8:30-2, 8:30-12 T	9 students on IEPs	Same teaching staff all day
#6	Extended Day integrated classroom (8:30am-1:30pm)	Afternoon programming W, F 1:30-2:30pm, Team meeting Monday 1:45-3:00pm	8 Students on IEPs and Monday staff meeting with 12 people	BT runs extended day programming with Aide support for high needs children
#7	Extended Day integrated classroom (8:30am-1:30pm)	Afternoon programming M, W, TH, F 1:30-2:30pm, Team meeting Thursday 1:45-3:00pm	8 Students on IEPs and Thursday staff meeting with 12 people	BT runs extended day programming with Aide support for high needs children
#8	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Social Pragmatics groups 12:00-2:00pm	8 Students, Integrated	Same teaching staff all day
#9	Morning integrated classrooms (9am-12pm)	Mon, Wed, Th, Fri Social Pragmatics groups 12:00-2:00pm	8 Students, Integrated	Same teaching staff all day
#10	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Social Pragmatics groups 12:00-2:00pm	8 Students, Integrated	Same teaching staff all day
#11	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Social Pragmatics groups 12:00-2:00pm	8 Students, Integrated	Same teaching staff all day
#12	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Language groups 1:30-2:30, Classroom meeting Thursdays 12:15-1:15	8 students on IEPs (classroom) 8 students on IEPs (Language group)	Morning staff, afternoon laguage groups staffed by Speech Pathologists
#13	Morning integrated classroom (9am-12pm)	Mon, Wed, Th, Fri Academic groups 12:00-2:00pm	8 Students, Integrated	Same teaching staff all day

The Space Summary for the integrated preschool program includes 14 classrooms that are used for morning program, extended day program, speech/language therapy program, ABA program, and social skills programs. The spaces are programmed through the end of the school day at 2:30 pm.

SELF-CONTAINED SMALL GROUP CLASSROOMS

Two self-contained classrooms are show in the chart above. Students placed in the NECP substantially separate classroom require intensive behavioral and communication support and receive almost all of their instruction though the methodology of discrete trial instruction. These services include a combination of supported inclusion, discrete trial training, small group activities, and incidental teaching strategies. The program is based on the principles of ABA focusing on reinforcement systems and consistent behavior management programs.

There are also two half sized classrooms or ABA programming:

1/2 Size	ABA programming for 9-12 classes (pull out)	12pm-2:30pm afternoon ABA services	PM Group is 6-8 students	BT/ BCBA staff
1/2 Size	ABA programming for 9-12 classes (pull out)	12pm-2:30pm afternoon ABA services	PM Group is 6-8 students	BT/ BCBA staff

The Space Summary for the integrated preschool program includes two (2) self-contained full day special education classrooms.

RELATED SERVICES

Related services are a major program aspect of NECP and serve a caseload ranging from 100 to 125 students (on average) during the year. The caseload increases throughout the year as preschool age children are identified for services. Related services include supportive services that are necessary to assist a child with a disability to access and benefit from regular education. At NECP, related services include speech and language therapy, deaf/hard of hearing services, occupational therapy, physical therapy, emotional/behavioral support, orientation and mobility services, and vision services. These services may be provided to a student who is attending one of the classroom programs or in a community preschool program, as indicated in their IEP. Services may be provided in the classroom setting or in other instructional spaces. These alternative spaces might include the gross motor room (e.g. for physical therapy) or small group instructional space.

TYPE OF SPACE	ROOM UTILIZATION IN AFTERNOON	GROUP SIZE / NOTES	STAFFING
Medium Size	Related Services Therapy/Testing	8	SLP
Small Size	Related Services Therapy/Testing	4	SLP / TODHH
Small Size	Related Services Therapy/Testing	4	OT Testing
Small Size	Related Services Therapy/Testing	4	SLP / TODHH / Music Therapy
Small Size	Related Services Therapy/Testing	4	SLP
Small Size	Related Services Therapy/Testing	4	SLP
Small Size	Related Services Therapy/Testing	6	OT Treatment / Sensory Integration

The Space Summary for the integrated preschool program includes small instructional spaces to provide treatment and related services for small groups, pairs and individual children.

ART/ MUSIC

Art and music activities take place in the classrooms and are taught by classroom teachers. Art and music are fully integrated into the developmentally appropriate preschool curriculum.

The space summary for the integrated program has classrooms of a sufficient size to accommodate art and music curriculum and includes a small gymnasium/multi-purpose space for large group activities.

GROSS MOTOR AND OUTDOOR PLAY

In support of the importance of physical activity as a major necessity for preschool student learning and self-regulation, all preschool classrooms include indoor and outdoor gross motor activities and play as part of their daily schedule.

All preschool students enrolled in a classroom program participate in an instructional, quality physical education (hereafter, PE) program once per week taught by a PE teacher and an adaptive PE teacher. Each of the 14 classrooms is scheduled for 60 minutes of PE per week.

NECP requires a separate early childhood play area in an exterior location adjacent to the preschool program spaces with equipment designed for children at developmental levels of

5 and under, designed for a population with highly varied physical abilities. The playground will also need to be large enough to accommodate up to approximately 45 children, since often there are multiple classrooms using the playground at the same time.

Given the number of students with physical disabilities, the NECP play area will need to also be inclusive of children with significant mobility challenges (e.g. wheelchair-bound) and sensory challenges (e.g. hard of hearing, visually impaired).

In addition to daily time on the outdoor play area, and weekly physical education classes, many preschool students require additional motor breaks throughout their school day. Suspension points allowing for the usage of swings can be found in two of the current classrooms, and are required in four of the new classrooms. In addition, a number of students from all of the classrooms also require the use of the OT and PT sensory motor rooms for their therapy sessions as well as for motor breaks. The OT and PT sensory motor rooms will also be used for OT and PT evaluations as well as therapy sessions for community students who receive related services.

The space summary for the integrated program has several gross motor/OT/PT spaces.

MEDICAL

The NECP nurse's suite serves students with significant medical needs who may require daily medical support.

The space summary for the integrated program has a nurse's office which may or may not be able to be shared with the Elementary School due to adjacency requirements (for both ES and NECP) and intensive nature of the preschool caseload.

ELL

Preschool English Language Learning (hereafter, ELL) instruction is not provided as a discrete educational strategy as is required at the elementary level. However, a recent new requirement by MA DESE has added ELL screening for all four year olds. It is possible that ELL services for preschool age children may be added as a requirement in the near future. Under the new LOOK act, the ELL departments are now not only required to identify preschool age ELLs but to service them. There has been no guidance on what that service means to-date, but guidance is expected soon. Currently, ELL services in NECP consist of translation when needed for communication with families.

The Space Summary does not contain dedicated space for ELL instruction or services. This space would be shared with Lincoln-Eliot Elementary School if needed.

LUNCH

The preschool children who attend extended day may opt to participate in the Newton

Public School lunch program. Lunch is delivered to participating children. Children eat snack and lunch in their classrooms and no separate lunch space is required.

The Space Summary does not provide a cafeteria or kitchen. The cafeteria space would not be needed for lunching preschool children. Kitchen services would be shared with the Lincoln-Eliot Elementary School.

A staff lunch room is required.

The Space Summary provides a staff lunch room.

ADMINISTRATION

NECP administration consists of the program director, an administrative assistant, and support staff. The administrative personnel require a director's office with meeting space, an administrative work area, and secure student file area accessible to both administrative and teacher work spaces. Three confidential parent/staff meeting conference rooms are needed for team and other meetings with parents and staff.

ADMINISTRATIVE SPACES	Type	Use	Notes
Large office space, #204		SLP, OT, PT offices	1.5 Classrooms used as office space for 16 staff
Consulting teacher/social worker, Upstairs	Office	Exterior office space	office for 2 staff
Team Specialist office, Upstairs	Office	Office/Small meeting space	1 staff
School Psychologist Office, Upstairs	Office	Office/Testing space/Small meeting space	1 staff
Staff work room, Upstairs	Office Work Room	Staff work space/File room	Shared
Main Office, Upstairs	Office	Directors office/Main Office	
Conference Room #1, Upstairs	Conference Room	Meetings, IEP meetings, Interviews, etc...	
Conference Room #2, Upstairs	Conference Room	Meetings, IEP meetings, Interviews, etc...	
Safe space, Downstairs	Quiet Room	as needed	
Safe space, Upstairs	Quiet Room	as needed	

The Space Summary provides a director's office, administration area with file storage and conference space.

TECHNOLOGY REQUIREMENTS

NECP uses instructional technology to support its educational goals and wireless access for devices (mostly iPads and Elmos at this age) is required by the program.

Standard technology access including laptop plug-in stations at flexible professional work pagespaces and a range of expected administrative technology is necessary to support professional work by staff.

The Space Summary does not provide space for technology infrastructure which is expected to be shared with the Lincoln-Eliot Elementary School. Technology infrastructure for the Lincoln-Eliot Elementary School is expected to exceed the needs of the preschool program.

TRANSPORTATION AND PARKING

Currently in the 2017-18 school year, there is a mix of student transportation by individual parents and group vans. Vans carrying a maximum of 5 students arrive and depart several times throughout the day. In a typical year, of the 200 enrolled students, the following students are transported as follows:

- 65 students attending preschool programs - by van - five days per weekClass
- 30 receiving related services students - by van - three or four days per week
- 70 students attending preschool programs - by parents - five days per week
- 35 related services students - by parents - one to four days per week

Transportation is provided in eight-seat passenger vans but, for children aged 3-5 years old, a maximum of five-six children are transported in order to accommodate integrated car seats and other equipment. Because students are receiving related services only, or are attending programs, or both in some cases, there are numerous vans that arrive and depart throughout the day from 8:30 to 2:30. The main arrival times are 8:30 - 9:00 a.m. and noon/12:30pm. The main departure times are noon, 1:30 and 2:30 p.m.

Based on 2017-18, daily traffic flow by hour for parent drop off and special education vans is illustrated below:

Parent Drop Off	8:30	16-20 Parent Cars In	
	9:00	75 Parent Cars In	
	Noon	50-60 Parent Cars Out	
	12:30	10-15 Parent Cars In	
	2:00	40 Parent Cars Out	
	2:30	20 Parent Cars Out	
Vans	8:30	5 Vans In	
	9:00	10-12 Vans In	
	Noon	10-12 Vans Out (15 Vans on TUES early release)	
	12:30	4 Vans Out	
	1:30	5-6 Vans Out	
	2:00	4 Vans Out	
	2:30	5-6 Vans Out	

A dedicated lobby area to receive students transported by van is addressed in the space summary.

The preschool has a staff of 80 part-time and full-time employees and a total of 61.5 full time equivalents. The chart below details the mix of full time and part-time personnel and estimates parking needs. Part-time staff typically might be expected to share parking spaces, but scheduling does not allow that at NECP because the majority of staff all work during the main program morning hours.

Full-time Equivalency (FY19)	FY19 # Staff	# Spots Proposed
Full-time	35	35
Part-time	38	38
Proposed Full and Part-Time	8	8
TOTAL PERSONNEL	81	81

EXTENDED YEAR PROGRAM (SUMMER)

Extended School Year (ESY) is a 6 week program that is offered for students with disabilities whose IEPs including ESY services in order to maintain progress toward educational goals. The ESY program is also an integrated program available to the general public on a fee-for-service basis, but the mix of students not as balanced as during the school year. ESY enrollment is about 25% typical and 75% students with disabilities. The ESY starts the first week of July; NECP staff have a few days in June following the close of school to prepare. Air conditioning for all classrooms is required in ESY. ESY includes a variety of similar services offered from classroom 6, 5 or 3-hour placements to afternoon therapeutic groups. In the 17-18 school year ESY was 10 early childhood classrooms, and afternoon therapy groups until 2:30 p.m. such as social pragmatic or language groups.

Appropriate related services were also available to children as eligibility deemed. The ESY operates Monday-Thursday.

FUTURE NEEDS

PRESCHOOL CLASSROOMS (15 CHILDREN)

While enrollment is almost impossible to forecast, NECP has grown by 4 classrooms in the past 8 years. Enrollment growth is driven by the number of students with disabilities who requiret service. In an integrated program, governed by MA regulations for group sizes, typical student enrollment must parallel enrollment of students with disabilities.

Adding a minimum of two additional preschool classrooms is needed to accomodate enrollment growth.

The Space Summary provides additional preschool classrooms to serve group sizes of 15 students.

SELF-CONTAINED SMALL GROUP CLASSROOMS

Students placed in the NECP substantially separate classroom require intensive behavioral and communication support and receive almost all of their instruction though the methodology of discrete trial instruction. These services include a combination of supported inclusion, discrete trial training, small group activities, and incidental teaching strategies. The program is based on the principles of ABA focusing on reinforcement systems and consistent behavior management programs.

Children with autism spectrum disorder are one of the highest disability groups served by NECP. Demand for services and level of service needs have both increasing trends. Enrollment is difficult to predict / project but services have been added for this populations for each of the past four years.

The Space Summary provides additional (# to-be-determined) sub-separate preschool classrooms to serve group sizes of 8 students.

SMALL GROUP CLASSROOMS (8 CHILDREN)

Services are provided to small groups of students with disabilities in the afternoon hours within preschool classrooms. Classroom and team meetings also are held in preschool classrooms which restricts other uses such as extending hours to 2:30 for preschool programming or extended day programming until 2:30 or beyond.

Adding a minimum of 6 small group classrooms will allow for more efficient use of space. Small group classrooms should be located adjacent to preschool classrooms for staffing

reasons. Typically, the same teacher will be teaching preschool in the morning and working with a small group in the afternoon.

The Space Summary provides additional (# to-be-determined) sub-separate preschool classrooms to serve group sizes of 8 students.

EXTENDED DAY

Extended day services are not currently available at NECP. Both typical and special education students request longer days (either beyond 12:00 until 2:30 or past 2:30 in the afternoon. Extended Day services require a different blend ofTeacher Aide staffing and licensed special education teachers (Teacher Aides can be used more). However, extended day services are required to be fully integrated and additional staffing would be needed depening upon enrollment of students with disabilities and their level of need.

Extended day services would be fee-for-service based for both students with disabilities and typically developing preschool students. Currently students with disabilities do not have an option to extend their time at the program for child care needs beyond the services required by their IEPs. Parents of typically developing students have limited ability to access the longer days they prefer. A wait list is maintained for students in the 9 - 2:00 classrooms while vacancies exist in the 9:00 - noon classrooms. This would be a new source of revenue for the program.

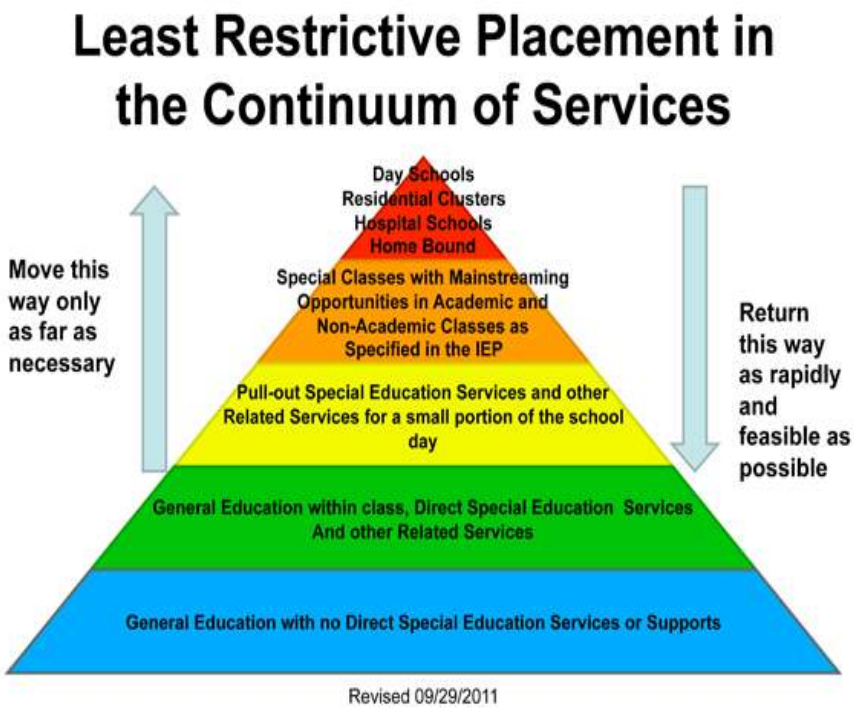
The Space Summary provides additional flexible spaces (number and design to be determined) to serve group sizes of 15 students in extended day space.

Overview of Special Education

Overview

The Office of Student Services (OSS) strives to provide a broad continuum of services and supports that meet the unique needs of students with disabilities. The OSS is dedicated to ensure equitable access and excellence and promote the meaningful inclusion and success of all students across every domain of school and community life. Services are provided to students eligible for special education from the ages of 3-22 years. The OSS is committed to engaging with families, their supporters, general and special educators and school leaders in partnerships that promote equity and excellence for all.

The vision of the Least Restrictive Environment (LRE) in the IDEA was designed to ensure and protect the rights of all students with disabilities, regardless of the nature or severity of disability, to be educated in their home schools alongside their peers to the greatest extent possible. This LRE principle is well-borne out by decades of research that show that the more normative the environment the better the long-term outcomes for children. The continuum of services and supports in special education and general education ensures that student's services and programs are based on individual needs. School districts are required to offer services and supports that move across the continuum so that all students' needs can be met. As students' needs change, services may move up and/or down the continuum. The continuum of services is fluid. This means that as needs change, services and service delivery can change. Services designate what is being rendered and can be rendered in and throughout various settings both general education and separate. Programs designate a place in which various types of services are rendered, these are often sub-separate programs and placements individualized to meet students' needs and with the goal of moving towards less restrictive programming and placement as students make progress. For some students, programs can serve as a hub or home-base providing support and therapeutic and academic holding that enables students to be in their general education classes for much of the school day. In Massachusetts, the transition planning process begins no later than age 14. By age 14, students are invited to attend their IEP meetings and the development of a Transition Planning Form (TPF) must occur. Team discussions regarding transition planning will take place at a student's IEP meeting and are documented on the Transition Planning Form.



Newton Public Schools Mission, Goals, and Values

The Newton Public Schools strives to "cultivate a culture of equity and excellence by creating and sustaining curriculum and instructional practices that lead to high-quality learning for each and every student." The Newton Public Schools value diversity and shared commitment to the philosophy of inclusion by providing students with disabilities access to an education in their neighborhood schools and in their classrooms with same-aged peers. One of our core values is to: "Recognize the uniqueness and dignity of individuals of differing races, religions, classes, ethnicities, sexual orientations, learning styles and abilities. Newton believes that we achieve this goal by creating, "an environment where everyone feels known, safe, and valued."

Inclusion in the Newton Public Schools

An inclusive education helps prepare students with and without disabilities for life and builds understanding and acceptance within the broader community. This is achieved through collaboration among families, administrators, general education teachers, special education teachers, and teaching aides to provide differentiated instruction and supports for all students to address their individual learning needs. The environment necessary to nurture and foster inclusion is built upon a shared belief system merging the talents and resources of all educators.

The Continuum of Special Education Services

All schools offer a range of services and supports designed to provide flexible and individualized programming for all students. Services and supports are provided both within and outside the general education classroom. The nature of this support varies and is specific to the students' needs. They are customized based on individual needs, and are designed to be flexible and match each student as they learn and grow.

Adapted Physical Education (APE):
APE services are for students who need specialized instruction to access the general education physical education curriculum.

Applied Behavior Analysis (ABA):
ABA services are for students who present with educational and behavioral needs that benefit from highly structured instruction and interventions inclusive of: systematic individualized instruction (e.g. discrete trial training, natural environment training, comprehensive behavior support plans). Applied Behavior Analysis (ABA) is a scientifically validated method to teach a variety of skills and to address challenging behavior. A Board Certified Behavior Analyst (BCBA) provides services and consultation to students and the student's IEP Team and direct service delivery is provided by a behavior therapist, a special education aide with specialized experience and training who implements ABA methods under the direction of a BCBA.

Assistive Technology:
Assistive Technology must be considered in conjunction with the student's IEP and, when recommended, must support IEP goals and objectives. Assistive technology consultation or assessment determines what is educationally needed for a student to make effective progress as part of FAPE. To determine which device and/or strategy will be the best fit for the student the Assistive Technology Specialist follows the SETT Framework, reviewing the student, their environment and the tasks they are asked to do in their educational setting to choose the appropriate tool for them.

Counseling Services:
Counseling Services are for students who have identified social-emotional or mental health needs that interfere with the student's ability to access their education. Services may include individual or group counseling, consultation with teachers, parents and outside providers. Services are provided by social workers, school psychologists, school counselors and counseling interns.

Music Therapy:
Music Therapy services are provided to assist students in accessing the curriculum. Individual and group music therapy sessions are provided based on student need. Music therapy services are provided through consultation, one-on-one, small group and in-class formats by a music therapist.

Physical Therapy (PT):
Physical Therapy services are for students whose physical disabilities interfere with their ability to access their educational program and environment, including students with motor and/or functional limitations caused by neurological or orthopedic impairments. Physical therapy services are provided in consultation, one-on-one, small group and in-class formats by physical therapists.

Occupational Therapy (OT):
Occupational Therapy is a related service for students who qualify for special education services. Occupational therapy services promote the development of motor, play, social and adaptive abilities of children who experience a wide range of challenges. The OT evaluation provides information to assist the team in creating an appropriate educational plan to support the student's school participation. Occupational therapy services are provided through consultation, one-on-one, small group and in-class formats by registered occupational therapists (OTR) and/or certified occupational therapy assistants (COTA).

Services for the Deaf and Hard of Hearing:
Deaf and Hard of Hearing services are for students who have a diagnosed hearing loss. Deaf and Hard of Hearing services provide students with equal access to all communication, learning, and social activities in the school setting. Deaf and Hard of Hearing services are provided in consultation, one-on-one, small group and in-class formats by a staff of specialists for the deaf and hard of hearing, teachers of the deaf and hard of hearing, sign language interpreters, captionists, signing aides, and classroom aides, as well as a consulting educational audiologist.

Services for the Visually Impaired:
Vision and Orientation and Mobility services are for students who have diagnosed vision concerns. Vision and Orientation and Mobility services provide students with Braille literacy instruction, use of assistive technology, transportation access, community, vocational and academic access, and skills of daily living. Vision and Orientation and Mobility services are provided in consultation, one-on-one, small group and in-class formats by a teacher of the visually impaired (TVI) and an orientation and mobility provider.

Speech and Language Therapy:
Speech and Language services are for students whose education is adversely affected by communication difficulties. Treatment can be provided to eligible students who have language, pragmatic, voice, fluency, articulation or augmentative/alternative communication needs that directly impact their ability to access the curriculum. Services are provided by Speech and Language Pathologists (SLP) and Speech and Language Pathology Assistants (SLP-A).

Early Childhood Education Program

Program: **Citywide Preschool**
School: **Newton Early Childhood Program (NECP)**
Grades: **Preschool**

Overview: NECP offers a wide range of identification, diagnostic, educational, and support services for preschool children. Integrated preschool classes are located at NECP. They enroll 15 to 16 children, seven to eight of whom have moderate to intensive special education needs and eight students without disabilities. A substantially separate classroom enrolls eight to nine students with intensive special needs.

- 3-hour integrated classes
- 5-hour integrated classes
- Full-day self-contained classes
- Afternoon programming
- Therapeutic-based programming

The goal of the program is to address student needs by providing a comprehensive range of services and a consistent, structured and supportive environment throughout the preschool day.

Student Profile: Children (ages 3, 4, and 5), including those turning 5 during the school year (5 after August 31st), who have special education needs and require educational and/or related services.

Description:

- **Staffing:** Each classroom is staffed with a master's level teacher certified in early childhood special education, teacher aides, and behavior therapists as necessary. In addition, speech language pathologists, occupational therapists, physical therapists, psychologists, social workers and board certified behavior analysts (BCBA), are part of the classroom interdisciplinary team. Additionally, a physical education teacher provides a weekly physical education program and a music teacher provides a weekly music education program.

- **Curriculum:** Curriculum in the Newton Early Childhood Program is child-centered and offers developmentally appropriate activity based learning for preschool children following the Massachusetts Guidelines for Preschool Learning Experiences.

- **Programming:** The range of direct services varies widely depending on a student's individualized needs. The type and frequency of service are decided at the child's IEP Team meeting and are listed in the continuum of special education services.

5.4 Lincoln- Eliot Educational Visioning Session

Lincoln-Eliot Elementary Educational Visioning

Newton Public Schools
Newton, MA

October 2018

Frank Locker Educational Planning

Contents + Acknowledgements

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ACKNOWLEDGEMENTS

Lincoln-Eliot Elementary School

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Lincoln-Eliot Elementary School

INTRODUCTION

This Educational Vision reflects the work of a Visioning Team; approximately seven teachers, and district and school leaders. Created in an intense facilitated workshop it is intended to guide the planning of Lincoln-Eliot Elementary School and to extend the continuously evolving Newton Public Schools (NPS) elementary education model

Much of the work was conducted by two Table Teams, each with half the participants. They brainstormed, debated, and attempted to reach consensus on most of the defining issues.

VISION COMPONENTS

The Educational Vision for Lincoln-Eliot Elementary School is described here through several components:

- **Evolving the NPS Elementary Model** identifies key concepts for education in the Lincoln-Eliot School, some of which will be new to NPS
- **Learning Modalities** identifies the most effective and appropriate ways for teachers to reach students with curriculum delivery
- **School Organizational Concepts** defines preferred approaches to the overall relationships of people and programs

- **Special Education Program Review + Facility Needs,** specific focus on Special Education programs and spaces
- **Appropriate Classroom Designs,** detailed descriptions of the learning environments
- **Safety + Security** outlines emerging best practices in achieving safety and security for students and educators in new and renovated school buildings

EVOLVING THE NPS EDUCATIONAL MODEL

The *Evolution* presented here builds on the experience of planning and operating recent elementary schools in Newton, including Cabot and Zervas.

Educational Delivery

Educational Delivery identifies fundamental issues for Lincoln-Eliot and the district.

INSTRUCTIONAL MODELS

- Equity is important, but does not equal cookie cutter
- Teams of teachers need to be in close proximity
  - Grade level
  - Many other groupings
  - Cross grade as well
- Provide seamless service support, wrapped around individual student needs
- Employ project-based learning on a regular basis
- Empower students to guide their own learning thorough available time and furniture and spatial posit choices
- Create a school and community culture that values flexibility for change
- Group students in small learning teams to differentiate instruction and foster communication, collaboration, and improved social skills, and foster differentiated instruction
- Extend and refine current Science-Technology-Engineering-Math programs. Add the Arts to this interdisciplinary mix to offer STEAM to students
- Organize classroom teachers in teaching teams in a variety of ways. Different grade groups will value different models:

Educational Structure

Educational Structure establishes the organizational patterns necessary to group students and teachers in the most effective ways.

ORGANIZATION

- Position educators to better know their students through the size and strategic placement of learning spaces

RELATIONSHIPS

- Organize school as Small Learning Communities to support formation of relationships
- Build stronger relationships among teachers through strategic positioning of each of their spaces
- Foster student collaboration to build social and communication skills, and the ability to work with others

CURRICULUM

- Build 21st century skills while meeting traditional curriculum goals

Facility Concepts

Rethink school building plans with the following considerations:

- Design facilities to be flexible, able to support multiple learning modalities, teaching styles, and program change over time
- Design the facility for inclusiveness
- Empower the possibility of team teaching with shared larger cohorts of students through connections between classrooms
- Develop Small Learning Communities, learning spaces arranged in clusters
- Create Teacher Planning Centers to foster collaboration, interdisciplinary teaching, and greater knowing of students by teachers
- Create a Parents Spot for those who want to spend time in the school and participate in their child's work
- Create building plans that offer security and safety despite constant visitors, many of whom will be active participants in student learning
- Minimize circulation spaces that do not also offer opportunities for learning. Maximize those that do, such as Extended Learning Areas, Breakout/ Collaboration small group spaces

- Develop spaces for specialists to work with students immediately adjacent to the Classrooms
- If the Newton Early Childhood Program is co-located on the 150 Jackson Rd site, do so in a manner that maintains respectful boundaries, including separation of functions, and supports the identifies areas of overlap of programs and uses. Many of these are outlined in the NECP report

LEARNING MODALITIES

Visioning Team members each individually considered 21 learning modalities, ranging from traditional lecturing and direct teaching to independent study, and ranked them in order of appropriateness.

The most commonly cited most effective modalities, in order of importance, are:

- Small Group Work/Student Collaboration
- Teacher teaming/synchronous collaboration
- Project-Based Learning
- Social/Emotional Learning
- Making things, STEM and STEAM learning
- Thematic, integrated learning

The modalities most commonly cited as least effective were:

- Lecture
- Direct Teaching
- Seminar instruction
- Skype conversations/distance learning

SCHOOL ORGANIZATIONAL CONCEPTS

The Table Teams reflected on internal school organizational structure, and determined these to be the most and least appropriate organizations for all grade groupings. They are shown here in rank order FOR BOTH Lower Elementary and Upper Elementary.

LOWER ELEMENTARY

Most appropriate:

- Grade level classroom groupings, Small Learning Communities (SLCs)
- Synchronous teacher teaming, sharing students in real time
- Home room teacher "teaming," swapping rooms, separately teaching curriculum specialties
- Multi-grade classroom groupings/SLCs
- Thematic multi-grade classroom groupings

Least appropriate:

- Multi-grade classrooms (one or more teachers)

UPPER ELEMENTARY

Most appropriate:

- Grade level classroom groupings, Small Learning Communities (SLCs)
- Home room teacher "teaming," swapping rooms, separately teaching curriculum specialties
- Multi-grade classroom groupings/SLCs
- Synchronous teacher teaming, sharing students in real time

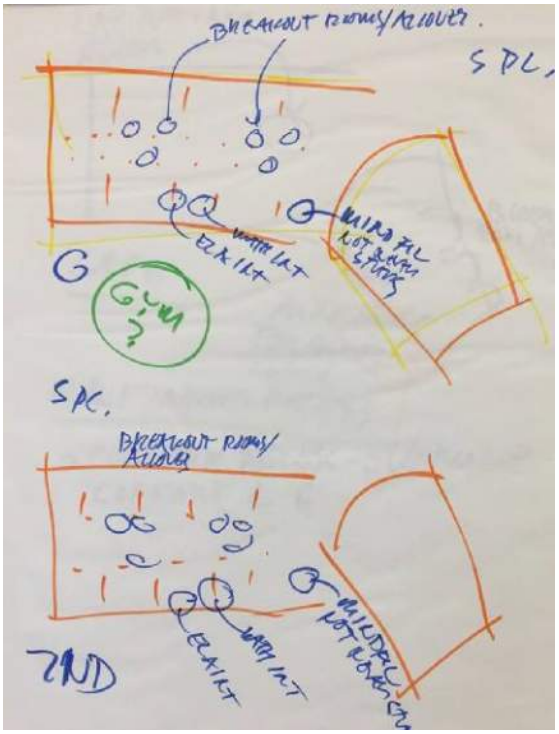
Least Appropriate:

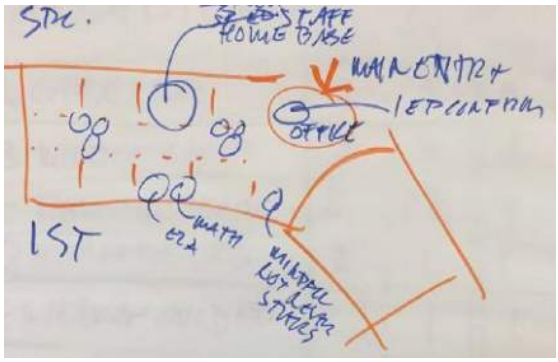
- Multi-grade classrooms (one or more teachers)

SPECIAL EDUCATION PROGRAM REVIEW + FACILITY NEEDS

The Visioning Team identified critical planning aspects of Special Education in a whole group discussion, shown here diagrammed on the floor plates of 150 Jackson Rd:

ESSENTIAL PLANNING CONCEPTS





- Special Education spaces needed, both floors
  - Breakout Rooms/Alcoves
    - ✓ Distributed regularly along each floor
  - ELA Intervention
    - ✓ Easy for all students to get to
  - Math Intervention
    - ✓ Easy for all students to get to
  - Mindful Room
    - ✓ Not near stairs
  - Inclusion in Classrooms
  - Pull out

The full outline of needs is in Appendix Ch 3.1.

APPROPRIATE CLASSROOM DESIGNS

The Visioning Team reviewed 13 exemplar schools from the USA, the United Kingdom, and Australia. Working in Table Teams they ranked the schools for appropriateness for the future teaching and learning at the Lincoln-Eliot School

The results were:

MOST APPROPRIATE

In rank order:

- New Albany Grade 1-8 School (cited by 7 of 8 Table Teams)
- Springfield Literacy Center
- Forest Avenue K-2 Center
- Concord Elementary Schools

LEAST APPROPRIATE

The Visioning Team had strong opinions on the least appropriate exemplar. Minges Brook Elementary School, the most traditional of the choices, was cited as least appropriate by both Table Teams.

This school exemplifies 20th century school planning, with:

- Isolated classrooms arranged along single-purpose corridors
- No support spaces for classrooms
- Grade-based and curriculum-based planning, with no consideration for building relationships
- No sense of learning communities within the buildings

ESSENTIAL CHARACTERISTICS

Most of the schools cited as most appropriate shared these characteristics:

- Learning spaces arranged as Small Learning Communities
- Classrooms are components of "suites of spaces," supported by other spaces immediately adjacent
- Circulation to be used for learning
- Classrooms are to be flexible, interconnected, and supported by auxiliary spaces including Alcoves/Tutorial rooms for support specialists and Collaboration/Breakout/Commons Spaces
- Interdisciplinary possibilities
- Open presentation areas

Ch 2 Lincoln-Eliot Elementary School

- Variety of furnishings, offering students and teachers more choices in supporting learning
- Possibility of student groups working in multiple places under the guidance of the teacher
- Teacher collaboration supported by the facilities, through connections between the rooms and strategic placement of related functions
- Teacher Planning Centers to support teacher collaboration and sense of community

Most Appropriate Planning Concepts

Here are representative photos, descriptions, and Table Team comments for the most commonly cited exemplar schools.

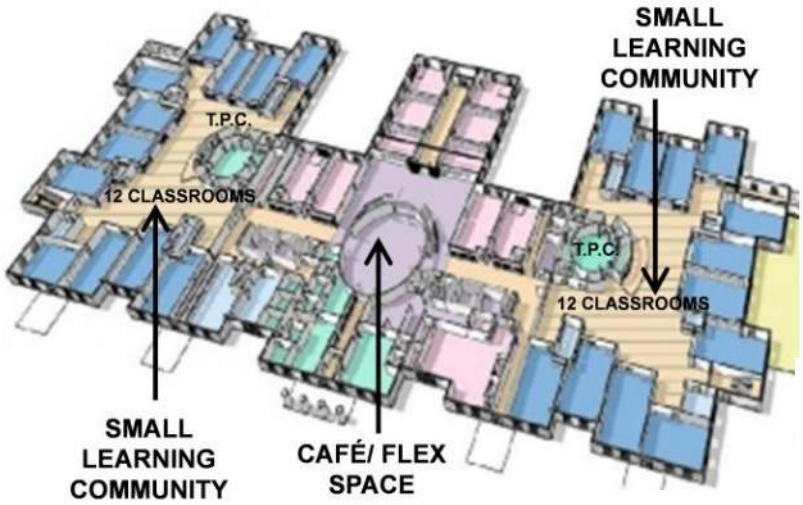
NEW ALBANY GRADE 1-8 SCHOOL

Featuring:

- Large number of Classrooms (12) arranged in Small Learning Communities (SLCs)
- Classrooms arranged around a Breakout/Commons space
- Classrooms are not identical
  - Varieties of folding walls between some of them
  - Many have garage doors to the Breakout/Commons space
- Classroom positioning is not identical
  - Some are central and highly connected to the Breakout/Commons space
  - Others are at the edges, less connected
- Teacher Planning Center located in a strategic position at the center of each SLC
- Small, low Stage located in a paramount position in each SLC
- Conference/Small Group Room located between the Stage and Teacher Planning

Table Team comments:

- Seems intuitive, has all of the positive attributes we've discussed
- Inclusive design
- Flexibility, agency for kids
- Like:
  - Furniture
  - "Porch" identity
  - Use of hallway/less traffic
  - Teacher Planning Center
  - Stage area



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Ch 2 Lincoln-Eliot Elementary School

SPRINGFIELD LITERACY CENTER

Featuring:

- Interstitial Spaces between Classrooms for use by specialists working with students in small groups, student collaboration groups, tutorials, testing
- Folding glass wall to the Corridor to allow it to be used as an Extended Learning Area

Table Team comments:

- Glass doors
- Storage is critical
- Interstitial spaces and breakout spaces
- Sinks
- Concern – other grades walking thru (hall space)
- Glass wall and folding walls (+)
- Flexibility, multiple ways to use
- Interstitial spaces (+)

FOREST AVENUE K-2 CENTER

Featuring:

- Classrooms arranged around a shared Breakout/Commons/Tutorial/project space
- Stage in this space
- Barn door connections between classrooms
- Teacher Planning Center
- Glass between rooms gives teachers overview and control no matter where students are learning

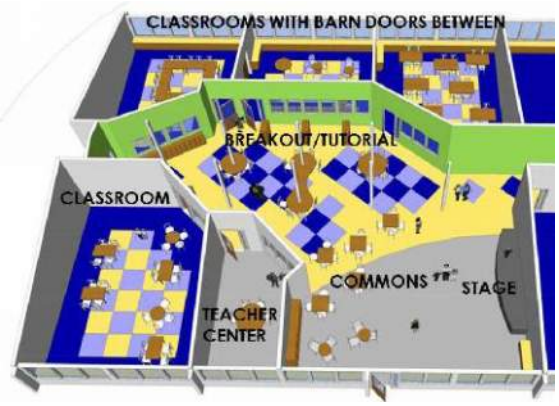


Table Team comments:

- Like:
  - Common space
  - Stage area
  - Teachers sharing students
  - Teacher workspace
- Grouping by level could be a strong model
- Missing private breakout spaces
- Interested to learn more about how space is used

Ch 2 Lincoln-Eliot Elementary School

CONCORD ELEMENTARY SCHOOLS
Cited by 6 of 6 Table Teams
Featuring:

- Library/Media Center organized as the access to all classrooms
- Shared spaces for hands-on learning, presentations, and computer uses all contained within the Learning Corridor
- Small Group Rooms interspersed between classrooms

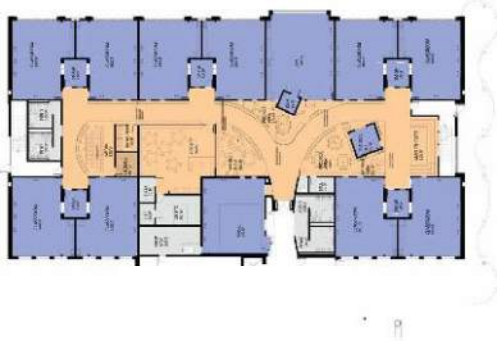


Table Team comments:

- Library in center? We like it
- Media center
- Blends traditional and innovative well
- Presentation spaces may be challenging in this orientation
- Like shared media rooms
- Wish rooms were bigger
- Like concept/details and execution needs adjustment

Least Appropriate Planning Concept

MINGES CREEK ELEMENTARY SCHOOL
Featuring:

- Challenging separations between learning spaces
- Isolated classrooms
- No central focus

Table Team comments:

- Never, resembles existing condition
- Never want to see again!

