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Lexington Public Schools

PK – 12 Master Plan

March 12, 2009

Updated June 3, 2009 Elementary Section

K-12 MasterPlan Study
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LEXINGTON PUBLIC SCHOOLS

1. Executive Summary

This is the report of a PK-12 School Facilities Master Plan study conducted for the Lexington Public Schools by Design Partnership of Cambridge between September 2008 and January 2009. The purpose of this work is to provide a comprehensive set of recommendations for school facilities looking 10 years into the future. These recommendations are intended to incorporate previous recent facilities study work, including the Design Partnership ES master plan study of 2006, the GGD High School HVAC systems assessment of 2007-08, and the 2008 Russo Bar roof assessment of all school buildings.

The study and report are directed primarily to the 4 old elementary schools, the Lexington High School, and the old Harrington School currently used for Central Administration. As regards the elementary schools, the 2006 Master Plan study made recommendations for the long term total renovation, replacement or closing of the 4 older elementary schools. This report does not attempt to revisit that work except to note and assess the impact of changes in projected ES enrollments between 2006 and 2008.

However, in light of the likelihood that it may be many years before funding is available to replace or totally renovate one or more of the elementary schools, this report identifies and prioritizes work that will need to be done for those older elementary schools that remain in service up to 10 years into the future. The estimated total cost of recommended scopes of work at 4 schools, undertaken according to the schedule put forth in this report (construction in 2010 and 2011) is approximately $19.5 million.

As regards the Lexington High School, this report addresses two major categories of work needing to be addressed. One category is physical building deficiencies either not addressed by or that have occurred since the renovations completed in 2002. Major work in these categories include roof and HVAC systems work.

The other major category of work is the need for additional space, resulting in part from enrollment growth that has occurred beyond what was projected when renovations were done, changes in space use and program needs, and from the fact that not all recommended work was included in prior renovations. The cost of the work has been calculated as if it would be undertaken as a single major capital project. A preliminary estimate of this cost is approximately $37.7 million, calculated to June 2012, which is the estimated mid-point of construction according to the proposed schedule.

The recommendation of this study is to proceed with projects that address the short-term needs of the elementary schools and the long-term needs of the High School. Costs, implementation strategy and time-frame are addressed.

I. Master Plan Introduction

2. Recent Facilities History

With the exception of ongoing maintenance and repair work, the most significant recent improvements to Lexington's school buildings have been the major projects which followed the prior Master Plan prepared in 1997. The facilities work which followed that effort include construction of two new elementary schools, renovation and expansion of the two middle schools, and renovation and expansion of the High School.

The major elementary school work consisted of constructing replacement school buildings for the Fiske and Harrington Elementary Schools. As a result of this, the Old Harrington building became available for other uses, and currently houses Central Administration and related functions of the Lexington Public Schools.

The four other functioning elementary schools received no significant work, and they continue to function with ongoing maintenance and repair and selective system upgrades. However, they have never undergone major renovations and are due for major renovation or replacement. This was the subject of the K-5 Master Plan prepared in 2006, updates to which are presented in this report.

Both the Clarke and the Diamond Middle Schools received major renovations and expansions pursuant to the 1997 Schools Master Plan. However, in both cases the scope of work was significantly reduced from what was recommended in the Master Plan, by 12,000GSF and 16,700 GSF at Clarke and Diamond respectively. Modular classroom installed to accommodate the construction were left in place and remain at the Diamond School. Capacity questions in this regard are discussed in this report.

Major renovation and expansion work was completed at the High School in 2002. However, some significant items of recommended work were not included in those renovations. Notable items in this category include major mechanical system components, which were deemed not to have exceeded their useful life and therefore not to be in need of replacement at the time. Many of those items and system components are now beyond their life expectancy and are in many cases non-functional or marginally functional.

In addition (as described more fully elsewhere), actual High School enrollments have exceeded the design enrollments, which were based on projections developed as part of the 1997 Master Plan. As a result, the High School has significant current space needs.

3. Why a new Master Plan is Necessary

In order to be useful, Facilities Master Plans must be renewed periodically. A facilities master plan is essentially a framework to guide the maintenance, repair, upgrading, replacement or augmenting of facilities. The circumstances that dictate how this needs to occur over time will change over time, and so a Master Plan typically has a fixed life of 10 years or so before it needs to be renewed. This is particularly true for school districts, where the factors that dictate facilities needs, including enrollments, cannot be reasonably projected more than 10 years into the future.

The last complete K-12 Master Plan undertaken for Lexington was the HMFH Master Plan Study completed in March 1997. That report is now more than 10 years old, and many of the assumptions that went into it, including the enrollment projections, are out of date. As an example, enrollments at the High School at that time were 1,443, projected to increase to 1,842 in 10 years. By comparison, the HS enrollment now (2008-09) is 2012 and projected to remain fairly steady.

The Elementary School Master Plan: An Elementary School Master Plan study was completed by Design Partnership of Cambridge in 2006. That report was completed at the time that the last of two new elementary schools, the Harrington and Fiske , were completing construction. The study examined the educational space needs on a district-wide basis and the facilities needs at the four remaining older schools and at old Harrington, which was serving as swing space during construction of Fiske School.

The recommendation was made to undertake major projects, either to build replacement schools or to renovate existing schools to as-new standards, at three of the four older elementary schools. The expectation, based on enrollment projections, was that declining elementary school enrollments would make advisable the reduction to five in the number of elementary schools operated by Lexington and thereby the closing of one of the four older schools.

This current K-12 Master Plan builds on the work of that study. As regards the long-term elementary needs of the school district, this study is limited to examining the potential impact of changed enrollment projections relative to what was the basis for the 2006 study. In addition, because the availability of school building funding assistance from the state is a matter of uncertainty, it is unclear at what point the Town of Lexington will be willing to undertake the major projects recommended in the prior study. With this in mind, the current study examines what will be needed to allow the four older elementary schools to remain in service for up to ten years prior to commencement of major projects.

Middle School Implications: Projects have been undertaken at the Middle Schools, and no major work is expected to be recommended in this study. What the study does look at is the capacity of the middle schools relative to the projected enrollments, with particular regard to the question of for how much longer the modular classrooms are likely to remain in service.

High School Implications: The current Master Plan study does recommend significant work at the High School. This is the result of both of programmatic needs and of facilities needs. Major work was undertaken at the High School as a result of the previous Master Plan study. However, a combination of enrollment increases and educational program changes do leave the high school in need of additional space. There are also facilities needs, due both to the passage of time and to limitations imposed on the scope of prior projects, which this report recommends need to be addressed.

II. Impact of Enrollment Projections

4. Enrollment impact on ES needs

Analysis of the impact of projected enrollments on elementary level space needs is based on the Four and Ten Year Enrollment Forecasts prepared by Dr. Paul Ash, Lexington Superintendent of Schools dated December 10, 2008. As was the case with the 2006 enrollment projections use for the 2006 ES Master Plan, the most recent enrollment projections show an impending marked decline in total Lexington Elementary School enrollments. This is significant in its implications, both for the number of elementary schools likely to be needed in the future and for the ability to undertake major elementary school replacement or reconstruction projects using existing schools as swing space.

Capacity Analysis

Answers to both of these questions require a comparative analysis of the capacities of existing elementary schools with the projected trend in elementary school enrollments. The elementary school capacity analysis dated 10/16/06 as part of the ES Master Plan shows the following capacities with ***the schools as-is (modular classrooms remaining):***

Total elem school capacity:	(Kg plus grades 1-5)	2822 pupils
Range of individual capacities of older schools (Bridge, Bowman, Estabrook & Hastings):		444 to 512 pupils
Range of capacity available with any ONE of the Older schools taken out of service:		2310 to 2378 pupils

What this means is that, with any one of the older schools taken out of service, the elementary school system continues to have capacity for at least 2310 pupils. This is significant for two reasons:

1. I t means that, if enrollments dip to below 2310 pupils for one or more years, it will be possible to do major projects, requiring the shutdown of a school for a year, at one or more of the existing elementary schools.

2. It means that, if enrollments drop below 2310 pupils on a long-term basis, it will be possible to close a school and operate the elementary school system as a 5-school system.

*If we look at the ES system with the **modular classrooms removed**, the figures are somewhat different:*

Total elem school capacity:	*(Kg plus grades 1-5)*	*2523 pupils*
Range of individual capacities of older schools (Bridge, Bowman, Estabrook & Hastings):		*260 to 466 pupils*

Range of capacity available with any ONE of the Older schools taken out of service: *2057 to 2263 pupils*

As regards ES capacities for new or reconfigured schools, the 2006 ES Master Plan recommends that the older schools be replaced with or reconfigured as schools with individual K-5 capacities of 450 pupils. The cumulative capacity of an ES system with new or reconfigured schools will be slightly less than the existing capacity for the same number of schools, because of the reconfiguration and the elimination of modular classrooms. The proposed capacity of a 5-school system with 3 new or reconfigured schools is 2284 pupils.

Prognosis for Swing Space and Closing a school

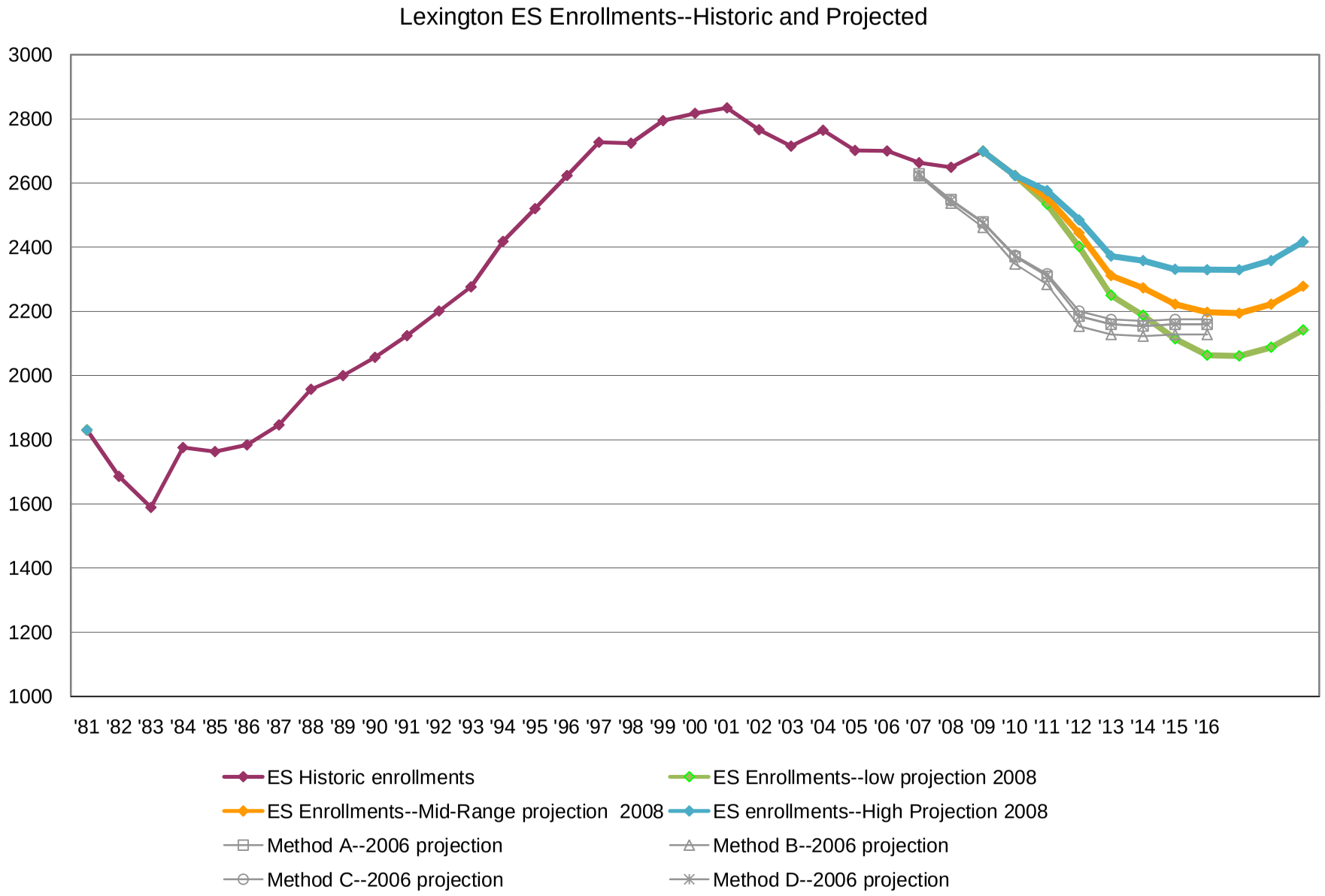
The current enrollment projections differ from the earlier projections in several regards (see graph). First, although both projections show a sharp decline in ES enrollments, the more recent projection shows this starting two years later. Secondly, where the earlier projection shows enrollments leveling out at a lower number, the more recent projections show a potential upturn in enrollments toward the end of the projection period.

In both sets of projections, those done in 2006 and those done in 2008, alternate projections of high, mid-range and low options were developed,, For the 2006 ES master plan, the proposed ES design enrollment of 2175 relates closely to the mid-range projection, which showed ES enrollments leveling at 2138.

Looking now at the most recent enrollment projection, the mid-range projection shows ES enrollments dropping to 2311 in FY13 (the 2012/13 school year) and staying in the 2200 range until FY 2019, when it shows an upturn to 2278. Even the High projection shows ES enrollments hovering at or below 2358 for the five years from FY2014 to FY2018 before climbing to 2417.

As regards availability of swing space, it is possible to conclude from these projections that there should be sufficient excess capacity within the system to allow for the closing of one school at a time for renovation or replacement purposes from FY 2014 through FY 2018. However, given that actual enrollments have not followed the track of the downturn projected in 2006, it would be prudent to avoid committing to this path until an actual decline in enrollments has been observed that tracks the projections over a period of time.

As regards the possibility of permanently closing a school, all of the alternatives in the current projections show an upturn in enrollments at the end of the projection period which, if sustained beyond the range of projections, could exceed the capacity of a five ES school system. Given this circumstance, it is difficult to maintain with any confidence that Lexington Public Schools. will be able to operate for an extended period of time as a five ES system.


Lexington ES Enrollments--Historic and Projected
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
'81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16
ES Historic enrollments
ES Enrollments--low projection 2008
ES Enrollments--Mid-Range projection 2008
ES enrollments--High Projection 2008
Method A--2006 projection
Method B--2006 projection
Method C--2006 projection
Method D--2006 projection

5. Enrollment impact on MS needs

Projects have recently been undertaken at the Middle Schools, and no major work is recommended in this study. What we will do here is look at the educational space requirements and pupil capacity of the middle schools relative to the projected enrollments, with particular regard to the question of the degree to which the remaining modular classrooms are required, and at what point in the future might they no longer be needed.

As noted earlier, both middle school buildings underwent major renovation and expansion projects following the 1997 Master Plan. However, as also noted, the scope and cost of these projects was significantly reduced from what was recommended in the Master Plan.

A block of six modular classrooms was installed at the Diamond School, reportedly at the time of the renovation/expansion project to provide swing space so the building could remain in use during construction. Those modular classrooms, which were left in place following completion of construction, remain in service today, and they are increasingly in need of maintenance and repairs. However, they do remain somewhat necessary. To explain why, it is necessary to digress briefly on the difference between a Middle School and a Junior High School.

The pure concept of a Middle School includes the concept of Student Teams and Team Teaching, in which students are grouped into Teams of perhaps 60 to 100 students in 3 to 5 sections and a Teacher Team of 3 to 5 dedicated core subject teachers works with the Team.

In a pure purpose-built Middle School, self-contained “team space” would usually be provided, consisting of a Science classroom and general classrooms so that the total provides for one room per section, allowing instruction in the core subjects to occur on a rotating basis within the team space for all students within the team. For other subjects, including Art, Music, Foreign Language (sometimes but not always), Health, PE and others, students would travel outside their “team space” to specialized instruction areas.

By virtue of the amount of time students spend outside the team space, this model has a lower efficiency of space utilization than a High School or Junior High School model, where students rotate through classrooms that are assigned by discipline, and therefore a higher degree of scheduled utilization is possible.

Lexington's middle schools, roughly speaking, are organized on the basis of Teams averaging 85 pupils , which is generally equivalent to 4 sections per team and would typically be housed, in a "pure team" model, in a team space of three general classrooms, a science classroom, and support space.

Diamond and Clarke are each intended to have the capacity for 3 teams per grade in 3 grades, for a total of 9 teams. Both schools currently function according to this model, but with some compromises. Probably their most difficult period in this regard was the 2006-07 school year, when total MS enrollments peaked at 1569. Enrollments have dropped since then, and projections show them continuing to drop to 1200 or less by FY 2019.

The reason that compromises are necessary is that the scope of the built projects was reduced. As presented in the 1997 Master Plan, the expansion projects for Clarke and Diamond provided enough classroom and science room space to accommodate 9 teams in a pure "team-taught" model. However, the projects as approved and constructed were significantly reduced in size, by 12,000 GSF in the case of Clarke and by 16,700 GSF in the case of Diamond. This was accomplished largely by reducing the number of general classrooms.

The educational impact of this is that, while the number of science classrooms per school remains at 9, allowing science rooms to be assigned to each team, the number of general classrooms is insufficient for this. It is therefore necessary that both students and teachers rotate or "hot-bed" through classrooms. This situation is somewhat more complicated at Diamond because Diamond has insufficient teacher planning space to allow each teacher a "home base" (minimally, a desk and a secure place for coat and personal belongings). This means that, even with the extra modular classrooms, some teachers must "double up" with desks in classrooms.

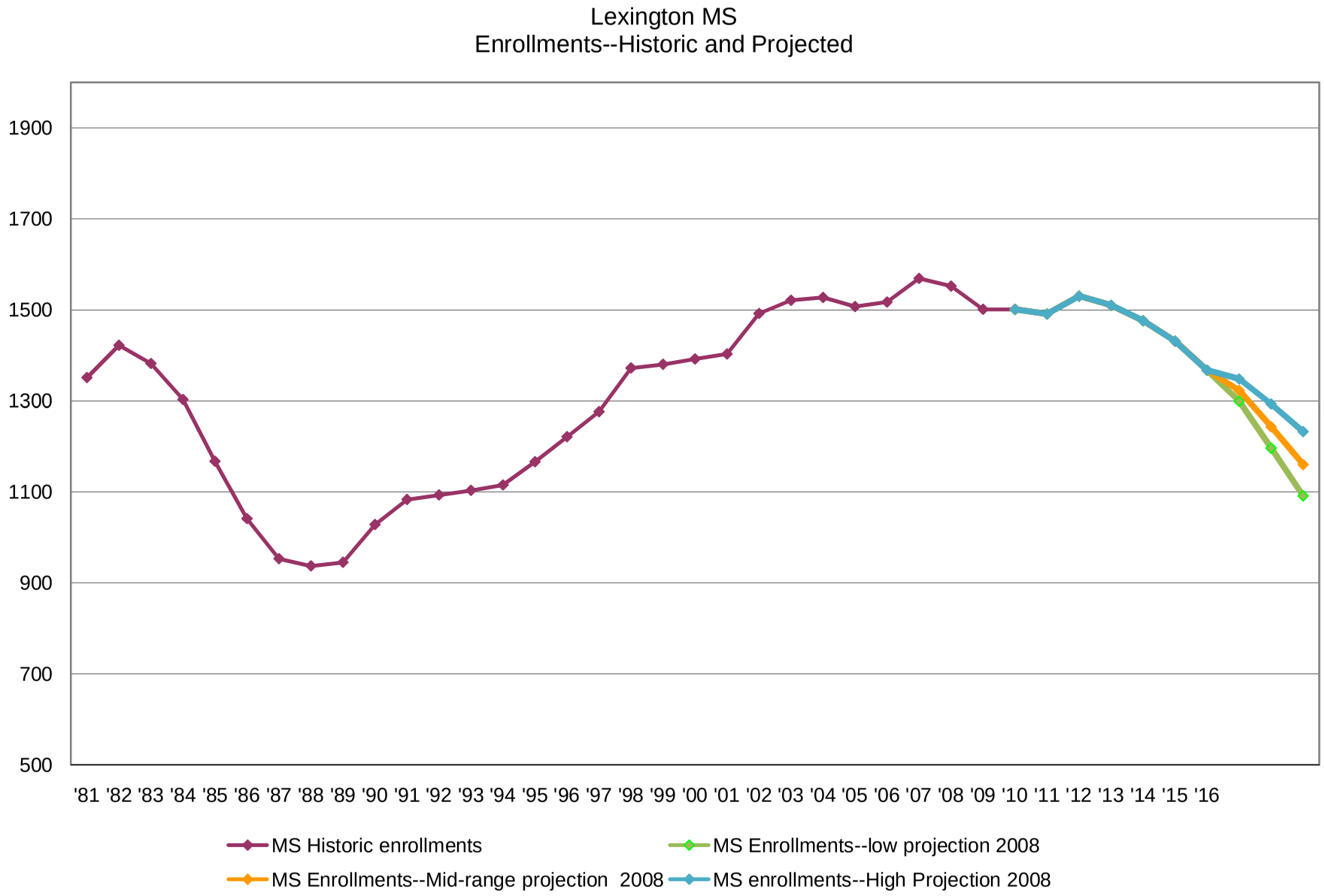
Because of the degree of operational accommodation that has become routine at these two schools over the years, it is difficult to say with precision how many additional classrooms Diamond actually needs to function. However, It is safe to say that, with current enrollments, Diamond would be seriously disadvantaged if it could not retain at least 3 of the 6 modular classrooms currently in place.

