EDUCATIONAL SPECIFICATIONS
FOR
THE MT. GREYLOCK REGIONAL SCHOOL

JANUARY, 2005

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FOR

THE MT. GREYLOCK REGIONAL SCHOOL

PREPARED BY

THE MERRIMACK EDUCATION CENTER

JANUARY 5, 2005

Mt. Greylock Regional School
Educational Specifications

Overview

The Merrimack Education Center was contracted to develop a set of educational specifications for the Mt. Greylock Regional School.

As part of the Long – Range Enrollment Projections and Space Analysis completed in August 2004, members of the Merrimack Education Center team visited the Mt. Greylock Regional School on two occasions.

Comments relative to the availability of space, space utilization and the condition of the facilities should be referenced as an adjunct to this report. We noted that, "We did a complete analysis of room requirements as indicated by the current curriculum and.....there does not appear to be a shortage of classroom space for the (educational) programs being offered."

Our report also stated, "The Mt. Greylock Regional School was constructed in 1960 with an addition added in 1968. This is a sprawling 44 year old building of brick construction, configured around several courtyards of different sizes housing a Middle School and High School under one roof. Since the addition and relocation in 1968 of the library, cafeteria and some classrooms little of a structural nature has been done to improve or update school facilities. As a result, many of the current facilities were not designed to accommodate the curriculum demanded of today's schools. We also noted the physical layout of the building does not lend itself to a contemporary Middle School curriculum.

School Building Authority

In 2004 the legislature responded to a need to better support the construction and renovation of schools in the Commonwealth by establishing the School Building Authority under the direction of the State Treasurer's Office. This action eliminated the School Building Assistance Bureau (SBAB) under the Dept. of Education.

The new legislation established, for the first time, a permanent funding source for school construction, allocating a portion of the state sales tax for that purpose, and creating a bond issue to address the large unfunded liability incurred for prior school projects. A moratorium on new school projects was implemented last year and will remain in place until July 2007, until prior financial obligations have been addressed. However, in anticipation of the lifting of the moratorium, several school districts have begun the planning stages for new school construction and renovation.

Under the School Building Authority, there will be changes in the regulations governing school construction. However the guidelines under which the need for new or renovated school facilities is determined will likely remain similar to existing guidelines.

Educational Specifications

The development of educational specifications requires that we evaluate available educational resources in relation to the educational resources required to maintain the educational program.

We have updated Table I (Mt.Greylock Major Programs and Room Requirements) to reflect the elimination of the Piano Lab and thus the reduction of one music room.

We also note that one large classroom continues to be utilized as an office for the athletic director and the former Piano Lab is now being rented to a charter school. These spaces, although not used as such, are still considered available classroom space and are included in our tally of classrooms.

Table II, Spaces by Program, correlates a specific space with either an educational purpose or other specific use. The information in Tables I & II has been incorporated into the Middle/High School Educational Specifications.

Under present school construction guidelines the major criteria for determining the need for school construction are: building safety, major overcrowding, and problems affecting accreditation. From our observations the Mt. Greylock Regional School does not fall into any of these categories.

The state specification for a secondary school program is 155 sq./ft. per student. Using the 2013-14 projections of 772 students, the maximum allowable gross size of a new school, even after adding special space in addition to the base figure, would be only 143,812 sq. ft. The present building is reported to be 179,217 sq. ft., substantially larger than what is required under the state formula.

Our analysis confirms that there are more available spaces than are presently required for the existing educational programs and the construction of additional facilities is not required.

However, the basic school is approximately forty years old and in need of work. Science laboratories are outdated, do not meet current safety requirements and do not support a comprehensive science program requiring advanced placement students to conduct experiments at nearby Williams College.

It is likely that a case can be made for the renovation of existing spaces, expanding some of the smaller classrooms to a more acceptable standard to better accommodate the educational program and repairing badly worn areas such as the auditorium and locker and physical education spaces.

Please refer to our comments relative to the adequacy of the facilities in our recent report, Enrollment Projections and Educational Space Analysis.

