

# NEWTON PUBLIC SCHOOLS

100 Walnut Street, Newtonville, MA 02460

AREA CODE (617) 559-9025

## Memorandum

\*\*\*\*\*

TO: David Fleishman, Superintendent  
School Committee

FROM: Sandra Guryan, Deputy Superintendent/Chief Administrative Officer

DATE: February 11, 2013

RE: Facilities Update: Angier Elementary School Project  
Carr School Swing Space  
Day Middle School Construction Project  
Elementary Modular Project  
MSBA 2013 SOI Process  
Safety and Security Project

\*\*\*\*\*

This update addresses information on the Angier Elementary School project, the status of the Carr School as swing space, the Day Middle School construction project, the elementary modular project, the MSBA 2013 SOI process and the safety and security project.

### I. Angier Elementary School Project:

DiNisco Design Partnership (DDP) and Joslin, Lesser and Associates (JLA) submitted a response to the MSBA's review comments on the Preliminary Design Program on January 21, 2013. DDP also continued to refine earlier design concepts and met with JLA and the Angier Working Group on January 17, January 24, and February 7, 2013 to discuss the design schemes and updates on the process. During the past few weeks, the school administration analyzed the two design options which had been presented at the January 10, 2013 ASBC/DRC meeting. The major difference between the options was the location of the library on the first floor and kindergarten on the upper floors (with grades 1 through 5) versus location of the kindergarten classrooms on the first floor and the library on the second floor. The school administration preferred the design option (B.7.7) which locates the library on the first floor and kindergarten classrooms on the second floor. This floor plan allows the library to be located on the same floor as all specialty and community use spaces (art, music, cafeteria and gymnasium) while grades K, 1 and 2 are on the second floor and grades 3, 4 and 5 on the third floor (along with special education spaces which are interspersed on the second and third floors). In this design, the kindergarten classrooms are located next to a stairwell facilitating kindergarten dismissal and access to the playground.

Advantages of this design layout are:

- Facilitation of collaboration between the kindergarten and first grade classrooms;
- Kindergarten classrooms are located next to a stairwell facilitating kindergarten dismissal and access to the playground;
- Location of the library, cafeteria and gymnasium, music and art on the first floor provides for good student circulation across specialty spaces and allows the common/community spaces to be accessible by the public during non-school hours;

- Location of the library on the first floor which is a taller story allows it to be more spacious and possibly to have a sunken reading area;
- Location of classrooms on the second and third floors may be more secure (Note: the architects will be designing a secure vestibule/lobby before visitors enter the building).

At their joint meeting on January 31, 2013, the ASBC and DRC voted unanimously to submit this preferred design scheme (B.7.7) to the MSBA on February 14, 2013. The ASBC and DRC will host a public forum on February 13, 2013 at the Angier School to review the project and hear comments from the community. After submission of the preferred design alternative to the MSBA, the tentative schedule includes a meeting with the MSBA Facilities Assessment Subcommittee in late February or March 2013 followed by a vote to approve the preferred schematic design alternative by the MSBA Board of Directors, hopefully, in early April 2013. Once approval is received, the architects will begin the schematic design phase.

In addition, the following meetings were held in January by members of project team and/or Angier Working Group:

- January 18, 2013 - Onsite meeting with Parks and Recreation Commissioner and the Newton Conservators to provide an overview of the existing property lines and current uses on the school and park site;
- January 25, 2013 - Meeting with the City arborist to review the embankment area and a survey of existing trees and the proposed strategy to fill this area in with new trees;
- January 28, 2012 - Meeting with the Parks & Recreation Commission to discuss the possibility of developing a shared parking scheme, filling the embankment at the playground abutting the MBTA to reclaim this area, providing emergency access for both the school and playground, and temporary lay-down space during school construction. The Commission requested additional calculations of the proposed areas which were delivered to Commissioner DeRubeis on February 1, 2013. A possible site visit by commissioners may occur soon.

Please follow the link below to view Angier Design Option B.7.7:

[http://www3.newton.k12.ma.us/schoolcommittee/documents/linked\\_resources](http://www3.newton.k12.ma.us/schoolcommittee/documents/linked_resources)

### II. Carr School Swing Space:

The design team of Turowski<sup>2</sup> updated the project status at the Design Review Committee's (DRC) January 24, 2013 meeting. The DRC discussion was primarily focused on mechanical, electrical and plumbing systems as well as the building envelope. The DRC was also updated on the Site Plan and they had questions about the need for the proposed change of the bus lane to the south side of the building. This solution has been reviewed and vetted with the Planning Department, School Department and other City departments and will be presented to the Public Facilities Committee as part of a project update on February 20, 2013. The City will hold a neighborhood information session at Carr School on February 28, 2013 at 7:00 p.m. The project's construction drawings are at 60% completion and the project is on budget and on schedule to be advertised for construction bids and filed sub-bids in April 2013.

### III. Day Middle School Construction Project:

The new dumpster pad area has been completed and dumpsters have been relocated to that space to provide additional parking at the former dumpster area. Steel and concrete slabs for the new front addition have been installed; placement of metal studs for the exterior walls of the front addition will begin next week. Placement of the steel for the new classroom addition began on January 24, 2013 and interior mechanical work for the new classrooms is underway. Traffic patterns around the building have been well managed. The fire suppression subcontractor has begun its survey of the existing building and is planning to utilize the February and April school

vacation weeks to begin work. Weekly coordination meetings are ongoing. Please follow the the link below to view photographs of the construction project:

[http://www3.newton.k12.ma.us/schoolcommittee/documents/linked\\_resources](http://www3.newton.k12.ma.us/schoolcommittee/documents/linked_resources)

#### IV. Elementary Modular Project:

On January 24, 2013, the Design Review Committee reviewed preliminary site plan options for each modular building site. The DRC's comments on the site plan options require further exploration by HMFH and revisions are in process. On February 6, 2013, the design team met with the Development Review Team (DRT) which is coordinated by the Planning Department for its preliminary review. The next meeting with the DRC will be held on February 21, 2013. Once DRC approval is received, the City's site plan approval process will continue with hearings before the Board of Aldermen Public Facilities and Programs and Services Committees. The preliminary project schedule anticipates bidding and awarding the project in the spring of 2013 for summer 2013 construction. The full cost of the seven modular classrooms is being refined and all costs plus associated sprinkler installation and contingencies are included in the City's Capital Improvement Plan.

#### V. MSBA 2013 SOI Process:

The MSBA's FY13 Statement of Interest (SOI) Process opened on Wednesday, January 9, 2013 and extends through Wednesday, April 10, 2013. The Statement of Interest is the first step in the school building construction process allowing districts to inform the MSBA about facility deficiencies that inhibit the delivery of the district's educational program. On December 12, 2012, the School Committee voted that Cabot Elementary School is designated the district's next highest priority major project after Angier Elementary School for submission to the MSBA in its FY13 SOI process. As a result, work is in process to answer the MSBA's SOI questions. Carol Chafetz is coordinating and completing the SOI and working collaboratively the principal, the Public Buildings Department and school administration. Although votes were taken by the School Committee and the Board of Aldermen to approve the submission of a Cabot SOI in prior years, the MSBA requires that new votes be taken after this year's update of the SOI. As a result, to meet the April 10, 2013 submission deadline the following tentative schedule is proposed:

- 2/25/13 School Committee vote to approved SOI submission followed by docket request to the Clerk of the Board of Aldermen
- 3/6/13 Tentative hearing before Public Facilities and Programs & Services Committees
- 3/18/13 Full Board of Aldermen Vote

A draft of the Cabot Statement of Interest is attached for your review. After all approvals are received, the SOI will be downloaded into the MSBA's website template for submission.

#### VI. Safety and Security Project:

The Operations Department conducted a survey of all elementary and middle school principals and after care and pre-school directors to assess their preferred locations, including handicap accessible doors, for a camera/buzzer system for building access by the public. This survey was given to the Public Buildings Department which conducted site visits to each building with its security and door contractors to determine wiring and door equipment needs. The contractors will submit their cost proposals to the City for review by February 13, 2013.

