

## Attachment A

## Massachusetts School Building Authority

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### Next Steps to Finalize Submission of your FY 2021 Statement of Interest

Thank you for submitting your FY 2021 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete.** The District is required to mail all required supporting documentation, which is described below.

**VOTES: Each SOI must be submitted with the proper vote documentation.** This means that (1) the required governing bodies have voted to submit each SOI, (2) the specific vote language required by the MSBA has been used, and (3) the District has submitted a record of the vote in the format required by the MSBA.

- | **School Committee Vote:** Submittal of all SOIs must be approved by a vote of the School Committee.
  - | For documentation of the vote of the School Committee, Minutes of the School Committee meeting at which the vote was taken must be submitted with the original signature of the Committee Chairperson. The Minutes must contain the actual text of the vote taken which should be substantially the same as the MSBA's SOI vote language.
- | **Municipal Body Vote:** SOIs that are submitted by cities and towns must be approved by a vote of the appropriate municipal body (e.g., City Council/ Aldermen/Board of Selectmen) in addition to a vote of the School Committee.
  - | Regional School Districts do not need to submit a vote of the municipal body.
  - | For the vote of the municipal governing body, a copy of the text of the vote, which shall be substantially the same as the MSBA's SOI vote language, must be submitted with a certification of the City/Town Clerk that the vote was taken and duly recorded, and the date of the vote must be provided.

**ADDITIONAL DOCUMENTATION FOR SOI PRIORITIES #1 AND #3:** If a District selects Priority #1 and/or Priority #3, the District is required to submit additional documentation with its SOI.

- | If a District selects Priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- | If a District selects Priority #3, Prevention of a loss of accreditation, the SOI will not be considered complete unless and until a summary of the accreditation report focused on the deficiency as stated in this SOI is provided.

**ADDITIONAL INFORMATION:** In addition to the information required above, the District may also provide any reports, pictures, or other information they feel will give the MSBA a better understanding of the issues identified at a facility.

If you have any questions about the SOI process please contact the MSBA at 617-720-4466 or [SOI@massschoolbuildings.org](mailto:SOI@massschoolbuildings.org).

## Massachusetts School Building Authority

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School District    Lexington

District Contact   Julie L Hackett TEL: (781) 861-2580

Name of School    Lexington High

Submission Date   6/16/2021

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### SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- ☐ The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- ☐ The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- ☐ The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- ☐ The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- ☐ After the district completes and submits this SOI electronically, the district must mail hard copies of the required documentation described under the "Vote" tab, on or before the deadline.
- ☐ The district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- ☐ Prior to the submission of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- ☐ On or before the SOI deadline, the district will submit the minutes of the meeting at which the School Committee votes to authorize the Superintendent to submit this SOI. The District will use the MSBA's vote template and the vote will specifically reference the school and the priorities for which the SOI is being submitted. The minutes will be signed by the School Committee Chair. This is required for cities, towns, and regional school districts.
- ☐ The district has arranged with the City/Town Clerk to certify the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body to authorize the Superintendent to submit this SOI. The district will use the MSBA's vote template and submit the full text of this vote, which will specifically reference the school and the priorities for which the SOI is being submitted, to the MSBA on or before the SOI deadline. This is not required for regional school districts.
- ☐ The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all of the required vote documentation in a format acceptable to the MSBA. If Priority 1 is selected, your SOI will not be considered complete unless and until you provide the required engineering (or other) report, a professional opinion regarding the problem, and photographs of the problematic area or system. If Priority 3 is selected, your SOI will not be considered complete unless and until you provide a summary of the accreditation report focused on the deficiency as stated in this SOI.

**LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR  
(E.g., Mayor, Town Manager, Board of Selectmen)**

**Chief Executive Officer \***

**School Committee Chair**

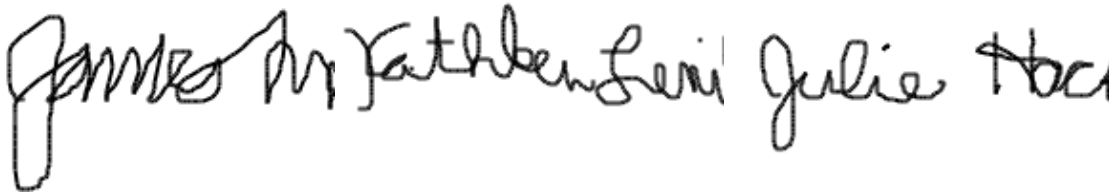
**Superintendent of Schools**

James Malloy

Kathleen Lenihan

Julie Hackett

Town Manager



(signature)

(signature)

(signature)

Date

Date

Date

6/16/2021 6:13:51 PM

6/16/2021 5:45:27 PM

6/16/2021 5:48:03 PM

\* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

## Massachusetts School Building Authority

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School District    Lexington

District Contact   Julie L Hackett TEL: (781) 861-2580

Name of School    Lexington High

Submission Date   6/16/2021

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### Note

Dear Massachusetts School Building Authority,

Please accept our Statement of Interest for Lexington High School. We plan to send all required documentation by certified mail tomorrow. Thank you in advance for your time and consideration.

Sincerely,

Julie Hackett, Ed.D.  
Superintendent of Schools  
Lexington Public Schools  
146 Maple Street  
Lexington, MA 02420

### The following Priorities have been included in the Statement of Interest:

1. ☒ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☐ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☒ Short term enrollment growth.
7. ☐ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☒ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

### SOI Vote Requirement

☐ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using

the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA.

**SOI Program:** CorePotential Project Scope: Potential New School

**Is this a Potential Consolidation?** YES

**If 'YES', Please describe Potential Consolidation that is anticipated at the school.**

We are carefully monitoring enrollment and consolidation opportunities. While this is not a potential consolidation in the traditional sense (i.e., closing one school due to lower enrollments), the Master Planning Advisory Committee continues to explore all creative options to increase space. Consolidation ideas that have been discussed include, but are not limited to: converting the existing high school into a middle school; repurposing the middle school for another elementary school or as a potential high school site. The Master Planning Advisory Committee also has explored the possibility of building two new smaller high schools, given that Lexington will be the fourth or fifth largest high school in Massachusetts.

**Is this SOI the District Priority SOI?** YES

**School name of the District Priority SOI:** 2021 Lexington High

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

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

**Facilities Plan Date:** 5/25/2021

**Planning Firm:** DiNisco Design

**Please provide a brief summary of the plan including its goals and how the school facility that is the subject of this SOI fits into that plan:**

The Lexington School Committee formally approved a facilities master plan on May 25, 2021. Lexington Public Schools engaged DiNisco Design in the completion of a ten-year, detailed facilities master plan. In the same year, a Master Planning Advisory Committee (MPAC) was created, comprising municipal and school community leaders. The detailed 10-year facilities master plan was completed by DiNisco Design just prior to the pandemic in March of 2020, but the MPAC opted to develop a companion document, the LPS Master Planning Compendium. The Compendium was finalized in May, at which time the School Committee unanimously voted to formally approve both documents. The detailed facilities master plan includes the following information: Introduction - goals and objectives; an overview of the master planning process; facilities' existing conditions; educational programming; enrollment projections; evaluation of strategies; land acquisition strategies; integrated design process and construction policy; sustainable design; capital improvement plan; facilities maintenance and log repair; communications; and next steps. Evaluation of Existing Conditions - introduction; existing conditions report, site, and floor plans of each Lexington Public Schools building (i.e., Bowman, Bridge, Estabrook, Harrington, Hastings Elementary Schools; Clarke and Diamond Middle Schools; and Lexington High School). Educational Programming - introduction; an overview of educational program requirements; universal design for learning; 21st century learning environments; facility design capacities (i.e., elementary school education program; middle school education program; and district-wide special education programs); and facility designed capacity enrollment adjustments. District Enrollment Projections - introduction; historic forecasting; current overview of enrollment trends; enrollment projections and methods; and 10-year enrollment projections. Evaluation of Strategies - introduction; educational goals; current facility planning; and elementary, middle, and high school facility strategies. Appendix - enrollment projections; updated current enrollment; a redistricting plan; lists of strategies for elementary and secondary schools; integrated building design and construction policy; capital improvement list; and master planning committee documentation (i.e., agendas, minutes, presentations). The Master Planning Compendium is not an executive summary; it is a companion to the more detailed and technical facilities master plan developed by DiNisco Design. It is the first of its kind in Lexington, designed to be fluid and responsive to variations, such as how to respond to different types of fluctuations in enrollment. We engaged the community in a planning process that prioritizes school-based capital needs through the Master Planning Advisory Committee, a group of municipal and school community leaders who provided extensive input into the document. The Compendium begins with the Superintendent's Foreword and contains the following information: An

Introduction and Plan Highlights - key findings; a summary of recommendations; and an overview of a flexible, responsive, and useful master plan. There were three key findings: (1) Lexington High School is the most critical priority in terms of LPS building projects until 2030; (2) Review of enrollment data indicates that while we focus on the high school, we do not anticipate a need for major expansions at the elementary and middle school level; and (3) In anticipation of new information and acknowledgment of evolving conditions, LPS should strive for a flexible master planning process that includes ongoing review of key reports and other information relevant to capital planning decisions with decision makers. Who Are We and What Do We Believe? - an overview of Lexington's master planning process and how it aligns to the LPS Strategic Plan. Defining the Problem - a description of how, if current projections hold, Lexington High School enrollment is expected to reach its peak with over 2,500 students or 650 students over planned operating capacity. LPS Facilities and Student Assignment - an overview of current school facilities, 2020-2021 (including Table 1 - existing school building information); specialized programs; recent building projects; redistricting and student assignments. Student Enrollment and Trends - enrollment 2020-2021 update (including Table 2 - Enrollment by Grade as of October 1, 2020-2021; Chart 1 - Lexington Public Schools PK-12 annual enrollment; Chart 2 - Lexington Public Schools Grades PK-12 Annual Enrollment; Table 3 - LPS Transfer Reasons FY2020 vs. FY2021); enrollment projections 2020-2021 update (including Table 4 - Current Enrollment Projections with Confidence Intervals). Summary of MPAC Recommendations; Strategies Prioritized by Grade Span, Enrollment Pressure and Associated Costs; Land Swaps or Purchase; High Performance Facilities, etc

**Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 23 students per teacher**

**Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 20 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 author and date of the District's Master Educational Plan.**

The LHS Master Education Plan in the LPS Master Planning Compendium was written by the Superintendent and LHS administrators and Department Heads. 2017 - 2018: Convened a team of 80 stakeholders to create the Educational Vision. 2018-2019: DiNisco Design developed a PK-8 Educational Plan; Superintendent led community-wide effort to develop a new LPS Strategic Plan; 2020-2021: Administration/curriculum leaders co-authored a comprehensive narrative of unmet programmatic needs by department

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

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

Severe overcrowding and enrollment pressures have plagued Lexington High School for years, but recently the situation has worsened. Nearly 100% of existing classrooms are undersized (100% of science rooms and 30% of gen. ed. classrooms do not meet MSBA standard of 850 sf/classroom). Space-mining has become an increasingly complex endeavor, teaching and learning are impacted on a daily basis, and student safety is compromised. Educators are forced to search for space to teach and collaborate, and we must retrofit classrooms to ensure all students have access to their core classes, an unfortunate distraction from teaching and learning in any school community.

A significant and steady uptick in enrollment has translated to an increase of over 1,000+ more students in the district in the past 10 years. In the last several years, we have experienced overcrowding at all levels (elementary, middle and high), but nowhere is the overcrowding felt more intensely than at Lexington High School (LHS). LHS, originally designed to accommodate 1,850 students, currently serves 2,261 students. The recent analysis of our Enrollment Working Group indicates that by 2024-2025, LHS projected enrollment will be 2,500+ and will continue at or near that level for the foreseeable future. When enrollment reaches 2,500+, we will have exceeded our planned operating capacity by nearly 800 students. The idea of accommodating a population of 2,600+ students seems incomprehensible given our current enrollment pressures, and the consequences of the rapid increase in 9-12 student enrollment cannot be overstated.

Overcrowding at LHS has necessitated repeated and inefficient makeshift capital planning exercises described elsewhere in this application. Moreover, overcrowding impacts our ability to deliver an innovative schedule that enables us to meet the 990-hour time-on-learning requirement. The current antiquated 8-period high school schedule assures that we free up approximately 10% more space at LHS, negatively impacting time-on-learning requirements. Finally, in the 2008 and 2019 LHS accreditation reports, LHS was cited for and recently earned a NEASC accreditation rating of “Does Not Meet the Standard” due to the poor condition of the facility. The accreditation team identified overcrowding as a specific concern: “Enrollment has outpaced the addition of buildings, creating significant space issues in classrooms, the cafeteria, and other facilities.”

Perhaps the best example of the impact of overcrowding at LHS can be shown in the complex planning exercise recently undertaken to accommodate rising enrollment in our science labs. Two options were considered: 1) implement alternative scheduling and course sequence changes to accommodate increasing enrollment; or 2) build two additional science labs at a cost of \$1.1 million, which was approved and scheduled for the fall warrant. In collaboration with the Department of Public Facilities, a rather complicated, less-than-ideal, short-term plan was developed, ensuring that LHS students have appropriate access to science labs. While the plan will not cost the \$1.1 million originally anticipated, there will be associated costs from the relocation, equipment, chemical fume hood and ventilation, eyewash, minor plumbing upgrades, and furniture. The details of that plan are as follows: In 2019-2020, the first year of the space reconfiguration plan, we will add one Biology room. In order to do so, the necessary changes are as follows (1) Earth Science (Rm. 313) becomes the 6th Biology Rm.; (2) Physics (Rm. 303) becomes Earth Science (from 313); (3) Rm. 418 becomes Physics Room (from 303); (4) Materials from Rm. 418 to first floor storage; and (5) 418 offices to Rooms 413, 401, 300, 301. In 2020-2021, one Chemistry room will be added, necessitating the following changes (1) Retrofit Rm. 420 (Bio) to be a Chemistry room; (2) Relocate Bio (Rm.420) to 315 Earth Science; (3) Relocate Earth Science (Rm. 315) to 301 (Staff/Acad. Support); (4) Relocate Resource Room (309); 5) Relocate Staff Rm., Academic Support, and offices to 309.

The impact of overcrowding has resulted in other challenges, such as inadequate space for students with disabilities in the Intensive Learning Program (ILP), as well as a shortage of space for ELLs. We are unable to create in-district programs for students with disabilities who should be educated with their peers whenever possible. Some classes are small, dark, dreary, and windowless. We lack science labs and adequate space for the Arts. HS students must eat lunches in hallways, as there is not enough seating to accommodate all students. Hallway spaces are congested with mobility equipment or students trying to complete schoolwork, creating safety hazards. We have locked many campus doors in an effort to tighten security; however, this means there are fewer viable routes to move from one building to another, making hallways impassable.

**Has the district had any recent teacher layoffs or reductions?** YES

**If "YES", how many teaching positions were affected?** 1

**At which schools in the district?** Fiske Elementary School

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

One special education teaching position was eliminated.

**Has the district had any recent staff layoffs or reductions?** YES

**If "YES", how many staff positions were affected?** 6

**At which schools in the district?** Bowman, Bridge, Harrington, Estabrook and Central Administrative Offices.

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

There was a reduction of 4.26 FTEs in Classroom Aides; a 0.7 FTE Teacher reduction; a 0.5 FTE Support Staff reduction; and 0.5 FTE reduction of a Finance Clerk position.

**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.**

The program modification that occurred relates to how we account for students who are "high risk" or likely to be identified for more costly specialized services. In the past, we budgeted for the likelihood that "high risk" students with disabilities would be provided more intensive services. Due to tighter budgetary restrictions this year, we assumed more risk and did not budget for the potential for students identified as "high risk" (or those likely to need additional special education services). We stand firmly commitment to provided each child with the type of support and services they need, and should funding be limited, Lexington has established a "Special Education Stabilization Fund," which is a mechanism for the schools to access more funding for special education should it be needed. These funds must be accessed through Town Meeting.

**Please provide a description of the local budget approval process for a potential capital project with the MSBA. Include schedule information (i.e. Town Meeting dates, city council/town council meetings dates, regional school committee meeting dates). Provide, if applicable, the District's most recent budget approval process that resulted in a budget reduction and the impact of the reduction to the school district (staff reductions, discontinued programs, consolidation of facilities).**

The FY 2020 Budget Development process includes the following: 1) Summer, 2018 - elected boards, Town Manager and School Superintendent established goals and priorities; 2) Early Fall - Staff developed capital and operating budget requests; 3) Late Fall/Early Winter - Municipal departments presented requests at Board of Selectmen meetings, where feedback from citizens is invited. The School Committee reviews and adopts its requested operating and capital budgets in a similar public process; 4) Fall/Winter - At a series of working summit meetings the Board of Selectmen, the School Committee, the Appropriation Committee, and the Capital Expenditures Committee discuss budget issues and provide policy guidance to the Town and School staff in finalizing the budget recommendations (Summit I - October 22, 2018 - Indicator Analysis and Projection of Revenues and Expenses; Summit II - December 6, 2018 - Revenue Estimates; Summit III - January 31, 2019 - Town Manager Presentation; 5) The Town Manager reviews budget requests and makes recommendations for all Town programs, including the total budget for the Schools; 6) Early spring - A month before Town Meeting discusses financial articles, the budget is distributed to Town Meeting members and the finance committees; it is also available to citizens at the Library and the Town Manager's Office. Prior to the first session of the annual Town Meeting, the Selectmen mail the Town Warrant, containing a draft of all financial and non-financial articles to be considered by Town Meeting, to all Lexington households; 7) Spring - The annual Town Meeting begins in March with meetings held on weekday evenings. Town Meeting debates and adopts budget after making any amendments it deems appropriate—within the constraints of Proposition 2 1/2 and balanced budget requirements; and 8) The budget may be amended at the following year's annual Town Meeting. If earlier adjustments are required, a Special Town Meeting may be called.



## 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).**

Lexington High School (LHS) was relocated in 1953 to a new building at 251 Waltham Street. This building was enlarged to accommodate more students in 1955. As enrollments rose, three (3) separate new buildings were completed around 1964: one for science classes and two buildings together with much of the 1950's main building to accommodate a "house model" in which students would be assigned to a particular house within a building. The intention was to limit the need for students to travel from building to building during the school day. Each of nine (9) houses (three (3) in each of the three (3) buildings), contained a cafeteria, classrooms, and support areas sufficient to serve up to 300 students, with the exception of science, physical education, performing arts, visual arts, and other special subjects. The field house also was constructed in the early 1960s. The house model was abandoned prior to 1990. A major renovation of LHS that included construction of a new library was completed in 2001, and it was intended to serve up to 1,850 students. In this renovation, the walls that originally separated the houses were removed to facilitate indoor passage within each building. Even so, the LHS campus was left with four (4) detached buildings, now content-focused and known as the Humanities, Math, World Language, and Science buildings. In 2014, when it was clear that enrollment growth was outpacing capacity, the Town added 17,000 square feet of modular construction to accommodate our growing population. In 2015, this was augmented with an additional 8,000 sf modular installation, most of which was dedicated to students with disabilities. At present the buildings at LHS comprise approximately 360,000 GSF of floor area.

In 2014, Lexington participated in the Green Repair Project, and part of the aging and damaged roof over the cafeteria was replaced. The MSBA contributed \$360,547 (approximately 34%) of the funding for this project. There is currently a proposal under review for a renovation that will reconfigure space in the Science building into Biology and Chemistry lab spaces to accommodate increasing student enrollments. The most recent renovation was completed in 2021, which was driven by significant and rapid increases in high school student enrollment. This included an effort to reconfigure classrooms in the Science building so they could be utilized as laboratories for Chemistry classes. Throughout the years, there have been many other modest space-mining and reconfiguration projects to meet the needs of our growing population, as well as work to retrofit our buildings with wireless capacity needed to incorporate technology into learning. Although financial support from the Town and the State have allowed for maintenance and numerous renovations and expansions over the past decades, today the general infrastructure of the buildings is in poor condition, and VFA/Accruent architects estimate a total maintenance cost for Lexington High School at \$61M.

The existing steam piping system, pneumatic controls system, and unit ventilators in the main building were all installed in the 1950's or 1960's, and they are well beyond the life expectancy of 20-25 years. The heating and air conditioning roofing units are also at the end of their 15-year life expectancy, and there is an estimated \$3M in roofing repairs, according to VFA/Accruent architects and engineers who recently conducted the facility needs assessment. The roof has sprung leaks and, although replaced in 2000 and later repaired in part through the 2014 Green Repair Project, it, too, is close to its end of life.

The Lexington Public Facilities Department does an admirable job keeping these systems up and running; however, the systems are neither efficient nor reliable. In 2016, the Town contracted with an architectural and engineering firm to explore potential updates to mechanical systems in only the main building of LHS. A feasibility study, pre-schematic, schematic, and design development was completed. The process was halted when the estimated price of \$21,000,000 was determined to be cost-prohibitive, especially considering other facility needs across the campus. In a recent Facilities Condition Assessment, the condition of the HVAC systems and need for replacement was again confirmed, with cost estimates increasing. Over the next five years, over \$26M of HVAC systems is due for renewal based on Class 3 AACE (Association for the Advancement of Cost Engineering) estimate for budgeting purposes. With aging facilities and the enrollment projections that continue to increase, it is becoming increasingly difficult to meet even the most basic needs of

our students.

**TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.**

328500

**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. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).**

Lexington High School is situated currently on the southerly edge of a 56-acre parcel of land owned by the Town of Lexington. The open high school campus abuts Worthen Road to the South, Waltham Street to the East, and Park Drive to the North. The site has no visible slope with access to multiple parking areas around the school. These areas provide pedestrian and vehicular access for parking and service to the four detached buildings, several athletic fields, and an outdoor track. LHS is surrounded on three sides by a densely settled residential neighborhood. Despite having a robust annual maintenance plan, paved areas and sidewalks are at the end of their life cycle and are in poor condition.