Table III, Summary of Spaces for Maximum Construction Cost Allowance, in the Middle/High School Educational Specification form shows the following:

1) The entire building, 179,217 sq. ft. is considered as renovation space with no new construction required..
2) Base square footage has been calculated at 155 sq. ft. per student (772 projected) or 119, 660. In addition to the base allowance square footage of 24, 152 has been added for special needs, technology, remedial and community use of some facilities. This brings the total allowable square footage to143, 812. Community use was calculated at 30% of the total space for the cafeteria, auditorium, gymnasium and other phys. ed. facilities.
3) Using the 2004 approved cost of $195.00 per sq. ft. multiplied by the gross allowable square footage, a maximum allowable cost of $34, 947,315 has been determined for the renovation of the building.

These Educational Specifications in addition to the Enrollment Projections are the basic steps required to initiate a building project. The facility audit (2002) and the air quality assessment (2003) may need to be updated.

As the new School Building Authority begins its work, changes in the regulations, should be monitored to assure compliance.

GREYLOCK

Table I

MT. GREYLOCK MAJOR PROGRAMS & ROOM REQUIREMENTS

Subject	Sections	Sessions	Total	Periods	Rooms Req'd.	Rooms Avail.	Diff.
English							
Eng 9	4	7	28	49	0.6		
H.Eng 9	2	7	14	49	0.3		
Eng 10	3	7	21	49	0.4		
H.Eng 10	3	7	21	49	0.4		
Eng 11	4	7	28	49	0.6		
H. Eng 11	2	7	14	49	0.3		
Eng 12	3	7	21	49	0.4		
H.Eng 12	2	7	14	49	0.3		
Eng 7	6	7	42	49	0.9		
Eng 8	7	7	49	49	1.0		
IntroDrama	2	7	14	49	0.3		
CreativeWriting	2	7	14	49	0.3		
CreativeWriting II	1	7	7	49	0.1		
APEng11	1	7	7	49	0.1		
APEngLit	1	7	7	49	0.1		
Total English					**6**	**8**	**2**
SPED - OTHER							
Peer Resource	1	7	7	49	0.1		
Sports Medicine	1	7	7	49	0.1		
Child Dev.	1	7	7	49	0.1		
Acad. Supp.9	4	7	28	49	0.6		
Acad. Supp10	4	7	28	49	0.6		
Acad. Supp. 11/12	5	7	35	49	0.7		
Dev. Eng.	1	7	7	49	0.1		
Dev. Read. MS	1	7	7	49	0.1		
Dev. Math9/10	1	7	7	49	0.1		
Dev. Math 11/12	3	7	21	49	0.4		
Acad. Supp. 7	3	7	21	49	0.4		
Dev. Eng. MS	2	7	14	49	0.3		
Dev. Math	1	7	7	49	0.1		
Acad. Supp. 8	3	7	21	49	0.4		
Speech/Lang 6	1	7	7	49	0.1		
Speech/ Lang.7	1	7	7	49	0.1		
MS Reading MS	2	7	14	49	0.3		
Dev. Math 8	1	7	7	49	0.1		
Lang. Comm.	1	7	7	49	0.1		
Pre Voc. Life Skills	2	7	14	49	0.3		
					6	**8**	**2**
Mathematics							
Algebra	4	7	28	49	0.57		
H. Algebra	1	7	7	49	0.14		
Geom.	3	7	21	49	0.43		
H. Geom	3	7	21	49	0.43		
Alg. II	3	7	21	49	0.43		

GREYLOCK

Table I cont'd.