Attachment

# Massachusetts School Building Authority

---

School District: Newton

District Contact: David Fleishman TEL: (617) 559-6100

Name of School: Cabot

Submission Date:

**Potential Project Scope:** Major Project

**Is this SOI the District Priority SOI?** NO

**The MSBA ID for the District Priority SOI:** 2009 A. E. Angier

**District Goal for School:** Please explain the educational goals of any potential project at this school

Upon completion of the Angier School building project, Cabot Elementary School is the City of Newton and Newton Public Schools' next priority school with respect to reimbursement from the MSBA for the construction or renovation as outlined in the Cabot School SOI. The City and school district's goal is to have new or renovated schools that meet the school district's standards for teaching and learning. The district seeks high performance design elements that extend beyond minimum building codes. These standards promote: a school facility and site plan that advances the health and wellbeing of users of the facility; a school that is efficient in its use of materials and resources and is easy to operate and maintain; a school that is safe and secure; a school that will accommodate future programmatic changes while maintaining its standards of performance and reliability. The expectation is that high performance standards utilizing proven technologies will create a state of the art school that will complement and fit well within the context of the site and surrounding neighborhoods, be a model of energy, water, and materials efficiency, and be cost effective to maintain over the lifetime of the building. Specifically, the following educational and building specifications are desired:

## Educational Specifications

- Core classrooms shall be 850 net square feet with sinks
- Kindergarten classrooms shall be 1000 net square feet with toilet rooms located within or nearby
- Gymnasium shall be 3000 NSF (one station) in a school housing less than 400 students and 6000 net square feet (two stations) in a school housing up to 450 students. In a larger building, a 6000 square foot gym will allow two classes of physical education to meet at the same time.
- Dedicated After School classroom, office and storage
- Special Education Programs, including self-contained classrooms, resource rooms, and other ancillary support space, may total approximately 3500 square feet in a school housing less than 400 students, 7000 square feet in a school housing up to 450 students.

While self-contained classrooms are located at selected schools, other programs, offices and related support spaces are required at all of Newton's elementary schools:

- Speech & Language Program
- Learning Center office and teaching space
- Reading Program/Literacy Room
- ELL Program
- Occupational and Physical Therapy Programs
- Quiet room for students who need to regulate their behavior
- Psychologist
- Social Worker
- Inclusion Facilitators' office
- Literacy Specialist office and teaching space

- Small Group Tutorial Space
- Library
- Nurse's office
- Principal's and administrative suite with conference space
- Workroom for copier, paper cutter, laminators
- Teachers' room
- Storage both general and specific (Art)

The following program areas that are not currently provided at all elementary schools are included in the educational specifications:

- Cafeteria with stage for school performances
- Kitchen adjacent to cafeteria
- Dedicated Art and Music rooms, with the required storage
- Maximum access to natural daylight throughout the building
- Superior ventilation
- Superior acoustic environment
- Reliable and flexible control of the internal environment
- A design that feels welcoming throughout the facility
- A building that enhances the function of teaching and learning, including areas for chance encounters between students and adults and spaces that facilitate private student/teacher conferences
- A design that is easy to navigate
- A design that provides efficient and reliable use of resources in building operations and maintenance at the lowest cost
- A design that satisfies lifecycle costing to achieve reduced demand for natural resources (energy, water)
- Safety and security including controlled building access and a design that maximizes natural supervision of space
- Flexibility to accommodate change
- Anticipate changing student/staff spatial needs
- Anticipate changing technology for major systems

**District's Proposed Schedule: What is the District's proposed schedule to achieve the goal(s) stated above?**

To achieve the City's goal of providing new or renovated schools that meet the district's standards for teaching and learning for all students, the School Committee, the Mayor and the Board of Aldermen have approved the priority order of the SOI's for replacement elementary schools. The City has approved and allocated funds for the feasibility study for the Angier School, which is in process with the MSBA. The City is holding a special election on March 12, 2013 seeking an override of Proposition 2 ½ for amounts required to pay for the bonds issued in order to renovate or replace the Angier Elementary and the Cabot Elementary Schools. The City has also funded design for the renovation and repair of the former Carr School building, which will be used to house the students during the building and repair process. Final votes for construction funding are anticipated by April 2013 at which time the project will be advertised for construction bids and filed sub-bids.

**Is this part of a larger facilities plan? YES**

**If "YES", please provide the following:**

**Facilities Plan Date:** April 2012, first draft Long Range Facilities Plan completed in-house; November 2011, updated from June 2007, Long Range Facilities Plan completed by outside vendor

**Planning Firm:** HMFH, Architects Inc.

**Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:**

During the spring of 2012, the district presented the first draft of a Long Range Facilities Plan to the School Committee and to the Board of Aldermen of the City of Newton. As part of overall City planning and the district's strategic plan, the draft focused solely on the elementary schools with the goal of creating additional capacity to address growing enrollment, improving facilities, and balancing feeder patterns to the two high schools. The draft Long Range Facilities Plan offered two scenarios with differing timelines during which larger projects such as the replacement or renovation of Angier and Cabot Schools alternated and overlapped with mid-range projects to add capacity at other schools. The plan depicted in detail how many classrooms were added each year to ameliorate classroom shortages for both regular education needs as well as the needs of special populations. The HMFH Long-Range Facilities Master Plan, updated in November 2011, provided the City of Newton and the Newton Public Schools with space needs assessments, space standards, facility conditions, and long-range utilization plans for the elementary and middle schools. The study consisted of educational and facility standards, enrollment projections, facilities assessment, and system-wide options. Note that seven of Newton's elementary school buildings are greater than 50 years old and four are greater than 80 years old. Five buildings have undergone renovations and/or additions in the last 12 years. The remaining facilities are outdated and have code-related deficiencies. Many of the educational spaces do not meet today's standards. Educational standards were developed for elementary, middle and pre-school programs using MSBA guidelines as a reference to develop Newton-specific requirements to meet the needs of Newton's inclusive programs. Facility standards were developed to reflect the preferred materials and systems. These standards provide a benchmark to assess the existing educational spaces and facility conditions. The November 2011 update of the Master Plan by HMFH utilized October 1, 2011 enrollment projections extending up to ten years. To ensure a consistent comparison and rating, the same group of professionals at HMFH conducted the Master Plan update. Based on detailed and objective assessments of each property with regard to educational space needs, facility conditions, and enrollment projections, a numerical evaluation was assigned to each property. Representatives of each school completed assessment Questionnaires. The responses identified how well each building meets the physical space and educational needs of the programs and its occupants. Each assessment provided the number of classrooms required to accommodate the projected enrollment, distributed the elementary population evenly between the north and south sides of the city, upgraded all the schools in need of improvement over the long term, and provided for future flexibility and on-going reassessment of the master plan.

Cabot Elementary School is rated at the highest level of need in terms of facility condition index and educational space needs in the long-range master plan. This rating reflects undersized classrooms, low net square feet of space per pupil, and minimal sizes and quantity of shared spaces. Many of the deficiencies are due to the age of the building. Educational requirements have changed dramatically in the past 84 years. Constructed in 1929, Cabot is the fourth oldest building in the Newton school system. There have been no major improvements; minor improvements include upgrades to fire alarm, telephone, and sound/intercom systems and lighting. Most interior finishes are original and are worn and/or do not meet current code requirements. The building has minimal accessibility for the physically disabled; there are only exterior ramps to the ground floor. Most classrooms are undersized at an average of 790 square feet, not including the modulars. There is no cafeteria and no auditorium. The corridors are used for small group teaching space. The net square feet per pupil of 66 is low in comparison with MSBA guidelines of 113 NSF/pupil. Cabot has only a wood platform stage in the gym for performance space. It has no auditorium or cafetorium. Cabot is currently overcrowded by 36 students and is projected to grow by 22 students in the next five years. It has been designated by the district and the City as the second highest priority school in need of replacement after the Angier School. A feasibility study will determine the scope of the project based on enrollment projections at that time.

**Please provide the current student to teacher ratios at the school facility that is the subject of this SOI:** 21 students per teacher (420 students within 20 classrooms).

**Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI:** 21 students per teacher.

**Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District?** YES

**If "YES", please provide the following:**

**Please provide the author and date of the District's Master Educational Plan. (Maximum of 500 characters)**

Vision 2020, Newton Public Schools Strategic Plan, Fall 2012 Update, authored by the District's Strategic Planning Committee.