In a recently conducted Facility Condition Assessment, it was identified that many of the pedestrian walkways, paved roadways, and parking lots are at the end of useful life. The replacement cost for these areas exceeds \$1.5M based on a Class 3 AACE (Association for the Advancement of Cost Engineering) estimate for budgeting purposes. The existing sidewalks need to be updated to fully meet current Americans with Disabilities Act (ADA) requirements. The play-fields are in fair condition. Worthen Road is used as both access to and egress from the Main Building and provides faculty parking (Parking Lot A), while also serving as the drop-off bus loop and the student drop-off and pick-up. Waltham Street provides a secondary means of access to parking for faculty (Parking Lot B) and single point of access to the central area of the campus. The Park Drive entrance is used as both access to and from the rear of the property and the three outer buildings. It is used as a drop-off and pick-up point for parents and also has access to Parking Lot B. There is inadequate on-site parking for staff and itinerant staff, some of whom utilize on-street parking when needed.

**ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)**

Lexington High School currently serves students in grades 9–12 and is located at 251 Waltham Street in Lexington, MA 02421.

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

In a recently conducted Facility Condition Assessment, the expected 5-year maintenance cost for Lexington High School is \$61,642,016. Based on a recent Class 3 AACE (Association for the Advancement of Cost Engineering) estimate for budgeting purposes, there are approximately \$5M of building envelope requirements due for renewal before 2024. These requirements include but are not limited to the following:

1. Aluminum Window Seals are failing and would be due to be replaced in 2022.
2. Due to the age of the substructure and superstructure they are due for renewal.
3. The active chimney is in need of repair and repointing.
4. In three of the outer buildings there are single pane steel windows that are original to the building.
5. The pedestrian covered walkways are in poor condition and need to be renewed.

The existing building is constructed of brick and block with steel and concrete framing; aluminum-framed, double-glazed, fixed- and single-paned, project-out windows; membrane flat roofs, brick, block, glazed block, and plaster partitions; various porcelain tiles, composite tile and carpet floors; plaster ceilings and suspended tile ceilings; metal-framed wood

doors and metal doors with vision panels. It sits on a site with access to all sides, three of them paved and an access road and courtyard around the remaining perimeter. It is fully sprinklered and fire-alarmed. The building is a school with classrooms, offices, a gymnasium, auditorium, library/media center, shops, and associated storage and building services equipment rooms. These occupancies fit into use groups Educational (E) and Assembly (A-3), which is an accessory to the educational use group.

**Has there been a Major Repair or Replacement of the EXTERIOR WALLS?** NO

**Year of Last Major Repair or Replacement:(YYYY)** 1957

**Description of Last Major Repair or Replacement:**

No major repair or replacement to the exterior walls has ever occurred, and approximately \$5M is needed to update the building envelope.

**Roof Section A**

**Is the District seeking replacement of the Roof Section?** YES

**Area of Section (square feet)** 11850

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

Building A roof is 11,850 sqft of EDPM in which 11,850 sqft should be replaced in the year 2020.

**Age of Section (number of years since the Roof was installed or replaced)** 19

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section B**

**Is the District seeking replacement of the Roof Section?** YES

**Area of Section (square feet)** 25000

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

Building B roof is 25,000 sqft of EDPM in which 25,000 sqft needs to be replaced in the year 2020.

**Age of Section (number of years since the Roof was installed or replaced)** 19

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section C**

**Is the District seeking replacement of the Roof Section?** YES

**Area of Section (square feet)** 10500

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

Building C roof is 10,500 sqft of EDPM in which was replaced in 2011 and will need to be replaced in 2031.

**Age of Section (number of years since the Roof was installed or replaced)** 8

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section D**

**Is the District seeking replacement of the Roof Section?** YES

**Area of Section (square feet)** 39500

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

Building D roof is 39,500 sqft of EDPM. 4,740 replaced in 2010 and will need to be replaced again in 2030. All other portions of the roof that comprise the remaining 34,760 were replaced in 2000 and will need to be replaced again in 2020.

**Age of Section (number of years since the Roof was installed or replaced)** 19

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in

2014.

**Roof Section    E**

**Is the District seeking replacement of the Roof Section?**    YES

**Area of Section (square feet)**    30000

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

Building E roof is 30,000 sqft of EPDM which was installed in 2000. The roof will need to be replaced in 2020.

**Age of Section (number of years since the Roof was installed or replaced)**    19

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section    F**

**Is the District seeking replacement of the Roof Section?**    YES

**Area of Section (square feet)**    35000

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

Building F roof is 35,000 sqft of PVC. The bottom two-thirds of the roof was replaced in 2011, and will require replacement in 2031. The top third of the roof was installed in 2000 and will need to be replaced in 2020.

**Age of Section (number of years since the Roof was installed or replaced)**    19

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section    G**

**Is the District seeking replacement of the Roof Section?**    YES

**Area of Section (square feet)**    30600

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

Building G roof is 30,600 sqft of EPDM which was replaced in 2006. The roof will require replacement in 2026.

**Age of Section (number of years since the Roof was installed or replaced)**    13

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement occurred in 2014.

**Roof Section    H**

**Is the District seeking replacement of the Roof Section?**    YES

**Area of Section (square feet)**    23800

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

Building H roof is 23,800 sqft of EPDM which was replaced in 2011. The roof will require replacement in 2031.

**Age of Section (number of years since the Roof was installed or replaced)**    9

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement was completed in 2014.

**Roof Section    J**

**Is the District seeking replacement of the Roof Section?**    YES

**Area of Section (square feet)**    23800

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

Roof is 23,800 sf of EPDM which was replaced in two sections. The 1st section comprising 7,600 sf was replaced in 2008 and will require replacement in 2028. The remaining 16,200 sf of roof was replaced in 2011 and will require replacement in 2031.

**Age of Section (number of years since the Roof was installed or replaced)**    11

**Description of repairs, if applicable, in the last three years. Include year of repair:**

The last major roof repair occurred in 2000. A Green Repair Project for partial roof replacement occurred in 2014.

**Window Section    A****Is the District seeking replacement of the Windows Section?**    YES**Windows in Section (count)**    999**Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))**

The actual # of windows in this section is 1550 (not 999), but field only allows 3 digits. Windows in the Main Building (Building A-E) were replaced during the 2000 renovations from single to double pane thermal windows.

**Age of Section (number of years since the Windows were installed or replaced)**    19**Description of repairs, if applicable, in the last three years. Include year of repair:**

All single pane windows in the Main Building were replaced in 2000 with thermal double pane windows. Maintenance and repair of these windows fall under our current work order system.

**Window Section    B****Is the District seeking replacement of the Windows Section?**    YES**Windows in Section (count)**    999**Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))**

The actual # of windows in this section is 1155 (not 999), but field only allows 3 digits. Windows in the Science Building, World Language Building, Math Building, and Field House are original single pane windows.

**Age of Section (number of years since the Windows were installed or replaced)**    59**Description of repairs, if applicable, in the last three years. Include year of repair:**

All single pane windows in the Science Building, World Language Building, Math Building, and Field House are original single pane windows. Maintenance and repair of these windows fall under our current work order system.

**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 existing steam piping system, pneumatic controls system and unit ventilators were installed in 1960 and are approximately 60 years old, well beyond their life expectancy (20-25 years). Boilers, rooftop air handling units (RTU's), heating and ventilating units (HV's) and split system cooling units were installed during the 2000 building renovation and are approaching the end of their life expectancy (20 years). Typical classrooms in the Main Building are served by wall-mounted classroom unit ventilators (UV's). The unit ventilators are original to the building installed in the '50's. Each unit ventilator has a wall mounted intake louver for the introduction of outside air to the space. Units have filters, supply air fan and a steam heating coil and pneumatic control valve. It is controlled by the pneumatic control system and is energized by a space mounted thermostat. The pneumatic control system is extremely antiquated and unreliable. Occupants often report that units are extremely loud and the air temperature is uncomfortable. In addition to the unit ventilators, some windows not utilizing a unit ventilator have perimeter steam radiation. Heating for the building is provided via two steam boiler(s) located in the basement of Building D. Boilers are the following: H.B. Smith, 650, cast iron sectional boilers (B-D1 and B-D2). Generate L.P. steam tie into central distribution system. These boilers replaced the original steam boilers when they were installed in 1998. In 2008, the Viesman CT-3-57 replaced the existing hot water boiler. Condensate is returned to the power plant via a duplex condensate return pump set. The boiler room located in the basement of building 'D' serves the main building, which consists of buildings A, B, C, D, and E. The boiler room contains two large, cast iron steam boilers which were part of the original building construction in the 1950's and are well past their expected life cycle. The boilers are Smith cast iron sectional boilers. Each boiler is rated for 6638 MBH, and the attached burner is a Power Flame burner rated for 3000-9000 MBH. The two steam boilers serve fin tube radiation throughout the main building, unit ventilators in the classroom offices, and five rooftop units.

**Boiler Section    1****Is the District seeking replacement of the Boiler?**    YES**Is there more than one boiler room in the School?**    YES**What percentage of the School is heated by the Boiler?**    100**Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)**

Natural Gas

**Age of Boiler (number of years since the Boiler was installed or replaced) 21**

**Description of repairs, if applicable, in the last three years. Include year of repair:**

Boilers in the Main Building fall under our preventative maintenance and repair program, which includes an annual boiler inspection and cleaning, with semi-annual efficiency testing. Repairs are conducted on an as needed basis. Heating for the building is provided via two steam boiler(s) located in the basement of Building D. Boilers are the following: H.B. Smith, 650, cast iron sectional boilers (B-D1 and B-D2). Generate L.P. steam tied into central distribution system. These boilers replaced the original steam boilers when they were installed in 1998. The boiler room contains two large, cast iron steam boilers which were part of the original building construction in the 1950's and are well past their expected life cycle. The boilers are Smith cast iron sectional boilers. Each boiler is rated for 6638 MBH, and the attached burner is a Power Flame burner rated for 3000-9000 MBH. The two steam boilers serve fin tube radiation throughout the main building, unit ventilators in the classroom's offices, and multiple rooftop units.

**Boiler Section 2**

**Is the District seeking replacement of the Boiler? YES**

**Is there more than one boiler room in the School? YES**

**What percentage of the School is heated by the Boiler? 100**

**Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)**

Natural Gas

**Age of Boiler (number of years since the Boiler was installed or replaced) 19**

**Description of repairs, if applicable, in the last three years. Include year of repair:**

Boilers in the Science Building fall under our preventative maintenance and repair program. This includes an annual boiler inspection and cleaning, with semi-annual efficiency testing. Repairs are conducted on an as needed basis. Heating for the building is provided via three Hydronic boiler(s) located in the basement of Building G. Boilers are the following: Burnham, cast iron sectional boilers. Generate 180 degree primary hot water tied into central distribution system. These boilers replaced the original boilers when they were installed in 2000.

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

**Year of Last Major Repair or Replacement:(YYYY) 2000**

**Description of Last Major Repair or Replacement:**

In the 2000 renovation multiple pieces of rooftop equipment were added to supply large spaces and office spaces. The unit ventilators in the Main Building remain original, over 60 years old. In the basement of building 'D' serves the main building, which consists of buildings A, B, C, D and E. In 2003 additional HVAC rooftop units were installed for sound reduction in classrooms spaces that serve students with hearing impairments. In 2009 40+ year old unit ventilators in the Science, World Language, and Math Buildings were replaced.

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

**Year of Last Major Repair or Replacement:(YYYY) 2000**

**Description of Last Major Repair or Replacement:**

In the 2000 renovation all major electrical systems and distribution were replaced. This replacement included main switch gear, distribution panels, and emergency generator for the entire campus.

**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).**

In the 2000 renovation of Lexington High School, flooring systems, finishes, ceilings, and lighting were replaced. No major replacements or upgrades have occurred since 2000. Replacement and repairs are made on an as needed basis through the computerized work order system (CMMS).

**PROGRAMS and OPERATIONS: Please provide a detailed description of the current grade structure and programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc. (maximum of 5000 characters).**

LHS is a 9-12 school. Facility constraints at Lexington High School significantly limit our ability to offer a wide variety of course and programming options to satisfy state and local requirements and meet the needs of all Lexington HS learners. Federal law mandates a "Free and Appropriate Education" (FAPE) for all students in their "least restrictive environment." One visit to the Lexington HS wing that houses 120 +/- LABBB Collaborative students (students with disabilities from school systems across the Commonwealth) would confirm that the high school facility impedes our ability to provide students with the most appropriate education in their least restrictive environment.

Students with disabilities who are medically fragile are in inadequate spaces that offer little in the way of privacy. Small classrooms have only enough room for the students, themselves, and not the mobility equipment that they need to be successful. Often it is the case that the students' mobility equipment must be stored outside of the classroom, which presents many challenges for them. These limitations put enormous and undue pressure on our staff, whose responsibility it is to ensure that safety and well-being of our students. Another challenge for students with disabilities in the Intensive Learning Program (ILP) is that they do not have access to the in-house educational opportunities their families desire related to transitional programming that is required by the State.

As discussed elsewhere in this Statement of Interest, we are unable to meet the State's 990 hour "time on learning" requirements at Lexington HS, which has been cited in the 2013 Civil Rights component of the Coordinated Program Review. Both Juniors and Seniors fall significantly under the 990 hour requirement, receiving approximately 100+ fewer hours of instruction than their counterparts in other school systems, with much of it driven by the 8-period schedule that creates opportunities to free up more space.

The Department of Elementary and Secondary Education (DESE) recently revamped the State's accountability system and the Massachusetts Comprehensive Assessment System now emphasizes "college and career readiness." While there are a number of course offerings at LHS to prepare students for the college experience, few career readiness opportunities exist. Given our current space limitations at Lexington HS, we are unable to offer vocational courses of any kind. In the Town of Lexington, there are a number of community experts who would enrich the lives of our students if given the opportunity to mentor. Unfortunately, we are unable to offer valuable mentoring experiences, college and career advising, and internships/externships due to space limitations.

Limited space at Lexington HS also impacts local district requirements. Currently, the district is pursuing innovative pedagogical practices like "Project-Based Learning" (PBL) that are designed to engage students and connect them to authentic learning experiences. While other schools in the system are offering a wide array of PBL experiences in the classroom, the Lexington HS facility does not have the multi-functional, collaborative learning spaces to most effectively integrate PBL in the high school curriculum. Additionally, educators in the elementary and middle schools have moved toward unique schedules that build in more time for teacher collaboration, while Lexington HS teachers have added to the caseload in recent years. Teachers have half-day Thursdays in the elementary schools and modified teaching assignments in the middle schools. In recent years, Lexington HS teachers have added to their caseload, which they feel impacts their ability to contribute to professional learning communities and meet their students' needs.

Other unmet needs that are a result of the facility constraints at Lexington HS include the following: as previously mentioned, the music program has inadequate practice spaces and classrooms to meet the needs of Lexington HS students; students are frequently displaced from the library media space and from their lessons with librarians who are attempting to teach them research and other important skills in order to make room for faculty and district-level meetings; all of the Science classrooms are inadequately sized and under the MSBA-recommended square footage guidelines, and we do not have an adequate number of Science labs for the student population we serve; Physical Education lacks a much-needed fitness center and lockers; many students carry heavy backpacks around daily from building-to-building, as there are no lockers for them to utilize; and we cannot expand classes to offer important learning opportunities, such as engineering, robotics, computer-aided design (CAD), and video production; and no space exists to have a proper security booth upon entry into Lexington HS.

**EDUCATIONAL SPACES: Please provide a detailed description of the Educational Spaces within the facility, a**

**description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, a description of the cafeteria, gym and/or auditorium and a description of the media center/library (maximum of 5000 characters).**

An overview of the LHS programs, spaces, and net floor area are as follows: Core Academic (84), 57,703; Science Class w/ Prep (22), 24,718; Gen. Ed. Support (1), 2,882; Teacher Planning (10), 10,174; Voc. Tech. (0), 0; Special Education (47), 17,947; Art & Music (19), 13,661; Health & PE (4), 43,510; Library 10,050; Auditorium 12,592; Dining 10,752; Medical/Admin. 11,106; Custodial Maintenance 3,414; Misc. Support Space 17,559; Total Net Floor Area = 236,068; Gross SF = 359,600.

Nearly every general classroom is undersized at approximately 500-775 square feet vs. the MSBA-recommended 850 square feet. There aren't enough science lecture and lab spaces to accommodate our growing student enrollments, and the spaces that exist for science lectures and labs are significantly undersized at 1,000-1,270 square feet, rather than the recommended 1,440 square feet. There are 47 special education spaces at LHS and all are undersized. In addition, the Library Media Center is significantly undersized. The need to reconfigure space to accommodate our growing population has resulted in smaller instructional spaces. Of our 137 instructional spaces, only 19 meet the MSBA's square footage recommendations and 8 of those 19 are visual arts classrooms. None of our shared spaces (gym, field house, cafeteria, science lecture hall, kitchen and nurse's area) meet the MSBA guidelines for square footage. As a result, we have limited pedagogical choices, and it can create safety concerns in science classrooms and other areas throughout the building.

**CAPACITY and UTILIZATION: Please provide the original design capacity and 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).**

Lexington HS was built in 1953 with a substantial increase in population shortly thereafter, so determining the original capacity and utilization of the building is a somewhat storied tale. From 1950 through the 1970's, the Town of Lexington saw a dramatic increase in population, leading to an upsurge in student enrollment. In 1940, the Town's population was 13,113. By 1950, the population had grown to 17,335. In 1960, the population reached 27,691 and continued to grow over the next decade, increasing to 31,388 in 1970. Over the course of 30 years the population had more than doubled. Inevitably, student enrollment increased commensurate with the Town's overall population growth. From 1950 to 1960, the school district's total student population grew from 2,813 students to nearly three times that number (6,280 students). The high school facility could no longer accommodate the increasing student population. After a contentious process, the first phase of new construction was approved in 1951 and began shortly thereafter. Students moved into the new facility in 1953. Stage two of construction was completed in 1957, which included a new auditorium, shop wing, and 16 additional classes. In 1961, student enrollment continued to rise, requiring additions to LHS. These additions intentionally came in the form of detached, separate buildings on the Waltham Street High School campus. In 2014, a total of 17,000 sf of modular space was added to accommodate our growing population. In 2015, an additional 8,000 sf of modular space was added, most of which is dedicated to educate students with disabilities in the Intensive Learning Program, ensuring safer access to the space and better compliance with the ADA guidelines.

**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 past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).**

The Department of Public Facilities (DPF) was formed in 2007 to ensure consistent maintenance of the Town's assets. The DPF utilizes web-based Maintenance Direct for managing work orders. DPF utilizes the work order system to manage a combination of preventative maintenance, planned maintenance, and customer requests. Work orders are initiated by building users and prioritized for completion. When the work orders are finished, the completed work ticket is routed to the facility coordinator, who finalizes and closes the work order in the system. The coordinator sends out a monthly report updating building administrators on the status of the work orders.



The DPF implemented a district-wide mechanical preventative maintenance program beginning in 2009. This plan includes over 1,400 pieces of equipment in schools, with identified preventative maintenance tasks for each. The work is accomplished by in-house maintenance staff and supplemented by contracted maintenance employees.

The Director of Public Facilities submits an annual operating budget to maintain buildings and to operate buildings efficiently. After review and modification, the budget is included in the budget of the Superintendent of Schools and recommended to the School Committee. The final budget is approved at the annual Town Meeting.

On an annual basis, DPF staff submit project recommendations for inclusion in the capital planning process. Staff continues to be involved in the process, and when projects are approved, they are included in the process of design and implementation of the projects. DPF maintains a 20-year Roofing Master Plan and has developed a 20-year Building Renewal Plan for replacing facility mechanical equipment based on life-cycle costing. This 20-year inventory informs the development of projects submitted into the capital planning process. Through this process, a five-year capital plan is maintained and projects are funded on an annual basis.

Several projects have been implemented as a result of the aforementioned 20-year planning process. At Hastings Elementary School over the last five years we have upgraded the building envelope of the portable classrooms, replaced classroom cabinetry, replaced a section of PVC roof, installed new playground equipment, converted the heating boilers from oil to natural gas, installed staff bathrooms on the lower level, and replaced food preparation equipment in the cafeteria.

In December 2017, a debt-override was passed to replace Hastings Elementary School and to build a new Lexington Children's Place for pre-kindergarten students. Diamond and Clarke Middle Schools underwent extensive renovations in 2016-2018 and a new playground was installed recently at Bowman Elementary School. In 2018, the aforementioned DPF process was utilized to secure funding for interim safety and security measures for Lexington High School that Town Meeting members approved.

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## Priority 2

### *Question 1: Please describe the existing conditions that constitute severe overcrowding.*

**Severe Overcrowding.** The significant overcrowding at Lexington High School creates a serious challenge for our community. Based on current projections, by the year 2025, enrollment in grades 9-12 is expected to reach its peak with over 2,500 students. An enrollment topping 2,500 means that LHS will be approximately 650 students over capacity in the core spaces and classrooms. In addition to overcrowding, the current high school facility faces deteriorating conditions, and it is not well configured for modern instructional approaches to meet educational needs.

A significant and steady uptick in enrollment has led to an increase of over 1,000 students in the district in the past ten years. The school district has consistently experienced overcrowding in all of the elementary, middle and high school grades, but nowhere is the overcrowding felt more intensely than at Lexington High School (LHS). Analysis of enrollment data indicates that by the year 2024-2025, the LHS projected enrollment could reach roughly 2500+ students and could continue at or near that level for the foreseeable future. Even if enrollment does not reach 2,500+ students, any measurable increase puts additional pressure on the planned operating capacity for large core spaces, such as the cafeteria and lunchroom spaces, as well as the instructional spaces. The core spaces were designed for 1,850 students, and the current high school enrollment would need to decline by approximately 450 students for the core spaces to be within the planned operating capacity.