Subject	Sections	Sessions	Total	Periods	Rooms Req'd.	Rooms Avail.	Diff.
Mathematics cont'd.							
H. Alg. II	3	7	21	49	0.43		
Pre-Cal	2	7	14	49	0.29		
H. Pre-Cal	1	7	7	49	0.14		
H. Calculus	1	7	7	49	0.14		
Topics in Math	1	7	7	49	0.14		
Statistics	1	7	7	49	0.14		
Math 7	4	7	28	49	0.57		
Adv. Math 7	2	7	14	49	0.29		
Math 8	4	7	28	49	0.57		
Adv. Math 8	3	7	21	49	0.43		
AP Cal	1	7	7	49	0.14		
Total Mathematics					**5**	**8**	**3**
Science							
Integrated Sc.	5	7	35	49	0.71		
Biology	3	7	21	49	0.43		
Applied Bio	1	7	7	49	0.14		
Chem.	3	7	21	49	0.43		
H.Chem	3	7	21	49	0.43		
Applied Chem	1	7	7	49	0.14		
Physics	1	7	7	49	0.14		
H. Physics	1	7	7	49	0.14		
Enviro Sc	1	7	7	49	0.14		
Ant. & Phy.	2	7	14	49	0.29		
Science 7	6	7	42	49	0.86		
Science 8	7	7	49	49	1.00		
AP Chem	2	7	14	49	0.29		
APChem Lab	2	7	14	49	0.29		
AP Physics	1	7	7	49	0.14		
AP Physics Lab	1	7	7	49	0.14		
Total Science					**6**	**9**	**3**
Foreign Languages							
Latin II	2	7	14	49	0.29		
Latin III	2	7	14	49	0.29		
French II	1	7	7	49	0.14		
French III	1	7	7	49	0.14		
H. French IV	1	7	7	49	0.14		
Adv. French	1	7	7	49	0.14		
Spanish I	3	7	21	49	0.43		
Spanish II	4	7	28	49	0.57		
Spanish III	3	7	21	49	0.43		
H. Spanish IV	3	7	21	49	0.43		
Latin 7	2	7	14	49	0.29		
French 7	1	7	7	49	0.14		
Spanish 7	2	7	14	49	0.29		
Latin 8	2	7	14	49	0.29		
French 8	1	7	7	49	0.14		

GREYLOCK

Table I cont'd.

Subject	Sections	Sessions	Total	Periods	Rooms Req'd.	Rooms Avail.	Diff.
Foreign Languages cont'd.							
Spanish 8	2	7	14	49	0.29		
AP Latin Lit	1	7	7	49	0.14		
AP Spanish	1	7	7	49	0.14		
Total Foreign Languages					**5**	**8**	**3**
Business/Technical							
Acct I	1	7	7	49	0.14		
Acct II	2	7	14	49	0.29		
Basic Keyboard	1	7	7	49	0.14		
Intro Business	1	7	7	49	0.14		
Pers. Fin/Invest	1	7	7	49	0.14		
BCC Careers	1	7	7	49	0.14		
Comp. Graphics	2	7	14	49	0.29		
Comp. Graphics II	2	7	14	49	0.29		
WEB Design	2	7	14	49	0.29		
WEB Design II	2	7	14	49	0.29		
Tech.Draw	3	7	21	49	0.43		
Tech.Draw II	1	7	7	49	0.14		
Total Business/Tech.					**3**	**3**	**0**
Social Studies							
World Hist & Geo I	7	7	49	49	1.00		
World Hist & Geo II	7	7	49	49	1.00		
U.S. Hist	5	7	35	49	0.71		
Psychology	2	7	14	49	0.29		
Holocaust	2	7	14	49	0.29		
Vietnam Conflict	2	7	14	49	0.29		
Soc Studies 7	6	7	42	49	0.86		
Soc Studies 8	7	7	49	49	1.00		
AP US Hist	1	7	7	49	0.14		
AP Euro Hist	1	7	7	49	0.14		
Total Social Studies					**6**	**8**	**2**
Art							
Intro Studio Art I	3	7	21	49	0.43		
Intro Studio Art Alt	1	7	7	49	0.14		
Intro Studio Art II	3	7	21	49	0.43		
Adv Studio Art I	2	7	14	49	0.29		
Adv Studio Art II	1	7	7	49	0.14		
Printmaking	1	7	7	49	0.14		
Painting	1	7	7	49	0.14		
Art theory	1	7	7	49	0.14		
Stained Glass	5	7	35	49	0.71		
Adv Stained Glass	3	7	21	49	0.43		
Total Art					**3**	**3**	**0**

GREYLOCK

Table I cont'd.