One goal of the Strategic Plan is to ensure up-to-date teaching and learning environments by: developing steps to address the short- and long-term needs of all facilities; engaging in financially sustainable multi-year financial planning; building network infrastructure that support robust access to the internet and allows students to learn anywhere, anytime.

**Is there overcrowding at the school facility?** YES

**If "YES", please describe in detail, including specific examples of the overcrowding.**

The overcrowding at the Cabot Elementary School has a direct impact on student learning and instructional best practices. Due to overcrowding issues and space constraints, over the years, Cabot teachers and specialists have become very creative finding spaces to teach. Many of these "spaces" are tables in the hallway or small closet areas without adequate ventilation or windows. Small group and individual instruction takes place in the hallway, which is a distracting environment and potentially stigmatizing for the students. For the students who require small group instruction, the overcrowding has not allowed for comparable learning spaces to larger group instruction. There are no private, quiet spaces for students to focus on learning.

Cabot has one co-taught integrated classroom in Grade 5, which means that there is a regular education teacher, a special education teacher and a fulltime intern in that room. 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 inclusion and integrated students. In addition, there are the following significant space constraints:

- After School program has no dedicated space and must use the corridors; the After School office shares space with the custodian.
- Special Education quiet room is in the old kitchen space, a small partitioned area in the lobby.
- Art and Music have both been relocated to a temporary modular building.
- Inclusion Facilitator's office is in a small 15x11 office.
- Stage in the gymnasium is used for storage. There is no fully functioning cafeteria; students eat in a converted classroom.
- Food service warming kitchen was created out of space in the lobby area and is not adjacent to the lunchroom.
- Most classrooms are undersized and smaller than Newton and MSBA guidelines.
- There are no areas to hold whole school assemblies; the gymnasium is used for assemblies but cannot accommodate the entire school population.
- The Literacy Program, English Language Learners, and Math Coach share one room.
- The Learning Center room is shared by two learning center teachers, an occupational therapist, physical therapist and speech/language pathologist.

- There is a lack of meeting space for monthly IEP meetings for the 14 inclusion students and the bi-weekly PLC meetings.
- All the staff for mental health services shares one small room creating challenges for testing, counseling individuals and groups and meeting with parents.
- There is a lack of sufficient space during MCAS testing; as a result, all spaces allocated to other grades/specialists are taken.
- Storage units for instructional, art and music materials are located in hallways due to small classrooms.

**Has the district had any recent teacher layoffs or reductions? NO**

**If "YES", how many teaching positions were affected?**

**At which schools in the district?**

**Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).**

**Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).**

**Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.**

Does Not Apply

**Please provide a detailed description of your most recent budget approval process including a description of any budget reductions and the impact of those reductions on the district's school facilities, class sizes, and educational program.**

Newton's FY13 School Committee Approved Budget is \$178.8 million, or \$6.9 million (+4%) greater than FY12. The budget process began in December 2011 with the approval by the School Committee of the FY13 Budget Guidelines, with emphasis on educational and operational infrastructure, breath of program, realistic class sizes, and support for student services. The FY13 budget is a result of significant cost savings including the successful negotiation of all collective bargaining agreements including wages and benefits, to allow for growth of less than 2.5% annually. Notwithstanding unprecedented enrollment growth over the past nine years, which is expected to continue for at least the next five years, the FY13 budget contained no cuts to teachers at any grade level; this was a significant change from recent years when staffing reductions were required. Cost savings of \$1.2 million annually have been achieved by the outsourcing of the food service program. Full implementation of new fees also served to ameliorate the need to cut instructional staff. For the first time, in FY12, student services, including special education, had an annual operating budget surplus with the successful implementation of cost savings initiatives. Efforts to lower energy costs have also paid off. Major challenges for the district include immediate short and long term space constraints at the elementary and middle schools, the need to upgrade aging and poorly maintained school buildings, and the requirement for increased support to maintain and upgrade technology.

## General Description

---

**BRIEF BUILDING HISTORY:** Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

Cabot School was built in 1929 with an addition constructed in 1957. It is one of four elementary schools in Newton that was constructed prior to 1930, and expanded 30 years later in 1957 to accommodate the post-WWII enrollment boom. The three-story 43,584 GSF Cabot School sits on 1.78 acres of land. The addition in 1957 added 11,000 square feet including a multi-purpose gymnasium, three classrooms, and a kindergarten room, toilet rooms and storage space, a small kitchen, and a lobby. The steel single-pane storefront system is from the 1957 addition and is in poor condition. Along with creative reassignment of spaces, capacity issues have been addressed at Cabot by adding two modular classrooms of 2980 square feet in 1991 and two more modular classrooms and a connector totaling 2500 square feet in 2007. Because Cabot School sits on a small 1.78 acre parcel of land abutting public roads on two sides and residential properties on the remaining two sides, the school cannot reasonably expand further. The mechanical system is original to the building and past its normal useful life. There was a new boiler installed in 2010; however, the HVAC infrastructure has outlived its useful life despite ongoing repairs and preventive maintenance. The steam distribution system has aged to a point where system pressure cannot be maintained without the boiler running on high fire. Additionally, this condition causes a constant makeup water feed, which further deteriorates the piping. One of the main six-inch steam lines actually runs under the parking lot outside the building for over 100 feet. With no insulation, the portion of the building that this serves is constantly chilly. Steam leaks in the crawl spaces throughout the building produce a constant musty smell. The heating control system has failed. The condensate vacuum system has failed. Corrosion of the steam pipes has reduced inside pipe diameter to the point that there is very little flow or heat transfer. There are no digital controls for the systems and no occupancy sensors for the lighting. The original shingle roof does not meet current energy code requirements. Exterior windows have inefficient single-pane glazing. A school building security project was implemented, funded through a Homeland Security Grant, providing installation of electronic access card readers on two exterior doors. All appropriate staff have electronic access via a key fob device. Access to the building is much more secure and records of access by individuals are monitored via a live database. The grant also funded installation of new classroom door locks, which enable a teacher to secure the classroom from the inside. In 2013, a video/buzzer monitoring system is in the process of being installed at two entrances.

**SITE DESCRIPTION:** Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site (maximum of 5000 characters):

Built in 1929 with an addition constructed in 1957 and modulars added in 1991 and 2007, the three-story 43,584 gsf Cabot School sits on 1.78 acres of land surrounded by a dense residential neighborhood and the Cabot Park. The parking lot is made of bituminous concrete and is in poor condition with potholes. The concrete curb ramp and entrance ramp and stair are also in poor condition. Sidewalks are concrete and bituminous and are in fair condition. The concrete ramp to the play area entrance is in poor condition. The wooden stairs and ramp that allow access to the school from the parking area are in good condition. A brick seating area on the north side of the school serves as an outdoor classroom and is in good condition. There is a turf field with a skinned base area, used for Little League baseball and soccer, which is not accessible. Mature trees surround the front of the school, play area, and turf. Play structures consist of five steel structures and wooden swings which are in fair condition but not accessible. A bituminous concrete paved area is located at the front of the school for ball sports. Recycled composite benches are located by the fields and seating area. There is a metal bike rack on site. A chain link fence found at the perimeter is in fair condition. Exterior lighting was upgraded to LED fixtures for energy conservation and safety in 2012.

**BUILDING ENCLOSURE: Please provide a detailed description of the building enclosure, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters):**

Cabot School has an asphalt shingle pitched roof over the main building with no active leaks. There is also a flat rubber roof with no active leaks and a metal edge in good condition. The original shingle roof does not meet current energy code requirements. Exterior walls are load-bearing masonry/concrete and are not insulated. The sills/stone detailing at the main façade is in good condition, all original, but there are minor cracks and staining at masonry and lintels. Windows are aluminum with thermal break and glazing, fixed, hopper and awning types with opaque panels at the top. Replacement glass is plexi-glass/lexan. Metal louvers are dented, rusted, and peeling. The steel single-pane storefront system is from the 1957 addition and is in poor condition. Exterior hardware is metal, aluminum, and wood and is non-accessible. Exterior steps and ramps are in fair condition with deteriorating concrete and rusting railing supports. Some railings do not meet accessibility code. There are no structural concerns.