On the question of when in the future Diamond could fully function without the modulars, the answer is probably that this can only occur when the number of teaching teams is reduced from 9 to 8 (which, among other things, will probably require that at least one team be multi-grade). If we assume 85 pupils per team, this will happen when the enrollment at Diamond drops to 680 or below. We can project this happening in either of two ways:

1. If we assume no re-districting at the MS level, then this enrollment drop at Diamond probably will not occur until the District-wide MS enrollments drop

proportionately. This equates to a total MS enrollment of 1375 or below, which is projected to occur in FY 2016.

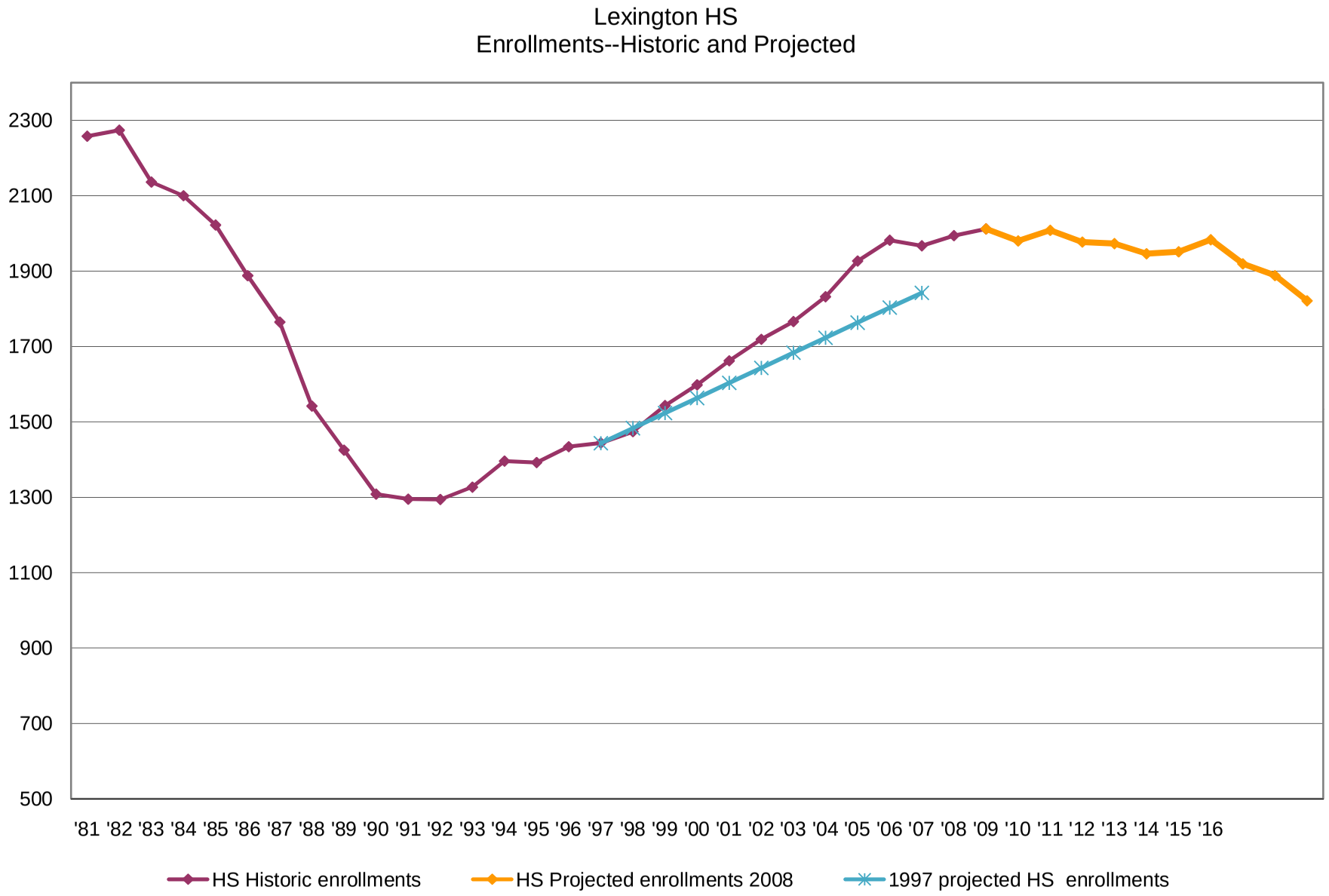
2. If we assume some level of MS redistricting, so that Clarke enrollments remain at current levels and all enrollment reduction occurs at Diamond, this equates to a total MS enrollment of 1445 or below, which is projected to occur in FY 2015.


Lexington MS
Enrollments--Historic and Projected
1900
1700
1500
1300
1100
900
700
500
'81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16
MS Historic enrollments
MS Enrollments--low projection 2008
MS Enrollments--Mid-range projection 2008
MS enrollments--High Projection 2008

6. Enrollment impact on HS needs

As noted earlier, HS enrollments at the time of the 1997Master Plan study were 1443, projected to increase in 10 years to 1842. This last number appears to be the design enrollment for which the most recent HS expansions and renovations were planned. In point of fact, by FY 2007, 10 years after the 1997 Master Plan, HS enrollments had grown to 1967, and they have continued growing slightly to the current HS enrollment of 2012.

The most recent enrollment projections suggest that those enrollments will hold fairly steady, oscillating between 1950 and 2000 until FY 17, at which point the projection shows a slight decline (to 1821) for the last three years of the projection. However, the current enrollment, at 2012, represents an increase of 170 students, which is a significant increase over the design enrollment for which the most recent renovations were planned, and the HS does have significant space needs as a result of this and other considerations. These HS space needs are addressed in more detail in a later section.


Lexington HS
Enrollments--Historic and Projected
2300
2100
1900
1700
1500
1300
1100
900
700
500
'81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16
HS Historic enrollments
HS Projected enrollments 2008
1997 projected HS enrollments

III. ES Short-term Needs

7. ES short-term Program Space Needs

The elementary school needs to be addressed in this study include only those which need to be addressed in the time preceding implementation of a long-range project as recommended in the 2006 ES Master Plan study. Because of this, and because the elementary level enrollments are essentially stable and likely to start to decline in the near future, we have not addressed any educational space needs at the elementary level in this report.

8. ES short-term Facilities Needs

In order to determine what the elementary school needs are prior to commencement of major projects at some future time, architectural and engineering teams did surveys of each building and compiled detailed reports of building needs. These scope lists were then individually priced and compiled according to a prioritized hierarchy.

These lists are aimed to identify all work which can anticipated to be required, , based on observations and building knowledge, within the next 10 years. The goal is to identify only those work items which are necessary, whether from a health and safety standpoint, a legal or code standpoint, a building preservation and maintenance standpoint, or simply to maintain a minimally acceptable "quality of life" for building occupants. For the most point, these work items will not improve the buildings beyond their current condition, but will rather prevent from degrading to an unacceptable level of deterioration.

The priority categories were determined and priority assignments of work items made in consultation with Town Facilities staff. The priority categories are as follows:

Priority O: *Work to be done under the operating budget as part of ongoing building upkeep. These are mostly small work items, often with implications for safety and health.*

Priority 1: *Work considered necessary from a health and safety standpoint, a legal or code standpoint, or a building preservation and maintenance standpoint. These are considered "must do's".*

Priority H-1: *Work required under MA. Accessibility codes whenever other work at a building exceeds $100,000.*

Priority 2: *Work considered necessary to maintain a minimally acceptable "quality of life" for building occupants. This work is strongly recommended if a building is to remain in use for a significant time.*

Priority H-2: *Work required under MA. Accessibility codes whenever other work at a building exceeds 30% of the building's value, usually taken to mean its assessed value.*

9. Impact of short-term ES needs on Long-Term Recommendations

The priority categories for short-term elementary school needs can be considered in two categories:

- Priority 0, which are to be addressed in the operating budget and will not be part of capital projects.
- All other priorities, which will need to be addressed as capital projects.

In considering how to implement recommendations from Priority categories 1 & 2, it is important to note that scopes of work to address building accessibility become required by law when certain dollar thresholds are reached.

Thus the work of HC-1 becomes required whenever the value of other work exceeds $100,000 (with certain limited exemptions such as HVAC, roof and window work under $500,000). The work of HC-2 becomes required whenever the value of other work exceeds 30% of "full & fair cash value of the building" (determined by dividing the assessed value by the Mass DoR "sales assessment ratio" for the town).

This becomes a significant consideration for the 4 older elementary schools, where the combined value of Priority 1 work and HC-1 work (made necessary by the value of Priority 1 work) is close to or above the value that triggers the requirement to perform HC-2 work. Any escalation due to starting work after the June 1 2009 baseline date is likely to push the cost of work over that threshold. Accordingly, we have assumed for planning purposes that work which exceeds the Priority 1 value will trigger the requirement for full accessibility at all schools.

ES cost summary--Potential Capital Projects
Lexington Public Schools
1.8.09
rev. 1.12.09
rev. 2.26.09 Haz Mat.

Note: All estimated costs assume a benchmark construction start date of June 2009 unless otherwise noted.

	Bowman	Bridge	Estabrook	Hastings	TOTAL four schools
Priority 1	$3,218,998	$1,694,672	$2,675,457	$1,930,270	$9,519,397
HC-1	$322,390	$280,167	$227,640	$116,892	$947,089
subtotal-- Priority 1 & HC1	**$3,541,388**	**$1,974,839**	**$2,903,097**	**$2,047,162**	**$10,466,486**
Priority 2	$2,482,101	$2,648,731	$2,782,429	$2,828,679	$10,741,940
HC-2	$467,084	$511,582	$572,617	$491,394	$2,042,677
TOTAL by School --Priority 1, HC-1 & HC-2	**$4,008,472**	**$2,486,421**	**$3,475,714**	**$2,538,556**	**$12,509,163**
TOTAL by School --Priority 1 & 2, HC-1 & HC-2	**$6,490,573**	**$5,135,152**	**$6,258,143**	**$5,367,235**	**$23,251,103**
TOTAL by School -- Priority 1, HC-1 & HC-2-- Escalated to June 2010.			**$3,736,393**	**$2,728,948**	**$6,465,340**
TOTAL by School -- Priority 1 & 2, HC-1 & HC-2-- Escalated to June 201 1	**$7,301,895**	**$5,777,046**			**$13,078,941**

Lexington's 2006 DOR Sales Assessment ratio (average): ***95%***

2008 Assessed Value	*$8,774,000*	*$6,313,000*	*$4,309,000*	*$4,250,000*	
30% of Assessed Value /sales assessment ratio	***$2,770,737***	***$1,993,579***	***$1,360,737***	***$1,342,105***	

Lexington Public Schools

ES Short Term Work -- Scope Cost

BRIDGE ELEMENTARY SCHOOL

PRIORITY O - OPERATING BUDGET		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
1A/1D	Replace exterior door @ double classroom to swing in the direction of egress.	$414
2H	Remove (4) sets of double doors from corridor. Creating dead end corridor.	$703
6E	Replace damaged louver.	$1,480
6J	Repair broken exterior window/window hardware.	$11,373
6L	Rake out ETR expansion joint material and provide rubber compression seal at expansion joint.	$1,463
6M	Replace damaged blind.	$3,335
6T	Replace broken window.	$2,166
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. *(68,000 SF until warranty expires in 2019)*	$21,330
EBR1.1	Generator does not start automatically upon normal power failure. Generator is currently started manually. Code requires generator to start automatically and assume load within 10 seconds.	$3,950
EBR1.2	Various kitchen receptacles not GFI.	$2,370
EBR1.3	Portable men toilet, receptacle not GFI.	$158
EBR1.4	Service electrode requires jumper around water meter for proper grounding.	$790
EBR1.5	Electrical items under kitchen hood are required to shutdown upon activation of hood's suppression system.	$3,950
EBR1.7	Add receptacles to eliminate extension cord use.	$15,800
EBR1.8	No pull station at gym exterior door.	$1,185
HBR1.4	Sprinkler head in kitchen hood is not installed	$395
	PRIORITY O TOTAL	**$70,863**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

Lexington Public Schools

ES Short Term Work -- Scope Cost

BRIDGE ELEMENTARY SCHOOL

PRIORITY 1 - HIGH PRIORITY **(0-5 Years)**		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
3C	Provide window screens @ all operable windows	$10,392
3RA.4	Repair and replace wet mod.-bit. in Roof Areas B & C and repair base flashing in Roof Areas A & C. As recommended by Russo Bar Associates.	$12,640
PBR2.1	A new gas fired water heater along with a thermostatic mixing valve that will supply 120	$23,700
PBR2.2	A new natural gas service will be installed to the building to provide fuel for heating and domestic hot water. Natural gas will also be provided to a generator if one is provided as part of the design.	$7,900
PBR3.3	A new domestic 140 degree F. hot water and hot water recirculating piping system will be included to supply the kitchen needs.	$7,900
HBR2.1	In approximately five years the heating plant will be at the end of its serviceable life therefore, within that time frame we recommend the installation of (2) new gas fired steam boilers with modulating gas for energy savings. ($10,000 added from Haz Mat Report 02/26/09)	$410,800
HBR3.1	▪ The recently installed heating plant will be reused and converted from steam to hot water while reusing the modulating gas burners and adding boiler water reset for additional energy savings. ▪ All unit ventilators will be replaced with hot water unit ventilators reusing CO2 demand ventilation controls. ▪ All steam piping will be removed and a new schedule 40 black steel hot water system will be installed. ▪ Provide a direct digital control system with internet access and colored graphics.	$1,221,340
	PRIORITY 1 TOTAL	**$1,694,672**
PRIORITY H.1		
5H	**Per 521 CMR provide accessible toilet room. Including toilet fixtures, grab bars & accessories. *(Renovation of two existing single user toilet rooms adjacent to Gym, one for each sex).*	$280,167
	PRIORITY H.1 TOTAL	**$280,167**
	PRIORITY 1 & H.1 TOTAL	**$1,974,839**

***Work required per 521 CMR 3.3.1.b is only applicable if complete scope of work exceeds $100,000 and involves the "alteration of any elements or spaces required to be accessible". Work which is limited solely to electrical mechanical or plumbing system, abatement of hazardous materials, and retrofit of automatic sprinklers will not prompt this requirement.*

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

BRIDGE ELEMENTARY SCHOOL

PRIORITY 2 (6-10 Years)

DPC ITEM #	DESCRIPTION	ESTIMATED PROJECT COST
1D	Provide panic hardware @ (3) exterior doors.	$6,135
2C	Provide rated door.	$2,710
2D	Provide smoke stopping at top of wall.	$363
2F	Provide smoke stopping at door.	$228
2G	Provide new house curtains and valance, remove existing.	$51,502
2I	Provide new door and frame and wall.	$7,206
3A	Replace exterior windows.	$755,201
3B	Replace window treatment.	$44,167
3D	Repaint exterior door.	$144
4H	Hazardous material removal as per updated Ahera Report done by Universal Environmental Consultants, dated 1/27/09	$71,100
6A	Replace 2'x4' ACT	$11,624
6B	Repair crack in CMU/Brick.	$199,375
6KK	Paint entire interior (wholesale).	$56,967
6LL	Replace all ceilings (wholesale).	$625,724
EBR1.6	Add horn/strobes in kitchen, cafeteria and library, currently none exist. Add strobes in toilets.	$11,850
EBR2.1	The existing fire alarm control panel, Spectronics 641 Series, late 1980's vintage, is still a current panel for this manufacturer with available parts. Detectors compatible with this panel are still available. This will allow existing wiring and devices to remain and allow additional devices to be provided. In light of the building not being sprinklered it is recommended that additional smoke and heat detectors be provided for full coverage of the facility. $1.00/s.f. =	$100,226
EBR2.2	The normal/emergency lighting system should be tested by simulating a power failure and confirming that adequate emergency lighting exists in egress ways and other large spaces where required. Additional emergency lighting should be added where required including on the exterior at exit discharge doors. $.25/s.f. =	$25,057
EBR2.3	Provide full coverage of exit signs where required for safe egress out of the facility. $.10/s.f. =	$10,022
EBR3.1	Provide occupancy sensors to turn lights off in classrooms, toilets, offices, gym, etc. to save energy when spaces are unoccupied. Utility Co. rebates may be available for energy conservation measures. 50 @ $200.00/unit =	$15,800
PBR3.4	All plumbing fixtures will be replaced with new water conserving type fixtures capable of saving approximately 30% of overall water usage of the building.	$63,200

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HBR1.1	Veeder Root oil tank monitoring system is not operating	$3,160
HBR1.2	Wasted energy resulting from pre-heating No.2 fuel oil	$3,160
HBR1.3	Steam leaks in steam tunnels	$39,500
HBR1.5	Code required ventilation air not provided in corridors	$69,520
HBR1.6	Calibration of the pneumatic temperature controls	$49,770
HBR1.7	CO2 Demand ventilation control in Classroom unit ventilators	$42,660
HBR1.8	Verify shaft trueness on all unit ventilators, exhaust fans and air handling units and replace if necessary	$20,540
HBR1.9	Verify conditions of shaft bearings on all unit ventilators, exhaust fans and air handling units and replace if necessary	$20,540
HBR1.10	Clean fan wheels, coils, dampers, and outside air louvers on all unit ventilators, exhaust fans and air handling units	$20,540
HBR3.5	Replace all air handling units serving the Kitchen, Cafeteria, Art/Teachers Work Room, Media Center and Administration Area.	$213,300
HBR3.6	Replace all exhaust fans and internally clean exhaust ductwork.	$107,440
	PRIORITY 2 TOTAL	**$2,648,731**
	PRIORITY H.2	
5A	Non HC compliant door.	$15,242
5B	Remove non-accessible sink and associated casework, provide new casework unit with accessible sink.	$80,280
5C	Provide accessible circulation desk and remove non accessible desk.	$11,355
5D	Provide accessible drinking fountain, by plumbing.	$534
5E	Remove wall mounted ETR TV, owner to place on moveable cart.	$1,142
5F	Provide guard/handrail.	$2,545
5G	Toilet room inaccessible - min. work required: accessories, handrails and new phenolic partitions at gang bathrooms.	$28,089
5K	Provide accessible door and frame.	$81,457
5L	Provide wheelchair lift.	$30,309
5N	Provide accessible entrance - concrete ramp at 8'-0", including handrails.	$4,972
5P	Provide accessible door hardware.	$4,659
5Q	Relocated lockers to provide HC accessible door clearance.	$1,563
5T	Remove and replace all remaining door hardware.	$249,433
	PRIORITY H.2 TOTAL	**$511,582**
	PRIORITY 2 & H.2 TOTAL	**$3,160,313**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