Full details of all Table Team responses are in Appendix Ch 3.1.

SAFETY + SECURITY

Planning for the type of teaching and learning outlined above calls for mew, more effective method of achieving safety and security. Essential concepts to achieve this, aligned with the principles of the international organization Crime Prevention Through Environmental Design, are:

21st CENTURY PLANNING

- Classrooms arranged in suites of spaces, each with easy overview by eye sweep
- Few, controlled entry/exit points
- Gatekeeper at the front door
- Security at Gym or Cafeteria
- Lockdown provided by suites of learning spaces, Small Learning Communities, and at Gym and Cafeteria
- Escape built into the design at each Small Learning Community

See Appendix Ch 3.1 for more discussion and Ch 3.4 for the presentation.

Workshop Notes

AGENDA

The Lincoln-Eliot Elementary School Visioning Workshop was held on 17th October, 2018. Notes of all activities follow:

- Evolving the NPS Elementary Model
- Special Education Program Review + Facility Needs
- School Organizational Concepts
- Appropriate Classroom Designs
- Overall Building Planning/Relationship Diagram
- Learning Modalities
- Safety + Security

EVOLVING THE NPS ELEMENTARY MODEL

In a whole group discussion the Visioning Team explored educational and operational opportunities for Lincoln –Eliot Elementary School in the context of the continuously evolving district elementary model. The discussion included these key concepts:

- Equity is important
  - Does not equal cookie cutter
- Stacey, an English Learners teacher does pull out/break out
  - Singing
  - Needs sound control
- Teams of teachers need to be in close proximity

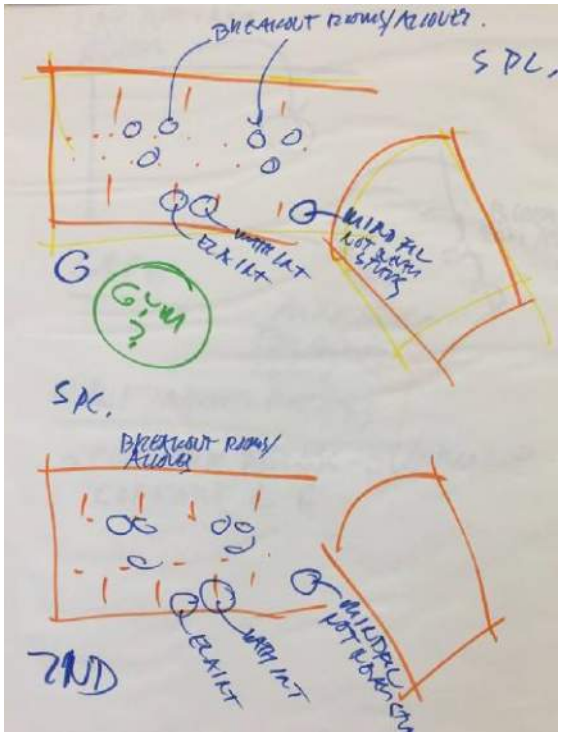
- Grade level
- Many other groupings
- Cross grade as well

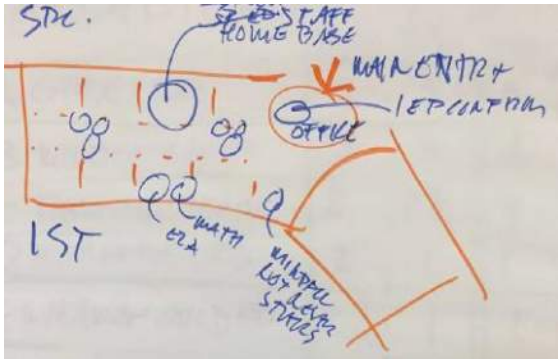
- Teams in Small Learning Communities, or Pods
  - Ex learning areas
- Need Breakout Rooms
- Lockers are the big problem: where to locate them
- Extended Learning Areas
  - Presentation
  - Performance
- Goal = 4 Classrooms/grade
- Need a Parents Spot
  - To participate in kids work
- Seamless support
  - Wrap around students
  - Continuum

SPECIAL EDUCATION PROGRAM REVIEW + FACILITY NEEDS

The Visioning Team identified critical planning aspects of Special Education in a whole group discussion, shown here diagrammed on the floor plates of 150 Jackson Rd:

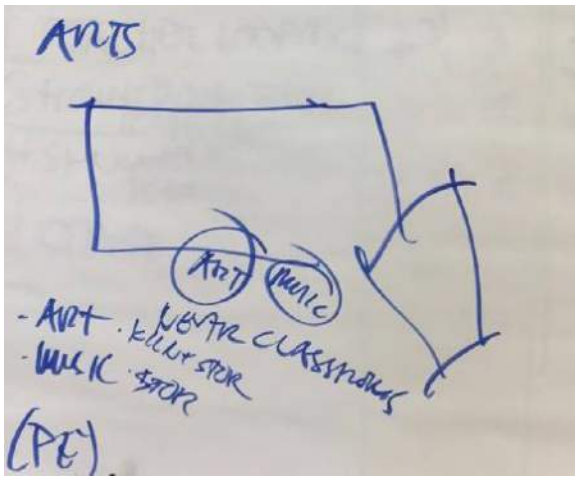
ESSENTIAL PLANNING CONCEPTS



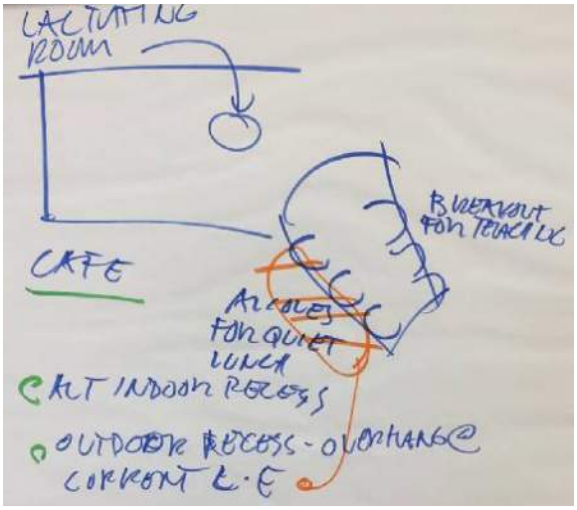


- Special Education spaces needed, both floors
  - Breakout Rooms/Alcoves
    - ✓ Distributed regularly along each floor
  - ELA Intervention
    - ✓ Easy for all students to get to
  - Math Intervention
    - ✓ Easy for all students to get to
  - Mindful Room
    - ✓ Not near stairs
  - Inclusion in Classrooms
    - ✓ 22-25 kids in Classroom
      - ➢ 6-8 with IEPs
        - Average 20% pull out
  - Pull out
- Rarely cross grades
    - ✓ Small groups, fewer than six kids
    - ✓ With a door
    - ✓ Variety of spaces needed
      - ➢ Some with walls and door
      - ➢ Some open
      - ➢ Some Alcoves
  - Substantially Separate Classrooms
    - ✓ Not out of the way
    - ✓ Not in the center of school activity
- Gym will be in an addition

Ch 3 Workshop Notes



- Arts
  - Art and Music in an addition
  - Art
    - ✓ Kiln and storage
    - ✓ Near classrooms
  - Music
    - ✓ Will allow better acoustical control than if in existing building
    - ✓ Storage
- Specialist staff
  - Some assigned to Lincoln-Eliot
  - Some itinerant
- Angier Elementary has pretty good planning
  - 500 +- students
  - 3 floors
  - Two Teacher Planning Centers
- Zervas Elementary has a good Extended Learning Area
- Flexibility is needed
  - Space
  - Time
- OT Room and PT Room
  - Not combined
  - Sensory Room as well
- Lincoln-Eliot has large English Learner cohort
  - Now four classes at E-L in one room
  - Need two spaces
    - ✓ 1 at lower grades
    - ✓ 1 at upper grades
- Now four staff Literacy Intervention spaces
  - Need at least three spaces for Literacy Intervention
- Now four staff Math Intervention
- Need at least three spaces or Math Intervention
- Title 1 needs staff space
  - In home base with staff
  - In ½ size Classrooms
- Want generic spaces without labels, to be assigned over time
- Meeting spaces
  - Need an IEP Conference Room by front door
- Mindful Room one per floor
- One Lactating Room, centrally located
- Cafeteria (assumed to be in part of current location)



- Include:
  - Breakout for teaching
  - Alcoves for quiet lunch
- Use for alternative indoor recess
- Outdoor recess
  - Roof overhang at current Lincoln-Eliot. Works well

SCHOOL ORGANIZATIONAL CONCEPTS

This was the challenge:

SCHOOL ORGANIZATION
Table Team discussion and report out.

ORGANIZATIONAL CONCEPTS
FROM THE MODELS BELOW CREATE THE MOST APPROPRIATE CONCEPT FOR THE FUTURE FROM AN EDUCATIONAL POINT OF VIEW
Rank the following, from (1=) most appropriate to least appropriate

ELEMENTARY ORGANIZATIONAL MODELS

A. Grade level classroom groupings (Small Learning Communities (SLCs)
B. Multi-grade classroom groupings/SLCs (eg: 3-4-5)
C. Themed multi-grade classroom groupings/SLCs (eg Arts, Sustainability)
D. Multi-grade classrooms (one or more teachers) (eg: 2-3. K-1-2)

ANY OF THE ABOVE WITH…

E. Early Childhood Education
F. Teacher looping
G. Home room teacher "teaming," swapping rooms, separately teaching curriculum components
H. Synchronous teacher teaming, sharing students in real time

I. OTHER

The Visioning Team worked as Table Teams, each developing concepts for the early years and the upper years.

This charts starting on the next page show how each Table Team ranted the concepts, and then the ranking of their responses. They offer a comparison of the lower years and the upper years as well as clarification of the preferred organizational concepts:

SCHOOL ORGANIZATION
Lincoln-Eliot Elementary School
Rankings for the LOWER YEARS as reported

ELEMENTARY ORGANIZATIONAL MODELS	Table Team 1	Table Team 2	RANK	Score
A. Grade level classroom groupings, Small Learning Communities (SLCs)	5	5		2.0
B. Multi-grade classroom groupings/SLCs	3	3		1.2
C. Themed multi-grade classroom groupings/SLCs	2	2.5		0.9
D. Multi-grade classrooms (one or more teachers) (eg 2-3, K-1-2)	2	1		0.6
E. Any of the above with Early Childhood Education	2.5	1		0.9
F. Any of the above with teacher looping	3	3		1.2
G. Any of above with home room teacher "teaming," swapping rooms, separately teaching curriculum components	3	4		1.8
H. Any of the above with synchronous teacher teaming, sharing students in real tim	3.5	4		1.9
I. Other	-	-		0.0

SCHOOL ORGANIZATION
Lincoln-Eliot Elementary School
Rankings for the UPPER YEARS as reported

ELEMENTARY ORGANIZATIONAL MODELS	Table Team 1	Table Team 2	RANK	Score
A. Grade level classroom groupings, Small Learning Communities (SLCs)	5	5		5.0
B. Multi-grade classroom groupings/SLCs	4	3		3.5
C. Themed multi-grade classroom groupings/SLCs	3	3.5		3.3
D. Multi-grade classrooms (one or more teachers) (eg 2-3, K-1-2)	1	1		1.0
E. Any of the above with Early Childhood Education	1	3		2.0
F. Any of the above with teacher looping	2	3		2.5
G. Any of above with home room teacher "teaming," swapping rooms, separately teaching curriculum components	4	4		4.0
H. Any of the above with synchronous teacher teaming, sharing students in real tim	3.5	4		3.8
I. Other	-	-		0.0

SCHOOL ORGANIZATION Lincoln-Eliot Elementary School Rankings for the LOWER YEARS ranked				
ELEMENTARY ORGANIZATIONAL MODELS	Table Team 1	Table Team 2	RANK	Score
A. Grade level classroom groupings, Small Learning Communities (SLCs)	5	5	1	5.0
H. Any of the above with synchronous teacher teaming, sharing students in real tim	3.5	4	2	3.8
G. Any of above with home room teacher "teaming," swapping rooms, separately teaching curriculum components	3	4	3	3.5
B. Multi-grade classroom groupings/SLCs	3	3	4	3.0
F. Any of the above with teacher looping	3	3	5	3.0
C. Themed multi-grade classroom groupings/SLCs	2	2.5	6	2.3
E. Any of the above with Early Childhood Education	2.5	1	7	1.8
D. Multi-grade classrooms (one or more teachers) (eg 2-3, K-1-2)	2	1	8	1.5
I. Other	-	-		0.0

SCHOOL ORGANIZATION Lincoln-Eliot Elementary School Rankings for the UPPER YEARS ranked				
ELEMENTARY ORGANIZATIONAL MODELS	Table Team 1	Table Team 2	RANK	Score
A. Grade level classroom groupings, Small Learning Communities (SLCs)	5	5	1	5.0
G. Any of above with home room teacher "teaming," swapping rooms, separately teaching curriculum components	4	4	2	4.0
H. Any of the above with synchronous teacher teaming, sharing students in real tim	3.5	4	3	3.8
B. Multi-grade classroom groupings/SLCs	4	3	4	3.5
E. Any of the above with Early Childhood Education	1	3	5	2.0
C. Themed multi-grade classroom groupings/SLCs	3	3.5	6	3.3
F. Any of the above with teacher looping	2	3	7	2.5
D. Multi-grade classrooms (one or more teachers) (eg 2-3, K-1-2)	1	1	8	1.0
I. Other	-	-		0.0

APPROPRIATE CLASSROOM DESIGNS

The Visioning Team reviewed a range of 12 Classroom and Classroom grouping concepts, rated them, and identified critical planning aspects in a whole group discussion. This chart shows their ranking of the concepts:

The two Table Teams discussed and rated each option on a 1 to 5 scale:

TABLE TEAM 1

A Minges Brook Elementary School (1/5)
- Never, resembles existing condition

B Grand Rapids Middle Schools (3.5/5)
- Flexibility of space = (+)

C Ideal Math Classroom (3.5/5)
- Not enough storage access?
  - Tables (+)
  - Ground projector (5/5)

D Scarborough Elementary Primary (4/5)
- Love pocket doors, dedicated storage and bath

E Springfield Literacy Center (5/5)
- Glass wall and folding walls (+)
- Flexibility, multiple ways to use
- Interstitial spaces (+)

F Slate Magazine 5th Grade Exploratory Classroom (3.5/5)
- Lots of good elements, space
- Intensive makes it impractical

G Old Town Elementary School (4/5)
- Extended learning area "courtyard" central space (+)
- Multi-use is a big plus
- Triangular space is dynamic, but could pose challenges

H Cristo Rey High School (4/5)
- Garage doors (+) allow for massive space
- Visual access to adjacent space could be disrupting
- Facilitates movement
- Flexible (+)

I Concord Elementary Schools (4/5)
- Library in center? We like it
- Media center
- Blends traditional and innovative well
- Presentation spaces may be challenging in this orientation

J West Muskingum Elementary School (2/5)
- May be a large culture shift to adapt
- Sharing may be challenging

K New Albany Grade 1-8 School ((5/5)
- Seems intuitive, has all of the positive attributes we've discussed
- Inclusive design
- Flexibility, agency for kids

L Forest Avenue K-2 Center (4/5)
- Grouping by level could be a strong model
- Missing private breakout spaces
- Interested to learn more about how space is used

TABLE TEAM 2

A Minges Brook Elementary School (1/5)
- Never want to see again!

B Grand Rapids Middle Schools (2.5/5)
- Storage good
- Like sink

C Ideal Math Classroom (2.5-3/5)
- White boards and corners – like!
- Not enough storage, cramped
- Would be higher if this were a breakout space (3.5)
- Projection on ground – cool!

D Scarborough Elementary Primary (2.5/5)
- Bathroom space for younger grades
- 1 large space with 1 slightly smaller would be nice
- Soundproof would be essential
- Pocket doors seem good

E Springfield Literacy Center (4/5)
- Glass doors
- Storage is critical
- Interstitial spaces and breakout spaces
- Sinks
- Concern – other grades walking thru (hall space)

F Slate Magazine 5th Grade Exploratory Classroom (2.5/5)
- Like learning modalities but too much going on
- Like outdoor space

G Old Town Elementary School (2.5/5)
- Like the common area
- Presentation area – safety concern
- Shared storage good
- Stairs – tiered seating – safety issue

H Cristo Rey High School (2/5)
- Like garage door
- Like flex seating options
- Glass walls could be disruptive
- Circ movement
- Seems appropriate for upper levels

I Concord Elementary Schools (3/5)
- Like shared media rooms
- Wish rooms were bigger
- Like concept/details and execution needs adjustment

J West Muskingum Elementary School (1/5)
- No one has own space
- Don't like no ownership
- Don't like shaped spaces
- A lot of kids in one space

K New Albany Grade 1-8 School (4.5/5)
- Like:
  - Furniture
  - "Porch" identity
  - Use of hallway/less traffic
  - Teacher Planning Center
  - Stage area

L Forest Avenue K-2 Center (4.5/5)
- Like:
  - Common space
  - Stage area
  - Teachers sharing students
  - Teacher workspace

The discussion appreciated these planning concepts:
- Small Learning Communities
- Flexible spaces and edges, with a variety of doors
- Easy access to stages
- Teacher Planning Centers
- Bathrooms in Classrooms when possible
- Spaces for specialists immediately adjacent to Classrooms
- Small Group Rooms
- Flexible furniture

The Table Teams each rated the Options:

CLASSROOM DESIGNS
Lincoln-Eliot Elementary School
As Scored

ELEMENTARY ORGANIZATIONAL MODELS	Table Teams		Total Rating	
	TT1	TT2		
A Minges Brook Elementary School	1	1	2	
B Grand Rapids Middle Schools	3.5	2.5	6	
C Ideal Math Classroom	3.5	2.5	6	
D Scarborough Elementary Primary	4	2.5	6.5	
E Springfield Literacy Center	5	4	9	
F Slate Magazine 5th Grade Exploratory Classroom	3.5	2.5	6	
G Old Town Elementary School	4	2.5	6.5	
H Cristo Rey High School	4	2	6	
I Concord Elementary Schools	4	3	7	
J West Muskingum Elementary School	2	1	3	
K New Albany Grade 1-8 School	5	4.5	9.5	
L Forest Avenue K-2 Center	4	4.5	8.5	

Their choices, when ranked, looked like this:

CLASSROOM DESIGNS Lincoln-Eliot Elementary School As ranked				
ELEMENTARY ORGANIZATIONAL MODELS	Table Teams		Total Rating	OVERALL RANK
	TT1	TT2		
K New Albany Grade 1-8 School	5	4.5	9.5	1
E Springfield Literacy Center	5	4	9	2
L Forest Avenue K-2 Center	4	4.5	8.5	3
I Concord Elementary Schools	4	3	7	4
D Scarborough Elementary Primary	4	2.5	6.5	5
G Old Town Elementary School	4	2.5	6.5	6
B Grand Rapids Middle Schools	3.5	2.5	6	7
C Ideal Math Classroom	3.5	2.5	6	8
F Slate Magazine 5th Grade Exploratory Classroom	3.5	2.5	6	9
H Cristo Rey High School	4	2	6	10
J West Muskingum Elementary School	2	1	3	11
A Minges Brook Elementary School	1	1	2	12

LEARNING MODALITIES

As homework Visioning Team members ranked 21 possible learning modalities, identifying the most and the least appropriate for Lincoln-Eliot. This was the challenge:

LEARNING MODALITIES

Here is a list of learning modalities. Which are most appropriate for core learning? Which ones should we be using most at our future schools? Which ones the least?

Personal reflection:

- Personally rank them in order of appropriateness for learning
- Focus on the 4 most and the 2 least appropriate (and extensive application)

4 Most 2 Least

A. Direct teaching _____ _____

B. Lecture (sustained direct teaching) _____ _____

C. Seminar instruction _____ _____

D. Teacher team/synchronous collaboration _____ _____

E. Independent study _____ _____

F. Small group work/student collaboration _____ _____

G. Peer tutoring/teaching _____ _____

H. Internships _____ _____

I. Service learning _____ _____

J. Project-based learning _____ _____

K. Making things, prototyping, STEM, STEAM _____ _____

L. Interdisciplinary learning _____ _____

M. Thematic/integrated learning _____ _____

N. Integrated arts learning _____ _____

O. Social/emotional learning _____ _____

P. Student presentations _____ _____

Q. Computer-based: games, learning programs _____ _____

R. Blended learning/flipped classroom _____ _____

S. Skype conversations, distance learning _____ _____

T. Technology with any mobile devices _____ _____

U. Technology with desktop devices _____ _____

V. Other _____ _____

Responses were scored and ranked by subtracting the number of "Leasts" from the number of "Mosts." Their responses were:

Ch 3 Workshop Notes

Lincoln-Eliot Elementary School	All Responses			
RATING OF LEARNING MODALITIES	**Most**	**Least**	**Score**	
A. Direct teaching	**2**	**0**	2	
B. Lecture (sustained direct teaching)	**0**	**3**	-3	
C. Seminar instruction	**0**	**3**	-3	
D. Teacher team/synchronous collaboration	**3**	**0**	3	
E. Independent study	**0**	**1**	-1	
F. Small group work/student collaboration	**5**	**0**	5	
G. Peer tutoring/teaching	**1**	**0**	1	
H. Internships	**0**	**1**	-1	
I. Service learning	**0**	**0**	0	
J. Project-based learning	**3**	**0**	3	
K. Making things, prototyping, STEM, STEAM	**2**	**0**	2	
L. Interdisciplinary learning	**0**	**0**	0	
M. Thematic/integrated learning	**1**	**0**	1	
N. Integrated arts learning	**0**	**0**	0	
O. Social/emotional learning	**3**	**0**	3	
P. Student presentations	**0**	**0**	0	
Q. Computer-based: games, learning programs	**0**	**1**	-1	
R. Blended learning/flipped classroom	**0**	**0**	0	
S. Skype conversations, distance learning	**0**	**1**	-1	
T. Technology with any mobile devices	**0**	**0**	0	
U. Technology with desktop devices	**0**	**0**	0	
V. Other: Outdoors/environmental focus	**0**	**0**	0	

Lincoln-Eliot Elementary School	All Responses			
RANKING OF LEARNING MODALITIES	**Most**	**Least**	**Score**	**RANK**
F. Small group work/student collaboration	**5**	**0**	5	**1**
D. Teacher team/synchronous collaboration	**3**	**0**	3	**2**
J. Project-based learning	**3**	**0**	3	**2**
O. Social/emotional learning	**3**	**0**	3	**4**
A. Direct teaching	**2**	**0**	2	**5**
K. Making things, prototyping, STEM, STEAM	**2**	**0**	2	**5**
G. Peer tutoring/teaching	**1**	**0**	1	**7**
M. Thematic/integrated learning	**1**	**0**	1	**7**
I. Service learning	**0**	**0**	0	**9**
L. Interdisciplinary learning	**0**	**0**	0	**9**
N. Integrated arts learning	**0**	**0**	0	**9**
P. Student presentations	**0**	**0**	0	**9**
R. Blended learning/flipped classroom	**0**	**0**	0	**9**
T. Technology with any mobile devices	**0**	**0**	0	**9**
U. Technology with desktop devices	**0**	**0**	0	**9**
V. Other: Outdoors/environmental focus	**0**	**0**	0	**9**
E. Independent study	**0**	**1**	-1	**17**
H. Internships	**0**	**1**	-1	**17**
Q. Computer-based: games, learning programs	**0**	**1**	-1	**17**
S. Skype conversations, distance learning	**0**	**1**	-1	**17**
B. Lecture (sustained direct teaching)	**0**	**3**	-3	**21**
C. Seminar instruction	**0**	**3**	-3	**21**

SAFETY + SECURITY

Frank Locker shared planning concepts for achieving safety and security, outlining the shift from 20th century school planning to 21st century. Essential concepts were:

20th CENTURY PLANNING

- Classrooms arranged in rows along a corridor that is difficult to survey
- Multiple, uncontrolled entry/exit points
- No Gatekeeper at the front door
- No security at Gym or Cafeteria
- Lockdown provided on a room-by-room basis
- No escape built into the design

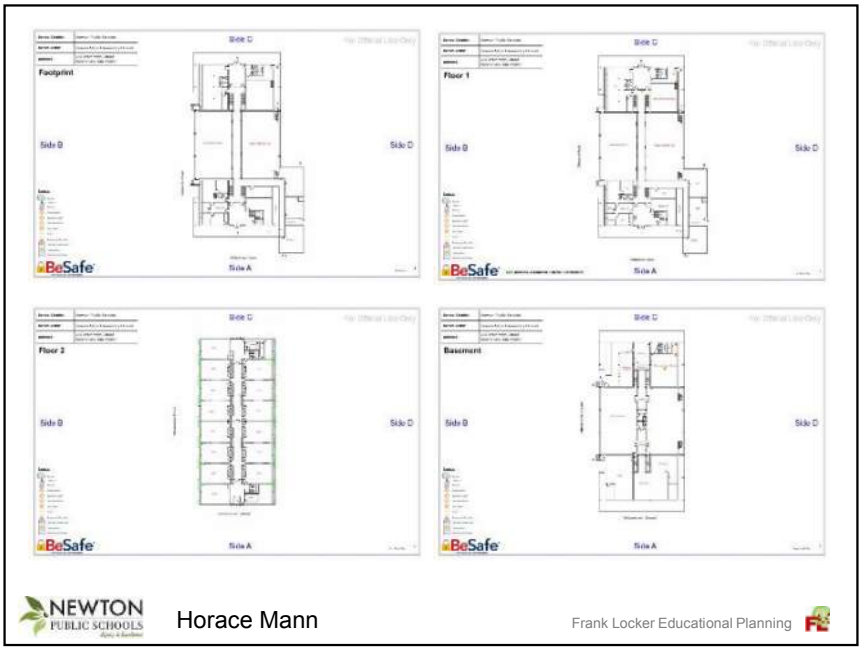
21st CENTURY PLANNING

- Classrooms arranged in suites of spaces, each with easy overview by eye sweep
- Few, controlled entry/exit points
- Gatekeeper at the front door
- Security at Gym or Cafeteria

Ch 3 Workshop Notes

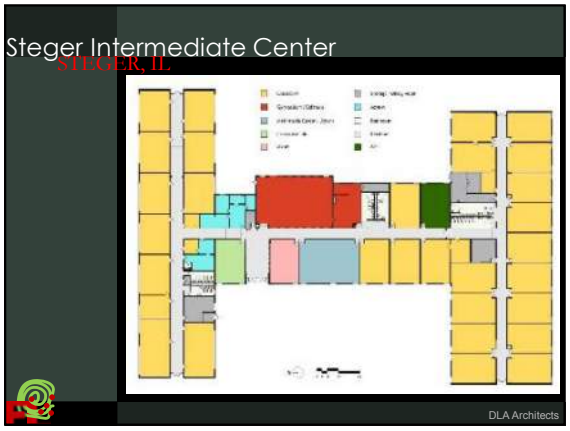
- Lockdown provided by suites of learning spaces, Small Learning Communities, and at Gym and Cafeteria
- Escape built into the design at each Small Learning Community

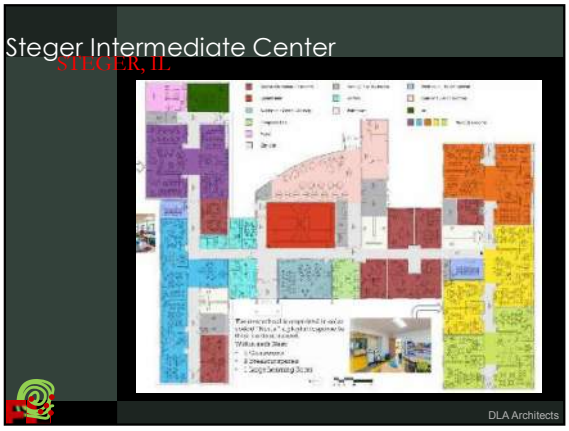
See Appendix Ch 3.4 for the presentation.


Footprint
Floor 1
Floor 2
Basement
BeSafe
NEWTON PUBLIC SCHOOLS
Horace Mann
Frank Locker Educational Planning


Existing Conditions
Ground Floor Plan
Existing Conditions
First Floor Plan
Existing Conditions
Second Floor Plan
Existing Conditions I Convent Floor Plans
NEWTON PUBLIC SCHOOLS
Jackson Road
Frank Locker Educational Planning

Ch 3.3 Classroom Design Options Presentation





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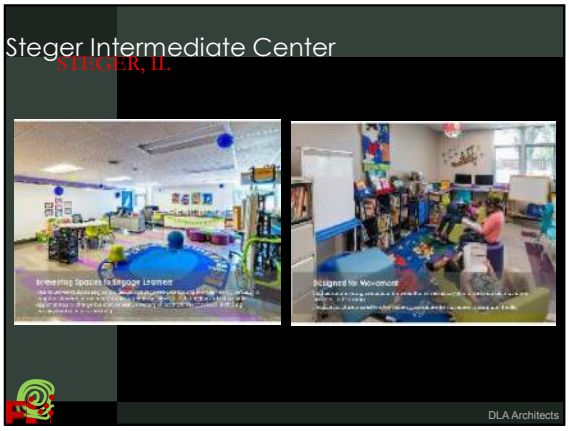

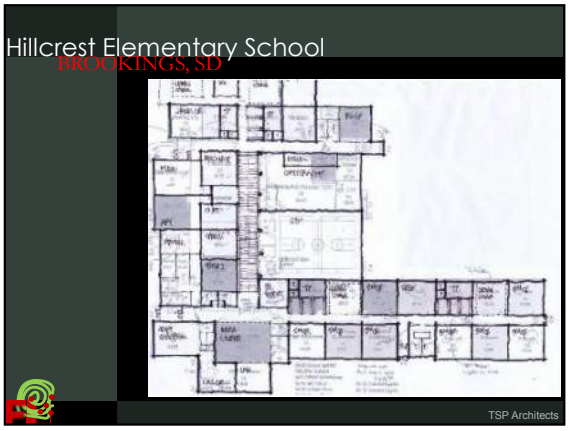

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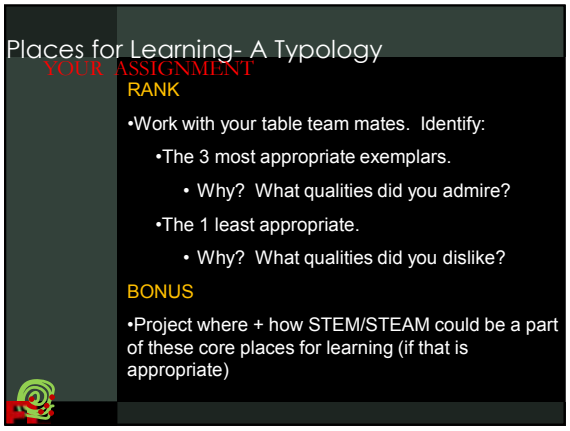

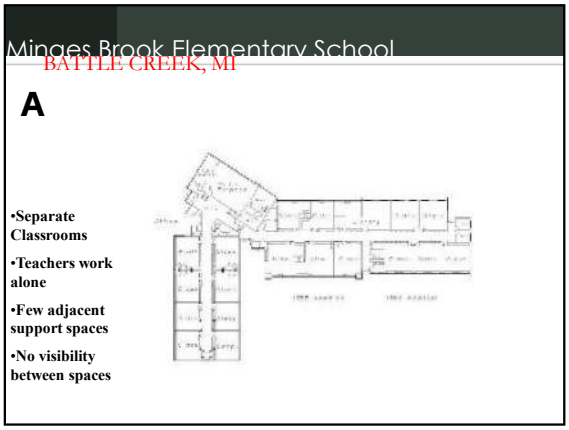

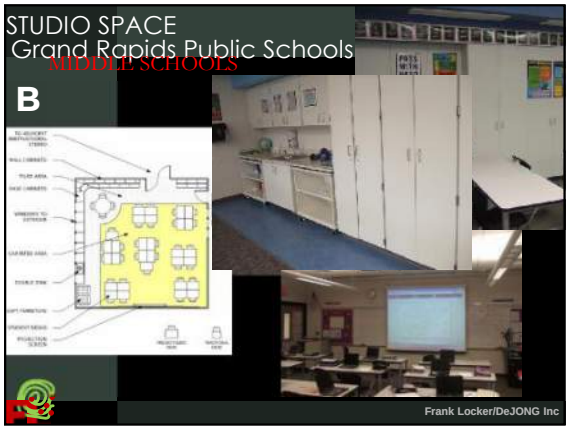

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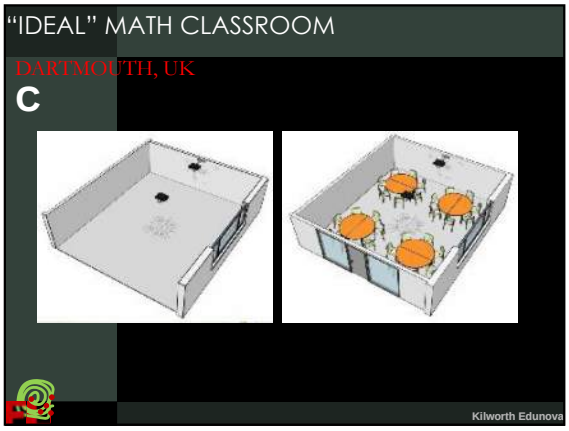

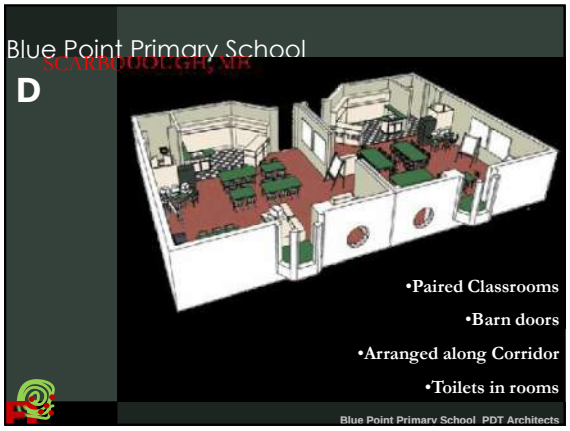

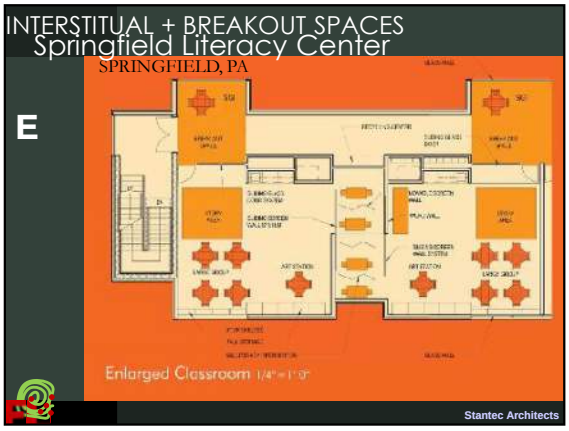

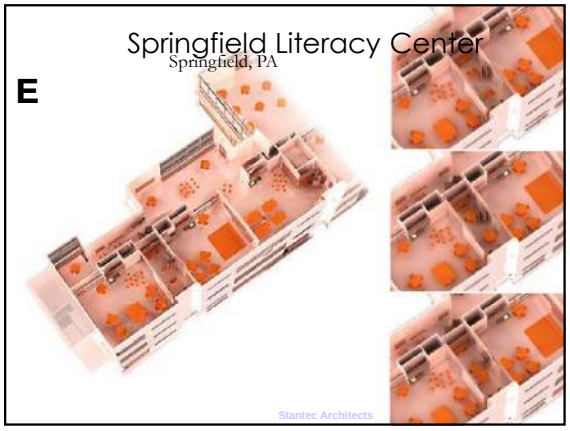

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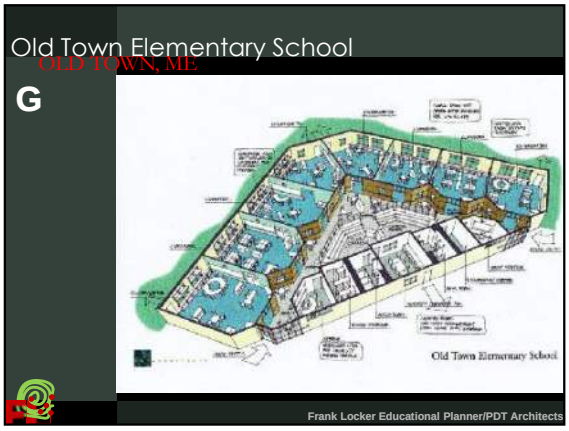

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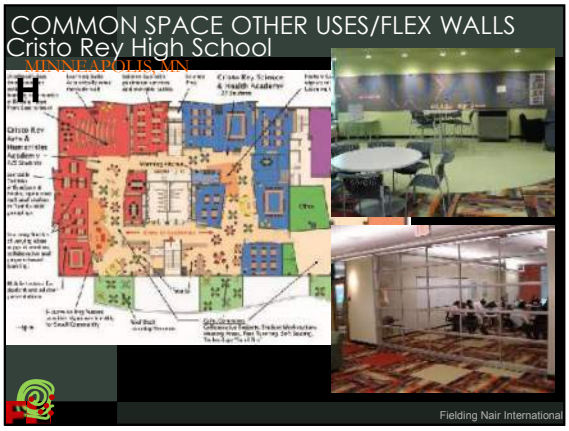

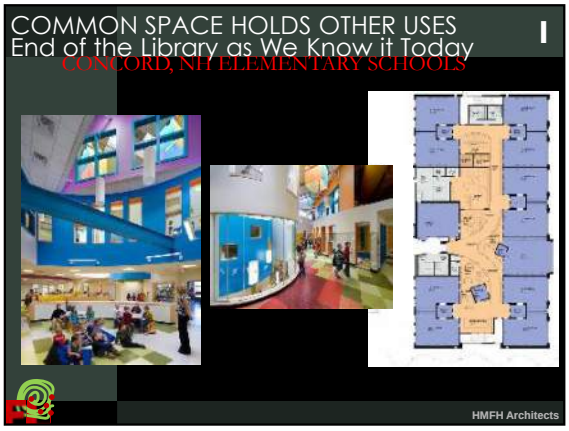

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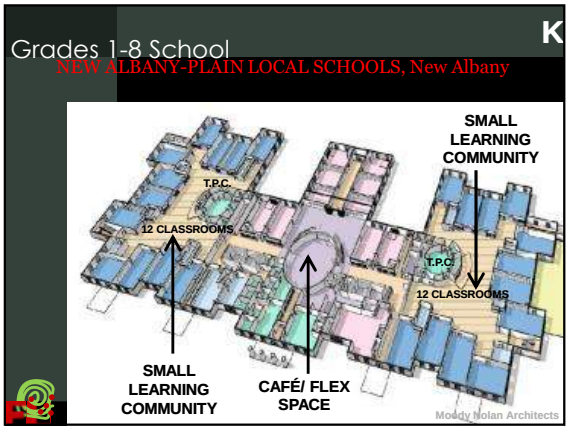