**Has there been a Major Repair or Replacement of the EXTERIOR WALLS? YES**

**Year of Last Major Repair or Replacement:** 1957

**Description of Last Repair or Replacement:** Repairs were made in a 1951 renovation and in the 1957 building addition.

**Has there been a Major Repair or Replacement of the ROOF? Yes**

**Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe))** Slate, 1936  
Rubber, 1992

**Year of Last Major Repair or Replacement:** 1992

**Description of Last Repair or Replacement:** Roof replacement in 1992. Additional repairs were made in 2012 to slate, rubber membrane, flashing gutters and downspouts.

**Has there been a Major Repair or Replacement of the WINDOWS? YES**

**Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))**

Single pane, 1936

Thermopane, 1982

**Year of Last Major Repair or Replacement:** 1982

**Description of Last Repair or Replacement:** Windows were replaced in 1982.

**MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems, and any known problems or existing conditions (maximum of 5000 characters):**

The HVAC system is steam fired by gas. There are unit ventilators in classrooms, some with companion exhausters. There is A/C in the office (window units) and modulars. There are two boilers, one original to the building and the other installed in 2010. The burners were replaced in the 1970s. As the result of a 2012 energy conservation project, steam traps were replaced to improve the flow of steam heat throughout the building and a heat timer was installed on the boiler to regulate boiler operation based on outside air temperature.

Despite these improvements there are major heating infrastructure problems including leaking steam pipes, inoperable pneumatic controls, and unit ventilators that have outlived their useful life. Plumbing is original and fixtures are not accessible. There is no domestic hot water throughout all areas of the building. The domestic water piping is corroded with pitting on the inside, leaks are patched with clamps. There is no fire protection in the school. Electrical service is 600A, three phase, 4 wire, and 120/208V and is over 50 years old. There are insufficient working clearances as well. Also over 50 years old are the circuit breaker panel boards with conduit and the wire feeder. The emergency system is a 10kW gas generator in the boiler room; it serves corridor and stair lighting. Again, there are insufficient working clearances located

in a two-hour fire rated room. The fire alarm system is multi-zone but is not ADA compliant. There are smoke detectors in the library and corridors, door holders, and an exterior master box. However, the alarm cannot be heard throughout the building.

**Has there been a Major Repair or Replacement of the BOILERS? YES**

**Year of Last Major Repair or Replacement:** 2010

**Description of Last Repair or Replacement:** boiler replaced

**Has there been a Major Repair or Replacement of the HVAC System? YES**

**Year of Last Major Repair or Replacement:** 1989

**Description of Last Repair or Replacement:** New unit ventilators

**Has there been a Major Repair or Replacement of ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES**

**Year of Last Major Repair or Replacement:** 1988

**Description of Last Repair or Replacement:** Electrical upgrades were made during renovations or in areas where modulars were installed.

**BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters):**

The building's interior partitions are painted plaster and concrete and painted gypsum wallboard that is patched, peeling, and cracked. Door surrounds do not meet the accessibility code. Floors are VCT, VAT, sheet vinyl and carpet and, generally are in poor condition, although some floor tiles were replaced in the summer of 2010. Ceilings are painted plaster, 2x4 ACT and 2x2 ACT. Doors are solid wood core with metal framed, and are original. Hardware is also original and is non-accessible. There are some built-in furnishings of wood, laminate, and metal, all original and in fair condition. Wood cubbies and metal lockers of variable sizes are in fair condition; many are relocated from other schools. Window treatments are rolling shades, but in good condition. Bathrooms are non-accessible. Adult bathrooms are painted plaster and gypsum wallboard with VCT and VAT, and wood or metal partitions. These are original. Student bathrooms are made of glazed or painted CMU with ceramic tile floors and walls; partitions are metal. Student bathrooms are also non-accessible. Stairs are painted concrete with steel nosing and wood or metal hand rails and are non-accessible. There is no elevator in the school. Plastic plaques are installed as signage, but do not include Braille. The gymnasium has a wood athletic floor and backstops, wood paneling and painted CMU above with exposed acoustic deck, original and in good condition. There is a wood platform with fabric curtains that is not accessible. The only kitchen is a warming kitchen. Among code concerns: the majority of the building is inaccessible, hardware is inaccessible, open cubbies create a flammability risk and no visual of the front entry creates a security risk. The telephone system is new and has multiple outside lines. The lighting system is generally 2x2 recessed with surface wraps and surface metal box fluorescents, and is not energy efficient. Receptacles are standard duplex type, some are 50 years old. There is a keypad at the custodian door, motion detectors in corridors and main office, and monitor switches on exterior doors that notify the UL Central Station. A push button at the rear and front entrance as well as in the main office serves as doorbells. Classrooms and most offices have speakers for the intercom/sound system, as do the corridors and the gymnasium. Classrooms and offices have battery-operated clocks, the corridors and classrooms have bell tones. Data is located in classrooms and office areas, but there is minimal wireless coverage. There are cable outlets in the science classroom and an adjacent room as well.

**PROGRAMS and OPERATIONS: Please provide a detailed description of the current programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc.:**

Programs offered:

- Classrooms for each grade
- Special education services (academic instruction), occupational therapy, physical therapy and speech and language share one room
- English Language Learners, Literacy program and math coach share one room
- Psychologist
- Inclusion Facilitator
- Nurse, principal, administrative offices
- After School

Programs with components not offered due to facility restraints:

- After School is very constrained for space; office is shared with the custodial staff
- Spaces for small group instruction for regular and students with special needs
- Quiet/safety space needed for students to regulate their behavior
- Small learning spaces for discrete trial training provided by behavior therapists
- Tutorials
- Rooms for parents to gather
- Cafeteria
- Multi-purpose spaces
- Rooms for instrumental music
- Assembly space for the whole school and performances
- Newton Community Education programs

**CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, and a description of the media center/library (maximum of 5000 characters):**

Cabot has 20 core instructional classrooms with an average size of 790 NSF

14@ 740 NSF

1@ 844 NSF

2@ 886 NSF

1@ 929 NSF

2@ 900 NSF (modulars)

In addition, there are:

812 NSF Art room in a modular structure

929 NSF Music room in a modular structure

808 NSF Learning Center room is shared by the following programs: special education services, speech and language, occupational and physical therapy, psychologist and social worker

875 NSF Academic center room houses English Language Learners, Literacy program and math coach

The library is a converted classroom space and has only 1,116 NSF; it contains approximately 12,500 titles with 21,500 copies.

There is no whole school assembly space as there is neither a cafeteria nor auditorium. Due to Fire Department regulations limiting occupancy in the gymnasium, the 2,400 NSF space is unable to hold the entire student body.

**CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters):**

Cabot School is over capacity based on its current enrollment of 420 students and its current programs and spaces. When using the standard 40 square feet per pupil classroom size, Cabot should have a maximum of 339 students without consideration of the modular classrooms, and 384 if the modulares are considered in the calculation. This does not take into account the deficient spaces and nonexistent programs. When factoring in future enrollment projections showing an additional 20 students and that Cabot currently does not have the educational spaces required to meet Newton standards nor MSBA guidelines, Cabot is greatly over capacity. Cabot School has a mere 43,584 gross square feet (including 4 modulares) with a high net to gross area ratio of 1.60. Despite every conceivable space being used for educational purposes it has a low net square feet per pupil of 66 nsf/pupil, which is significantly lower than the MSBA space guidelines of 113 NSF per pupil. Cabot School is 100% utilized.

**MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the including if any override or debt exclusion votes were necessary (maximum of 5000 characters):**

Regular maintenance and preventive maintenance (PM) programs are funded annually by City Charter funding with a requirement of up to 2% of the prior fiscal year's school budget and City capital funds from bonding/free cash.

