

# AN ANALYSIS OF THE CHARTER SCHOOL FACILITY LANDSCAPE IN MASSACHUSETTS

JANUARY 2013



## EXECUTIVE SUMMARY

THE MASSACHUSETTS CHARTER PUBLIC SCHOOL ASSOCIATION, the Colorado League of Charter Schools, and the National Alliance for Public Charter Schools publish this report entitled *“An Analysis of the Charter School Facility Landscape in Massachusetts,”* detailing the status of charter school facilities in the state.

In the spring of 2012, these organizations worked to collect data that would reveal and accurately portray the adequacy of charter school facilities<sup>1</sup> and the average spending for facilities out of charter schools’ operating budgets in Massachusetts. As described more fully herein, the results of the data collection efforts provide evidence that charter schools in Massachusetts pay more for facilities compared to traditional public schools, yet charter school students do not have access to many of the same facilities and amenities as compared to their peers in traditional public schools.

In order to ensure that the recommendations of this effort were research-based and supported by reliable data, Hutton Architecture Studio—a leader in educational facilities architecture—consulted on the project to provide a set of reasonable expectations for school facilities’ size and amenities (see Appendix B for detailed description). The Colorado League of Charter Schools (“the League”) is the pioneering organization behind the creation and development of the facilities survey. The League worked closely with the Massachusetts Charter Public School Association (“MCPSA”) to collect the data to produce this report. The recommendations section of this report was created by the National Alliance for Public Charter Schools (“the Alliance”).

Given the alignment of the Facilities Initiative and the goals and data needs of the U.S. Department of Education’s (ED) Charter Schools Program (CSP), ED procured additional state surveys, including Massachusetts. The National Charter School Resource Center at American Institutes for Research (AIR) [1] is subcontracting with the Colorado League of Charter Schools to collect the research and data on behalf of the U.S. Department of Education for Idaho, Massachusetts, Michigan and New Jersey.

This report is based on survey, enrollment, and operating revenue data collected for the 2010-2011 school year<sup>2</sup>. Results presented in this report are based on data from the 90 percent of Massachusetts’ Commonwealth Charter Schools that completed all or part of a comprehensive facility survey. Horace Mann Charter Schools were not included in this survey (see “Charter Schools in Massachusetts” on page 4). Participating schools were representative of the state’s charter sector as far as size of enrollment, percent of minorities and low-income students served, grade levels served and per-pupil operating revenue.

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- 1 “Adequacy” for school facilities was derived from local, regional and national school construction data, as well as best practices in new charter school construction.
  - 2 Enrollment and per-pupil funding were obtained from the Massachusetts Department of Education.



### Key findings include:

#### 1. Massachusetts' public charter schools spend an average of seven percent of their operating budget on facilities<sup>3</sup>.

- On average, charter schools in Massachusetts **spend \$1,235 per student** from designated per-pupil operating revenue each year on facilities costs. However, Massachusetts charter schools do receive a facilities allocation of \$893 per pupil. When taking the allocation into account the average per-pupil revenue spent on facilities drops to \$342. For the average charter school facility in Massachusetts, with an enrollment of 308 students, this translates to \$105,336 annually or seven percent of the average charter schools' operating budget.

#### 2. Massachusetts charter school facilities are small compared to state and industry standards.

- **Over 50 percent** of surveyed Massachusetts charter schools are located in facilities that are smaller than the industry standard for gross square feet per student (see Appendix B). Students in Massachusetts charter schools are likely to attend classes in smaller classrooms and/or facilities that may not have specialized instructional spaces such as a library, science lab, art, or music room that are part of a comprehensive educational program.
- Massachusetts state standards refers to information found at [http://www.massschoolbuildings.org/sites/default/files/editcontentfile/Guidelines\\_Forms/Statutes\\_Regulations/MSBA\\_Regs\\_program\\_04\\_16\\_10.pdf](http://www.massschoolbuildings.org/sites/default/files/editcontentfile/Guidelines_Forms/Statutes_Regulations/MSBA_Regs_program_04_16_10.pdf).
- Industry standards are set both by region and nationally based on traditional public school district's capital construction data for the years 2001 through 2012, using School Planning & Management's Annual School Construction reports.