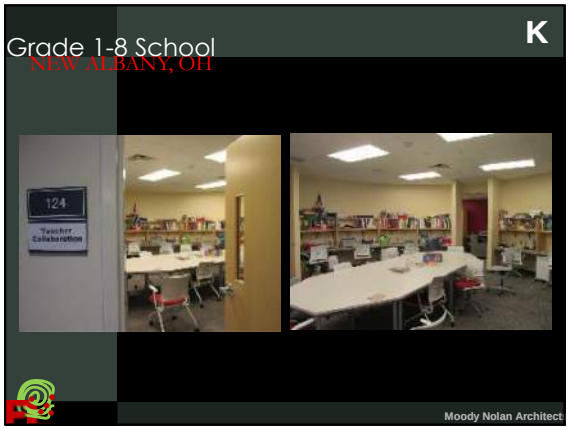

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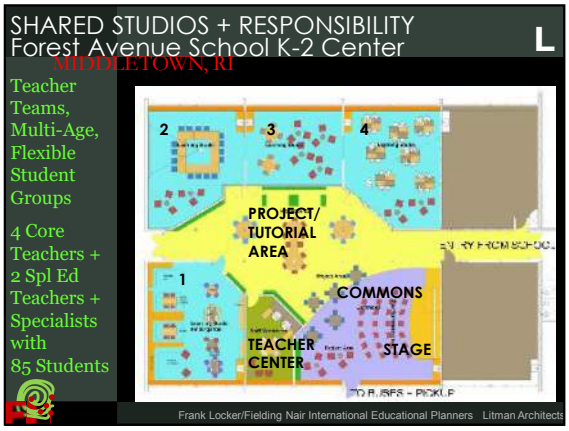
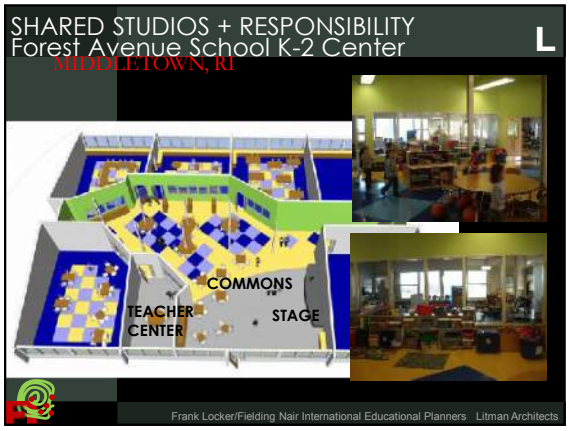
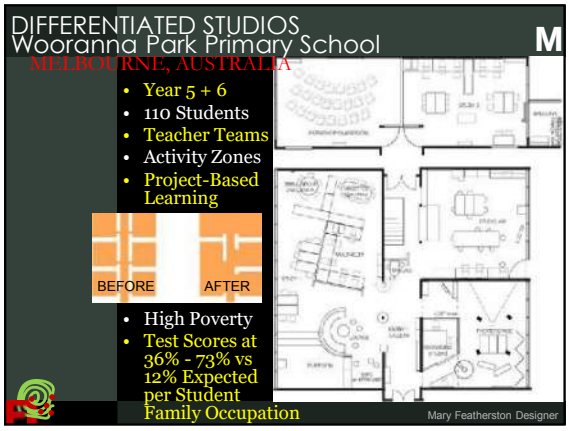
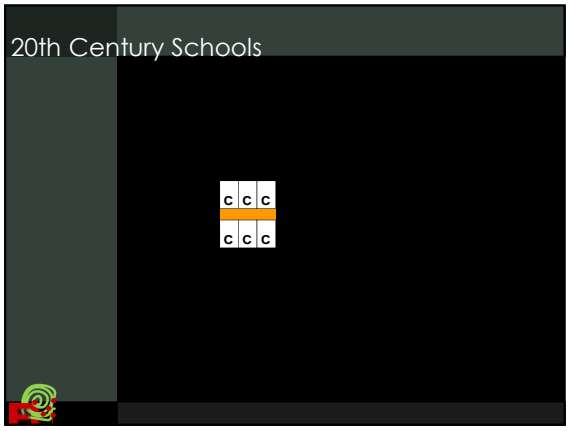


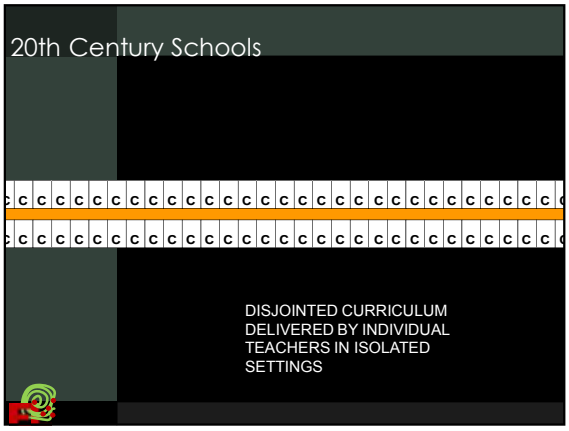


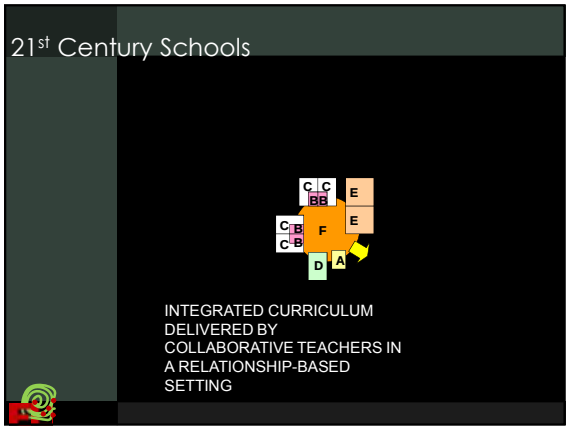


Ch 3.3 Classroom Design Options Presentation

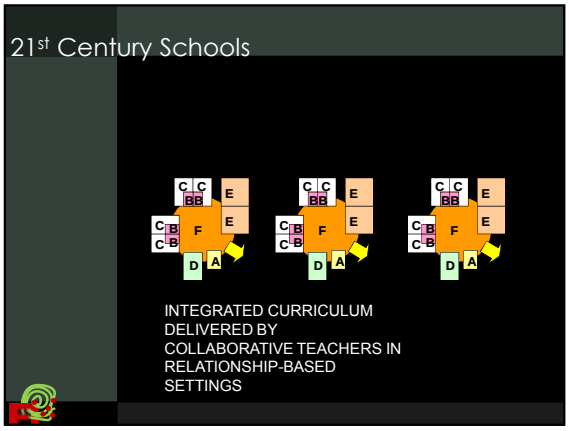
Ch 5.4 21st Century Schools Presentation

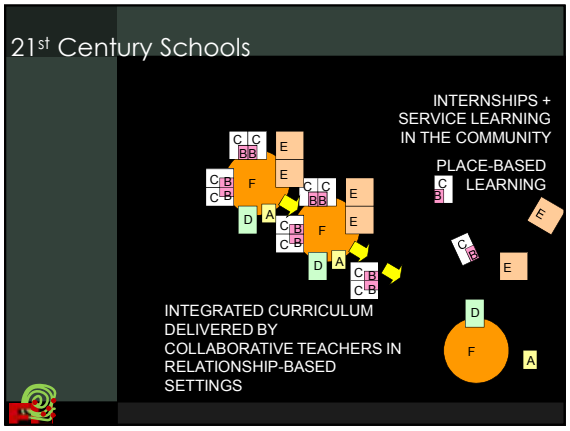


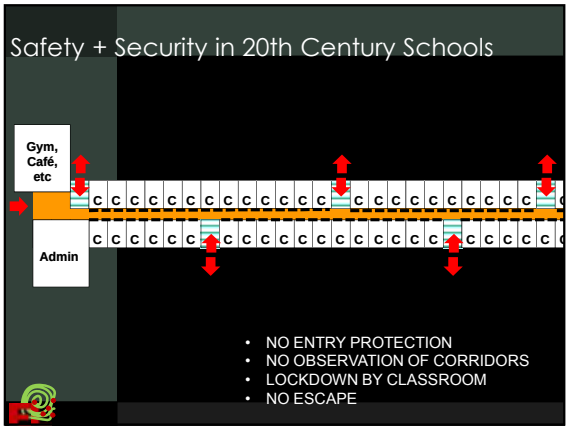


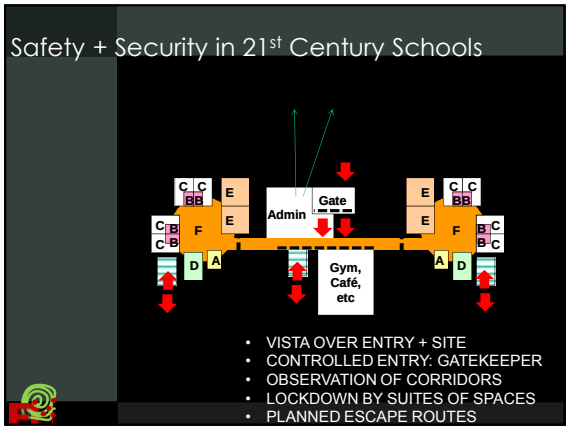


Ch 5.4 21st Century Schools Presentation









5.5 Lincoln-Eliot Educational Visioning Session Meeting Minutes

Lincoln Eliot **-** *Educational Visioning Session*

Date & Time: 9:00am – 1:00pm on Wednesday, October 17, 2018
Location: 150 Jackson Rd., Newton, MA; Lincoln Eliot Elementary School

Attended

Newton Public Schools (NPS):	Diana Beck (*Principal, Zervas Elementary School*) Jason Raisner (*2nd Grade teacher, Lincoln Eliot*) Stacey Kazakoff-Eigen (*ELL, Lincoln Eliot*) Ally Andrews (*Lincoln Eliot*) Danielle Morrissey (*Principal, Lincoln Eliot*) Karen Schmukler (*Assistant Superintendent*) Maura Tynes (*Director of Elementary Special Ed.*) Liam Hurley Julie Kirrane
Hill International (Hill):	Matthew Sturz
Arrowstreet Architects (AST):	Meryl Nistler Jessica Bessette Sara Garber
Frank Locker Education Planning:	Frank Locker

The goal of the educational visioning session is to envision how teaching and student services are ideally administered, both currently and into the foreseeable future. The idea is to identify key concepts, ideal resources that would be available to faculty, and any preferred adjacent uses that will help inform the space requirement program for the new school.

Items Discussed:

1. Introducing the Team
    a. Introductions proceeded with individuals' names and the respective organizations. 14 total attendees present, representing Hill International Inc., Arrowstreet Architects, Frank Locker, and the City of Newton.
    b. The client is the City of Newton.
    c. Hill International, Inc. (Hill) is the OPM.
    d. Arrowstreet Architects (AST) is the Designer.
    e. Frank Locker, Education Planning Specialist

Hill International

2. Outline of Discussion
    a. Frank began by stressing that the goal was to discuss *concepts* and not do any actual design work.
        i. KEY QUESTION: *Fixed Development Model*, or is there *Latitude for Innovation*?
    b. School Organizational Concepts
    c. Integration Opportunities
        i. Frank stressed that every school will make different decisions based on their unique circumstances
    d. Effective Learning Modalities
        i. Focus should be on creating different kinds of *learning opportunities*, to give staff latitude to choose those which they feel are most effective. Provide staff + students with *options*.
    e. Safety + Security

3. Visioning the Education Plan
    a. Frank began with a quick discussion of the Cabot Plan as a starting point:
        i. Curricular/grade level information, nothing about spatial relationships
        ii. Frank discussed the general benefits of building a sense of community, equity, and appropriate adjacencies, etc.
        iii. KEY QUESTIONS: Do teachers work together? What flexibility do the current spaces offer? What have we learned from other recent builds in the district?
    b. Input from school employees/representatives from the City of Newton:
        i. LE is highest need school in the district – from this perspective *equity* is very important.
        ii. Small group discussion/breakout spaces needed – sometimes the most vulnerable students are learning in the hallway for lack of appropriate sub-spaces in the current Lincoln Eliot configuration. Traditional model (current setup) has its limitations.
        iii. Teams of teachers that want to collaborate need to be adjacent – perhaps across grade levels?
        iv. Pods / Extended Learning Area's with breakout spaces are performing well at Zervas – these contain breakout spaces, lockers, etc.
        v. How to get the whole grade level together? How many pods would be needed to serve a grade level? Can these be arranged by purpose/ideal adjacencies? Need proximal, observable spaces
        vi. Ideally 4 classrooms per grade to achieve desired class sizes.
        vii. How is parent involvement accommodated in the education plan?
        viii. From a Special Education perspective, ideally there would be a sequence of spaces that respond to students' needs (Core Instruction, Private instruction, Escalation space, etc.)
    c. Review of Existing Conditions:
        i. Accessibility challenges acknowledged with existing structure
        ii. Floor plan / space orientation by Arrowstreet
        iii. KEY QUESTION: Do substantially-separate plans need to be accommodated?

Hill International

iv. Discussion was adjourned, self-guided small-group tour/site walkthrough ensued. Group had the opportunity to ask questions and observe the existing spaces described in (3) above.

d. Space Program Requirements – What needs to be included?

i. 22-25 students per classroom target desired

ii. Breakout spaces / Extended Learning Areas

- Special Ed. Breakout groups tend to be ~6 students max. and require proximity (do not typically cross grade levels) Ideally Special Education spaces will not have different labeling (this is important to the district from an equity perspective)
- Breakout spaces should have both Open- and Closed-model spaces as an option

iii. Dedicated office spaces

- Work space (for adults)
- Open desks/flexible use space for itinerant Special Ed. Individuals
- Flexibility generally desirable
- Staff would prefer designated spaces to store personal items, not bring them into the classroom

e. Frank began discussion about space names, identities, adjacencies

i. NO SPECIAL ED. LABELING DESIRED – Naming conventions should be inclusive

ii. What is unique about the needs of the Lincoln-Eliot community?

- Higher ELL population than district average, need to support current students + room to grow
- Literacy + Math interventions/coaches

iii. Sharing spaces, although it contributes to a flexible-use space environment, has its limits and may not always be feasible

iv. Frank suggested a maxim from his experience that seemed to be well-received by the group: Every space should have at least 3 possible uses

v. Need not just *meeting spaces*, but also *discreet meeting spaces*, some that may be able to be expanded to accommodate up to ~20 people.

f. Art, Music, and Gym discussed. Likely (1) pod needed for each, may be sufficient to meet Lincoln Eliot needs.

g. Cafeteria space should have multiple lunchtime seating options, not defined large-format table groupings – may include separate quieter breakout spaces

h. Ideally, would also open to the outside so that children can go out for recess even in inclement conditions.

i. Playground, Field space also needed.

j. BREAKOUT GROUPS: Broke into 2 subgroups to discuss the merits of different spatial configurations, pro's and con's of different configurations and how different learning modalities might be enabled/restricted based on layout.

Hill International

i. Frank Locker presented a slide show with 12 different configurations/adaptations of interior space, describing how each of these enabled/restricted different learning modalities and behaviors.

ii. Large format easel sheets contain record of group discussion and input - Arrowstreet to disseminate this information to the group

k. Safety and Security discussion tabled until following meeting, due to schedule constraints

To the best of my knowledge, these notes are a fair representation of the items discussed at the meeting. Additional items or corrections should be brought to the attention of the writer. Submitted by: Matthew Sturz 10/19/18

LINCOLN ELIOT ELEMENTARY SCHOOL
Educational Planning
AGENDA

17th October 2018

9:00	Welcome + Introductions
9:10	Continued Development of the NPS Elementary Model Latitude for innovation Whole group discussion including other principals
9:30	Special Education Program Review + Facility Needs Whole group discussion
10:30	School Organizational Concepts Do the upper years look like the lower years? Teacher collaboration, cross-grade groupings, integration of "specials" with core Table team discussions, whole group discussion
11:30	BREAK with snacks
11:40	Most (and Least) Appropriate Classroom Designs Table team discussions, whole group discussion
12:25	Opportunities for integration w/ NECP Whole group discussion
12:45	Effective Learning Modalities Individual responses, whole group discussion
TBD	CONTINGENCY: Safety + Security Presentation
1:00	**ADJOURN**

NEWTON EARLY CHILDHOOD PROGRAM
Educational Planning
19TH OCTOBER 2018

NEWTON PUBLIC SCHOOLS
Equity & Excellence

OPERATIONAL OPPORTUNITIES WITH LINCOLN-ELIOT ES

MAJOR SPACES	NOT NEEDED FOR NECP	SEPARATE SPACES	SHARED SPACES, SAME TIME USE	SHARED SPACES, SEPARATE TIME USE
Entrance				
Core Classrooms				
Spl Ed inclusion (in general classrooms)				
Spl Ed Substantially Separate				
Spl Ed Behavior				
English Language Learners				
OT/PT				
IT Labs (if any)				
Tech/STEM Labs/ Maker Spaces				
Music Room				
Art Room				
Gymnasium				
Multi-Purpose Room				
Administration Office				
Guidance Office				
Nurse Suite				
Specialist Offices				
Teacher Planning Centers				
Media Center/Leaming Commons				
Stage				
Food Court/Cafeteria				
Food Service Kitchen				
Custodial				
Playground				
Playfield(s)				
Parking				
Bus Drop-off/Pickup				
Parent Drop-off/Pickup				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				

5.6 NECP Educational Visioning Session

Newton Early Childhood Program Educational Visioning

Newton Public Schools
Newton, MA

October 2018

Frank Locker Educational Planning

Contents + Acknowledgements

CONTENTS

ACKNOWLEDGEMENTS

Newton Early Childhood Program

NECP

Kathleen Browning	Director, NECP
Sarah Lipsitt	Special Education Teacher
Carol Anne Myers	Occupational Therapist
Michelle Simon	Special Education Teacher
Trish Szoke	Team Specialist

NPS CENTRAL OFFICE

Liam Hurley	Assistant Superintendent
Julie Kirrane	Director of Business Planning

Other

WELLESLEY PUBLIC SCHOOLS

Becca Zieminski	Director of Early Childhood PAWS Preschool at Wellesley Schools

Architect

ARROWSTREET ARCHITECTS

Jessica Bessette	Architect
Sara Garber	Architect
Meryl Nistler	Project Manager
Larry Spang	Principal in Charge

Owner's Project Manager

HILL INTERNATIONAL

Mary Mahoney	Project Manager
Matthew Sturz	Project Manager

Educational Planner

FRANK LOCKER EDUCATIONAL PLANNING

306c Dover Point Rd
Dover NH 03820
617.412.7444
www.franklocker.com

Dr Frank Locker

Newton Early Childhood Program

INTRODUCTION

This Educational Vision reflects the work of a Visioning Team; approximately seven teachers, and district and school leaders. Created in an intense facilitated workshop it is intended to guide the educational evolution and the physical planning of the Newton Early Childhood Program.

Much of the work was conducted by two Table Teams, each with half the participants. They brainstormed, debated, and attempted to reach consensus on most of the defining issues.

VISION COMPONENTS

The Educational Vision for Newton early Childhood Program is described here through several components:

- **Evolving the NECP Model** identifies key concepts for education at the preschool
- **Co-location Opportunities: L-E ES,** explores sharing the 150 Jackson Rd site
- **Special Services Program Review** identifies the most operational and planning concepts for special services
- **Special Services Program Review + Facility Needs,** specific focus on programs and spaces

- **Appropriate Classroom Designs,** detailed descriptions of the learning environments
- **Safety + Security** outlines emerging best practices in achieving safety and security for students and educators in new and renovated school buildings
- **Overall Program Relationship Diagram** shows the strategic positioning of critical spaces

EVOLVING THE NECP MODEL

Most essential components of the NECP model are:

Educational Delivery

Educational Delivery identifies organizational and operational fundamental issues.

- Primary values are:
  - Empathy
  - Respect
- All learning is play based
- Students move to learn
  - Outside
  - Inside
- Typical student activities are based on 15 to 30 minute rotations
  - In and out of Classrooms
  - In and out of the building
- ABA program
  - Applied behavior analysis
- Integrated program
  - NECP 50-50 ratio of IEPs and typical
  - NECP committed to this integrated program
- NECP would like to extend the day to offer parents more options and support

Facility Concepts

Develop program building plans with the following considerations:

- Design facilities to be flexible, able to support multiple learning modalities, teaching styles, and program change over time
- Design the facility for inclusiveness
- Develop Small Learning Communities, learning spaces arranged in clusters
- Create shared specialist offices to foster collaboration and greater knowing of students by teachers
- Create Teacher Planning Centers, perhaps near those of Lincoln-Eliot
- Create a Parents Spot for those who want to their dwell spend time in the school waiting for their child
- Create building plans that offer security and safety despite constant visitors
- Minimize circulation spaces that do not also offer opportunities for learning. Maximize those that do, such as Extended Learning Areas, Breakout/ Collaboration small group spaces
- Develop spaces for specialists to work with students immediately adjacent to the Classrooms
- If the Newton Early Childhood Program is co-located on the 150 Jackson Rd site, do so in a manner that maintains respectful boundaries, including separation of functions, and supports the identifies areas of overlap of programs and uses. Many of these are outlined in Appendix Ch 3.1

CO-LOCATION OPPORTUNITIES: L-E ES

In a whole group discussion the Visioning Team explored educational and operational opportunities of being co-located with Lincoln –Eliot Elementary School in the 150 Jackson Rd building.

Among them are:

- Share a Maker Space
- Perhaps share Music and Art spaces
- Locate Teacher Planning Center within proximity of Lincoln-Eliot's but do not require sharing
- Medical spaces could be shared, but not the Nurse
- Media Center is a prime learning opportunity for preschool students. Plan access to Lincoln-Eliot's
- Carefully plan bus drop-offs, parent drop-offs, sidewalks, and entry spaces to assure no confusion, congestion, and safety problems for both schools

See Appendix Ch 3.1 for the full considerations.

SPECIAL SERVICES PROGRAM REVIEW + FACILITY NEEDS

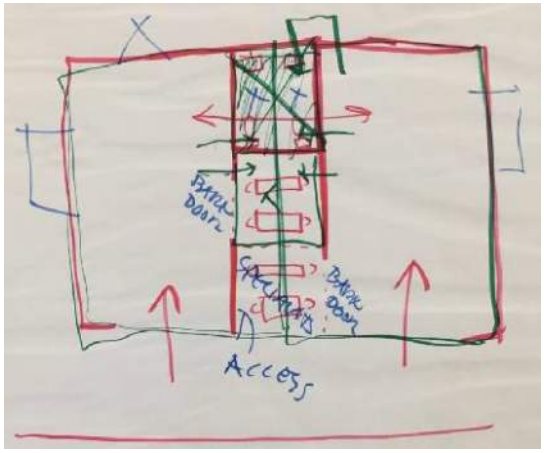
Critical planning aspects of Special Services are:

- Special services
  - Offices/therapy spaces
    - ✓ Team specialist
    - ✓ Therapy specialist
    - ✓ Conference offices
  - IEP Conference Room
    - ✓ 15 People
  - Office pool
    - ✓ Social workers
    - ✓ OT/PT Pool
  - Therapy spaces
  - Variations

The full outline of needs is in Appendix Ch 3.1

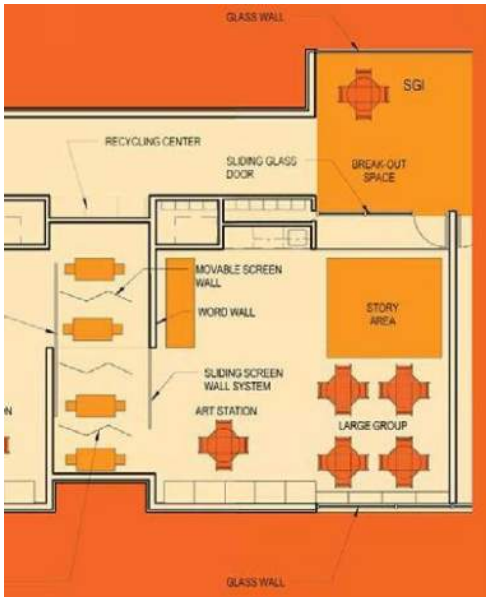
APPROPRIATE CLASSROOM DESIGNS

Critical planning aspects of Classrooms are:



CLASSROOM ORGANIZATION CONCEPTS

- Generic Classroom organization
  - OT etc. offices
  - Play
  - Library, food commons and learn in center
  - Classrooms connected to above
  - Could have therapy spaces in pod
  - Pullout perhaps like Springfield –
    - ✓ Access to the pullout space directly from the circulation would be important



Full details of all Table Team responses are in Appendix Ch 3.3.

SAFETY + SECURITY

Planning for the type of teaching and learning outlined above calls for mew, more effective method of achieving safety and security. Essential concepts to achieve this, aligned with the principles of the international organization Crime Prevention Through Environmental Design, are:

21st CENTURY PLANNING

- Classrooms arranged in suites of spaces, each with easy overview by eye sweep
- Few, controlled entry/exit points
- Gatekeeper at the front door
- Security at Gym or Cafeteria
- Lockdown provided by suites of learning spaces, Small Learning Communities, and at Gym and Cafeteria
- Escape built into the design at each Small Learning Community

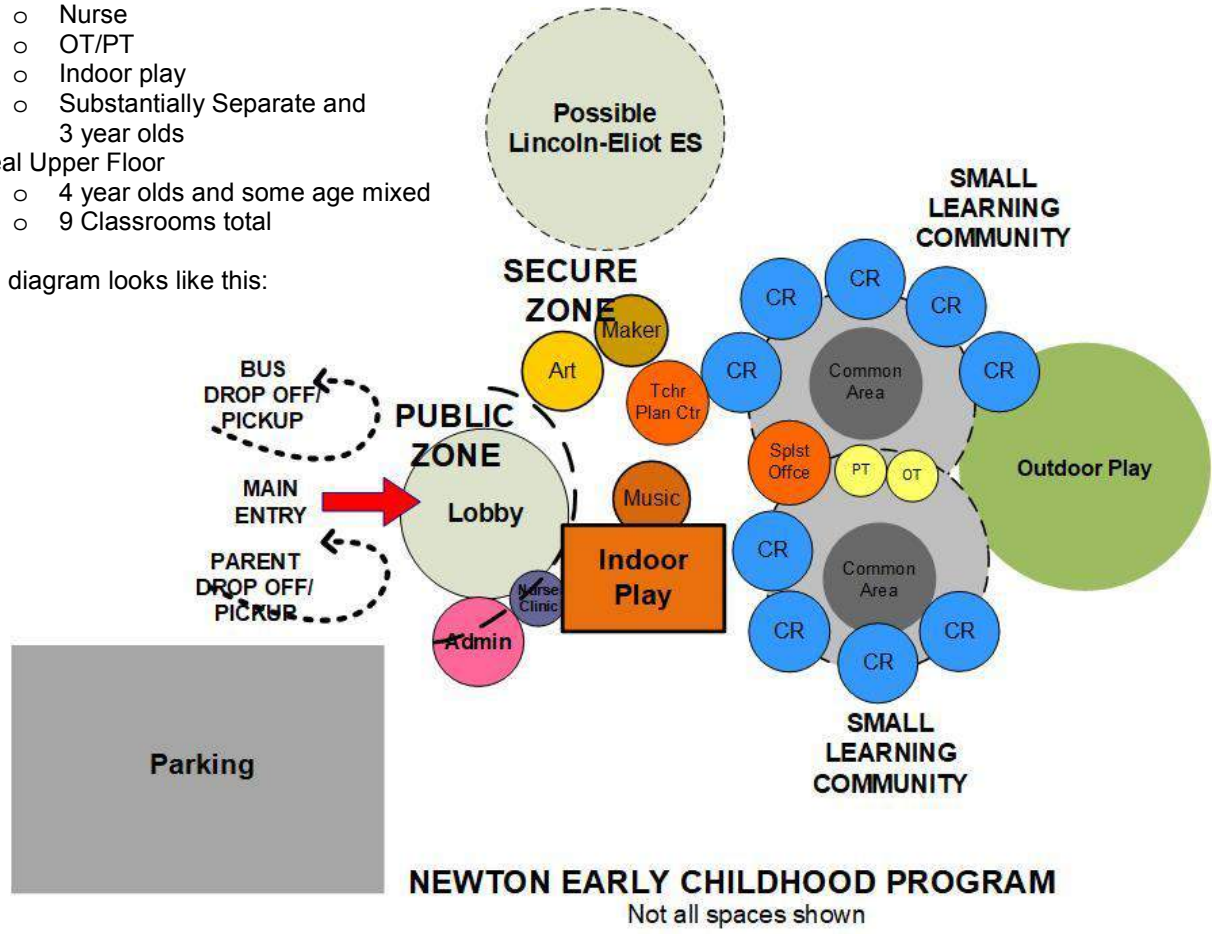
See Appendix Ch 3.1 for more discussion and Ch 3.4 for the presentation.

OVERALL BUILDING PLANNING/ RELATIONSHIP DIAGRAM

OVERALL PLANNING CONCEPTS

- Outdoor Play Area
  - Students often have to play indoors in the winter due
- Classroom counts
  - 18 Classrooms
  - 2 floors
  - 9 per floor
  - 4 and 5 per side per floor
- OT and PT
  - Closer access needed to OT-PT for Substantially separate Classrooms
- Ideal Lower Floor
  - 3 Classrooms for 3 year olds
  - 3 Classrooms for Substantially Separate
  - 3 Classrooms for medical needs
  - Nurse
  - OT/PT
  - Indoor play
  - Substantially Separate and 3 year olds
- Ideal Upper Floor
  - 4 year olds and some age mixed
  - 9 Classrooms total

The overall diagram looks like this:



See Appendix Ch 3.1 for more discussion.

Workshop Notes

AGENDA

The Newton Early Childhood Program Visioning Workshop was held on 19th October, 2018. Notes of all activities follow:

- Evolving the NECP Model
- Co-Location Opportunities: L-EES
- Learning from PAWS, Preschool at Wellesley Schools
- Special Services Program Review + Facility Needs
- Appropriate Classroom Designs
- Overall Building Planning/Relationship Diagram
- Safety + Security

EVOLVING THE NECP MODEL

The Visioning Team explored the most appropriate ways of improving early childhood education in Newton. Their thoughts were:

- 13 Classrooms now
  - 1 more coming soon integrated
  - 2 Classrooms substantially separate
    - ✓ Less than 9 kids each
    - ✓ 11 integrated
      - ➢ 16 kids
- Empathy
- Respect
- Play based
- Move to learn
  - Outside
  - Inside

Ch 3.1 Workshop Notes

- Typical student activities
  - 15 to 30 minute rotation
  - Within Classrooms
  - Out of Classrooms
  - Walks
  - Pull out for testing
- ABA program
  - Applied behavior analysis
- NECP has a vibrant PTO
  - Lots enrichment activities
  - In gym due to lack of space
  - Parents day
    - ✓ Jamin'
    - ✓ Creatures
- We need a place to have whole school events
  - Build community
- External
  - 63 staff
    - ✓ Parking needed
  - 88 typical students
    - ✓ No busing
    - ✓ Therefore lots cars
  - Students with IEPs
    - ✓ Transport available
    - ✓ 6-15 vans
  - Now separate bus lane
  - If with L-EES
    - ✓ Concerning
      - ➢ Bus lane conflicts
      - ➢ Conflict with walkers to L-EES
      - ➢ L-E ES has an 8:30 start
      - ➢ NECP has an 8:30-9:00 start
- Policy is needed to create separations
  - Bus
  - Vans
  - Cars
  - Walkers
  - Cabot ES has this
- Classrooms
  - Now 600 square feet
  - 16 kids per room
  - Cubbies in hall
  - Some wheelchairs
- 16 students maximum
  - 8 with special needs
- Integrated program
  - NECP 50-50 ratio of IEPs and typical
  - NECP committed to this integrated program
- Extended day
  - Feds: Have to offer to all kids in day program
  - Would like to extend the day
    - ✓ Now
      - ➢ 3 hour plus 5 hour time slots
      - ➢ 3 days plus 5 days
    - ✓ Extended day could be 7:30AM to 5:00-5:30PM
    - ✓ If extended day, student enrollment numbers would skyrocket
    - ✓ Extended day cannot use day spaces
    - ✓ Space needs are almost like a Classroom
      - ➢ Mimic the day program
      - ➢ Noise concerns
    - ✓ Brookline has separate extended day operations
    - ✓ Newton
      - ➢ Extended day possibilities
        - Group A – to end of school day 7:30
        - Group B – to 5:00
    - ✓ Extended day
      - ➢ Fee for services
  - Dedham is another model
    - ✓ Early child center
      - ➢ Good to visit
    - ✓ Kindergarten and preschool
    - ✓ Substantially separate with adjacent space
    - ✓ Opens in January 2019

CO-LOCATION OPPORTUNITIES: L-E ES

In a whole group discussion the Visioning Team explored educational and operational opportunities of being co-located with Lincoln –Eliot Elementary School in the 150 Jackson Rd building. The reviewed this chart of typical elementary school spaces to stimulate their thoughts.