PM and regular maintenance work orders are processed in a web-based electronic system enabling efficiency and data gathering. Custodians receive annual training on PM procedures. PM program includes:

- Asbestos inspection every 3 years
- Boiler cleaning annually
- Elevator inspection
- Emergency generator inspections monthly
- Fire suppression testing annually
- Replacing carpet with vinyl tile
- HVAC maintenance including duct cleaning
- Infrared roof inspection
- Steam trap replacement
- Univent filter changes 3x/year

The Summer Projects Program tailors repairs and improvements to each building, including items such as painting, flooring, bathroom upgrades and space re-organization to meet enrollment/programmatic demands. Capital funds pay for larger repairs from a plan formulated jointly with the Public Buildings Department and include:

- Accessibility improvements
- Communication system upgrades
- Masonry repairs/waterproofing
- Generators
- Major HVAC system repairs, including replacement of boilers, roof top units, univents
- Energy efficient lighting installation
- Roof/gutter replacements
- Window/door replacements

## **Priority 2: Elimination of existing severe overcrowding**

**Any district that chooses to select Priorities 2, 4, or 6 will participate in enrollment discussions with the MSBA prior to being invited into the Capital Pipeline. Specifically, much of the enrollment projection collaboration now occurs when the district is invited into the MSBA's Eligibility Period.**

**The MSBA has published in its regulations and guidelines space standards for new schools. These space standards may not necessarily be applicable to reconstruction, renovation, or repair projects and should not be used for assessing safety standards or educational adequacy of existing facilities that were constructed in accordance with the standards and guidelines that prevailed at the time of construction. Districts should not check Priorities 2, 4, or 6 for overcrowding if the basis for their selection is solely a comparison of their current educational space versus the MSBA's space standards for new facilities.**

### **Priority 2, Question 1. Please describe the existing conditions that constitute severe overcrowding.**

Cabot School is currently overcrowded based on its current enrollment of 420 students and its current programs and spaces. When using the standard 40 square feet per pupil classroom size, the Master Plan updated in November 2011 by HMFH Architects stated that Cabot should have a maximum of 339 students without consideration of the modular classrooms, and 384 if the modulares are considered in the calculation. This capacity calculation does not take into account the deficient spaces and nonexistent programs. When factoring in future five-year enrollment projections showing an additional 22 students and the fact that Cabot currently does not have the educational spaces required to satisfy either Newton standards or MSBA guidelines, Cabot will become increasingly overcrowded in the future. Cabot School has a mere 43,584 gross square feet with a high net to gross area ratio of 1.60. Despite every conceivable space being used for educational purposes it has the lowest net square feet per pupil in the Newton school system of just 66 nsf/pupil, which is significantly lower than the MSBA space guidelines of 113 NSF per pupil.

### **Priority 2, Question 2. Please describe the measures the School District has taken to mitigate the problem(s) described above.**

Newton has completed a Long-Range Facilities Master Planning process to address overcrowding on a district wide basis. Enrollment has experienced eight consecutive years of growth with 902 students added from 2005 to 2012. This year (2012-13) there were 103 additional elementary school students and the current K-5 elementary school population is the highest since the mid-1970s. To mitigate the problem, the district has added 12 modular elementary classrooms since 2007 for a total of 21 elementary modulares. The district is also currently designing 7-9 additional elementary modulares to be in place by September 2013. The district is also working with the MSBA to conduct a feasibility study for the Angier Elementary School, which if reconstructed will enlarge the school building and increase capacity. Despite these mitigating measures on a school-by-school basis there continues to be overcrowding due to inadequate facility sizes (gymnasiums, cafeterias, specialist spaces) and inappropriate educational spaces in basements and hallways. Although the Cabot School population is projected to increase by 22 students in the next five years, there are few remaining options for creative reassignment of space and or adding more than the existing four modular classrooms. Cabot School sits on 1.78 acres of land abutting public roads on two sides and residential properties on the remaining two sides; the school cannot reasonably expand further.

### **Priority 2, Question 3. Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.**

Most of Newton's elementary schools are over 50 year old, with four over 80. The buildings are crowded for two reasons. First, net growth at the elementary schools is projected to continue following an increase of 852 students, or 17%, since 2003-04. Newton has 21 modular classrooms in place to deal with the elementary increases, four added last year. Newton also converted spaces not originally intended as classrooms into classrooms thus creating more classrooms in buildings than the core facilities (library, multi-use spaces) can support. Five schools have no auditorium/multi use spaces, limiting large group gatherings. No school has a traditional cafeteria close to the warming kitchen, but some schools have crafted an eating area in a corridor or on the auditorium stage. However, many children must eat lunch in their classrooms. The second reason for crowding is that the buildings were built in a different era for a different educational program than the one Newton offers today. Over the years classrooms and other spaces were converted to accommodate these new needs. When built, Newton schools did not have special education and ELL programs in neighborhood schools, children went home for lunch, kindergarten was a half-day double session, no After School programs existed, nor was there dedicated space for art and music instruction. Newton provides an inclusive special education program in its elementary and middle schools, but none of the buildings are fully ADA compliant. There are special education services that are provided outside of the general education classroom that require ancillary spaces for occupational and physical therapy, speech and language therapy, music therapy, social pragmatics, academic instruction and counseling. Teachers and specialists have become creative in finding spaces to teach. Many of these spaces are tables in hallways, small closets and former storage spaces with inadequate ventilation and lighting.

Cabot has no auditorium or cafeteria. There are five lunch periods in a crowded former classroom converted to a lunchroom and all Grade 1 students continue to eat lunch in their classrooms. The lunchroom is not adjacent to the warming kitchen. The small 2,400 sq. ft. gymnasium has a small platform area that serves as a stage; however, the gymnasium is not large enough for the entire student body to assemble. Two former classrooms are being used as specialist offices and some share as many as ten staff and five aides at one time. The ability to have private tutorial space is non-existent. There are tables and chairs in hallways that are already crowded with cubbies and storage cabinets for curriculum materials and copying machines. The building does not support its current enrollment. And with a projected increase of 22 more students in the next five years, the overcrowding is extreme. The negative impact on teachers and student learning only increases when they do not have access to quiet, well-ventilated space in which to teach and learn without distraction. With the majority of classrooms being less than 800 sq. ft., classrooms are noisy and difficult to organize. Often educational materials are not readily available as they are stored in cabinets in the hallways. Despite ongoing repairs, the mechanical, electrical and plumbing systems are old and inefficient, providing an uncomfortable learning environment when rooms are too hot or too cold. Ventilation is below standard and missing in some spaces. The building is not fully accessible. Inadequate electrical infrastructure prevents classrooms from adequately supporting the technology that supports 21<sup>st</sup> century education.

**Please also provide the following:**

**Cafeteria Seating Capacity: 75**

**Number of lunch seatings per day: 5**

**Are modular units currently present on-site and being used for classroom space: YES**

**If "YES", indicate the number of years that the modular units have been in use: 18**

**Number of Modular Units: 4**

**Classroom count in Modular Units: 4**

**Seating Capacity of Modular classrooms: 25**

**What was the original anticipated useful life in years of the modular units when they were installed:**

15

**Have non-traditional classroom spaces been converted to be used for classroom space: YES**

**If "YES", indicate the number of non-traditional classroom spaces in use: 4**

**Please provide a description of each non-traditional classroom space, its originally intended use and how it is currently used:**

- Modularity installed 1991 (2 classrooms), 2007 (1 art, 1 music)

**Priority 2, Question 4. Please explain any recent changes to the district's educational program, school assignment policies, grade configurations, class size policy, school closures, changes in administrative space, or any other changes that impact the district's enrollment capacity (maximum of 5000 characters):**

The Newton Public Schools instituted a full neighborhood inclusion program in the 1990s and all school facilities have been adapted to meet the needs of all students. For example, regular classroom space has been used for special education programs; office space for support services such as speech/language, occupational therapy, physical therapy, social workers, psychologists, and inclusion facilitators has been created out of existing space. In many instances these spaces are in former closets, storage rooms, and rooms without proper lighting or privacy. Handicapped-accessible lifts have been installed where needed; however, Cabot School does not have a lift. The addition of programs and staff that address the needs of these learners has had a tremendous impact on school facilities and space availability. In addition to the neighborhood inclusion needs, several of Newton's elementary schools also have citywide special education programs that require the use of classroom space as well, thus putting further pressure on already strained space needs. The district's out-of-assigned district policy recently changed to allow for flexibility in assigning students; key considerations for out-of-assigned district placements include impact on enrollment, staffing and space availability as the student moves up within the school system. The Education Center administrative building has seven integrated pre-school classrooms because they no longer fit into the elementary school buildings. In addition, four integrated pre-school classrooms are located at Lincoln-Eliot Elementary School.

Until recently, elementary schools without auditoriums or other multi-use spaces used gymnasiums for large school gatherings until it was determined that this violated fire code. They now have no large space for the entire school to gather.