Subject	Sections	Sessions	Total	Periods	Rooms Req'd.	Rooms Avail.	Diff.
Health							
Tech/Art 7	4	7	28	49	0.57		
Art/Tech 7	4	7	28	49	0.57		
Art/Health 8	4	7	28	49	0.57		
Health/Art 8	4	7	28	49	0.57		
Total Health					**2**	**2**	**0**
Music							
MusicComp 7	2	7	14	49	0.29		
Comp/Music 7	2	7	14	49	0.29		
Comp I/Comp II 8	4	7	28	49	0.57		
PA Band	1	7	7	49	0.14		
PA Chorus	1	7	7	49	0.14		
PA Orchestra	1	7	7	49	0.14		
PA Orchestra/Chor	1	7	7	49	0.14		
PABandOrchChorus	1	7	7	49	0.14		
PABandChorus	1	7	7	49	0.14		
PAOrchBand	1	7	7	49	0.14		
AmerPopMusic	1	7	7	49	0.14		
Piano I	1	7	7	49	0.14		
Piano II	1	7	7	49	0.14		
Guitar I	1	7	7	49	0.14		
Guitar II	1	7	7	49	0.14		
MS Band	1	7	7	49	0.14		
MS Chorus	1	7	7	49	0.14		
MS Orchestra	1	7	7	49	0.14		
MS Orch Chorus	1	7	7	49	0.14		
MSBandOrchChorus	1	7	7	49	0.14		
MS Band Chorus	1	7	7	49	0.14		
MSOrchBand	1	7	7	49	0.14		
Total Music					**4**	**3**	**-1**
	Total Ed. Rooms				**45**	**60**	**15**
Other							
AD Office						1	
Charter School						1	
	Total All Rooms					**62**	

Note: Fractions of spaces have been rounded off to represent whole spaces

Table II
Spaces by Program

Room #	Sq. Ft.	Use
Soc. Stud.		
N32	767	Soc. Stud.
N35	773	Soc. Stud.
N42	756	Soc. Stud.
51	928	Soc. Stud.
52	924	Soc. Stud.
53	928	Soc. Stud.
54	878	Soc. Stud.
55	878	Soc. Stud.
Total	**6832**	
English		
C1	910	English
C2	836	English
N36	773	English
N38	773	English
56	876	English
57	844	English
58	866	English
59	876	English
Total	**6754**	
Other Ed. Space		
S1	618	Drafting
S2	1663	Stained Glass
S3	2216	MS Technology
Total	**4497**	
Other Class Space		
E49	920	AD Office
W27	885	Charter School rental
Total	**1805**	

Room #	Sq. Ft.	Use
SPED		
N34A	661	SPED
N41	773	SPED
N43	882	SPED
S14	881	SPED
S16	756	SPED
E44	616	SPED
E47	1147	SPED
N33	767	Reading
Total	**6483**	
Math		
N34B	689	Math
N39	778	Math
S4	759	Math
S5	762	Math
S7	762	Math
S8	759	Math
S9	770	Math
S12	762	Math
Total	**6041**	
Business & Computer		
W25	879	Comp. Lab.
S6	753	HS Comp. Lab.
W28	907	Comp. Lab.
Total	**2539**	

Room #	Sq. Ft.	Use
Science		
W20	869	Science
W21	1093	Sc. Lab.
W22	872	Science
W23	983	Science
W26	888	Science
65	1092	Sc. Lab.
66	1001	Sc. Lab.
67	1095	Sc. Lab.
68	1093	Sc. Lab.
Total	**8986**	
For. Language		
S10	770	For. Lang.
S11	881	For. Lang.
S13	762	For. Lang.
S15	762	For. Lang.
63/64	1115	For. Lang.
N37A	770	For. Lang.
N37B	669	For. Lang.
N40	773	For. Lang.
Total	**6502**	
Art		
E45	1011	Art
E46	1248	Art
Total	**2259**	
Health		
E48	974	Health
E50	1167	Health
Total	**2141**	

Room #.	Sq. Ft.	Use
	Miscellaneous & Core Space	
Comp. Lab.	638	
Fac. Lib.	83	
Conf. Rm.	643	
Library	7655	
Tech.	599	
AV	899	
MGFA	483	
Faculty work rm.	978	
Cafeteria	4634	
Kitchen	3531	
Faculty Dng.	300	
Stage	1928	
Auditorium	4188	
College Center	357	
Guidance	2400	
Orchestra	1550	
Chorus	855	
Band Room	1712	
Art Gallery	400	
District Offices	2246	
Nurse	1046	
61 greenhouse	172	Storage
62 greenhouse	957	Storage
SPED Office	902	
Yearbook	300	
Boy's Locker	6653	
Girl's Locker	4365	
Total	**50,474**	

Room #.	Sq. Ft.	Use
	Phys. Ed.	
Gymnasium	12235	
Wt. Rm.	1950	
Exercise Rm.	4062	
Total	**18247**	

Total # Avail. Ed Spaces	62
Science labs	5
Computer Labs	3
Other Ed. Space	3
Net Classrooms	**51**

Total Sq. Ft.