<sup>3</sup> Schools were asked to provide the prior years' utilities, maintenance fees, and any other assessed fees in the survey. These amounts were then subtracted from the annual payments for rent, lease, mortgage, or bonds.

### 3. Charters spend more to provide low-income students with federally-subsidized meals.

- Surveyed Massachusetts charter schools that participate in the federal subsidized meal program spend more than traditional public schools to provide these meals to students. In fact, **80 percent** of the Massachusetts charter schools surveyed lacked a federally approved kitchen facility that would qualify the school to provide federally-subsidized free and reduced price meals to students from low-income families. Therefore, charter schools contract with outside vendors to ensure that these students have access to free and reduced price meals.

### 4. As Massachusetts charter schools expand, facility challenges will need new solutions. More operating funds may be needed to address charter school facility issues, and the fast-growing charter school student population in Massachusetts may not benefit from the quality facilities that other public school students have come to expect.

- **Over 45,000 students** are on waitlists for existing charter schools, indicating strong demand for the expansion of Massachusetts' charter school sector.
  - Waitlist information was obtained from the Massachusetts Department of Elementary and Secondary Education and can be found at: <http://www.doe.mass.edu/charter/enrollment>.
- **78 percent** of surveyed Massachusetts charter schools plan to increase their enrollment by 2016. The average school surveyed that has plans to increase enrollment has a current enrollment of 484 students, and plans to increase enrollment by 56 percent (or 271 students) between 2012 and 2016.
- **66 percent** of these growing schools report that they do not have adequate space to serve their likely 2016 population.

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## INTRODUCTION

### **Charter School Facilities Initiative Background**

In summer 2007, the Colorado League of Charter Schools (“the League”) launched its Facilities 2010 Task Force. The Task Force was established to identify prominent shortcomings in the charter school capital landscape and develop a blueprint of public policy and private sector changes leading to a comprehensive, long-range system of adequate public school facilities or facility funding sources that are accessible to charter schools. At the direction of the Task Force, the League developed a comprehensive Charter School Facilities Survey in partnership with a national leader in school facilities, Paul Hutton, AIA, of Hutton Architecture Studio, and local experts in school planning, Wayne Eckerling, Ph.D., and Allen Balczarek.

In April 2008, the first report of the Colorado results was published. As a result of the report, the League was able to successfully obtain more capital construction funds for charter schools, make legislative changes that required school districts to include district authorized charter schools in bond election discussions, and provide for the inclusion of charter schools as eligible applicants in the Colorado Building Excellent Schools Today (BEST) program, a competitive grant program that provides funding to school districts and charter schools for capital construction projects.

### **Charter School Facilities Initiative Partnership**

Seeing the success of the Colorado facilities initiative, the National Alliance for Public Charter Schools (“the Alliance”) partnered with the League to use the Colorado facilities survey model in other states to assess the charter facilities landscape across the country. In 2010-2011 the League worked with Georgia, Indiana, and Texas to pilot the initiative across multiple states simultaneously. Following the success of this multi-state initiative, data collection was started in late 2011 in New York and Tennessee.

Given the alignment of the Facilities Initiative and the goals and data needs of the U.S. Department of Education’s (ED) Charter Schools Program (CSP), ED procured additional state surveys, including Massachusetts. The National Charter School Resource Center at American Institutes for Research (AIR) [1] is subcontracting with the Colorado League of Charter Schools to collect the data on behalf of the U.S. Department of Education for Idaho, Massachusetts, Michigan and New Jersey.

The League worked in conjunction with the Massachusetts Charter Public School Association (MCPSA) to collect and analyze the data used to produce this report. All charter schools were asked to complete a survey and allow a representative from MCPSA to conduct an on-site measurement of the facility and all educational spaces.