Newton is an urban suburb whose demographics have changed over the years. Many students' first language is not English. These ELL students are supported in small group settings and tutorials, thus the need for smaller classrooms and space where they can receive English instruction. Title 1 schools, and subsidized housing are all present in Newton and the city's population is far more diverse than that of the neighboring communities to which Newton is most often compared.

**Priority 2, Question 5. What are the district's current class size policies?**

The class size guidelines recognize that in recent years budget gaps have elevated class sizes. The goal is to keep average class sizes close to current levels and ensure equity across the district; lower class sizes in K-2 are a priority. Creative staffing mechanisms are used to offset higher class sizes by improving the adult-student ratio. Examples include the use of combination classes (K-1), placing 0.5 FTE teachers in classrooms with large class sizes, and the use of class size aides.

**Has the district closed, taken off-line, or converted to another, non-school use, any school facilities within the last 10 years? NO**

**If "YES", please provide the name and address of any such school facility and provide a description of the reasons for removing the school from service:**

**Priority 4:**

**Prevention of severe overcrowding expected to result from increased enrollments, which must be substantiated, as determined in the judgment of the Authority.**

**Priority 4, Question 1. Please describe the conditions within the community and School District that are expected to result in increased enrollment.**

Enrollment in Newton Public Schools has experienced eight consecutive years of growth with 902 students added from 2005 to 2012; growth is expected to continue for the next five years. There are 258 additional elementary students projected in the next five years. This year's kindergarten population of 934 students is 39 more students than last year and the largest since 1975-76. While Massachusetts ranks low in expected school age population growth from 2000-2030 by the Census Bureau, Newton's enrollment projections are not typical of Massachusetts. Student enrollments from four of Newton's largest residential rental complexes have increased. In addition, there is another proposed rental complex in the City's development review process which is expected to generate approximately 45 more students. Through the first eight months of 2012, real estate sales totaled 802 versus 667 in the same period a year earlier. Many realtors indicate that many homes sales are generated by an older population of empty nesters selling to young families.

Cabot School is currently overcrowded based on its current enrollment of 420 students and its current programs and spaces. When using the standard 40 square feet per pupil classroom size, the Master Plan updated in November 2011 by HMFH associates stated that Cabot should have a maximum of 339 students without consideration of the modular classrooms, and 384 if the modulares are considered in the calculation. This capacity calculation does not take into account the deficient spaces and nonexistent programs. When factoring in future five-year enrollment projections showing an additional 22 students and the fact that Cabot currently does not have the educational spaces required to satisfy neither Newton standards nor MSBA guidelines, Cabot will become increasingly overcrowded in the future.

**Priority 4, Question 2. Please describe the measures the School District has taken or is planning to take in the immediate future to mitigate the problem(s) described above.**

Newton has completed a Long-Range Facilities Planning process to address overcrowding on a district wide basis. Enrollment has experienced eight consecutive years of growth with 902 students added from 2005 to 2012. This year (2012-13) there were 103 additional elementary school students and the current K-5 elementary school population is the highest since the mid-1970s. To mitigate the problem, the district has added 12 modular elementary classrooms since 2007. The district is currently planning to add 7-9 additional elementary modulares by September 2013. The district is also working with the MSBA to conduct a feasibility study for the Angier Elementary School, which if reconstructed will enlarge the school building and increase capacity. Despite these mitigating measures on a school-by-school basis there continues to be overcrowding due to inadequate facility sizes (gymnasiums, cafeterias, specialist spaces) and inappropriate educational spaces in basements and hallways. Although the Cabot School population is projected to increase by 22 students in the next five years, there are few remaining options for creative reassignment of space and or adding more than the existing four modular classrooms. Cabot School sits on a 1.78 acre parcel of land abutting public roads on two sides and residential properties on the remaining two sides; the school cannot reasonably expand further.

**Priority 4, Question 3. Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.**

Most of Newton's elementary schools are over 50 year old, with four over 80. The buildings are crowded for two reasons. First, net growth at the elementary schools is projected to continue following an increase of 852 students, or 17%, since 2003-04. Newton has 21 modular classrooms in place to deal with the elementary increases, four added last year. Newton also converted spaces not originally intended as classrooms into classrooms thus creating more classrooms in buildings than the core facilities (library, multi-use spaces) can support. Five schools have no auditorium/multi use spaces, limiting large group gatherings. No school has a traditional cafeteria close to the warming kitchen, but some schools have crafted an eating area in a corridor or on the auditorium stage. However, many children must eat lunch in their classrooms. The second reason for crowding is that the buildings were built in a different era for a different educational program than the one Newton offers today. Over the years classrooms and other spaces were converted to accommodate these new needs. When built, Newton schools did not have special education and ELL programs in neighborhood schools, children went home for lunch, kindergarten was a half-day double session, no after school programs existed, nor was there dedicated space for art and music instruction. Newton runs an inclusive special education program in its elementary and middle schools, but none of the buildings are fully ADA compliant. There are special education services that are provided outside of the general education classroom that require ancillary spaces for occupational and physical therapy, speech and language therapy, music therapy, social pragmatics, academic instruction and counseling. Teachers and specialists have become creative in finding spaces to teach. Many of these spaces are tables in hallways, small closets and former storage spaces with inadequate ventilation and lighting.

Cabot has no auditorium or cafeteria. There are five lunch periods in a crowded former classroom converted to lunchroom and all Grade 1 students continue to eat lunch in their classrooms. The lunchroom is not adjacent to the warming kitchen. The small 2,400 sq. ft. gymnasium has a small platform area that serves as a stage; however, the gymnasium is not large enough for the entire student body to assemble. Two former classrooms are being used as specialist offices, and some share as many as ten staff and five aides at one time. The ability to have private tutorial space is non-existent. There are tables and chairs in hallways that are already crowded with cubbies and storage cabinets for curriculum materials, and copying machines. The building does not support its current enrollment. With a projected increase of 22 more students in the next five years, the overcrowding is extreme. The negative impact on teachers and student learning only increases as students and their teachers do not have quiet, well-ventilated spaces in which to teach and learn without distraction. With the majority of classrooms being less than 800 sq. ft., classrooms are noisy and difficult to organize. Often educational materials are not readily available as they are stored in cabinets in the hallways. Despite ongoing repairs, the mechanical, electrical and plumbing systems are old and inefficient, providing an uncomfortable learning environment when rooms are too hot or too cold. Ventilation is below standard and missing in some spaces. The building is not fully accessible. Inadequate electrical infrastructure prevents classrooms from adequately supporting the technology that supports 21<sup>st</sup> century education.

**Please also provide the following:**

**Cafeteria Seating Capacity: 75**

**Number of lunch seatings per day: 5**

**Are modular units currently present on-site and being used for classroom space? YES**

**If "YES", indicate the number of years that the modular units have been in use: 18**

**Number of Modular Units: 4**

**Classroom count in Modular Units: 4**

**Seating Capacity of Modular classrooms: 25**

**What was the original anticipated useful life in years of the modular units when they were installed?**

15

**Have non-traditional classroom spaces been converted to be used for classroom space? YES**

**If "YES", indicate the number of non-traditional classroom spaces in use: 4**

**Please provide a description of each non-traditional classroom space, its originally intended use and how it is currently used:**

Modulars installed 1991 (2 classrooms), 2007 (1 art, 1 music)

**Priority 4, Question 4. Please explain any recent changes to the district's educational program, school assignment policies, grade configurations, class size policy, school closures, changes in administrative space, or any other changes that impact the district's enrollment capacity:**

The Newton Public Schools instituted a full neighborhood inclusion program in the 1990s and all school facilities have been adapted to meet the needs of all students. For example, regular classroom space has been used for special education programs; office space for support services such as speech/language, occupational therapy, physical therapy, social workers, psychologists, and inclusion facilitators has been created out of existing space. In many instances, these spaces are in former closets, storage rooms, or rooms without proper lighting or privacy. Lifts have been installed where needed. The addition of programs and staff that address the needs of these learners has had a tremendous impact on school facilities and space availability. In addition to the neighborhood inclusion needs, several of Newton's elementary schools also house citywide special education programs that require the use of classroom space as well, thus putting further pressure on already strained space needs. The district's out-of-assigned district policy has changed in order to add flexibility to student enrollment; optional districts where parents had the choice of two schools were eliminated. Instead, optional districts are now known as buffer zones, and the school department reserves the right to assign new families to the least crowded school serving the buffer zone. Over the past two school years, the buffer zone policy has served to ameliorate overcrowding in two schools.