Educational Space	73186
Misc & core space	50474
Total	**123,660**

School Governance, Environment, & Structural Support Services
Middle/High School Educational Specifications

Date: **December 28, 2004** Version #: **1**

School District: **Mt. Greylock Regional School District**

School Name: **Mt. Greylock Regional School**

Completed by: **Merrimack Education Center**

Type of Project: New School for _____ Students
Addition of _____ Seats & Core
Renovation of _____ Spaces
Acquisition/Renovation of **772** Seats & Related Core Facilities

ENROLLMENT INFORMATION

Grades	Current Enrollments as of **10/1/04** (Yr.)	Projected Enrollments as of **2013-14** (Yr.)
Gr 7	133	135
Gr 8	122	132
Gr 9	114	126
Gr 10	117	128
Gr 11	127	125
Gr 12	121	126
TOTAL	734	772

In order to determine the teaching station for the projected enrollment, the following information is needed to complete the Tables in this form.

1) Projected students in each class: the total number of students who will be taking each subject.
2) Class size: the maximum proposed class size for each project.
3) Sections: the number of sections of each course needed to serve the projected enrollment. Divide the total projected enrollment by the class size
4) Sessions per week: the number of times the class meets each week (usually 3 or 5).
5) Periods per week: the number of periods each day times 5.
6) Teaching stations required for program: multiply the number of sections by the sessions per week that each subject is taught.

In order to determine the number of NEW teaching stations needed for projected enrollments, the following information is needed:

1) After you determine the total number of teaching stations required, subtract the number of teaching stations currently available from the teaching stations required to support your educational program, to determine the number of new stations that will be needed to serve the projected enrollment (only needed for additions).

2) Determine the net area of each station, both new and existing (proposed renovations). Include storage space:

Subtotal the net basic educational space, the net miscellaneous space and the gross square footage; these figures will be used in the space computations on the last page and are necessary to evaluate the efficiency of the structure.

The following column designations and calculations will determine the net educational space to be renovated and/or newly constructed:

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Subject	Projected Students per Class	Class Size	Sections	Sessions per Week	Total Sessions	Periods per Week	Total Stations Required	Stations Available	Sq. Ft. each Station	Total Area Available	New Satations Required	Sq. Ft. each Station	Total Area New

Calculations

Step 1: Sections

$$\frac{B}{C} = D$$

Step 2: Total Sessions

$$D \times E = F$$

Step 3: Stations Required

$$\frac{F}{G} = H$$

Step 4: New Stations Needed

$$H - I = L$$

Step 5: Total Area Available

$$I \times J = K$$

Step 6: Total New Area to be built

$$L \times M = N$$

TABLE I - BASIC EDUCATIONAL SPACE FOR PLANNED PROGRAM

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Subject	Projected Students per Class	Class Size	Sections	Sessions per Week	Total Sessions	Periods per Week	Total Stations Required	Stations Available	Sq. Ft. each Station	Total Area Available	New Stations Required	Sq. Ft. each Station	Total Area New
English	734	17	43	7	301	49	6	8		6,754	0		0
Math	629	17	37	7	259	49	5	8		6,041	0		0
Science	680	17	40	7	280	49	6	9		8,986	0		0
Foreign Language	561	17	33	7	231	49	5	8		6,502	0		0
Bus & Comp Tech	323	17	19	7	133	49	3	3		2,539	0		0
Social Studies	680	17	40	7	280	49	6	8		6,832	0		0
Health	272	17	16	7	112	49	2	2		2,141	0		0
Art	357	17	21	7	147	49	3	2		2,259	0		0

TABLE I - Continued

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Subject	Projected Students per Class	Class Size	Sections	Sessions per Week	Total Sessions	Periods per Week	Total Stations Required	Stations Available	Sq. Ft. each Station	Total Area Available	New Stations Required	Sq. Ft. each Station	Total Area New
PHYSICAL EDUCATION													
Teaching Station 1 Gym							4	4		12,335	0		0
Teaching Station 2 Weight Rm							1	1		1,950	0		0
Teaching Station 3													
Teaching Station 4													
Other: Exercise Rm							1	1		4,062	0		0
SPECIAL EDUCATION													
Special Needs:							7	7		5,716	0		0
Special Needs: Office							1	1		902			
Special Needs:													
Small Group													
Small Group													
Bilingual 1													
Bilingual 2													
Collaborative Class													
Other: Reading							1	1		767	0		0

TABLE II - SPACE NEEDS SUMMARY

Total columns H, I, K, & N from Table I for all regular classroom curriculum including only those business and science courses that do NOT require specialized spaces; total all specialized teaching stations needed for basic educational use; then total all miscellaneous educational space and fill out the table below.