Ninety percent of Massachusetts’ Commonwealth Charter Schools participated in the data collection effort. There were no differences between participating and non-participating charter schools other than the fact that one of the non-participating schools is not a member of MCPSA. This was not intentional. All schools, members or not, were invited and encouraged to participate. Given the high response rate and the representativeness of the sample, conclusions made in this report can be said to reflect the facility status of all Commonwealth Charter Schools in the state.



## Charter Schools in Massachusetts

Massachusetts' charter school statute was enacted in 1993, and the first 14 Massachusetts charters opened in the fall of 1995. Most recently, in 2010, Massachusetts passed a law that partially lifted the state's caps on charter school growth and explicitly allowed charter governing boards to hold multiple charter contracts to promote the replication and expansion of high-quality charter schools. All charter schools in Massachusetts are authorized by the state.

There are different types of charter public schools in Massachusetts: Commonwealth Charter Schools and Horace Mann Charter Schools. Both operate independently of the local school system, but a Horace Mann Charter School must have the approval of the local school committee and teachers' union, and its yearly budget request must be approved by the local school committee. A new type of Horace Mann Charter, created by the Legislature in 2009, does not require union support. These are referred to as "in-district" charters and are limited to 14 statewide. Due to the relationship with the districts with respect to facilities acquisition, the Horace Mann Charter Schools were not included in this survey. For the remainder of the report all references to charter schools include only the Commonwealth Charter Schools in Massachusetts.

Currently, 65 Commonwealth Charter Schools, with nearly 29,400 students (approximately 3.5 percent of Massachusetts' K-12 enrollment), operate throughout the state. Seventy-four percent of the charter schools in Massachusetts are located in urban areas, 15 percent in suburban areas, and 11 percent in rural areas. Charter schools in Massachusetts serve higher numbers of students that are eligible for free or reduced priced meals than their district counterparts. On average, 54 percent of Massachusetts' charter school students are eligible for free or reduced priced meals as compared to the state average of 35.2 percent. Charter schools in Massachusetts also serve a higher percentage of students who belong to at least one ethnic minority group than their district counterparts. The average charter school's student population is comprised of 62 percent of students who belong to at least one ethnic minority group, compared to the state average of 33 percent.



### **Charter School Facilities in Massachusetts**

According to the Massachusetts Charter Public School Association, charter school operators report time and again that facility funding is one of the most significant challenges they face in starting and/or sustaining a school. Massachusetts law does not provide new or existing charter schools with access to state public school facilities funding. Therefore, charter schools are at a disadvantage when compared to other public schools in the state. Massachusetts' law, as with most states across the country, puts the burden of both obtaining and paying for facilities on the charter schools themselves. As a result, charter schools are challenged to find suitable and affordable facilities.

The standards cited throughout this report were derived from published regional and national new school construction data. Judgment based on professional experience with charter and traditional public school design is also factored into these standards (see Appendix B). To ensure accuracy in data collection and interpretation, the League consulted with two industry experts; Paul Hutton, an architect and leader in school facilities design and planning and Wayne Eckerling, Ph.D., an expert on charter schools, facilities planning, research, and bond planning and implementation.

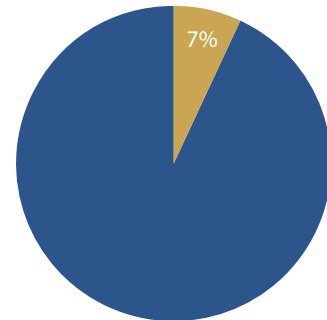
## KEY FINDINGS

### Key Finding #1: Massachusetts public charter schools spend an average of seven percent of their operating budget on facilities.

On average, public charter schools in Massachusetts spend \$1,235 per student from designated per-pupil operating revenue<sup>4</sup> on facilities costs<sup>5</sup>. This is \$342 over the state allocation of \$893. For the average-sized charter school in Massachusetts, this gap amounts to over \$100,000 in lost revenue per year, or seven percent of their operational budget.