OPERATIONAL OPPORTUNITIES WITH LINCOLN-ELIOT ES

Ch 3.1 Workshop Notes

MAJOR SPACES	NOT NEEDED FOR NECP	SEPARATE SPACES	SHARED SPACES, SAME TIME USE	SHARED SPACES, SEPARATE TIME USE
Entrance				
Core Classrooms				
Spl Ed inclusion (in general classrooms)				
Spl Ed Substantially Separate				
Spl Ed Behavior				
English Language Learners				
OT/PT				
IT Labs (if any)				
Tech/STEM Labs/ Maker Spaces				
Music Room				
Art Room				
Gymnasium				
Multi-Purpose Room				
Administration Office				
Guidance Office				
Nurse Suite				
Specialist Offices				
Teacher Planning Centers				
Media Center/Learning Commons				
Stage				
Food Court/Cafeteria				
Food Service Kitchen				
Custodial				
Playground				
Playfield(s)				
Parking				
Bus Drop-off/Pickup				
Parent Drop-off/Pickup				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				

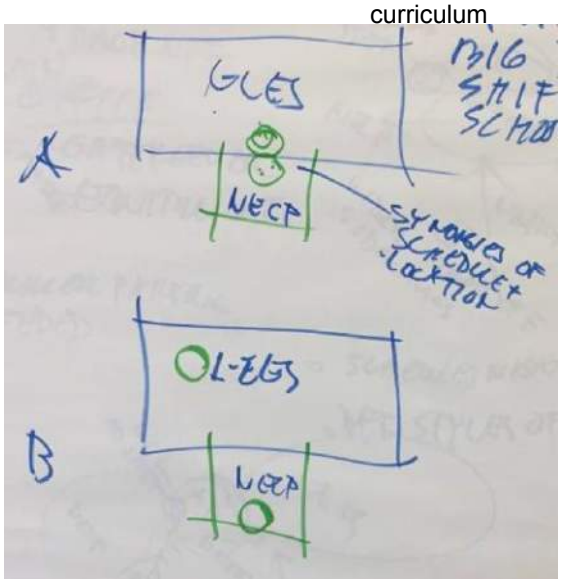
Their thoughts were:

MAKER SPACE

- Good idea
- Explore how to create one
- Contact Wellesley

NECP with L-E ES

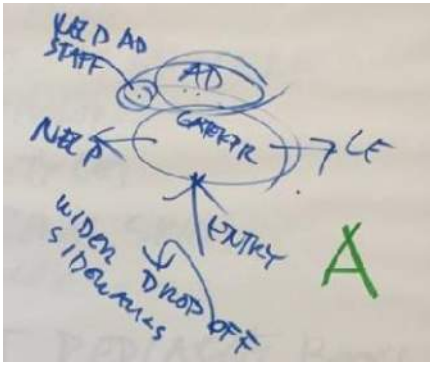
- Curricular:
  - PE and Art maybe
    - ✓ When at L-EES
      - ➢ Reading buddies
      - ➢ Best with older kids - 4 year olds
      - ➢ 5th maybe
  - Has to be of value to sending CR teacher
  - Would need buy-in from L-E ES
  - Would add an understanding of K
- Teachers
  - Good to know continuity through Grade 5
  - Opens up early child world
  - Kindergarten and maybe Grade 1 but not Grades 5 or 6
  - Could create PLC's
  - Former early release program worked for teachers looking to find alignments with others
  - The curricular issue is this: is L-E ES a resource or are we looking for collaboration
  - Schedules are challenge
- Collaboration enhanced by Teacher Planning Centers
  - Diagram A
    - ✓ L-EEs and NECP attached
      - ➢ If attached – big thinking shift both schools
      - ➢ Synergies of school schedules and location of spaces need to be carefully worked out
  - Diagram B
    - ✓ L-EES and NECP adjacent
      - ➢ Not as directive as A
      - ➢ Not as likely to impact cultures and curriculum

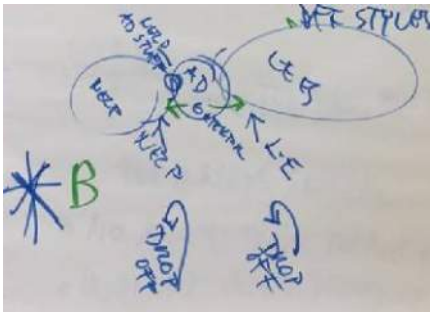


Ch 3.1 Workshop Notes

SPACES POSSIBLY SHARED WITH LINCOLN-ELIOT

- Entry has two possibilities





  - Option A
    - ✓ One drop off
    - ✓ One entry door
    - ✓ One Lobby
    - ✓ One Main Office
      - ➢ Shared
      - ➢ NEPS staff within office, with L-E ES staff
        - ➢ Gatekeeper
          - With security equipment
    - ✓ Stroller parking needed
    - ✓ Wider drop off sidewalks
    - ✓ Schedules might be challenge
    - ✓ Different styles of drop-off
  - Option B
    - ✓ Two drop offs
    - ✓ Two entry doors
    - ✓ Two Lobbies
    - ✓ One Main Office
      - ➢ Shared
      - ➢ NEPS staff within office, with L-E ES staff
        - ➢ Gatekeeper with security equipment
    - ✓ Stroller parking needed
    - ✓ Wider drop off sidewalks
    - ✓ Option B preferred
- Medical space
  - Could share space but NECP needs own nurse
    - ✓ Desk – sink – cot now
    - ✓ Need 2-3 cots
  - Could share professional office but need two entries, two Exam rooms, etc
  - Note, classroom nurses needed for some students with IEPs
- Library/Media Center
  - Share would be lovely
  - Chair size will be a challenge
  - NEPCP would use the Library/Media Center as a special event, not for everyday use
  - NECP would use it like the ES uses it
    - ✓ Reading circle
    - ✓ Check out books
  - Knowing a Librarian is exciting to students
    - ✓ Different person
    - ✓ Different styles
  - Could teach foundational skills
    - ✓ Find book
  - Will not replace books in Classrooms or in Hallway outside Classrooms
- Gym
  - An ES Gym would be too big, too tall, too loud
  - Pre-K needs smaller activity space
  - No advantage to NECP to share with L-E ES
  - Worry over schedule
- OT-PT
  - Need PE Space
    - ✓ Motor room
    - ✓ Need PT space
    - ✓ Need OT space
    - ✓ Both need suspension apparatus
  - Need Indoor Playground
- Summer

- Fewer kids
  - ✓ 10 Classrooms in use, not 13
- Water play outside
- Program lasts six weeks

- Food service
  - Now brought in, no kitchen
  - Now eat in Classrooms
  - In past 20 kids opted for the food service program
  - Could share L-E ES kitchen
- Do not scare parents with walking through big ES

LEARNING FROM PAWS: PRESCHOOL AT WELLESLEY SCHOOLS

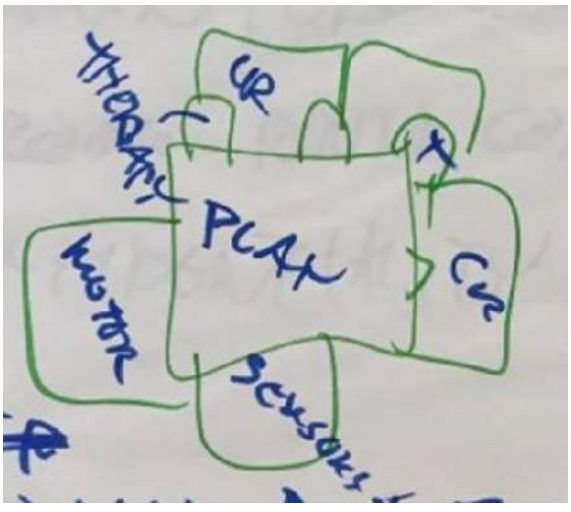
Becca Zieminski, Director of Early Childhood, PAWS, Wellesley Public Schools, joined the workshop to share her experiences gained from directing a program for a district with characteristics similar to Newton Public Schools. The whole group discussion covered these issues:

WELLESLEY PAWS MODEL

- 6 Pre-K Classrooms currently at Fisk School site, operating separately
  - Operations are compromised by limited site
- Currently two additional Classrooms in the Fisk building
  - In vacant Kindergarten spaces
  - Additional space in these rooms (compared to that in the PAWS building) has resulted in behavior improvements in some children
  - All kids are all unique
  - Families want to be at 2006 building
- Pre –Kindergarten in Wellesley wants one center for early childhood education
  - Building built in 2006
    - ✓ 650-700 square foot/Classroom
    - ✓ Each with own bathrooms
  - 16:1 student: teacher ratio in Classrooms with two assistants
- PAWS building has the following for services and service providers
  - Motor Room
  - OT/PT Office
    - ✓ Six staff in one space
    - ✓ Used as therapy space
  - In the new proposed design
    - ✓ Staff stations 1 room plus
    - ✓ Separate therapy spaces
      - ➢ OT/PT staff collaborate
    - ✓ New speech pathologist position
      - ➢ Office/therapy
      - ➢ Higher caseload than OT/PT
- Play based instruction
  - Center of school is play
    - ✓ At edges are therapy spaces
  - 2 toilets between every two Classrooms
- Specialists
  - OT/PT have shared office
    - ✓ Phone calls are the only problem
  - Better to have this than closed offices, as staff share and learn from each other
  - Speech/therapist have office/therapy
    - ✓ Former closets
- Motor room
- Play space
- Sensory space
- Care for families
  - Some have younger kids up to age 3
    - ✓ Need/have space to respectfully greet them
    - ✓ Use existing library
- Also serve walk-ins for drop in services
  - Age 2 + for testing
  - Ages 3-5 for services
  - New model has space in library for this
    - ✓ Really a Book Storage Room
- Possibly make a Community Room
  - Could have washer/dryer
  - Bathroom
  - Changing table
  - Breast feeding
  - Grown up chair
  - (Franklin Public Schools has good one)
- IEP room
  - Round conference table
- Confidentiality challenges
- Cultural representation at pre-school
  - 18 languages at pre-school
  - Fabrics from different countries are hanging in the Entry

Ch 3.1 Workshop Notes

- ✓ Murals as well
- Reggio Emelia model is loosely followed
  - Less plastic
  - Natural
- Not enough parking spaces
  - 45 staff
  - Parents
- Needs a good car loop
- Have four vans
  - Park in front of school
- Has concierge service to being children to/from the building
  - No carts
  - Parents have withdrawal anxiety and like to bring their children to the Classrooms
- In contrast Marlboro
  - Whole staff on board for arrival and departure
  - No parents come into building
    - ✓ Old HS building
  - Hard to imagine this in Wellesley
  - Hard to do in Newton
    - ✓ Conflicting meetings
- Extended day
  - Has a 1:00 to 2:45 option
  - Parents with most severe needs signed up, i.e. those needing 1:1 services
  - PAWS could not afford to offer extended day
- PAWS is exploring a new building
  - Below is one of the possible floor plans, centered around a play space



NECP MODEL

- NECP
  - Currently confidentiality problems with psych, speech
    - ✓ Now staff in 1 office
      - ➢ Collaboration is good but confidentiality can be a problem due to lack of acoustical privacy
  - Carol Anne noted
    - ✓ In the Education Center the space use was ideal
      - ➢ Two groupings
      - ➢ 7-8 people in each
- Desired NECP model
  - Specialists in office pool
  - Separate therapy spaces
  - Classrooms need pull out spaces
  - Classrooms need to be big enough to hold some therapies in the Classrooms
    - ✓ This gives great flexibility to the specialists
  - Shared offices for specialist works well
    - ✓ Knowing families and instant communication
  - Classroom size directly related to size and number of pull out spaces
    - ✓ Nooks around the Classroom are great
- Some parents drop off their kid at 9:00, work on laptop, and pick up their kid at 12:00. Therefore a "dwell" space for them is important

SPECIAL SERVICES PROGRAM REVIEW + FACILITY NEEDS

The Visioning Team identified critical planning aspects of Special Services in a whole group discussion:

- Special services
  - Team specialist
  - Therapy specialist
  - Main office
  - IEP conference
    - ✓ 15 People
  - Conference
  - 3rd conference
  - Conference office

- Pool
  - ✓ Social workers
  - ✓ OT/PT Pool
- Therapy spaces
- Variations
  - ✓ Seasonal surge
  - ✓ Schedules
  - ✓ IEP
    - ➢ Normally 10 people
      - Parents
      - Experts
      - Attorneys

APPROPRIATE CLASSROOM DESIGNS

The Visioning Team identified critical planning aspects of Classrooms in a whole group discussion:

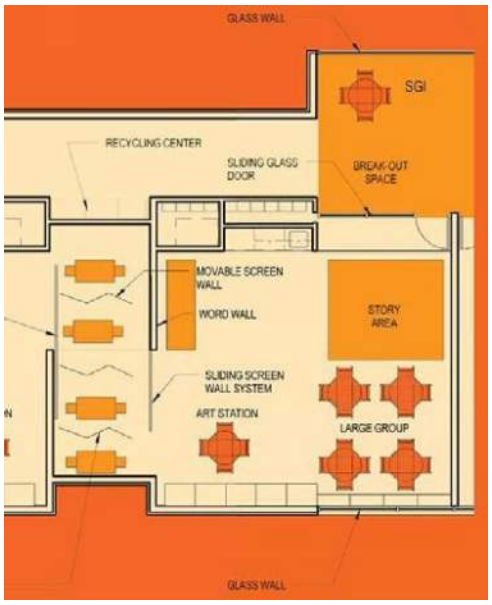
- Services suite
- CR
- Tour
  - OT then
  - PT then
  - PE/Music then
  - Classroom
  - 667 SF
- 2nd column
  - Tech space? Then
  - Therapist OT/PT Speech office

CLASSROOM CONCEPTS

The Visioning Team toured existing Classrooms in the existing NECP, and shared frustrations

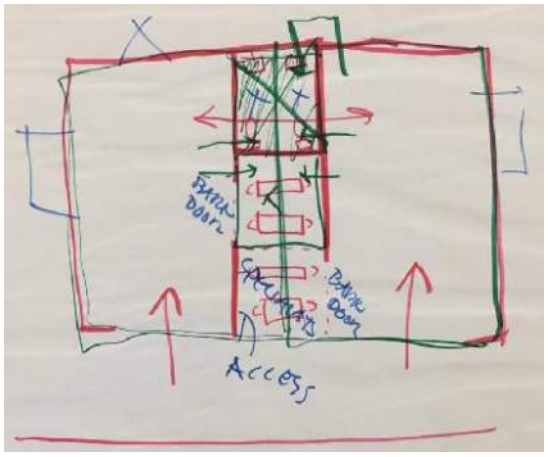
- Classrooms too small
- Classrooms are rectangular, offering few sheltered sub-spaces within
- Specialist spaces not nearby

The Team reviewed classroom concepts from Frank Locker's collection of school planning examples. They thought the specialist spaces between the Classrooms at the Springfield Literacy Center would be ideal.



Those spaces would work better for NECP if they had alternate access from the circulation.

A diagram for NECP would look like this:



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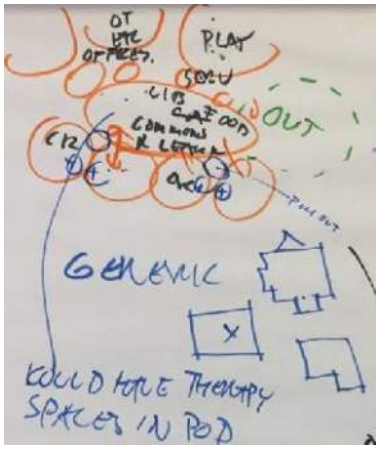
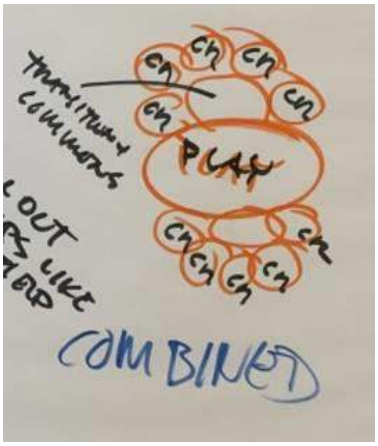
Ch 3.1 Workshop Notes



- Wellesley Study
  - Play in center
  - Classrooms at the perimeter
  - Outdoor play readily accessible

- Combined generic and Wellesley concepts
  - Play in center
  - Transitions and commons
  - Classrooms around the edges



In discussion it was determined that this organization of Classrooms placed too much emphasis on the Play Space

- Better to have it as a “go to” space than a “go through” space

OVERALL BUILDING PLANNING/ RELATIONSHIP DIAGRAM

OVERALL PLANNING CONCEPTS

- Outdoor Play Area
  - Students often have to play indoors in the winter due to the district wind chill rule
  - Cold weather dress up takes time
- Classroom counts
  - 18 Classrooms
  - 2 floors
  - 9 per floor
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- OT and PT
  - Closer access needed to OT-PT for
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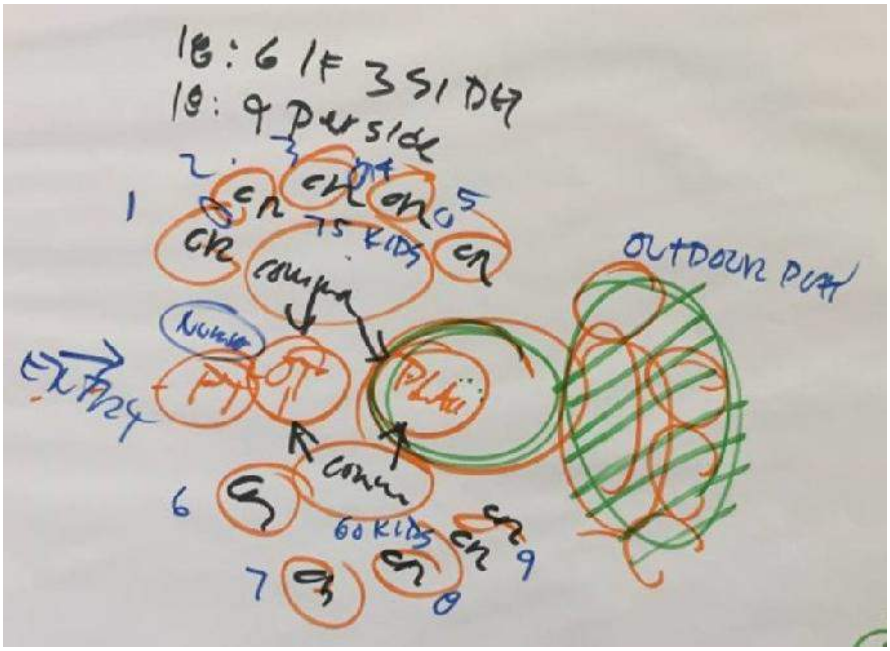
The overall diagram is on the next page:

Ch 3.1 Workshop Notes



SAFETY + SECURITY

Frank Locker shared planning concepts for achieving safety and security, outlining the shift from 20th century school planning to 21st century. Essential concepts were:

20th CENTURY PLANNING

- Classrooms arranged in rows along a corridor that is difficult to survey
- Multiple, uncontrolled entry/exit points
- No Gatekeeper at the front door
- No security at Gym or Cafeteria
- Lockdown provided on a room-by-room basis
- No escape built into the design

21st CENTURY PLANNING

- Classrooms arranged in suites of spaces, each with easy overview by eye sweep
- Few, controlled entry/exit points
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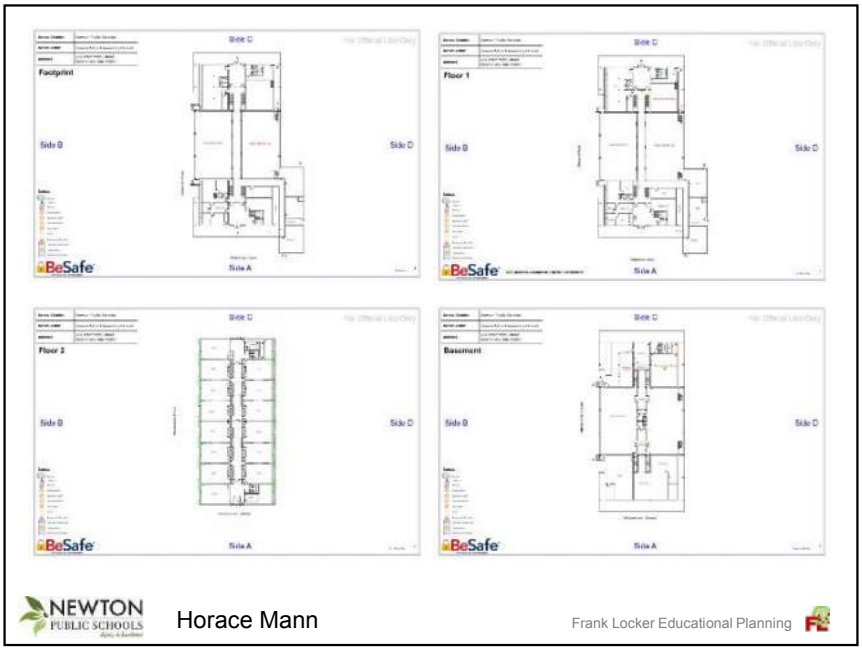
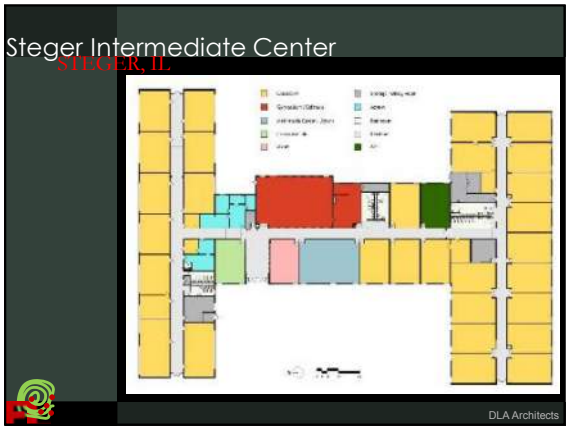
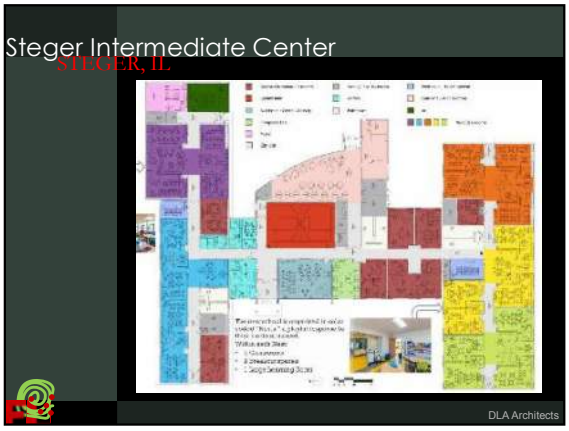

Footprint
Floor 1
Floor 2
Basement
BeSafe
NEWTON PUBLIC SCHOOLS
Horace Mann
Frank Locker Educational Planning

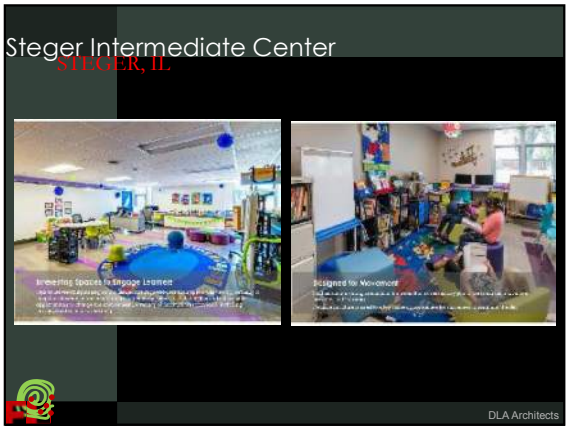

Existing Conditions
Ground Floor Plan
Existing Conditions
First Floor Plan
Existing Conditions
Second Floor Plan
Existing Conditions I Convent Floor Plans
NEWTON PUBLIC SCHOOLS
Jackson Road
Frank Locker Educational Planning

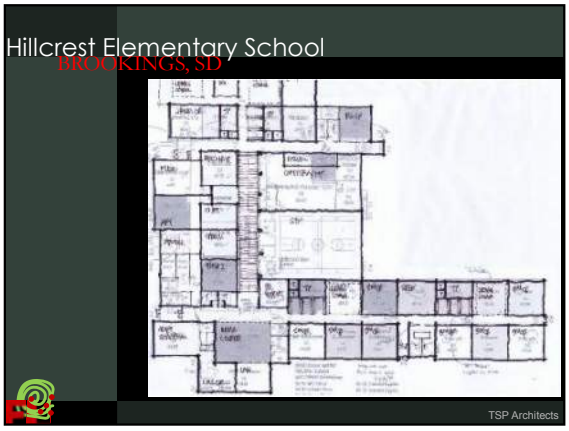
Ch 3.3 Classroom Design Options Presentation





Ch 3.3 Classroom Design Options Presentation





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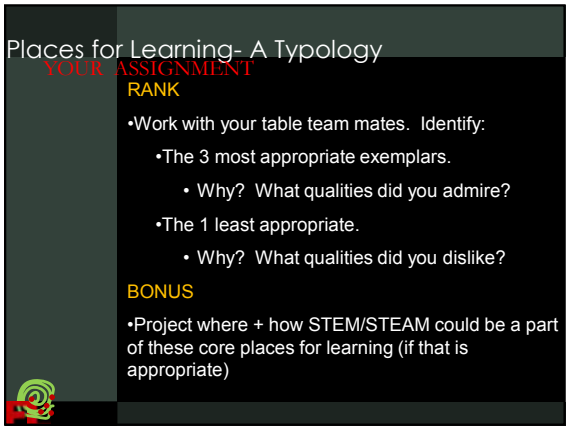
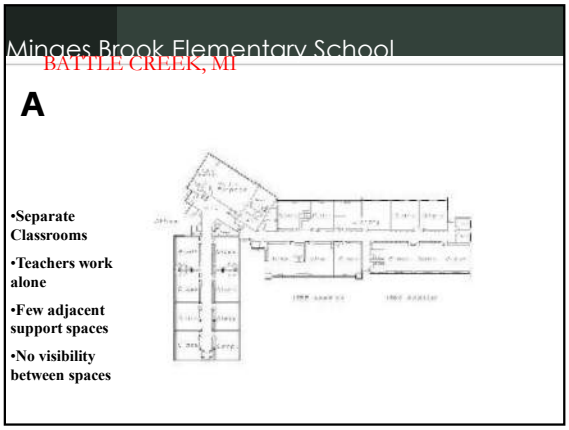
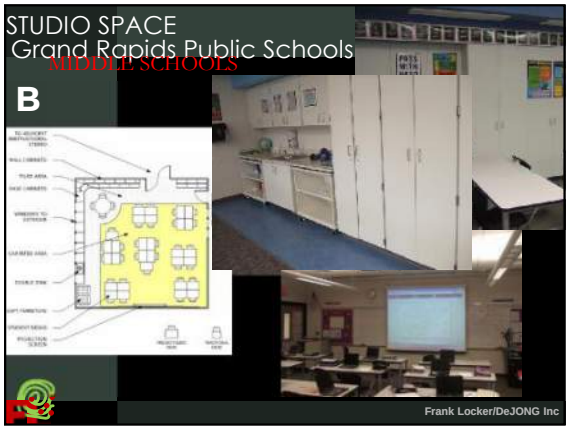
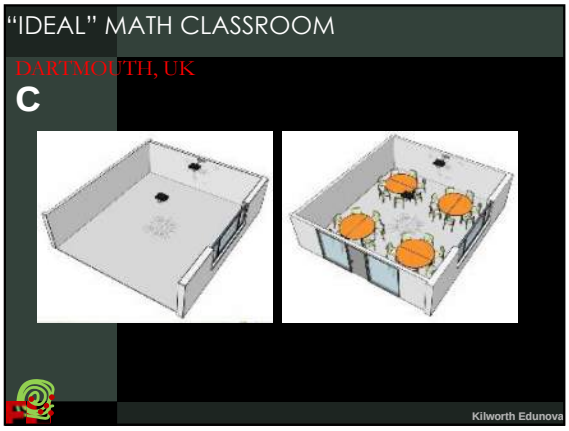
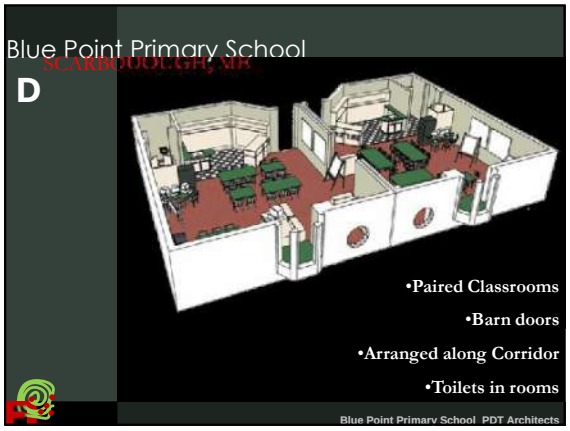


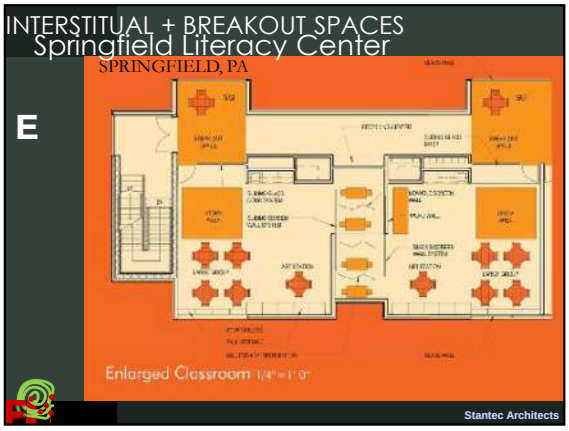


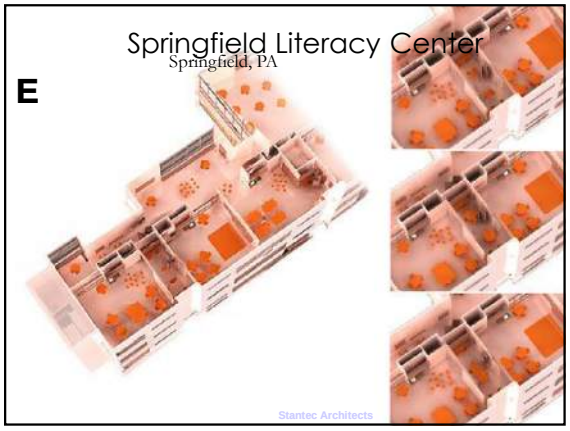


Ch 3.3 Classroom Design Options Presentation









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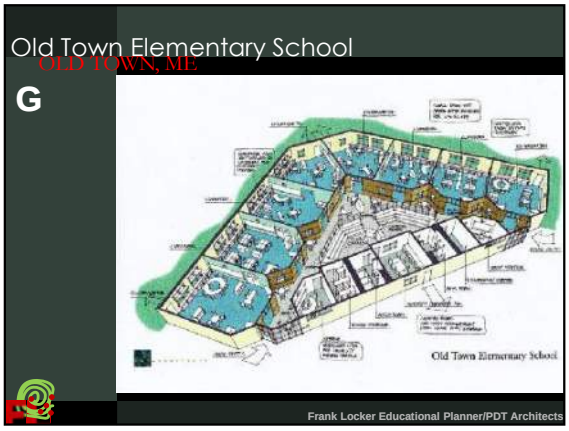

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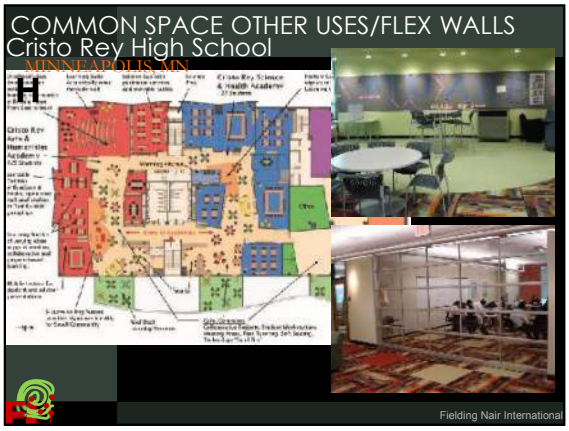

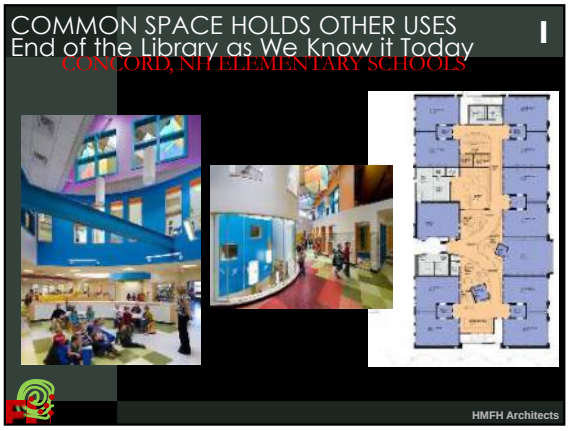

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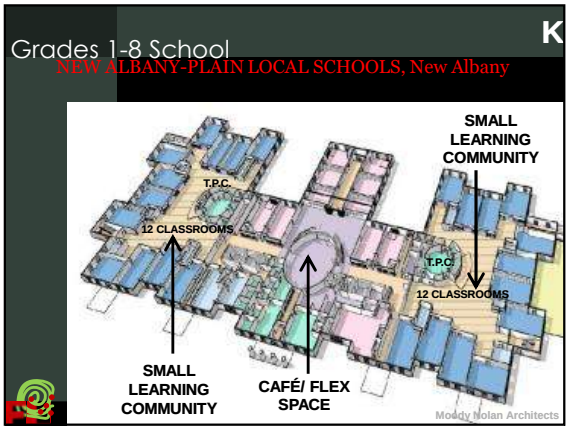

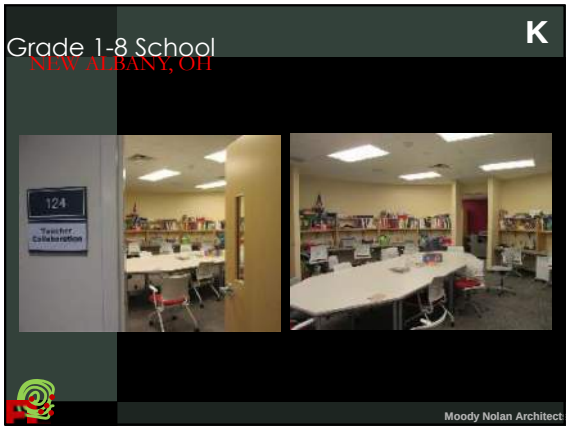

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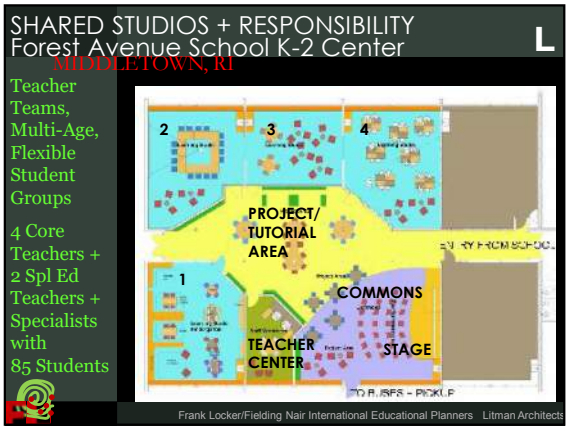
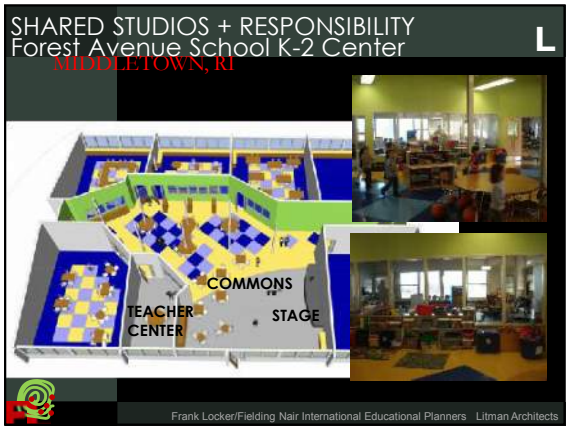
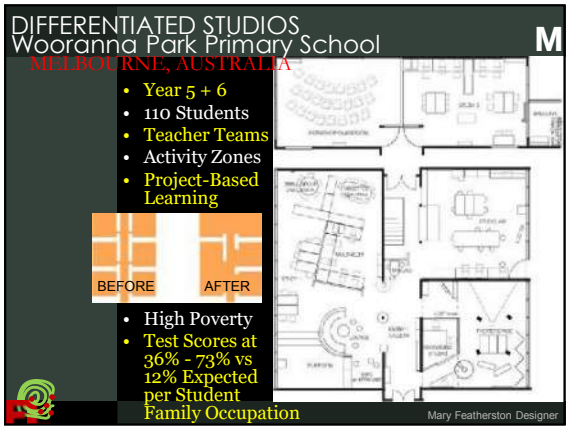
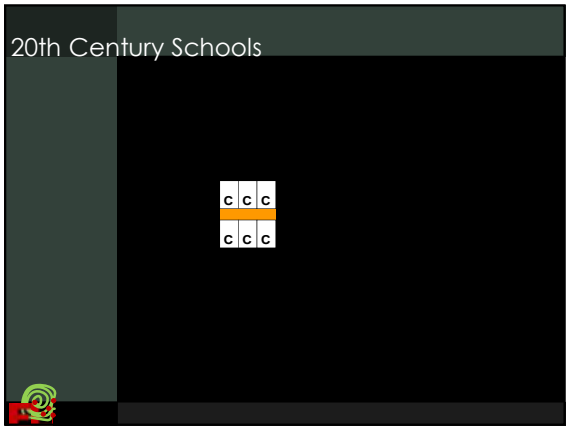


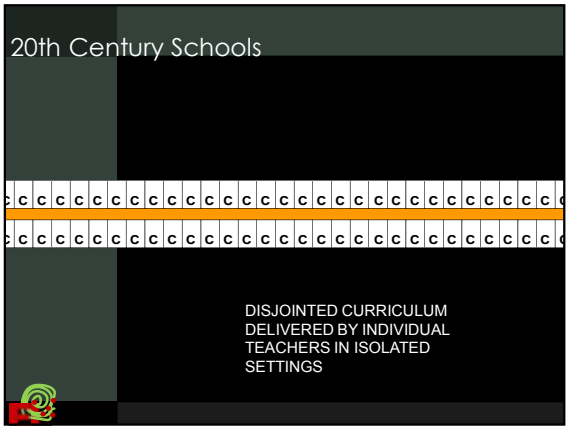


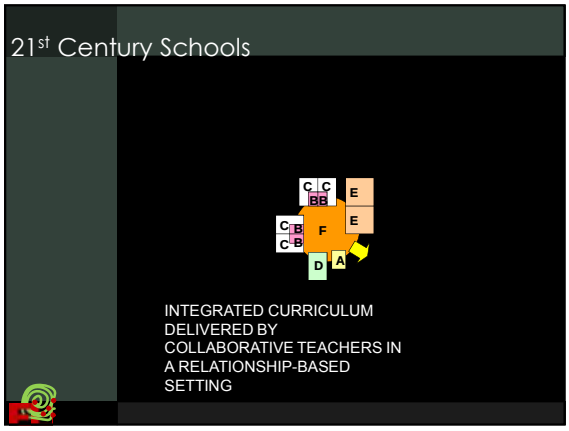


Ch 3.3 Classroom Design Options Presentation

Ch 5.4 21st Century Schools Presentation







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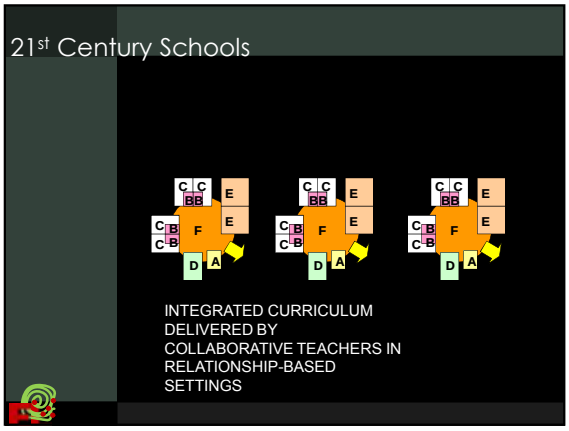

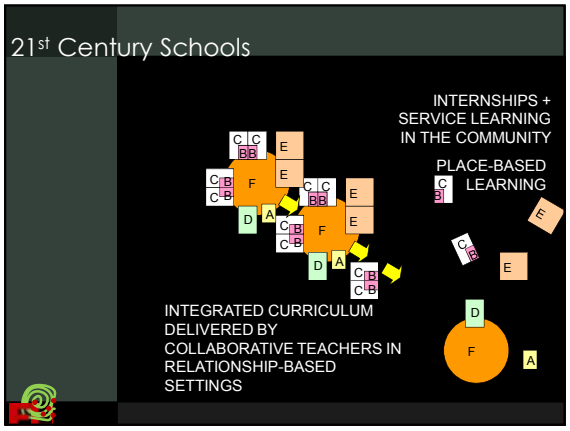

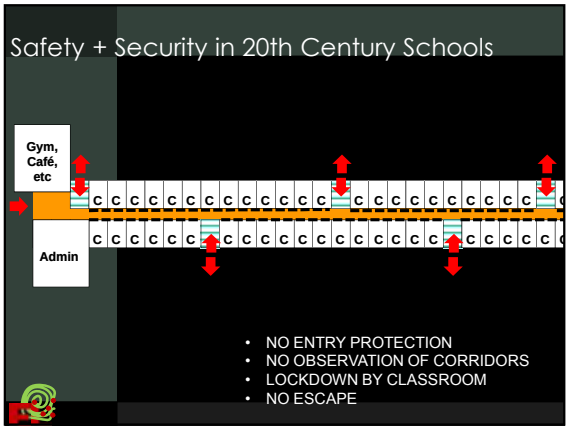

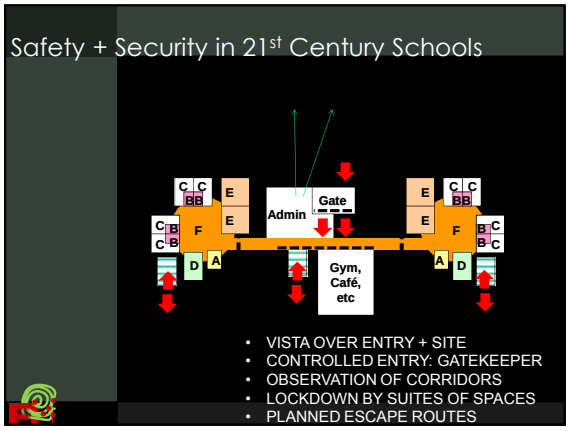

5.7 NECP Educational Visioning Session Meeting Minutes

Lincoln Eliot – NECP Project(s)

NECP *- Educational Visioning Session*

Date & Time: 9:00am – 3:00pm on Friday, October 19, 2018
Location: 150 Jackson Rd., Newton, MA; Lincoln Eliot Elementary School

Attended

Newton Public Schools (NPS)	Carolanne Myers Trish Szoke Sarah Lipsitt Michelle Simon Karen Shmukler Liam Hurley Julie Kirrane Kathleen Browning
Wellesley PAWS Program (PAWS)	Becca Ziemenski
Hill International (Hill):	Mary Mahoney
Arrowstreet Architects:	Meryl Nistler Jessica Bessette Larry Spang
Frank Locker Education Planning:	Frank Locker

The goal of the educational visioning session is to envision how teaching and student services are ideally administered, both currently and into the foreseeable future. The idea is to identify key concepts, ideal resources that would be available to faculty, and any preferred adjacent uses that will help inform the space requirement program for the new school.