Teaching Station	Number Needed	Sq. Ft. Area	Number Available	Sq. Ft. Area	Number New Stations Needed	Sq. Ft. Area
GENERAL CLASSROOMS						
English	6	6,754	8	6,754	0	
Math	5	6,041	8	6,041	0	
Science	6	8,986	9	8,986	0	
Foreign Language	5	6,502	8	6,502	0	
Bus & Comp Tech	3	2,539	3	2,539	0	
Social Studies	6	6,832	8	6,832	0	
Health	2	2,141	2	2,141	0	
Art	3	2,259	2	2,259	0	
Subtotal General Instructions:		42,054		42,054		
SPECIALIZED TEACHING STATIONS						
Stained Glass Shop	1	1,663	1	1,663	0	
Orchestra	1	1,550	1	1,550	0	
Band	1	1,712	1	1,712	0	
Chorus	1	855	1	855	0	
Drafting	1	618	1	618	0	
M. S. Tech	1	2,216	1	2,216	0	
Computer Lab	1	638	1	638	0	
Subtotal Specialized				9,252		

TABLE II - Continued

MISCELLANEOUS EDUCATIONAL SPACE

Station/Space	Sq. Ft. Required	-	Sq. Ft. Available	=	New Area Needed	Comments
Administration	2,246	-	2,246	=	0	
Auditorium/Stage	6,116	-	6,116	=	0	Capacity: 350
Cafeteria	4,634	-	4,634	=	0	Seatings: 275/3 lunch periods
Guidance & College Ctr	2,757	-	2,757	=	0	
Health Suite	1,046	-	1,046	=	0	
Library/IMC	7,655	-	7,655	=	0	
Locker/Shower Rooms	11,018	-	11,018	=	0	
Kitchen	3,531	-	3,531	=	0	
Faculty Library	83	-	83	=	0	
Teachers' Planning & Dining	1,278	-	1,278	=	0	
Other: Green Houses (2)	1,129	-	1,129	=	0	
Other: Art Gallery	400	-	400	=	0	
Conference Rooms (2)	643	-	643	=	0	
Studio/AV/Technollogy	1,981	-	1,981	=	0	
Yearbook Office	300	-	300	=	0	
A. D. Office	920	-	920	=	0	
Charter School	885	-	885	=	0	
Subtotal Miscellaneous Space	46,622	-	46,622	=	0	

OTHER SPACE (Non-Educational): 55,557 Sq. Ft.

...includes lavatories, hallways & circulation, mechanical spaces, non-educational material storage and wall thickness. This can be calculated by subtracting the

total of the basic and miscellaneous educational space from the anticipated gross square footage of the facility. Other space should be approximately 20 - 25% of the educational space for new construction and must not exceed 30% for approved school construction projects. This percentage is called the loading factor and is determined by dividing non-educational space by educational space and multiply by 100:

$$\frac{\text{Sq. Ft. Non-Educational Space} \times 100}{\text{Sq. Ft. Educational Space}} = \% \text{ Loading Factor}$$

This efficiency factor is the relationship of the educational space to the gross square footage and is typically 75 - 85%. This factor reflects the overall efficiency of structural design and is proportional to the loading factor. A building with a loading factor of 20% will have an efficiency of approximately 80%.

Pg.