Adding to the financial burden is that 61 percent of Massachusetts charters have undertaken a major capital project<sup>6</sup> in the last five years, for a total of nearly \$239 million spent on renovations, repairs, additions to existing facilities and new land or building purchases. Over 80 percent of these schools have used operating funds to help finance these projects.

Average Percent of Charter Schools' Designated Operating Budget Spent on Facilities



4 Operating revenue includes both per-pupil tuition and an \$893 per-pupil facilities allotment.  
 5 In this analysis facilities costs do not include maintenance fees or utilities costs.  
 6 A major capital project is defined as any project that carried an expense of \$20,000 or higher.

## Key Finding #2: Massachusetts charter school facilities are small compared to state and industry standards.

- **Over 50 percent** of surveyed Massachusetts charter school facilities are at least 20 percent smaller than the standard for gross square feet per student (see Appendix B for table of size standards).
- **82 percent** of surveyed charter schools are on sites that are more than 20 percent smaller than state and industry size standards (see Appendix B).
- **More than 50 percent** of surveyed charter school classrooms were found to be at least 20 percent below the standard.
  - The standards cited throughout this report were derived from published local, regional and national new school construction data. Judgment based on professional experience with charter and traditional public school design is also factored into these standards (see Appendix B).

When total facility size is too small, charter schools are challenged to provide the same quality instructional spaces that are enjoyed by other public school students; such as a library, computer lab, or a space exclusively used for a gymnasium or lunch room.



**Massachusetts charter schools are 20 percent smaller than state and industry standards.**

**Key Finding #3: Massachusetts charter schools spend more to provide low-income students with federally-subsidized meals.**

Kitchen facilities are commonly considered a “given” in public school buildings. In the world of charter schools, however, kitchen facilities are a luxury that many Massachusetts charter schools do without. Whether located in a new school building or a commercial facility that has been converted into functional educational space, the cost of adding a federally compliant kitchen is prohibitive when taken out of operating expenses. Without a formal, federally-approved kitchen, charter schools struggle financially to meet the needs of low-income students.

- **80 percent** of Massachusetts charter schools surveyed lack federally-approved kitchen facilities that would allow the school to prepare meals onsite that qualify for the federal subsidized meal program; so schools must find alternatives that may have additional costs.

The average Massachusetts charter school serves 54 percent free and reduced priced meal eligible students, compared to the state average of 35.2 percent. According to the Massachusetts Charter Public School Association, charter schools that want to provide a free and reduced lunch program, but lack federally-approved kitchen facilities, must seek other sources for meal service, such as external catering, which often costs far more than the federally-subsidized rates. Charter schools must find a way to cover that extra cost. Sometimes this is done by fundraising, but often this is done using operational funds.



**Key Finding #4: As the Massachusetts' charter school sector continues to grow, existing facilities challenges will need new solutions.**

With over 45,000 students on waitlists<sup>7</sup> for existing charter schools, the demand to open more charter schools in Massachusetts is strong. In response, existing charter schools, by-in-large, report a desire to grow in the coming years. The facilities challenges of today, however, may be limiting charter schools' ability to meet this demand.

- **78 percent** of surveyed Massachusetts charter schools plan to increase their enrollment by 2016. The average school surveyed that plans to increase enrollment has a current enrollment of 484 students and plans to increase enrollment by 56 percent (or 271 students) between 2012 and 2016.
  - **However, more than 66 percent** of these growing schools report that they do not have adequate space to serve their likely 2016 population.
- **44 percent** of surveyed Massachusetts charter schools that have identified a future growth plan, report that they will construct or acquire additional space in the next five years.
- **More than 66 percent** of surveyed Massachusetts charter schools are in facilities that they do not own and for which they pay rent. These rent payments will go on in perpetuity without assistance to purchase or build a facility or gain more access to unused or underutilized district facilities.



<sup>7</sup> Waitlist information was obtained from the Massachusetts Department Elementary and Secondary Education and can be found at: <http://www.doe.mass.edu/charter/enrollment>.