Items Discussed:

1. Introductions
2. Guiding Principles & Evolving the Model for NECP:
    a. Defining Characteristics:
        i. NECP is a District-wide program that has had many homes. For the last 3-yrs NECP has occupied 150 Jackson Rd.
        ii. Current program uses (13) classrooms & it is expected that another classroom (total 14) will be needed in the near future.
        iii. State regulations cap: 16 student/classroom based on current staff assignment.

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iv. Existing classrooms are approx. 680s.f. and size is tight – Prefer class size at 850s.f.
v. Children store jackets & other items in corridor cubbies (metal lockers) – Prefer cubbies in classroom.
vi. Storage needs for other student equipment items needed, i.e. stander, wheelchair, walkers
vii. Integrate special education is the current and future model combining special education population and general education populations within classrooms.
viii. Two Sub-separate classrooms are included in the program for students with higher needs. Sub-separate classroom enrollment is 9 students/classroom max.
ix. Early Education Academics include: empathy/sympathy, "Play to Learn", and "Move to Learn" elements.
x. Activities occur in 15-30 min. rotation both in and out of the classrooms (corridor, therapy areas, outdoors)
xi. Additional Programs include: AVA during school and After Hours Program.
xii. Enrichment Activities occur 2days/week with outside resources. Small groups and multi-sessions are required due to the size of existing group meeting spaces and the existing cafeteria is too large. – Prefer option for conducting larger group activities.
xiii. There is no suitable space for all school events – Prefer space for all school events to build community.

3. Transportation and Traffic:
    a. Staff Parking – 83 staff parked in first few parking lanes to provide separation between District transportation van arrival/departure and parent/family arrival/departure.
    b. 88 students – not on District transportation, some walk but most are driven by private vehicle.
    c. Van counts 6-15 vans & at higher counts vans must queue on Jackson Rd.
    d. Need to separate District transport from private student transport and both from walkers.
    e. NECP programs starts at 8:30am and 9:00am.
    f. Newton Elementary Schools start at 8:30am. Co-Located Lincoln Eliot-NECP will need to consider arrival/departure times and traffic control.
    g. Transportation - District Policy in development with principles including
        i. Separate transportation lanes – bus/vans, private vehicles, walkers
        ii. Start times and impacts to local traffic
        iii. Full Day Pre-Kindergarten impact
4. Special Education – Integrated v. Inclusion
    a. Integrated Program: Is a special needs population based program with general education populations included. 15 students max per classrooms and (8) with identified needs.
    b. Inclusion Program: Is a general education population based program with special needs population included.
5. Integrated Program Considerations:

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a. Extended Day & After Hour Programs - if available then must be offered to all students regardless of needs. Student needs will directly impact staffing requirements and can be continually changing.
b. Extended Day presently offered Mon, Wed, Thus, & Fri 9am-12pm daily and Tues for 3hrs, staffed with both NECP and non-NECP resources.
c. Existing space constraints limit Extended Day program offerings.
d. NECP and Therapy Programs running in afternoon limit space available for Extended Day offerings.
e. ADA Programs – 3hour and 5 hour programs offered with Parents paying for service.
f. NECP base program cannot share space with outside programs or Extended Day program.
g. Therapy does sometimes share classroom space with Base Program.
h. Extended Day – Future Considerations
    i. Program offerings 7:30am – 5:30pm.
    ii. Assigned space sized & set up like a classroom to keep students engaged and to build structure needed by students.

6. Insight from Wellesley PAWS Director Becca Ziemenski
    a. PAWS existing facility is a modular building opened in 2006 and built specifically to early childhood education. Discuss considerations during the original building design and construction.
    b. Program is Integrated with Sub-Separate Classrooms
    c. Building has a limited footprint that includes (6) classrooms each at 650s.f.
    d. Program expansion since 2006 requires (2) satellite classrooms in kindergarten classrooms at an existing elementary school.
    e. (2) satellite classrooms are 1,100s.f. and children have done better in the larger classrooms.
    f. Prefer one early childhood center to maximize staff time and benefit from building efficiencies and on site resources.
    g. PK classrooms have toilet rooms within each classrooms and sinks in each classroom.
    h. Staffing is (15) student: (1) teacher & (2) teacher assistants.
    i. Students enter the program through an IEP process.
7. NECP existing set-up & future considerations:
    a. OT/PT current space is an open space with multiple workstations and therapy space within. Space is tight based on staff of (8) with therapy space. – Future Space OT/PT like to collaborate consider shared offices separate from therapy area.
    b. Speech Pathologist Office is also used for therapy – Future space preferred to be office set-up with a table & chairs to work with students.
    c. Pull-out Space from Classrooms is needed for 1:1 instruction and therapy, but need to balance classroom space needs to treat within the classroom as well.
    d. In a Co-Located model the NECP needs to have assigned space separate from the elementary school program. No space sharing with older students such as core facilities. Size and scale of

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the building/environment for NECP student needs serious consideration. NECP students are all unique.

e. Offices – Shared v. Individual need to cultivate a collaborative environment for staff.
f. Office Suites and adjacency to Treatment Suites discussed.
g. Space for Conference critical for team meetings and meetings with families.

8. Wellesley Director Becca Ziemenski – PAWS Preferred Model
    a. Play Based Model – including an interior play area at the center of the building with adjoining dedicated OT/PT space. Play area includes a track around its perimeter.
    b. Classrooms and therapy spaces border the interior play area. No corridor separating play area from classroom area.
    c. Classrooms have glass walls along the room entry.
    d. Each pair of classrooms share two toilets rooms within the classrooms.
    e. OT/PT share an office
    f. Speech Pathologists have individual workspace/treatment offices.
    g. Interior play space, motor room, & sensory room provided in the model of Utopia in Meridan, CT.
    h. Storage an important need.
9. NECP existing set-up & future considerations:
    a. Need to create a welcoming and calming environment for Parents/Families. Space respectful to the cultures of the population.
    b. Early Intervention Program supports children from birth to age 3yrs.
    c. Transition Process from Early Intervention Program to NECP:
        i. Transition Process can occur at school or in home depending on the student.
        ii. Transition Process can involve 15 or so people including parents, teachers, counselors, and advocates.
    d. Walk-in Therapy occurs all day – needs reception, transition, waiting and therapy space for walk-in therapies, i.e. 1hr OT/PT, Speech
    e. Transition Process and Walk-in Therapies should provide waiting separate from the NECP education programs with size & furnishing appropriate for adults and children, toilet/changing/nursing accommodations and work space.
    f. Meeting spaces should create a calming environment with table round or oblong to avoid positions of authority.
10. Student drop off & pick up:
    a. Discuss separation of District transport and private transport
    b. Rolling drop off/pick up options and associated staff demands.
    c. NECP program conducts meetings throughout the school days so staff are not consistently available for assignment to rolling drop of/pick up.
    d. NECP prefers the children walk in to class to create a transition from parent to classroom.

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11. Extended Day Programs:
    a. Discuss level of need for early childhood students and the direct impact of student needs to staff assignment.
    b. Discuss Newton elementary school extended day model.
    c. Discuss difficulty in finding qualified staff and tuitions required to support the required qualifications of early childhood staff.
    d. Extended Day Options – stepped program within period of the school day or hours beyond the school day (before & after).
12. Other Considerations:
    a. Special Education program with close proximity to the main entry/offices.
    b. Space needed for Team Specialist who has a separate role from other therapists. Team Specialist coordinates and guides the transition from Early Intervention Program to NECP Program. Team Specialist needs a dedicated office and adjacent conference room for family & transition meetings (10-15 attendees).
    c. 3-4 shared conference rooms needed to meet the student population enrollment/transition surge in the Spring.
    d. Therapy/specialist offices and conference space should not be combined with therapy space for children.
13. Co-Locating Considerations:
    a. Maker Spaces – how using your hands to develop cognitive knowledge. Critical thinking, Logistics, Multi-tasking.
    b. Outdoor educational program space
    c. Shared learning opportunities
    d. Mix age & cultures
    e. Advanced curriculum – better connection to High School because of student maturity
    f. Transitional insight – prepare for Kindergarten
    g. Kindergarten coordination – PLA
    h. Resource and collaboration with other grades
    i. Shared Spaces:
        i. Shared entry/office would allow shared resources but need to consider compatibility of entry & drop off times and process
        ii. Separate entry would provide better control
        iii. Need to account for stroller parking during drop off & pick up
        iv. Medical shared suite but separate staffing needed based on NECP student needs. 2-3 beds per school.
        v. Library would provide daily access to reading materials & curriculum piece with library, however different furniture size would need to be considered. Library resources need to be near classrooms.

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vi. Gym – elementary school gym size/scale too big. Also issues with scheduling and learning unit equipment needs

vii. Furniture, equipment, service heights required for NECP make space sharing difficult.

14. NECP – future considerations:

a. Need indoor play area, PT Room, PE Room, & Motor Skills Room

b. NECP conducts summer sessions for 6wks, Mon.-Thurs, 8:30am-2:30pm in (10) classrooms with outdoor water feature.

c. Air conditioning is required for all indoor spaces.

d. Food Service – Students currently and will in the future eat within the classroom. The current food preparation/delivery service is inconsistent resulting in low participation. On site food preparation/delivery may produce better/consistent meals increasing participation. Extended Day programs may increase participation.

e. Classrooms needs:

i. Break-out space & sub-zones within a classroom.

ii. Flexible to adapt to individual and group learning needs

iii. Storage

iv. Cubbies, within or outside for student personal belongings

v. Natural light without glare

vi. Sub-Separate including cubicles for individualized instruction

vii. Sight lines to supervise students

viii. Teacher desk/workstation that does not impact learning space

ix. Shared space/link for specialized instruction between classrooms that can be part of the classroom or physically/acoustically isolated

x. Provide (2) shared toilets between (2) adjacent classrooms.

f. Security & Control important

g. Building Planning & Relationships

i. Indoor play area & proximity to classrooms critical

ii. Review hierarchy of structure: Cellular v. Town Square

iii. Concern that indoor play area adjacent to classrooms may cause distraction, supervision issues with pubic visitors and need for rules for use.

h. Future Space current v. new

i. (2) Sub-Separate classrooms – (3) Sub-Separate classrooms

ii. (2) 4-5 yr old classrooms – (2-3) 4-5 yr old classrooms

iii. (5) mixed age classrooms – (5) mixed age classrooms

iv. (2) mixed age with medical needs classrooms – (2) mixed age with medical needs classrooms

i. Nurse needs to be near Sub-Separate classrooms and Mixed age with medical needs classrooms

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j. Toilets, handrails, & elevator need to consider student size/height.
k. Indoor play needs to be connected to outdoor play

15. AST reviews the feasibility study process including:
    a. Education Program
    b. Existing Conditions investigations and report for 150 Jackson Rd and Horace Mann.
    c. Preliminary Space concepts.

To the best of my knowledge, these notes are a fair representation of the items discussed at the meeting. Additional items or corrections should be brought to the attention of the writer. Submitted by: Mary Mahoney 10/24/18

Attachments:

- NECP Educational Planning Agenda
- NECP Educational Planning Operational Opportunities Form

NEWTON EARLY CHILDHOOD PROGRAM
Educational Planning
AGENDA

NEWTON PUBLIC SCHOOLS

19th October 2018

9:00	Welcome + Introductions
9:10	Evolving the NECP model BREAK WITHIN Hours, days, additional programs/services Educational/operational opportunities co-located with L-EES Table team discussions, whole group discussion Learning from PAWS, Preschool at Wellesley Public Schools Becca Ziemenski, Director of Early Childhood
11:35	LUNCH PowerPoint presentation during lunch
12:05	Special Education Program Review + Facility Needs Table team discussions, whole group discussion
12:50	Effective Learning Modalities Individual responses, whole group discussion
1:05	Appropriate Classroom Designs for Age Groups Whole group discussion
1:35	Overall building planning/relationship diagram Whole group activity
2:35	Safety + Security Presentation Whole group discussion
3:00	**ADJOURN**

NEWTON EARLY CHILDHOOD PROGRAM
Educational Planning
19TH OCTOBER 2018

NEWTON PUBLIC SCHOOLS
Equity & Excellence

OPERATIONAL OPPORTUNITIES WITH LINCOLN-ELIOT ES

MAJOR SPACES	NOT NEEDED FOR NECP	SEPARATE SPACES	SHARED SPACES, SAME TIME USE	SHARED SPACES, SEPARATE TIME USE
Entrance				
Core Classrooms				
Spl Ed inclusion (in general classrooms)				
Spl Ed Substantially Separate				
Spl Ed Behavior				
English Language Learners				
OT/PT				
IT Labs (if any)				
Tech/STEM Labs/ Maker Spaces				
Music Room				
Art Room				
Gymnasium				
Multi-Purpose Room				
Administration Office				
Guidance Office				
Nurse Suite				
Specialist Offices				
Teacher Planning Centers				
Media Center/Leaming Commons				
Stage				
Food Court/Cafeteria				
Food Service Kitchen				
Custodial				
Playground				
Playfield(s)				
Parking				
Bus Drop-off/Pickup				
Parent Drop-off/Pickup				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				
Other:				

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | October 11, 2018

ARROWSTREET

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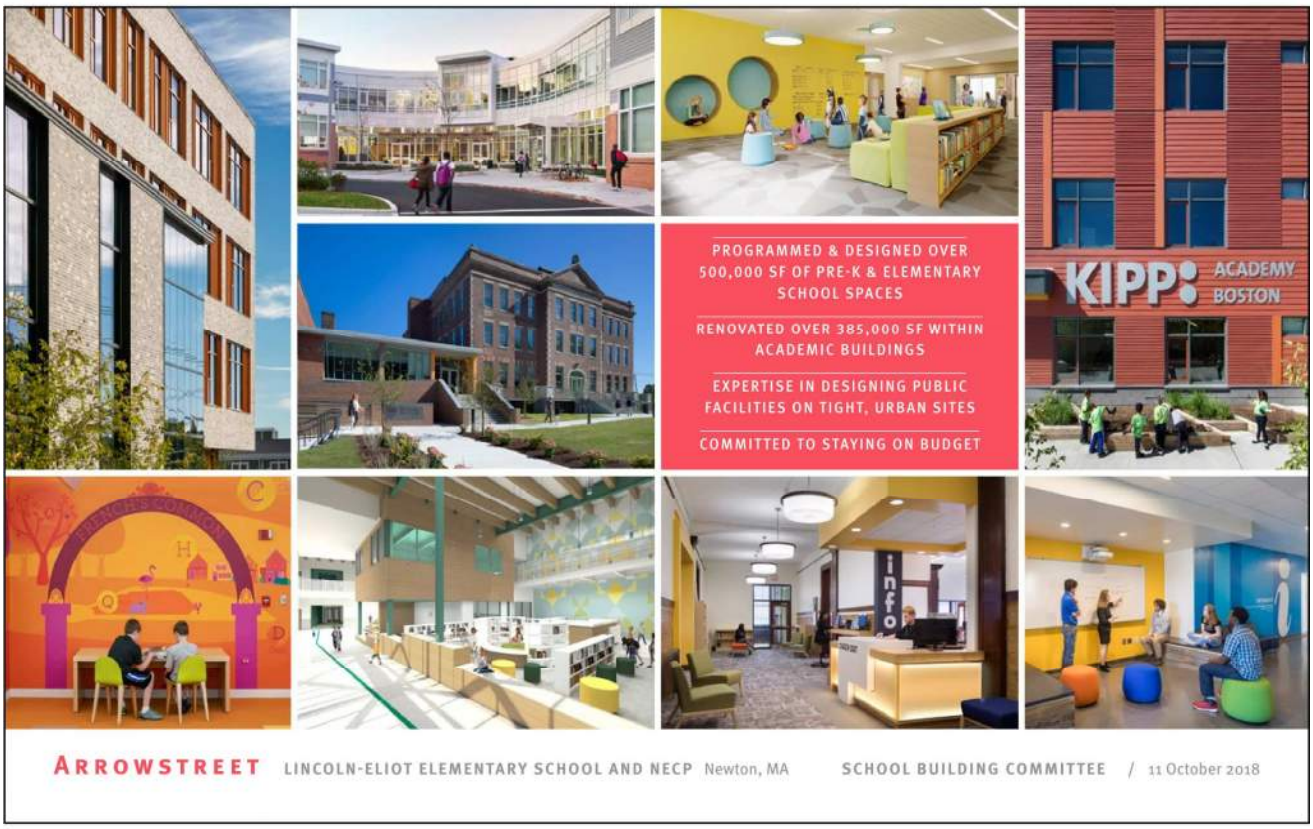
Agenda

- Team Introductions
- Process and Schedule
- Existing Conditions Observations
- Preliminary Site Selection Criteria
- Discussion



Hill International / Owners Project Manager (OPM)

ELEMENTARY SCHOOL EXPERIENCE


Howe-Manning Elementary School | $31M


Estabrook Elementary School| $41M


Paul Revere Elementary School | $17M


Millbury Shaw Elementary School| $40M

ELEMENTARY/ PRE- SCHOOL EXPERIENCE


James Hill Elementary School | $32M


Park Avenue Elementary School| $47M


Natick High School w/ Pre-K | $78M


AC Whelan Elementary School | $39M

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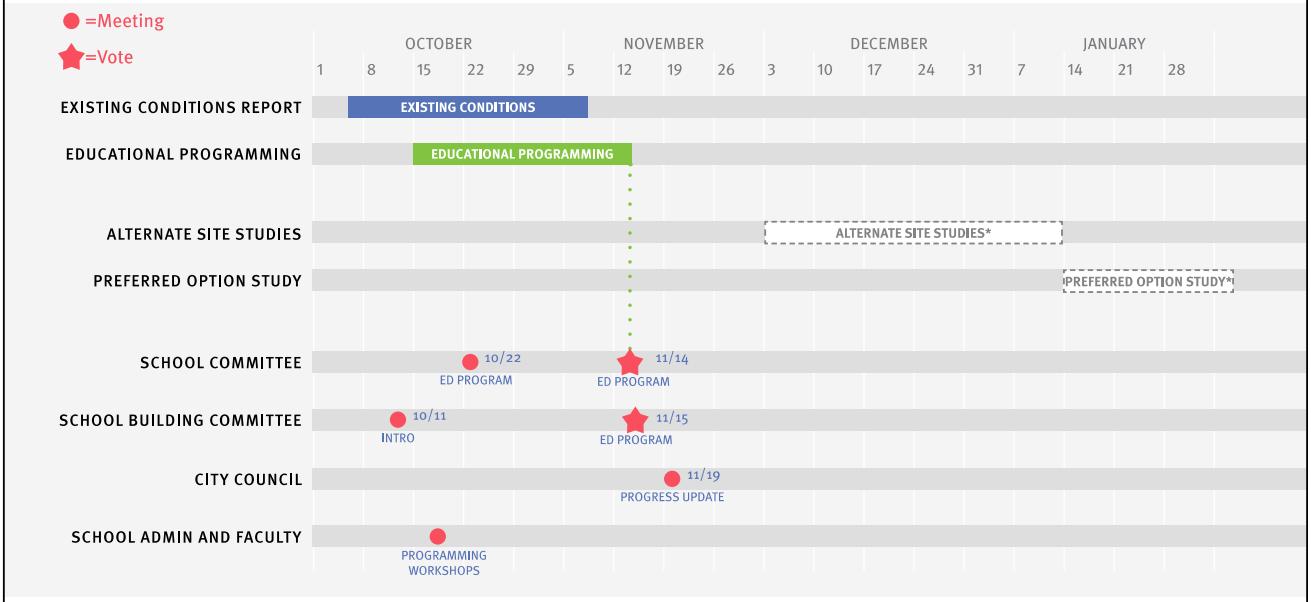
Project Timeline / Project Scope, Meetings, and Approvals



* = Awaiting Authorization

Educational program needs and workshops

» Half day session with Lincoln-Eliot

» Full day session with NECP

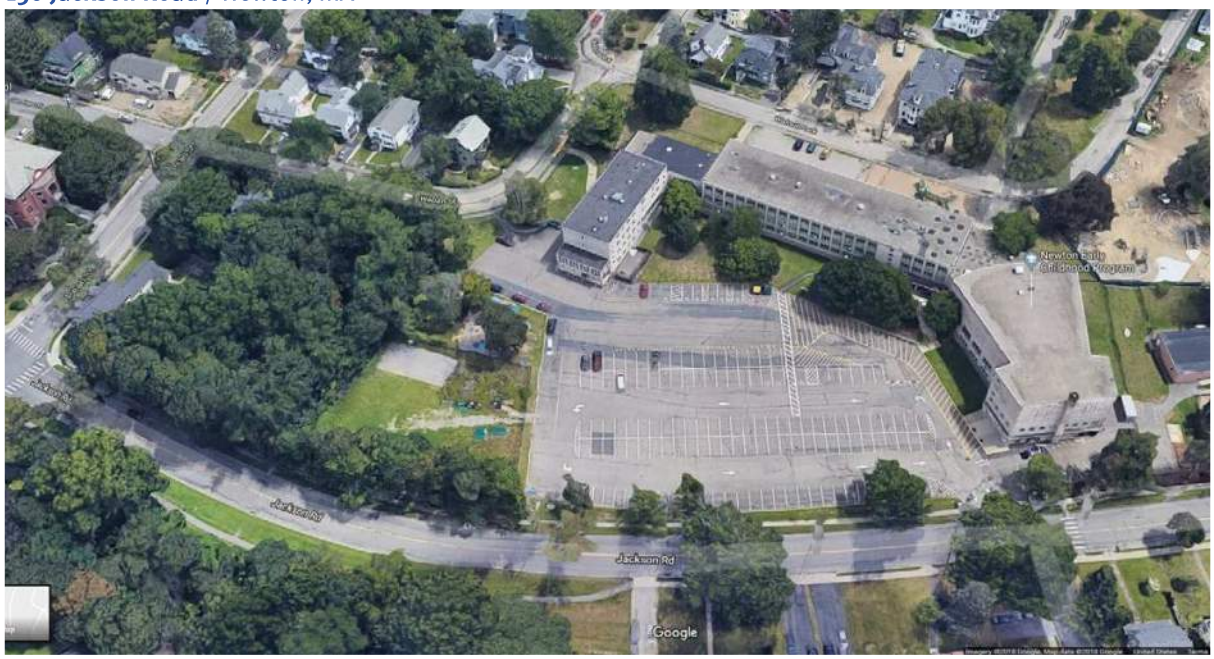
» Understanding existing and proposed program needs

» Understanding student future enrollment and demographics

Lincoln-Eliot: +/- 450-490

NECP: +/- 200 FT and 100 PT

150 Jackson Road / Newton, MA



150 Jackson Road / Initial Building Observations

- Good educational spaces
- Gymnasium needed for Elementary use
- Accessible upgrades required
- System upgrades or replacement required
- Finish upgrades needed

150 Jackson Road / Site Opportunities and Challenges

- Large site
- Front entrance presence
- Play spaces and activity areas
- Traffic and parking
- Neighborhood concerns

Horace Mann / 687 Watertown Street, Newton, MA

Horace Mann / Initial Building Observations

- Large classroom spaces
- Accessible upgrades required
- System upgrades or replacement required
- Finish upgrades needed
- Aged modular classrooms

Horace Mann / Site Opportunities and Challenges

- Small site
- Traffic, parking and pedestrian circulation
- Drop-off and pick-up
- Front entrance presence
- Play spaces and activity areas

Co-locate NECP and Lincoln-Eliot at 150 Jackson Road

Pros of having NECP and L-E at 150 Jackson:

- Potential staffing reduction due to cohabitation
- Potential shared resources (i.e. conference rooms and administrative areas) may reduce upfront capital costs
- Potential for increased energy efficiency and utility savings due to cohabitation
- Potential for less total parking development due to possible dual purpose parking

Cons of having NECP and L-E at 150 Jackson:

- Both programs on the site will prove both challenging and taxing to the neighborhood
- Maintaining a safe site will prove challenging
  - 200 staff, 300 parent vehicles, 12+ vans, and school buses
  - continuous activity all day
- Space for exterior playspace and greenspace will be challenging
- Traffic and parking demands will present a challenge
- Additional costs for temporary NECP facilities during construction

NECP at Horace Mann

Pros of having NECP at Horace Mann:

- Cost savings in not having to construct additional space at 150 Jackson
- Achieving an NECP identity is much easier at HM, than if it were part of 150 Jackson
- Subject to program needs confirmation, it appears that HM has more space than the current NECP program
- The adjacent park is available for playspace and greenscape subject to safety and security considerations

Cons of having NECP at Horace Mann:

- Traffic and parking demands will present a challenge that needs to be worked out
- Exterior program spaces may require utilizing adjacent assets like Albemarle Road

Lincoln-Eliot Elementary School and Newton Early Childhood Program
Next School Building Committee Presentation | November 15, 2018

» Discussion

ARROWSTREET

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Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | November 14, 2018

NEWTON PUBLIC SCHOOLS

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ARROWSTREET

Newton Early

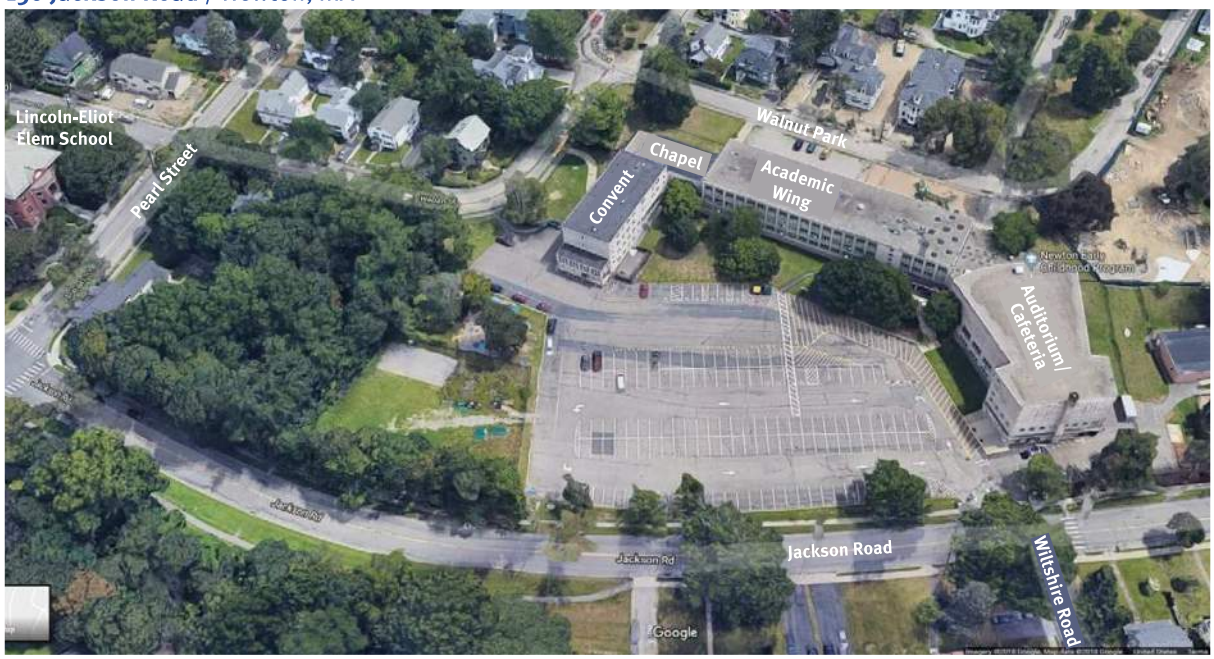
Agenda

- 150 Jackson Road and 687 Watertown Street

  Existing buildings observation summary
- Lincoln-Eliot Educational Programming
  - Visioning workshop summary
  - Space summary template
- NECP Educational Programming
  - Visioning workshop summary
  - Programming summary
- Next Steps/ Feasibility guiding questions

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 14, 2018

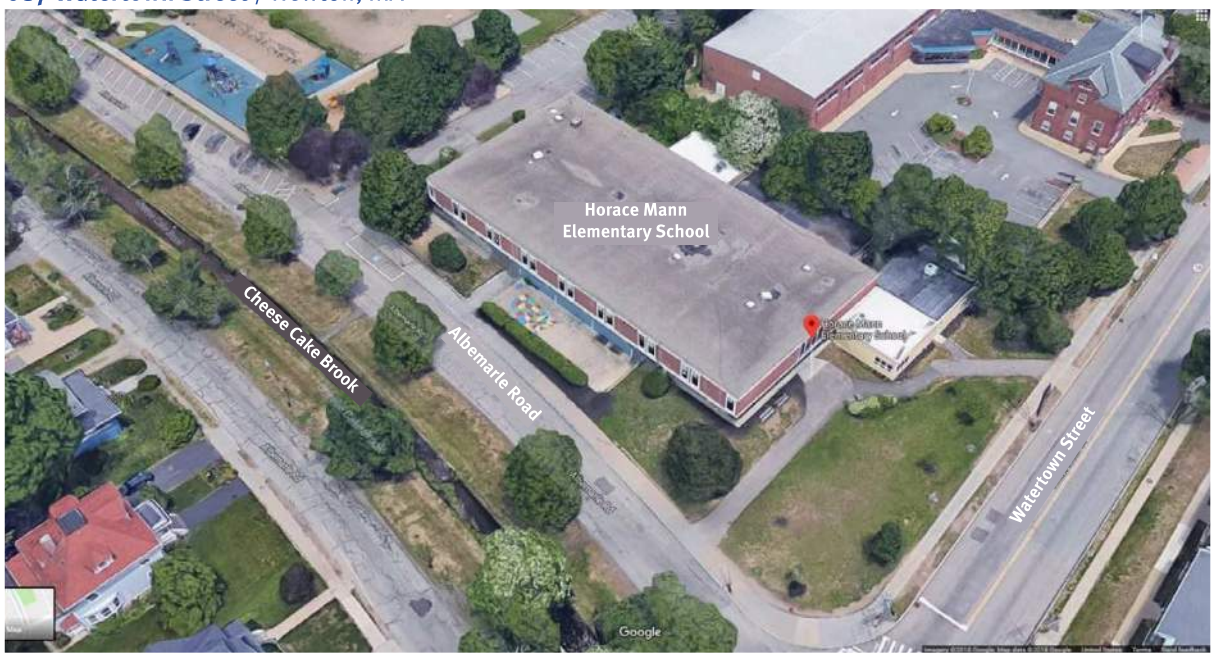
150 Jackson Road / Newton, MA



150 Jackson Road / Building Observation Summary

- *Site/ Civil* - Anticipate overall improvements to support the project
- *Exterior* - Generally in good condition; miscellaneous repairs as required
- *Interiors* - Substantial renovation to support the Educational program, upgrade finishes, and address ADA accessibility
- *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- *Fire Protection* - Incorporate needed fire protection/ suppression system
- *HVAC* - System is functional, but has reached its life expectancy and should be replaced to improve building performance, thermal comfort, energy efficiency, and indoor air quality
- *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT needs upgrade/ replacement.

687 Watertown Street / Newton, MA



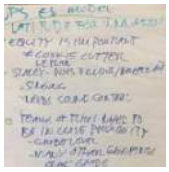
687 Watertown Street / Building Observation Summary

- *Site/ Civil* - Anticipate overall improvements to support the project and anticipated programming
- *Exterior* - Structurally performing adequately with some noticeable floor deflection and spalling concrete
- *Interiors* - Renovation to upgrade finishes, support the Educational program, and address ADA accessibility, including adding an elevator
- *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- *Fire Protection* - Provide sprinklers at underside of exterior canopies
- *HVAC* - System is functional, but has reached its useful life expectancy and should be replaced to improve building performance, energy efficiency, and indoor air quality
- *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT systems need upgrade/ replacement.

Lincoln-Eliot / Educational Planning Workshop Summary





- Half day session with Lincoln-Eliot team
- Design for flexibility and inclusiveness
- Develop small learning communities, learning spaces arranged in clusters
- Maximize teacher planning space to foster collaboration, interdisciplinary teaching
- Maximize circulation spaces that offer opportunities for breakout spaces and group learning
- Improve pick-up/ drop off and entry to provide better access and security for families and caregivers

Lincoln-Eliot / Programming and Enrollment

- Enrollment = 465 Students / Grades K - 5
- 20 - 23 Students per classroom
- 24 Classrooms (22 Typical + 2 Special Education)

	K	1	2	3	4	5	Total
Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot Preliminary Design Program

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students: ROOM NFA[1]	# OF RMS	area totals	Comments	EXISTING NEWTON PUBLIC SCHOOLS — Angier 465 Students: ROOM NFA[1]	# OF RMS	area totals	Zervas 490 Students: ROOM NFA[1]	# OF RMS	area totals	Cabot 480 Students: ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES		22 + 2 (SpEd)	**20,700**				**21,472**			**23,450**			**22,690**
(List classrooms of different sizes separately)													
Pre-Kindergarten w/ toilet													
Kindergarten w/ toilet	1,200	4	4,800		1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
General Classrooms - Grade 1-5	850	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.	925	18	16,650	925	20	18,500	888	20	17,760
							0			0	General CR Room NFA is average		
ELL Program	300	2	600	Due to larger ELL population	298	1	298	150	1	150	250	1	250
SPECIAL EDUCATION			**10,775**				**5,965**			**5,500**			**6,900**
(List rooms of different sizes separately)													
Self-Contained SPED	850	2	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program	925	1	925	900	1	900	925	2	1,850
Self-Contained SPED - toilet			0										
Resource Room			0										
Substantially Separate Classroom			0										
Learning Centers (K-2; 3-5)	450	2	900	Currently 1 Learning Center in existing L-E	470	2	940	450	2	900	475	2	950
Breakout Rooms (small group/ individual instruction) 1/grade average, Extended Learning Areas	125	8	1,000	Currently 1 Small Group Instruction in existing L-E. Difference due to high needs, assume 1 shared breakout space per 2 calssrooms	121	7	845	125	6	750	125	6	750
OT/PT	475	1	475		511	1	511	450	1	450	475	1	475
Sensory Room/ additional OT/PT	450	1	450									1	
Safe Room/ Mindful Room 1/ academic floor	100	3	300		106	2	212	100	2	200	100	3	300
Speech + Language	150	2	300		298	1	298	150	2	300	250	1	250
Reading Program/ Literacy Room	850	3	2,550	Currently 1 Reading Program in existing L-E. Difference due to higher needs and Title 1 school	925	1	925	900	1	900	925	1	925
Inclusion Facilitators (office for 6 adults; 150SF per person)	450	2	900	Difference due to higher needs and Title 1 school	238	1	238	150	1	150	300	1	300
Literacy Specialist (Office + teaching area for 6 students)	250	3	750	Difference due to higher needs and Title 1 school	176	1	176	125	1	125	250	1	250
Math Coach	250	3	750	Difference due to higher needs and Title 1 school	161	1	161	125	1	125	150	1	150
Team Specialist + IEP Conf Room (12 adults)	400	1	400		428	1	428	400	1	400	400	1	400
Psychologist (Office, testing, therapy, storage)	150	1	150		155	1	155	150	1	150	150	1	150
Social Worker (Office, testing, conferences)	150	1	150		151	1	151	150	1	150	150	1	150
													0
ART & MUSIC			**2,650**				**2,608**			**2,725**			**2,575**
Art Classroom - 25 seats	1,000	1	1,000	1 Art Classroom currently in existing L-E	1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150		178	1	178	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1 Music Classroom currently in existing L-E	1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble (Groups 4-10 students)	150	2	300		162	1	162	150	2	300	150	1	150
Music Practice / Ensemble (Groups 4-10 students)					100	1	100	75	1	75	75	1	75
HEALTH & PHYSICAL EDUCATION			**6,300**				**6,105**			**6,300**			**6,300**
Gymnasium	6,000	1	6,000		5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
Gym Storeroom	175	1	175		176	1	176	200	1	200	175	1	175
Health Instructor's Office w/ Shower & Toilet	125	1	125		120	1	120	100	1	100	125	1	125

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MEDIA CENTER			**2,800**				**2,770**			**2,875**			**2,830**
Media Center / Reading Room	2,800	1	2,800		2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
DINING & FOOD SERVICE			**6,960**				**6,321**			**6,663**			**6,960**
Cafeteria / Dining	3,400	1	3,400		3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
Stage	1,000	1	1,000		950	1	950	1,000	1	1,000	1,000	1	1,000
Chair / Table / Equipment Storage	360	1	360		408	1	408	363	1	363	360	1	360
Kitchen	1,700	1	1,700		1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
Staff Lunch Room (1/3 of staff = 60 staff/3)	250	2	500		234	2	468	250	2	500	250	2	500
MEDICAL			**510**				**569**			**510**			**510**
Medical Suite Toilet	60	1	60		73	1	73	60	1	60	60	1	60
Nurses' Office / Waiting Room	250	1	250		306	1	306	250	1	250	250	1	250
Examination Room / Resting	100	2	200		95	2	190	100	2	200	100	2	200
ADMINISTRATION & GUIDANCE			**3,225**				**2,305**			**2,515**			**2,595**
General Office / Waiting Room / Toilet	700	1	700		750	1	750	680	1	680	650	1	650
Teachers' Mail and Time Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisory/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	1	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	1	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	1	1,500	100 students at 15 SF per student									

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 14, 2018

Newton Early Childhood Program/ Educational Planning Workshop Summary

- Full day session with NECP team
- Design different learning modalities, teaching styles, and program changes
- Design for inclusiveness and spaces for specialists adjacent or within classrooms
- Create shared specialist offices to foster collaboration and sharing between teachers
- Improve pick-up/ drop off and entry to provide better access and security for families and caregivers
- Reflect the culture of the community

Newton Early Childhood Program/ Programming and Enrollment

- Enrollment = 200 - 300 students / Pre-Kindergarten

  10 - 15 students added per month
- 16 students maximum per integrated classroom
- 9 students maximum per STRIDE classroom
- 14 - 18 classrooms total

	Integrated Classroom	STRIDE Classroom	Total
Number of Students	176 - 288	18	+/- 300
Maximum Number of students/CR	16	9	
Number of Classrooms	15 - 16	2 -3	14 - 18

Newton Early Childhood Program/ Program Summary

Program Needs:
(based on NECP Ed Program August 2018):

- Maintain classroom student to teacher ratios
- Small group OT/PT and Speech spaces
- Dedicated spaces for screening and testing
- Workspace for OT/PT and Speech Therapists
- Administration and Guidance with several multi-sized conference rooms and specialist spaces
- Gross motor space

Program Wishes:

- In-classroom toilets
- Dedicated PE space
- All school/ large group gathering multi-purpose space/ indoor play area
- Lactation room(s)

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential benefits of Lincoln-Eliot and NECP located on the same site:

- Shared learning opportunities
- Collaboration between Pre-K and Kindergarten teachers to facilitate student transition
- Shared administrative support
- Shared resources, such as medical suite
- Some families may benefit when Pre-K students continue to Lincoln- Eliot Elementary School

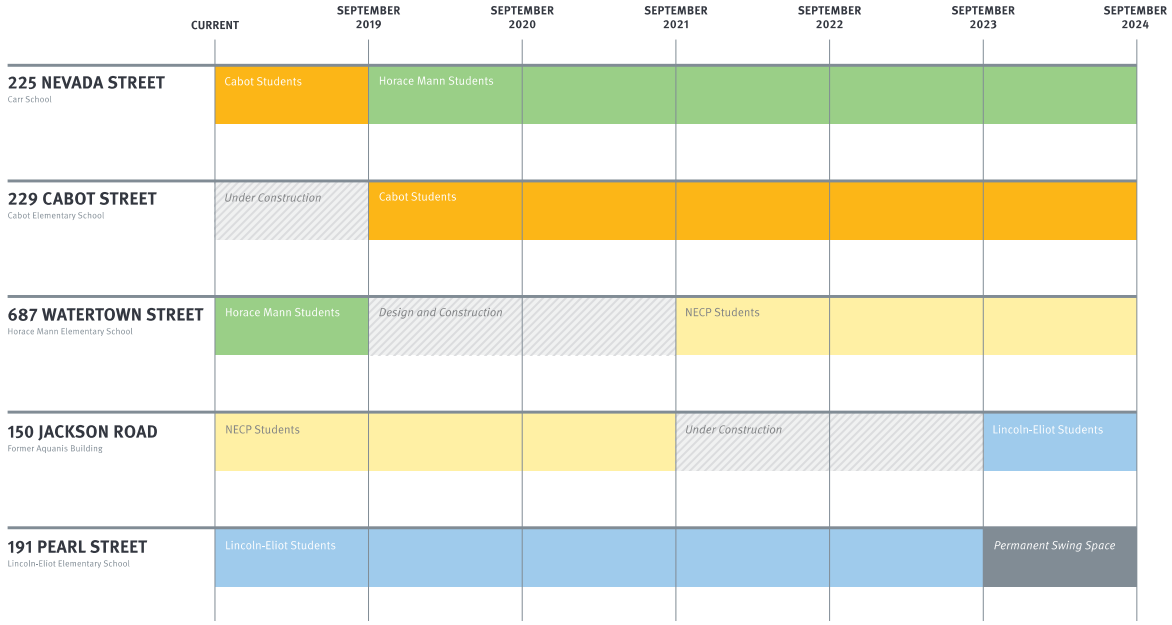
Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential disadvantages of Lincoln-Eliot and NECP located on the same site:

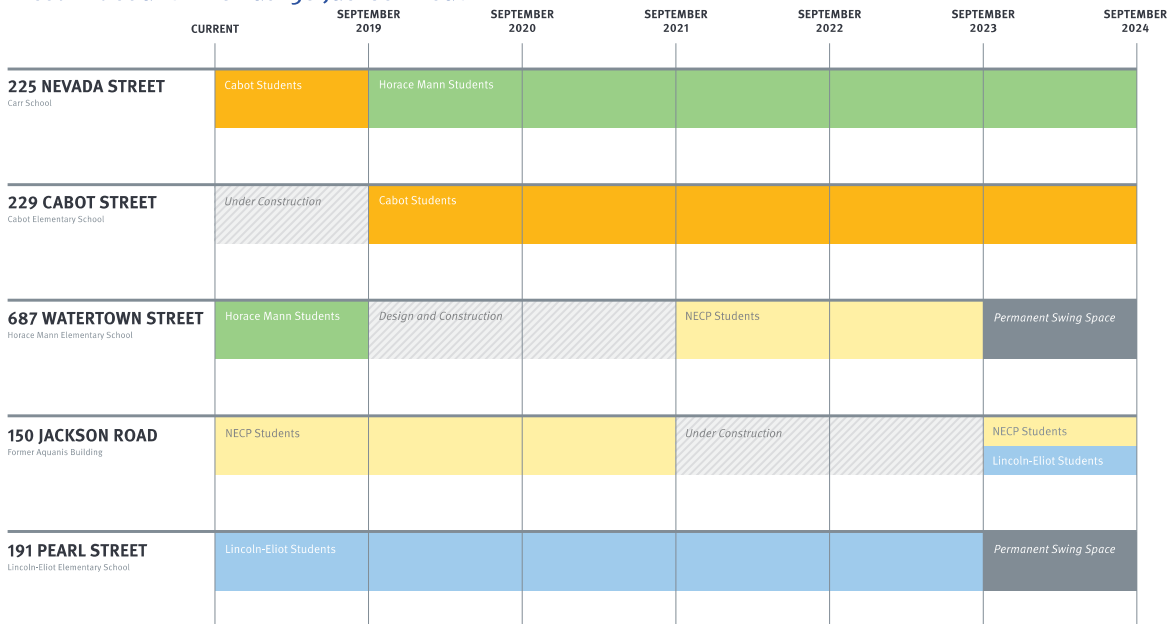
- Educational spaces should be sized for each student cohort (for example, an elementary school sized gym may be too large/loud for Pre-K)
- Minimal program overlap (for example, Pre-K students eat in the classrooms so would not benefit from a shared cafeteria)
- Minimal benefit from age group interaction as Pre-K age students benefits more from interaction with High School age students
- Need separate entrances to avoid overwhelming Pre-K students. May be difficult to co-locate front offices activities with separate entries
- Minimal staffing overlap

Sequence of Program Movement / Option 1

Lincoln-Eliot at Jackson Road, NECP at Watertown Street



Sequence of Program Movement / Option 2
Lincoln-Eliot and NECP at 150 Jackson Road



Feasibility Study: Guiding Questions for Further Investigations

- What improvements are necessary to accommodate the Lincoln-Eliot space needs at 150 Jackson Road for 465 students and 24 core classrooms?
- Should Lincoln-Eliot and NECP co-locate at Jackson Road, or separate?
- Is the use of 687 Watertown Street for NECP a temporary use or permanent location?
- What are the traffic and parking impacts to both 150 Jackson and 687 Watertown?
- What is the best use of the existing auditorium at 150 Jackson Road? Can it become a shared community resource in addition to serving the school's program needs?
- What use, if any, can be located in the former Convent portion of the building? What building and system improvements are necessary to support the re-use?
- What are projected scope, schedule, and budget for the proposed project?