Until recently, elementary schools without auditoriums or other multi-use spaces used gymnasiums for large school gatherings until it was determined that this violated fire code. They no longer have a large space for the entire school to gather.

The Education Center administrative building has seven integrated pre-school classrooms because they no longer fit into the elementary school buildings. In addition, four pre-school classrooms are located at the Lincoln-Eliot Elementary School.

Newton is an urban suburb whose demographics have changed over the years. Many students' first language is not English. These ELL students are supported in small group settings and tutorials, thus the need for smaller classrooms and space where they can receive English instruction. Title 1 schools, and subsidized housing are all present in Newton and the city's population is far more diverse than that of the neighboring communities to which Newton is most often compared.

**Priority 4, Question 5: What are the district's current class size policies (maximum of 500 characters)?**

The class size guidelines recognize that in recent years budget gaps have elevated class sizes. The goal is to keep average class sizes close to current levels and ensure equity across the district; lower class sizes in K-2 are a priority. Creative staffing mechanisms are used to offset higher class sizes by improving the adult-student ratio. Examples include the use of combination classes (K-1), placing 0.5 FTE teachers in classrooms with large class sizes, and the use of class size aides.

**Has the district closed, taken off-line, or converted to another, non-school use, any school facilities within the last 10 years? NO**

**If "YES", please provide the name and address of any such school facility and provide a description of the reasons for removing the school from service:**

**Priority 5: Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, and heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.**

**Priority 5, Question 1. Please provide a detailed description of the energy conservation measures that are needed and include an estimation of resultant energy savings as compared to the historic consumption.**

Constructed in 1929 with an addition built in 1957, and the addition of two modular buildings in 1999 and two modular buildings in 2007, the mechanical systems are outdated and past their scheduled life cycle; and in some cases, original to the building.

There are no digital controls for the systems and no occupancy sensors for the lighting (occupancy sensors have been installed and a very rudimentary DDC system is in the process of being installed). The original slate shingle roof does not meet current energy code requirements (R-38 cellulose insulation was installed in the attic as part of an energy project and that insulation exceeds the stretch code). Walls are not insulated. Exterior glazing is comprised of wood frame or aluminum awning style, or vinyl double hung windows that are all in fair or worse condition and inefficient by today's performance standards. Recognizing that all of our older buildings are energy inefficient, the City of Newton hired a Sustainability Project Manager to oversee sustainability and energy projects throughout city and school buildings. The total number of energy conservation measures that would be needed at the Cabot School is too numerous for a building of this age. Those that are feasible and have a quick payback are being pursued. These include: steam trap replacements, attic insulation, basic energy management system, and energy efficient lighting. The estimated savings in annual heating and electricity costs is \$29,300 with a four-year payback.

**Priority 5, Question 2. Please describe the measures the School District has already taken to reduce energy consumption.**

Newton has recently completed a Long-Range Facilities Master Plan process encompassing all its elementary and middle school buildings. Based on current best practices and Newton's educational mission, educational and building standards that address the reduction of energy consumption have been established as part of the master plan. In recent years, energy efficient lighting has been installed throughout the system by partnering with the NStar Lighting Rebate Program. The City's Public Buildings Department has hired an HVAC specialist who has initiated a preventative maintenance program for the district's heating equipment. The City has also hired a Sustainability Project Manager responsible for evaluating consumption and pursuing options to reduce consumption. The School's Operations Department has hired a building operator responsible for troubleshooting daily building systems operations. The oversight of mechanical and electrical systems by this team has a direct impact on reduced energy consumption and energy expenditures. The district has clear policies and procedures for reducing energy use throughout the day and evening. Heat is not turned on within school buildings until October 15. During the school day thermostats are kept at the lowest possible temperatures and staff and students are reminded to dress warmly and rearrange classroom furnishing to maximize distribution of heat. Similarly, custodians lower thermostats accordingly during the night and on weekends. Policies are in place to shut off lights and use natural lighting whenever possible. The Superintendent periodically sends out reminders regarding these energy conservation policies. There is a staff environmental team in each school that is responsible for encouraging environmental and energy awareness.

In 2012, the City entered into a contract with Thielsch Engineering. This company has conducted an energy audit of the Cabot School and has reviewed the historic consumption of all utilities and calculated the available energy costs savings that will result from recommended energy conservation projects that will deliver those savings. The total number of projects that would be needed at the Cabot School is too numerous for a building of this age. Those that are feasible and have a quick payback are being pursued. These include:

steam trap replacements, attic insulation, basic energy management system, and energy efficient lighting. The estimated savings in annual heating and electricity costs is \$29,300 with a four-year payback.

**Priority 5, Question 3. Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.**

The vast majority of mechanical, electrical, and plumbing systems are original and not up to current code. The impact of this problem is experienced in the teaching and learning environment. Ambient temperatures and air quality affect student and staff comfort levels. Despite repairs and energy conservation improvements, heat continues to be uneven; some rooms are too hot; others are too cold. Ventilation is below standard and lacking in some spaces. Windows are old and do not provide sufficient natural daylight. The school has too few toilet rooms for both students and staff. The building is not accessible or ADA compliant in many ways. Classrooms do not have the ability to adequately support the technology that is part of 21st century education. There are minimal wireless systems and no cable service. There are too few receptacles in classrooms. The phone systems are new but there are no phone lines in classrooms. All of the systems in the buildings are past their useful life affecting comfort and security as well as teaching and learning.

**Priority 5, Question 4. Please describe how addressing the system will extend the useful life of the facility that is the subject of this SOI (maximum of 5000 characters):**

The heating system of a building is a major piece of building infrastructure, and its replacement and/or modernization will extend the useful life of the facility. Since the heating system of this facility was constructed, technology has changed significantly; today there are high efficiency boilers, variable speed drives and sophisticated electronic controls for heating system management. Decreased maintenance needs for heating systems increases not only its useful life, but has a positive effect on the building as a whole. Approximately one-third of the district's maintenance and repair budget is devoted to repairing failing heating equipment. There is an opportunity cost in this scenario whereby other facility systems must compete for dollars. Heating system emergencies take a high priority over other maintenance concerns. Heating system upgrades will reduce the operating cost and allow those dollars to be spent on preventative maintenance and other types of facility improvements. In 2010, Cabot School converted its heating from oil to natural gas, which allows for cleaner emissions and fewer maintenance needs.

The mechanical system is original to the building and past its normal useful life. There was a new boiler installed in 2010; however, the HVAC infrastructure has outlived its useful life despite ongoing repairs and preventive maintenance. The steam distribution system has aged to a point where system pressure cannot be maintained without the boiler running on high fire. Additionally, this condition causes a constant makeup water feed that further deteriorates the piping. One of the main six-inch steam lines runs under the parking lot outside the building for over 100 feet. With no insulation, the portion of the building that this serves is constantly chilly. Steam leaks in the crawl spaces throughout the building produce a constant musty smell. The heating control system has failed. The condensate vacuum system has failed. Corrosion of the steam pipes has reduced inside pipe diameter to the point that there is very little flow or heat transfer.

**Have the systems identified above been examined by an engineer or other trained building professionals? YES**

**If "YES", please provide the name of the individual and his/her professional affiliation:**

**Name:** Josh Morse, Mechanical Engineer, City of Newton

**Professional affiliation:**

**The date of the inspection:** February 1, 2013

**A summary of the findings (maximum of 5000 characters):**

Roof – The roof is asphalt shingle pitched roof over the main building with no active leaks. There is also a flat rubber roof with no active leaks and a metal edge in good condition, The original shingle roof does not meet current energy code requirements. (R-38 cellulose insulation was installed in the attic as part of an energy project and that insulation exceeds the stretch code).

Windows – The exterior glazing is comprised of wood frame or aluminum awning style, or vinyl double hung windows that are all in fair or worse condition and inefficient by today's performance standards.