## ADDITIONAL FINDINGS

### Specialized Instructional Spaces

Most instruction during the school day takes place in generic classrooms, however, specialized instructional spaces such as science labs, libraries, and music rooms are an important part of a comprehensive educational program. Due to facilities challenges, Massachusetts charter schools often go without at least one specialized instructional space.

The following is a breakdown of the percentage of surveyed Massachusetts charter schools that have each of the specialized spaces observed in the Facilities Study:

- **40 percent** of surveyed Massachusetts charter schools have at least one dedicated classroom for providing music instruction.
- **63 percent** of surveyed Massachusetts charter schools have at least one dedicated art room.
- **52 percent** of surveyed Massachusetts charter schools have at least one dedicated computer lab.
- **53 percent** of surveyed Massachusetts charter schools have a dedicated library space.
- **58 percent** of surveyed Massachusetts charter secondary schools have at least one dedicated science lab.
- **68 percent** of surveyed Massachusetts charter schools have a dedicated lunch room.
- **70 percent** of surveyed Massachusetts charter schools have a dedicated gymnasium.



## CONCLUSIONS AND RECOMMENDATIONS

Massachusetts' Commonwealth Charter Schools currently serve 3.5 percent of the state's public school students, and are poised to serve more in the coming years. The survey shows that 78 percent of Massachusetts' charter schools plan to increase their enrollment over the next few years (see Key Finding #4).

More equitable facilities funding would allow public charter schools to allocate more operational dollars toward core educational items and enhance their ability to provide a well-rounded educational experience for Massachusetts' public charter school students.

Based on experiences in other states, there is no one simple way to resolve charters' facilities challenges. The National Alliance for Public Charter Schools' *A New Model Law for Supporting the Growth of High-Quality Public Charter Schools* provides a menu of eight solutions that Massachusetts may consider to meet these challenges:

- 1. A per-pupil facilities allowance that annually reflects actual average district capital costs.**
- 2. A state grant program for charter school facilities.**
- 3. A state loan program for charter school facilities.**
- 4. Equal access to tax-exempt bonding authorities or allow charters to have their own bonding authority.**
- 5. A mechanism to provide credit enhancement for charter school facilities.**
- 6. Equal access to existing facilities funding programs available to traditional public schools.**
- 7. Right of refusal to purchase or lease at or below fair market value a closed, unused, or underused public school facility or property.**
- 8. Prohibition of facility related requirements that are stricter than those applied to traditional public schools.**



States and local governments can provide revenue and other capital assets directly to public charter schools in order to ensure they have adequate facilities. Items #1, #2, and #6 (on page 11) provide facility revenue options for Massachusetts to consider. While equitable funding is critical, the other policy solutions listed (#3, #4, #5, #7, and #8) may be helpful for Massachusetts charter schools—providing support to meet facilities challenges—and should be seriously considered as well. It is important to note that the states that have helped public charter schools the most with their facilities challenges have enacted both policies providing revenue and policies that provide support in facilities acquisition and financing.

Massachusetts currently provides some facilities support to public charter schools. According to the National Alliance for Public Charter Schools' *Measuring Up to the Model: A Ranking of State Charter School Laws* (which analyzes and ranks each state charter school law against the model law), Massachusetts law addresses two of the eight facilities components in the model law, while another law is covered via a federal program:

- Massachusetts law requires the state department of education to provide, subject to appropriation, funding to charter schools for a portion of the per-pupil capital needs component included in the charter tuition amount. For Fiscal Year 2012, the per-pupil capital needs component was \$893. However, this amount is less than what charter schools are currently paying, on average, for facilities that are still small compared to school district's school facilities.
- Massachusetts law allows charter schools to access tax-exempt bond financing for capital projects through the Massachusetts Development Finance Agency.
- While state law does not provide for credit enhancement for charter school capital bonds/loans, Massachusetts charters do have several credit enhancement options due to federal backing via the U.S. Department of Education Charter School Facilities Enhancement Fund.