PRIORITY O, 1, H.1, 2 & H.2 TOTAL	**$5,206,015**

BOWMAN ELEMENTARY SCHOOL

PRIORITY O - OPERATING BUDGET		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. *(54,200 SF excluding roof areas from 3RA.2)(Refer to 3RA.3 for scheduled work)*	$3,555
1A/1D	Replace exterior door @ double classroom to swing in the direction of egress.	$414
2H	Remove (4) sets of double doors from corridor. Creating dead end corridor.	$589
6E	Replace damaged louver.	$5,187
6G	Repair water damage at exterior soffit.	$264
6GG	Repair damaged foundation wall.	$6,603
6L	Rake out ETR expansion joint material and provide rubber compression seal at expansion joint.	$1,626
EBO1.1	Hood fire suppression system fire alarm conduit broken.	$474
EBO1.2	Exposed wiring in freezer provide box and cover.	$474
EBO1.3	Various kitchen receptacles not GFI. Provide GFI receptacles or GFI breakers.	$2,370
EBO1.4	Exterior core classroom, receptacle cover missing.	$79
EBO1.5	Portable classroom, men toilet, receptacle not GFI.	$158
EBO1.7	Electrical items under kitchen hood are required to shutdown upon activation of hood's suppression system.	$3,950
EBO1.9	One (1) wire guard for smoke detector on gym ceiling is loose and ready to drop.	$158
EBO1.11	Add fire alarm pull station at gymatorium.	$1,185
HBO1.4	Fire suppression system in Kitchen is not compatible with sprinkler head in hood	$395
	PRIORITY O TOTAL	**$27,481**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

BOWMAN ELEMENTARY SCHOOL

PRIORITY 1 - HIGH PRIORITY **(0-5 Years)**		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
3C	Provide window screens @ all operable windows	$6,848
3RA.2	Begin phased Roof replacement in Roof Areas E & F in 2009. As per Russo Bar Associates. *(16,800 SF)*	$371,300
3RA.3	Phased replacement of built up roofing system for roof areas 'A','B','C','D', & 'G', from 2010 thru 2013. As recommended by Russo Bar Associates. *('A' & 'B' 21,000 SF scheduled in 2010) ('C' 19,000 SF scheduled in 2011) ('D' 11,200 SF scheduled in 2012) ('G' 3,000 SF scheduled in 2013)*	$1,185,000
PBO2.1	A new gas fired water heater along with a thermostatic mixing valve that will supply 120 degree F. hot water to the building.	$23,700
PBO2.2	A new natural gas service will be installed to the building to provide fuel for heating and domestic hot water. Natural gas will also be provided to a generator if one is provided as part of the design.	$7,900
PBO3.3	A new domestic 140 degree F. hot water and hot water recirculating piping system will be included to supply the kitchen needs.	$7,900
HBO2.1	In approximately five years the heating plant will be at the end of its serviceable life therefore, within that time frame we recommend the installation of (2) new gas fired steam boilers with modulating gas for energy savings.	$395,000
HBO3.1	▪ The recently installed heating plant will be reused and converted from steam to hot water while reusing the modulating gas burners and adding boiler water reset for additional energy savings. ▪ All unit ventilators will be replaced with hot water unit ventilators reusing CO2 demand ventilation controls. ▪ All steam piping will be removed and a new schedule 40 black steel hot water system will be installed. ▪ Provide a direct digital control system with internet access and colored graphics.	$1,221,340
	PRIORITY 1 TOTAL	**$3,218,988**
PRIORITY H.1		
5H	**Per 521 CMR provide accessible toilet room. Including toilet fixtures, grab bars & accessories. *(Renovation of two existing single user toilet rooms adjacent to Gym, one for each sex).*	$322,390
	PRIORITY H.1 TOTAL	**$322,390**
	PRIORITY 1 & H.1 TOTAL	**$3,541,377**

***Work required per 521 CMR 3.3.1.b is only applicable if complete scope of work exceeds $100,000 and involves the "alteration of any elements or spaces required to be accessible". Work which is limited solely to electrical mechanical or plumbing system, abatement of hazardous materials, and retrofit of automatic sprinklers will not prompt this requirement.*

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

BOWMAN ELEMENTARY SCHOOL

PRIORITY 2 (6-10 Years)		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
1D	Provide panic hardware @ (3) exterior doors.	$6,990
2G	Provide New house curtains and valance, remove existing.	$51,499
3A	Replace exterior windows.	$605,202
3B	Replace window treatment.	$36,512
3E	Demo modular classrooms.	$39,105
4H	Hazardous material removal as per updated Ahera Report done by Universal Environmental Consultants, dated 1/27/09	$118,500
6A	Replace 2'x4' ACT	$4,753
6B	Repair crack in CMU/Brick.	$54,282
6D	Repair/repoint damaged brick.	$67,006
6KK	Paint entire interior (wholesale).	$47,409
6LL	Replace all ceilings.	$617,968
EBO1.6	Service electrode requires jumper around water meter for proper grounding.	$790
EBO1.8	Add horn/strobes in cafeteria and library, currently none exist. Add strobes in toilets.	$11,850
EBO1.10	Add receptacles to eliminate extension cord use.	$15,800
EBO2.1	The existing fire alarm control panel, Simplex 4002, 1980's vintage, has reached the end of its life. Although some replacement parts are still available, other parts are not. Detectors compatible with this panel are still available. Should the panel fail and the replacement part not be available it would force the school to be under a fire watch. We recommend replacing the 4002 control panel with a current Simplex zoned 4006 panel on a one for one swap. This will allow existing wiring and devices to remain and allow additional devices to be provided. In light of the building not being sprinklered it is recommended that additional smoke and heat detectors be provided for full coverage of the facility. $1.00/s.f.=	$100,226
EBO2.2	The normal/emergency lighting system should be tested by simulating a power failure and confirming that adequate emergency lighting exists in egress ways and other large spaces where required. Additional emergency lighting should be added where required including on the exterior at exit discharge doors. $0.25/s.f. =	$25,057
EBO2.3	Provide full coverage of exit signs where required for safe egress out of the facility. $0.10/s.f.	$10,022
EBO3.1	Provide occupancy sensors to turn lights off in classrooms, toilets, offices, gym, etc. to save energy when spaces are unoccupied. Utility Co. rebates may be available for energy conservation measures. 50 @ $200.00/unit =	$15,800
PBO3.4	All plumbing fixtures will be replaced with new water conserving type fixtures capable of saving approximately 30% of overall water usage of the building.	$63,200

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HBO1.1	Veeder Root oil tank monitoring system is not operating	$3,160
HBO1.2	Wasted energy resulting from pre-heating No.2 fuel oil	$3,160
HBO1.3	Steam leaks in steam tunnels	$39,500
HBO1.5	Code required ventilation air not provided in corridors	$69,520
HBO1.6	Calibration of the pneumatic temperature controls	$49,770
HBO1.7	CO2 Demand ventilation control in Classroom unit ventilators	$42,660
HBO1.8	Verify shaft trueness on all unit ventilators, exhaust fans and air handling units and replace if necessary	$20,540
HBO1.9	Verify conditions of shaft bearings on all unit ventilators, exhaust fans and air handling units and replace if necessary	$20,540
HBO1.10	Clean fan wheels, coils, dampers, and outside air louvers on all unit ventilators, exhaust fans and air handling units	$20,540
HBO3.5	Replace all air handling units serving the Kitchen, Cafeteria, Art/Teachers Work Room, Media Center and Administration Area.	$213,300
HBO3.6	Replace all exhaust fans and internally clean exhaust ductwork.	$107,440
	PRIORITY 2 TOTAL	**$2,482,101**
	PRIORITY H.2	
5A	Non HC compliant door.	$32,025
5B	Remove non-accessible sink and associated casework, provide new casework unit with accessible sink.	$89,248
5C	Provide accessible circulation desk and remove non accessible desk.	$11,355
5D	Provide accessible drinking fountain, by plumbing.	$267
5E	Remove wall mounted ETR TV, owner to place on moveable cart.	$1,332
5F	Provide guard/handrail.	$2,545
5G	Toilet room inaccessible - min. work required: accessories, handrails and new phenolic partitions at gang bathrooms.	$12,552
5K	Provide accessible door and frame.	$47,447
5L	Provide wheelchair lift.	$30,311
5N	Provide accessible entrance - concrete ramp at 8'-0", including handrails.	$5,701
5P	Provide accessible door hardware.	$4,659
5Q	Relocated lockers to provide HC accessible door clearance.	$1,563
5T	Remove and replace all remaining door hardware.	$228,079
	PRIORITY H.2 TOTAL	**$467,084**
	PRIORITY 2 & H.2 TOTAL	**$2,949,185**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

PRIORITY O, 1, H.1, 2 & H.2 TOTAL	**$6,518,044**

ESTABROOK ELEMENTARY SCHOOL

PRIORITY O - OPERATING BUDGET		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
2H	Remove (2) sets of double doors from corridor. Creating dead end corridor.	$179
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. *('H' & 'I' 20,825 SF until warranty expires in 2025) (54,555 SF excluding roof areas from 3A.5)(Refer to 3RA.6 & 3RA.7 for scheduled work)*	$9,164
6CC	Patch concrete.	$2,961
6D	Repair/repoint damaged brick.	$2,888
6F	Repair water damage at exterior soffit.	$1,561
6L	Rake out ETR expansion joint material and provide rubber compression seal at expansion joint.	$1,340
6Q	Replace ETR expansion joint at floor.	$3,182
6QQ	Fasten down loose window muntin.	$201
6R	Patch and paint gyp. ceiling at window damage.	$295
6S	Patch wall at removed display case.	$2,496
6U	Refinish metal panels.	$207
6YY	Remove and replace portion of metal decking.	$626
6ZZ	Remove and replace accordion door.	$1,049
EES1.1	Receptacles in kitchen not GFI.	$2,370
EES1.2	Provide lens in light fixture over servery counter.	$158
EES1.5	Add pull station at toilet exterior door.	$1,185
HES1.1	No actuator on one of the combustion air ducts in the boiler room. Duct termination heights are not code compliant.	$4,740
	PRIORITY O TOTAL	**$34,602**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

ESTABROOK ELEMENTARY SCHOOL

PRIORITY 1 - HIGH PRIORITY **(0-5 Years)**		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
3C	Replace (8) missing window screens @ operable windows	$7,437
3RA.6	Phased replacement of built up roofing areas in 'D', 'E', 'F', & 'G', from 2010 thru 2013. *('D' 8,500 SF scheduled for 2010) ('E' 3,930 SF scheduled for 2011) ('F' 8,400 SF scheduled for 2012) ('G' 6,200 SF scheduled for 2013)*	$502,243
3RA.7	Roof replacement of roofing areas in Part 'A' & 'B', scheduled for year 2014. (*6,700 SF)*	$125,800
3RA.5	Phased replacement of built up roofing areas 'C' scheduled for 2009. As recommended by Russo Bar Associates. *(17,510 SF)*	$335,948
PES2.1	▪ A new gas fired water heater along with a thermostatic mixing valve that will supply 120 degree F. hot water to the building. ▪ A new natural gas service will be installed to the building to provide fuel for heating and domestic hot water. Natural gas will also be provided to a generator if one is provided as part of the design. ▪ In approximately five years the heating plant will be at the end of its serviceable life therefore, within that time frame we recommend the installation of (2) new gas fired steam boilers with modulating gas for energy savings.	$454,250
PES3.3	A new domestic 140 degree F. hot water and hot water recirculating piping system will be included to supply the kitchen needs.	$7,900
PES3.4	All plumbing fixtures will be replaced with new water conserving type fixtures capable of saving approximately 30% of overall water usage of the building.	$63,200
HES3.1	▪ The recently installed heating plant will be reused and converted from steam to hot water while reusing the modulating gas burners and adding boiler water reset for additional energy savings. ▪ All unit ventilators will be replaced with hot water unit ventilators reusing CO2 demand ventilation controls. ▪ All steam piping will be removed and a new schedule 40 black steel hot water system will be installed. ▪ Provide a direct digital control system with internet access and colored graphics.	$1,178,680
	PRIORITY 1 TOTAL	**$2,675,457**
PRIORITY H.1		
5H	**Per 521 CMR provide accessible toilet room. Including toilet fixtures, grab bars & accessories. *(Renovation of two existing single user toilet rooms, one for each sex).*	$227,640
	PRIORITY H.1 TOTAL	**$227,640**
	PRIORITY 1 & H.1 TOTAL	**$2,903,097**

***Work required per 521 CMR 3.3.1.b is only applicable if complete scope of work exceeds $100,000 and involves the "alteration of any elements or spaces required to be accessible". Work which is limited solely to electrical mechanical or plumbing system, abatement of hazardous materials, and retrofit of automatic sprinklers will not prompt this requirement.*

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

ESTABROOK ELEMENTARY SCHOOL

PRIORITY 2 (6-10 Years)		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
1D	Provide panic hardware @ (3) exterior doors.	$9,316
2I	Add double doors and partition @ entry to Gymnasium. To Eliminate dead end corridor.	$33,924
2D	Provide smoke stopping at top of wall.	$523
3A	Replace exterior windows.	$656,207
3B	Replace window treatment.	$43,241
3E	Demo modular classroom.	$55,401
3P	Re-grout precast panel mortar.	$776
3Q	Repair exterior lintels.	$6,968
3R	Repair aluminum siding.	$65,829
4D	Remove VAT flooring, provide new VCT with underlayment.	$846,624
4H	Hazardous material removal as per updated Ahera Report done by Universal Environmental Consultants, dated 1/27/09	$319,950
6A	Replace 2'x4' ACT	$2,007
6B	Repair crack in CMU/Brick.	$31,527
6KK	Paint entire interior (wholesale).	$56,374
6M	Replace damaged blind.	$15,476
6MM	Repair and replace HM door frame.	$897
6P	Demo existing ceiling tile and provide new mylar face tile.	$16,448
EES1.3	Electrical items under kitchen hood are required to shutdown upon activation of hood suppression system.	$3,950
EES1.4	Add fire alarm strobe to toilets.	$7,900
EES2.1	The existing fire alarm control panel, Gamewell Flex 300, 1980's vintage has reached the end of its life. Replacement parts are still available until they run out. New parts are no longer manufactured. Replacement smoke detectors are still available although UL Listed smoke detectors may not be. Existing panel is not expandable. In light of the building not being sprinklered it is recommended that a replacement panel be provided with expansion capability for full coverage of smokes and heats. Strobes visible within the same space are required to be synchronized. $1.00/s.f. =	$102,700
EES2.2	Provide additional self contained battery units in egress ways and other large spaces. Provide emergency lighting over exterior doors. $.20/s.f. =	$20,540
EES2.3	Provide full coverage of exit signs where required for safe egress out of the facility. $.10/s.f. =	$10,270
EES3.1	Provide occupancy sensors to turn lights off in classrooms, toilets, offices, gym, etc. to save energy when spaces are unoccupied. Utility Co. rebates may be available for energy conservation measures. 55 @ $200/unit =	$17,380

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HES1.2	Code required ventilation air not provided in corridors/café	$50,560
HES1.3	Calibration of the pneumatic temperature controls	$51,350
HES1.4	CO2 Demand ventilation control in the classroom and media center unit ventilators	$33,180
HES1.5	Verify shaft trueness on all unit ventilators, exhaust fans and air handling units and replace if necessary.	$20,540
HES1.6	Verify conditions of shaft bearings on all unit ventilators, exhaust fans and air handling units and replace if necessary.	$20,540
HES1.7	Clean fan wheels, coils, dampers, and outside air louvers on all unit ventilators, exhaust fans and air handling units.	$20,540
HES3.5	Replace all air handling units serving the gym, computer classroom, administration area, music/lecture area and kitchen.	$154,840
HES3.6	Replace all exhaust fans and internally clean exhaust ductwork.	$106,650
	PRIORITY 2 TOTAL	**$2,782,429**
	PRIORITY H.2	
5A	Non HC compliant door.	$29,683
5B	Remove non-accessible sink and associated casework, provide new casework unit with accessible sink.	$92,446
5C	Provide accessible circulation desk and remove non accessible desk.	$8,513
5CC	Demo inaccessible stair in entirety. Provide new concrete stairs and rails.	$7,255
5D	Provide accessible drinking fountain, by plumbing.	$1,322
5E	Remove wall mounted ETR TV, owner to place on moveable cart.	$95
5F	Provide guard/handrail.	$2,190
5G	Toilet room inaccessible - min. work required: accessories, handrails and new phenolic partitions at gang bathrooms.	$64,897
5K	Provide accessible door and frame.	$41,652
5L	Provide wheelchair lift.	$29,875
5N	Provide accessible entrance - concrete ramp at 8'-0", including handrails.	$20,453
5Q	Relocated lockers to provide HC accessible door clearance.	$7,674
5R	Provide accessible serving line and remove non-accessible serving line.	$20,812
5T	Remove and replace all remaining door hardware.	$228,484
5W	Infill accessible seating area.	$17,266
	PRIORITY H.2 TOTAL	**$572,617**
	PRIORITY 2 & H.2 TOTAL	**$3,355,046**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

PRIORITY O, 1, H.1, 2 & H.2 TOTAL	**$6,292,745**

HASTINGS ELEMENTARY SCHOOL

PRIORITY O - OPERATING BUDGET		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
1E	Standing water @ concrete pit, cemetitious waterproofing required.	$943
2A	Replace door closer.	$754
3L.A	Cracks in exterior wall to be sealed to prevent further water infiltration. Monitoring cracking shall be done on a regular basis as recommended by Lim Consultants Inc. See attached report for further information.	$3,950
3L.B	Perform recommendations required by Lim Consultants Inc. to fully understand the cause of the cracking within the exterior wall and determine lasting remedial recommendations; including observing seasonal variations of crack size, mapping relative movements of the structure and reviewing existing record drawings. See attached report for further information.	$15,800
3RA.8	Trim back trees brushing the roof along the north side of Roof Area 'A' and repair shingle roof at intersection of roofing areas 'A' & 'B'. As recommended by Russo Bar Associates.	$12,640
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. *(43,600 SF excluding roof areas from 3RA.8 & 3RA.9) ('R' & 'S' 600 SF to be inspected until scheduled work in 2020)*	$35,076
6AA	Refinish fascia/soffit.	$1,074
6CC	Patch concrete	$593
6DD	Wood rot at window, wood window head to be replaced.	$149
6D	Re-point brick veneer @ chimney. As recommended by Russo Bar Associates.	$2,966
6HH	Refasten lifting fascia.	$1,296
6JJ	Provide (3) galvanized metal grates @ exterior areaways	$992
6MM	Repair HM door frame.	$449
6NN	Repair wood flooring. Patch existing seal as required.	$1,779
6PP	Provide steel lintel at existing CMU opening.	$390
6SS	Remove biological growth.	$1,787
6V	Repair water damage at floor	$5,013
6Y	Replace damaged downspout and/or gutter.	$2,738