Enrollment is outpacing existing space in schools across the district, but nowhere is the pressure felt as intensely as at Lexington High School. Severe overcrowding exists at Lexington High School, and five-year enrollment projections using the Cohort Survival Model indicate that the student population will increase to over 2,500 by 2024 and remain at or near that level for the foreseeable future. When enrollment reaches 2,500, that would place Lexington High School in the top fourth or fifth largest high schools (under one roof) in Massachusetts. No other suburban community in the Commonwealth of MA has high school enrollments at this level, which is what prompted the Master Planning Advisory Committee to explore the possibility of two high schools. The Master Planning Advisory Committee (MPAC) concluded that such an idea is not feasible given the excessive costs for two building projects coupled with the land constraints in the Town of Lexington.

A subgroup of the Master Planning Advisory Committee is the Enrollment Advisory Group (EAG), a group of talented Lexington residents and data analysts who have studied enrollment trends throughout the last decade. Through a collaborative effort with the EAG, Lexington Public Schools recently reconvened and updated statistical models to members of the MPAC. The EAG used the Cohort Survival Method, the statistical method used historically by the district, to forecast future student enrollment growth for the next five years. The elementary and middle school enrollment numbers appear to be aligned with earlier CSM projections; however, there is an anticipated increase in enrollment at the high school. Lexington HS enrollments are expected to increase by 300 +/- students in the next five years, with the highest enrollments anticipated in the 2024 - 2025 school year. A 90% confidence interval is produced for all enrollment projections, which tells us that there is a 90% chance that the confidence interval contains the true value of future enrollment. As shown in the table below, the current enrollment at Lexington High School is 2,263, and we anticipate that number to continue to rise until it reaches its peak enrollment of 2,509 students in the 2024-2025 school year and remain that way for the foreseeable future.

**Existing Conditions.** Lexington High School, originally built in 1953, has an open campus plan with several individual buildings. Students must exit one building to get to a class in another building. LHS has undergone several major renovations to create the space needed to serve its students, including the construction of a new library completed in 2001. In 2014, when it was clear that enrollment growth was outpacing capacity, a modular building was added, providing an additional 17,000 square feet for core academics. While this created academic spaces intended for approximately 2,250 students, core spaces, including both

cafeterias, remained unaltered and significantly undersized to accommodate growing enrollments. Further, this expansion did not address the quality of the academic spaces throughout the main building. By today's standards, the average classroom size at LHS is significantly smaller than the recommended square footage associated with 21st century learning environments and the Massachusetts School Building Authority (MSBA) guidelines. In 2014, Lexington participated in the Green Roof Repair Project, replacing part of the aging and damaged roof over the cafeteria. In 2015, another modular was installed at LHS, resulting in 8,000 additional square feet mostly dedicated to students with disabilities. In that same timeframe, the LHS buildings were retrofitted to increase the wireless capacity needed to ensure adequate technology for teaching and learning. Throughout the years, there have been a few modest addition/renovation projects to attempt to meet the needs of our growing student population.

### **The Impact of Inclusive Programs on Enrollment (450+ LABBB and METCO Students).**

Lexington High School is an inclusive, loving environment where we try to live our core values and students know that "we all belong." The Lexington Public Schools have been members of the LABBB Collaborative and METCO programs for well over 50 years. Between LABBB and METCO, Lexington hosts a combined total of approximately 450 students in what some might consider optional programs, and our decision to continue to be a member district is challenged from time-to-time. Lexington is a well-resourced district where "caring for yourself and others" is one of our school community's core values. While some might say that our membership in these programs is a choice that puts added enrollment pressure and additional financial burdens on taxpayers, most do not consider it a choice. We are thankful that the vast majority of the community believes that these programs enrich the lives of all our students, staff, and families, and we are honored to be able to give back in this way.

We are proud of our inclusive school community and honored to host 120 students with disabilities (from over 60 school districts) in the LABBB program at Lexington High School. The Lexington Public Schools has been a member district of LABBB for more than 50 years. We do not gain added financial incentives for hosting LABBB students from communities outside our district, as is the case with many member districts in the Commonwealth's Collaboratives. The Lexington Public Schools Superintendent serves on the LABBB Board of Directors, along with superintendents from the five member districts, including: Arlington, Burlington, Bedford, and Belmont. Of these five member districts, the largest population of LABBB students attend school at Lexington High School. Lexington also hosts one of the largest METCO programs in the Commonwealth with approximately 225 students. The money we receive from the State for this program falls significantly short of the per pupil costs to educate these students, but such programs bring obvious benefits to our entire school community.

The LABBB program at LHS for students with significant disabilities does not have enough space to store wheelchairs or other mobility equipment. Students with disabilities must have some of their personal care needs met behind a curtain in the classroom, rather than in a private, separate space. Due to these concerns and the serious overcrowding that will significantly worsen in the next few years, the Master Planning Advisory Committee gave serious consideration to a relocation of the LABBB program. Ultimately the MPAC who assisted in the master facilities planning exercises decided against a relocation given our lengthy and proud history with the LABBB Collaborative.

In addition to the inadequate space for LABBB and METCO students, severe overcrowding has impacted the Intensive Learning Program (ILP) for students with disabilities whose least restrictive environment is a sub-separate setting and English Language Learners. Portable units are used to house students within the ILP program to ensure they have the access they need. Though the district would like to build a Transition Program and Developmental Learning Program at LHS for some of our students who are currently educated out of district, there is no space to do so. The spaces for English Language Learners are inadequate, as are the classroom instructional spaces.

Finally, we have locked many campus doors in an effort to tighten security; however, this means there are fewer viable routes to move from one building to another, funneling everyone on the same paths and crowding hallways. Our lunch needs have necessitated adding seating to our front hallway, making that area quite congested. While movement breaks built into the day can be beneficial to student learning, there is nothing calm or restorative about passing time for LHS students. They rush out of the classrooms when the bell rings.

### **Physical Space Constraints.**

LHS lacks adequate space for the kinds of learning experiences that every child should experience in all the content areas, as described in the next section and in our Master Educational Plan. Many students must eat lunches in hallways, as there is not enough seating in the dining areas to accommodate them. Hallway spaces are already congested with mobility equipment due to inadequate storage and students trying to complete schoolwork, creating additional health and safety concerns. Many campus doors have been locked in an effort to tighten security; however, this means there are fewer viable routes to move from one building to another, which further exacerbates overcrowding in the hallway. Due to space limitations, the administration is unable to create inclusive, in-district programs for students with disabilities who should be educated with their peers whenever possible.

Nearly 100% of existing classrooms are undersized; 100% of science rooms do not meet the MSBA standard of 850 square feet, and approximately 30% of general education classrooms do not meet the recommended square footage guidelines. Common areas such as cafeterias and hallways are inadequate for their intended functions. Teaching and learning are impacted on a daily basis, and overcrowding creates safety hazards, such as congested hallways. Educators are forced to search for space to teach and collaborate. LHS is in a constant state of retrofitting classrooms to ensure all students have access to fundamental learning experiences.

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

One of the most important mitigation strategies is the development of solid plans to ensure that the school district clearly understands and anticipates space needs. In Lexington, we engaged in extensive master planning process with community leaders and stakeholders in the facilities master planning process. In collaboration with these stakeholders, we wrote a 50-page LPS Master Planning Compendium ourselves to ensure the facilities needs are well known and understood by all, including decision-makers in the Town of Lexington. We developed an Enrollment Working Group to analyze K-12 enrollments for the next five years. We also engaged in a series of space-mining exercises and developed a 450+ page Facilities Master Plan in collaboration with the community.

Lexington HS originally built in 1953, has an open campus plan with several individual buildings. Students must exit one building to get to a class in another building, creating potential safety issues. LHS has undergone several major renovations to create the space needed to serve its students, including the construction of a new library completed in 2001.

In 2014, when it was clear that enrollment growth was outpacing capacity, a modular building was added, providing an additional 17,000 square feet for core academics. Core spaces, including both cafeterias, remained unaltered and significantly undersized to accommodate growing enrollments. This expansion did not address the quality of the academic spaces throughout the main building. In 2014, Lexington participated in the Green Roof Repair Project, replacing a small portion of the aging and damaged roof over the cafeteria. With limited cafeteria seating, it is critical that the existing cafeteria spaces remain operational.

In 2015, another modular was installed at LHS, resulting in 8,000 additional square feet mostly dedicated to students with disabilities. In 2015, LHS buildings were retrofitted to increase the wireless capacity needed to ensure adequate technology for teaching and learning. Throughout the years, there have been a few modest addition/renovation projects to attempt to meet the needs of our growing student population.

In 2017, a \$350,000 capital investment was made to replace locks and provide better security in the building.

In 2019 - 2020, we explored and utilized outdoor tents and canopies to provide Lexington HS students with additional space to eat. In year one of the Science lab reconfiguration plan (2019 - 2020), one additional Biology room was added. Earth Science (Room 313) was converted to a sixth Biology Room. The Physics (Room 303) became the Earth Science Room (from Room 313). Room 418 was converted to a Physics Room (from Room 303) and materials from Room 418 were transferred to first floor storage. Finally, Room 418 offices were relocated to Rooms 413, 401, 300, 301.

In year two of the Science lab reconfiguration plan (2020 - 2021), one additional Chemistry room was added. Next, we retrofitted Biology (Room 420) and converted it to a Chemistry Room. We converted a Biology room (Room 420) to an Earth Science (Room 315). Room 315 (Earth Science) became Staff and Academic Support (Room 301). We relocated Room 309 (the Resource Room) and converted it into the Staff Room and Academic Support offices to Room 309. It cost approximately \$250,000 for a chemical fume hood and ventilation system, eyewash, minor plumbing upgrades (Room 420), and furniture.

## 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.***

### **Severe Overcrowding - The Problem.**

The severe overcrowding issue at Lexington High School (LHS) places students and teachers at a significant disadvantage, and the situation is expected to drastically worsen by 2024-2025 when we gain an approximately 300 new students at Lexington High School. The student population at LHS is 2,300 now. **The additional 300 students will make Lexington HS the fourth or fifth largest high school under one roof in Massachusetts.** Severe overcrowding exists at LHS, impacting our ability to comply with time-on-learning requirements or to deliver the kind of educational program we need and want to deliver to our students. The information that follows highlights the general and some department-specific challenges caused by severe overcrowding, impacting our ability to deliver a 21st century educational program.

The impact of the rapid student enrollment growth is the constant re-purposing of spaces for uses outside of their intended design on a regular basis. Our buildings and facilities designed core spaces for 1,800, but we somehow manage to educate approximately 2,300 students every day. The physical space as it currently exists hampers our ability to pursue more creative endeavors with our students and deliver a high-quality curriculum to our students. We do not meet State-mandated time-on-learning requirements. Seniors have 100 fewer instructional hours than their counterparts in other districts, and Juniors have 160 fewer instructional hours than peers in other districts. Despite our best efforts, we are limited in our ability to use the classrooms in flexible and creative ways to create optimal conditions for teaching and learning.

There are several spaces that are being utilized for purposes other than that which were originally intended. Earth Science classrooms are being converted into Chemistry and Biology labs. **Our students do not have equitable access to Science labs.** We had to develop a complex, two-year reconfiguration plan that does not adequately prepare our students to meet the Next Generation Science Standards. The cafeteria is being used as a makeshift classroom. The Athletic Training room is being used as a classroom.

The front hallway is where students eat and do their work. The music prep/teacher storage area is where classes are held and equipment is stored. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library space to allow librarians to teach research and presentation skills to classes.

The greatest challenge to the library program is the physical space. Over the course of the last few years, areas of the library have been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners.

The LMC has been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners. The library has no carpet or acoustical treatments to minimize sound. The library offers space for two classes to work quietly, to conduct research, and to work on laptop computers. When the LMC is used for MCAS, AP testing, and for district- and school-based meetings, any class that had signed up gets bumped into library space. The result is a less-targeted experience for that class and a more disruptive environment in the library overall, as there could be as many as three classes of students using the library at any given time, in addition to any students studying quietly during a study block.

The lunch program is an important part of our inclusionary practices, but space is inadequate. The kitchen produces over 1,000

complete meals and an estimated 400 additional a la carte meals per day. The commons areas (two cafeterias) seat approximately 600 people. We currently have three lunch services with approximately 600 - 800 students assigned per lunch block in addition to any staff and the students in the LABBB program. There is insufficient seating to accommodate students eating lunch, leaving hundreds of students eating on the floor or at extra tables set up in the main hallway and outside. Also, time to serve the students has become increasingly tight as enrollments increase and more students attend each lunch block.

Space for 120+ LABBB Collaborative students who we host from 60 districts throughout the Commonwealth is inadequate; so, too, is space for the supporting English Language Learners and the 225 METCO students (one of the largest METCO programs) from Boston who have been part of the Lexington school community for over fifty years. It is extremely difficult to provide our special education students with an education in their least restrictive environments due to space constraints. Each student is assigned to a liaison, a special educator who serves as the point of contact and coordination for the student, parents, and teachers. The least restrictive model is Academic Support as a resource model, which meets 1-5 times per week depending on the student's level of need. Instructional Assistants and Student Support Instructors (SSIs) are also used to support students in the general education classroom. Some classes are co-taught by a regular educator and a special educator, but space limits our ability to expand the co-teaching model. We have limited space for our specialized programs including: (1) the Language Learning Program (LLP); (2) the Intensive Learning Program (ILP); and (3) the Therapeutic Learning Program (TLP). The LLP is developed for students with language-based disabilities. There is support in the general education setting and students have resource/academic support blocks with special educators to address specific goals. Students receive specially designed instruction in reading, written language, and executive functioning. The ILP is designed for students with Autism Spectrum Disorder and related disabilities, and a continuum of supports ranging from full integration to substantially separate is offered. The TLP is for students with emotional disabilities. There is a therapeutic aspect and a greater focus on metacognition. Classes are taught in a variety of settings, including small group and self-contained. Social workers and therapeutic supports are provided daily to students. Our educators do the best they can with the space available to them, but our facilities impact our ability to deliver the type of inclusive special education that our students deserve.

We have one auditorium at LHS with a capacity of approximately 800 people. This space is dedicated performing arts instructional space, as there are more musical groups than we have rehearsal spaces for if the stage were not used. In fact, it is the only space that will accommodate one of our orchestras due to its size of well over 100 students. The educators work effectively with one another around theater and musical productions throughout the year to avoid conflicts with demands for the stage. However, there are times where the auditorium is needed for large meetings and/or presentations to whole grades of students. When this need arises, the teacher and the performing group are displaced with nowhere to go, resulting in the cancellation of a class or I-Block (intervention block) and the loss of valuable instructional time.

Another re-purposed space is a room between the two performing arts classrooms. This space was originally intended to be a storage and teacher prep area. The room has a cubicle partition wall to divide the space into a teacher prep area and a storage/music digital lab area. Students work at computer stations composing, learning music theory, and critiquing work among stored musical instruments, band uniforms, and other sundry items. It is a most unsuitable space for encouraging creativity and exploration.

**Overcrowding Impacts Time-on-Learning at Lexington High School.** In the 2013 and 2018 Coordinated Program Review for Civil Rights, DESE cited Lexington High School for not meeting the time-on-learning requirements. While we were able to make some slight modifications and adjustments to the schedule to increase our high school students' overall time-on-learning, LHS still failed to meet the 990-hour requirement due to severe overcrowding. LHS Seniors accrue approximately 812 hours of "time on learning," while Juniors receive approximately 830 hours of instruction. To remedy this problem, enlisted the expertise of a master scheduler who has done an exhaustive examination of the LHS schedule to see if there is a way for us to meet the State's TOL requirement. Unfortunately, after careful analysis, it was determined that LHS is unable to increase time-on-learning given the constraints imposed by severe overcrowding. This means that a junior or senior at Lexington HS receives between 100-160 fewer hours of instructional time compared to their peers across the State. Despite our best efforts, Lexington HS students must endure an antiquated high school schedule that allows us to free up approximately 10% more space at LHS. Most of Lexington HS students perform considerably well and make significant contributions to their school community, but so much more could be accomplished if we had adequate facilities to meet the growing needs of our 9-12 students.

**General Challenges for Students and Staff.** Lexington educators are unable to find space collaborative space to work in creative ways with our students. Educators in the district have received extensive training on Project-Based Learning (PBL), an innovative, student-centered pedagogical approach designed to help students acquire deep knowledge through active, multi-disciplinary, real-world problem-solving. Such an approach requires longer class periods and flexible spaces for students and educators to collaborate, neither of which exists at Lexington High School. There is a critical shortage of Science labs, and we have had to invest funds to temporarily convert Earth Science classrooms to Chemistry Labs. We are unable to deliver the research skills students need, as the Library Media Center is completely overrun by competing demands at Lexington High School. Lexington HS students with and without disabilities should be able to learn together in their school system, but overcrowding limits inclusive opportunities. We would like to build a Transitional Program and a Developmental Learning Program at Lexington HS for some of our students who are currently educated out-of-district, but this is an impossibility given the current space restrictions. Furthermore, it is difficult to find private space for sensitive Individualized Education Program (IEP) Team Meetings at Lexington HS, and guidance counselors cannot expand college and career opportunities and explorations given the current space limitations.

For the past five years, LHS has included flexible time in its block schedule for academic intervention, enrichment learning, and community building. The flexibility of the programming has been limited by the types of spaces we have around the school, especially spaces that can accommodate learning in groups smaller than the typical classroom. For instance, our fledgling advisory program has used a model of restorative and community building circles. The model is best suited to a group of 12 students who can sit in relative privacy to have courageous, honest conversations about their school, their experiences, and our shared values. This is not a problem unique to LHS; but, it is a problem that newly constructed schools have addressed through creative and functional architecture: spaces that are modular or that adapt to many purposes, alcoves in hallways where students can meet during flexible blocks to collaborate on group projects, and the like would increase our ability to provide the types of learning opportunities that help students flourish.

#### **Unmet Programmatic Needs by Department - A Few Examples.**

Our LPS Master Educational Plan contains a comprehensive overview by department of unmet programmatic and curricular needs. What follows below are a few select examples of the ways in which overcrowding seriously affects teaching and learning and our ability to cover the curricula. (Note: we had to limit this section due to character limitations for Priority #1).

##### *Mathematics and Computer Science*

While Lexington HS has adequate classroom capacity for its core set of math courses, there has been insufficient space for a widening range of elective computer/technology courses. LHS has introduced three new computer science courses in the past decade--all aimed at attracting more diverse students into the subject, including the state-encouraged equity-oriented Advanced Placement Computer Science Principles course. This program expansion has been tremendously successful in attracting more students with greater diversity: the number of students requesting computer courses has gone from 200 in SY12, to 350 in SY17, to 700 in SY22. While adding 500 additional computer science enrollments, LHS has only been able to add one more room for Computer Science, covering less than half of the demand increase. The remainder has needed to be absorbed into math classrooms due to overcrowding. Trends of increasing demand are likely to continue. To meet even the current demand for computer courses without burdening math classroom capacity, LHS would need two additional computer classrooms.

Lack of appropriate and sufficient classroom space is a significant obstacle, as Lexington HS attempts to fulfill the expectations of the 2016 Massachusetts Curriculum Framework in Digital Literacy and Computer Science. In order for every student (and not just those who take computer electives) to meet this framework's State standards (in the areas of Computing and Society, Digital Tools and Collaboration, Computing Systems, and Computational Thinking), it will require new technology courses taken by all students, or additional instructional time in existing STEM courses. Either approach requires additional classroom capacity that the school currently lacks. For example, adding a single half-year technology course as a graduation requirement would require two additional classrooms to serve 300 students per semester.

Lexington HS does not have any of the more contemporary kinds of technology facilities that benefit students who attend high schools with updated facilities. For example, despite the school's large size, there is no dedicated maker space, even though LHS has many students interested in using such a facility. A single regular classroom is jammed with all the equipment used by a



robotics course and two extracurricular robotics teams, as well as the school's 3-D printers and other design equipment. This overcrowded space does not allow school-owned equipment to be used to its full potential by students. For the future, LHS aims to have amounts of computer design and robotics equipment commensurate with the school's size, housed in appropriately modern facilities that make these resources fully available to students both within and beyond the school day.

### *Science*

Over the last five years, the Lexington HS Science Department has been forced to make stop-gap modifications to the Science building and spaces available based on our current structural limitations in the building. We have added a modular classroom, converted a common, collaborative student support space into a classroom, and converted a Biology room into a Chemistry room. Even now after this series of modifications, we still lack enough space to engage in the kind of Science education that our students need today. All of our classrooms are in use at least six (6) of the eight (8) teaching blocks and 50% are used at least seven (7) out of the eight (8) teaching blocks. All teachers currently share classrooms; this, coupled with the lack of open space during the school day, diminishes our ability to offer authentic lab experiences, as teachers have to set up and breakdown labs for different classes and coordinate the use of equipment, lab spaces, and supplies—all within a brief five (5) minute window of passing time.

We currently have six (6) classrooms dedicated to our required 9th grade Environmental Earth Science (EES) course, focusing on climate change, water, and human impact on the earth's resources. Ironically, some of these classrooms have no access to water, one of the earth's most precious resources. Of these six (6) classrooms, only three (3) have a lab space associated with them, resulting in unequal access of opportunity for over half of our 9th graders, simply based upon random assignment. Our EES teachers go above and beyond to eliminate these inequalities by switching rooms so that all students have a chance to engage in an authentic lab experience.

Lexington HS students are exposed to a robust four (4) discipline Science curriculum, including Environmental Earth Science, Biology, Chemistry, and Physics; however, due to classroom space limitations, we are only able to offer two electives: Astronomy (full year) and Robotics (one semester). We have been forced to turn students away in each of the last two years due to a lack of space to run these electives in addition to our core offerings. Increased classroom and lab space would allow us to increase the electives we offer, empowering students to learn more about the concepts that matter the most to them and pursue their passion in Science.