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | November 14, 2018

» Discussion

NEWTON PUBLIC SCHOOLS

Hill International

ARROWSTREET

Newton Early

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | November 15, 2018

NEWTON PUBLIC SCHOOLS

Hill International

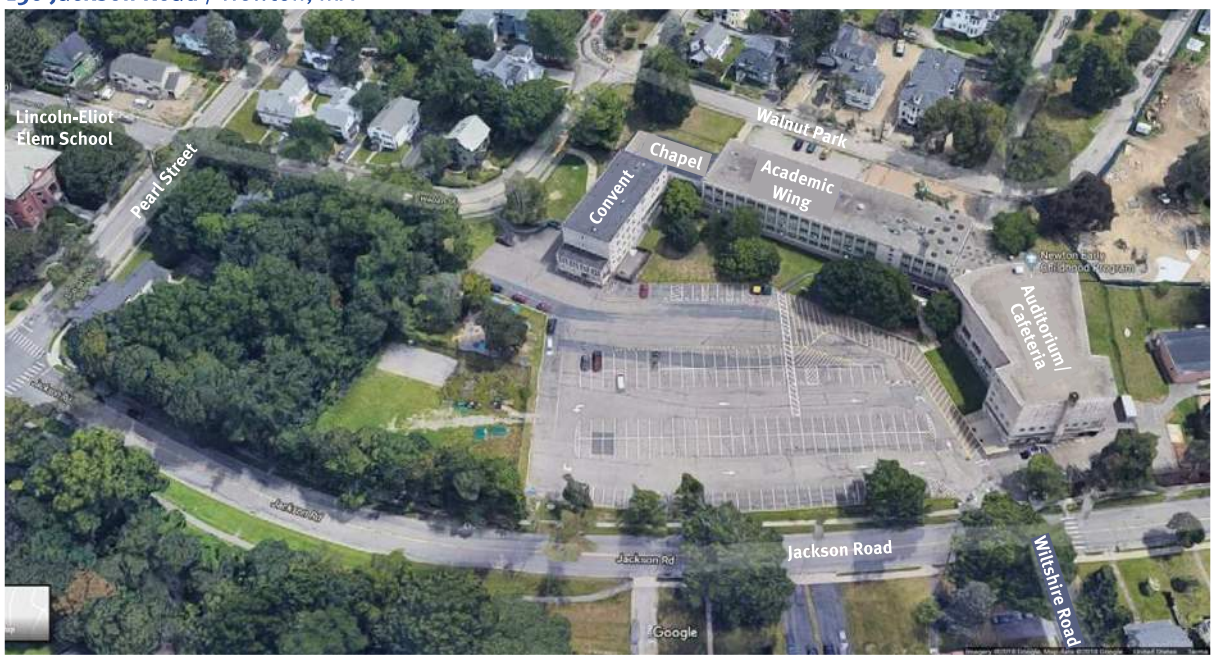
ARROWSTREET

Newton Early

Agenda

- 150 Jackson Road and 687 Watertown Street
  - Existing buildings observations
- Lincoln-Eliot Educational Programming
  - Visioning workshop summary
  - Space summary template
- NECP Educational Programming
  - Visioning workshop summary
  - Programming summary
- Next Steps/ Feasibility guiding questions

150 Jackson Road / Newton, MA



150 Jackson Road / Existing Building Conditions
Site and Civil

	150 Jackson Road
Site and Civil	
Observations	
Parking spaces	140
Existing play structures	●
Neighborhood concerns	●
Existing parking lot pavement	◎
ADA accessible site	●
Separation of vehicles and pedestrians	●
Hazardous soils	●
Wetlands buffer zone (Wetlands Protection Act)	n/a

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road / Existing Building Conditions
Architecture and Code




Architecture and Code	150 Jackson Road
Observations	
Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	●
Fire protection system	●
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend	
●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road / Existing Building Conditions
Structural and Plumbing/ Fire Protection



Structural	150 Jackson Road
Observations	
Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	n/a
Concrete spalling	n/a
Noticeable floor deflection	n/a

Plumbing and Fire Protection	
Observations	
Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	●
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	●
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

Legend	
●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road / Existing Building Conditions
Heating Ventilation, and Air Conditioning (HVAC)




	150 Jackson Road
Heating, Ventilation, and Air Conditioning (HVAC)	
Observations	
Chiller	●
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

Legend	
●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

150 Jackson Road / Electrical




	150 Jackson Road
Electrical	
Observations	
Life safety lighting	●
Backup generator	●
Fire alarm system	●
Lighting systems	●
Lightning protection system	●
Tel/ Com and IT Systems	●
Building communication system	●
Main switchboard and branch circuit panels	●
Receptacle quantity and quality (GFCI)	●

Legend	
●	Good
●	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

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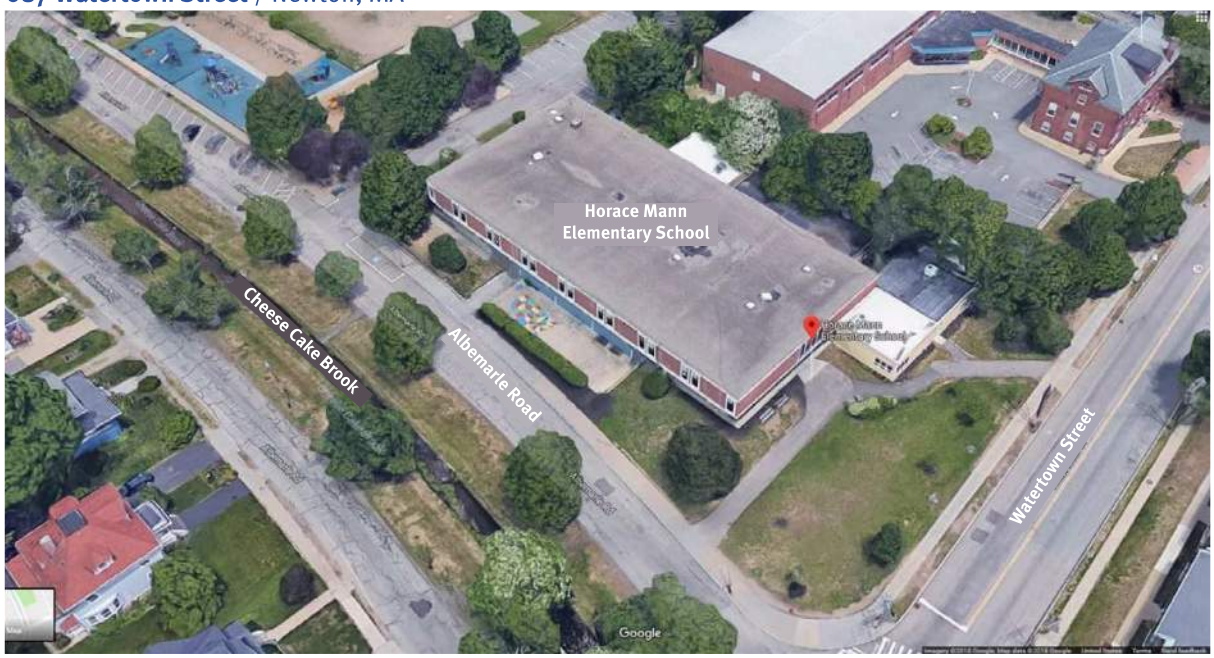

687 Watertown Street / Existing Building Conditions
Site and Civil

Site and Civil	687 Watertown Street
Observations	
Parking spaces	22 On site
Existing play structures	●
Neighborhood concerns	Unknown
Existing parking lot pavement	◎
ADA accessible site	●
Separation of vehicles and pedestrians	◎
Hazardous soils	Unknown
Wetlands buffer zone (Wetlands Protection Act)	●

Legend	
●	Good
◎	Repair/ Update
●	Replace/ Needed/ Address
n/a	Not applicable

687 Watertown Street / Existing Building Conditions
Architecture and Code

Architecture and Code	687 Watertown Street
Observations	
Exterior windows	●
Exterior masonry	●
Exterior wall insulation	Unknown
Roof condition	●
Interior finishes	◎
Fire protection system	◎
ADA accessibility throughout, including elevator upgrades	●
Bathroom handicap accessibility	●
Exit/ egress paths (Stair nosing, hand/guardrail upgrades)	●
Past water leakage	●

Legend	
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◎	Repair/ Update
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687 Watertown Street / Existing Building Conditions
Structural and Plumbing/ Fire Protection




	687 Watertown Street
Structural	
Observations	
Structural performance	●
Foundation settlement	●
Cracks in the interior and exterior masonry walls	●
Concrete spalling	●
Noticeable floor deflection	●
Plumbing and Fire Protection	
Observations	
Fire suppression system per current code	●
Dedicated fire service from site to building	●
Hot water boiler	◎
Hot/ colder water piping	●
Storm piping system	●
Waste/ vent system	●
Egress stair standpipes	n/a
Plumbing fixture quality	●
Plumbing fixture quantity/ counts/ distribution	●

687 Watertown Street / Existing Building Conditions
Heating Ventilation, and Air Conditioning (HVAC)



	687 Watertown Street
Heating, Ventilation, and Air Conditioning (HVAC)	
Observations	
Chiller	n/a
Boiler	●
HVAC equipment	●
Hot water piping and insulation	●
Exhaust ductwork system	●
Exhaust air fans	●
Pneumatic control system	●

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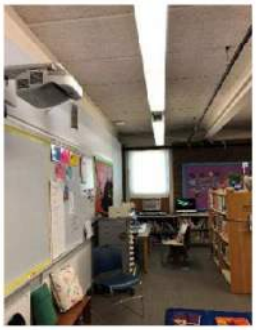
687 Watertown Street / Electrical



Electrical	687 Watertown Street
Observations	
Life safety lighting	n/a
Backup generator	●
Fire alarm system	●
Lighting systems	○
Lightning protection system	n/a
Tel/ Com and IT Systems	●
Building communication system	●
Main switchboard and branch circuit panels	○
Receptacle quantity and quality (GFCI)	●

Legend	
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Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / November 15, 2018

DATE: 11/14/18

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DRAFT REVIEWED BY D. MORRISSEY 11/13/18

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot Preliminary Design Program

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students: ROOM NFA[1]	# OF RMS	area totals	Comments	EXISTING NEWTON PUBLIC SCHOOLS — Angier 465 Students: ROOM NFA[1]	# OF RMS	area totals	Zervas 490 Students: ROOM NFA[1]	# OF RMS	area totals	Cabot 480 Students: ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES		22 + 2 (SpEd)	**20,700**				**21,472**			**23,450**			**22,690**
(List classrooms of different sizes separately)													
Pre-Kindergarten w/ toilet													
Kindergarten w/ toilet	1,200	4	4,800		1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
General Classrooms - Grade 1-5	**850**	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.	925	18	16,650	925	20	18,500	888	20	17,760
							0			0	General CR Room NFA is average		
ELL Program	300	**2**	600	Due to larger ELL population	298	1	298	150	1	150	250	1	250
SPECIAL EDUCATION			**10,775**				**5,965**			**5,500**			**6,900**
(List rooms of different sizes separately)													
Self-Contained SPED	850	**2**	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program	925	1	925	900	1	900	925	2	1,850
Self-Contained SPED - toilet			0										
Resource Room			0										
Substantially Separate Classroom			0										
Learning Centers (K-2; 3-5)	450	2	900	Currently 1 Learning Center in existing L-E	470	2	940	450	2	900	475	2	950
Breakout Rooms (small group/ individual instruction) 1/grade average, Extended Learning Areas	125	**8**	1,000	Currently 1 Small Group Instruction in existing L-E. Difference due to high needs, assume 1 shared breakout space per 2 calssrooms	121	7	845	125	6	750	125	6	750
OT/PT	475	1	475		511	1	511	450	1	450	475	1	475
Sensory Room/ additional OT/PT	450	1	450									1	
Safe Room/ Mindful Room 1/ academic floor	100	3	300		106	2	212	100	2	200	100	3	300
Speech + Language	150	2	300		298	1	298	150	2	300	250	1	250
Reading Program/ Literacy Room	850	**3**	2,550	Currently 1 Reading Program in existing L-E. Difference due to higher needs and Title 1 school	925	1	925	900	1	900	925	1	925
Inclusion Facilitators (office for 6 adults; 150SF per person)	450	**2**	900	Difference due to higher needs and Title 1 school	238	1	238	150	1	150	300	1	300
Literacy Specialist (Office + teaching area for 6 students)	250	**3**	750	Difference due to higher needs and Title 1 school	176	1	176	125	1	125	250	1	250
Math Coach	250	**3**	750	Difference due to higher needs and Title 1 school	161	1	161	125	1	125	150	1	150
Team Specialist + IEP Conf Room (12 adults)	400	1	400		428	1	428	400	1	400	400	1	400
Psychologist (Office, testing, therapy, storage)	150	1	150		155	1	155	150	1	150	150	1	150
Social Worker (Office, testing, conferences)	150	1	150		151	1	151	150	1	150	150	1	150
													0
ART & MUSIC			**2,650**				**2,608**			**2,725**			**2,575**
Art Classroom - 25 seats	1,000	1	1,000	1 Art Classroom currently in existing L-E	1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150		178	1	178	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1 Music Classroom currently in existing L-E	1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble (Groups 4-10 students)	150	2	300		162	1	162	150	2	300	150	1	150
Music Practice / Ensemble (Groups 4-10 students)					100	1	100	75	1	75	75	1	75
HEALTH & PHYSICAL EDUCATION			**6,300**				**6,105**			**6,300**			**6,300**
Gymnasium	6,000	1	6,000		5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
Gym Storeroom	175	1	175		176	1	176	200	1	200	175	1	175
Health Instructor's Office w/ Shower & Toilet	125	1	125		120	1	120	100	1	100	125	1	125

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MEDIA CENTER			**2,800**				**2,770**			**2,875**			**2,830**
Media Center / Reading Room	2,800	1	2,800		2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
DINING & FOOD SERVICE			**6,960**				**6,321**			**6,663**			**6,960**
Cafeteria / Dining	3,400	1	3,400		3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
Stage	1,000	1	1,000		950	1	950	1,000	1	1,000	1,000	1	1,000
Chair / Table / Equipment Storage	360	1	360		408	1	408	363	1	363	360	1	360
Kitchen	1,700	1	1,700		1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
Staff Lunch Room (1/3 of staff = 60 staff/3)	250	2	500		234	2	468	250	2	500	250	2	500
MEDICAL			**510**				**569**			**510**			**510**
Medical Suite Toilet	60	1	60		73	1	73	60	1	60	60	1	60
Nurses' Office / Waiting Room	250	1	250		306	1	306	250	1	250	250	1	250
Examination Room / Resting	100	2	200		95	2	190	100	2	200	100	2	200
ADMINISTRATION & GUIDANCE			**3,225**				**2,305**			**2,515**			**2,595**
General Office / Waiting Room / Toilet	700	1	700		750	1	750	680	1	680	650	1	650
Teachers' Mail and Time Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisory/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	**1**	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	**1**	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	**1**	1,500	100 students at 15 SF per student									

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / November 15, 2018

Newton Early Childhood Program/ Educational Planning Workshop Summary

- Full day session with NECP team
- Design different learning modalities, teaching styles, and program changes
- Design for inclusiveness and spaces for specialists adjacent or within classrooms
- Create shared specialist offices to foster collaboration and sharing between teachers
- Improve pick-up/ drop off and entry to provide better access and security for families and caregivers
- Reflect the culture of the community

Newton Early Childhood Program/ Programming and Enrollment

- Enrollment = 200 - 300 students / Pre-Kindergarten

  10 - 15 students added per month
- 16 students maximum per integrated classroom
- 9 students maximum per STRIDE classroom
- 14 - 18 classrooms total

	Integrated Classroom	STRIDE Classroom	Total
Number of Students	176 - 288	18	+/- 300
Maximum Number of students/CR	16	9	
Number of Classrooms	15 - 16	2 -3	14 - 18

Newton Early Childhood Program/ Program Summary

Program Needs:
(based on NECP Ed Program August 2018):

- Maintain classroom student to teacher ratios
- Small group OT/PT and Speech spaces
- Dedicated spaces for screening and testing
- Workspace for OT/PT and Speech Therapists
- Administration and Guidance with several multi-sized conference rooms and specialist spaces
- Gross motor space

Program Wishes:

- In-classroom toilets
- Dedicated PE space
- All school/ large group gathering multi-purpose space/ indoor play area
- Lactation room(s)

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential benefits of Lincoln-Eliot and NECP located on the same site:

- Shared learning opportunities
- Collaboration between Pre-K and Kindergarten teachers to facilitate student transition
- Shared administrative support
- Shared resources, such as medical suite
- Some families may benefit when Pre-K students continue to Lincoln- Eliot Elementary School

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

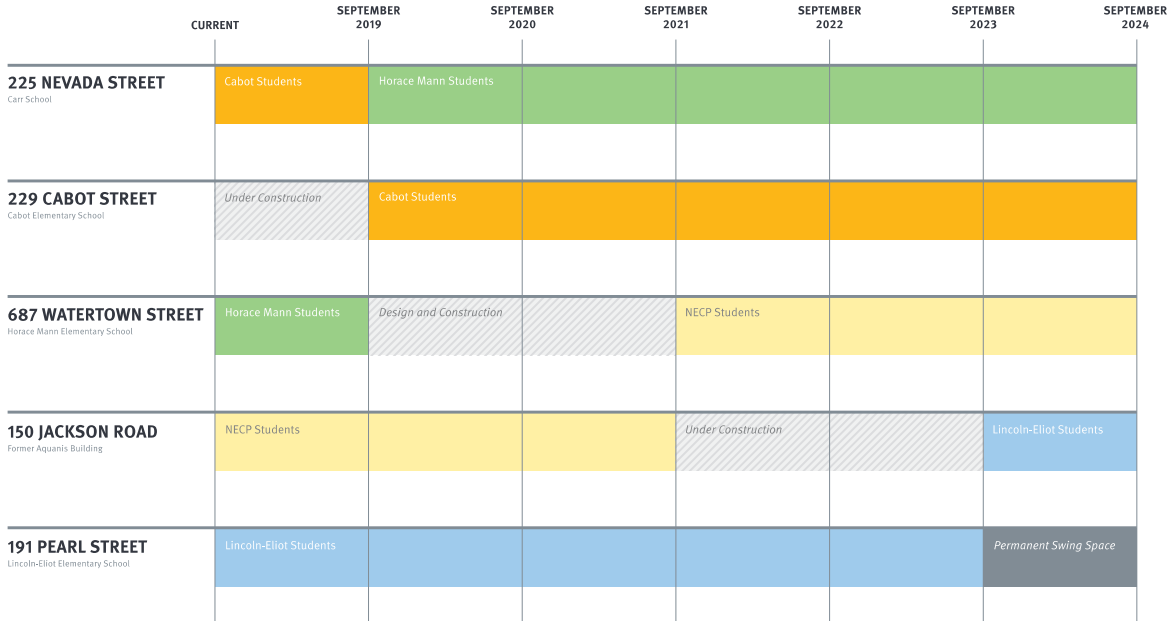
Potential disadvantages of Lincoln-Eliot and NECP located on the same site:

- Educational spaces should be sized for each student cohort (for example, an elementary school sized gym may be too large/loud for Pre-K)
- Minimal program overlap (for example, Pre-K students eat in the classrooms so would not benefit from a shared cafeteria)
- Minimal benefit from age group interaction as Pre-K age students benefits more from interaction with High School age students
- Need separate entrances to avoid overwhelming Pre-K students. May be difficult to co-locate front offices activities with separate entries
- Minimal staffing overlap

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / November 15, 2018

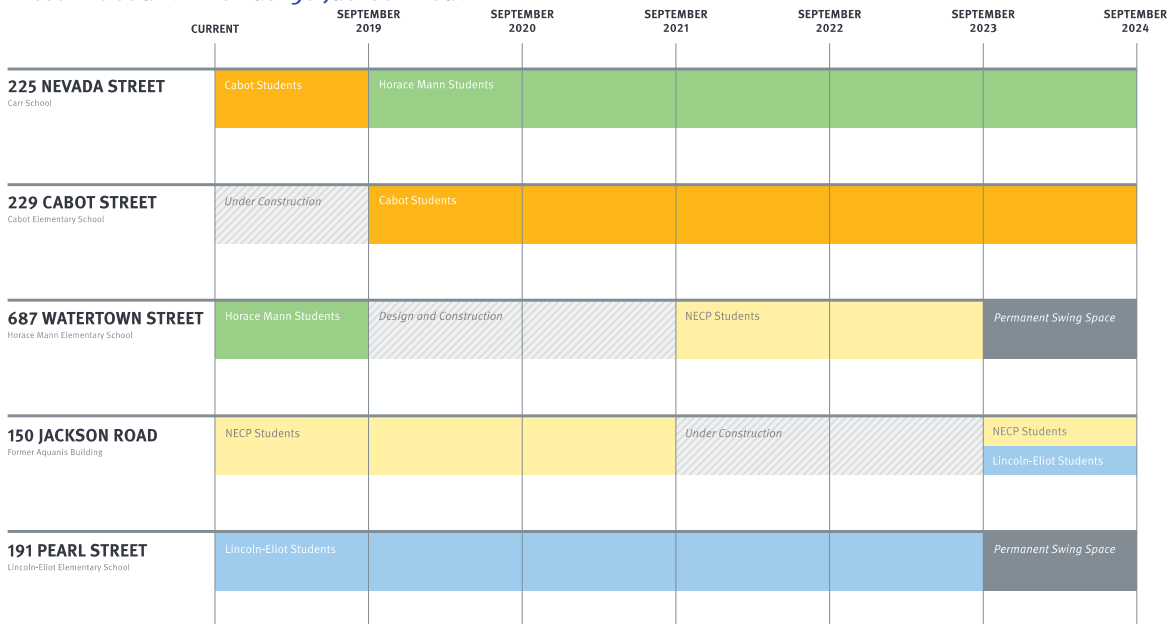
Sequence of Program Movement / Option 1

Lincoln-Eliot at Jackson Road, NECP at Watertown Street



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / November 15, 2018

Sequence of Program Movement / Option 2
Lincoln-Eliot and NECP at 150 Jackson Road



Feasibility Study: Guiding Questions for Further Investigations

- What improvements are necessary to accommodate the Lincoln-Eliot space needs at 150 Jackson Road for 465 students and 24 core classrooms?
- Should Lincoln-Eliot and NECP co-locate at Jackson Road, or separate?
- Is the use of 687 Watertown Street for NECP a temporary use or permanent location?
- What are the traffic and parking impacts to both 150 Jackson and 687 Watertown?
- What is the best use of the existing auditorium at 150 Jackson Road? Can it become a shared community resource in addition to serving the school's program needs?
- What use, if any, can be located in the former Convent portion of the building? What building and system improvements are necessary to support the re-use?
- What are projected scope, schedule, and budget for the proposed project?

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | November 15, 2018

» Discussion

NEWTON PUBLIC SCHOOLS

Hill International

ARROWSTREET

Newton Early

Lincoln-Eliot Elementary School and Newton Early Childhood Program

City Council Presentation | November 26, 2018

NEWTON PUBLIC SCHOOLS

Hill International

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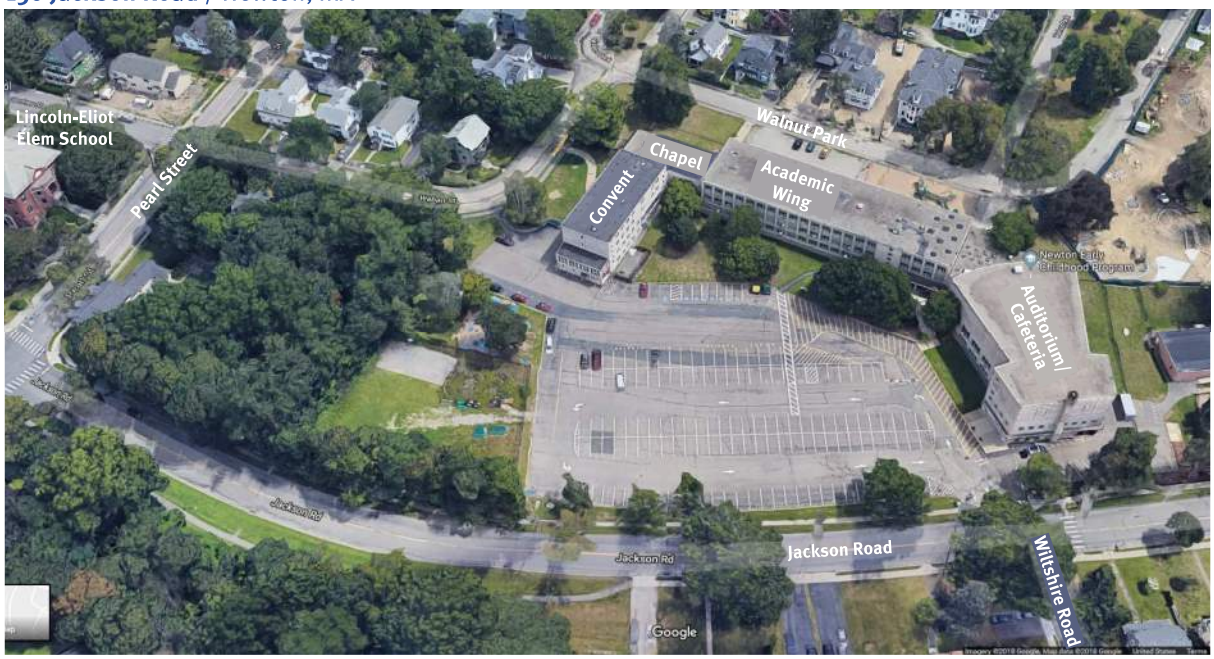
Newton Early

Agenda

- 150 Jackson Road existing building and site observations
- Lincoln-Eliot Educational Programming
  - Visioning workshop summary
  - Space summary template
- NECP Educational Programming
  - Visioning workshop summary
  - Programming summary
- Benefits and disadvantages of co-locating Lincoln-Eliot and NECP programs
- 687 Watertown Street existing building and site observations
- Sequence of program movement
- Feasibility guiding questions and next steps

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

150 Jackson Road / Newton, MA



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

150 Jackson Road / Initial Building Observations

- Good educational spaces
- Newer windows
- Gymnasium needed for Elementary use
- Accessible upgrades required
- System upgrades or replacement required
- Finish upgrades needed

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

150 Jackson Road / Site Opportunities and Challenges

- Large site
- Front entrance presence
- Play spaces and activity areas
- Traffic and parking
- Neighborhood concerns

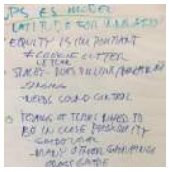
150 Jackson Road / Building Observation Summary

- *Site/ Civil* - Anticipate overall improvements to support the project
- *Exterior* - Generally in good condition; miscellaneous repairs as required
- *Interiors* - Renovation to support the Educational program, upgrade finishes, add gymnasium, and address ADA accessibility
- *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- *Fire Protection* - Incorporate needed fire protection/ suppression system
- *HVAC* - System is functional, but has reached its life expectancy and should be replaced to improve building performance, thermal comfort, energy efficiency, and indoor air quality
- *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT needs upgrade/ replacement.

Lincoln-Eliot / Educational Planning Workshop Summary





- Half day session with Lincoln-Eliot team
- Design for flexibility and inclusiveness
- Develop small learning communities, learning spaces arranged in clusters
- Maximize teacher planning space to foster collaboration, interdisciplinary teaching
- Maximize circulation spaces that offer opportunities for breakout spaces and group learning
- Improve pick-up/ drop off and entry to provide better access and security for families and caregivers

Lincoln-Eliot / Programming and Enrollment

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- 24 Classrooms (22 Typical + 2 Special Education)

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Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisory/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	**1**	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	**1**	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	**1**	1,500	100 students at 15 SF per student									

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Newton Early Childhood Program/ Educational Planning Workshop Summary

- Full day session with NECP team
- Design different learning modalities, teaching styles, and program changes
- Design for inclusiveness and spaces for specialists adjacent or within classrooms
- Create shared specialist offices to foster collaboration and sharing between teachers
- Improve pick-up/ drop off and entry to provide better access and security for families and caregivers
- Reflect the culture of the community

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Newton Early Childhood Program/ Programming and Enrollment

- Enrollment = 305 students maximum/ Pre-Kindergarten (as of June 2018)
  - 104 students with special needs
  - 90 students who are typically developing
  - 111 students receiving related services
- 16 students maximum per integrated classroom
- 9 students maximum per STRIDE classroom
- 14 - 17 classrooms total

	Integrated Classroom	STRIDE Classroom	Total
Number of Enrolled Students	192 - 224	18 - 27	210 - 251
Maximum Number of students/CR	16	9	
Number of Classrooms	12 - 14	2 -3	14 - 17

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Newton Early Childhood Program/ Program Summary

Program Needs:
(based on NECP Ed Program August 2018):

- Maintain classroom student to teacher ratios
- Small group OT/PT and Speech spaces
- Dedicated spaces for screening and testing
- Workspace for OT/PT and Speech Therapists
- Administration and Guidance with several multi-sized conference rooms and specialist spaces
- Gross motor space

Program Wishes:

- Toilet rooms directly adjacent to classrooms
- Dedicated PE space
- All school/ large group gathering multi-purpose space/ indoor play area

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential *benefits* of Lincoln-Eliot and NECP located on the same site:

- Shared learning opportunities
- Collaboration between Pre-K and Kindergarten teachers to facilitate student transition
- Shared administrative support, however will not reduce key personnel such as nurses guidance
- Some families may benefit when Pre-K students continue to Lincoln-Eliot Elementary School, however not all NECP students are in the L-E school district

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential *disadvantages* of Lincoln-Eliot and NECP located on the same site:

- Educational spaces should be sized for each student cohort (for example, an elementary school sized gym may be too large/loud for Pre-K)
- Minimal program overlap (for example, Pre-K students eat in the classrooms so would not benefit from a shared cafeteria)
- Minimal benefit from age group interaction as Pre-K age students benefits more from interaction with High School age students
- Need separate entrances to avoid overwhelming Pre-K students. May be difficult to co-locate front offices activities with separate entries
- Minimal staffing overlap

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Shared NECP and Lincoln-Eliot Site / Programmatic Synergies

Potential *constraints* of Lincoln-Eliot and NECP located on the same site:

- Significant traffic for pick-up and drop-off times
  - Need to separate pick-up/ drop-off activities due to age and program differences
  - Need to separate yellow bus and private vehicles
- Significant parking demand
  - High staff ratio for NECP
- Goal to target separate entrances for Lincoln-Eliot and NECP students due to age and size concerns of each population
- Additional building area to support both programs will limit site development opportunities for traffic/ parking
- Potential to increase project cost beyond budget

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

687 Watertown Street / Newton, MA

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

687 Watertown Street / Initial Building Observations

- Large classroom spaces
- Accessible upgrades required
- System upgrades or replacement required
- Finish upgrades needed
- Aged modular classrooms

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

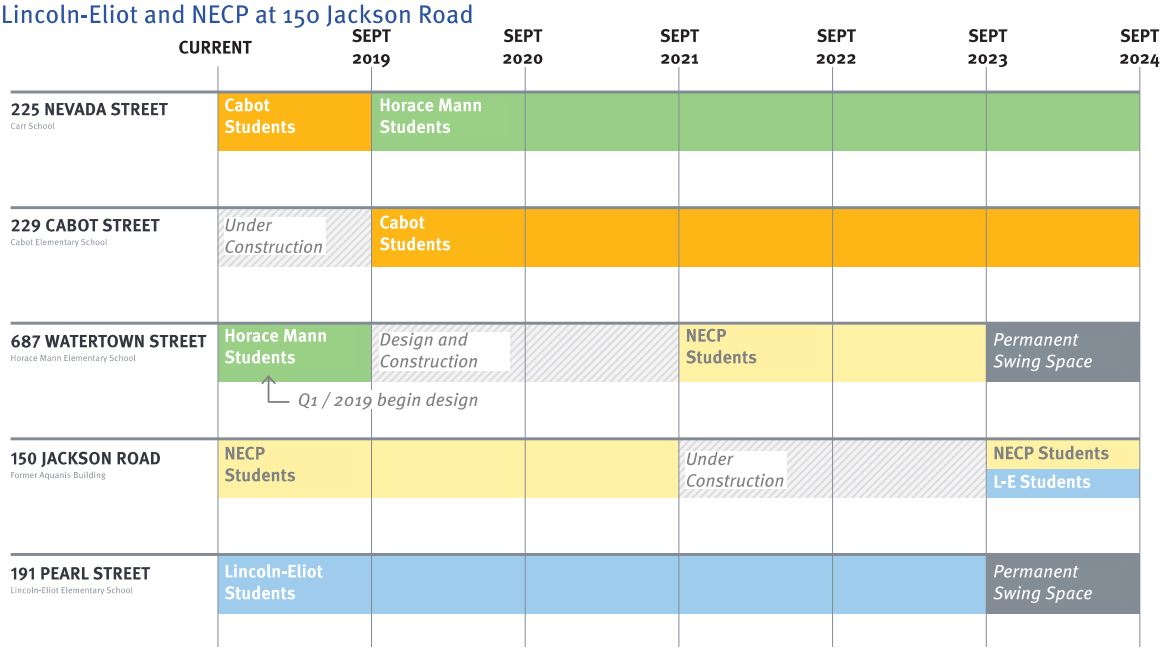
687 Watertown Street / Site Opportunities and Challenges

- Small site
- Traffic, parking and pedestrian circulation
- Drop-off and pick-up
- Front entrance presence
- Play spaces and activity areas

687 Watertown Street / Building Observation Summary

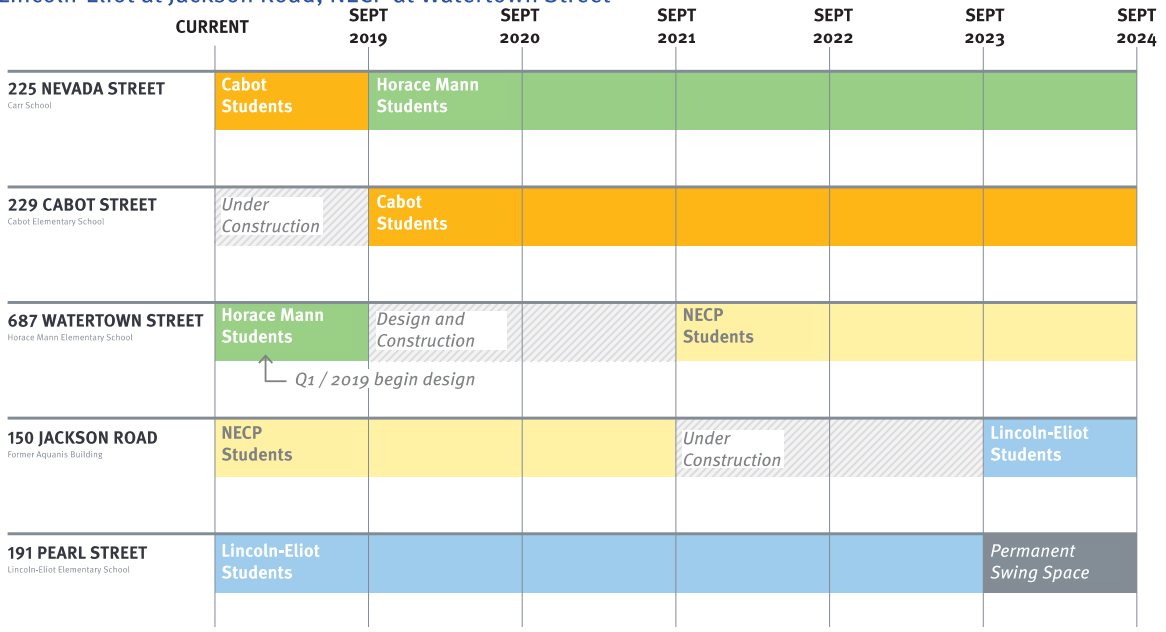
- *Site/ Civil* - Anticipate overall improvements to support the project and anticipated programming
- *Exterior* - Structurally performing adequately with some noticeable floor deflection and spalling concrete
- *Interiors* - Renovation to upgrade finishes, support the Educational program, and address ADA accessibility, including adding an elevator
- *Plumbing* - Replace plumbing system and address bathroom fixture quality, quantity, and distribution
- *HVAC* - System is functional, but has reached its useful life expectancy and should be replaced to improve building performance, energy efficiency, and indoor air quality
- *Electrical* - System is functional, but needs to be upgraded to accommodate additional electric loads. Tel/com and IT systems need upgrade/ replacement.