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EHA1.1	Receptacles in kitchen not GFI.	$2,370
EHA1.2	Add pull station and exit sign at lower level stairwell exterior door.	$2,370
EHA1.3	Add pull stations at lower level classroom exterior doors, 1960 addition.	$7,900
EHA1.6	Add exit signs at all exterior doors.	$7,900
PHA1.1	Repair seals and venting of the sewage ejector to eliminate the sewer smell in the building.	$3,950
HHA1.3	Room #10's unit ventilator steam valve was not operating.	$948
HHA1.5	The library thermostat is located within the corridor next to the main entrance rather then within the space.	$1,580
	PRIORITY O TOTAL	**$115,406**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

HASTINGS ELEMENTARY SCHOOL

PRIORITY 1 - HIGH PRIORITY **(0-5 Years)**		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
3C	Replace (12) missing window screens @ operable windows	$1,417
3RA.9	PVC Roofing located @ Roof Area 'P' to be replaced in year 2010. As recommended by Russo Bar Associates. *(6,500 SF)*	$134,300
4C	Remove counter top (mold evident) and associated casework unit.	$101,583
PHA2.1	▪ A new gas fired water heater along with a thermostatic mixing valve that will supply 120 degree F. hot water to the building. ▪ A new natural gas service will be installed to the building to provide fuel for heating and domestic hot water. Natural gas will also be provided to a generator if one is provided as part of the design. ▪ In approximately five years the heating plant will be at the end of its serviceable life therefore, within that time frame we recommend the installation of (2) new gas fired steam boilers with modulating gas for energy savings. ($10,000 added from Haz Mat Report 02/26/09)	$442,400
PHA3.3	A new domestic 140 degree F. hot water and hot water recirculating piping system will be included to supply the kitchen needs.	$7,900
HHA3.1	▪ The recently installed heating plant will be reused and converted from steam to hot water while reusing the modulating gas burners and adding boiler water reset for additional energy savings. ▪ All unit ventilators will be replaced with hot water unit ventilators reusing CO2 demand ventilation controls. ▪ All steam piping will be removed and a new schedule 40 black steel hot water system will be installed. ▪ Provide a direct digital control system with internet access and colored graphics.	$1,242,670
	PRIORITY 1 TOTAL	**$1,930,270**
PRIORITY H.1		
5G	**Per 521 CMR (MAAB Accessibility) provide accessible toilet room. Including phenolic partitions, toilet fixtures, grab bars & accessories. *(Renovation of two existing gang toilet @ ground level, one for each sex).*	$116,892
	PRIORITY H.1 TOTAL	**$116,892**
	PRIORITY 1 & H.1 TOTAL	**$2,047,162**

***Work required per 521 CMR 3.3.1.b is only applicable if complete scope of work exceeds $100,000 and involves the "alteration of any elements or spaces required to be accessible". Work which is limited solely to electrical mechanical or plumbing system, abatement of hazardous materials, and retrofit of automatic sprinklers will not prompt this requirement.*

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

HASTINGS ELEMENTARY SCHOOL

PRIORITY 2 (6-10 Years)		
DPC ITEM #	**DESCRIPTION**	**ESTIMATED PROJECT COST**
1D	Provide panic hardware.	$9,317
2I	Provide new door and frame and wall.	$12,164
3A	Replace exterior windows.	$977,511
3B	Replace window treatment.	$55,431
3E	Demo modular classrooms.	$104,045
3F	Provide new hardware and 180 degree door swing @ (2) egress doors located @ the Auditorium & Gymnasium.	$10,191
3P	Re-grout stone hard mortar.	$7,251
3Q	Repair exterior lintels.	$4,748
4B	Remove wood shelf with VAT adhered to it.	$107
4D	Remove VAT flooring and provide new VCT with underlayment.	$458,543
4H	Hazardous material removal as per updated Ahera Report done by Universal Environmental Consultants, dated 1/27/09	$120,080
6A	Replace 2'x4' ACT	$14,051
6B	Repair crack in CMU/Brick.	$211,614
6BB	Provide break-metal closure.	$4,219
6E	Replaced damaged louver.	$10,657
6GG	Repair damaged foundation wall.	$7,108
6KK	Paint entire interior (wholesale).	$50,355
6P	Demo existing ceiling tile and provide new mylar face tile.	$11,367
6RR	Replace aluminum faced plywood sheating with aluca bon system.	$12,324
6W	Repaint CMU.	$3,745
6X	Replace entire ceiling.	$3,211
6Z	Replace fascia/soffit.	$11,188

(CONTINUED ON NEXT PAGE)

EHA1.4	Add horn/strobe in library.	$1,580
EHA1.5	Add globes to kitchen hood fixtures.	$790
EHA2.1	The existing fire alarm control panel, Edwards EST LSS1, early 1990's vintage, has reached the end of its life. Although some replacement parts are still available, other parts are not. Replacement detectors compatible with this panel are still available. Should the panel fail and the replacement part not be available it would force the school to be under a fire watch. We recommend replacing the existing control panel with a current EST addressable panel on a one for one swap. This will allow existing wiring to remain and allow new addressable devices to be added. In light of the building not being sprinklered it is recommended that additional smoke and heat detectors be provided for full coverage of the facility. Strobes should be synchronized to meet ADA. $1.00/s.f. =	$106,713
EHA2.2	The normal/emergency lighting system should be tested by simulating a power failure and confirming that adequate emergency lighting exists in egress ways and other large spaces where required. Additional emergency lighting should be added where required including on the exterior at exit discharge doors. $.25/s.f. =	$26,678
EHA2.3	Provide full coverage of exit signs where required for safe egress out of the facility. $.10/s.f. =	$10,671
EHA3.1	Provide occupancy sensors to turn lights off in classrooms, toilets, offices, gym, etc. to save energy when spaces are unoccupied. Utility Co. rebates may be available for energy conservation measures. 60 @ $200/unit =	$18,960
HHA1.1	Boiler #2 burner control panel needs to be replaced.	$3,950
HHA1.2	Teachers work room/General classroom has no exhaust system.	$5,530
HHA1.4	The computer room has no exhaust or ventilation air also the wall mounted cooling unit is not operating correctly and has a tendency to allow the room to over heat.	$13,430
HHA1.6	Code required ventilation air not provided in corridors	$37,920
HHA1.7	Calibration of the pneumatic temperature controls	$52,930
HHA1.8	Installing CO2 demand ventilation control in classroom unit ventilators.	$37,920
HHA1.9	Verify shaft trueness on all unit ventilators, exhaust fans and air handling units and replace if necessary.	$26,860
HHA1.10	Verify conditions of shaft bearings on all unit ventilators, exhaust fans and air handling units and replace if necessary.	$26,860
HHA1.11	Clean fan wheels, coils, dampers, and outside air louvers on all unit ventilators, exhaust fans and air handling units.	$26,860
HHA3.5	Replace all air handling units serving the gym, computer classroom, administration area, music/lecture area and kitchen.	$158,000
HHA3.6	Replace all exhaust fans and internally clean exhaust ductwork.	$110,600
PHA3.4	All plumbing fixtures will be replaced with new water conserving type fixtures capable of saving approximately 30% of overall water usage of the building.	$63,200
	PRIORITY 2 TOTAL	**$2,828,679**

(CONTINUED ON NEXT PAGE)

PRIORITY H.2		
5A	Non HC compliant door.	$16,190
5B	Remove non-accessible sink and associated casework, provide new casework unit with accessible sink.	$10,856
5D	Provide accessible drinking fountain, by plumbing.	$1,853
5E	Remove wall mounted ETR TV, owner to place on moveable cart.	$381
5F	Provide guard/handrail.	$23,392
5H	Toilet Room inaccessible - min. work required: accessories, handrails and new phenolic partitions at gang bathrooms.	$86,126
5L	Provide wheelchair lift.	$60,219
5N	Provide accessible entrance - concrete ramp at 8'-0", including handrails.	$10,765
5Q	Relocate lockers to provide HC accessible door clearance.	$412
5R	Provide accessible serving line and remove non-accessible serving line.	$520
5T	Remove and replace all remaining door hardware.	$280,497
5V	Provide pipe insulation at sink, under counter.	$183
	PRIORITY H.2 TOTAL	**$491,394**
	PRIORITY 2 & H.2 TOTAL	**$3,320,073**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

PRIORITY O, 1, H.1, 2 & H.2 TOTAL	**$5,482,641**

IV. HS Needs

10. HS Program & Space Needs

As noted earlier, although many of the space needs were addressed in the renovation project completed in 2002, significant space needs do remain at the High School. Enrollment growth, which has continued beyond the enrollment number projected in the 1997 Master Plan, is one reason for this.

Beyond enrollment growth, however, the small average size of existing classrooms, which was a concern recognized but not fully addressed in the earlier project, has become a matter of greater significance. The greater use of technology in classrooms, combined with a greater emphasis on individual and group work within the classroom, have caused a general "raising of the bar" for classroom size at the secondary level.

To illustrate this point, at the time of the previous master plan study, the recommended average size range for a HS classroom was 750 to 850 SF. More recently, in space standards adopted by the Massachusetts School Building Authority, this range has increased to 850-950 SF. By comparison, the size of the average classroom at LHS is 707 SF.

Because there is clearly a tradition of successful teaching in smaller classrooms at Lexington HS, we are not recommending that all classrooms be brought up the most recent recommended range. We are recommending, however, that a number of the smallest classrooms be expanded or replaced with classrooms that meet the current LHS classroom average size. We are also recommending the provision of additional computer labs, some additional specialized instructional space, and the provision of additional space to support current SPED programs, including the LABBB collaborative.

The May 2008 NEASC report on "School Site and plant support" confirms the need for additional space at LHS. Among the space needs identified in that report are needs for teacher planning and preparation space, conference space, and storage space. Much of this space need is tied to the growth in enrollments. Growth in enrollments leads to increasing intensity of classroom utilization, so that classrooms are less available for activities such as teacher preparation, student meetings, "extra help", teacher computer use, and meetings & conferences. As a more efficient alternative to adding classrooms to return to a condition where every teacher has a dedicated classroom, we are recommending an increase in the amount of faculty work space and departmental conference space.

In developing our analysis of space needs, we have evaluated existing available educational space against applicable standards, including MSBA's educational space standards. We have met with educators at the High School and have reviewed the above-mentioned NEASC report. The outcome of this is a Program of Recommended Spaces which shows the need for an additional 29,360 net square feet. In rough terms,

this translates into additions totaling approximately 45,850 GSF. The proposed additional net space needs are as follows:

Core Academic Space (classrooms):	3,500	nsf
Special Education:	9,110	nsf
Art & Music:	2,800	nsf
Health & PE:	1,200	nsf
Media Center:	3,000	nsf
Auditorium/drama:	1,500	nsf
Dining & Food Service:	2,000	nsf
Admin./Guidance (workspace):	3,500	nsf
Computer Labs:	2,700	nsf
TOTAL:	29,360	nsf

NOTE: The itemized square footages above represent the increases needed for each space type, but are not necessarily translated into new construction. The proposed plans include the re-assignment of existing spaces for better utilization, fit and location within the existing buildings that results in a corresponding net increase, but different allocation of new construction.

Proposed Space Summary - High Schools

Full Scope

1/09/09

LEXINGTON HIGH SCHOOL	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**68,842**			**58,887**			**13,175**			**72,062**			**94,270**	
(List classrooms of different sizes seperately)			-			-			-			-				
Classroom - General	775	10	7,750	775	7	5,425	***775***	***17***	***13,175***	709	67	47,500	950	71	67,450	850 SF min - 950 SF max
	700	24	16,800	700	23	16,100			-							
	650	15	9,750	650	17	11,050			-							
	600	2	1,200	600	2	1,200			-							
	550	13	7,150	550	1	550			-							
	500	2	1,000			-			-							
	450	1	450			-			-							
Small Group Seminar (20-30 seats)			-			-			-				500	5	2,500	
Science Classroom / Lab	1,270	1	1,270	1,270	1	1,270			-	1,089	20	21,775	1,200	19	22,800	period / day / student
	1,150	7	8,050	1,150	7	8,050			-							
	1,065	7	7,455	1,065	7	7,455			-							
	1,000	5	5,000	1,000	5	5,000			-							
Prep Room	180	10	1,800	180	9	1,620			-	180	9	1,620	80	19	1,520	
Chemical/Storage	822	1	822	822	1	822			-		1	822				
	225	1	225	225	1	225			-		1	225				
	120	1	120	120	1	120			-		1	120				
SPECIAL EDUCATION			**18,233**			**25,314**			**2,000**			**27,314**			**23,150**	
(List classrooms of different sizes seperately)			-			-			-		0	-				
Self-Contained SPED			-			-			-		0	-	950	15	14,250	assumed 8% of pop. in self-contained SPED
Self-Contained SPED Toilet			-			-			-		0	-	60	15	900	
Resource Room(s)	623	1	623	500	4	2,000			-		4	2,000	500	11	5,500	1/2 size Genl. Clrm.
	429	5	2,143	429	10	4,290					10	4,290				
	250	2	500	250	2	500			-		2	500				
Resource Office	250	1	250	140	1	140			-		1	140				
	82	1	82	95	4	380			-		4	380				
Testing	82	1	82	95	4	380			-		4	380				
Small Group Room(s)	186	1	186	186	1	186			-		1	186	500	5	2,500	1/2 size Genl. Clrm.
Evaluation Team Leader (ETL)	73	1	73	73	1	73			-		1	73				
SPED Director	100	1	100	100	1	100			-		1	100				
SPED Secretary	120	1	120	120	1	120			-		1	120				
E.L.L.	311	1	311	311	1	311			-		1	311				
Social Work	90	3	270	90	3	270			-		3	270				
Speech/Language	160	2	320	160	2	320			-		2	320				
Speech Office	90	1	90	90	1	90			-		1	90				
Reading & Study	867	1	867	867	1	867			-		1	867				
SPED Reading	96	1	96	96	1	96			-		1	96				
Conference	340	1	340	340	1	340			-		1	340				
New Storage			-			-	***100***	***4***	***400***		4	400				
			-			-					0	-				
Transition Small Group / Secretary	197	1	197	197	1	197			-		1	197				
Transition Offices	73	1	73	73	1	73			-		1	73				
	82	1	82	82	1	82			-		1	82				
			-			-			-		0	-				
L.L.P. (Language Lrng Program)	642	1	642	690	2	1,380			-		2	1,380				
			-			-			-		0	-				
I.L.P. (Intensive Lrng Program)	623	1	623	550	2	1,100			-		2	1,100				
	322	1	322	322	1	322			-		1	322				
New Office			-			-			-		0	-				
			-			-			-		0	-				
MST Classroom	555	1	555			-			-		0	-				
	443	3	1,328	443	4	1,772			-		4	1,772				
MST Sci. Classroom	555	1	555	555	1	555			-		1	555				
MST Therapists (8 staff + sm grps)	357	1	357	357	1	357			-		1	357				
MST Dir. Office	195	1	195	195	1	195			-		1	195				
MST Tutor	195	1	195	195	1	195			-		1	195				
MST Work Room	357	1	357	357	1	357			-		1	357				
			-			-			-		0	-				
LABBB Suite			-			-			-		0	-				
Administration (3 staff + waiting)	269	1	269	269	1	269			-		1	269				
Director	177	1	177	177	1	177			-		1	177				
Asst. Director	87	1	87	87	1	87			-		1	87				
Admissions	90	1	90	90	1	90			-		1	90				
Mail/Storage	80	1	80	80	1	80			-		1	80				
Work Room	169	1	169	169	1	169			-		1	169				
Counselors (7 staff)	240	1	240	240	1	240			-		1	240				
	119	1	119	173	1	173			-		1	173				

Proposed Space Summary - High Schools

Full Scope

1/09/09

LEXINGTON HIGH SCHOOL	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
	117	1	117	119	1	119			-		1	119				
			-	117	1	117			-		1	117				
Vocational Offices (5 staff)	173	1	173	200	1	200	***200***	***1***	***200***		2	400				
Speech Therapists (6 staff)	117	1	117	200	2	400			-		2	400				
Physical Therapy	200	1	200	200	1	200			-		1	200				
OT Director	68	1	68	117	1	117			-		1	117				
OT Therapists (4 staff)	68	1	68	117	1	117			-		1	117				
			-	68	2	136			-		2	136				
*Nurse (2staff + rest **+ exam + toilet**)*	138	1	138	647	1	647			-		1	647				
Kitchen/Caf/Multi-Purpose	320	1	320	320	1	320			-		1	320				
LABBB Classroom (4 life skills +4 voc skills)	647	1	647	700	5	3,500	***700***	***2***	***1,400***		7	4,900				
	485	2	970	485	2	970			-		2	970				
	450	5	2,250			-			-		0	-				
New Storage			-	***138***	***1***	***138***			-		1	138				
ART & MUSIC			**12,199**			**13,254**			**1,870**			**15,124**			**9,350**	
Art Classroom - 25 seats	1,453	1	1,453	1,453	1	1,453	***1,200***	***1***	***1,200***		2	2,653	1,200	4	4,800	Assumed use - 25% Population - 5 times/week
	1,372	1	1,372	1,372	1	1,372			-		1	1,372				
	1,023	2	2,046	1,023	2	2,046			-		2	2,046				
	923	1	923	923	1	923			-		1	923				
			-			-			-		0	-	150	4	600	
Art Workroom w/ Storage & kiln	393	1	393	393	1	393			-		1	393				
	132	1	132	132	1	132			-		1	132				
Dark Room	477	1	477	477	1	477			-		1	477				
	52	1	52	52	1	52			-		1	52				
Band/Chorus - 50-100 seats	1,907	1	1,907	1,907	1	1,907			-		1	1,907	1,500	2	3,000	Assumed use - 25% Population - 5 times/week
	1,711	1	1,711	1,711	1	1,711			-		1	1,711				
Ensemble			-			-			-		0	-	200	1	200	
Music Practice	120	2	240	120	2	240			-		2	240	75	10	750	
	88	2	176	88	2	176			-		2	176				
Perf. Arts Dir.	100	1	100			-	100	1	100		1	100				
Perf. Arts Secretary	120	1	120			-	120	1	120		1	120				
Office/Library	225	1	225			-	250	1	250		1	250				
Uniform/Instrument Storage	872	1	872	872	1	872	200	1	200		2	1,072				
Midi Lab / Digital Photo Lab			-	***750***	***2***	1,500			-		2	1,500				
VOCATIONS & TECHNOLOGY			**0**			**0**			**0**			**0**			**25,600**	
Tech Clrm. - (E.G. Drafting, Business)			-			-			-		0	-	1,200	8	9,600	Assumed use - 50% Population - 5 times/week
			-			-			-		0	-				
Tech Shop - (E.G. Consumer, Wood)			-			-			-		0	-	2,000	8	16,000	Assumed use - 50% Population - 5 times/week
			-			-			-		0	-				
HEALTH & PHYSICAL EDUCATION			**53,954**			**54,268**			**1,300**			**55,568**			**22,100**	
Gymnasium	9,207	1	9,207	9,207	1	9,207			-		1	9,207	10,000	1	10,000	
Fieldhouse	30,711	1	30,711	30,711	1	30,711			-		1	30,711				
PE Alternatives (Dance, Weights, etc.)	2,372	1	2,372	2,372	1	2,372			-		1	2,372	3,000	1	3,000	
Gym Storeroom			-			-			-		0	-	300	1	300	
Locker Rooms - Boys/Girls w/Toilets	4,065	1	4,065	4,065	1	4,065			-		1	4,065	1,400	6	8,400	
	3,720	1	3,720	4,310	1	4,310			-		1	4,310				
Phys. Ed. Office(s)	265	2	530	265	2	530			-		2	530				
Phys. Ed. Storage	569	2	1,137	569	1	569	***700***	***1***	***700***		2	1,269				
Athletic Director's Office	230	2	460	230	2	460			-		2	460	150	1	150	
Health Instructor's Office w/Shower & Toilet			-			-			-		0	-	250	1	250	
Health Classroom	450	2	900	790	2	1,580			-		2	1,580				
Health Office	194	2	388			-			-		0	-				
PE/Health Dir.	90	1	90	90	1	90			-		1	90				
Trainer	374	1	374			-	***600***	***1***	***600***		1	600				
New Storage			-	***374***	***1***	***374***			-		1	374				
MEDIA CENTER			**9,393**			**9,393**			**3,000**			**12,393**			**13,256**	
Media Center/Reading Room	7,119	1	7,119	7,119	1	7,119	***3,000***	***1***	***3,000***		2	10,119	13,256	1	13,256	
MDF	146	1	146	146	1	146			-		1	146				
Workroom/Office/Storage	262	1	262	262	1	262			-		1	262				
Professional Resource	262	1	262	262	1	262			-		1	262				
Writing Center	224	1	224	224	1	224			-		1	224				
LargeGroup/Meeting	690	2	1,380	690	2	1,380			-		2	1,380				
AUDITORIUM / DRAMA			**17,249**			**17,061**			**1,550**			**18,611**			**10,400**	
Auditorium	7,654	1	7,654	7,654	1	7,654			-		1	7,654	7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
Balcony	2,398	1	2,398	2,398	1	2,398			-		1	2,398				
Stage	1,052	1	1,052	1,052	1	1,052			-		1	1,052	1,600	1	1,600	
Stage Storage/Shop	941	1	941	941	1	941			-		1	941	500	1	500	
Make-up / Dressing Rooms	240	1	240	240	1	240			-		1	240	300	2	600	