As part of our diversity, equity, and inclusion efforts, Lexington HS Science educators are working to eliminate CP2 courses by merging CP2/CP1 courses, but we are hampered by a lack of space for teachers to support all learners. There are no breakout spaces available or even adjoining spaces for students and staff, due to overcrowding. In addition, we cannot deliver co-teaching strategies in conjunction with special educators, which would further support collaborative learning and play an important role in our de-leveling efforts. General and special educators are doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL) and long term inquiry based projects.

In order to support our work on the Next Generation Science Standards (NGSS) science skills and combine with the LPS vision of creating authentic learning experiences for our students, we would have a lab space dedicated to the preparation of materials and inquiry learning experiences. This dedicated lab space could support both teachers and students in authentic learning experiences. We have a strong history and participation in the Massachusetts Science & Engineering Fair, but we currently do not have lab space (either separate space or space within classrooms) to support students conducting their own individual long research projects in school. This creates inequalities for students who are unable to work on their projects at home. We believe that limited access to appropriate learning spaces is one of the major reasons why our MSEF participation rate has dropped by over 50% in the last four years.

### *Special Education*

The Lexington Public Schools Strategic Plan states, “Everyone has a right to an excellent education, and it is our individual and collective responsibility to create learning opportunities and systems that are fair and just.” LPS is committed to providing access to an excellent education for all students, and we have provided the necessary personnel to achieve this, but we do not have the appropriate facilities at Lexington HS to match that level of commitment.

Our current co-teaching efforts are hampered by our inability to fully implement a range of co-teaching strategies in small classrooms that lack breakout space. Co-teaching strategies support collaborative learning and play an important role in de-leveling, and our Department Leaders are eager to make additional strides in these areas. We have general and special educators doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL), creative I-Block opportunities, scheduled advisory sessions, and restorative justice circles.

Special Education teachers share classrooms and reclaimed spaces across the campus. As our student body grows, so does the number of students with special needs and the number of special educators. Unfortunately, this expansion means that we are constantly redefining and recovering space that often was intended for a purpose other than small group instruction and can very imperfectly meet our students’ needs, as it displaces other special or general education programming. We need more space that is well-designed and utilized for its intended purpose.

LHS has one classroom with a kitchen area. We currently have students with a wide range of specialized programming needs who require instruction in life skills, including meal preparation. With the only kitchen area located inside of a classroom that has students in it for most of the day, other students have very limited access, which impacts our ability to help them to develop essential skills. In order to address these skills, the students require access to a kitchen. This could be a shared kitchen that would be scheduled by teachers, untethered to a classroom, and with a dining area to allow programming for social skills, meal etiquette, and meal preparation.

Some students with intensive special needs remain eligible for Special Education until they turn 22. These students require intensive transition services with specialized programming not currently offered through Lexington HS due in large part to space constraints. At present, there simply is nowhere to place a program that requires (1) a location away from most classrooms and with a direct exit from the building to an accessible parking area to give students ready access to the community; (2) a large kitchen with expansive accessible counter areas to give students an opportunity to learn and implement meal/food preparation skills, to stage small business production, and to prep for a small cafe; and (3) an adjacent small cafe and school store to address vocational skills; (4) a laundry area to teach basic life skills and with the potential for vocational instruction; (5) two breakout spaces for small group instruction; and (6) proximity to accessible restrooms. With these elements in place we would be able to provide the opportunity for students to act as active agents in their own learning, as envisioned by inclusion experts and our LPS Strategic Plan: “Learning is authentic and connected to the real world, allowing students to apply knowledge and skills in context.”

### *Performing Arts*

The LHS Performing Arts Department has a long tradition of engaging an extremely high number of students from diverse backgrounds, and we are proud to be recognized as one of the nation’s premiere public high school Performing Arts programs. Lexington HS has continued to provide an exceptionally rich and robust program of studies, enabling students to access a curriculum that supports students’ own individual interests, passions, and social-emotional needs, as well as connections to STEM and Humanities programming. Despite our many successes, the physical restraints of the current building have had a negative impact on the kinds of opportunities and experiences that our educators can provide to our students.

In terms of rehearsal and performance spaces, the three concert bands, three orchestras, and five choruses meet in rotation between two classroom spaces that were outfitted in outdated technical education spaces at Lexington HS. The rehearsal halls are small in size with ceilings that are quite low, resulting in compacted sound that is musically inappropriate and also unhealthy for one’s ears due to decibel thresholds. Given the high number of students we have in each ensemble, the rooms cannot

adequately fit all of the students, chairs, instruments, and stands. The music storage area is a major issue where the lockers are in desperate need of being replaced after undergoing many repairs. Additional space is needed to safely house the rest of the large number of instruments our students play (both school- and student-owned). We need adequate rehearsal halls for Band, Orchestra, and Chorus with acoustical panels and ceilings with heights of at least 24 feet. These rooms would need access to the exterior of the building for loading and unloading equipment, and there should be a separate storage area for adequate storage of instruments (lockers and large equipment). Our locker storage poses many safety risks due to the overload of equipment stored in inadequate spaces.

Currently, we have four practice rooms that are located well away from the Band and Orchestra/Chorus rooms, making it difficult to supervise students and for them to access instruction in general. While the rooms vary in size, there is only one room that can fit more than four people at a time. This makes it difficult for students to work collaboratively in chamber music settings (i.e., quintets, quartets, instrumental choirs, small chamber choirs) and also in sectionals (by instrument type). By having more adequate practice room space with some spaces a bit larger to accommodate 5-10 people, students would be able to work more independently and collaboratively, which has been somewhat impossible to do given our current severe overcrowding situation.

While the LHS Auditorium can seat approximately 1,000 audience members, the stage, pit orchestra area, wings, and line sets are inadequate for a program this large. The stage itself needs to be expanded with adequate wing space that can house automated line sets and winches to enable us to safely and appropriately prepare for musical concerts and our dramatic arts productions. Right now, the stage itself is not large enough (both in length and in depth) to fit all students in a given ensemble, and the wing space is pretty much non-existent, posing significant safety concerns with equipment and access to egresses. We lack an attached and large prop/building shop to enable equipment to easily be maneuvered from prep areas to the stage. We do not have a prop/costume storage space, either, which poses many safety issues, as there is no space large enough to handle the kind of work that needs to be done for productions. While we do have a pit orchestra, it is exceptionally narrow, making it extremely difficult for instrumentalists to perform during productions. Along with this, the sheer quality of the stage in the auditorium poses safety concerns in general due to its deteriorated nature. The rehearsal spaces should be directly “attached” or at least within access to the auditorium and stage areas, which is not the case at this time.

LHS has a Black Box Theater that is located upstairs in the main building away from the auditorium and the rest of the performing arts spaces. The space is just a double-sized classroom with a carpet and black painted walls. There are windows that have curtains to simulate a more enclosed feeling. While this is adequate as a classroom space, we are lacking the kind of dramatic arts space to produce quality small scale productions and presentations. A theater in-the-round that has perimeter seating for an audience would be more appropriate. Only a limited number of audience members can attend our improv shows and festival productions. Such a space would enable us to provide small dramatic arts productions, as well as small musical presentations. For example, we have an extensive jazz program, but it is difficult to find space for them to hold their many jazz evenings for our large jazz ensembles and our smaller jazz combos.

We are trying to expand our Performing Arts course offerings to students from diverse backgrounds at LHS outside of just performance-based ensembles and dramatic performances. Unfortunately, we are lacking a music classroom that can accommodate non-Performing Arts courses in music theory, music production, piano keyboard, guitar, and ukulele classes, modern band classes, steel drum ensembles and handbell choirs, composition and arranging, and music related humanities classes. Our current space limits enrollment to 15 students per class. We also lack the technology to provide an even more meaningful learning experience. A Musical Instrument Digital Interface (MIDI-style set up) would provide our students with the kind of technological environment consistent with a contemporary music education experience. Such a technology space could double as a recording studio for our instrumental and choral students to record tracks for the high number of festivals and adjudications in which they participate.

While there are so many priorities to be considered when building a new high school, here in Lexington, the Performing Arts program is an extremely important and foundational part of the curriculum across the school district and within the Town of Lexington. Our community truly *values* the Arts and believes in providing an exceptionally high quality and well-rounded education for its students. Outside of our non-Performing Arts classes, the number of students we have participating in our

ensembles is almost 1,000 students, which is 43% of the current LHS population. As our program has been recognized on both a state, national, and global level, having such resources and adequate spaces will enable us to support the development of even more Performing Arts students in the best ways possible.

### *Physical Education, Health and Wellness*

The 9-12 PE, Health and Wellness program at LHS has a strong foundation with talented educators, but the space limitations severely impact our ability to collaborate with other departments to the level that we envisioned. We do not have the space for many inter-departmental collaborative opportunities occur, and our efforts to implement integrated units in collaboration with the Science department (e.g., Anatomy and Physiology, Biomechanics, Kinesiology and Neuroscience, as it relates to the teen brain and addiction and decision-making) are on hold. Due to issues of overcrowding, there is no available space to achieve the kinds of integrated educational opportunities that better promote a well-rounded PE, Health & Wellness education that meets the social and emotional needs of each child.

We are unable to schedule any of our PE classes during a two hour window in the middle of the day, as the large number of lunch students requires the use of most of the PE indoor spaces at that time, including the gymnasium and field house. The severe overcrowding impacting the large core spaces in Lexington HS in turn impacts the PE, Health and Wellness department's ability to offer all of the units of study, as the number of blocks available to schedule classes is also reduced. The gymnasium is too small to accommodate some of the units of study, and a large soffit running through the middle of the gym further impacts the ability to effectively deliver the curriculum in some cases, as well as after school sports (e.g., volleyball).

The Athletic Training room also doubles as a classroom. Due to the current size of the room, we have to restrict the class sizes of both the Cardiopulmonary Resuscitation (CPR) and Sports Medicine classes to a maximum of 18 students, impacting the number of students who have access to these vital classes each year. The Athletic Training room is totally inadequate to accommodate the after school sports teams in order to effectively evaluate, treat, and rehabilitate the numerous sports injuries (approximately 3000+ visits in three seasons) that are treated in the room every school year, which poses health and safety issues. The Fitness Center is a converted space that has approximately ten concrete support columns throughout the room, greatly impacting the safety of students. The Yoga/Dance Studio is a converted printing space that has size limitations that require our educators to modify lessons in order to safely teach some of the more dynamic performance-based units of study. Health Education classes require safe and private spaces to allow students to speak with the health education staff when personal issues are part of the conversation. Furthermore, some of the units require intervention and support from a social worker in the department, and the need for a private welcoming space is optimal to support student emotional health.

The Prevention Program provides a research-based approach to substance abuse assessment, education and intervention, using evidenced-based research, curriculum, and interventions. Services are short-term with opportunities for students to engage in follow-up check-ins. Trained staff and graduate school interns provide services primarily using the "Healthy Futures Stanford Alternative to Suspension Curriculum." This is a nicotine-specific curriculum that we have adapted and modified to include education about marijuana and other drugs. There are other research-based curricula that we hope to adapt and adopt to meet the needs of our Lexington HS students. Our ability to implement the Prevention Program and the substance abuse interventions and curricula is impacted by the lack of a permanent, appropriate space to support the student-led peer leadership programs that are necessary. Many other associated student activities are impacted, as well, including Students Against Destructive Decisions (SADD) Club, SHAC, and the Teen/Adult Dialogue events. Currently the program does not have the space available to support the student-facing K-12 elements of the program, given that student participation is well over 300 trained high school students each year and growing!

The Lexington Public Schools PE, Health and Wellness Prevention Program provides free and confidential information, counseling, and support to students and their families for any alcohol or drug-related questions or problems. In the district's efforts to continue to reduce exclusionary practices and suspensions and to maximize restorative practices and educational opportunities, the Prevention Program provides interventions and assessment, and it offers an important alternative to suspension. We want to educate instead of isolate students who violate the LPS code of conduct and substance use policies and find alternatives to suspension. Space constraints often make it challenging to provide the necessary confidential spaces to hold

associated meetings with students and families.

Please also provide the following:

<b>Cafeteria Seating Capacity:</b>	600
<b>Number of lunch seatings per day:</b>	3
<b>Are modular units currently present on-site and being used for classroom space?:</b>	YES
<b>If "YES", indicate the number of years that the modular units have been in use:</b>	5
<b>Number of Modular Units:</b>	12
<b>Classroom count in Modular Units:</b>	25
<b>Seating Capacity of Modular classrooms:</b>	300
<b>What was the original anticipated useful life in years of the modular units when they were installed?:</b>	10
<b>Have non-traditional classroom spaces been converted to be used for classroom space?:</b>	YES
<b>If "YES", indicate the number of non-traditional classroom spaces in use:</b>	6
<b>Please provide a description of each non-traditional classroom space, its originally-intended use and how it is currently used (maximum of 1000 characters):</b>	
<p>There are 6 or more spaces that have been repurposed for uses outside of their intended design and are used on a regular basis, including: the athletic training room, the auditorium, the field house, the music teacher/prep storage area, and the Library Media Center (LMC). Students study and eat in the hallways because there is a significant space shortage. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library so librarians can teach research and presentation skills. The LMC is in constant use for testing (MCAS/AP, etc.) meetings, and displaced classes. Approximately 800 students visit the library each day, and when classes convene, we have to turn students away due to lack of space. A flexible learning space is needed to support multiple learning/teaching styles, emerging technologies, and the needs of the 21st century learner.</p>	
<b>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):</b>	
<p>Two substantive changes were made to the district's educational program: K-8 redistricting and later school start times. It remains to be seen whether these changes will have an impact on the district's enrollment capacity. We implemented the K-8 Phase II Redistricting Plan in the Fall of 2021. With Hastings Elementary School and Lexington Children's Place completed, the timing was right for a substantial redistricting effort. Phase I Redistricting was completed in 2016 and helped establish a "flexible boundaries" model that was successfully implemented. Phase II was a far more comprehensive redistricting effort that examined all school populations and redistricted in an effort to alleviate space pressures in a number of our schools. Approximately 300 students were affected by the Phase II Redistricting Plan.</p> <p>The Lexington School Committee voted for a 45-minute later school start time for all Lexington HS students that was implemented in the Fall of 2021. We do not anticipate any major changes to the district's enrollment capacity as a result; however, we do need to further examine the implications of a later school start for our 250+ students from Boston and our students with disabilities in the LABBB Collaborative. We anticipate that a later school start will be beneficial for our Boston students and those in the LABBB Collaborative, which, in theory, could result in more pressure on the district's enrollment capacity.</p>	
<b>What are the district's current class size policies (maximum of 500 characters)?:</b>	
<p>The district's current class size guidelines cap all Lexington High School classes at 20-25 students (high school labs are capped at 20 students).</p>	

### Priority 3

***Question 1: Please provide a detailed description of the "facility-related" issues that are threatening accreditation. Please include in this description details related to the program or facility resources (i.e. Media Center/Library, Science Rooms/Labs, general classroom space, etc.) whose condition or state directly threatens the facility's accreditation status.***

In the 2008 and 2020 New England Association of Schools and Colleges (NEASC) Accreditation Reports, LHS earned a rating of **"Does Not Meet the Standard"** due to the poor condition of the facility. The accreditation team reported in 2020: "Enrollment has outpaced the addition of buildings, creating significant space issues in classrooms, the cafeteria, and other facilities."

Lexington HS has a number of facilities-related issues that threaten accreditation. The NEASC Visiting Team participated in a site visit at Lexington High School from September 25-27, 2018. The NEASC Conference Committee's Report published in January 2019 noted school safety concerns, ADA compliance issues, and the impact on the Library Media Center, Science labs (relative to our temporary plan to retrofit and convert Earth Science classrooms to Biology and Chemistry rooms), a shortage of general classroom space, and the need for additional space for students with disabilities.

The significant overcrowding at Lexington High School creates a serious challenge for our community. Nearly 100% of existing classrooms are undersized; 100% of science rooms do not meet the MSBA standard of 850 square feet, and approximately 30% of general education classrooms do not meet the recommended square footage guidelines. Common areas such as cafeterias and hallways are inadequate for their intended functions. Teaching and learning are impacted on a daily basis, and overcrowding creates safety hazards, such as congested hallways. Educators are forced to search for space to teach and collaborate, and LHS is in a constant state of retrofitting classrooms to ensure all students have access to fundamental learning experiences.

There is a critical shortage of Science labs, and we have had to invest funds to temporarily convert Earth Science classrooms to Chemistry and Biology Labs. We are unable to deliver the research skills students need, as the Library Media Center is completely overrun by competing demands at Lexington High School. Lexington HS students with and without disabilities should be able to learn together in their school system, but overcrowding limits inclusive opportunities. We would like to build a Transitional Program and a Developmental Learning Program at Lexington HS for some of our students who are currently educated out-of-district, but this is an impossibility given the current space restrictions. Furthermore, it is difficult to find private space for sensitive Individualized Education Program (IEP) Team Meetings at Lexington HS, and guidance counselors cannot expand college and career opportunities and explorations given the current space limitations.

Lexington educators are unable to find collaborative space to work in creative ways with our students. Educators in the district have received extensive training on Project-Based Learning (PBL), an innovative, student-centered pedagogical approach designed to help students acquire deep knowledge through active, multi-disciplinary, real-world problem-solving. Such an approach requires longer class periods and flexible spaces for students and educators to collaborate, neither of which exists at Lexington High School. These collaborative spaces are critical to our de-leveling efforts, as each Lexington HS Department works to create more inclusive learning opportunities by de-leveling and consolidating CP1 and CP2 classes that traditionally have an over-representation of students with disabilities and students of color.

For the past five years, LHS has included flexible time in its block schedule for academic intervention, enrichment learning, and community building. The flexibility of the programming has been limited by the types of spaces we have around the school, especially spaces that can accommodate learning in groups smaller than the typical classroom. For instance, our fledgling advisory program has used a model of restorative and community building circles. The model is best suited to a group of 12 students who can sit in relative privacy to have courageous, honest conversations about their school, their experiences, and our shared values. This is not a problem unique to LHS; but, it is a problem that newly constructed schools have addressed through creative and functional architecture: spaces that are modular or that adapt to many purposes, alcoves in hallways where students can meet during flexible blocks to collaborate on group projects, and the like would increase our ability to provide the types of learning opportunities that help students flourish. The school is working on re-envisioning learning by, for example, increase project-based learning, but the facility is not currently organized to maximize the implementation of engaging student learning

strategies.

There are a number of areas in which the district has been making efforts to address the needs of the school, including improved ability to lock exterior doors, but many additional concerns remain. For example, there is no plan to secure the perimeter of the school. Doors are left unlocked and unmonitored during the school day because students take classes in multiple buildings. Enrollment continues to increase and the available space is not organized to support the anticipated number of students in coming years.

An excerpt from the 2018 NEASC Report:

*The school does not have the infrastructure that supports the response to crisis situations and is in the process of developing and implementing protocols for crisis situations. The school facility was designed as an open campus with a central exterior courtyard which is a structural impediment to fully implementing current best practices for school safety in crisis situations. Important work has been done in the last year to secure some of the exterior doors during the school day, but many doors remain unlocked to allow students to pass between the various buildings. Faculty now wear identification badges, but there are many entrances and a limited number of security staff...*

*The visiting team concurs that [continuing the process to propose a new school building] is a priority for the school. In addition to pursuing the long-term plan for a new building, the district should develop and fund a short-term capital plan to address the facility issues in the existing building to ameliorate safety concerns, expand the space available for instruction, and support the improvement of teaching and learning in the existing facility."*

An excerpt from the narrative section on page 29 of the NEASC Report for Lexington High School states:

*"The school building does not adequately support the delivery of curriculum, programs, and services. The main building was built in 1949. Additional buildings have been added since then, and a renovation to the main building was completed in 2000. Students have to travel through the central courtyard between buildings creating significant safety challenges. Enrollment has outpaced the addition of buildings creating significant space issues in classrooms, the cafeteria, and other facilities. Many of the mechanical systems have exceeded their life expectancy. The school does not meet ADA accessibility guidelines. Additionally, the classrooms, the library/ media center, the school's technology infrastructure, and many other spaces do not fully support 21st century learning."*

Also, it is worth noting that for the Standard 5.1a - Learning Resources (the foundational element that relates to the condition of the facilities), Lexington High School educators submitted a more favorable "Meets the Standard" self-rating. However, the NEASC Visiting Team took exception to the more favorable rating given by LHS and in the Collaborative Conference Report downgraded the rating to **"Needs Improvement"** due to the condition of the high school.

**Priority 3*****Question 2: Please describe the measures the district has taken to mitigate the problem(s) described above.***

We have taken a number of actions to mitigate the facilities-related issues noted in the NEASC Visiting Team's report. Door locks were added to improve the safety and security of Lexington High School. Modular units were added to increase the amount of general classroom space and to create safe and accessible learning environments for students with disabilities in the Intensive Learning Program. Short-term measures have been put in place to address ADA guidelines (e.g. signage, handrails, etc.). A three-year plan was developed to convert Earth Science classrooms into Chemistry and Biology classrooms. A 1:1 Chromebook initiative was implemented at LHS to improve students' 21st century skills.

We have undertaken a series of complex space-mining and planning exercises to prepare for the significantly increasing enrollments at Lexington High School. The Enrollment Working Group (EWG) analyzed enrollment trends using three statistical models (i.e., the Cohort Survival Model (CSM) using 5-year projections; the CSM using 10-year projections; and a CSM hybrid) in an effort to predict enrollment trends with the greatest accuracy. The effort is led by the Director of Planning and Assessment and members of the EWG are fully engaged in the process. The EWG members are highly educated Lexington residents who have historically participated in analyzing enrollment trends in the Town. The most recent analysis of enrollment trends indicates that we expect to exceed 2,614 students by 2024 - 2025, which translates to an additional 300 +/- students.