Sequence of Program Movement / Co-located option
Lincoln-Eliot and NECP at 150 Jackson Road



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Sequence of Program Movement / Split program option
Lincoln-Eliot at Jackson Road, NECP at Watertown Street



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Feasibility Study: Guiding Questions for Further Investigations

- What improvements are necessary to accommodate the Lincoln-Eliot space needs at 150 Jackson Road for 465 students and 24 core classrooms?
- Should Lincoln-Eliot and NECP co-locate at Jackson Road, or separate?
- Is the use of 687 Watertown Street for NECP a temporary use or permanent location?
- What are the traffic and parking impacts to both 150 Jackson and 687 Watertown?
- What is the best use of the existing auditorium at 150 Jackson Road? Can it become a shared community resource in addition to serving the school's program needs?
- What use, if any, can be located in the former Convent portion of the building? What building and system improvements are necessary to support the re-use?
- What are projected scope and schedule for the proposed project?

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA CITY COUNCIL PRESENTATION / November 26, 2018

Lincoln-Eliot Elementary School and Newton Early Childhood Program
City Council Presentation | November 26, 2018

- Discussion
- For further information:

www.newtonma.gov/gov/building/capital_projects

www.lincolneliot-necp-projects.com

NEWTON PUBLIC SCHOOLS Hill International ARROWSTREET

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | November 28, 2018

NEWTON PUBLIC SCHOOLS

Hill International

ARROWSTREET

Newton Early

Agenda

- NECP Educational Programming
  - Program space summary
- Lincoln-Eliot Educational Programming
  - Space summary review
- Site Selection Criteria

Newton Early Childhood Program/ Historic Program Enrollment

» Capacity = 305 students maximum/ Pre - Kindergarten (as of March 1, 2018)
104 students with special needs
90 students who are typically developing
111 students receiving related services

NECP Enrollment Trend by school year (as of March 1st)

Service Type	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	**17-18**
Special Needs	134	119	125	100	123	127	113	107	95	111	**104**
Typically Developing	62	74	89	83	88	89	81	66	75	67	**90**
Related Services	42	42	44	60	40	32	43	41	101	107	**111**
Total	238	235	258	243	251	248	237	214	271	285	**305**

Newton Early Childhood Program/ Current Program Enrollment

	Morning Integrated Classroom 9am - 12pm	Extended Day Integrated Classroom with ABA* 8:30am - 1:30pm	STRIDE* Classroom 8:30am - 12pm/2pm/ 2:30	Related Services 1-hour sessions	**Total as of Nov. 1, 2018**
Students currently enrolled	161 students (75 special needs + 86 typically developing)			69	**230**
Maximum number of students per classroom	16	16	9	4 - 8	
Number of classrooms	9	2	2		**13**

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate
ABA = Applied Behavior Analysis

Newton Early Childhood Program/ Proposed Future Program

	Morning Integrated Classroom and Extended Day Integrated Classroom with ABA*	STRIDE* Classroom	Related Services	Program Expansion Total
Student capacity	192 - 224	18 - 27	100 - 125	310 - 376
Maximum number of students per classroom	16	9	4 - 8	
Number of classrooms	12 - 14	2 - 3		14 - 17

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate
ABA = Applied Behavior Analysis

Newton Early Childhood Program/ Program Summary

Program Needs:
(based on NECP Ed Program August 2018):

- Maintain classroom student to teacher ratios
- Small group OT/PT and Speech spaces
- Dedicated spaces for screening and testing
- Workspace for OT/PT and Speech Therapists
- Administration and Guidance with several multi-sized conference rooms and specialist spaces
- Gross motor space

Program Improvements:

- Toilet rooms directly adjacent to classrooms
- Dedicated PE space
- All school/ large group gathering multi-purpose space/ indoor play area

Newton Early Childhood Program/ State Regulations

Approximate existing conditions at 687 Watertown Street
(*actual SF to be verified)

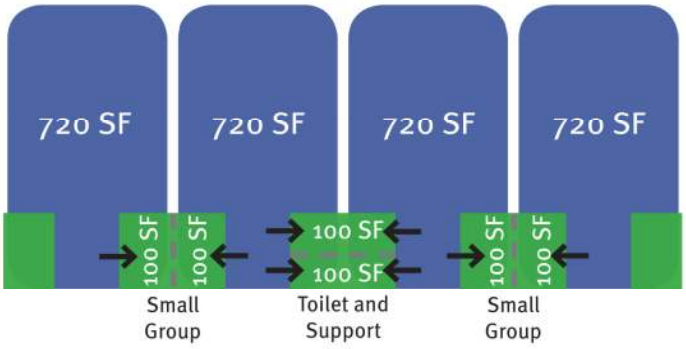
ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Newton Early Childhood Program/ State Regulations

606 CMR 7.00: Standards for the Licensure or Approval of Small Group and School Age and Large Group and School Age Child Care Programs

7.07 Physical Facility Requirements
Space: The licensee must provide a minimum of 35 square feet (sf) of **activity space** per child.

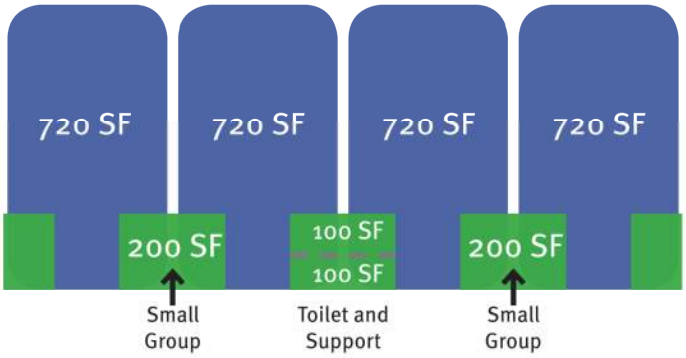
16 students x 45 square feet (conservative) = 720 SF per classroom



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Newton Early Childhood Program/ State Regulations

Flexibility of shared spaces for afternoon use



Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED

11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**0**		**17**	**12,760**	
(List classrooms of different sizes separately)							
Integrated Pre-Kindergarten w/ toilet		9		720	13	9,360	Room SF for 16 students at 45 SF per student (720 SF). Toilets adjacent to and shared by classroom pairs, accounted in Grossing factor (100SF per classroom pair)
Integrated Pre-Kindergarten w/ toilet		2		850	2	1,700	Medically fragile
STRIDE Pre-Kindergarten w/ toilet		2		850	2	1,700	STRIDE
SPECIAL EDUCATION			**0**			**6,450**	
(List rooms of different sizes separately)							
Applied Behavior Analysis (ABA) Classrooms		2		425	2	850	Used throughout the day. Adjacent to each other, near safe space
Safe Space/ Quiet/ Mindful Room		2		100	2	200	One per classroom floor
Small Group/ 1:1 support/ pull out spaces (per 2 CR)		7		200	9	1,800	For morning use; dedicated classroom pull out spaces adjacent to classroom pairs. For afternoon use; small group support space in afternoon. Also located on ground level for morning use.
PT Room		1		1,000	1	1,000	
OT Room/ Motor Skills Room		1		1,000	1	1,000	
Team Specialists		1		200	1	200	Individual office with separate conference table for 6, adjacent to director
Therapist Office (OT/ PT/ Speech)		1.5 CR		50	16	800	16 therapists in one large space at 50 SF per person
Speech and Language Testing				100	3	300	
OT Testing Room				100	1	100	
Psychologist (office + testing +1 student)		1		150	1	150	
Social Worker		1		50	1	50	

Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED
11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
HEALTH & PHYSICAL EDUCATION			**0**			**1,950**	
Storeroom				250	1	250	
PE Space/Indoor/ Multipurpose		1		1,700	1	1,700	Dedicated PE Space
DINING & FOOD SERVICE			**0**			**400**	
Staff lunch room		1		400	1	400	
MEDICAL			**0**			**610**	
Medical Suite Toilet				60	1	60	
Nurses' Office / Waiting Room		1		250	1	250	
Examination Room / Resting				100	2	200	
Lactation Room				100	1	100	For staff use
ADMINISTRATION & GUIDANCE			**0**			**2,400**	
Director's Office		1		200	1	200	
Reception / Waiting Room				150	1	150	Toilet with changing table, Lactation Room for community use
Front Office (for parent walk-in)		1		500	1	500	
Conference rooms		2		250	1	250	
Duplicating Room/ Storage				100	2	200	One per floor, separate from the records, but adjacent
Records Room / Teachers' Mail and Time Room		1		200	1	200	Needs to be separate from the main office. Table for layout space
IEP Conference Room (up to 15 people)		1		450	2	900	

Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED
11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CUSTODIAL & MAINTENANCE			**0**			**1,150**	
Custodian's Office		1		150	1	150	
Custodian's Workshop/ Storeroom for materials		1		500	1	500	
Custodian's Storage				100	2	200	slop sink and storage per floor for machine
Recycling Room / Trash				100	1	100	Not currently in existing program; may not be needed
Network / Telecom Room				200	1	200	
Total Building Net Floor Area (NFA)						**25,720**	
Proposed Student Capacity / Enrollment						310 - 375	Enrollment increases throughout the year
Total Building Gross Floor Area (GFA)						**38,580**	
Grossing factor (GFA/NFA)						**1.50**	
Extended Day/ After School			**0**			**4,000**	
Dedicated Extended Day classrooms				1,000	4	4,000	Potentially 3 - 4 Extended Day Classrooms
Potential Extended Day Capacity						60 - 80	
Other *(specify)*							

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Lincoln-Eliot / Programming and Enrollment

- Enrollment = 465 Students / Grades K - 5
- 20 - 23 Students per classroom
- 24 Classrooms (22 Typical + 2 Special Education)

	K	1	2	3	4	5	Total
Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

Lincoln-Eliot
Preliminary Design Program

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students				EXISTING NEWTON PUBLIC SCHOOLS								
					Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
	ROOM NFA[1]	# OF RMS	area totals	Comments	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES		22 + 2 (SpEd)	20,700				21,472			23,450			22,690
(List classrooms of different sizes separately)													
Pre-Kindergarten w/ toilet													
Kindergarten w/ toilet	1,200	4	4,800		1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
General Classrooms - Grade 1-5	850	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.	925	18	16,650	925	20	18,500	888	20	17,760
							0			0	General CR Room NFA is average		
ELL Program	300	2	600	Due to larger ELL population	298	1	298	150	1	150	250	1	250
SPECIAL EDUCATION			10,775				5,965			5,500			6,900
(List rooms of different sizes separately)													
Self-Contained SPED	850	2	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program	925	1	925	900	1	900	925	2	1,850
Self-Contained SPED - toilet			0										
Resource Room			0										
Substantially Separate Classroom			0										
Learning Centers (K-2; 3-5)	450	2	900	Currently 1 Learning Center in existing L-E	470	2	940	450	2	900	475	2	950
Breakout Rooms (small group/ individual instruction) 1/grade average. Extended Learning Areas	125	8	1,000	Currently 1 Small Group Instruction in existing L-E. Difference due to high needs, assume 1 shared breakout space per 2 calssrooms	121	7	845	125	6	750	125	6	750
OT/PT	475	1	475		511	1	511	450	1	450	475	1	475
Sensory Room/ additional OT/PT	450	1	450									1	
Safe Room/ Mindful Room 1/ academic floor	100	3	300		106	2	212	100	2	200	100	3	300
Speech + Language	150	2	300		298	1	298	150	2	300	250	1	250
Reading Program/ Literacy Room	850	3	2,550	Currently 1 Reading Program in existing L-E. Difference due to higher needs and Title 1 school	925	1	925	900	1	900	925	1	925
Inclusion Facilitators (office for 6 adults; 150SF per person)	450	2	900	Difference due to higher needs and Title 1 school	238	1	238	150	1	150	300	1	300
Literacy Specialist (Office + teaching area for 6 students)	250	3	750	Difference due to higher needs and Title 1 school	176	1	176	125	1	125	250	1	250
Math Coach	250	3	750	Difference due to higher needs and Title 1 school	161	1	161	125	1	125	150	1	150
Team Specialist + IEP Conf Room (12 adults)	400	1	400		428	1	428	400	1	400	400	1	400
Psychologist (Office, testing, therapy, storage)	150	1	150		155	1	155	150	1	150	150	1	150
Social Worker (Office, testing, conferences)	150	1	150		151	1	151	150	1	150	150	1	150
													0
ART & MUSIC			2,650				2,608			2,725			2,575
Art Classroom - 25 seats	1,000	1	1,000	1 Art Classroom currently in existing L-E	1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150		178	1	178	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1 Music Classroom currently in existing L-E	1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble (Groups 4-10 students)	150	2	300		162	1	162	150	2	300	150	1	150
Music Practice / Ensemble (Groups 4-10 students)					100	1	100	75	1	75	75	1	75
HEALTH & PHYSICAL EDUCATION			6,300				6,105			6,300			6,300
Gymnasium	6,000	1	6,000		5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
Gym Storeroom	175	1	175		176	1	176	200	1	200	175	1	175
Health Instructor's Office w/ Shower & Toilet	125	1	125		120	1	120	100	1	100	125	1	125

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot Preliminary Design Program

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students: ROOM NFA[1]	# OF RMS	area totals	Comments	EXISTING NEWTON PUBLIC SCHOOLS — Angier 465 Students: ROOM NFA[1]	# OF RMS	area totals	Zervas 490 Students: ROOM NFA[1]	# OF RMS	area totals	Cabot 480 Students: ROOM NFA[1]	# OF RMS	area totals
MEDIA CENTER			**2,800**				**2,770**			**2,875**			**2,830**
Media Center / Reading Room	2,800	1	2,800		2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
DINING & FOOD SERVICE			**6,960**				**6,321**			**6,663**			**6,960**
Cafeteria / Dining	3,400	1	3,400		3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
Stage	1,000	1	1,000		950	1	950	1,000	1	1,000	1,000	1	1,000
Chair / Table / Equipment Storage	360	1	360		408	1	408	363	1	363	360	1	360
Kitchen	1,700	1	1,700		1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
Staff Lunch Room (1/3 of staff = 60 staff/3)	250	2	500		234	2	468	250	2	500	250	2	500
MEDICAL			**510**				**569**			**510**			**510**
Medical Suite Toilet	60	1	60		73	1	73	60	1	60	60	1	60
Nurses' Office / Waiting Room	250	1	250		306	1	306	250	1	250	250	1	250
Examination Room / Resting	100	2	200		95	2	190	100	2	200	100	2	200
ADMINISTRATION & GUIDANCE			**3,225**				**2,305**			**2,515**			**2,595**
General Office / Waiting Room / Toilet	700	1	700		750	1	750	680	1	680	650	1	650
Teachers' Mail and Time Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisory/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	1	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	1	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	1	1,500	100 students at 15 SF per student									

Site Criteria Evaluation Matrix / Potential Site Alternatives

» Lincoln - Eliot Program

Potential Alternatives		
1	2	3
Existing program to remain at 191 Pearl Street	Relocate program to 150 Jackson Rd	Relocate program to alternate unidentified site

» NECP Program

Potential Alternatives		
1	2	3
Existing program to remain at 150 Jackson Rd	Relocate program to 687 Watertown Street (existing Horace Mann Elementary School)	Relocate program to alternate unidentified site

» Co-located Lincoln - Eliot Program and NECP Program

Potential Alternatives		
1	2	3
Existing programs to remain at 150 Jackson Rd (NECP) and 191 Pearl St (L-E)	Co-locate programs to 150 Jackson Rd	Relocate program to alternate unidentified site

*Multiple sites are anticipated to be evaluated, similar to previous school projects

Site Criteria Matrix / Evaluation

● Favorable ◉ Neutral ○ Unfavorable Costs: 0, $, $$, $$$

		1	2	3
General, Building and Site Facts				
1	Student enrollment population in K- 5 (465 Students/ 24 Classrooms)			
2	Student enrollment population in NECP/ Pre-K (310-375 Students/ 14-17 CRs)			
3	Estimated Gross Square Feet			
4	Size of site (acres)			
5	Disruptions to school and neighbors during construction			
6				
Cost and Schedule				
1	Relative capital cost			
2	Requires phased construction			
3	Impact to project schedule			
4	Requires swing space / modular classrooms			
5	Maintains project approvals schedule			
6				

*Criteria may be added or revised as needed based on the actual sites analyzed

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Site Criteria Matrix / Evaluation

● Favorable ◉ Neutral ○ Unfavorable Costs: 0, $, $$, $$$

		1	2	3
Educational				
1	Meets educational program for all students + design enrollment			
2	Provides flexibility for future growth			
3	Optimizes configuration and adjacency of teaching spaces			
4				
Community				
1	Provides accessibility to community used space			
2	Accommodates community program needs			
3	Accommodates after school program			
4	Minimize long term impacts to the community			
5				
Building				
1	Allows efficient attainment of Newton Sustainability Guidelines			
2	Optimizes use of natural light and daylighting			
3	Optimizes connection of interior & exterior spaces; integration w/ site			
4	Provides operable windows and indoor air quality for teaching/learning			
5	Meets ADA requirements efficiently			

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Site Criteria Matrix / Evaluation

● Favorable ◉ Neutral ○ Unfavorable Costs: 0, $, $$, $$$

		1	2	3
Site				
1	Maximizes efficient use of site			
2	Provides safe pedestrian circulation and access, promotes walk-ability			
3	Optimizes outdoor program space and green space/ Playground			
4	Optimizes safety and efficiency of on site drop-off/pick up			
5	Separates bus, van, and automobile circulation			
6	Provides sufficient parking for teachers, staff + visitors			
7	Minimizes off-site traffic impact			
8	Potential wetlands			
9	Environmental conditions			
10	Tree removal			
Additional Criteria				
1				
2				
3				
4				
5				

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / November 28, 2018

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | November 28, 2018

» Discussion

» For further information:

www.newtonma.gov/gov/building/capital_projects

www.lincolneliot-necp-projects.com

NEWTON PUBLIC SCHOOLS Hill International ARROWSTREET

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | December 10, 2018

NEWTON PUBLIC SCHOOLS

Hill International

ARROWSTREET

Newton Early

Agenda

- Lincoln - Eliot Educational Programming
  - Space summary review
- NECP Educational Programming
  - Space summary review

Lincoln-Eliot / Programming and Enrollment

- Enrollment = 465 Students / Grades K - 5
- 20 - 23 Students per classroom
- 24 Classrooms (22 Typical + 2 Special Education)

	K	1	2	3	4	5	Total
Number of Students	80	77	77	77	77	77	465
Average Number of students/CR	20	21	21	21	21	21	
Number of Classrooms per Grade	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	22

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

Lincoln-Eliot
Preliminary Design Program

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

ROOM TYPE	Lincoln-Eliot (Target Program) 465 Students				EXISTING NEWTON PUBLIC SCHOOLS								
					Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
	ROOM NFA[1]	# OF RMS	area totals	Comments	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES		22 + 2 (SpEd)	20,700				21,472			23,450			22,690
(List classrooms of different sizes separately)													
Pre-Kindergarten w/ toilet													
Kindergarten w/ toilet	1,200	4	4,800		1,131	4	4,524	1,200	4	4,800	1,170	4	4,680
General Classrooms - Grade 1-5	850	18	15,300	18 CRs in existing L-E school. Smaller SF classroom size due to potential existing conditions.	925	18	16,650	925	20	18,500	888	20	17,760
							0			0	General CR Room NFA is average		
ELL Program	300	2	600	Due to larger ELL population	298	1	298	150	1	150	250	1	250
SPECIAL EDUCATION			10,775				5,965			5,500			6,900
(List rooms of different sizes separately)													
Self-Contained SPED	850	2	1,700	Difference due to higher needs and Title 1 school. Potential for District wide SpEd program	925	1	925	900	1	900	925	2	1,850
Self-Contained SPED - toilet			0										
Resource Room			0										
Substantially Separate Classroom			0										
Learning Centers (K-2; 3-5)	450	2	900	Currently 1 Learning Center in existing L-E	470	2	940	450	2	900	475	2	950
Breakout Rooms (small group/ individual instruction) 1/grade average. Extended Learning Areas	125	8	1,000	Currently 1 Small Group Instruction in existing L-E. Difference due to high needs, assume 1 shared breakout space per 2 calssrooms	121	7	845	125	6	750	125	6	750
OT/PT	475	1	475		511	1	511	450	1	450	475	1	475
Sensory Room/ additional OT/PT	450	1	450									1	
Safe Room/ Mindful Room 1/ academic floor	100	3	300		106	2	212	100	2	200	100	3	300
Speech + Language	150	2	300		298	1	298	150	2	300	250	1	250
Reading Program/ Literacy Room	850	3	2,550	Currently 1 Reading Program in existing L-E. Difference due to higher needs and Title 1 school	925	1	925	900	1	900	925	1	925
Inclusion Facilitators (office for 6 adults; 150SF per person)	450	2	900	Difference due to higher needs and Title 1 school	238	1	238	150	1	150	300	1	300
Literacy Specialist (Office + teaching area for 6 students)	250	3	750	Difference due to higher needs and Title 1 school	176	1	176	125	1	125	250	1	250
Math Coach	250	3	750	Difference due to higher needs and Title 1 school	161	1	161	125	1	125	150	1	150
Team Specialist + IEP Conf Room (12 adults)	400	1	400		428	1	428	400	1	400	400	1	400
Psychologist (Office, testing, therapy, storage)	150	1	150		155	1	155	150	1	150	150	1	150
Social Worker (Office, testing, conferences)	150	1	150		151	1	151	150	1	150	150	1	150
													0
ART & MUSIC			2,650				2,608			2,725			2,575
Art Classroom - 25 seats	1,000	1	1,000	1 Art Classroom currently in existing L-E	1,000	1	1,000	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150		178	1	178	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1 Music Classroom currently in existing L-E	1,168	1	1,168	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble (Groups 4-10 students)	150	2	300		162	1	162	150	2	300	150	1	150
Music Practice / Ensemble (Groups 4-10 students)					100	1	100	75	1	75	75	1	75
HEALTH & PHYSICAL EDUCATION			6,300				6,105			6,300			6,300
Gymnasium	6,000	1	6,000		5,809	1	5,809	6,000	1	6,000	6,000	1	6,000
Gym Storeroom	175	1	175		176	1	176	200	1	200	175	1	175
Health Instructor's Office w/ Shower & Toilet	125	1	125		120	1	120	100	1	100	125	1	125

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / December 10, 2018

DATE: 11/14/18

Yellow highlight indicates L-E specific program

Blue highlight indicates difference than other Newton Schools

DRAFT REVIEWED BY D. MORRISSEY 11/13/18

* Where descrepancy between Angier, Zervas, and Cabot, Lincoln-Eliot Target Program used Cabot

Lincoln-Eliot Preliminary Design Program	Lincoln-Eliot (Target Program) 465 Students				EXISTING NEWTON PUBLIC SCHOOLS								
					Angier 465 Students			Zervas 490 Students			Cabot 480 Students		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	Comments	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
MEDIA CENTER			**2,800**				**2,770**			**2,875**			**2,830**
Media Center / Reading Room	2,800	1	2,800		2,770	1	2,770	2,875	1	2,875	2,830	1	2,830
DINING & FOOD SERVICE			**6,960**				**6,321**			**6,663**			**6,960**
Cafeteria / Dining	3,400	1	3,400		3,035	1	3,035	3,200	1	3,200	3,400	1	3,400
Stage	1,000	1	1,000		950	1	950	1,000	1	1,000	1,000	1	1,000
Chair / Table / Equipment Storage	360	1	360		408	1	408	363	1	363	360	1	360
Kitchen	1,700	1	1,700		1,460	1	1,460	1,600	1	1,600	1,700	1	1,700
Staff Lunch Room (1/3 of staff = 60 staff/3)	250	2	500		234	2	468	250	2	500	250	2	500
MEDICAL			**510**				**569**			**510**			**510**
Medical Suite Toilet	60	1	60		73	1	73	60	1	60	60	1	60
Nurses' Office / Waiting Room	250	1	250		306	1	306	250	1	250	250	1	250
Examination Room / Resting	100	2	200		95	2	190	100	2	200	100	2	200
ADMINISTRATION & GUIDANCE			**3,225**				**2,305**			**2,515**			**2,595**
General Office / Waiting Room / Toilet	700	1	700		750	1	750	680	1	680	650	1	650
Teachers' Mail and Time Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Duplicating Room	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Records Room	100	1	100		79	1	79	60	1	60	100	1	100
Principal's Office w/ Conference Area	300	1	300		301	1	301	300	1	300	300	1	300
Principal's Secretary / Waiting	Included in General Office				Included in General Office			Included in General Office			Included in General Office		
Assistant Principal's Office	125	1	125		117	1	117	125	1	125	125	1	125
Supervisor/ Intinerant teachers/ Extended Program	750	1	750		428	1	428	650	1	650	750	1	750
Conference Room	250	1	250		218	1	218	200	1	200	250	1	250
Guidance Office/ Storeroom													
SPED/ Specialist Work Room	400	1	400	Difference due to higher needs and Title 1 school									
Teachers' Work Room	250	2	500		206	2	412	250	2	500	210	2	420
Lactation Room	100	1	100	Difference due to needs of the population									
CUSTODIAL & MAINTENANCE			**2,080**				**1,785**			**1,865**			**2,080**
Custodian's Office	150	1	150		102	1	102	125	1	125	150	1	150
Custodian's Workshop	375	1	375		0	0	0	0	0	0	375	1	375
Custodian's Storage	375	1	375		583	1	583	147	3	440	375	1	375
Recycling Room / Trash	400	1	400		712	1	712	650	1	650	400	1	400
Receiving and General Supply	260	1	260		Included above			Included above			260	1	260
Storeroom	320	1	320		78	2	156	200	2	400	320	1	320
Network / Telecom Room	200	1	200		232	1	232	250	1	250	200	1	200
Total Building Net Floor Area (NFA)			**56,000**				**49,900**			**52,403**			**53,440**
Proposed Student Capacity / Enrollment			465				465			490			480
Total Building Gross Floor Area (GFA)[2]			**84,225**				**74,960**			**78,800**			**80,160**
Grossing factor (GFA/NFA)			**1.50**				**1.50**			**1.50**			**1.50**
Multi-Grade Gathering Space	1,500	1	1,500	100 students at 15 SF per student									

Lincoln-Eliot Elementary School Educational Programming

» Discussion

Newton Early Childhood Program/ Proposed Future Program

	Morning Integrated Classroom and Extended Day Integrated Classroom with ABA*	STRIDE* Classroom	Related Services	Program Expansion Total
Student capacity	192 - 224	18 - 27	100 - 125	310 - 376
Maximum number of students per classroom	16	9	4 - 8	
Number of classrooms	12 - 14	2 - 3		14 - 17

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate
ABA = Applied Behavior Analysis

Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED
11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			0		17	12,760	
(List classrooms of different sizes separately)							
Integrated Pre-Kindergarten w/ toilet		9		720	13	9,360	Room SF for 16 students at 45 SF per student (720 SF). Toilets adjacent to and shared by classroom pairs, accounted in Grossing factor (100SF per classroom pair)
Integrated Pre-Kindergarten w/ toilet		2		850	2	1,700	Medically fragile
STRIDE Pre-Kindergarten w/ toilet		2		850	2	1,700	STRIDE
SPECIAL EDUCATION			0			6,450	
(List rooms of different sizes separately)							
Applied Behavior Analysis (ABA) Classrooms		2		425	2	850	Used throughout the day. Adjacent to each other, near safe space
Safe Space/ Quiet/ Mindful Room		2		100	2	200	One per classroom floor
Small Group/ 1:1 support/ pull out spaces (per 2 CR)		7		200	9	1,800	For morning use; dedicated classroom pull out spaces adjacent to classroom pairs. For afternoon use; small group support space in afternoon. Also located on ground level for morning use.
PT Room		1		1,000	1	1,000	
OT Room/ Motor Skills Room		1		1,000	1	1,000	
Team Specialists		1		200	1	200	Individual office with separate conference table for 6, adjacent to director
Therapist Office (OT/ PT/ Speech)		1.5 CR		50	16	800	16 therapists in one large space at 50 SF per person
Speech and Language Testing				100	3	300	
OT Testing Room				100	1	100	
Psychologist (office + testing +1 student)		1		150	1	150	
Social Worker		1		50	1	50	

Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED
11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
HEALTH & PHYSICAL EDUCATION			**0**			**1,950**	
Storeroom				250	1	250	
PE Space/Indoor/ Multipurpose		1		1,700	1	1,700	Dedicated PE Space
DINING & FOOD SERVICE			**0**			**400**	
Staff lunch room		1		400	1	400	
MEDICAL			**0**			**610**	
Medical Suite Toilet				60	1	60	
Nurses' Office / Waiting Room		1		250	1	250	
Examination Room / Resting				100	2	200	
Lactation Room				100	1	100	For staff use
ADMINISTRATION & GUIDANCE			**0**			**2,400**	
Director's Office		1		200	1	200	
Reception / Waiting Room				150	1	150	Toilet with changing table, Lactation Room for community use
Front Office (for parent walk-in)		1		500	1	500	
Conference rooms		2		250	1	250	
Duplicating Room/ Storage				100	2	200	One per floor, separate from the records, but adjacent
Records Room / Teachers' Mail and Time Room		1		200	1	200	Needs to be separate from the main office. Table for layout space
IEP Conference Room (up to 15 people)		1		450	2	900	

Newton Early Childhood Program/ Program Space Summary

11/28/18: UPDATED
11/16/18: TEAM WORKING SESSION

NECP	Existing (11/1/2018) Conditions for NECP at Jackson Road			PROPOSED NECP (Target Program) 17 Classrooms			104 students with special needs 90 students who are typically developing 111 students receiving related services
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CUSTODIAL & MAINTENANCE			**0**			**1,150**	
Custodian's Office		1		150	1	150	
Custodian's Workshop/ Storeroom for materials		1		500	1	500	
Custodian's Storage				100	2	200	slop sink and storage per floor for machine
Recycling Room / Trash				100	1	100	Not currently in existing program; may not be needed
Network / Telecom Room				200	1	200	
Total Building Net Floor Area (NFA)						**25,720**	
Proposed Student Capacity / Enrollment						310 - 375	Enrollment increases throughout the year
Total Building Gross Floor Area (GFA)						**38,580**	
Grossing factor (GFA/NFA)						**1.50**	
Extended Day/ After School			**0**			**4,000**	
Dedicated Extended Day classrooms				1,000	4	4,000	Potentially 3 - 4 Extended Day Classrooms
Potential Extended Day Capacity						60 - 80	
Other *(specify)*							

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL COMMITTEE / December 10, 2018

Newton Early Childhood Program Educational Programming

» Discussion

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Committee Presentation | December 10, 2018

» For further information:

www.newtonma.gov/gov/building/capital_projects

www.lincolneliot-necp-projects.com

NEWTON PUBLIC SCHOOLS Hill International ARROWSTREET

Lincoln-Eliot Elementary School and Newton Early Childhood Program

School Building Committee Presentation | December 13, 2018

NEWTON PUBLIC SCHOOLS

Hill International

ARROWSTREET

Newton Early

Agenda

- Approved Ed Program Space Summary
- Site Options Review
  - Potential sites
  - Other alternate sites
- Site Selection Criteria

Newton Early Childhood Program/ Programming and Enrollment

	Integrated Classrooms	STRIDE* Classroom	Related Services	**Program Design Enrollment**
Student capacity	192 - 224	18 - 27	100 - 125	**310 - 376**
Number of students per classroom (Maximum)	16	9	4 - 8	
Number of classrooms	12 - 14	2 - 3		**14 - 17**

*STRIDE = Structured Teaching through Research and Intensive Developmental Experiences/ Substantially Separate

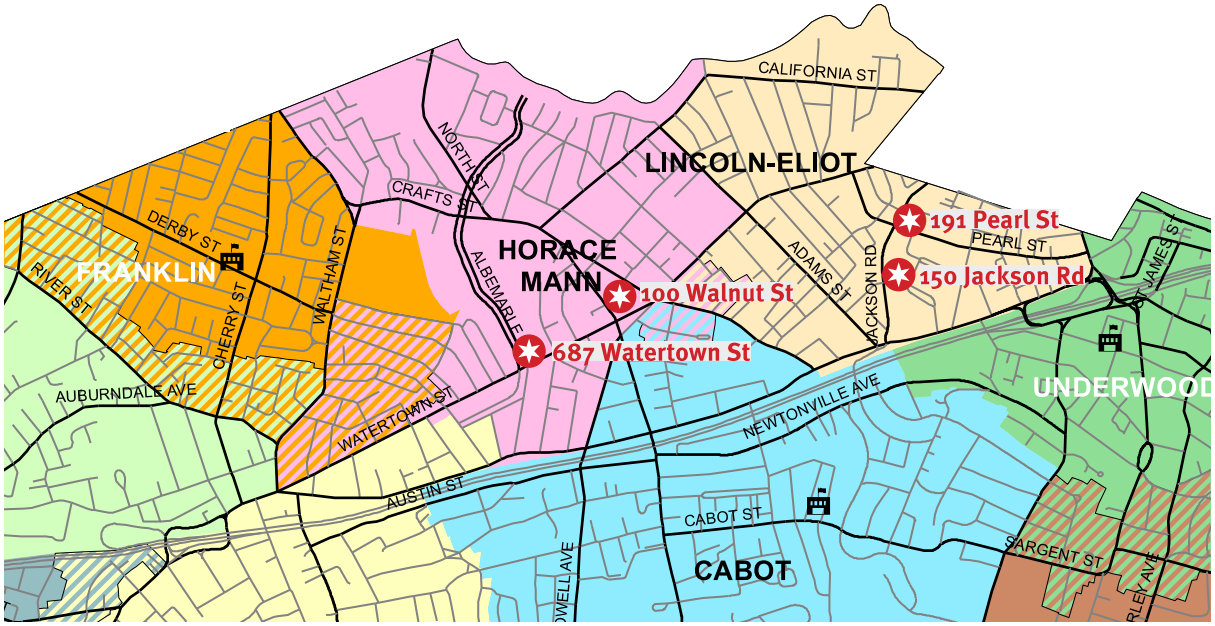
» Space Summary Total Building Gross Floor Area = 38,500 GFA

Lincoln-Eliot Elementary School / Programming and Enrollment

	K	1	2	3	4	5	**Program Design Enrollment**
Student count	80	77	77	77	77	77	**465**
Number of students per classroom (Average)	20	21	21	21	21	21	
Number of classrooms	4	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4	**22**

» Space Summary Total Building Gross Floor Area = 84,000 GFA

Site Selection / Potential Sites



Site Selection / Potential Sites

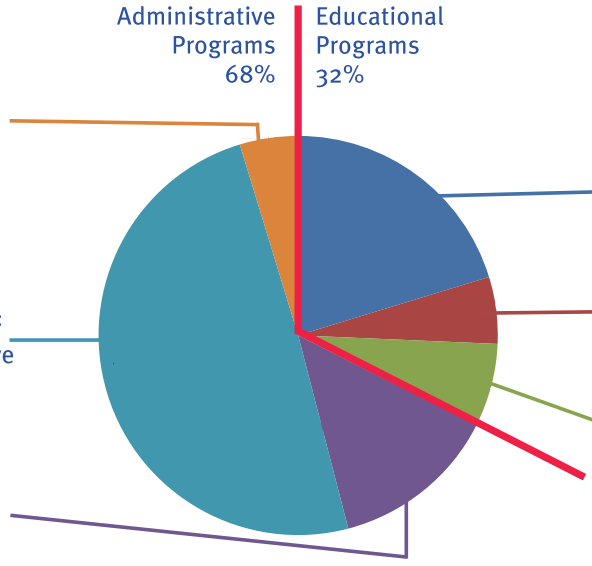
All buildings anticipated to require building systems, code, and general building upgrades

	150 Jackson Road	687 Watertown Street	100 Walnut Street	191 Pearl Street
Existing Program	NECP	Horace Mann Elementary School	Education Center	Lincoln-Eliot Elementary School
Site and Building specific considerations	• Gymnasium needed for Elem School program • Elevator needed and other ADA upgrades	• Cafeteria needed for Elem School program • Elevator needed and other ADA upgrades	• Cafeteria and Gymnasium needed for Elem School program • All or multiple existing programs to be relocated: - Ed Programs (Central HS, CCC, MS Harbor) - Administration Offices - IT services and mainframe	• Multi-level/ multiple stairs • Poor layout • Disjointed additions • Lack of secure access • Limited site/ parking/ bus queuing

100 Walnut Street / Newton, MA

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / December 13, 2018

Education Center (100 Walnut Street) / Existing Building Program
Approximate 74,000 SF (including Annex)



- Meeting Spaces (5%):
  - 2 large
  - 1 medium
  - 1 small
- School Administration offices personnel (49%):
  - 91 FTE Administrative
- Information Technology (14%): offices, servers, and infrastructure

- 43 FTE Instructional program staff
- Central High School (20%):
  - 30 Students
- Springboard Program (5%):
  - Approx 25 to 30 Students
- Citywide Community Connections (4%):
  - Enrollment varies and

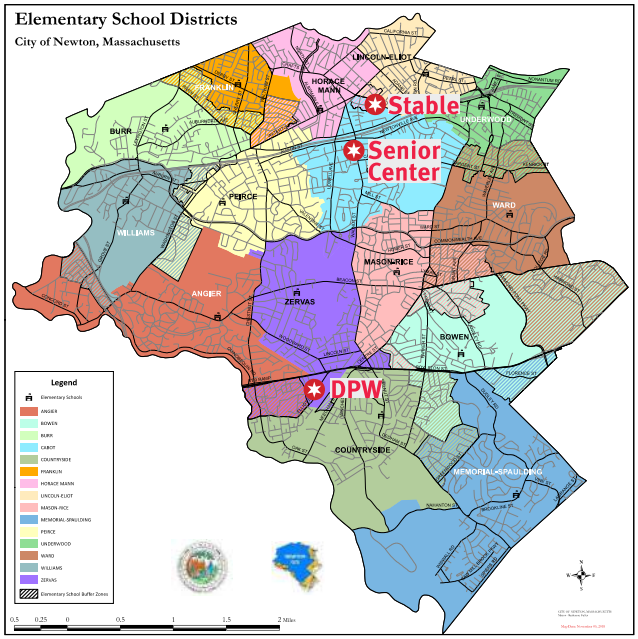
Middle School 'Harbor' Program (3%):
- 3 to 7 Students

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / December 13, 2018

191 Pearl Street / Newton, MA

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / December 13, 2018

Site Selection / Other Alternate Sites



ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / December 13, 2018

Site Selection / Other Alternate Sites

All sites:

- Would require building replacement and/ or significant additions or alterations to meet educational program
- All sites are outside of the Lincoln-Eliot District

	74 Elliot Street	345 Walnut Street	90 Crafts Street
Existing Program	DPW Operations Center	Senior Center	Stable
Site and Building specific considerations	• Relocate and/or consolidate DPW Operations • Environmental clean up of site	• Relocate Senior Center • Historic Building (former Branch Library) • Small site	• Relocate and/ or consolidate DWP Operations • Historic Building • Small site • Environmental clean up of site

Site Selection / Potential Sites

Preliminary SITE Options/ Criteria Evaluation Matrix

Costs: 0, $, $$, $$$, $$$$, $$$$$

Potential Alternatives										
Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$

Site Selection / Site Criteria

● Favorable ◉ Neutral ○ Unfavorable Costs: 0, $, $$, $$$, $$$$, $$$$$

* Note: All design options will meet current building codes.