Proposed Space Summary - High Schools

Full Scope

1/09/09

LEXINGTON HIGH SCHOOL	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
	188	1	188	188	1	188			-		1	188				
Storage	73	1	73	73	1	73			-		1	73				
	58	1	58	58	1	58			-		1	58				
Controls / Lighting / Projection	178	1	178	178	1	178			-		1	178	200	1	200	
AV Classroom **/ TV Classroom**	773	1	773	773	1	773	***800***	***1***	***800***		2	1,573				
Storage	148	1	148	148	1	148			-		1	148				
Drama Classroom	1,433	1	1,433	1,433	1	1,433			-		1	1,433				
Dressing	345	1	345	345	1	345			-		1	345				
Office/Storage	180	1	180	180	1	180			-		1	180				
Dance Studio	1,400	1	1,400	1,400	1	1,400			-		1	1,400				
New Office/Storage	188	1	188			-	***750***	***1***	***750***		1	750				
DINING & FOOD SERVICE			**14,194**			**12,694**			**4,400**			**17,094**			**15,590**	
Cafeteria / Student Lounge/ Break-out	4,200	1	4,200	2,700	1	2,700			-		1	2,700	10,685	1	10,685	3 seatings - 15SF per seat
	3,200	1	3,200	3,200	1	3,200	***4,400***	***1***	***4,400***		2	7,600				
Chair / Table Storage			-			-			-		0	-	684	1	684	
Kitchen *(Incl. Office/Lockers/Toilet)*	4,507	1	4,507	4,507	1	4,507			-		1	4,507	3,437	1	3,437	1600 SF for first 300 + 1 SF/student Add'l
	1,597	1	1,597	1,597	1	1,597			-		1	1,597			-	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room	690	1	690	690	1	690			-		1	690	784	1	784	20 SF/Occupant
MEDICAL			**934**			**934**			**0**			**934**			**810**	
Medical Suite Toilet	46	2	92	46	2	92			-		2	92	60	1	60	
Nurses' Office/Waiting Room	376	1	376	376	1	376			-		1	376	250	1	250	
Interview Room	67	1	67	67	1	67			-		1	67	100	5	500	
	174	1	174	174	1	174			-		1	174				
	135	1	135	135	1	135			-		1	135				
Nurse Director	90	1	90	90	1	90			-		1	90				
ADMINISTRATION & GUIDANCE			**21,481**			**20,956**			**4,370**			**25,326**			**5,779**	
General Office / Waiting Room/Toilet	533	1	533	533	1	533			-		1	533	1,069	1	1,069	
Teachers' Mail and Time Room			-			-			-		0	-	100	1	100	
Duplicating Room (Workroom)	102	1	102	102	1	102			-		1	102	200	1	200	
Records Room (Vault)	100	1	100	100	1	100			-		1	100	200	1	200	
Principal's Office w/ Conference Area	276	1	276	276	1	276			-		1	276	375	1	375	
Conference Room	105	1	105	105	1	105			-		1	105				
Tel. Rm	97	1	97	97	1	97			-		1	97				
Storage	58	1	58	58	1	58			-		1	58				
Assist. Principal	140	1	140	140	1	140			-		1	140				
Secretary	192	1	192	192	1	192			-		1	192				
Maintenance Secretary	147	1	147	147	1	147			-		1	147				
Dean's Office - 1	100	1	100	100	1	100			-		1	100	125	1	125	
Dean / Evaluation Secretary	350	1	350	350	1	350			-		1	350				
Conference Room	98	1	98	98	1	98			-		1	98				
Suspension	68	1	68	68	1	68			-		1	68				
Dean's Office - 2	145	1	145	145	1	145			-		1	145	150	1	150	
Secertary	396	1	396	396	1	396			-		1	396				
Dean's Office - 3	210	1	210	210	1	210			-		1	210	150	3	450	
Secertary / Work Room	317	1	317	317	1	317			-		1	317				
Dean's Office - 4	210	1	210	210	1	210			-		1	210				
Secertary / Work Room	317	1	317	317	1	317			-		1	317				
			-			-			-		0	-				
Guidance Offices	120	2	240	120	2	240			-		2	240	150	11	1,650	
	90	13	1,170	90	13	1,170			-		13	1,170				
Guidance Reception/Waiting	466	1	466	466	1	466			-		1	466				
	352	1	352	352	1	352			-		1	352				
	343	1	343	343	1	343			-		1	343				
Guidance Conference Room	340	1	340	340	1	340			-		1	340				
	200	1	200	200	1	200			-		1	200				
Pysch	100	1	100	100	1	100			-		1	100				
	80	2	160	80	2	160			-		2	160				
	73	1	73	73	1	73			-		1	73				
Guidance Storeroom			-			-			-		0	-	100	1	100	
Records Room *(Files)*	90	1	90	90	1	90			-		1	90	292	1	292	
Testing *(See SPED)*			-			-			-		0	-				
Small Group	90	1	90	90	1	90			-		1	90				
Registrar/Meeting	520	1	520	520	1	520			-		1	520				
METCO	528	1	528	528	1	528			-		1	528				
METCO office	71	2	142	71	2	142			-		2	142				
			-			-			-		0	-				
Teachers' Work Rooms			-			-			-		0	-	1,069	1	1,069	
Math Dept.	2,750	1	2,750	2,450	1	2,450			-		1	2,450				
Conference Room			-	280	1	280			-		1	280				

Proposed Space Summary - High Schools

Full Scope

1/09/09

LEXINGTON HIGH SCHOOL	Existing Conditions			PROPOSED: Existing to Remain/Renovated			PROPOSED: New			PROPOSED: Total			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Dept. Office	100	1	100	100	1	100			-		1	100				
Reception	120	1	120	120	1	120			-		1	120				
Storage/Copy	325	1	325			-	*200*	*1*	*200*		1	200				
F. Language Dept.	2,062	1	2,062	2,062	1	2,062			-		1	2,062				
Conference Room	212	1	212	212	1	212			-		1	212				
English/Soc. Studies Dept.	1,910	1	1,910	1,700	1	1,700	*1,700*	*1*	*1,700*		2	3,400				
Conference Room			-	200	1	200	*250*	*1*	*250*		2	450				
Dept. Office	100	2	200	100	1	100	*100*	*1*	*100*		2	200				
Reception	120	1	120	120	1	120	*120*	*1*	*120*		2	240				
Storage/Copy	555	1	555	555	1	555			-		1	555				
Science Dept.	635	1	635			-	*2,000*	*1*	*2,000*		1	2,000				
	350	2	700			-			-		0	-				
	200	1	200			-			-		0	-				
	160	2	320			-			-		0	-				
Conference Room			-	235	1	235			-		1	235				
Dept. Office	240	1	240	190	1	190			-		1	190				
Reception	200	1	200	190	1	190			-		1	190				
Storage/Copy	160	1	160	160	1	160			-		1	160				
	140	1	140	250	5	1,250			-		5	1,250				
	100	1	100	100	1	100			-		1	100				
Technology Center Admin/Work	533	1	533	1,657	1	1,657			-		1	1,657				
Admin/Work	586	1	586			-			-		0	-				
Technicians	129	3	388			-			-		0	-				
Database	150	1	150			-			-		0	-				
New Offices/Secure Receiving/Secure Server			-	500	1	500			-		1	500				
CUSTODIAL & MAINTENANCE			**3,375**			**3,375**			**0**			**3,375**			**3,228**	
Custodian's Office	487	1	487	487	1	487			-		1	487	150	1	150	
Custodian's Workshop	1,405	1	1,405	1,405	1	1,405			-		1	1,405	250	1	250	
Custodian's Storage	325	1	325	325	1	325			-		1	325	375	1	375	
Recycling Room / Trash			-			-			-		0	-	400	1	400	
Receiving and General Supply			-			-			-		0	-	684	1	684	
Warehouse	1,158	1	1,158	1,158	1	1,158			-		1	1,158	1,169	1	1,169	
Network/Telecom Room			-			-			-		0	-	200	1	200	
OTHER ACADEMIC SPACES			**8,579**			**10,583**			**900**			**11,483**			**0**	
Other *(specify)*			-			-			-		0	-				
Academic Computer Labs	1,150	2	2,300	1,150	2	2,300	*900*	*1*	*900*		3	3,200				
	904	1	904	904	3	2,712					3	2,712				
	690	1	690	850	1	850					1	850				
Lecture Hall (incl. Platform)	3,098	1	3,098	3,098	1	3,098			-		1	3,098				
Debate Classroom	650	1	650	690	1	690			-		1	690				
School News / Student Activities	254	1	254	250	1	250			-		1	250				
P.T.S.A Newspaper	88	1	88	88	1	88			-		1	88				
Community Ed Office	161	1	161	161	1	161			-		1	161				
Campus Police	204	1	204	204	1	204			-		1	204				
Lexington Educ. Assoc.	125	1	125	125	1	125			-		1	125				
	105	1	105	105	1	105			-		1	105				
Total Building Net Floor Area (NFA)			**228,433**			**226,719**			*32,565*			**259,284**			**223,533**	
Proposed Student Capacity/Enrollment			**2,137**									**2,137**			**2,137**	*Incl. 125 F.T.E. LABBB students*
Total Building Gross Floor Area (GFA)[2]			**333,354**			**333,354**			*45,250*			**378,604**			**395,345**	
Grossing factor (GFA/NFA)			**1.46**			**1.47**			1.39			**1.46**			**1.77**	
OTHER SPACES			**0**			**0**			**1,400**			**1,400**			**0**	
Enclosed Bridges						-			600			600				
												-				
Freestanding Athletic Storage						-			800			800				
												-				

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

11. HS Facilities Needs

In addition to the HS space needs described above, significant facilities needs also exist at the Lexington HS. GGD engineers completed a study for Lexington in 2008 that identifies and prioritizes HVAC systems needs at the High School. As part of this study, GGD has extended that work to include electrical, plumbing and fire protection systems needs. A separate assessment of roof needs has been done by Russo Bar Associates.

DPC technical staff have completed a review of the building for architectural deficiencies, including building enclosure, building interior finishes and specialties, doors & hardware, code compliance, and disability access requirements. We have also had an inspection and report of food service requirements done by Crabtree Mcgrath Associates and a site review and assessment by Warner-Larson Associates.

Consistent with the report structure for the elementary schools, the scope and cost information from the architectural, electrical, plumbing, fire protection and roof assessments has been tabulated in a prioritized matrix. This allows these categories of work to be addressed as stand-alone projects over time if desired. HVAC work was not included in this prioritized matrix, as some of that work is proceeding on a separate track.

It is important to note that this matrix represents only a portion of the work that appears to be necessary at the high school. A more comprehensive depiction of work recommended for the high school, including work to address the space needs described in the previous section, as well as food service, site improvement and HVAC systems needs, is presented in the summary cost estimate in Section 15. This estimate represents a preliminary assessment of the cost to undertake this work, including HVAC work, as a major single stand-alone project.

For the sake of consistency, costs for the High School are estimated to a date of June 2012, which would be the midpoint of construction according to the proposed implementation schedule presented in this report.

Lexington Public Schools

HS Short Term Work -- Scope Cost

LEXINGTON HIGH SCHOOL

PRIORITY 1 - (0-12 Months)			
DPC ITEM #	**DESCRIPTION**	ESTIMATED TRADE COST	**ESTIMATED PROJECT COST**
6D	Repair/patch hole in brick veneer (<1sf) @ egress stair.	$4,763	$7,526
3RA.10	Replacement of flat built-up roofing in roofing area 'J' as recommended by Russo Bar Associates. (*7,600 SF)*	$95,000	$150,100
3RA.11	EPDM repairs at various roofing areas; 'E2', 'D2', 'D4' & 'B1'. As recommended by Russo Bar Associates.	$3,500	$5,530
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. (*222,750 SF exluding roof areas from 3RA.10) ('F', Bridge roof areas 1,2, & 3 and EPDM roofs to be inspected until scheduled work in 2016 & 2020)*	$12,500	$19,750
	ARCH TOTAL	$115,763	**$182,906**
ELE1.1	Emergency closet near kitchen has contactor very loud, near failure condition.	$1,000	$1,580
ELE1.2	One hood light fixture missing protective globe.	$100	$158
ELE1.3	Servery has two (2) open recessed cans, need lens.	$500	$790
ELE1.4	60A/2P breaker for photovoltaic system is not GFI. Breaker to be changed to GFI type.	$750	$1,185
	ELEC TOTAL	$2,350	**$3,713**
PLE1.1	Provide proper maintenance of the ph neutralization systems so they may operate as designed and discharge waste at an acceptable level.	$2,500	$3,950
	PLUMB TOTAL	$2,500	**$3,950**
FPLE1.1	Provide modifications to the existing fire protection sprinkler system to eliminate sprinkler coverage deficiencies.	$10,000	$15,800
	FIRE PROTECTION TOTAL	$10,000	**$15,800**
	Total HVAC cost for PRIORITY 1, 2 & 3	$3,776,000	$5,966,080
	HVAC TOTAL	$3,776,000	**$5,966,080**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

Lexington Public Schools

HS Short Term Work -- Scope Cost

LEXINGTON HIGH SCHOOL

PRIORITY 2 - (1-5 Years)			
DPC ITEM #	**DESCRIPTION**	ESTIMATED TRADE COST	**ESTIMATED PROJECT COST**
2I	Add door and partition @ Admin Suite. To Eliminate dead end corridor.	$33,907	$53,573
2K	Remove door for storage area within egress stair. Unoccupied space.	$651	$1,029
2P	Remove screen door @ Kitchen. Swinging opposite egress direction.	$75	$119
1A	Change direction of door swing @ print shop to swing in direction of egress.	$1,495	$2,362
1F	Replace (2) F.E.C. not code complaint.	$1,955	$3,089
2S	Provide missing fire blanket @ Lab.	$236	$373
3G	Repair/Replace water damaged wood trim. Multiple locations	$1,140	$1,801
4H	Hazardous material removal as per updated Ahera Report done by Universal Environmental Consultants, dated 1/27/09	$140,000	$221,200
6NNN	Repaint exterior wood trim throughout.	$99	$156
3RA.12	Phased replacement of built up roofing system for roof areas Part D8, D1, J, H, and C from 2011 thru 2015. As recommended by Russo Bar Associates. *('D8' scheduled for 2011) ('D1' scheduled for 2012) ('J' scheduled for 2013) ('H' scheduled for 2014) ('C' scheduled for 2015)*	$770,000	$1,216,600
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. (Refer to 3RA.12 for scheduled work) ('F', Bridge roof areas 1,2, & 3 and EPDM roofs to be inspected until scheduled work in 2016 & 2020)	$43,500	$68,730
	ARCH TOTAL	$993,058	**$1,569,032**
ELE2.1	Exterior lighting not controlled with photocell "ON", timeclocks only. Photocell and contactors need to be added to system.	$5,000	$7,900
ELE2.2	Selective kitchen loads including refrigeration should be reconnected to the generator.	$25,000	$39,500
ELE2.3	Provide automated lighting control system for common area lighting and exterior lighting.	$100,000	$158,000
ELE2.4	Provide occupancy sensors to turn lights off in classrooms, toilets, offices, etc. to save energy when spaces are unoccupied. Utility Co. rebates may be available for energy conservation measures. 200 @ $200/unit =	$40,000	$63,200
	ELEC TOTAL	$170,000	**$268,600**
PLE2.1	All plumbing fixtures will be replaced with new water conserving type fixtures capable of saving approximately 30% of overall water usage of the building.	$60,000	$94,800
	PLUMB TOTAL	$60,000	**$94,800**

***High School has already been renovated providing minimum accessibility requirements.*

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

LEXINGTON HIGH SCHOOL

PRIORITY 3 - EXCLUDING REQUIREMENTS FOR FULL HC ACCESS **(6-10 Years)**			
DPC ITEM #	**DESCRIPTION**	ESTIMATED TRADE COST	**ESTIMATED PROJECT COST**
2C	Provide rated door.	$1,714	$2,708
2L	Demo hollow metal door frame and associated glazing.	$688	$1,087
2R	Head height issue at stair, not to code, rebuild stair in its entirety.	$226,800	$358,344
3A	Replace exterior window(s).	$673,072	$1,063,454
3B	Replace window treatment.	$11,637	$18,386
3H	Repair failing window glazing w/ low E insulated pane	$254,382	$401,924
3J	Replace hollow metal frame and door.	$17,062	$26,958
3K	Patch electrical penetration.	$406	$641
3M	Provide insulated aluminum soffit.	$2,957	$4,672
3P	Regrout 25% of precast panel joints.	$86	$136
4B	Remove wood shelf with VAT adhered to it.	$846	$1,337
6A	Replace 2x4 ACT, see plans for quantities	$24,085	$38,054
6AAA	Replace damaged ceramic tile	$922	$1,457
6B	Repair crack in CMU/Brick – to be reviewed by structural engineer	$20,883	$32,995
6BBB	Provide new acoustic seal on door	$277	$438
6CC	Patch concrete	$862	$1,362
6CCC	Replace flashing	$791	$1,250
6E	Replace damaged louver	$815	$1,288
6G	Repair soffit	$277	$438
6GGG	Repaint exterior wood siding, see plans for extent	$346	$547
6H	Paint Room	$3,647	$5,762
6HH	Refasten lifting fascia, see plan for extent	$834	$1,318
6HHH	Replace wood fascia/trim, see plan for extent	$2,505	$3,958
6JJJ	Clean paint off brick	$108	$171
6KKK	Provide new HM door to replace wood door	$3,146	$4,971
6L	Rake out ETR EJ material and provide rubber compression seal @ EJ	$5,503	$8,695
6LLL	Replace metal panels, see plan for extent.	$1,222	$1,931
6MM	Repair HM door frame, to be replaced, UON.	$23,846	$37,677
6MMM	Repaint vertical mullions @ ETR translucent wall panel system	$128	$202
6OOO	Provide custom interior signage.	$5,062	$7,998
6PPP	Provide dock bumper	$1,154	$1,823