When student enrollments increase, we also experience pressure on our shared spaces. We currently have need additional spaces in every department, including but not limited to: additional general classroom spaces, Science labs, planning spaces for increased teaching/support staff to meet enrollment needs; spaces for confidential counseling and administrative staff; conference rooms for IEP Team Meetings; meeting spaces for teachers to collaborate in Professional Learning Communities (PLCs); space for testing (e.g. Special Education, Advanced Placement, MCAS, ELL), especially with regard to IEP-mandated accommodations for alternative testing locations.

Finally, there is a critical need to increase the capacity in the shared spaces of the Cafeteria and/or to create additional lunch periods. The current average number of reimbursable meals is approximately 1,000 per day (with 300+ per lunch period). The current average number of a la carte meals served per day is approximately 400 (or an average of 100+ per lunch period, plus 25-30 lunches served on average to LABBB students during each lunch). The total number of students purchasing lunches in the cafeteria is approximately 1,400 +/- per day.

We estimate an increased demand of 14 general classrooms in the next few years. Additionally, there is a need for 2-3 classrooms for other programs, such as those that support English Language Learners, Learning Center, and specialized classrooms. The specialized classrooms include Art, Physics, and Earth Science, and these classrooms are in addition to the plan described in more detail below (see Question 3) to add extra Biology (2019) and Chemistry (2020) classrooms in the Science building). In total, we need an additional 14 general classrooms and space for our English Language Learners, the Learning Center, and two specialized spaces (1 Art and 1 Earth Science/Physics). We conservatively estimate that an additional 17 total spaces should adequately accommodate a 300 +/- student increase.

We have developed extensive plans to mitigate the problems that we are encountering due to severe overcrowding and other high school facility constraints. We work daily to mitigate the issues in less elaborate ways. For instance, we find that we must impose strict time limits on Individualized Education Program (IEP) Team Meetings given our space limitations at Lexington HS. Our most medically-fragile students, many of whom are in the LABBB Collaborative program and come to our campus from 60 other surrounding communities, have their medical needs attended to within the classroom setting with makeshift barriers that offer only a modicum of privacy. In many cases, the district has no choice but to encourage families to pursue out-of-district placements for some students with disabilities who may be better educated at Lexington HS.

In 2018, we engaged in another complex planning exercise to increase student access to science courses. We developed a new space reconfiguration plan involving the retrofitting of Earth Science rooms to Chemistry and Biology rooms, and we have a plan



in place that will provide limited access to Science labs for all Lexington HS students for the next five years if enrollment projections hold.

**Priority 3**

***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(s) identified.***

1. Our facilities are nearly 70 years old, and they were designed in an era when instructional practices were quite different than they are today. The classrooms of today are flexible spaces that are lively, engaging, collaborative, and interactive. It is a challenge to create collaborative work spaces, implement project-based learning, and find innovative ways to integrate technology, as these efforts require flexibility in space in order to address various instructional modalities. Our buildings and facilities designed core spaces for 1,800, but we somehow manage to educate approximately 2,300 students every day. The physical space as it currently exists hampers our ability to pursue more creative endeavors with our students and deliver a high-quality curriculum to our students. We do not meet State-mandated time-on-learning requirements. Seniors have 100 fewer instructional hours than their counterparts in other districts, and Juniors have 160 fewer instructional hours than peers in other districts. Despite our best efforts, we are limited in our ability to use the classrooms in flexible and creative ways to create optimal conditions for teaching and learning.
2. Another impact of our rapid growth is the re-purposing of spaces for uses outside of their intended design on a regular basis. There are several spaces that are being utilized for purposes other than that which were originally intended. Earth Science classrooms are being converted into Chemistry and Biology labs. The cafeteria is being used as a makeshift classroom. The front hallway is where students eat and do their work. The music prep/teacher storage area is where classes are held and equipment is stored. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library space to allow librarians to teach research and presentation skills to classes.
3. The greatest challenge to the library program is the physical space. Over the course of the last few years, areas of the library have been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners.
4. The library has no carpet or acoustical treatments to minimize sound. The library offers space for two classes to work quietly, to conduct research, and to work on laptop computers. When the LMC is used for MCAS, AP testing, and for district- and school-based meetings, any class that had signed up gets bumped into library space. The result is a less-targeted experience for that class and a more disruptive environment in the library overall, as there could be as many as three classes of students using the library at any given time, in addition to any students studying quietly during a study block.
5. The lunch program is an important part of our inclusionary practices, but space is inadequate. The kitchen produces over 1,000 complete meals and an estimated 400 additional a la carte meals per day. The commons areas (two cafeterias) seat approximately 600 people. We currently have three lunch services with approximately 600 - 800 students assigned per lunch block in addition to any staff and the students in the LABBB program. There is insufficient seating to accommodate students eating lunch, leaving hundreds of students eating on the floor or at extra tables set up in the main hallway and outside. Also, time to serve the students has become increasingly tight as enrollments increase and more students attend each lunch block.
6. The greatest challenge to the library program is the physical space. Over the course of the last few years, areas of the library have been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners.

7. Space for 120+ LABBB Collaborative students who come from 60 districts throughout the Commonwealth is inadequate; so, too, is space for the supporting English Language Learners and the 225 METCO students (one of the largest METCO programs) from Boston who have been part of the Lexington school community for over fifty years.
8. It is extremely difficult to provide our special education students with an education in their least restrictive environments due to space constraints. Each student is assigned to a liaison, a special educator who serves as the point of contact and coordination for the student, parents, and teachers. The least restrictive model is Academic Support as a resource model, which meets 1-5 times per week depending on the student's level of need. Instructional Assistants and Student Support Instructors (SSIs) are also used to support students in the general education classroom. Some classes are co-taught by a regular educator and a special educator, but space limits our ability to expand the co-teaching model. We have limited space for our specialized programs including: (1) the Language Learning Program (LLP); (2) the Intensive Learning Program (ILP); and (3) the Therapeutic Learning Program (TLP). The LLP is developed for students with language-based disabilities. There is support in the general education setting and students have resource/academic support blocks with special educators to address specific goals. Students receive specially designed instruction in reading, written language, and executive functioning. The ILP is designed for students with Autism Spectrum Disorder and related disabilities, and a continuum of supports ranging from full integration to substantially separate is offered. The TLP is for students with emotional disabilities. There is a therapeutic aspect and a greater focus on metacognition. Classes are taught in a variety of settings, including small group and self-contained. Social workers and therapeutic supports are provided daily to students. Our educators do the best they can with the space available to them, but our facilities impact our ability to deliver the type of inclusive special education that our students deserve.
9. We have one auditorium at LHS with a capacity of approximately 800 people. This space is dedicated performing arts instructional space, as there are more musical groups than we have rehearsal spaces for if the stage were not used. In fact, it is the only space that will accommodate one of our orchestras due to its size of well over 100 students. The educators work effectively with one another around theater and musical productions throughout the year to avoid conflicts with demands for the stage. However, there are times where the auditorium is needed for large meetings and/or presentations to whole grades of students. When this need arises, the teacher and the performing group are displaced with nowhere to go, resulting in the cancellation of a class or I-Block (intervention block) and the loss of valuable instructional time.
10. Another re-purposed space is a room between the two performing arts classrooms. This space was originally intended to be a storage and teacher prep area. The room has a cubicle partition wall to divide the space into a teacher prep area and a storage/music digital lab area. Students work at computer stations composing, learning music theory, and critiquing work among stored musical instruments, band uniforms, and other sundry items. It is a most unsuitable space for encouraging creativity and exploration.

**Please also provide the following:**

**Name of accrediting entity (maximum of 100 characters):**

New England Association of Schools and Colleges (NEASC).

**Current Accreditation Status: Please provide appropriate number as 1=Passed, 2=Probation, 3=Warning, 4=Lost:**

1

**If "WARNING", indicate the date accreditation may be switched to Probation or lost:** 9/1/2018

**If "PROBATION", indicate the date accreditation may be lost:**

**Please provide the date of the first accreditation visit that resulted in your current accreditation status.:**

9/27/2018

**Please provide the date of the follow-up accreditation visit:** 1/14/2019

**Are facility-related issues related to Media Center/Library? If yes, please describe in detail in Question 1 below.:**

YES

**Are facility-related issues related to Science Rooms/Labs? If yes, please describe in detail in Question 1 below.:**

YES

**Are facility-related issues related to general classroom spaces? If yes, please describe in detail in Question 1 below.:**      YES

**Are facility-related issues related to SPED? If yes, please describe in detail in Question 1 below.:**      YES

**Are facility-related issues related to support spaces? If yes, please describe in detail in Question 1 below.:**  
YES

**Are facility-related issues related to "Other"? If yes, please identify the other area below and describe in detail in Question 1 below.:**      YES

**Please describe (maximum of 100 characters).:**

Hallways, auditorium, I-Block (Intervention Block).

Priority 4

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

**Severe Overcrowding.** The significant overcrowding at Lexington High School creates a serious challenge for our community. Based on current projections, by the year 2025, enrollment in grades 9-12 is expected to reach its peak with over 2,500 students. An enrollment topping 2,500 means that LHS will be approximately 650 students over capacity in the core spaces and classrooms. In addition to overcrowding, the current high school facility faces deteriorating conditions, and it is not well configured for modern instructional approaches to meet educational needs. **The most recent analysis of enrollment trends indicates that we expect to exceed 2,500 students by 2024 - 2025, which would make us the fourth or fifth largest high school (under the same roof) in Massachusetts.**

A significant and steady uptick in enrollment has led to an increase of over 1,000 students in the district in the past ten years. The school district has consistently experienced overcrowding in all of the elementary, middle and high school grades, but nowhere is the overcrowding felt more intensely than at Lexington High School (LHS). Analysis of enrollment data indicates that by the year 2024-2025, the LHS projected enrollment could reach roughly 2500+ students and could continue at or near that level for the foreseeable future. Even if enrollment does not reach 2,500+ students, any measurable increase puts additional pressure on the planned operating capacity for large core spaces, such as the cafeteria and lunchroom spaces, as well as the instructional spaces. The core spaces were designed for 1,850 students, and the current high school enrollment would need to decline by approximately 450 students for the core spaces to be within the planned operating capacity.

Enrollment is outpacing existing space in schools across the district, but nowhere is the pressure felt as intensely as at Lexington High School. Severe overcrowding exists at Lexington High School, and five-year enrollment projections using the Cohort Survival Model indicate that the student population will increase to over 2,500 by 2024 and remain at or near that level for the foreseeable future. When enrollment reaches 2,500, it would place Lexington High School in the top four largest school systems in Massachusetts. No other suburban community in the Commonwealth of MA has high school enrollments at this level, which is what prompted the Master Planning Advisory Committee to explore the possibility of two high schools. The Master Planning Advisory Committee (MPAC) concluded that such an idea is not feasible given the excessive costs for two building projects coupled with the land constraints in the Town of Lexington.

The Enrollment Working Group (EWG) analyzed enrollment trends using three statistical models (i.e., the Cohort Survival Model (CSM) using 5-year projections; the CSM using 10-year projections; and a CSM hybrid) in an effort to predict enrollment trends with the greatest accuracy. The effort is led by the Director of Planning and Assessment and members of the EWG are fully engaged in the process. The EWG members are highly educated Lexington residents who have historically participated in analyzing enrollment trends in the Town.

The elementary and middle school enrollment numbers appear to be aligned with earlier CSM projections; however, there is an anticipated increase in enrollment at the high school. Lexington HS enrollments are expected to increase by 300 +/- students in the next five years, with the highest enrollments anticipated in the 2024 - 2025 school year. A 90% confidence interval is produced for all enrollment projections, which tells us that there is a 90% chance that the confidence interval contains the true value of future enrollment.

As shown in the table below, the current enrollment at Lexington High School is 2,261, and we anticipate that number to continue to rise until it reaches its peak enrollment of 2,509 students in the 2024-2025 school year and remain that way for the foreseeable future.

Table 1. Current Enrollment Projections with Confidence Intervals

Actual	Projected
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A significant and steady uptick in enrollment has led to an increase of over 1,000 students in the district in the past ten years. The school district has consistently experienced overcrowding in all of the elementary, middle and high school grades, but nowhere is the overcrowding felt more intensely than at Lexington High School (LHS). Analysis of enrollment data indicates that by the year 2024-2025, the LHS projected enrollment could reach roughly 2500+ students and could continue at or near that level for the foreseeable future. Even if enrollment does not reach 2,500+ students, any measurable increase puts additional pressure on the planned operating capacity for large core spaces, such as the cafeteria and lunchroom spaces, as well as the instructional spaces. The core spaces were designed for 1,850 students, and the current high school enrollment would need to decline by approximately 450 students for the core spaces to be within the planned operating capacity. Even in these unpredictable times, such a scenario seems unlikely.

The significant overcrowding at Lexington High School creates a serious challenge for our community. Nearly 100% of existing classrooms are undersized; 100% of science rooms do not meet the MSBA standard of 850 square feet, and approximately 30% of general education classrooms do not meet the recommended square footage guidelines. Common areas such as cafeterias and hallways are inadequate for their intended functions. Teaching and learning are impacted on a daily basis, and overcrowding creates safety hazards, such as congested hallways. Educators are forced to search for space to teach and collaborate, and LHS is in a constant state of retrofitting classrooms to ensure all students have access to fundamental learning experiences.

**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.***

We have undertaken a series of complex space-mining and planning exercises to prepare for the significantly increasing enrollments at Lexington High School.

When student enrollments increase, we also experience pressure on our shared common spaces. There is a critical need to increase the capacity in the shared spaces of the Cafeteria and/or to create additional lunch periods. The current average number of reimbursable meals is approximately 1,000 per day (with 300+ per lunch period). The current average number of a la carte meals served per day is approximately 400 (or an average of 100+ per lunch period, plus 25-30 lunches served on average to LABBB students during each lunch). The total number of students purchasing lunches in the cafeteria is approximately 1,400 +/- per day. Two years ago, DiNisco Design estimated the cost of portable structures to house additional students at \$5M. have estimated the cost of portable structures at approximately \$5M, and we are now utilizing less permanent structures (tents and canopies) to provide students with a space to eat.

We calculated an increased demand of 14 general classrooms in the next few years, and we exploring portable options to accommodate students. Additionally, there is a need for 2-3 classrooms for several other programs, such as those that support English Language Learners, Learning Center, and specialized classrooms. The specialized classrooms include Art, Physics, and Earth Science to add extra Biology (2019) and Chemistry (2020) classrooms in the Science building). In total, we need an additional 14 general classrooms and space for our English Language Learners, Learning Center, and two specialized spaces (1 Art and 1 Earth Science/Physics).

We have developed extensive plans to mitigate the problems that we are encountering due to high school facility constraints. We also work daily to mitigate the issues in less elaborate ways. For instance, we find that we must impose strict time limits on Individualized Education Program (IEP) Team Meetings given our space limitations at Lexington HS. Our most medically-fragile students, many of whom are in the LABBB Collaborative program, have their medical needs attended to within the classroom setting with makeshift barriers that offer only a modicum of privacy. In many cases, the district has no choice but to encourage families to pursue out-of-district placements for some students with disabilities who may be better educated at Lexington HS.

One of the most important mitigation strategies is the development of solid plans to ensure that the school district clearly understands and anticipates space needs. In Lexington, we engaged in extensive master planning process with community leaders and stakeholders in the facilities master planning process. In collaboration with these stakeholders, we wrote a 50-page LPS Master Planning Compendium ourselves to ensure the facilities needs are well known and understood by all, including decision-makers in the Town of Lexington. We developed an Enrollment Working Group to analyze K-12 enrollments for the next five years. We also engaged in a series of space-mining exercises and developed a 450+ page Facilities Master Plan in collaboration with the community. In the LPS Master Planning Compendium, we outline short-term and long-term mitigation strategies to help us address the growing enrollment trends at Lexington High School:

- 1 flexible school assignment;
- 1 increases in class size, coupled with increased staffing (e.g. instructional assistants);
- 1 repurposing non-instructional spaces (e.g. staff offices, conference rooms);
- 1 repurposing art and music spaces;
- 1 repurposing literacy libraries;
- 1 the potential relocation of district-wide special education programs
- 1 the use of modular additions to existing buildings;
- 1 the use of the "Old Harrington," the current central administrative office building for a 7th elementary school or a 3rd middle school;
- 1 the purchase of property near existing schools for future expansion
- 1 the use of the Laconia Street site for possible central administrative offices or a new school;
- 1 explore grade reconfigurations (e.g., move 6th grade from the middle school to the elementary level or moving Kindergarten or 5th grade to a new location, move 8th grade to the high school);
- 1 land-swap opportunities or acquisition of land;
- 1 the demolition and replacement of Bridge or Bowman and/or use as swing space;
- 1 yearly space-mining exercises to be conducted by building principals in collaboration with school community members.

**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.***

The severe overcrowding issue at Lexington High School (LHS) places students and teachers at a significant disadvantage, and the situation is expected to drastically worsen by 2024-2025 when we gain an approximately 300 new students at Lexington High School. The student population at LHS is 2,300 now. **The additional 300+/- students will make Lexington HS the fourth or fifth largest high school under one roof in Massachusetts.** Severe overcrowding exists at LHS, impacting our ability to comply with time-on-learning requirements or to deliver the kind of educational program we need and want to deliver to our students. The information that follows highlights the general and some department-specific challenges caused by severe overcrowding, impacting our ability to deliver a 21st century educational program.

We presently are unable to meet the 990 hours of time-on-learning requirements at Lexington HS due to space-constraints. The Department of Elementary and Secondary Education (DESE), in the 2013 Coordinated Program Review for Civil Rights, cited Lexington HS for not meeting the time-on-learning requirements. While we were able to make some slight modifications and adjustments to increase our high school students' overall time-on-learning, LHS still failed to meet the 990-hour requirement. Seniors accrue approximately 812 hours of "time on learning," while Juniors attain approximately 830 hours. The loss of well over 100 hours of instructional time puts students at a significant disadvantage. Despite our best efforts and in the absence of more space, Lexington High School students presently endure an antiquated 8-period high school schedule that enables us to free up approximately 10% more space at LHS. Most of Lexington HS students perform considerably well and make significant contributions to their school community, but so much more could be accomplished if we had adequate facilities to meet the growing needs of our 9-12 students.

Our facilities are nearly 70 years old, and they were designed in an era when instructional practices were quite different than they are today. The classrooms of today are flexible spaces that are lively, engaging, collaborative, and interactive. It is a challenge to create collaborative work spaces, implement project-based learning, and find innovative ways to integrate technology, as these efforts require flexibility in space in order to address various instructional modalities. Our buildings and facilities designed core spaces for 1,800, but we somehow manage to educate approximately 2,300 students every day. The physical space as it currently exists hampers our ability to pursue more creative endeavors with our students and deliver a high-quality curriculum to our students. We do not meet State-mandated time-on-learning requirements. Seniors have 100 fewer instructional hours than their counterparts in other districts, and Juniors have 160 fewer instructional hours than peers in other districts. Despite our best efforts, we are limited in our ability to use the classrooms in flexible and creative ways to create optimal conditions for teaching and learning.

Another impact of our rapid growth is the re-purposing of spaces for uses outside of their intended design on a regular basis. There are several spaces that are being utilized for purposes other than that which were originally intended. Earth Science classrooms are being converted into Chemistry and Biology labs. The cafeteria is being used as a makeshift classroom. The front hallway is where students eat and do their work. The music prep/teacher storage area is where classes are held and equipment is stored. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library space to allow librarians to teach research and presentation skills to classes.

The greatest challenge to the library program is the physical space. Over the course of the last few years, areas of the library have been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners. The library has no carpet or acoustical treatments to minimize sound. The library offers space for two classes to work quietly, to conduct research,



and to work on laptop computers. When the LMC is used for MCAS, AP testing, and for district- and school-based meetings, any class that had signed up gets bumped into library space. The result is a less-targeted experience for that class and a more disruptive environment in the library overall, as there could be as many as three classes of students using the library at any given time, in addition to any students studying quietly during a study block.

The lunch program is an important part of our inclusionary practices, but space is inadequate. The kitchen produces over 1,000 complete meals and an estimated 400 additional a la carte meals per day. The commons areas (two cafeterias) seat approximately 600 people. We currently have three lunch services with approximately 600 - 800 students assigned per lunch block in addition to any staff and the students in the LABBB program. There is insufficient seating to accommodate students eating lunch, leaving hundreds of students eating on the floor or at extra tables set up in the main hallway and outside. Also, time to serve the students has become increasingly tight as enrollments increase and more students attend each lunch block.

Space for 120+ LABBB Collaborative students who come from 60 districts throughout the Commonwealth is inadequate; so, too, is space for the supporting English Language Learners and the 225 METCO students (one of the largest METCO programs) from Boston who have been part of the Lexington school community for over fifty years.

It is extremely difficult to provide our special education students with an education in their least restrictive environments due to space constraints. Each student is assigned to a liaison, a special educator who serves as the point of contact and coordination for the student, parents, and teachers. The least restrictive model is Academic Support as a resource model, which meets 1-5 times per week depending on the student's level of need. Our educators do the best they can with the space available to them, but our facilities impact our ability to deliver the type of inclusive special education that our students deserve.

We have one auditorium at LHS with a capacity of approximately 800 people. This space is dedicated performing arts instructional space, as there are more musical groups than we have rehearsal spaces for if the stage were not used. In fact, it is the only space that will accommodate one of our orchestras due to its size of well over 100 students. The educators work effectively with one another around theater and musical productions throughout the year to avoid conflicts with demands for the stage. However, there are times where the auditorium is needed for large meetings and/or presentations to whole grades of students. When this need arises, the teacher and the performing group are displaced with nowhere to go, resulting in the cancellation of a class or I-Block (intervention block) and the loss of valuable instructional time.