Boilers and heating and ventilation systems -- The mechanical system is original to the building and past its normal useful life. There was a new boiler installed in 2010; however, the HVAC infrastructure has outlived its useful life despite ongoing repairs and preventive maintenance. The steam distribution system has aged to a point where system pressure cannot be maintained without the boiler running on high fire. Additionally, this condition causes a constant makeup water feed that further deteriorates the piping. One of the main six-inch steam lines runs under the parking lot outside the building for over 100 feet. With no insulation, the portion of the building that this serves is constantly chilly. Steam leaks in the crawl spaces throughout the building produces a constant musty smell. The heating control system has failed. The condensate vacuum system has failed. Corrosion of the steam pipes has reduced inside pipe diameter to the point that there is very little flow or heat transfer.

Accessibility – The building is not ADA compliant as there is no elevator and toilet rooms are not compliant.

## Priority 7

**Priority 7, Question 1. Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs and the facility limitations precluding the programs from being offered.**

The Cabot Elementary School is one of four elementary schools in Newton that was constructed prior to 1930. It was built in 1929 and renovated and expanded in the 1950s to accommodate the post-WWII enrollment boom. Cabot contains 43,584 gross square feet of space and has a high net area of 27,185 net square feet (NSF) (including four modular classrooms), giving it a net-to-gross multiple of 1.60. Most of this usable area is contained in the 20 regular classrooms which have an average size of 790 NSF with a total of 15,705 NSF. Since such a large portion of Cabot's net area is allocated to regular classrooms (13 of which contain only 740 NSF and two of which are modular units), there is very little net area devoted to the special programs, which are a major part of the district's educational program. The library is a minimal 1,119 NSF. There are many programs that have to share space. The Literacy program shares a room with English Language Learners and the math coach. The Learning Center shares a room with occupational therapy, physical therapy and speech and language.

The art room is 812 NSF and the music classroom is 929 NSF (in modulars). The 2,400 NSF gymnasium is small for a 400-student school and there is a stage of 745 NSF at one end of the gymnasium. There is no cafeteria; students eat lunch in a crowded converted classroom and students Grade 1 eat in their classrooms. The Cabot School is missing dedicated facilities for a school psychologist, a guidance counselor, a school social worker, the occupational/physical therapy services, the English Language Learners program and the inclusion program. The Cabot School is an inadequate elementary school facility from an educational standpoint.

**Priority 7, Question 2. Please describe the measures the School District has taken or is planning to take in the immediate future to mitigate the problem(s) described above.**

During the spring of 2012, the district presented the first draft of a Long Range Facilities Plan to the School Committee and to the Board of Aldermen of the City of Newton. As part of overall City planning and the district's strategic plan, the draft focused solely on the elementary schools with the goal of creating additional capacity to address growing enrollment, improving facilities, and balancing feeder patterns to the two high schools. The draft Long Range Facilities Plan offered two scenarios with differing timelines during which larger projects such as the replacement or renovation of Angier and Cabot Schools alternated and overlapped with mid-range projects to add capacity at other schools. The plan depicted in detail how many classrooms were added each year to ameliorate classroom shortages for both regular education needs as well as the needs of special populations. Another important aspect of planning was the HMFH Long-Range Facilities Master Plan, updated in November 2011. HMFH provided the City of Newton and the Newton Public Schools with space needs assessments, space standards, facility conditions, and long-range utilization plans for the elementary and middle schools. The study consisted of educational and facility standards, enrollment projections, facilities assessment, and system-wide options. The on-going intent is to use the Master Plan as a blueprint for mitigating the educational inadequacies of the existing elementary and middle school physical plant.

In the meantime, the City continues to locate additional modular classrooms at those schools experiencing the most severe overcrowding and, where unavoidable, to take over space from special programs to convert to regular classroom use. In addition, the limited use of buffer zones helps to alleviate overcrowding between adjacent schools. While these measures provide some short-term relief, it only points to the need for a comprehensive approach to the City's elementary and middle school educational needs for the next 25 years.

**Priority 7, Question 3. Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.**

Most of Newton's elementary schools are over 50 year old, with four over 80. The buildings are crowded for two reasons. First, elementary enrollment surged over the past eight years and is expected to continue to grow over the next five years. Newton has 21 modular classrooms in place to deal with the elementary increases, four added in 2007. Newton also converted spaces not originally intended as classrooms into classrooms thus creating more classrooms in buildings than the core facilities (library, multi-use spaces) can support. Five schools have no auditorium/multi use spaces, limiting large group gatherings. No school has a traditional cafeteria close to the warming kitchen, but some schools have crafted an eating area in a corridor or on the auditorium stage. However, many children must eat lunch in their classrooms. The second reason for overcrowding is that the buildings were built in a different era for a different educational program than the one Newton offers today. Over the years classrooms and other spaces were converted to accommodate these new needs. When built, Newton schools did not have special education and ELL programs in neighborhood schools, children went home for lunch, kindergarten was a half-day double session, no After School programs existed, nor was there dedicated space for art and music instruction. Newton has an inclusive special education program in its elementary and middle schools, but none of the buildings are fully ADA compliant. Special education services require self-contained classrooms and ancillary spaces for speech and language, occupational and physical therapy and small group tutorial spaces. Teachers and specialists have become creative in finding spaces to teach. Many of these spaces are tables in hallways, small closets and former storage spaces with inadequate ventilation and lighting.

Cabot has no auditorium or cafeteria. There are five lunch periods in a crowded former classroom converted to lunch room and all Grade 1 students continue to eat lunch in their classrooms. The lunchroom is not adjacent to the warming kitchen. The small 2,400 sq. ft. gymnasium has a small platform area that serves as a stage; however, the gymnasium is not large enough for the entire student body to assemble. Two former classrooms are being used as specialist offices and some share as many as ten staff and five aides at one time. The ability to have private tutorial space is non-existent. There are tables and chairs in hallways that are already crowded with cubbies and storage cabinets for curriculum materials and copying machines. The building does not support its current enrollment. With a projected increase of 22 more students in the next five years, the overcrowding is extreme. The negative impact on teachers and student learning only increases as students and their teachers do not have quiet, well-ventilated spaces in which to teach and learn without distraction. With the majority of classrooms being less than 800 sq. ft., classrooms are noisy and difficult to organize. Often educational materials are not readily available as they are stored in cabinets in the hallways. Despite ongoing repairs, the mechanical, electrical and plumbing systems are old and inefficient, providing an uncomfortable learning environment when rooms are too hot or too cold. Ventilation is below standard and missing in some spaces. The building is not fully accessible. Inadequate electrical infrastructure prevents classrooms from adequately supporting the technology that supports 21<sup>st</sup> century education.

# Vote

---

Vote of Municipal Governing Body YES: NO: Date:

Vote of School Committee YES: NO: Date:

Vote of Regional School Committee YES: NO: Date: \_\_\_\_\_

## Form of Vote

The following form of vote should be used by both the City Council/Board of Aldermen, Board of Selectmen/equivalent governing body AND the School Committee in voting to approve this Statement of Interest.

If a regional school district, the regional school district should use the following form of vote.

Resolved: Having convened in an open meeting on \_\_\_\_\_, the  
\_\_\_\_\_ [City  
Council/Board of Aldermen Board of Selectmen/Equivalent Governing Body, School Committee]  
of \_\_\_\_\_  
[City/Town/School District], in accordance with its charter, by-laws, and ordinances, has voted to authorize  
the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated  
\_\_\_\_\_ for the \_\_\_\_\_ [Name of  
School] located at

\_\_\_\_\_ [Address] which  
describes and explains the following deficiencies and the priority category(s) for which \_\_\_\_\_  
\_\_\_\_\_ [Name of City/Town/District] may  
be invited to apply to the Massachusetts School Building Authority in the future \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ [Insert a description of the priority(s)  
checked off on the Statement of Interest and a brief description of the deficiency described therein for each  
priority]; and hereby further specifically acknowledges that by submitting this Statement of Interest, the  
Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an  
application, the awarding of a grant or any other funding commitment from the Massachusetts School Building  
Authority, or commits the \_\_\_\_\_ [Name of City/Town/District] to filing an  
application for funding with the Massachusetts School Building Authority.

**CERTIFICATIONS**

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

**LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR**

**(E.g., Mayor, Town Manager, Board of Selectmen)**

**Chief Executive Chair**

\_\_\_\_\_  
(print name)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Date

**Officer School Committee**

\_\_\_\_\_  
(print name)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Date

**Superintendent of Schools**

\_\_\_\_\_  
(print name)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Date