(continued on next page)

6Q	Replace ETR EJ at floor	$2,018	$3,188
6QQQ	Re-fasten MB/TB	$293	$463
6SS	Remove biological growth	$1,078	$1,703
6SSS	Existing wood floor to be refinished	$8,112	$12,817
6UU	Provide new walk-off mat	$10,296	$16,268
6UUU	Repaint GWB ceiling	$2,719	$4,296
6VV	Replace vinyl base	$1,611	$2,545
6VVV	Adjust door hardware	$271	$428
6W	Repaint CMU, see plans for extent.	$1,082	$1,710
6WW	Patch hole in GWB wall & repaint	$784	$1,239
6WWW	Repair patch VCT, see floor plans for extent	$72	$114
6XXX	Provide missing locker door, see plans for extent.	$249	$393
6Y	Replace damaged downspout and/or gutter, see plans	$841	$1,329
6YYY	Provide new door louver	$186	$294
6ZZZ	Patch athletic rubber flooring & provide striping as shown	$37,994	$60,031
3RA.1	Roofing annual inspections and preventative maintenance work for roofing area. As recommended by Russo Bar Associates until roof replacement work is implemented. (excluding roof areas in 3RA.13) (Bridge roof areas 1,2, & 3 and EPDM roofs to be inspected until scheduled work in 2020)	$21,600	$34,128
3RA.13	Replace shingles in roofing area 'F' in year 2016. As recommended by Russo Bar Associates. *(17,000 SF)*	$200,000	$316,000
	ARCH TOTAL	$1,575,269	**$2,488,925**
PLE3.1	A new gas fired water heater boiler will be provided for the core buildings of the school independent of the heating boilers to eliminate the need for the heating boilers to fire during non-heating months.	$25,000	$39,500
	PLUMB TOTAL	$25,000	**$39,500**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

LEXINGTON HIGH SCHOOL

PRIORITY 3 - FULL HC ACCESS REQUIREMENTS - **(6 -10 Years)**			
DPC ITEM #	**DESCRIPTION**	ESTIMATED TRADE COST	**ESTIMATED PROJECT COST**
5A	Non HC compliant door	$88,612	$140,007
5AA	Provide accessible expansion joint cover plate	$1,006	$1,589
5B	Remove non-accessible sink and assoc. casework, provide new casework unit w/ accessible sink.	$178,762	$282,444
5BB	Provide accessible controls at elevator	$15,226	$24,057
5D	Provide accessible drinking fountain, by plumbing	$1,845	$2,915
5E	Remove wall mounted ETR TV, owner to place on moveable cart	$963	$1,522
5F	Provide guard/handrail	$51,121	$80,771
5G	Toilet Rm inaccessible – min. work req'd: accessories, handrails & new phenolic partitions @ gang bathrooms	$98,896	$156,256
5GG	Replace reception desk not to code	$24,279	$38,361
5H	Toilet Rm inaccessible – to be completely renovated including: new fixtures, finishes, grab bars and accessories	$238,843	$377,372
5HH	remove non accessible floor transition strip & provide new	$4,057	$6,410
5JJ	Relocate fire blanket	$1,124	$1,776
5K	Provide accessible door and frame	$4,172	$6,592
5L	Provide wheelchair lift	$18,988	$30,001
5M	Provide handrails at existing stair/ramp	$57,544	$90,920
5MM	Remove door and frame. Infill opening with concrete block.	$3,108	$4,911
5N	Provide accessible entrance – concrete ramp @ 8'-0", including handrails (UON noted on plans)	$39,211	$61,953
5NNN	Remove and replace lockers and benches.	$41,922	$66,237
5P	Provide accessible door hardware	$2,456	$3,880
5X	Provide accessible casework & hardware	$5,782	$9,136
5Z	Provide accessible portion at reception desk	$5,240	$8,279
	ARCH TOTAL	$883,157	**$1,395,388**

All costs estimated to June 2009. For A/E costs - trade costs are increased 58% to cover general conditions, overhead & profit, escalation to June of 2009, bidding and construction contingences and indirect costs.

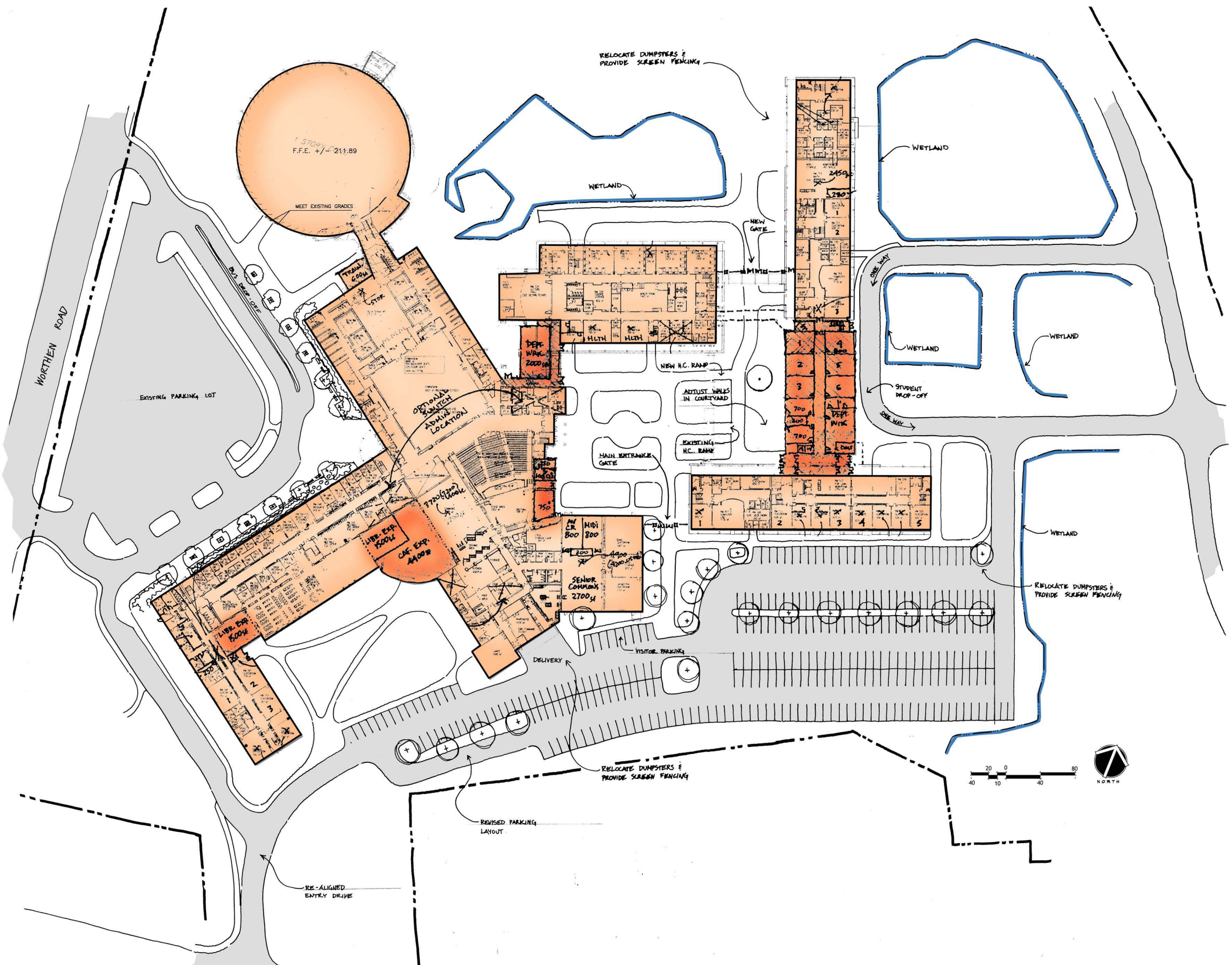
1.6.09	**TOTAL - ALL PRIORITIES (LEXINGTON HS)**	**$12,028,693**

12. High School—Proposed Scope and Budget

The proposed scope of the High School project includes the space needs and the facilities needs previously described. To address the space needs, several plan studies were undertaken . The recommended plan is the one which makes best use of existing space to meet program needs, thereby requiring the least amount of new built space.

The recommended plan calls for 45,850 GSF of new built space and approximately 27,000 GSF of space renovated to better serve program needs. As part of the preliminary project budget, parametric cost estimates were done on the proposed renovated and new space.

In addition, to address basic facilities needs such as the HVAC system, a detailed base renovation estimate was done. The results of these separate estimates were compiled, with appropriate markups for general contractor costs, inflation, contingencies and indirect costs, to give the total project budget.

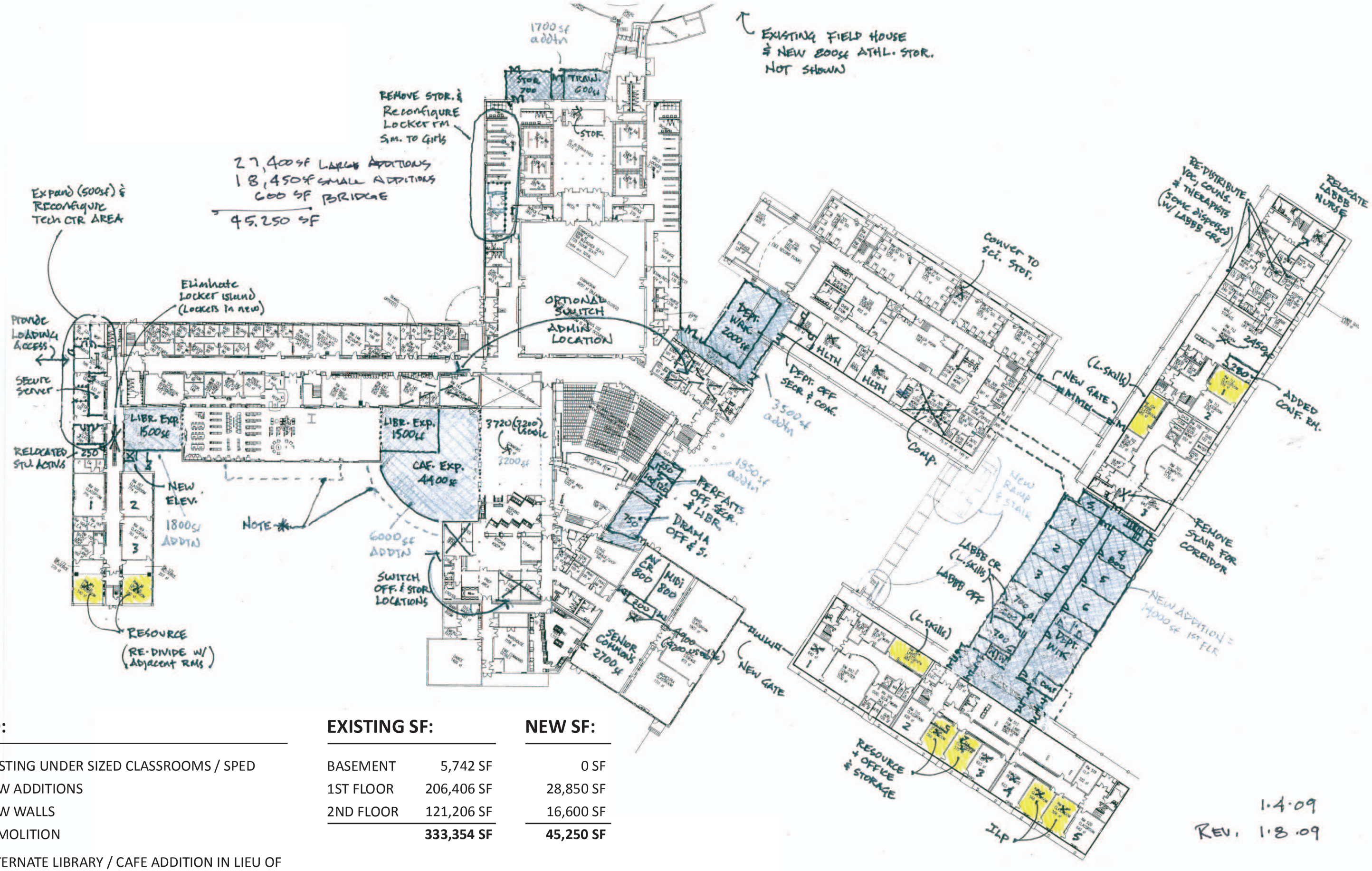


SITE CONCEPT

LEXINGTON HIGH SCHOOL FEASIBILITY STUDY

Designpartnership OF CAMBRIDGE

WARNER LARSON LANDSCAPE ARCHITECTS



LEGEND:

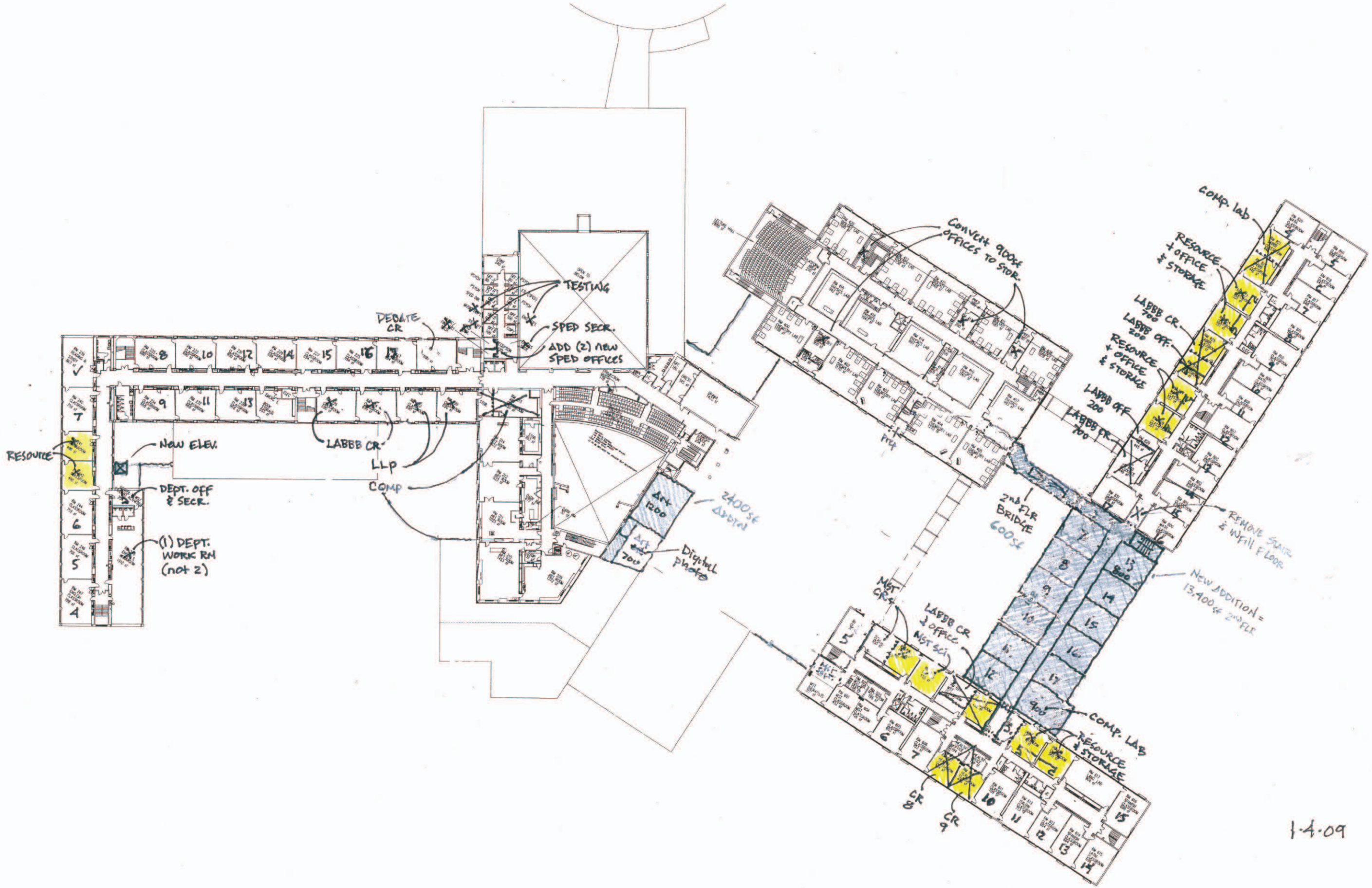
- EXISTING UNDER SIZED CLASSROOMS / SPED
- NEW ADDITIONS
- NEW WALLS
- DEMOLITION

NOTE* ALTERNATE LIBRARY / CAFE ADDITION IN LIEU OF 2ND FLOOR ART ADDITION RESULTS IN ONE, CONSOLIDATED CAFE. (RELOCATE 2 NEW ART TO SENIOR COMMONS)

EXISTING SF:		NEW SF:
BASEMENT	5,742 SF	0 SF
1ST FLOOR	206,406 SF	28,850 SF
2ND FLOOR	121,206 SF	16,600 SF
	333,354 SF	**45,250 SF**

1.4.09
REV. 1.8.09

LEXINGTON HIGH SCHOOL
1ST FLOOR



LEXINGTON HIGH SCHOOL
2ND FLOOR

Lexington HS **Master Plan Cost Estimate**

1/8/09

rev. 2.26.09 v.3

DRAFT

Building Area--gross SF:

		GSF	$/GSF	Renovations	New construction	TOTAL
A.	BUILDING TRADE COST					
	Base Renovation		LS	$2,281,150		$2,281,150
	Program Alteration (Adjusted Base)		LS	$1,912,381		$1,912,381
	Roof work			$973,500		$973,500
	New Addition--large	27,400	$155.64		$4,264,536	$4,264,536
	New Additions--small	18,450	$189.69		$3,499,781	$3,499,781
	Pedest. bridges	600	$330.49		$198,294	$198,294
	MEP/FP--new	46,450	$65.00		$3,019,250	$3,019,250
	Food Service		LS	$250,000		$250,000
	Casework	45,850	$5.00		$229,250	$229,250
	Fire Protection			$10,000		$10,000
	Plumbing			$87,500		$87,500
	HVAC			$3,776,000		$3,776,000
	Electrical			$172,350		$172,350
	SUBTOTAL			$9,462,881	$11,211,111	$20,673,992
B.	SITEWORK TRADE COST					
	Hazardous Materials Abatement & Monitoring					$140,000
	Earthwork / Site Improvements (courtyard, roads, parking)					$523,000
	Utilities -- Civil (mitigation of add'l imperv surface).					$100,000
C.	TOTAL TRADE COST					$21,436,992
	General Conditions		8.5%			$1,822,144
	Overhead & Profit		6.2%			$1,442,066
D.	SUBTOTAL CONTRACTOR'S COST					$24,701,202
	Escalation @ 5.7%/year to construction midpoint date of 6/2012		20.0%			$4,927,890
E.	**TOTAL CONTRACTOR'S COST**					**$29,629,092**
	Bidding Contingency		3.0%			$888,873
F.	**TOTAL ESTIMATED BID**					**$30,517,965**
	Construction Contingency		7.5%			$2,288,847
G.	**TOTAL ESTIMATED CONSTRUCTION COST**					**$32,806,812**
	FURNITURE & EQUIPMENT	45,850	$10.00			$458,500
	TECHNOLOGY	45,850	$8.00			$366,800
	INDIRECT EXPENSES					$4,057,100
H.	**TOTAL ESTIMATED PROJECT COST**					**$37,689,212**

Notes to Cost Estimate:

The following assumptions were made in preparation of this cost estimate:

* A construction start in Fall 2011.
* Lump sum competitive bid procurement.
* The renovation scope is selective, addressing only items of work identified in the 1.4.2009 preliminary plans and associated cost estimate detail.
* The scope of new construction is as shown in the 1.4.2009 preliminary plans.