Another re-purposed space is a room between the two performing arts classrooms. This space was originally intended to be a storage and teacher prep area. The room has a cubicle partition wall to divide the space into a teacher prep area and a storage/music digital lab area. Students work at computer stations composing, learning music theory, and critiquing work among stored musical instruments, band uniforms, and other sundry items. It is a most unsuitable space for encouraging creativity and exploration.

Our students do not have equitable access to Science labs. We had to develop a complex, two-year reconfiguration plan that does not adequately prepare our students to meet the Next Generation Science Standards.

**Overcrowding Impacts Time-on-Learning at Lexington High School.** In the 2013 and 2018 Coordinated Program Review for Civil Rights, DESE cited Lexington High School for not meeting the time-on-learning requirements. While we were able to make some slight modifications and adjustments to the schedule to increase our high school students' overall time-on-learning, LHS still failed to meet the 990-hour requirement due to severe overcrowding. LHS Seniors accrue approximately 812 hours of "time on learning," while Juniors receive approximately 830 hours of instruction. To remedy this problem, enlisted the expertise of a master scheduler who has done an exhaustive examination of the LHS schedule to see if there is a way for us to meet the State's TOL requirement. Unfortunately, after careful analysis, it was determined that LHS is unable to increase time-on-learning given the constraints imposed by severe overcrowding. This means that a junior or senior at Lexington HS receives between 100-160 fewer hours of instructional time compared to their peers across the State. Despite our best efforts, Lexington HS students must endure an antiquated high school schedule that allows us to free up approximately 10% more space at LHS. Most of Lexington HS students perform considerably well and make significant contributions to their school community, but so much more could be accomplished if we had adequate facilities to meet the growing needs of our 9-12 students.

**General Challenges for Students and Staff.** Lexington educators are unable to find space collaborative space to work in creative ways with our students. Educators in the district have received extensive training on Project-Based Learning (PBL), an innovative, student-centered pedagogical approach designed to help students acquire deep knowledge through active, multi-disciplinary, real-world problem-solving. Such an approach requires longer class periods and flexible spaces for students and educators to collaborate, neither of which exists at Lexington High School. There is a critical shortage of Science labs, and we have had to invest funds to temporarily convert Earth Science classrooms to Chemistry Labs. We are unable to deliver the research skills students need, as the Library Media Center is completely overrun by competing demands at Lexington High School. Lexington HS students with and without disabilities should be able to learn together in their school system, but overcrowding limits inclusive opportunities. We would like to build a Transitional Program and a Developmental Learning Program at Lexington HS for some of our students who are currently educated out-of-district, but this is an impossibility given the current space restrictions. Furthermore, it is difficult to find private space for sensitive Individualized Education Program (IEP) Team Meetings at Lexington HS, and guidance counselors cannot expand college and career opportunities and explorations given the current space limitations.

For the past five years, LHS has included flexible time in its block schedule for academic intervention, enrichment learning, and community building. The flexibility of the programming has been limited by the types of spaces we have around the school, especially spaces that can accommodate learning in groups smaller than the typical classroom. For instance, our fledgling advisory program has used a model of restorative and community building circles. The model is best suited to a group of 12 students who can sit in relative privacy to have courageous, honest conversations about their school, their experiences, and our shared values. This is not a problem unique to LHS; but, it is a problem that newly constructed schools have addressed through creative and functional architecture: spaces that are modular or that adapt to many purposes, alcoves in hallways where students can meet during flexible blocks to collaborate on group projects, and the like would increase our ability to provide the types of learning opportunities that help students flourish.

### **Unmet Programmatic Needs by Department - A Few Examples.**

Our LPS Master Educational Plan contains a comprehensive overview by department of unmet programmatic and curricular needs. What follows below are a few select examples of the ways in which overcrowding seriously affects teaching and learning and our ability to cover the curricula. (Note: we had to limit this section due to character limitations for Priority #1).

#### *Mathematics and Computer Science*

While Lexington HS has adequate classroom capacity for its core set of math courses, there has been insufficient space for a widening range of elective computer/technology courses. LHS has introduced three new computer science courses in the past decade--all aimed at attracting more diverse students into the subject, including the state-encouraged equity-oriented Advanced Placement Computer Science Principles course. This program expansion has been tremendously successful in attracting more students with greater diversity: the number of students requesting computer courses has gone from 200 in SY12, to 350 in SY17, to 700 in SY22. While adding 500 additional computer science enrollments, LHS has only been able to add one more room for Computer Science, covering less than half of the demand increase. The remainder has needed to be absorbed into math classrooms due to overcrowding. Trends of increasing demand are likely to continue. To meet even the current demand for computer courses without burdening math classroom capacity, LHS would need two additional computer classrooms.

Lack of appropriate and sufficient classroom space is a significant obstacle, as Lexington HS attempts to fulfill the expectations of the 2016 Massachusetts Curriculum Framework in Digital Literacy and Computer Science. In order for every student (and not just those who take computer electives) to meet this framework's State standards (in the areas of Computing and Society, Digital Tools and Collaboration, Computing Systems, and Computational Thinking), it will require new technology courses taken by all students, or additional instructional time in existing STEM courses. Either approach requires additional classroom capacity that the school currently lacks. For example, adding a single half-year technology course as a graduation requirement would require two additional classrooms to serve 300 students per semester.

Lexington HS does not have any of the more contemporary kinds of technology facilities that benefit students who attend high schools with updated facilities. For example, despite the school's large size, there is no dedicated maker space, even though LHS has many students interested in using such a facility. A single regular classroom is jammed with all the equipment used by a

robotics course and two extracurricular robotics teams, as well as the school's 3-D printers and other design equipment. This overcrowded space does not allow school-owned equipment to be used to its full potential by students. For the future, LHS aims to have amounts of computer design and robotics equipment commensurate with the school's size, housed in appropriately modern facilities that make these resources fully available to students both within and beyond the school day.

### *Science*

Over the last five years, the Lexington HS Science Department has been forced to make stop-gap modifications to the Science building and spaces available based on our current structural limitations in the building. We have added a modular classroom, converted a common, collaborative student support space into a classroom, and converted a Biology room into a Chemistry room. Even now after this series of modifications, we still lack enough space to engage in the kind of Science education that our students need today. All of our classrooms are in use at least six (6) of the eight (8) teaching blocks and 50% are used at least seven (7) out of the eight (8) teaching blocks. All teachers currently share classrooms; this, coupled with the lack of open space during the school day, diminishes our ability to offer authentic lab experiences, as teachers have to set up and breakdown labs for different classes and coordinate the use of equipment, lab spaces, and supplies—all within a brief five (5) minute window of passing time.

We currently have six (6) classrooms dedicated to our required 9th grade Environmental Earth Science (EES) course, focusing on climate change, water, and human impact on the earth's resources. Ironically, some of these classrooms have no access to water, one of the earth's most precious resources. Of these six (6) classrooms, only three (3) have a lab space associated with them, resulting in unequal access of opportunity for over half of our 9th graders, simply based upon random assignment. Our EES teachers go above and beyond to eliminate these inequalities by switching rooms so that all students have a chance to engage in an authentic lab experience.

Lexington HS students are exposed to a robust four (4) discipline Science curriculum, including Environmental Earth Science, Biology, Chemistry, and Physics; however, due to classroom space limitations, we are only able to offer two electives: Astronomy (full year) and Robotics (one semester). We have been forced to turn students away in each of the last two years due to a lack of space to run these electives in addition to our core offerings. Increased classroom and lab space would allow us to increase the electives we offer, empowering students to learn more about the concepts that matter the most to them and pursue their passion in Science.

As part of our diversity, equity, and inclusion efforts, Lexington HS Science educators are working to eliminate CP2 courses by merging CP2/CP1 courses, but we are hampered by a lack of space for teachers to support all learners. There are no breakout spaces available or even adjoining spaces for students and staff, due to overcrowding. In addition, we cannot deliver co-teaching strategies in conjunction with special educators, which would further support collaborative learning and play an important role in our de-leveling efforts. General and special educators are doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL) and long term inquiry based projects.

In order to support our work on the Next Generation Science Standards (NGSS) science skills and combine with the LPS vision of creating authentic learning experiences for our students, we would have a lab space dedicated to the preparation of materials and inquiry learning experiences. This dedicated lab space could support both teachers and students in authentic learning experiences. We have a strong history and participation in the Massachusetts Science & Engineering Fair, but we currently do not have lab space (either separate space or space within classrooms) to support students conducting their own individual long research projects in school. This creates inequalities for students who are unable to work on their projects at home. We believe that limited access to appropriate learning spaces is one of the major reasons why our MSEF participation rate has dropped by over 50% in the last four years.

### *Special Education*

The Lexington Public Schools Strategic Plan states, “Everyone has a right to an excellent education, and it is our individual and collective responsibility to create learning opportunities and systems that are fair and just.” LPS is committed to providing access to an excellent education for all students, and we have provided the necessary personnel to achieve this, but we do not have the appropriate facilities at Lexington HS to match that level of commitment.

Our current co-teaching efforts are hampered by our inability to fully implement a range of co-teaching strategies in small classrooms that lack breakout space. Co-teaching strategies support collaborative learning and play an important role in de-leveling, and our Department Leaders are eager to make additional strides in these areas. We have general and special educators doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL), creative I-Block opportunities, scheduled advisory sessions, and restorative justice circles.

Special Education teachers share classrooms and reclaimed spaces across the campus. As our student body grows, so does the number of students with special needs and the number of special educators. Unfortunately, this expansion means that we are constantly redefining and recovering space that often was intended for a purpose other than small group instruction and can very imperfectly meet our students’ needs, as it displaces other special or general education programming. We need more space that is well-designed and utilized for its intended purpose.

LHS has one classroom with a kitchen area. We currently have students with a wide range of specialized programming needs who require instruction in life skills, including meal preparation. With the only kitchen area located inside of a classroom that has students in it for most of the day, other students have very limited access, which impacts our ability to help them to develop essential skills. In order to address these skills, the students require access to a kitchen. This could be a shared kitchen that would be scheduled by teachers, untethered to a classroom, and with a dining area to allow programming for social skills, meal etiquette, and meal preparation.

Some students with intensive special needs remain eligible for Special Education until they turn 22. These students require intensive transition services with specialized programming not currently offered through Lexington HS due in large part to space constraints. At present, there simply is nowhere to place a program that requires (1) a location away from most classrooms and with a direct exit from the building to an accessible parking area to give students ready access to the community; (2) a large kitchen with expansive accessible counter areas to give students an opportunity to learn and implement meal/food preparation skills, to stage small business production, and to prep for a small cafe; and (3) an adjacent small cafe and school store to address vocational skills; (4) a laundry area to teach basic life skills and with the potential for vocational instruction; (5) two breakout spaces for small group instruction; and (6) proximity to accessible restrooms. With these elements in place we would be able to provide the opportunity for students to act as active agents in their own learning, as envisioned by inclusion experts and our LPS Strategic Plan: “Learning is authentic and connected to the real world, allowing students to apply knowledge and skills in context.”

### *Performing Arts*

The LHS Performing Arts Department has a long tradition of engaging an extremely high number of students from diverse backgrounds, and we are proud to be recognized as one of the nation’s premiere public high school Performing Arts programs. Lexington HS has continued to provide an exceptionally rich and robust program of studies, enabling students to access a curriculum that supports students’ own individual interests, passions, and social-emotional needs, as well as connections to STEM and Humanities programming. Despite our many successes, the physical restraints of the current building have had a negative impact on the kinds of opportunities and experiences that our educators can provide to our students.

In terms of rehearsal and performance spaces, the three concert bands, three orchestras, and five choruses meet in rotation between two classroom spaces that were outfitted in outdated technical education spaces at Lexington HS. The rehearsal halls are small in size with ceilings that are quite low, resulting in compacted sound that is musically inappropriate and also unhealthy for one’s ears due to decibel thresholds. Given the high number of students we have in each ensemble, the rooms cannot

adequately fit all of the students, chairs, instruments, and stands. The music storage area is a major issue where the lockers are in desperate need of being replaced after undergoing many repairs. Additional space is needed to safely house the rest of the large number of instruments our students play (both school- and student-owned). We need adequate rehearsal halls for Band, Orchestra, and Chorus with acoustical panels and ceilings with heights of at least 24 feet. These rooms would need access to the exterior of the building for loading and unloading equipment, and there should be a separate storage area for adequate storage of instruments (lockers and large equipment). Our locker storage poses many safety risks due to the overload of equipment stored in inadequate spaces.

Currently, we have four practice rooms that are located well away from the Band and Orchestra/Chorus rooms, making it difficult to supervise students and for them to access instruction in general. While the rooms vary in size, there is only one room that can fit more than four people at a time. This makes it difficult for students to work collaboratively in chamber music settings (i.e., quintets, quartets, instrumental choirs, small chamber choirs) and also in sectionals (by instrument type). By having more adequate practice room space with some spaces a bit larger to accommodate 5-10 people, students would be able to work more independently and collaboratively, which has been somewhat impossible to do given our current severe overcrowding situation.

While the LHS Auditorium can seat approximately 1,000 audience members, the stage, pit orchestra area, wings, and line sets are inadequate for a program this large. The stage itself needs to be expanded with adequate wing space that can house automated line sets and winches to enable us to safely and appropriately prepare for musical concerts and our dramatic arts productions. Right now, the stage itself is not large enough (both in length and in depth) to fit all students in a given ensemble, and the wing space is pretty much non-existent, posing significant safety concerns with equipment and access to egresses. We lack an attached and large prop/building shop to enable equipment to easily be maneuvered from prep areas to the stage. We do not have a prop/costume storage space, either, which poses many safety issues, as there is no space large enough to handle the kind of work that needs to be done for productions. While we do have a pit orchestra, it is exceptionally narrow, making it extremely difficult for instrumentalists to perform during productions. Along with this, the sheer quality of the stage in the auditorium poses safety concerns in general due to its deteriorated nature. The rehearsal spaces should be directly “attached” or at least within access to the auditorium and stage areas, which is not the case at this time.

LHS has a Black Box Theater that is located upstairs in the main building away from the auditorium and the rest of the performing arts spaces. The space is just a double-sized classroom with a carpet and black painted walls. There are windows that have curtains to simulate a more enclosed feeling. While this is adequate as a classroom space, we are lacking the kind of dramatic arts space to produce quality small scale productions and presentations. A theater in-the-round that has perimeter seating for an audience would be more appropriate. Only a limited number of audience members can attend our improv shows and festival productions. Such a space would enable us to provide small dramatic arts productions, as well as small musical presentations. For example, we have an extensive jazz program, but it is difficult to find space for them to hold their many jazz evenings for our large jazz ensembles and our smaller jazz combos.

We are trying to expand our Performing Arts course offerings to students from diverse backgrounds at LHS outside of just performance-based ensembles and dramatic performances. Unfortunately, we are lacking a music classroom that can accommodate non-Performing Arts courses in music theory, music production, piano keyboard, guitar, and ukulele classes, modern band classes, steel drum ensembles and handbell choirs, composition and arranging, and music related humanities classes. Our current space limits enrollment to 15 students per class. We also lack the technology to provide an even more meaningful learning experience. A Musical Instrument Digital Interface (MIDI-style set up) would provide our students with the kind of technological environment consistent with a contemporary music education experience. Such a technology space could double as a recording studio for our instrumental and choral students to record tracks for the high number of festivals and adjudications in which they participate.

While there are so many priorities to be considered when building a new high school, here in Lexington, the Performing Arts program is an extremely important and foundational part of the curriculum across the school district and within the Town of Lexington. Our community truly *values* the Arts and believes in providing an exceptionally high quality and well-rounded education for its students. Outside of our non-Performing Arts classes, the number of students we have participating in our

ensembles is almost 1,000 students, which is 43% of the current LHS population. As our program has been recognized on both a state, national, and global level, having such resources and adequate spaces will enable us to support the development of even more Performing Arts students in the best ways possible.

### *Physical Education, Health and Wellness*

The 9-12 PE, Health and Wellness program at LHS has a strong foundation with talented educators, but the space limitations severely impact our ability to collaborate with other departments to the level that we envisioned. We do not have the space for many inter-departmental collaborative opportunities occur, and our efforts to implement integrated units in collaboration with the Science department (e.g., Anatomy and Physiology, Biomechanics, Kinesiology and Neuroscience, as it relates to the teen brain and addiction and decision-making) are on hold. Due to issues of overcrowding, there is no available space to achieve the kinds of integrated educational opportunities that better promote a well-rounded PE, Health & Wellness education that meets the social and emotional needs of each child.

We are unable to schedule any of our PE classes during a two hour window in the middle of the day, as the large number of lunch students requires the use of most of the PE indoor spaces at that time, including the gymnasium and field house. The severe overcrowding impacting the large core spaces in Lexington HS in turn impacts the PE, Health and Wellness department's ability to offer all of the units of study, as the number of blocks available to schedule classes is also reduced. The gymnasium is too small to accommodate some of the units of study, and a large soffit running through the middle of the gym further impacts the ability to effectively deliver the curriculum in some cases, as well as after school sports (e.g., volleyball).

The Athletic Training room also doubles as a classroom. Due to the current size of the room, we have to restrict the class sizes of both the Cardiopulmonary Resuscitation (CPR) and Sports Medicine classes to a maximum of 18 students, impacting the number of students who have access to these vital classes each year. The Athletic Training room is totally inadequate to accommodate the after school sports teams in order to effectively evaluate, treat, and rehabilitate the numerous sports injuries (approximately 3000+ visits in three seasons) that are treated in the room every school year, which poses health and safety issues. The Fitness Center is a converted space that has approximately ten concrete support columns throughout the room, greatly impacting the safety of students. The Yoga/Dance Studio is a converted printing space that has size limitations that require our educators to modify lessons in order to safely teach some of the more dynamic performance-based units of study. Health Education classes require safe and private spaces to allow students to speak with the health education staff when personal issues are part of the conversation. Furthermore, some of the units require intervention and support from a social worker in the department, and the need for a private welcoming space is optimal to support student emotional health.

The Prevention Program provides a research-based approach to substance abuse assessment, education and intervention, using evidenced-based research, curriculum, and interventions. Services are short-term with opportunities for students to engage in follow-up check-ins. Trained staff and graduate school interns provide services primarily using the "Healthy Futures Stanford Alternative to Suspension Curriculum." This is a nicotine-specific curriculum that we have adapted and modified to include education about marijuana and other drugs. There are other research-based curricula that we hope to adapt and adopt to meet the needs of our Lexington HS students. Our ability to implement the Prevention Program and the substance abuse interventions and curricula is impacted by the lack of a permanent, appropriate space to support the student-led peer leadership programs that are necessary. Many other associated student activities are impacted, as well, including Students Against Destructive Decisions (SADD) Club, SHAC, and the Teen/Adult Dialogue events. Currently the program does not have the space available to support the student-facing K-12 elements of the program, given that student participation is well over 300 trained high school students each year and growing!

The Lexington Public Schools PE, Health and Wellness Prevention Program provides free and confidential information, counseling, and support to students and their families for any alcohol or drug-related questions or problems. In the district's efforts to continue to reduce exclusionary practices and suspensions and to maximize restorative practices and educational opportunities, the Prevention Program provides interventions and assessment, and it offers an important alternative to suspension. We want to educate instead of isolate students who violate the LPS code of conduct and substance use policies and find alternatives to suspension. Space constraints often make it challenging to provide the necessary confidential spaces to hold

associated meetings with students and families.

Please also provide the following:

**Cafeteria Seating Capacity:** 600

**Number of lunch seatings per day:** 3

**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: 5

**Number of Modular Units:** 12

**Classroom count in Modular Units:** 25

**Seating Capacity of Modular classrooms:** 300

**What was the original anticipated useful life in years of the modular units when they were installed?:** 10

**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: 6

**Please provide a description of each non-traditional classroom space, its originally-intended use and how it is currently used (maximum of 1000 characters):**

There are 6 or more spaces that have been repurposed for uses outside of their intended design and are used on a regular basis, including: the athletic training room, the auditorium, the field house, the music teacher/prep storage area, and the Library Media Center (LMC). Students study and eat in the hallways because there is a significant space shortage. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library so librarians can teach research and presentation skills. The LMC is in constant use for testing (MCAS/AP, etc.) meetings, and displaced classes. Approximately 800 students visit the library each day, and when classes convene, we have to turn students away due to lack of space. A flexible learning space is needed to support multiple learning/teaching styles, emerging technologies, and the needs of the 21st century learner.

**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). :**

Two substantive changes were made to the district's educational program: K-8 redistricting and later school start times. It remains to be seen whether these changes will have an impact on the district's enrollment capacity. We implemented the K-8 Phase II Redistricting Plan in the Fall of 2021. With Hastings Elementary School and Lexington Children's Place completed, the timing was right for a substantial redistricting effort. Phase I Redistricting was completed in 2016 and helped establish a "flexible boundaries" model that was successfully implemented. Phase II was a far more comprehensive redistricting effort that examined all school populations and redistricted in an effort to alleviate space pressures in a number of our schools. Approximately 300 students were affected by the Phase II Redistricting Plan.

The Lexington School Committee voted for a 45-minute later school start time for all Lexington HS students that was implemented in the Fall of 2021. We do not anticipate any major changes to the district's enrollment capacity as a result; however, we do need to further examine the implications of a later school start for our 250+ students from Boston and our students with disabilities in the LABBB Collaborative. We anticipate that a later school start will be beneficial for our Boston students and those in the LABBB Collaborative, which, in theory, could result in more pressure on the district's enrollment capacity.

**What are the district's current class size policies (maximum of 500 characters)?:**

The district's current class size guidelines cap all Lexington High School classes at 20-25 students (high school labs are capped at 20 students).