Massachusetts could better support the likely growth of its public charter school sector over the next few years by helping charters with their facilities challenges in the following ways:

- Increase direct funding to public charter schools for their facilities costs: One option is to increase the per-pupil capital needs component (which is now set at \$898) so that it is equitable to school district capital expenditures, thereby enabling all public school students to have access to the same level of facilities expenditures. A second option is to create a state grant program for charter school facilities. For example, Indiana law established the charter school facilities assistance program to make grants and loans to charter schools for the purpose of constructing, purchasing, renovating, maintaining, and paying first semester costs for new facilities projects, and reducing common school fund debt for charter schools. Indiana provided \$17 million to this program in 2011.
- Improve access to surplus district space: It is hard for public charter schools to access surplus district school buildings in the state. Massachusetts could follow the lead of such states as Indiana in changing that reality. Indiana law requires school districts to provide a list of buildings that are closed, unused, or unoccupied for a period of two years to the state department of education and make them available for lease or purchase to any charter school. If a charter school wishes to use a school building on the list, the school district must lease the building for \$1 a year for a term at the charter school's discretion or sell the building for \$1. The charter school is required to use the building for classroom instruction no later than two years after acquiring the building. If during the term of the lease, the charter school closes or ceases using the school building for instruction, the building will be placed again on the state department of education's list.



- Enhance public charter school access to bonds: Massachusetts law allows charter schools to access tax-exempt bond financing for capital projects through the Massachusetts Development Finance Agency. One option for enhancing public charter school access to financing would be for the state to directly allocate a certain amount of bond financing for charter schools. For example, Connecticut has provided \$20 million in bond financing to support public charter school facilities, dispersed through a competitive application process.

The results of the Massachusetts Charter School Facilities Survey indicate that students attending Massachusetts public charter schools are not currently housed in facilities that are equitable to traditional public schools. By ensuring facilities equity for all Massachusetts public schools, charter schools could widen programming options, increase the quality of the educational experience for students, and increase the number of seats available to waitlisted students.

## APPENDIX A

### Methodology

#### Questionnaire Development

A critical first step to gathering the best possible set of objective data and information about charter school facilities and facility needs was to develop a comprehensive questionnaire.

To accomplish this, the Colorado League of Charter Schools commissioned Hutton Architecture Studio. The firm's principal architect, Paul Hutton, AIA, has designed a variety of schools and is known for his creative, cost effective, and environmentally conscious facilities. Hutton has designed numerous new charter schools and charter school additions. Wayne Eckerling, Ph.D., a former assistant superintendent with the Denver Public Schools with responsibilities for supervision of charter schools, educational planning, and research, was also selected to assist in the design of the survey and analysis of the data. In addition to his public school facilities expertise, Dr. Eckerling has experience with general obligation bond planning and implementation.

The draft questionnaire was reviewed by the League's facility task force, League staff, and others with expertise in school construction and educational policy. A draft questionnaire was then field tested with a small group of charter schools to ensure clarity and comprehensiveness of the items. Further revisions to the questionnaire were made based on the feedback from all participating Colorado schools and survey results. The revised base survey and state-specific questions were then administered in Georgia, Indiana and Texas. Extensive feedback was solicited from these states' Charter Support Organizations and schools, resulting in further revisions to the Colorado League of Charter Schools' base survey.

Topics addressed include the following:

- Demographic information including grades served, year of inception, and number of students on the waiting list.
- Future facility plans.
- Shared use information.
- Facility information including year of construction and site size.
- Facility ownership, financing, and annual payments.
- Facility and classroom size and information technology resources.
- Facility amenities such as gymnasiums, lunch rooms, libraries, and playgrounds.
- Facility adequacy, condition, and maintainability.
- Facility funding.

The questionnaire includes more than 145 items with some requiring multiple responses.

### **Massachusetts Survey Procedures**

The Colorado League of Charter Schools' base questionnaire was revised to address Massachusetts-specific issues through a collaborative effort of the Massachusetts Charter Public School Association, the Colorado League of Charter Schools, Mr. Hutton, and Dr. Eckerling. To ensure both timely and accurate responses, the Massachusetts Charter Public School Association and their consultants assisted schools with completing the questionnaires. Submitted questionnaires were reviewed again for accuracy and completeness. Follow-up was done with the schools as necessary. While the completed questionnaires are the primary source of information for this study, information from the Massachusetts Department of Elementary and Secondary Education was used to provide data on pupil membership, per-pupil funding and free and reduced price lunch eligibility.