V. Central Administration

13. Central Administration Facilities & Program Needs

The Lexington Schools Central Administration has occupied the Old Harrington School since 2007. As an element of this Master Plan study, we evaluated options for implementing additional scopes of work over time.

As part of this effort, we did a re-evaluation of space needs for Central Administration, which basically consists of an update of the space needs assessment done for the 2006 K-5 Master Plan. In addition to small adjustments required because of changes in staffing to administrative departments over time, several more significant changes have been made or are planned that impact Central Administration space needs. Among these are:

- The decision to consolidate School Facilities and Town Facilities Departments and house them in the new DPW building . This move is expected to occur in the late Spring of 2009.
- The relocation of the central print shop, formerly at the high school, to space in Old Harrington.
- The need to provide additional space for LABBB and for Pre-Kindergarten support functions with Central Administration.

The attached Old Harrington Space Program (2.17.09) shows the total net space requirements with these adjustments made. Also included are two alternative layout plans showing different approaches to accommodating these space needs in Old Harrington. As stated in the 2006 K-5 Master Plan, upgrades to the building will be required at some time in the future.

Option I is essentially an extension of the current space use at Old Harrington, adjusted for future changes which include the ex-migration of Facilities to the new DPW Building and provision of space for LABBB and Pre-Kindergarten support requirements. This plan assumes some renovation for building preservation and to allow the continued functioning of the building with the aforementioned use changes, including building envelope repairs, hazardous materials abatement, accessibility improvements and building systems improvements.

Option II shows a more extensive adaptive renovation which will fit Central Administration functions more tightly and efficiently into the existing building. This approach would require replacement of old

building systems and is considerably more expensive, as can be seen from the attached estimates of probable cost.

It should be noted that, in either plan approach, the aggregated space requirements for Central Administration and related functions occupy considerably more space than is available on the upper floor of Old Harrington. In the case of Option I, it is significant that, of the usable space on the lower floor, school functions occupy all except 6 classrooms and a portion of the old cafeteria.

In Option II, by virtue of greater consolidation of functions on the upper floor, 4 additional classroom spaces are available for other uses on the lower floor. However, the undesignated net usable space in that option is still only 10 classrooms plus half the cafeteria, for a total of approximately 10,800 NSF. It is our expectation that, based on the observed pace of change in school space needs, particularly for District-wide services, the School Department may well have need for at least some of this space in the coming years.

Based on these considerations, and on the significant implementation cost differences of Option I and Option II, it is our recommendation that Central Administration continue to occupy Old Harrington according to Option I. The opportunity to gain 4 additional classrooms worth of space for potential use for other purposes does not seem to justify the additional cost of Option II. The recommended approach has the advantage that necessary repairs and improvements can be made on an ongoing basis, without the need for major relocation of activities.

In assessing available space, we have disregarded the modular classrooms, as they are in poor condition, and their original quality of construction strongly suggests that attempts to renovate for continued use are not cost effective.

For reasons explained later in this report, we do not think that future use of Old Harrington as swing school space should figure heavily in decisions on the future of Old Harrington. However, if this remains a concern, it may be of interest that the recommended Option I involves less alteration of the plan of the building, and thus leaves open to a greater extent the option of returning some or all of the building to school service in the future.

Town of Lexington - Old Harrington Program Study - Central Admin

2.13.2009

rev. 2.26.09

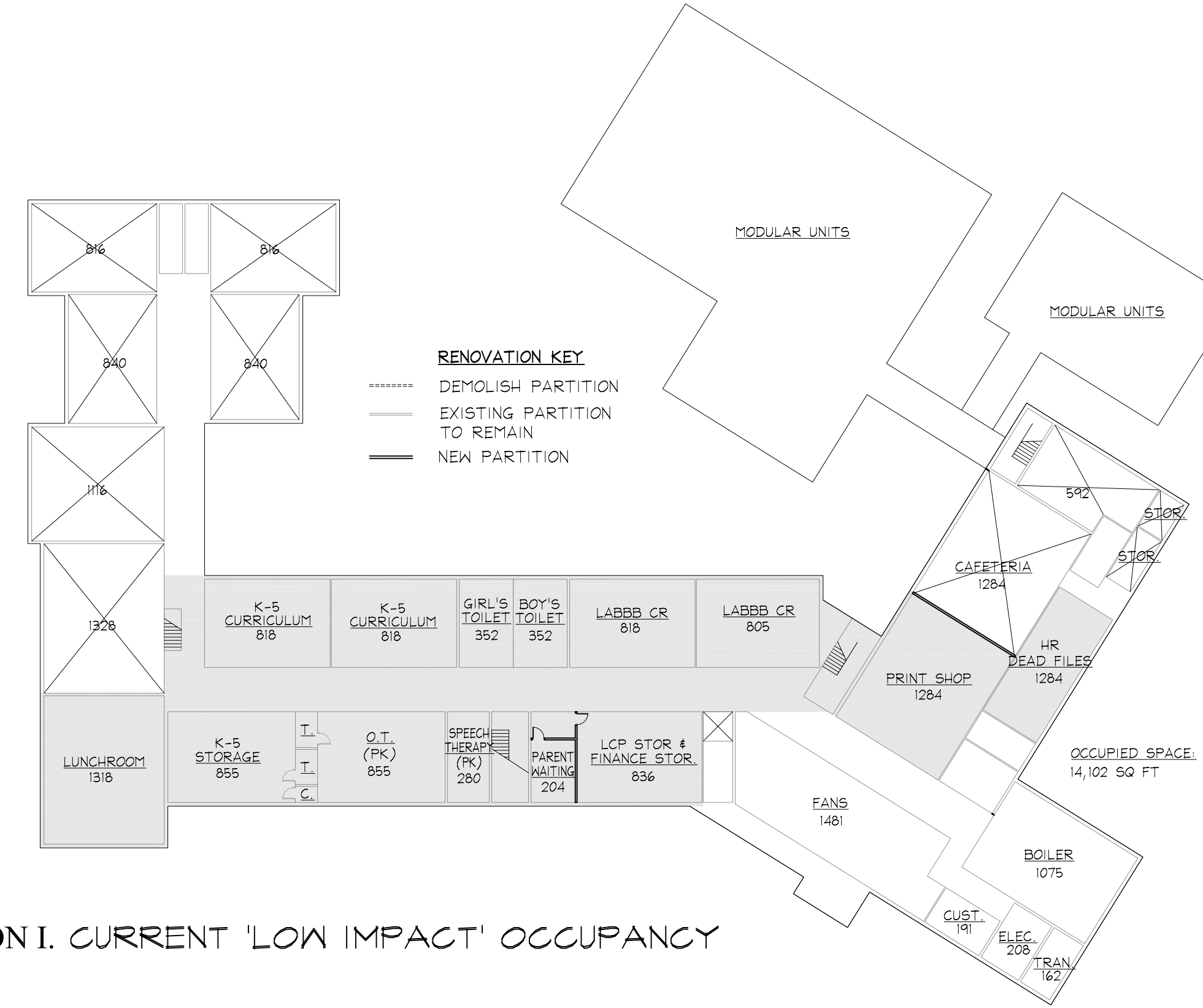
Room Name	New Program No.	Ea. (sf)	Total (sf)	Subtotals
Central Admin Spaces				
Student Services (SPED)				
Assist. Director	1	150	150	
K-8 Coordinator	2	150	300	
Out of District Admin	1	120	120	
IEP Processing	1	120	120	
Financial	1	120	120	
Conference Room		250	250	
Admin Assist	2	75	150	
Director of Student Services	1	250	250	
Behavior Specialist / Visually Impaired	1	120	120	
ABA Coordinator / Data Specialist	1	120	120	
BCBA Analysts	3	120	360	
Altec Contractor / Hotel	1	120	120	
subtotal			2,180	**2,180**
Human Resources				
Asst. Superintendent	1	250	250	
Conference Room		200	200	
Benefits	1	120	120	
File Room		700	700	
Licensure	1	150	150	
Reception	1	150	150	
Supplies / Mailing		120	120	
subtotal			1,690	**1,690**
Business / Finance				
Business				
Asst. Superintendent	1	250	250	
Assistant	1	100	100	
Conference Room		200	200	
Transportation	1	120	120	
Admin Asst.	1	100	100	
Print Shop	1	1,400	1,400	
Finance				
Finance Manager	1	200	200	
Acct. Manager	1	200	200	
Accounts Payable	2	150	300	
Payroll	2	150	300	
subtotal			3,170	**3,170**
District-wide Curriculum				
Deputy Superintendent	1	250	250	
Assistant	2	100	200	
Conference Room		250	250	
Assist. Superintendent	1	250	250	
subtotal			950	**950**
K-5 Curriculum				
Coordinator Offices	5	150	750	
Materials Library		1,000	1,000	
ELL Coordinator (Shared with Student Services)	1	120	120	
subtotal			1,870	**1,870**

Town of Lexington - Old Harrington Program Study - Central Admin

2.13.2009

rev. 2.26.09

Room Name	New Program No.	Ea. (sf)	Total (sf)	Subtotals
Superintendent				
Conference Room		200	200	
Superintendent	1	400	400	
Admin Assistant	1	75	75	
subtotal			675	**675**
Professional Development				
Prof. Development/Community Room		1,200	1,200	
Resource		250	250	
subtotal			1,450	**1,450**
LABBB				
Classrooms		800	1,600	
			1,600	**1,600**
PK Support Functions				
OT		850	850	
Speech Therapy		300	300	
Parent Waiting		200	200	
subtotal			1,350	**1,350**
Other				
Copy Room		180	180	
Storage		300	300	
Kitchen		150	150	
Lunch Room		180	180	
subtotal			810	**810**
Total Space requirements for Central Administration				**15,745 NSF**



OPTION I. CURRENT 'LOW IMPACT' OCCUPANCY

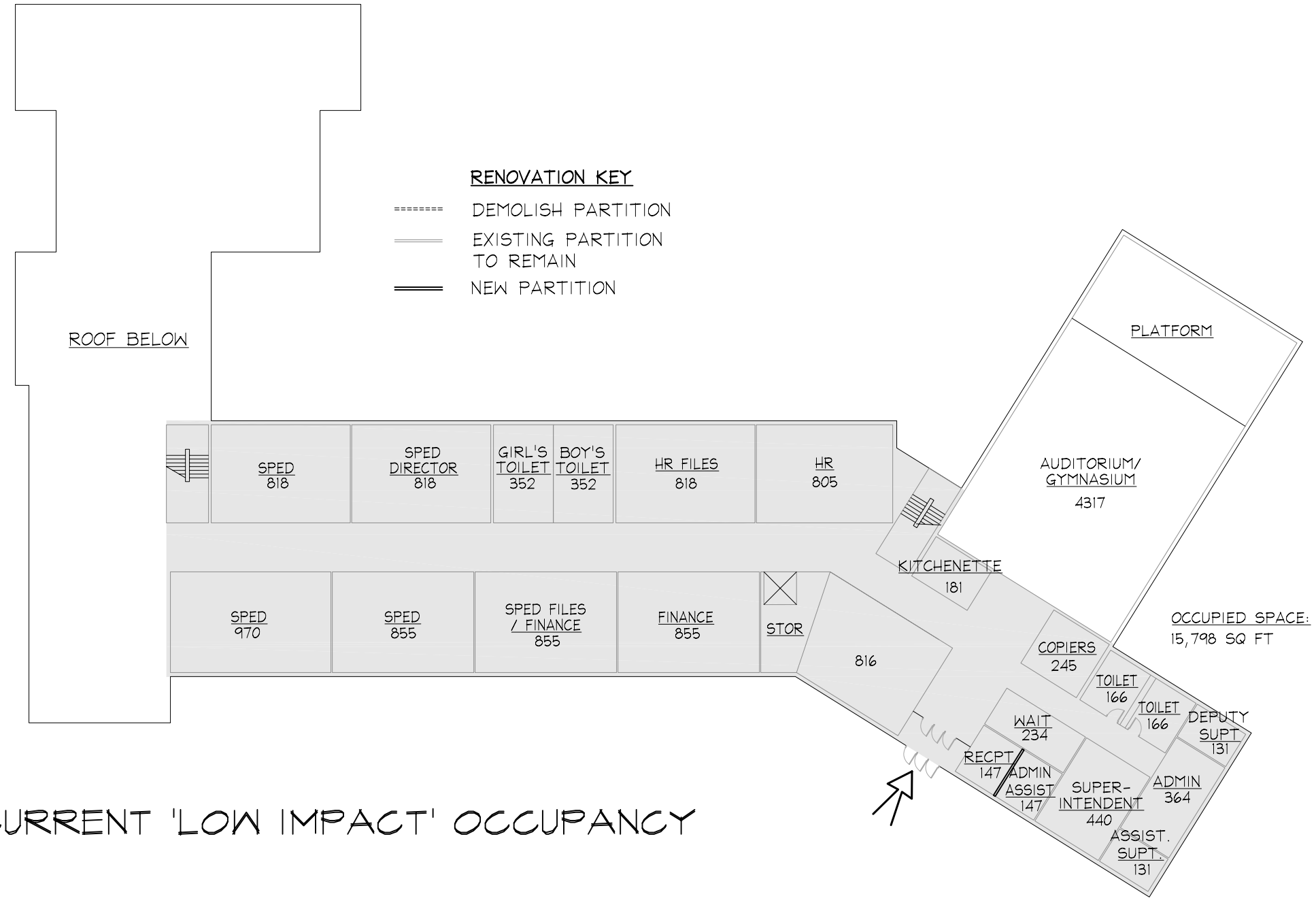
LEXINGTON - OLD HARRINGTON
GROUND FLOOR

FEB. 26, 2009

0 8' 16' 32'

SCALE:

DESIGN PARTNERSHIP OF CAMBRIDGE



OPTION I. CURRENT 'LOW IMPACT' OCCUPANCY

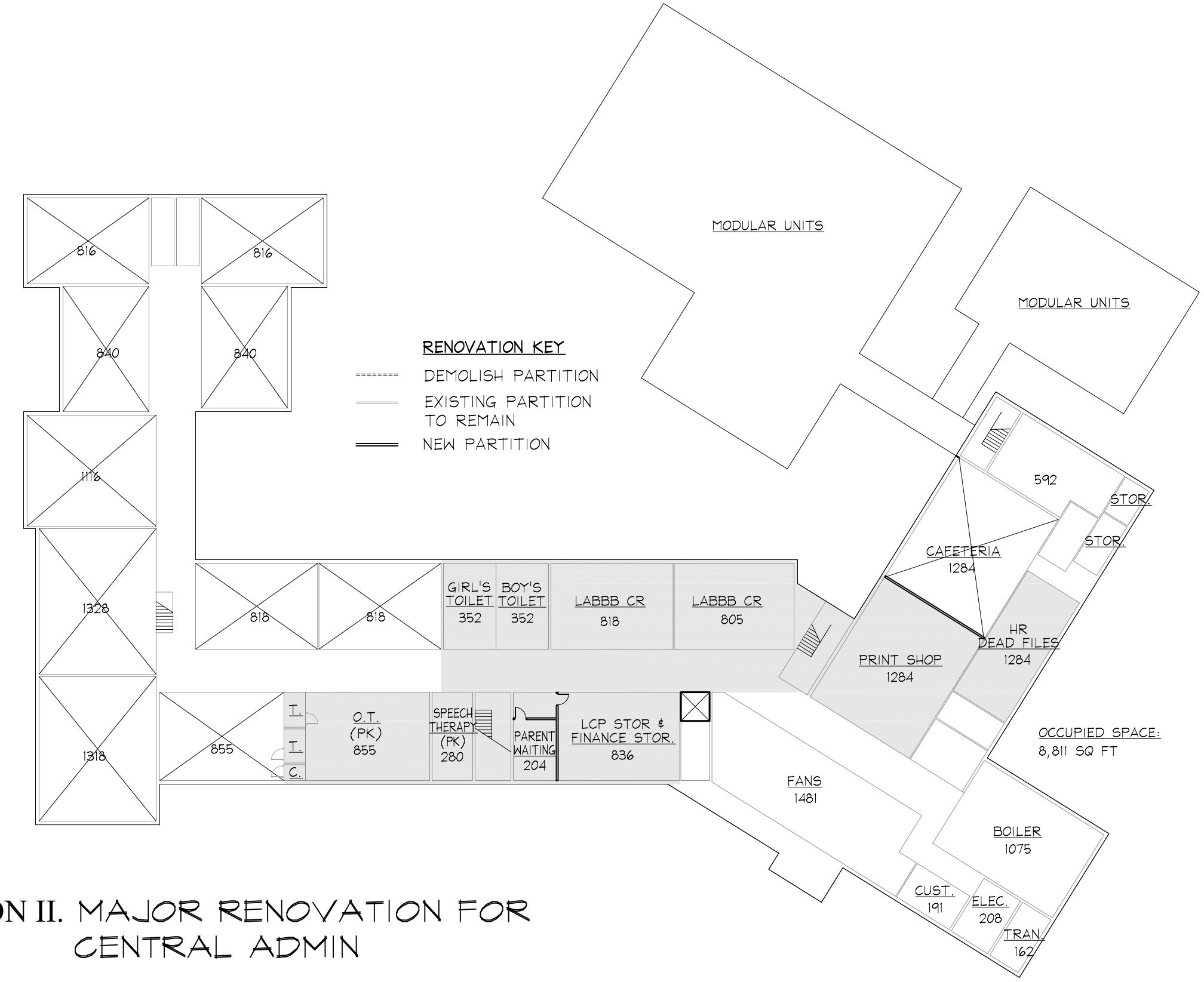
LEXINGTON - OLD HARRINGTON
MAIN FLOOR

FEB. 26, 2009

0 8' 16' 32'

SCALE:

DESIGN PARTNERSHIP OF CAMBRIDGE



OPTION II. MAJOR RENOVATION FOR CENTRAL ADMIN

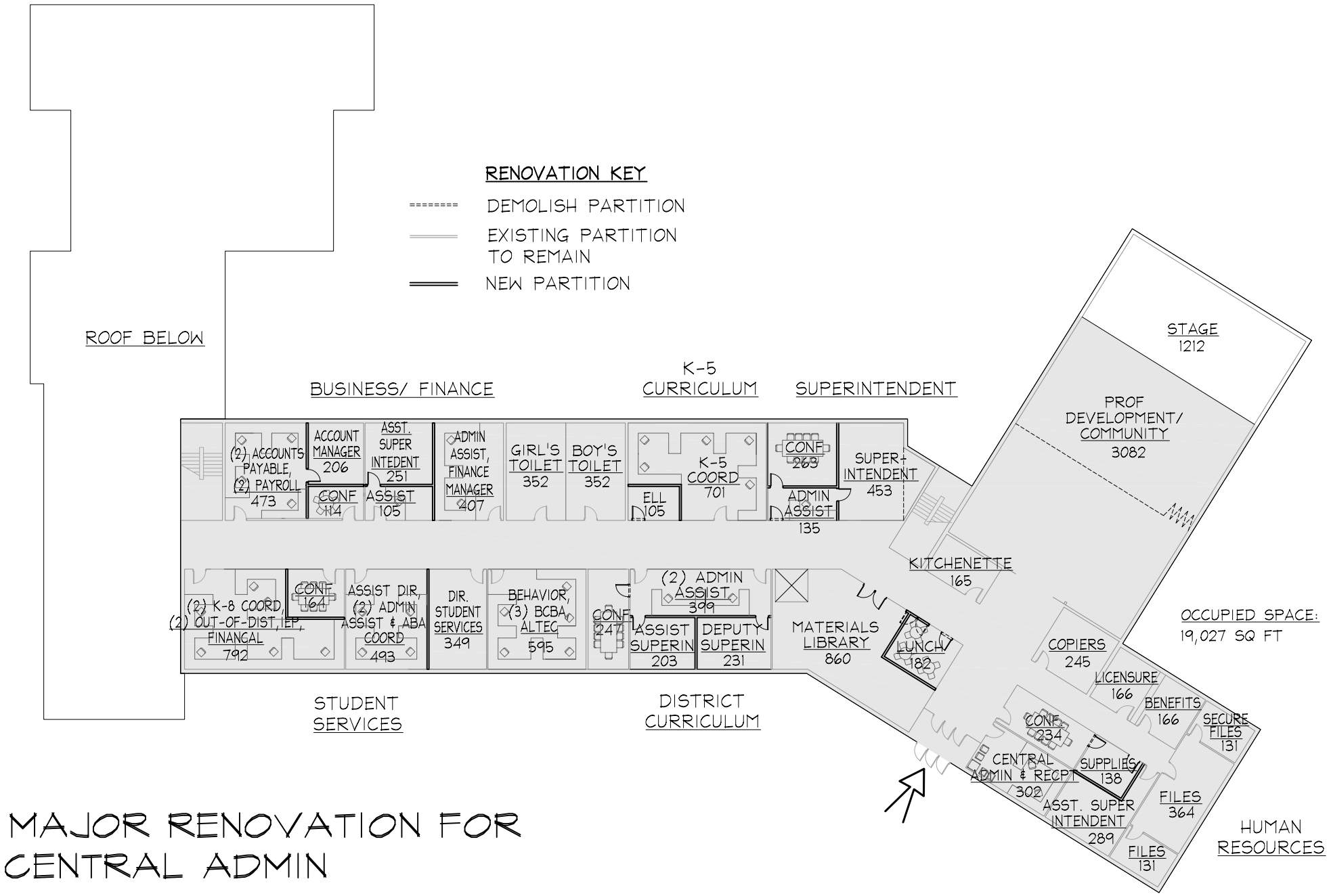
LEXINGTON - OLD HARRINGTON
GROUND FLOOR

FEB. 26, 2009

0 8' 16' 32'

SCALE:

DESIGN PARTNERSHIP OF CAMBRIDGE



OPTION II. MAJOR RENOVATION FOR CENTRAL ADMIN

LEXINGTON - OLD HARRINGTON
MAIN FLOOR

FEB. 26, 2009

DESIGN PARTNERSHIP OF CAMBRIDGE

0 8' 16' 32'

SCALE:

Old Harrington
Option I--"low-impact" renovation
2.20.09

Master Plan Cost Estimate

v.1

			finished occupied space	unfinished or unoccupied space	TOTAL
	Building Area--gross SF:		*26,496*	*17,190*	*43,686*
A.	BUILDING TRADE COST				
	Base Renovation				
	Life safety		$1,736		$1,736
	Building code		$66,680		$66,680
	Exterior		$845,500		$845,500
	Hazardous materials		$266,120		$266,120
	HC Access		$672,896		$672,896
	Finishes		$228,661		$228,661
	Fire Protection		$218,430		$218,430
	Plumbing		$60,000		$60,000
	HVAC		$821,000		$821,000
	Electrical		$18,700		$18,700
	SUBTOTAL		$3,199,723		$3,199,723
C.	TOTAL TRADE COST				$3,199,723
	General Conditions	8.5%			$271,976
	Overhead & Profit	6.2%			$215,245
D.	SUBTOTAL CONTRACTOR'S COST				$3,686,945
	Escalation @ 5.7%/year to baseline date of 6/2009.	2.9%			$105,078
E.	**TOTAL CONTRACTOR'S COST**				**$3,792,023**
	Bidding Contingency	3.0%			$113,761
F.	**TOTAL ESTIMATED BID**				**$3,905,783**
	Construction Contingency	7.5%			$292,934
G.	**TOTAL ESTIMATED CONSTRUCTION COST**				**$4,198,717**
	FURNITURE & EQUIPMENT	$10.00			$0
	TECHNOLOGY	$8.00			$0
	INDIRECT EXPENSES				$679,200
H.	**TOTAL ESTIMATED PROJECT COST**				**$4,877,917**

Old Harrington
Option II--Major renovation
2.20.09

Master Plan Cost Estimate

v.1

			finished occupied space	unfinished or unoccupied space	TOTAL
	Building Area--gross SF:		*24,434*	*19,252*	*43,686*
A.	BUILDING TRADE COST				
	Base Renovation				
	Life safety		$1,736		$1,736
	Building code		$66,680		$66,680
	Exterior		$845,500		$845,500
	Hazardous materials		$266,120		$266,120
	HC Access		$672,896		$672,896
	Finishes		$228,661		$228,661
	Program Alteration (Adjusted Base)		$552,709		$552,709
	Fire Protection		$218,430		$218,430
	Plumbing		$258,410		$258,410
	HVAC		$1,441,638		$1,441,638
	Electrical		$755,240		$755,240
	SUBTOTAL		$5,308,020		$5,308,020
C.	TOTAL TRADE COST				$5,308,020
	General Conditions	8.5%			$451,182
	Overhead & Profit	6.2%			$357,071
D.	SUBTOTAL CONTRACTOR'S COST				$6,116,273
	Escalation @ 5.7%/year to baseline date of 6/2009.	2.9%			$174,314
E.	**TOTAL CONTRACTOR'S COST**				**$6,290,586**
	Bidding Contingency	3.0%			$188,718
F.	**TOTAL ESTIMATED BID**				**$6,479,304**
	Construction Contingency	7.5%			$485,948
G.	**TOTAL ESTIMATED CONSTRUCTION COST**				**$6,965,252**
	FURNITURE & EQUIPMENT	$10.00			$0
	TECHNOLOGY	$8.00			$0
	INDIRECT EXPENSES				$998,800
H.	**TOTAL ESTIMATED PROJECT COST**				**$7,964,052**

VI. K-12 Master Plan

14. Master Plan Recommendations

Lexington High School:

Information collected for this study points to the need to proceed with a substantial project at the Lexington High School. This is needed both as a result of improvements, such as HVAC systems work, deferred at the time the prior renovation project was undertaken, and because enrollment growth beyond what the prior renovation was designed for has led to serious overcrowding at the High School.

The proposed project is presented in Section 10. The proposed Educational Specifications were developed based on a review of the existing facility, interviews & meetings with the HS Principal and senior educators, and benchmarking against MSBA space standards and industry standards. The proposed expansion plan was developed from a series of studies looking at alternate strategies for making best use of existing space to meet overall space needs, so as to minimize requirements for new space.

The preliminary budget is based on a cost estimating process that includes detailed quantity takeoffs for the facilities deficiencies identified in Section 11 and parametric cost estimates for spaces renovated to meet different program needs and for new construction.

Bowman, Bridge, Estabrook and Hastings Elementary Schools:

At the elementary schools, the previous ES master plan study illustrated the long-term need to either replace or renovate to as-new standards the older elementary schools (either three or four, depending on the enrollment trend) as a long-term goal. Since then, changes to both the health of the economy and the structure of Mass. school funding have altered the prospect of those recommendations being implemented quickly. Accordingly, this study has looked at what needs to be done to keep the elementary schools minimally serviceable until those recommendations can be implemented.

In our view, that question needs to be looked at slightly differently at each of the elementary schools. In particular, we need to consider the suitability of each of the four existing elementary schools to remain as elementary schools in the Lexington public school system over the long term.

In the case of the Bowman & Bridge schools, these buildings, although old and designed to different educational standards than what is current, are essentially well constructed and well configured. The previous ES master plan pointed out reasons to consider replacing these single-story buildings

with modern, efficiently planned energy-efficient two-story buildings. The reasons for doing this, although strong, are not absolutely compelling. It is possible to continue these buildings in service, either with full as-new renovations or with periodic upgrades, including systems replacement and alterations to meet program requirements, for the long-term.

The advantage of contemplating the continued use of the existing buildings is that the district maintains the option, if funding cannot be made available for complete renovation or replacement, to maintain the building with periodic upgrades (such as for HVAC systems) that can be planned for incorporation into anticipated future full renovations.

By contrast, the Estabrook and Hastings school buildings have more substantial fundamental shortcomings and are much less adaptable to the long term needs of the Lexington Schools. The Estabrook is smaller than the Bridge and Bowman and is lacking a cafeteria. Both the configuration and the structural system of Estabrook (steel frame depending on infill masonry panels for lateral stability) make it difficult to incorporate additions to the building effectively.

The Hastings School is a two-story building with the lower level partially buried. The configuration of the building and its proximity to the street bordering the long edge of the site make it difficult to effectively add to the building. The fact that the lower level is partly buried has caused significant water infiltration and the potential for air quality problems. Unlike at Estabrook, where the site is fairly adaptable to a replacement school, the Hastings site, due to the level changes, ground-water issues and overall dimensions, would not easily accommodate a new replacement school and suitable parking and outdoor play space.

Because of these different conditions, our recommendations for the elementary schools are as follows:

1. At Bridge and Bowman, undertake the renovation and systems work needed to keep the buildings in service up to ten years, with the expectation that these buildings will at some point undergo renovation to as-new standards.

2. At Estabrook, undertake the minimum renovation and repair necessary to keep the building serviceable, with the expectation that a new replacement school will be built on the site as soon as reasonably possible. Site access will need to be upgraded to allow construction of a new school while the old school remains in service.

3. At Hastings, undertake the minimum renovation and repair necessary to keep the building serviceable, with the understanding that the long-term

need for Hastings will be re-evaluated in a few years. If the projected decline in elementary enrollments materializes, it may be possible to take Hastings out of service or keep it in service for a limited duration as swing space while other elementary school projects proceed. If actual enrollment trends indicate a long-term continued need for a 6th elementary school, a decision will need to be made whether that school should remain at the Hastings site or if another site should be sought.

15. Master Plan—Timeline

The potential timeline for implementing the recommended combination of High School and Elementary School projects is dependent on a number of factors. Among these are the timing of Town votes, the willingness of the Town to proceed with projects, and the new MSBA process for review and approval of projects eligible for and submitted for funding.

The new MSBA project approval process is dramatically different from the SBA funding process that supported previous school renovation projects in Lexington. The process is still very much in its infancy, and there are changes and inconsistencies that have occurred in its application so far, but the major steps are as follows:

a. School districts submit an SOI (Statements of Interest) for each individual school project they want considered for funding. This are gathered annually, nominally at a July deadline. Within a few months, MSBA will review and vote to approve as "potential eligible feasibility projects" those they think potentially suitable for funding.

b. Projects that are approved to proceed as "feasibility projects" are authorized to proceed with what MSBA calls a "Feasibility Study", which is really a combination of a feasibility study and schematic design carried to an early Design Development level. MSBA policy states that MSBA will pay its share of the Feasibility Study based on the district's reimbursement rate. Prior to commencement of the study, MSBA will review the District's selection of an OPM (Owner's Project Manager) and will undertake Designer Selection with participation from the District.

c. Based on an acceptable feasibility study, MSBA will approve a Project Scope and Budget. This fixes the scope and costs of an approvable project. At this point the municipality has 120 days to procure, through municipal vote, the municipality's share of the full project cost. Foilowing successful municipal votes, MSBA will execute a Project Funding agreement (PFA). The project at that point is fully authorized to proceed through final design and construction. MSBA will issue its funding on a "pay as you go" basis, reimbursing its share to the municipality periodically as invoices for project work are presented.

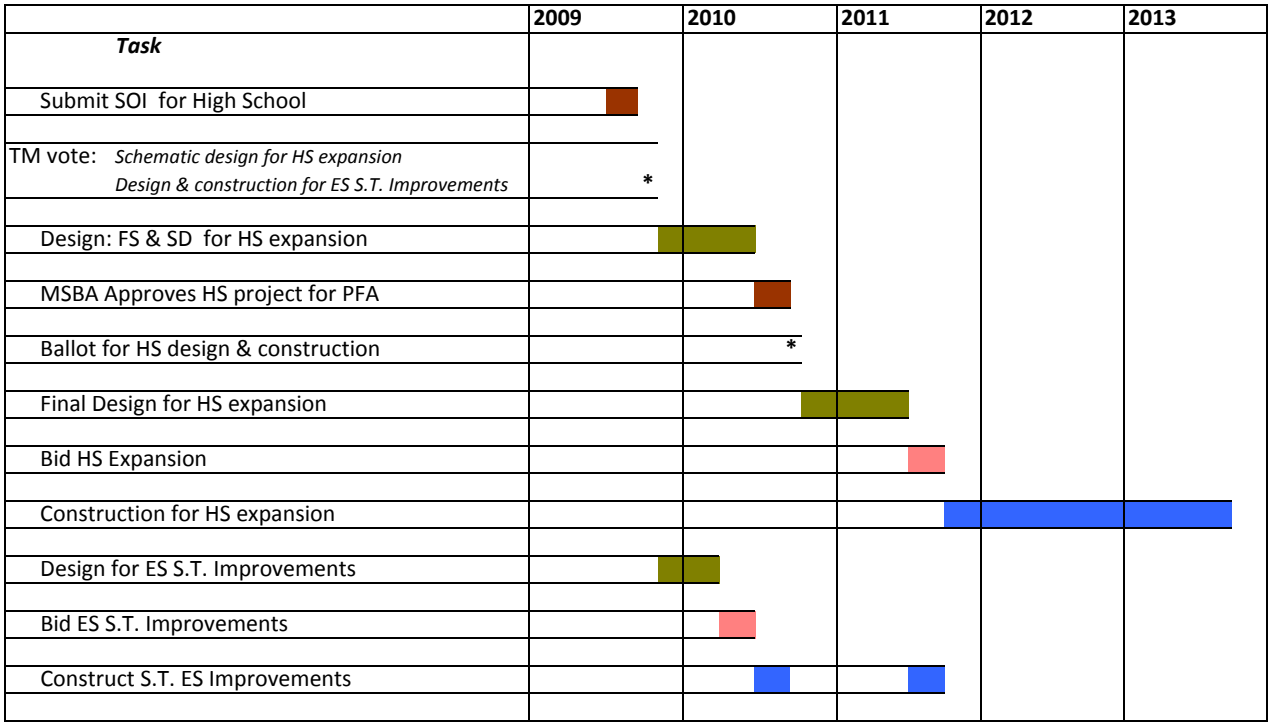
Given that the High School is the largest project under consideration, and given also that it is potentially the most eligible for funding, being needed largely to alleviate current overcrowding, this preliminary implementation schedule is based on the assumption that the High School, and only the High School, will be submitted for MSBA funding.

This plan also posits that, since any major school project in Lexington will require a debt exclusion vote, and since there are immediate needs at the four older elementary schools as well as at the High School, it makes sense to plan for a ballot question that addresses both High School and Elementary School needs.

The following schedule shows the shortest reasonable timeline for accomplishing those goals:

1.	Submit SOI for High School	July 2009
2.	Town vote to appropriate design funds for High School "Feasibility Study" and elementary School repairs. This assumes MSBA will have Approved The High School to proceed with a Feasibility Study	November 2009
3.	Construction proceeds for repairs at Estabrook and Hastings. Construction at Bridge & Bowman could proceed at the same time or the following summer.	June 2010
4.	Municipal vote for design & construction at the High School. This assumes MSBA has previously approved the Project Scope and Budget and has authorized a PFA.	November 2010
.5	Construction starts on a phased HS project	August 2011

Lexington Schools
Preliminary Project Schedule
1.12.09
Rev. 2.26.09



Notes to Master Plan Preliminary Schedule:

In developing this schedule, the following assumptions have been made:

1. *High School*

* The Town will move ahead with the High School as an MSBA-funded project and will submit an SOI (Statement of Interest) by July 2009.

* MSBA will approve the High School to proceed with a Feasibility Study & Schematic Design (FS/SD) in the Fall of 2009.

* MSBA will approve the FS/SD work in the summer or fall of 2010 and invite the Town to authorize project funding and execute a Project Funding Agreement.

* The Town will vote full design & construction funding in Fall 2010.

2. *Elementary Schools*

* The Town will move ahead with short-term improvements to the Elementary Schools without assuming MSBA reimbur

* Design & construction for elementary school short-term improvements will be approved in the Fall of 2009.

* Construction will proceed in the summers of 2010 and 2011.

16. Master Plan Implementation –Implications of the proposed solution

Recommendations for a solution to the Lexington Schools facilities needs must take into account the current need, but also must reflect how those needs may change over time. Based on analysis of the information presented, a recommendation that looks only at current needs might be structured as follows:

> ***High School:*** *Proceed with an expansion and renovation project according to the scope and schedule provided. The cost, escalated at 5% per year to a June 2012 mid-point of construction, is estimated to be $37.7 million.*
>
> ***Bridge & Bowman Elementary Schools:*** *Proceed with recommended Priority 1 & 2 improvements, including the disability access requirements (HC-1 & HC-2) triggered by the dollar value. The escalated cost, based on June 2011 midpoint of construction, is $13.1 million.*
>
> ***Estabrook & Hastings Elementary School****: Proceed with recommended Priority 1 improvements, including the disability access requirements (HC-1 & HC-2) triggered by the dollar value. The escalated cost, based on June 2010 midpoint of construction, is $6.45 million.*

There are factors, however, that go beyond current need that must be taken into account when deliberating on how to proceed. There are specific concerns at the High School and at the Estabrook and Hastings Schools that need to be considered in this regard:

` **High School:** The recommended expansion project addresses a substantial current overcrowding issue. Based on the most recent enrollment projections, the level of enrollment will remain fairly constant through FY 2016, but then starts to drop. Since the projections only go to 10 years, there are no projections beyond FY 2019. It is reasonable to speculate that the HS enrollments will follow the pattern of the Elementary school projections, which show declining enrollments for 6 or 7 years before projected enrollments plateau and start to rise again. However, projections don't currently exist to support that supposition.

In this context, where the enrollments that generate the space need only persist for 7 or so years, it may be necessary to ask which of the current space

deficiencies are likely to persist beyond that point and which of them may be resolved by subsequent declining enrollments.

Estabrook & Hastings Elementary School: The concern at Estabrook and Hastings is that these schools are not highly adaptable to the long-terms needs of the District. As discussed earlier, the recommendation is to take these schools out of service as soon as reasonably possible. Given that circumstance, the wisdom spending the money to implement the Priority 1 recommendations, including full HVAC replacement, and to further undertake the accessibility renovations required because of that work, is uncertain. An alternative approach, which may or may not address all immediate needs, is to attempt to define immediate scopes of work which can be accomplished at significantly less cost. Further evaluation of this approach may be required.

A. Appendices

Appendices

The following documents have been published in a separate volume of this study.

- Elementary Schools – M/E/P/FP Report *GGD*
- Elementary Schools – Cost Estimates *Essential Design*
- Elementary Schools – Structural Report for the Hastings School *Lim Consultants, Inc.*
- High School – E/P/FP Report *G/G/D*
- High School – Base renovation cost Estimate *Essential Design*
- High School – Food Service Report *Crabtree McGrath Associates*
- High School – Site Scope Memo *Warner Larson Associates*

The following documents are not included but are frequently referenced in this report and should be considered "incorporated by reference":

- High School – HVAC Systems Report-2008 *GGD*
- Elementary Schools – Master Plan—2006 *DPC*
- Enrollment Projections –12.2008 *Superintendent Paul Ash*