**Priority 5**

***Question 1: Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.***

Lexington High School was built in 1953 and is now close to 70 years old. Roofs, windows, boilers, the HVAC systems, and the electrical service and distribution system are all in need of repair or replacement. Building E roof is 30,000 sqft of EDPM (rubberized synthetic roof) which was installed in 2000. The roof will need to be replaced in 2020. Building F roof is 35,000 sqft of PVC. The bottom two-thirds of the roof was replaced in 2011, and will require replacement in 2031. The top third of the roof was installed in 2000 and will need to be replaced in 2020. Building G roof is 30,600 sqft of EDPM which was replaced in 2006. The roof will require replacement in 2026. Building H roof is 23,800 sqft of EPDM which was replaced in 2011. The roof will require replacement in 2031. Building I roof is 23,800 sqft of EPDM which was replaced in two sections. The first section comprised of 7,600 sqft was replaced in 2008. This section of roof will require replacement in 2028. The remaining 16,200 sqft of roof was replaced in 2011. This portion of the roof will require replacing in 2031.

The exterior windows are divided in two sections. The first section has a count of 1,550 windows in the Main Building (Building A-E) were replaced during the 2000 renovations from single to double-pane thermal windows. These windows are 19 years old. All single-pane windows in the Main Building were replaced in 2000 with thermal double-pane windows. Maintenance and repair of these windows fall under our current work order system. The second section has a count of 1,155 windows that can be found in the Science Building, the World Language Building, the Math Building, and the Field House. All 1,155 windows are original single-pane windows that are 59 year old. Maintenance and repair of these windows fall under our current work order system.

Lexington High School has two natural gas boilers. The first runs 100% of the main buildings (A-E) and is 21 years old (last replaced in 1998). The second runs 100% of the main buildings (F-I) and is 19 years old (last replaced in 2000). The boilers in the Main Building fall under our preventative maintenance and repair program. Maintenance work includes an annual boiler inspection and cleaning, with semi-annual efficiency testing. Repairs are conducted on an as needed basis. A constant worry for us is what happens if one of the boilers fails?

The same concern about imminent failure exists for all of the systems in our high school facility, such as the existing steam piping system, pneumatic controls system and unit ventilators were installed in 1960. They are approximately 60 years old, well beyond their life expectancy (20-25 years). Boilers, rooftop air handling units (RTU's), heating and ventilating units (HV's) and split system cooling units were installed during the 2000 building renovation and are approaching the end of their life expectancy (20 years). Typical classrooms in the Main Building are served by wall-mounted classroom unit ventilators (UV's). The unit ventilators are original to the building installed in the '50's. Each unit ventilator has a wall mounted intake louver for the introduction of outside air to the space. Units have filters, supply air fan and a steam heating coil and pneumatic steam control valve. It is controlled by the pneumatic control system and is energized by a space mounted thermostat. The pneumatic control system is extremely antiquated and unreliable. Occupants often report that units are extremely loud and the air temperature is uncomfortable.

In addition to the unit ventilators, some windows not utilizing a unit ventilator have perimeter steam radiation. Heating for the building is provided via two steam boiler(s) located in the basement of Building D. Boilers are the following: H.B. Smith, 650, cast iron sectional boilers (B-D1 and B-D2). Generate L.P. steam tie into central distribution system. These boilers replaced the original steam boilers when they were installed in 1998. In 2008, the Viesman CT-3-57 replaced the existing domestic hot water boiler. Condensate is returned to the power plant via a duplex condensate return pump set. The boiler room located in the basement of building 'D' serves the main building, which consists of buildings A, B, C, D and E. The boiler room contains two large, cast iron steam boilers which were part of the original building construction in the 1950's and are well past their expected life cycle. The boilers are Smith cast iron sectional boilers. Each boiler is rated for 6638 MBH, and the attached burner is a



Power Flame burner rated for 3000-9000 MBH. The two steam boilers serve fin tube radiation throughout the main building, unit ventilators in the classroom offices, and five rooftop units.

**Priority 5**

***Question 2: Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.***

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As noted above, the Department of Public Facilities has maintained all systems through the years. Every system falls under our current work order system and preventative maintenance and repair program. Ongoing efforts for **"Roof Repair and Replacement"** included the following: The bottom two-thirds of the Building F roof was replaced in 2011. The top third of the roof was installed in 2000. The Building G roof was replaced in 2006. The Building H roof was replaced in 2011. The Building I roof was replaced in two sections: the first section (7,600 sqft) was replaced in 2008; the remaining 16,200 sqft of roof was replaced in 2011. After 47 years, the first section of **"Exterior Windows"** were replaced during the 2000 renovations from single to double-pane thermal windows. All single-pane windows in the Main Building were replaced in 2000 with thermal double-pane windows. Lexington High School has two **Natural Gas Boilers"** and the first runs all of the main buildings (A-E) and was last replaced 21 years ago in 1998. Maintenance work includes an annual boiler inspection and cleaning, with semi-annual efficiency testing. Repairs are conducted on an as-needed basis. The second boiler was last replaced in 2000. H.B. Smith, 650, cast iron sectional boilers replaced the original steam boilers when they were installed in 1998. In 2008, the Viesman CT-3-57 replaced the existing domestic hot water boiler.

**Priority 5**

***Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above 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.***

A recently facilities needs assessment indicates that proper maintenance of Lexington HS would cost approximately \$61M in the next few years. \$26M of that total amount is in HVAC replacement alone. Investing money in inadequate facilities unnecessarily takes precious resources away from properly educating our students. Due to the age and condition of the roofs, windows, boilers, HVAC and electric service and distribution systems, we are limited in our ability to introduce potential interventions to reduce vulnerabilities and improve the building resilience. Moreover, when the systems in a school building do not function properly, it impacts the health and well-being of the school community and teaching and learning are unnecessarily impacted.

Students often report feeling tired and lethargic, which is often attributed to the high expectations of Lexington HS. However, the impacts of limited and inefficient air exchange systems on the circulation and quality of the air might be an equal contributor. Higher carbon dioxide levels can lead to headaches, dizziness, restlessness, and exhaustion. Moreover, the air particulates that are generated due to poor air filtration permeate the learning environment and exacerbate conditions for those who have compromised respiratory systems. In the absence of adequate air ventilation, mold growth may develop and be difficult to control. Plumbing systems may contain undetected hairline fractures and water leaks that can generate mold growth and inefficiencies that further compromise the health and well-being of students and staff.

It is difficult to learn in environments that are too hot or too cold. Students and staff frequently report being too hot or too cold in various classrooms and areas throughout the building. Given the age of the two boilers, they are inefficient and lead to heat-loss and heat-gain. The building is operated by pneumatic controls rather than digital; therefore, they are inefficient and do not adjust to internal and external environmental conditions. Furthermore, teachers recently reported that the room temperature in several areas and in the Science building were approximately 50 degrees due to a systems-failure. Rooms are often too hot or too cold and there are a number of interior rooms that are windowless. In the absence of good quality air ventilation and exchange systems, it is difficult to appropriately control the climate of the learning environment.

While it is more of a nuisance than a health-safety issue, the Science building has a fume hood and an old motor that generates noises that are highly distracting. The aged "weatherization" of the building envelope and the need for window replacement increases vulnerabilities for pest infiltration. Students and teachers in the Math Department recently reported that they contend with an infestation of rodents daily. Despite consistent pest control measures, students and teachers enter their classrooms each morning prepared to clean up the mouse urine and droppings left on their desks and work spaces.

We know that energy-inefficient buildings can make the inhabitants in that space sick. Energy efficiency improves inside air quality and reduces the need for utility companies to burn fossil fuels. Lexington High School is a school building that is inefficient in many ways, impacting our teaching and learning environment and the social and emotional well-being of our students and staff.

**Priority 5**

***Question 4: Please describe how addressing the school facility systems you identified in Question 1 above will extend the useful life of the facility that is the subject of this SOI and how it will improve your district's educational program.***

Lexington High School was built in 1953. The school building and its facility systems are close to 70 years old in some cases and are in desperate need of attention. We worry daily that we will have a serious system failure that could compromise the education of our students. Virtually every system in the school building is beyond its useful life. The rooftops, windows, boilers, HVAC, and electrical systems are all in desperate need of replacement. The high school population is anticipated to reach its peak of 2,500+ by 2024. If there is a major system failure in the high school, there is little to no swing space available in the Town of Lexington.

The district's educational program will be drastically improved, should we have the opportunity to finally address the failing facility systems at Lexington High School. We worry that our students and staff who suffer from respiratory attacks, headaches, feelings of restlessness and lethargy may be at least in part due to the poor condition of our aged ventilation systems. With an emphasis on critical thinking and college and career-readiness, teaching and learning is a more complex and demanding endeavor. It is nearly impossible for students to concentrate when they are too hot or too cold or when their basic needs for safety and security are unmet. It is difficult to imagine how challenging it must be for a student to take an Advanced Placement examination or to receive therapeutic supports in a cold, 50-degree classroom or an uncomfortable rodent-infested learning environment? A clean, safe, healthy, temperate learning environment will create efficiencies and save money, reduce the consumption of fossil fuels, and create an optimal teaching and learning environment.

**Please also provide the following:**

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

**If "YES", please provide the name of the individual and his/her professional affiliation (maximum of 250 characters):**

Accruent Assessment Services conducted a "facilities conditions assessments on Lexington Public Schools, including Lexington High School and ten Town-owned buildings.

**The date of the inspection:**      11/3/2020

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

The Accruent Assessment Services engineers and architects who conducted the facilities conditions assessment for Lexington High School only indicated that required system upgrades total \$61.6M. They analyzed costs over time and made recommendations by building. Immediate needs include \$26M in HVAC replacements, \$3M in roof replacements, and approximately \$5M in building envelope repairs for a total of \$34M. The document that Accruent produced is over 400 pages long and contains detailed information that includes repairs and replacements at Lexington High School in the Main building, the Field House, the Science Building, the Language Building, the Math Building, in the modulars, along with site work.

**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.***

Facility constraints at Lexington High School significantly limit our ability to offer a wide variety of course and programming options to satisfy state and local requirements and meet the needs of all Lexington HS learners. Federal law mandates a "Free and Appropriate Education" (FAPE) for all students in their "least restrictive environment." One visit to the Lexington HS wing that houses 120 +/- LABBB Collaborative students (students with disabilities from school systems across the Commonwealth) would confirm that the high school facility impedes our ability to provide students with the most appropriate education in their least restrictive environment.

Students with disabilities who are medically fragile are in inadequate spaces that offer little in the way of privacy. Small classrooms have only enough room for the students, themselves, and not the mobility equipment that they need to be successful. Often it is the case that the students' mobility equipment must be stored outside of the classroom, which presents many challenges for them. These limitations put enormous and undue pressure on our staff, whose responsibility it is to ensure that safety and well-being of our students. Another challenge for students with disabilities in the Intensive Learning Program (ILP) is that they do not have access to the in-house educational opportunities their families desire related to transitional programming that is required by the State.

As previously discussed elsewhere in this Statement of Interest, we are unable to meet the State's 990 hour "time on learning" requirements at Lexington HS, which has been cited in the 2013 Civil Rights component of the Coordinated Program Review. Both Juniors and Seniors fall significantly under the 990 hour requirement, receiving approximately 100+ fewer hours of instruction than their counterparts in other school systems, with much of it driven by the 8-period schedule that creates opportunities to free up more space.

The Department of Elementary and Secondary Education (DESE) recently revamped the State's accountability system and the Massachusetts Comprehensive Assessment System now emphasizes "college and career readiness." While there are a number of course offerings at LHS to prepare students for the college experience, few career readiness opportunities exist. Given our current space limitations at Lexington HS, we are unable to offer vocational courses of any kind. In the Town of Lexington, there are a number of community experts who would enrich the lives of our students if given the opportunity to mentor. Unfortunately, we are unable to offer valuable mentoring experiences, college and career advising, and internships/externships due to space limitations.

Limited space at Lexington HS also impacts local district requirements. Currently, the district is pursuing innovative pedagogical practices like "Project-Based Learning" (PBL) that are designed to engage students and connect them to authentic learning experiences. While other schools in the system are offering a wide array of PBL experiences in the classroom, the Lexington HS facility does not have the multi-functional, collaborative learning spaces to most effectively integrate PBL in the high school curriculum. Additionally, educators in the elementary and middle schools have moved toward unique schedules that build in more time for teacher collaboration, while Lexington HS teachers have added to the caseload in recent years. Teachers have half-day Thursdays in the elementary schools and modified teaching assignments in the middle schools. In recent years, Lexington HS teachers have added to their caseload, which they feel impacts their ability to contribute to professional learning communities and meet their students' needs.

Other unmet needs that are a result of the facility constraints at Lexington HS include the following: as previously mentioned, the music program has inadequate practice spaces and classrooms to meet the needs of Lexington HS students; students are frequently displaced from the library media space and from their lessons with librarians who are attempting to teach them research and other important skills in order to make room for faculty and district-level meetings; all of the Science classrooms are inadequately sized and under the MSBA-recommended square footage guidelines, and we do not have an adequate number

of Science labs for the student population we serve; Physical Education lacks a much-needed fitness center and lockers; many students carry heavy backpacks around daily from building-to-building, as there are no lockers for them to utilize; and we cannot expand classes to offer important learning opportunities, such as engineering, robotics, computer-aided design (CAD), and video production; and no space exists to have a proper security booth upon entry into Lexington HS.

**Priority 7**

***Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.***

We have undertaken a series of complex space-mining and planning exercises to prepare for the significantly increasing enrollments at Lexington High School. The Enrollment Working Group (EWG) analyzed enrollment trends using three statistical models (i.e., the Cohort Survival Model (CSM) using 5-year projections; the CSM using 10-year projections; and a CSM hybrid) in an effort to predict enrollment trends with the greatest accuracy. The effort is led by the Director of Planning and Assessment and members of the EWG are fully engaged in the process. The EWG members are highly educated Lexington residents who have historically participated in analyzing enrollment trends in the Town. The most recent analysis of enrollment trends indicates that we expect to exceed 2,614 students by 2024 - 2025, which translates to an additional 300 +/- students.

When student enrollments increase, we also experience pressure on our shared spaces. Presently we have needs for additional spaces that include the following: planning spaces for increased teaching/support staff to meet enrollment needs; office spaces for counseling and administrative staff; conference rooms for IEP Team Meetings; additional administrative offices; meeting spaces for teachers to collaborate in Professional Learning Communities (PLCs); space for testing (e.g. Special Education, Advanced Placement, MCAS, ELL), especially with regard to IEP-mandated accommodations for alternative testing locations.

Finally, there is a critical need to increase the capacity in the shared spaces of the Cafeteria and/or to create additional lunch periods. The current average number of reimbursable meals is approximately 1,000 per day (with 300+ per lunch period). The current average number of a la carte meals served per day is approximately 400 (or an average of 100+ per lunch period, plus 25-30 lunches served on average to LABBB students during each lunch). The total number of students purchasing lunches in the cafeteria is approximately 1,400 +/- per day.

We calculated an increased demand of 14 general classrooms in the next few years. Additionally, there is a need for 2-3 classrooms for other programs, such as those that support English Language Learners, Learning Center, and specialized classrooms. The specialized classrooms include Art, Physics, and Earth Science, and these classrooms are in addition to the plan described in more detail below (see Question 3) to add extra Biology (2019) and Chemistry (2020) classrooms in the Science building). In total, we need an additional 14 general classrooms and space for our English Language Learners, Learning Center, and two specialized spaces (1 Art and 1 Earth Science/Physics). We conservatively estimate that an additional 17 total spaces should adequately accommodate a 300 +/- student increase.

We have developed extensive plans to mitigate the problems that we are encountering due to high school facility constraints, and we also work daily to mitigate the issues in less elaborate ways. For instance, we find that we must impose strict time limits on Individualized Education Program (IEP) Team Meetings given our space limitations at Lexington HS. Our most medically-fragile students, many of whom are in the LABBB Collaborative program, have their medical needs attended to within the classroom setting with makeshift barriers that offer only a modicum of privacy. In many cases, the district has no choice but to encourage families to pursue out-of-district placements for some students with disabilities who may be better educated at Lexington HS. Finally, if students wish to explore careers, they must do so on their own after school or transfer to Minuteman Vocational Technical High School.

**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.***

**Severe Overcrowding**

The severe overcrowding issue at Lexington High School (LHS) places students and teachers at a significant disadvantage, and the situation is expected to drastically worsen by 2024-2025 when we gain an approximately 300 new students at Lexington High School. The student population at LHS is 2,300 now. **The additional 300 students will make Lexington HS the fourth largest high school under one roof in Massachusetts.** Severe overcrowding exists at LHS, impacting our ability to comply with time-on-learning requirements or to deliver the kind of educational program we need and want to deliver to our students. The information that follows highlights the general and some department-specific challenges caused by severe overcrowding, impacting our ability to deliver a 21st century educational program.

1. Our facilities are nearly 70 years old, and they were designed in an era when instructional practices were quite different than they are today. The classrooms of today are flexible spaces that are lively, engaging, collaborative, and interactive. It is a challenge to create collaborative work spaces, implement project-based learning, and find innovative ways to integrate technology, as these efforts require flexibility in space in order to address various instructional modalities. Our buildings and facilities designed core spaces for 1,800 students, but we somehow manage to educate approximately 2,300 students every day. The physical space as it currently exists hampers our ability to pursue more creative endeavors with our students and deliver a high-quality curriculum to our students. We do not meet State-mandated time-on-learning requirements. Seniors have 100 fewer instructional hours than their counterparts in other districts, and Juniors have 160 fewer instructional hours than peers in other districts. Despite our best efforts, we are limited in our ability to use the classrooms in flexible and creative ways to create optimal conditions for teaching and learning.
2. Another impact of our rapid growth is the re-purposing of spaces for uses outside of their intended design on a regular basis. There are several spaces that are being utilized for purposes other than that which were originally intended. Earth Science classrooms are being converted into Chemistry and Biology labs. The cafeteria is being used as a makeshift classroom. The front hallway is where students eat and do their work. The music prep/teacher storage area is where classes are held and equipment is stored. The Library Media Center (LMC) is a self-contained classroom that was carved out of the library space to allow librarians to teach research and presentation skills to classes.
3. The greatest challenge to the library program is the physical space. Over the course of the last few years, areas of the library have been reallocated for other uses. Because of this, there is no place for small group work, for meetings and even for office space for library staff. The main room is inflexible and cannot properly accommodate current usage. At times, when three classes converge, other students have to be turned away due to lack of space. Working electrical outlets are inadequate in number for a modern library. A flexible learning space with adequate power to support multiple learning and teaching styles is needed to accommodate the learning models, emerging technologies, and the needs of 21st century learners.
4. The library has no carpet or acoustical treatments to minimize sound. The library offers space for two classes to work quietly, to conduct research, and to work on laptop computers. When the LMC is used for MCAS, AP testing, and for district- and school-based meetings, any class that had signed up gets bumped into library space. The result is a less-targeted experience for that class and a more disruptive environment in the library overall, as there could be as many as three classes of students using the library at any given time, in addition to any students studying quietly during a study block.
5. The lunch program is an important part of our inclusionary practices, but space is inadequate. The kitchen produces over 1,000 complete meals and an estimated 400 additional a la carte meals per day. The commons areas (two cafeterias) seat approximately 600 people. We currently have three lunch services with approximately 600 - 800 students assigned per lunch block in addition to any staff and the students in the LABBB program. There is insufficient seating to accommodate students eating lunch, leaving hundreds of students eating on the floor or at extra tables set up in the main hallway and outside. Also, time to serve the students has become increasingly tight as enrollments increase and more students attend



each lunch block.

6. Space for 120+ LABBB Collaborative students who come from 60 districts throughout the Commonwealth is inadequate; so, too, is space for the supporting English Language Learners and the 225 METCO students (one of the largest METCO programs) from Boston who have been part of the Lexington school community for over fifty years.
7. It is extremely difficult to provide our special education students with an education in their least restrictive environments due to space constraints. Each student is assigned to a liaison, a special educator who serves as the point of contact and coordination for the student, parents, and teachers. The least restrictive model is Academic Support as a resource model, which meets 1-5 times per week depending on the student's level of need. Instructional Assistants and Student Support Instructors (SSIs) are also used to support students in the general education classroom. Some classes are co-taught by a regular educator and a special educator, but space limits our ability to expand the co-teaching model. We have limited space for our specialized programs including: (1) the Language Learning Program (LLP); (2) the Intensive Learning Program (ILP); and (3) the Therapeutic Learning Program (TLP). The LLP is developed for students with language-based disabilities. There is support in the general education setting and students have resource/academic support blocks with special educators to address specific goals. Students receive specially designed instruction in reading, written language, and executive functioning. The ILP is designed for students with Autism Spectrum Disorder and related disabilities, and a continuum of supports ranging from full integration to substantially separate is offered. The TLP is for students with emotional disabilities. There is a therapeutic aspect and a greater focus on metacognition. Classes are taught in a variety of settings, including small group and self-contained. Social workers and therapeutic supports are provided daily to students. Our educators do the best they can with the space available to them, but our facilities impact our ability to deliver the type of inclusive special education that our students deserve.
8. We have one auditorium at LHS with a capacity of approximately 800 people. This space is dedicated performing arts instructional space, as there are more musical groups than we have rehearsal spaces for if the stage were not used. In fact, it is the only space that will accommodate one of our orchestras due to its size of well over 100 students. The educators work effectively with one another around theater and musical productions throughout the year to avoid conflicts with demands for the stage. However, there are times where the auditorium is needed for large meetings and/or presentations to whole grades of students. When this need arises, the teacher and the performing group are displaced with nowhere to go, resulting in the cancellation of a class or I-Block (intervention block) and the loss of valuable instructional time.
9. Another re-purposed space is a room between the two performing arts classrooms. This space was originally intended to be a storage and teacher prep area. The room has a cubicle partition wall to divide the space into a teacher prep area and a storage/music digital lab area. Students work at computer stations composing, learning music theory, and critiquing work among stored musical instruments, band uniforms, and other sundry items. It is a most unsuitable space for encouraging creativity and exploration.
10. Our students do not have equitable access to Science labs. We had to develop a complex, two-year reconfiguration plan that does not adequately prepare our students to meet the Next Generation Science Standards. In year one of the reconfiguration plan (2019 - 2020), one additional Biology room was added. Earth Science (Room 313) was converted to a sixth Biology Room. The Physics (Room 303) became the Earth Science Room (from Room 313). Room 418 was converted to a Physics Room (from Room 303) and materials from Room 418 were transferred to first floor storage. Finally, Room 418 offices were relocated to Rooms 413, 401, 300, 301. In year two of the reconfiguration plan (2020 - 2021), one additional Chemistry room was added. Next, we retrofitted Biology (Room 420) and converted it to a Chemistry Room. We converted a Biology room (Room 420) to an Earth Science (Room 315). Room 315 (Earth Science) became Staff and Academic Support (Room 301). We relocated Room 309 (the Resource Room) and converted it into the Staff Room and Academic Support offices to Room 309. It cost approximately \$250,000 for a chemical fume hood and ventilation system, eyewash, minor plumbing upgrades (Room 420), and furniture.