Site Criteria	Potential Alternatives										
	Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
	150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
Ranking:	Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
Associated Costs:	$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$
General, Building and Site Facts											
1 Projected student enrollment	775 - 840	465	310 - 375	775 - 840	465	310 - 375	465	310 - 375	775 - 840	465	310 - 375
2 Classroom Count	38 - 41	24	14-17	38 - 41	24	14-17	24	14-17	38 - 41	24	14-17
3 Approx. targeted educational program (Total Building Gross Floor Area)	122,500 GFA	84,000 GFA	38,500 GFA	122,500 GFA	84,000 GFA	38,500 GFA	84,000 GFA	38,500 GFA	122,500 GFA	84,000 GFA	38,500 GFA
4 Approximate Gross Square Feet (from assessor database)	99,500 GSF			51,000 GSF			41,000 GSF		74,000 GSF (incl. annex)		
5 Approximate size of site (from assessor database)	5.7 acres			approx 1.3 acres			1.6 acres		3.8 acres		
6											
Site											
1 Maximizes efficient use of site	○	●	○	○	○	○	○	●	○	●	●
2 Provides safe pedestrian circulation and access, promotes walk-ability	○	●	●	○	●	●	○	○	○	○	○
3 Avoids Legal restrictions, City owned land	●	●	●	●	●	●	●	●	●	●	●
4 Site acquisition/ legal issues, privately owned land	●	●	●	●	●	●	●	●	●	●	●
5 Optimizes outdoor program space and green space/ Playground	○	●	●	○	●	●	●	●	○	○	○
6 Optimizes safety and efficiency of on arrival and dismissal	○	●	●	○	○	○	○	●	○	○	○
7 Separates bus, van, and automobile circulation	○	●	●	○	○	○	○	◉	○	○	◉
8 Does not increase demand for on street parking	○	●	●	○	◉	○	◉	○	○	○	○
9 Provides sufficient parking for teachers, staff + visitors	○	●	●	○	○	○	●	●	○	○	○
10 Minimizes off-site traffic impact	○	●	◉	○	◉	○	○	◉	○	○	○
11 Avoid potential wetlands	●	●	●	●	●	●	○	○	●	●	●
12 Avoids Environmental conditions/ identified Haz Mats	○	○	○	○	○	○	○	○	◉	◉	◉
13 Minimize tree removal and preserve trees	○	◉	●	○	●	◉	◉	◉	●	●	●
14											
Educational											
1 Meets educational program for all students + design enrollment	○	●	●	Does not fit the program		○	○	●	○	●	●
2 Provides flexibility for future growth	○	●	●	○	○	●	○	●	○	●	●
3 Optimizes configuration and adjacency of teaching spaces	○	●	●	○	○	○	●	●	○	●	●
4 Programmatic consistency with prior school projects	○	●	◉	○	○	◉	○	◉	○	●	◉
5											

Site Selection / Site Criteria

● Favorable ◉ Neutral ○ Unfavorable Costs: 0, $, $$, $$$, $$$$, $$$$$

* Note: All design options will meet current building codes.

Site Criteria	Potential Alternatives										
	Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
	150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
Ranking:	Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
Associated Costs:	$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$
Community											
1 Provides space for community use	●	●	●	●	●	●	●	●	●	●	●
2 Accommodates extended day programs	○	●	●	○	●	●	◉	◉	○	●	●
3 Minimize long term impacts to the community	○	◉	◉	○	◉	◉	○	●	○	○	◉
4 Disruptions to school and neighbors during construction	○	◉	●	○	○	●	○	○	○	○	○
5											
Existing Building											
1 Building systems conditions	○	○	○	○	○	○	○	○	○	○	○
2 Building envelope conditions	●	●	●	●	●	●	◉	◉	○	○	○
3 Energy performance	●	◉	◉	●	◉	◉	◉	◉	○	○	○
4 ADA compliance	○	○	○	○	○	○	○	○	○	○	○
5 Code compliance	○	○	○	○	○	○	○	○	○	○	○
6 Requires minimal interior renovations to meed Ed Program	○	◉	●	○	◉	●	◉	◉	○	○	○
7											
Cost and Schedule											
1 Relative capital cost	○	●	●	○	○	○	○	●	○	○	○
2 Maintains long range capital improvement sequence	○	●	○	○	◉	○	○	●	○	○	○
3 Avoids investment in temp or additional facilities	○	●	○	○	●	○	○	●	○	○	○
4 Avoids extending project schedule	○	●	○	○	●	○	○	●	○	○	○
5											
Additional Criteria											
1											
2											
3											
4											

Site Selection / Potential Sites

Preliminary SITE Options/ Criteria Evaluation Matrix

Costs: 0, $, $$, $$$, $$$$, $$$$$

Potential Alternatives										
Within the Lincoln-Eliot District						Outside of the Lincoln-Eliot District				
150 Jackson Road (Existing NECP, former Aquanis College)			191 Pearl Street (Existing Lincoln-Eliot)			687 Watertown Street (Existing Horace Mann)		100 Walnut Street (Existing Education Center)		
Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP	Lincoln-Eliot Elementary School	NECP	Co-located Lincoln-Eliot Elem and NECP	Lincoln-Eliot Elementary School	NECP
Unfavorable	Favorable	Not practical	Unable to meet program		Unfavorable	Unfavorable	Favorable	Unfavorable	Unfavorable	Not practical
$$$	$$	$$	$$$$	$$$$	$$$	$$$	$	$$$$$	$$$$$	$$$$

Next Steps

- School Building Committee vote to recommend Site Criteria Analysis
- Test fit studies of approved Ed program into preferred site
- Site plans
  - Traffic study
  - Site circulation (buses, vans, cars, pedestrians)
  - Parking

ARROWSTREET LINCOLN-ELIOT ELEMENTARY SCHOOL AND NECP Newton, MA SCHOOL BUILDING COMMITTEE / December 13, 2018

Lincoln-Eliot Elementary School and Newton Early Childhood Program
School Building Committee Presentation | December 13, 2018

» Discussion

» For further information:

www.newtonma.gov/gov/building/capital_projects

www.lincolneliot-necp-projects.com

NEWTON PUBLIC SCHOOLS

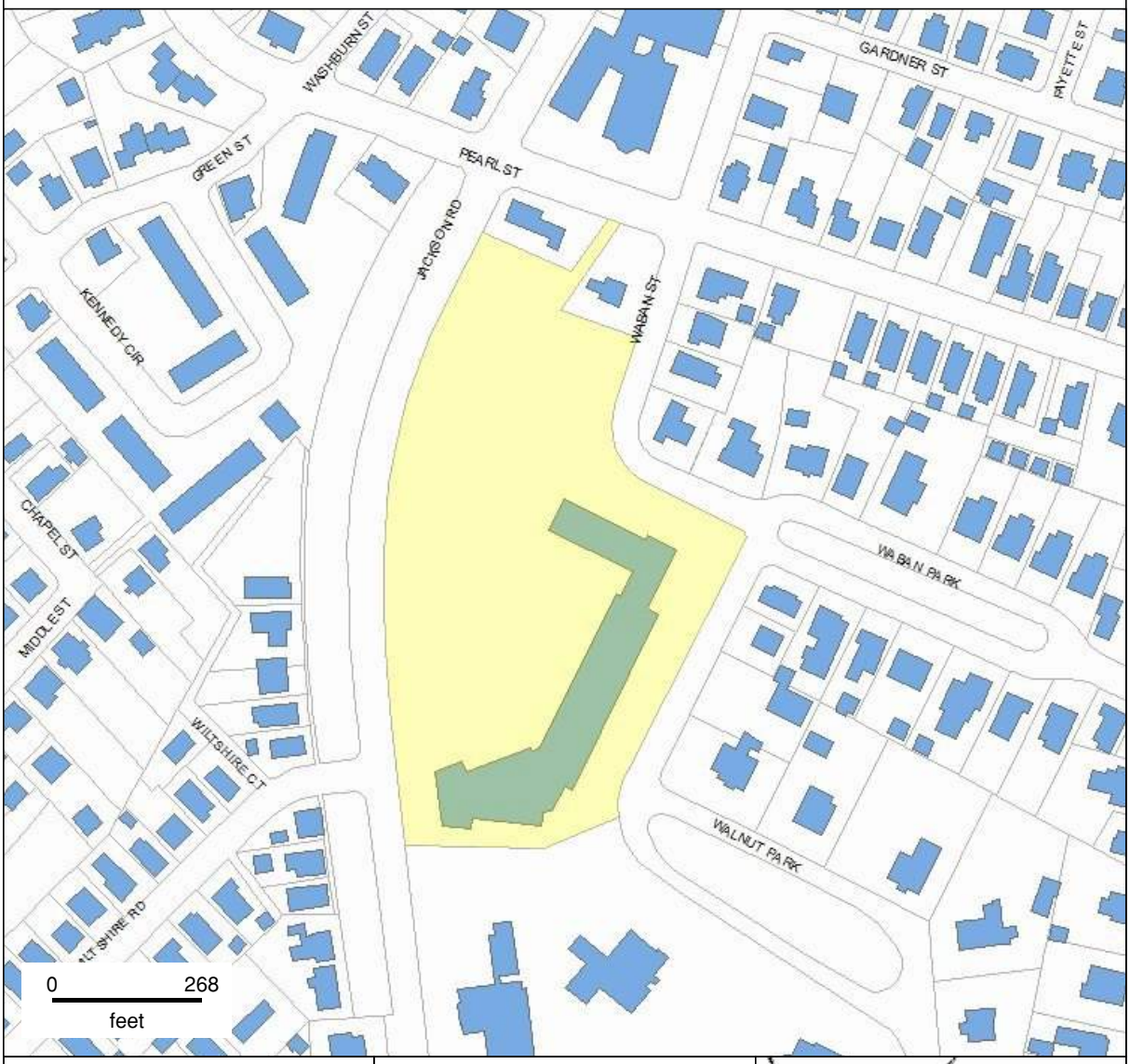
Hill International

ARROWSTREET

Newton Early

5.15 15 Walnut Park GIS Map

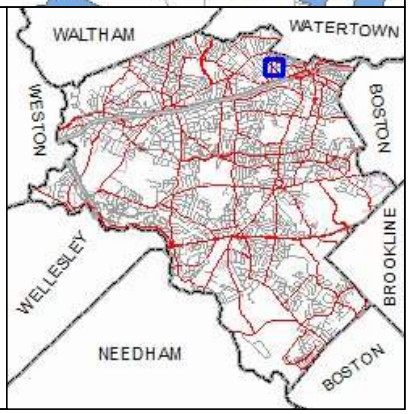
City of Newton



Property ID: 12003 0004AQ
Address: 15 WALNUT PK
Owner: CITY OF NEWTON

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Because of different update schedules, current property assessments may not reflect recent changes to property boundaries. Check with the Assessors' Office to confirm boundaries uses at the time of assessment.



5.16 15 Walnut Park Assessors Report Card

Property Record Card

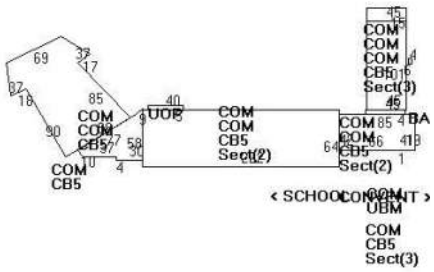
Property

Property SBL	12003 0004AQ
Address	15 WALNUT PK
Tax Bill Number	2904893
Land Use	9340
Land Use	CITY IMPROVED
Description	EDUCATION
Lot Size	248,884 sq ft
Zoning	PUB
Map ID	019SW
ID	12003 0004AQ

Primary Property Image

No results found

Property Sketch



Current Owner

Owner Information	CITY OF NEWTON PUBLIC BUILDINGS DIRECTOR 52 ELLIOT ST NEWTON, MA 02461

Sale History 2

Owner	CITY OF NEWTON
Co Owner	PUBLIC BUILDINGS DIRECTOR
Sale Date	2015-09-02
Sale Price	$15,350,000
Legal Reference	066023/0272

Previous Next

Assessment History 6

Assessed Value	Fiscal Year
$16,627,000	2019
$15,360,100	2018
$15,360,100	2017
$19,509,500	2016

Show More

Visit History 2

Visit Date	Type
2013-10-08	Interior
2013-05-30	Other

Building General

Building Style	Auditorium
Year Built	1965
Story Height	2
Neighborhood Code	7

Building Exterior

Porch Area	200 sq ft

Building Interior

Rooms	4
Baths	2
Heat Type	Hot Water
Fuel Type	Oil
Air Conditioning	None
Building Size	98,574 sq ft
Basement Area	675

Building Area

Building Type	COMMERCIAL
Gross Building Area	99,449 sq ft
Effective Area	98,909 sq ft
Building Area	98,574 sq ft

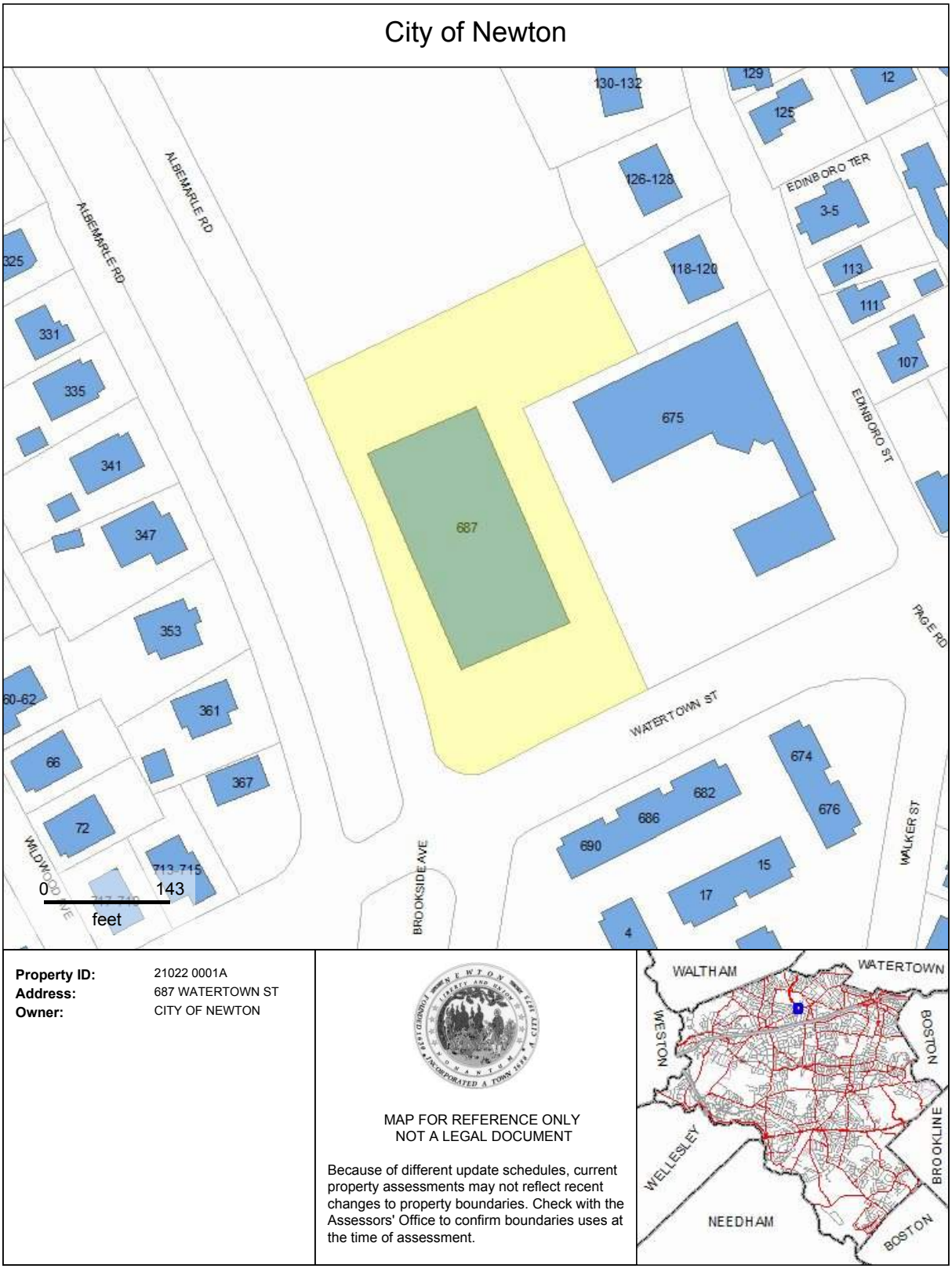
Condominium

Number of Units	1

Detached Structures

Apartments

5.17 687 Watertown Street GIS Map



5.18 687 Watertown Street Assessors Report Card

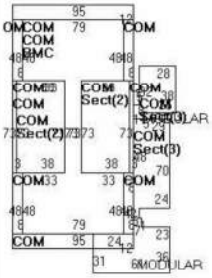
Property Record Card

Property

Property SBL	21022 0001A
Address	687 WATERTOWN ST
Tax Bill Number	2904867
Land Use	9340
Land Use	CITY IMPROVED
Description	EDUCATION
Lot Size	69,433 sq ft
Frontage	250 ft
Zoning	PUB
Map ID	030NE
ID	21022 0001A

Primary Property Image

Property Sketch



Current Owner

Owner Information	CITY OF NEWTON SCHOOL DEPT-HORACE MANN 100 WALNUT ST NEWTON, MA 02460

Sale History

Owner	CITY OF NEWTON
Co Owner	SCHOOL DEPT-HORACE MANN
Sale Date	1900-01-01
Sale Price	$1
Legal Reference	000000/0000

Assessment History 28

Assessed Value	Fiscal Year
$16,824,500	2019
$8,102,300	2018
$8,102,300	2017
$8,102,300	2016

Show More

Visit History 9

Visit Date	Type
2014-05-22	Exterior
2013-12-31	Other
2012-12-18	Interior

Show More

Building General

Building Style	School
Year Built	1965
Story Height	2
Neighborhood Code	4

Building Exterior

Building Interior

Rooms	40
Baths	12
Heat Type	Hot Water
Fuel Type	Gas
Air Conditioning	None
Building Size	41,019 sq ft

Building Area

Building Type	COMMERCIAL
Gross Building Area	41,019 sq ft
Effective Area	41,019 sq ft
Building Area	41,019 sq ft

Condominium

Number of Units	1

Detached Structures

Apartments

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5.19 150 Jackson Road Zoning Map

5.20 687 Watertown Street Zoning Map

5.21 Administrative Site Plan Review Application and Process

Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
Telefax
(617) 796-1086
www.newtonma.gov

Barney Heath
Director

ADMINISTRATIVE SITE PLAN REVIEW APPLICATION

DATE RECEIVED: _____ **PROJECT #:** _____ **ZONING DISTRICT:** _____

PROJECT ADDRESS: _____

PROJECT INFORMATION

IS THIS PROJECT A: ☐ WIRELESS FACILITY ☐ OTHER

CURRENT USE: _____ **PROPOSED USE:** _____

PROJECT DESCRIPTION (Briefly describe the project below):

REVIEWS BY OTHER REGULATORY AUTHORITIES? ☐ NO ☐ IF YES, DESCRIBE THE OF THOSE REVIEWS BELOW:

SITE INFORMATION

DESCRIBE THE CURRENT AND PAST USES, SITE, AND/OR STRUCTURE INFORMATION AS IT RELATES TO THIS APPLICATION:

ANY PRIOR SPECIAL PERMITS, VARIANCES, EASEMENTS, AND/OR SPECIAL RESTRICTIONS? ☐ NO ☐ IF YES, DESCRIBE BELOW:

THE PROJECT FILING MATERIALS SHOULD INCLUDE THE FOLLOWING INFORMATION IN CURRENT AND PROPOSED CONDITIONS:

REQUIRED SUBMITTAL CHECKLIST (CHECK ALL BEING SUBMITTED)					
☐	Evidence of Religious or Nonprofit Educational Status	☐	Plot Plan or As-built Survey Describing the Project Site	☐	Site Topography (2-foot intervals
☐	Façade Elevations or Floor Plans	☐	Delineation of Wetlands or Watercourses	☐	Site Structures and Improvements
☐	Utility Details	☐	Landscaping	☐	Site Encumbrances
☐	Lot Area Per Unit	☐	Number of Stories	☐	Parking & Circulation

(All plans **MUST** be signed, stamped, dated, drawn to scale, and clearly labeled. An inaccurate or incomplete application will **NOT** be accepted. Please review the reverse of this form for additional information.)

NOTE: This Application MUST be accompanied by a General Permit Application.

F:\cd-planning\PLANNING\APPLICATIONS May, 2014

ADMINISTRATIVE SITE PLAN REVIEW APPLICATION INSTRUCTIONS

DEVELOPMENT REVIEW TEAM MEETING: A Development Review Team (DRT) meeting is required prior to submitting any land use permitting or review application. During a DRT, City staff from several departments meet with prospective applicants to evaluate new proposals. These meetings are held weekly on Wednesday mornings. Most people find these meetings to be an efficient way to learn about issues they may want to address early on to ensure a successful project. After the DRT meeting, the next steps for pursuing this type of approval and handouts, further explaining the review and approval process, will be given to you.

APPLICATION SUBMISSION REQUIREMENTS: An application for site plan review will not be accepted by the Department of Planning and Development (Department) until it is determined to be complete. Whether a project qualifies for site plan review is determined by the Commissioner of Inspectional Services (Commissioner). **Inaccurate information or incomplete applications may delay the review of your project.** The items needed for a complete application include:

FORMS: A completed General Permit Application form and Administrative Site Plan Review Application. The signature of the Owner of the property (or the Owner's legal representative) and the Applicant/Agent is **mandatory** on the General Permit Application. Please provide current contact information on the General Application form to ensure City staff is able to contact the appropriate people regarding the project. On the Administrative Site Plan Review Application, be sure to fill in all possible fields with accurate information to describe the project.

FEES: The fee for an Administrative Site Plan Review is $350.00. All fees are subject to change.

PROJECT DESCRIPTION: A detailed letter or narrative describing the project, which includes:

1. Parking and Circulation movements within and off the site. The Department will determine whether a parking and/or traffic study may also be required;
2. The ability to adequately dispose of sewage, refuse and other wastes and to control drainage on site;
3. The ability to screen parking areas and structure(s) from adjoining properties or streets through an acceptable means (i.e. walls, fences, plantings or other means);
4. The removal of trees or soil shall be minimized and any topographic changes shall be in keeping with the surrounding neighborhood;
5. Consideration of the configuration and location of structures on site and their relationship to nearby structures in terms of scale, materials, color, roof and cornice lines; and
6. Avoidance of the removal or disruption of historic resources on and off the site.

SUBMITTALS: Each application shall be accompanied by copies of the project filling materials identified on the front page of this form. Any plans that are submitted as part of an application should be signed, stamped, dated, drawn to scale, clearly labeled, and not exceeding 11" x 17", except as requested by the Department.

DOCUMENT FORMAT: All information submitted as part of an application shall be submitted in the following formats:

1. One (1) electronic copy submitted on a CD in .pdf or another format approved by the Department; and
2. Five (5) hard copies of the complete application packet, including completed forms.

APPLICATION REVIEW PROCESS: The Department, upon receipt of a complete application packet, shall transmit a copy to the Commissioner of Inspectional Services, the City Engineer, and the Commissioner of Public Works for review. A copy of the application must also be filed with the Fire Chief. Upon the receipt of any responses by the above-mentioned departments, the Department shall review said plans for compliance with the dimensional controls and parking regulations contained in the Newton Zoning Ordinance.

After said review, the Department may issue nonbinding recommendations to the petitioner for changes in the site plan, which shall be consistent with accepted and responsible planning principles. The Department shall also inform, in writing, the Commissioner that the petitioner has complied with the procedural requirements as stated above and whether the petition has complied with the regulations of the Newton Zoning Ordinance. This statement shall be made within sixty (60) days after receipt of the site plan application. In cases of wireless facilities, an advisory report will be issued to the Commissioner within three weeks after receipt of the site plan application.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED.

Setti D. Warren
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
Telefax
(617) 796-1086
www.newtonma.gov

Barney Heath
Director

General Permit Application

Project #: _____ **Zoning District:** _____ **Date Received:** _____

Project Description:

To Be Completed By Applicant

Property Location Information

Street Address: _____ **City/Zip:** _____

Legal description *(section, block, lot)*: _____

Property Owner Information

Name: _____ **Phone:** _____ **Alt. Phone:** _____

Mailing Address: _____ **E-mail Address:** _____

Property Owner Consent

I am (we are) the owner(s) of the property subject to this application and I (we) consent as follows:

1. This application for a land use permit or administrative approval for development on my (our) property is made with my permission.
2. I (we) grant permission for officials and employees of the City of Newton to access my property for the purposes of this application.

X _____ _____
(Property Owner Signature) (Date)

X _____ _____
(Property Owner Signature) (Date)

NOTICE: The City of Newton staff may need access to the subject property during regular business hours and will attempt to contact the applicant/agent prior to any visit. Further, members of a regulatory authority of the city may visit the property as well.

Applicant / Agent Information

Name: _____ **Phone:** _____ **Alt. Phone:** _____

Mailing Address: _____ **E-mail Address:** _____

X _____ _____
(Applicant/Agent Signature) (Date)

NOTICE: The applicant/agent is the primary contact and may be any individual representing the establishment or property owner. The applicant/agent must also be legally authorized to make decisions on behalf of the Property Owner(s) in regards to the application.

---------- **OFFICE USE ONLY BELOW THIS LINE** ----------

CHECK APPROPRIATE PERMIT OR REVIEW PROCESS (Check all being submitted)			
	Zoning Review Application		Comprehensive Permit
	Administrative Site Plan Review		Variance Application
	Sign Permit		Historic Preservation Review
	Special Permit/Site Plan Approval		Conservation Commission Review
	Fence Appeal		Other, describe_____

Comments: _____

Permit Intake Initials and Date Stamp

NOTE: This form MUST accompany all other Department of Planning and Development applications.

GENERAL PERMIT APPLICATION INSTRUCTIONS

LAND USE PERMITTING CHECKLIST *(City staff, check all that apply)*

In most instances, any development or land disturbance activity within the City of Newton will require some type of review and approval from the Planning Department and one of the City's regulatory authorities. In all cases, this General Permit Application must accompany all land use permitting applications. A checklist of permit forms, by regulatory authority, is provided below:

Administrative

- Administrative Site Plan
- Review of Accessory Apartment
- Wireless Facility

Conservation Commission

- Request for Determination of Applicability
- Notice of Intent
- Abbreviated Notice of Resource Area Delineation

Historic Commission(s)

- Demolition Delay
- Historic District
- Landmark/Preservation Restriction

Land Use Committee

- Amendment to Special Permit/Site Plan
- Extension of Nonconforming Use or Building
- Site Plan Only
- Special Permit/Site Plan

Urban Design Commission

- Fence Appeal
- Sign Permit

Zoning Board of Appeals

- Appeals of the ISD Commissioner
- Comprehensive Permit
- Variance Application

NOTE: The Planning Department has many handouts that provide useful information regarding each of the permitting processes above. Petitioners should also be aware that approvals from other City or State agencies may be necessary as well.

APPLICATION COMPONENTS

For each permit application, the submission of inaccurate information or an incomplete application may delay the review and approval process for said permit. The items needed for a complete application will vary by permitting process, but generally include:

FORMS: A completed General Application and the project-specific permit application form. The signature of the Property Owner (or the Owner's legal representative) and the Applicant/Agent are **mandatory** on the General Permit Application.

FEES: To process any land use permit application, it must be submitted with the appropriate fee. The permit fee will vary by permitting process. All fees are subject to change, please contact the Department of Planning to verify the current fee.

SUBMITTALS: Each permit should also be accompanied by the necessary supporting documentation. The items needed to explain a project may vary, please refer to the permit application for the typical documents submitted for each permit application or contact a city planner. All applications should be submitted in hard and digital formats.

SUBMITTING THE APPLICATION

Bring the complete application to the Planning Department (at Inspectional Services customer service counter), on the second floor of City Hall at 1000 Commonwealth Avenue. A planner will review the application, answer any questions you may have and explain the next step of the permitting process.

If you have questions about an application or application process, please call the Department of Planning at (617) 796-1120 or visit the Planning Department, Monday-Friday: 8:30 a.m. to 5:00 p.m., and Tuesday 8:30 a.m. to 8:00 p.m.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED.

Description and requirements are available in Section 7.5 Administrative Site Plan Review Zoning Ordinance. This outline is intended as an overview only.

1. Section 7.5.2.A.— Application:
At least 60 days prior to the application for a building permit, file a site plan application with the Director of Planning and Development. (see Application in Appendix 5.21)

Site plans shall include:

a. Evidence of nonprofit educational status;

b. Boundaries, dimensions and area of the subject lot;

c. Use of existing buildings or structures on the subject lot;

d. Existing and proposed topography of the subject lot at 2-foot intervals;

e. Existing and proposed easements, if any;

f. Existing and proposed wetlands and watercourses, if any;

g. All existing and proposed buildings, structures, parking spaces, maneuvering aisles, driveways, driveway openings, pedestrian walks, loading areas, and natural areas and landscaping on the subject lot, with dimensions;

h. All facilities for sewage, refuse and other waste disposal, for surface water drainage, utilities, proposed screening, surface treatment, exterior storage, lighting, and landscaping, including fencing, walls, planting areas, and signs; and

i. Facade elevations and floor plans for any proposed new construction or alteration to the existing building or structure.

File a Zoning Review Application with the Chief Zoning Code Official

2. Section 7.5.2.B. Public Notice:
Give written notice and send a copy of the application and 1 set of site plans to:

a. Each of the 3 Councilors representing the ward in which the proposed project is to be located;

b. Clerk of the City Council

c. All immediate abutters of the property

3. Section 7.5.2.C. Review Process:
The applicant shall assist the Director of Planning Development in the review of the site plan

The Director of Planning Development shall transmit copies to:

a. Commissioner of Inspectional Services

b. City Engineer

c. Commissioner of Public Works

d. Fire Chief

Director of Planning and Development may consider the educational use application in light of the following criteria:

a. Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent streets, properties or improvements, including regulation of the

number, design and location of access driveways and the location and design of handicapped parking

b. Adequacy of the methods for disposal of sewage, refuse and other wastes and of the methods of regulating surface water drainage

c. Provision for off-street loading and unloading of vehicles incidental to the servicing of the buildings and related uses on the site

d. Screening of parking areas and structures on the site from adjoining premises or from the street by walls, fences, plantings or other means

e. Avoidance of major topographical changes; tree and soil removal shall be minimized and any topographic changes shall be in keeping with the appearance of neighboring developed areas

f. Location of utility service lines underground wherever possible

g. Avoidance of the removal or disruption of historic resources on or off-site

Site Contamination Summary

FACT SHEET: Fuel Oil Spill Cleanup

DEP RTN 3-16552

Background:

In March of 1998, an oil sheen was observed on Cheesecake Brook adjacent to the School property. The sheen was determined to be related to a release of fuel oil from a corroded fuel line serving an underground storage tank at the School. The Massachusetts Department of Environmental Protection (DEP) was notified and assigned the issue Release Tracking Number 3-16552. Clean Harbors, Inc. was hired by the City to perform emergency response actions including the removal of the tank, lines, and all readily accessible contaminated soil. A storm drain line believed to serve as a conduit to Cheesecake Brook was replaced and sealed. A preliminary assessment performed by Camp Dresser McKee, Inc. ("CDM") determined that the oil had impacted both soil and groundwater located in the area north of the building. CDM installed a recovery well system which operated until 2000, when it was deemed to be no longer effective. Lord Associates, Inc. ("LAI") was contracted to continue response actions and completed the installation of an enhanced groundwater recovery and treatment system that was supplemented by the addition of nutrients to promote natural degradation of the residual oil still present in soil and groundwater. This system operated until 2012 at which time oil was no longer recoverable. LAI continued with the biotreatment of the affected area until 2013. Since that time, response actions have been limited to an assessment for potential vapor intrusion into the school, groundwater sampling, and periodic manual removal of residual product when present.

Status of Cleanup:

The regulatory status of the Site is "Tier II", and it is in Phase V Remedy Operation Status, of the Massachusetts Contingency Plan regulations that enforce Massachusetts General Laws chapter 21e. The most recent groundwater sampling completed in February 2017 indicates compliance with applicable cleanup standards at all locations with the exception of two areas. One of these areas is located under the basement concrete slab foundation, and the other outside the building near the front entrance and parking lot. As oil is detected in groundwater wells, it is removed. A site plan showing the location of these areas is provided on the attached Figure.

In March of 2013, LAI completed an evaluation for potential vapor intrusion of petroleum hydrocarbons into indoor air. Twelve vapor points were drilled through the concrete floor of the Site basement to collect samples of soil gas. The results of the laboratory analyses of these samples were that while some detections of petroleum hydrocarbons were made, none of the concentrations exceeded the DEP soil vapor Residential and/or Commercial Threshold Values, indicating that a vapor intrusion pathway is not likely.

On April 17, 2013, LAI personnel collected indoor air samples from three locations in the lower level of the School. These locations were in the Gym, the Lunch Prep Room, and the Assembly Room. Samples were collected using evacuated canisters placed in the approximate center of these areas approximately three-to-four feet above the ground (in the breathing zone). These samples were collected as 24-hour composite samples. Laboratory analyses detected the presence of petroleum hydrocarbons in each location sampled. The concentrations were found to exceed the DEP Residential Threshold Value, but not the Commercial Threshold Value in the Assembly Room. For this reason, LAI undertook a site-specific risk assessment to evaluate the results using DEP "Method 3" methodology. The results of that assessment were that site conditions were determined to represent a condition of "No Significant Risk".

On December 28, 2016, LAI personnel collected additional indoor air samples from the three locations in the lower level of the School. Laboratory analyses detected concentrations of petroleum hydrocarbons, but all *were below* the DEP published Residential and Commercial/ Industrial Threshold Values.

Addressing Public Concerns:

The process for assessing and cleaning up disposal sites as set forth in the regulations is designed to address the effects of the site on health, safety, public welfare, and the environment. Once a release of oil or hazardous materials has been confirmed at a disposal site, the site is tier classified, I or II. This site has been classified as Tier II. As such it does not require direct DEP oversight and relies on the Licensed Site Professional's (LSP) supervision. Regardless of tier classification, all sites go through a similar process of assessment, and if indicated, cleanup. While this site is in Phase V of a five phase program, conditions do not currently support a "Permanent Solution without Conditions".

To qualify for a Permanent Solution, it must be demonstrated that:

- Site conditions represent a level of "No Significant Risk";
- The source of contamination must be eliminated or if not feasible, be controlled;
- Plumes of dissolved contamination in groundwater and vapor phase must be stable or contracting;
- Non-Aqueous Phase Petroleum ("NAPL") must not be present under current site conditions and for the foreseeable future, and all NAPL with Micro-scale Mobility is removed if and to the extent feasible based on the Conceptual Site model.

Based on the data collected to-date, the Site appears to meet all of the above criteria. However, additional groundwater and indoor air sampling must be completed that demonstrates continuous compliance throughout the year. As such, the City is committed to continuing all on-going monitoring programs until this is confirmed.

To address the public's concerns, the City will make all sampling results available to the public, and agree to answer all questions concerning the same. As a matter of law, all reports submitted to the DEP are available for public viewing at the Northeast Regional Office of the DEP at 205B Lowell Street, Wilmington or on-line referencing RTN 3-16552