## APPENDIX B

### School Facility Standards

This section provides information about the standards used in this report. These standards were derived from more than a decade of published regional and national new school construction data, and other sources including the Massachusetts School Building Authority's Educational Program Space Standards and Guidelines. Judgment based on professional experience with charter and public school design is also factored into the standards as are site, facility and classroom standards used in a number of states. The standards are intended to be neither excessively generous in allocating space nor unnecessarily limiting to charter school opportunities.

The process for developing facility standards began with published regional and national new school construction data and then incorporated Massachusetts's standards. This data is typically based on enrollments that average between 500 and 1,200 students. Since many charter schools may not reach these levels of enrollment even when their program capacity is realized and a few may even exceed these enrollments, the standards were extended to account for a much broader range of enrollments while at the same time taking into account minimum sizes necessary for a base level of educational adequacy. Standards were also compared to some state and district standards to verify validity. Standards for schools with enrollments of 200, 500, and 800 students are shown in Table 1. Standards were modified for schools with identified educational programs including Montessori, Expeditionary Learning, Arts, and STEM (Science, Technology, Engineering and Mathematics).

	<b>200 Students</b>	<b>500 Students</b>	<b>800 Students</b>
Grades K-5	172	146	121
Grades K-8	177	156	135
Grades K-12	182	169	157
Grades 6-8	185	171	157
Grades 6-12	193	185	176
Grades 9-12	201	194	187

Site standards were derived from the gross square footage standards described above by taking into account the fairly consistent relationship between building and site size. Again, particularly for smaller enrollments, educational adequacy was also taken into account. Derived standards were then compared to those used in other states and districts to ensure their validity. Site size standards are shown in Table 2 for three different enrollment levels.

<b>Table 2. School Site Standards (acres)</b>			
	<b>200 Students</b>	<b>500 Students</b>	<b>800 Students</b>
Grades K-5	3.9	8.2	10.9
Grades K-8	4.7	10.4	14.3
Grades K-12	4.6	10.6	15.7
Grades 6-8	4.6	10.6	15.6
Grades 6-12	4.5	10.8	16.5
Grades 9-12	4.5	10.9	16.9

General classroom standards are shown in Table 3. These standards were derived from standards used in other states and districts and standards established by the Massachusetts School Building Authority, as well as best practice based on professional experience with charter and public school design. Adjustments were made for Montessori and Expeditionary Learning programs to reflect that larger classrooms are required to implement these educational programs.

<b>Table 3. General Classroom Standards (square feet per student)</b>	
Grade K	60
Grades 1-6	37
Grades 7-8	34
Grades 9-12	34



Standards for specialized instructional spaces like libraries, computer rooms, science labs, art rooms, music rooms, special education classrooms, gymnasiums, and lunch rooms also were developed using a process similar to the one used for general classrooms. Many of the standards below are based on formulas to accommodate the potential for smaller or larger enrollments, as previously outlined, and then take into consideration educational adequacy. Some of these standards are shown below. Lunch room standards assume three lunch periods.

<b>Table 4. Specialized Instructional Spaces</b>			
	<b>Elementary</b>	<b>Middle</b>	<b>High</b>
Gymnasium	3,000 SQ FT	5,400 SQ FT	7,300 SQ FT
Science Lab/Class	40 SQ FT / Student	48 SQ FT / Student	52 SQ FT / Student
Art	40 SQ FT / Student	50 SQ FT / Student	50 SQ FT / Student
Library	SQ FT = 500 + (2.5* enrollment)		
Lunch Room	SQ FT = 4.75* enrollment		SQ FT = 4.9* enrollment

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Public Charter Schools on behalf of the Massachusetts Charter Public School Association.