**Overcrowding Impacts Time-on-Learning at Lexington High School.** In the 2013 and 2018 Coordinated Program Review for Civil Rights, DESE cited Lexington High School for not meeting the time-on-learning requirements. While we were able to make some slight modifications and adjustments to the schedule to increase our high school students' overall time-on-learning, LHS still failed to meet the 990-hour requirement due to severe overcrowding. LHS Seniors accrue approximately 812 hours of "time on learning," while Juniors receive approximately 830 hours of instruction. To remedy this problem, enlisted the expertise of a master scheduler who has done an exhaustive examination of the LHS schedule to see if there is a way for us to

meet the State's TOL requirement. Unfortunately, after careful analysis, it was determined that LHS is unable to increase time-on-learning given the constraints imposed by severe overcrowding. This means that a junior or senior at Lexington HS receives between 100-160 fewer hours of instructional time compared to their peers across the State. Despite our best efforts, Lexington HS students must endure an antiquated high school schedule that allows us to free up approximately 10% more space at LHS. Most of Lexington HS students perform considerably well and make significant contributions to their school community, but so much more could be accomplished if we had adequate facilities to meet the growing needs of our 9-12 students.

**General Challenges for Students and Staff.** Lexington educators are unable to find space collaborative space to work in creative ways with our students. Educators in the district have received extensive training on Project-Based Learning (PBL), an innovative, student-centered pedagogical approach designed to help students acquire deep knowledge through active, multi-disciplinary, real-world problem-solving. Such an approach requires longer class periods and flexible spaces for students and educators to collaborate, neither of which exists at Lexington High School. There is a critical shortage of Science labs, and we have had to invest funds to temporarily convert Earth Science classrooms to Chemistry Labs. We are unable to deliver the research skills students need, as the Library Media Center is completely overrun by competing demands at Lexington High School. Lexington HS students with and without disabilities should be able to learn together in their school system, but overcrowding limits inclusive opportunities. We would like to build a Transitional Program and a Developmental Learning Program at Lexington HS for some of our students who are currently educated out-of-district, but this is an impossibility given the current space restrictions. Furthermore, it is difficult to find private space for sensitive Individualized Education Program (IEP) Team Meetings at Lexington HS, and guidance counselors cannot expand college and career opportunities and explorations given the current space limitations.

For the past five years, LHS has included flexible time in its block schedule for academic intervention, enrichment learning, and community building. The flexibility of the programming has been limited by the types of spaces we have around the school, especially spaces that can accommodate learning in groups smaller than the typical classroom. For instance, our fledgling advisory program has used a model of restorative and community building circles. The model is best suited to a group of 12 students who can sit in relative privacy to have courageous, honest conversations about their school, their experiences, and our shared values. This is not a problem unique to LHS; but, it is a problem that newly constructed schools have addressed through creative and functional architecture: spaces that are modular or that adapt to many purposes, alcoves in hallways where students can meet during flexible blocks to collaborate on group projects, and the like would increase our ability to provide the types of learning opportunities that help students flourish.

### **Unmet Programmatic Needs by Department - A Few Examples.**

Our LPS Master Educational Plan contains a comprehensive overview by department of unmet programmatic and curricular needs. What follows below are a few select examples of the ways in which overcrowding seriously affects teaching and learning and our ability to cover the curricula. (Note: we had to limit this section due to character limitations for Priority #1).

#### *Mathematics and Computer Science*

While Lexington HS has adequate classroom capacity for its core set of math courses, there has been insufficient space for a widening range of elective computer/technology courses. LHS has introduced three new computer science courses in the past decade--all aimed at attracting more diverse students into the subject, including the state-encouraged equity-oriented Advanced Placement Computer Science Principles course. This program expansion has been tremendously successful in attracting more students with greater diversity: the number of students requesting computer courses has gone from 200 in SY12, to 350 in SY17, to 700 in SY22. While adding 500 additional computer science enrollments, LHS has only been able to add one more room for Computer Science, covering less than half of the demand increase. The remainder has needed to be absorbed into math classrooms due to overcrowding. Trends of increasing demand are likely to continue. To meet even the current demand for computer courses without burdening math classroom capacity, LHS would need two additional computer classrooms.

Lack of appropriate and sufficient classroom space is a significant obstacle, as Lexington HS attempts to fulfill the expectations of the 2016 Massachusetts Curriculum Framework in Digital Literacy and Computer Science. In order for every student (and not just those who take computer electives) to meet this framework's State standards (in the areas of Computing and Society, Digital Tools and Collaboration, Computing Systems, and Computational Thinking), it will require new technology courses taken

by all students, or additional instructional time in existing STEM courses. Either approach requires additional classroom capacity that the school currently lacks. For example, adding a single half-year technology course as a graduation requirement would require two additional classrooms to serve 300 students per semester.

Lexington HS does not have any of the more contemporary kinds of technology facilities that benefit students who attend high schools with updated facilities. For example, despite the school's large size, there is no dedicated maker space, even though LHS has many students interested in using such a facility. A single regular classroom is jammed with all the equipment used by a robotics course and two extracurricular robotics teams, as well as the school's 3-D printers and other design equipment. This overcrowded space does not allow school-owned equipment to be used to its full potential by students. For the future, LHS aims to have amounts of computer design and robotics equipment commensurate with the school's size, housed in appropriately modern facilities that make these resources fully available to students both within and beyond the school day.

### *Science*

Over the last five years, the Lexington HS Science Department has been forced to make stop-gap modifications to the Science building and spaces available based on our current structural limitations in the building. We have added a modular classroom, converted a common, collaborative student support space into a classroom, and converted a Biology room into a Chemistry room. Even now after this series of modifications, we still lack enough space to engage in the kind of Science education that our students need today. All of our classrooms are in use at least six (6) of the eight (8) teaching blocks and 50% are used at least seven (7) out of the eight (8) teaching blocks. All teachers currently share classrooms; this, coupled with the lack of open space during the school day, diminishes our ability to offer authentic lab experiences, as teachers have to set up and breakdown labs for different classes and coordinate the use of equipment, lab spaces, and supplies—all within a brief five (5) minute window of passing time.

We currently have six (6) classrooms dedicated to our required 9th grade Environmental Earth Science (EES) course, focusing on climate change, water, and human impact on the earth's resources. Ironically, some of these classrooms have no access to water, one of the earth's most precious resources. Of these six (6) classrooms, only three (3) have a lab space associated with them, resulting in unequal access of opportunity for over half of our 9th graders, simply based upon random assignment. Our EES teachers go above and beyond to eliminate these inequalities by switching rooms so that all students have a chance to engage in an authentic lab experience.

Lexington HS students are exposed to a robust four (4) discipline Science curriculum, including Environmental Earth Science, Biology, Chemistry, and Physics; however, due to classroom space limitations, we are only able to offer two electives: Astronomy (full year) and Robotics (one semester). We have been forced to turn students away in each of the last two years due to a lack of space to run these electives in addition to our core offerings. Increased classroom and lab space would allow us to increase the electives we offer, empowering students to learn more about the concepts that matter the most to them and pursue their passion in Science.

As part of our diversity, equity, and inclusion efforts, Lexington HS Science educators are working to eliminate CP2 courses by merging CP2/CP1 courses, but we are hampered by a lack of space for teachers to support all learners. There are no breakout spaces available or even adjoining spaces for students and staff, due to overcrowding. In addition, we cannot deliver co-teaching strategies in conjunction with special educators, which would further support collaborative learning and play an important role in our de-leveling efforts. General and special educators are doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL) and long term inquiry based projects.

In order to support our work on the Next Generation Science Standards (NGSS) science skills and combine with the LPS vision of creating authentic learning experiences for our students, we would have a lab space dedicated to the preparation of materials and inquiry learning experiences. This dedicated lab space could support both teachers and students in authentic learning experiences. We have a strong history and participation in the Massachusetts Science & Engineering Fair, but we

currently do not have lab space (either separate space or space within classrooms) to support students conducting their own individual long research projects in school. This creates inequalities for students who are unable to work on their projects at home. We believe that limited access to appropriate learning spaces is one of the major reasons why our MSEF participation rate has dropped by over 50% in the last four years.

### *Special Education*

The Lexington Public Schools Strategic Plan states, “Everyone has a right to an excellent education, and it is our individual and collective responsibility to create learning opportunities and systems that are fair and just.” LPS is committed to providing access to an excellent education for all students, and we have provided the necessary personnel to achieve this, but we do not have the appropriate facilities at Lexington HS to match that level of commitment.

Our current co-teaching efforts are hampered by our inability to fully implement a range of co-teaching strategies in small classrooms that lack breakout space. Co-teaching strategies support collaborative learning and play an important role in de-leveling, and our Department Leaders are eager to make additional strides in these areas. We have general and special educators doing their best in the existing space; however, in order to implement co-teaching with fidelity and create rich opportunities for collaboration, we need larger classrooms with access to breakout spaces that could also serve a range of purposes beyond co-teaching, including Project Based Learning (PBL), creative I-Block opportunities, scheduled advisory sessions, and restorative justice circles.

Special Education teachers share classrooms and reclaimed spaces across the campus. As our student body grows, so does the number of students with special needs and the number of special educators. Unfortunately, this expansion means that we are constantly redefining and recovering space that often was intended for a purpose other than small group instruction and can very imperfectly meet our students’ needs, as it displaces other special or general education programming. We need more space that is well-designed and utilized for its intended purpose.

LHS has one classroom with a kitchen area. We currently have students with a wide range of specialized programming needs who require instruction in life skills, including meal preparation. With the only kitchen area located inside of a classroom that has students in it for most of the day, other students have very limited access, which impacts our ability to help them to develop essential skills. In order to address these skills, the students require access to a kitchen. This could be a shared kitchen that would be scheduled by teachers, untethered to a classroom, and with a dining area to allow programming for social skills, meal etiquette, and meal preparation.

Some students with intensive special needs remain eligible for Special Education until they turn 22. These students require intensive transition services with specialized programming not currently offered through Lexington HS due in large part to space constraints. At present, there simply is nowhere to place a program that requires (1) a location away from most classrooms and with a direct exit from the building to an accessible parking area to give students ready access to the community; (2) a large kitchen with expansive accessible counter areas to give students an opportunity to learn and implement meal/food preparation skills, to stage small business production, and to prep for a small cafe; and (3) an adjacent small cafe and school store to address vocational skills; (4) a laundry area to teach basic life skills and with the potential for vocational instruction; (5) two breakout spaces for small group instruction; and (6) proximity to accessible restrooms. With these elements in place we would be able to provide the opportunity for students to act as active agents in their own learning, as envisioned by inclusion experts and our LPS Strategic Plan: “Learning is authentic and connected to the real world, allowing students to apply knowledge and skills in context.”

### *Performing Arts*

The LHS Performing Arts Department has a long tradition of engaging an extremely high number of students from diverse backgrounds, and we are proud to be recognized as one of the nation’s premiere public high school Performing Arts programs. Lexington HS has continued to provide an exceptionally rich and robust program of studies, enabling students to access a curriculum that supports students’ own individual interests, passions, and social-emotional needs, as well as connections to

STEM and Humanities programming. Despite our many successes, the physical restraints of the current building have had a negative impact on the kinds of opportunities and experiences that our educators can provide to our students.

In terms of rehearsal and performance spaces, the three concert bands, three orchestras, and five choruses meet in rotation between two classroom spaces that were outfitted in outdated technical education spaces at Lexington HS. The rehearsal halls are small in size with ceilings that are quite low, resulting in compacted sound that is musically inappropriate and also unhealthy for one's ears due to decibel thresholds. Given the high number of students we have in each ensemble, the rooms cannot adequately fit all of the students, chairs, instruments, and stands. The music storage area is a major issue where the lockers are in desperate need of being replaced after undergoing many repairs. Additional space is needed to safely house the rest of the large number of instruments our students play (both school- and student-owned). We need adequate rehearsal halls for Band, Orchestra, and Chorus with acoustical panels and ceilings with heights of at least 24 feet. These rooms would need access to the exterior of the building for loading and unloading equipment, and there should be a separate storage area for adequate storage of instruments (lockers and large equipment). Our locker storage poses many safety risks due to the overload of equipment stored in inadequate spaces.

Currently, we have four practice rooms that are located well away from the Band and Orchestra/Chorus rooms, making it difficult to supervise students and for them to access instruction in general. While the rooms vary in size, there is only one room that can fit more than four people at a time. This makes it difficult for students to work collaboratively in chamber music settings (i.e., quintets, quartets, instrumental choirs, small chamber choirs) and also in sectionals (by instrument type). By having more adequate practice room space with some spaces a bit larger to accommodate 5-10 people, students would be able to work more independently and collaboratively, which has been somewhat impossible to do given our current severe overcrowding situation.

While the LHS Auditorium can seat approximately 1,000 audience members, the stage, pit orchestra area, wings, and line sets are inadequate for a program this large. The stage itself needs to be expanded with adequate wing space that can house automated line sets and winches to enable us to safely and appropriately prepare for musical concerts and our dramatic arts productions. Right now, the stage itself is not large enough (both in length and in depth) to fit all students in a given ensemble, and the wing space is pretty much non-existent, posing significant safety concerns with equipment and access to egresses. We lack an attached and large prop/building shop to enable equipment to easily be maneuvered from prep areas to the stage. We do not have a prop/costume storage space, either, which poses many safety issues, as there is no space large enough to handle the kind of work that needs to be done for productions. While we do have a pit orchestra, it is exceptionally narrow, making it extremely difficult for instrumentalists to perform during productions. Along with this, the sheer quality of the stage in the auditorium poses safety concerns in general due to its deteriorated nature. The rehearsal spaces should be directly "attached" or at least within access to the auditorium and stage areas, which is not the case at this time.

LHS has a Black Box Theater that is located upstairs in the main building away from the auditorium and the rest of the performing arts spaces. The space is just a double-sized classroom with a carpet and black painted walls. There are windows that have curtains to simulate a more enclosed feeling. While this is adequate as a classroom space, we are lacking the kind of dramatic arts space to produce quality small scale productions and presentations. A theater in-the-round that has perimeter seating for an audience would be more appropriate. Only a limited number of audience members can attend our improv shows and festival productions. Such a space would enable us to provide small dramatic arts productions, as well as small musical presentations. For example, we have an extensive jazz program, but it is difficult to find space for them to hold their many jazz evenings for our large jazz ensembles and our smaller jazz combos.

We are trying to expand our Performing Arts course offerings to students from diverse backgrounds at LHS outside of just performance-based ensembles and dramatic performances. Unfortunately, we are lacking a music classroom that can accommodate non-Performing Arts courses in music theory, music production, piano keyboard, guitar, and ukulele classes, modern band classes, steel drum ensembles and handbell choirs, composition and arranging, and music related humanities classes. Our current space limits enrollment to 15 students per class. We also lack the technology to provide an even more meaningful learning experience. A Musical Instrument Digital Interface (MIDI-style set up) would provide our students with the kind of technological environment consistent with a contemporary music education experience. Such a technology space could

double as a recording studio for our instrumental and choral students to record tracks for the high number of festivals and adjudications in which they participate.

While there are so many priorities to be considered when building a new high school, here in Lexington, the Performing Arts program is an extremely important and foundational part of the curriculum across the school district and within the Town of Lexington. Our community truly *values* the Arts and believes in providing an exceptionally high quality and well-rounded education for its students. Outside of our non-Performing Arts classes, the number of students we have participating in our ensembles is almost 1,000 students, which is 43% of the current LHS population. As our program has been recognized on both a state, national, and global level, having such resources and adequate spaces will enable us to support the development of even more Performing Arts students in the best ways possible.

### *Physical Education, Health and Wellness*

The 9-12 PE, Health and Wellness program at LHS has a strong foundation with talented educators, but the space limitations severely impact our ability to collaborate with other departments to the level that we envisioned. We do not have the space for many inter-departmental collaborative opportunities occur, and our efforts to implement integrated units in collaboration with the Science department (e.g., Anatomy and Physiology, Biomechanics, Kinesiology and Neuroscience, as it relates to the teen brain and addiction and decision-making) are on hold. Due to issues of overcrowding, there is no available space to achieve the kinds of integrated educational opportunities that better promote a well-rounded PE, Health & Wellness education that meets the social and emotional needs of each child.

We are unable to schedule any of our PE classes during a two hour window in the middle of the day, as the large number of lunch students requires the use of most of the PE indoor spaces at that time, including the gymnasium and field house. The severe overcrowding impacting the large core spaces in Lexington HS in turn impacts the PE, Health and Wellness department's ability to offer all of the units of study, as the number of blocks available to schedule classes is also reduced. The gymnasium is too small to accommodate some of the units of study, and a large soffit running through the middle of the gym further impacts the ability to effectively deliver the curriculum in some cases, as well as after school sports (e.g., volleyball).

The Athletic Training room also doubles as a classroom. Due to the current size of the room, we have to restrict the class sizes of both the Cardiopulmonary Resuscitation (CPR) and Sports Medicine classes to a maximum of 18 students, impacting the number of students who have access to these vital classes each year. The Athletic Training room is totally inadequate to accommodate the after school sports teams in order to effectively evaluate, treat, and rehabilitate the numerous sports injuries (approximately 3000+ visits in three seasons) that are treated in the room every school year, which poses health and safety issues. The Fitness Center is a converted space that has approximately ten concrete support columns throughout the room, greatly impacting the safety of students. The Yoga/Dance Studio is a converted printing space that has size limitations that require our educators to modify lessons in order to safely teach some of the more dynamic performance-based units of study. Health Education classes require safe and private spaces to allow students to speak with the health education staff when personal issues are part of the conversation. Furthermore, some of the units require intervention and support from a social worker in the department, and the need for a private welcoming space is optimal to support student emotional health.

The Prevention Program provides a research-based approach to substance abuse assessment, education and intervention, using evidenced-based research, curriculum, and interventions. Services are short-term with opportunities for students to engage in follow-up check-ins. Trained staff and graduate school interns provide services primarily using the "Healthy Futures Stanford Alternative to Suspension Curriculum." This is a nicotine-specific curriculum that we have adapted and modified to include education about marijuana and other drugs. There are other research-based curricula that we hope to adapt and adopt to meet the needs of our Lexington HS students. Our ability to implement the Prevention Program and the substance abuse interventions and curricula is impacted by the lack of a permanent, appropriate space to support the student-led peer leadership programs that are necessary. Many other associated student activities are impacted, as well, including Students Against Destructive Decisions (SADD) Club, SHAC, and the Teen/Adult Dialogue events. Currently the program does not have the space available to support the student-facing K-12 elements of the program, given that student participation is well over 300 trained high school students each year and growing!

The Lexington Public Schools PE, Health and Wellness Prevention Program provides free and confidential information, counseling, and support to students and their families for any alcohol or drug- related questions or problems. In the district's efforts to continue to reduce exclusionary practices and suspensions and to maximize restorative practices and educational opportunities, the Prevention Program provides interventions and assessment, and it offers an important alternative to suspension. We want to educate instead of isolate students who violate the LPS code of conduct and substance use policies and find alternatives to suspension. Space constraints often make it challenging to provide the necessary confidential spaces to hold associated meetings with students and families.

## REQUIRED FORM OF VOTE TO SUBMIT AN SOI

## REQUIRED VOTES

If the SOI is being submitted by a City or Town, a vote in the following form is required from both the City Council/Board of Aldermen **OR** the Board of Selectmen/equivalent governing body **AND** the School Committee.

If the SOI is being submitted by a regional school district, a vote in the following form is required from the Regional School Committee only. FORM OF VOTE Please use the text below to prepare your City's, Town's or District's required vote(s).

## FORM OF VOTE

Please use the text below to prepare your City's, Town's or District's required vote(s).

Resolved: Having convened in an open meeting on \_\_\_\_\_, prior to the closing date, the \_\_\_\_\_ [City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body/School Committee] of \_\_\_\_\_ [City/Town], 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 an application may be submitted to the Massachusetts School Building Authority in the future

\_\_\_\_\_

\_\_\_\_\_ ; *[Insert a description of the priority(s) checked off on the Statement of Interest Form and a brief description of the deficiency described therein for each priority]*; and hereby further specifically acknowledges that by submitting this Statement of Interest Form, 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 City/Town/Regional School 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.

**Chief Executive Officer \*****School Committee Chair****Superintendent of Schools**

James Malloy

Kathleen Lenihan

Julie Hackett

Town Manager

(signature)

(signature)

(signature)

Date

Date

Date

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\* Local Chief Executive Officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.