TABLE III - SUMMARY OF SPACES FOR MAXIMUM CONSTRUCTION COST ALLOWANCE

able C Summarizes the square footage of the educational program space in Tables A and B to determine the maximum allowable ost for the proposed school project.

able III	(I) New Construction		(II) Renovated Space		(III) Total Planned Space	
escription of Space	Sq. Ft.	%	Sq. Ft.	%	Sq. Ft.	%
Basic Educational			77,038		77,038	
Miscellaneous Educational			46,622		46,622	
SUBTOTAL Basic + Misc.)			123,660		123,660	
Other Space			55,557		55,557	
TOTAL Gross Educational + Other)			179,217		179,217	

D. MAXIMUM ALLOWABLE SQUARE FOOTAGE

he allowable square feet per pupil as provided for in the School Building Assistance Regs is 115 for elementary schools. The llowing other spaces may be approved in excess of this base and should be included in the table above.

pecial Needs: 6,618 Sq. Ft.
BE: _____ Sq. Ft.
lemedial: 767 Sq. Ft.
Collaboratives: _____ Sq. Ft.
Community: 12,034 Sq. Ft.
Technology: 4,733 Sq. Ft.

Total Allowable Square Feet in Excess of Base: 24,152 Sq. Ft.

E. MAXIMUM ALLOWABLE CONSTRUCTION COST

he cost allowed per square foot for new school construction is published in the regulations and updated annually. Renovation costs ary widely depending on the age and overall condition of the existing schoolhouse. Under normal circumstances, renovation costs hould not exceed 50% of the cost of new construction per square foot. Proposals for which the renovation costs are estimated to XCEED 50% of new construction will be reviewed on an individual basis by DOE staff prior to recommendation too the Board for pproval.

1. (772 135/155) + 24,152 Sq. Ft. = 143,812 Sq. Ft.
(Projected Enrollment x 135/) + Total Approved Excess (table D) = Maximum Gross Sq. Ft.
(Projected Enrollment x 155)

2. $_____ x _____ Sq. Ft. = $_____ New
Allowable Cost per Sq. Ft. x Gross Sq. Ft. New = Maximum Allowable Cost New

3. $195.00 x 179,217 Sq. Ft. = $ 34,947,315 Renovation
Allowable Cost per Sq. Ft. x Renovated Sq. Ft. = Allowance for Renovations

$ _____ + 34,947,315 = $ 34,947,315
NEW + RENOVATIONS = MAXIMUM ALLOWABLE COST

REFERENCED STATE REGULATIONS

by the district school committee or other local agency or office having lawful control of community programs. Community school spaces shall be included within the gross square footage established in 603 CMR 38.00 unless the Commissioner specifically approves additional space based on a demonstrable community need that cannot be accommodated within those limitations.

(2) **Planned Enrollment** The Department and the applicant shall agree on a planned enrollment for the school project. The planned enrollment shall be consistent with demonstrable need.

(3) **Per Pupil Space Allowance** The Commonwealth shall share in construction of school facilities within the following limitations in gross square footage, determined according to the method of computation contained in 603 CMR 38.05(6):

(a) Elementary Schools - not more than 115 gross square feet per pupil in planned enrollment.
(b) Middle Schools/Junior High Schools - not more than 135 gross square feet per pupil in planned enrollment.
(c) Academic High Schools - not more than 155 gross square feet per pupil in planned enrollment.
(d) Vocational Technical Schools - not more than 225 gross square feet per pupil in planned enrollment.
(e) Comprehensive High Schools - not more than 225 gross square feet per planned vocational technical student enrollment plus not more than 155 gross square feet per planned academic pupil enrollment.

(4) **Space Allowance by Program Activity** The standards set forth in Tables 1 through 3 shall be followed in planning school construction and expansion for elementary, junior high/middle, and secondary schools for which State school building assistance funds are sought.

(5) **Space Allowance Exceptions:**

(a) The Commissioner may approve reasonable departures from the gross square footage requirements to accommodate proposed additions to existing school buildings when such departures will be consistent with the intent of 603 CMR 38.00 to provide adequate, safe, cost effective and programmatically sound school projects.
(b) The applicant shall assure that any capital construction project provides adequate and appropriate space to accommodate early childhood programs as appropriate and students with special needs or linguistic minority students who lack for space are not currently served in regular public school facilities. The Commissioner may grant an exception to the space allowance limitations if needed to accomplish these purposes.
(c) In the case of open plan buildings, the commissioner may approve reasonable variations from the size of the listed program spaces with adjustment in gross project allowances where it can be demonstrated that the planning for such facility reflects good educational practice.
(d) Spaces for special education classes/programs will receive special consideration, in the discretion of the Commissioner, notwithstanding the gross square footage allowances contained in 603 CMR 38.00.
(e) Other exceptions to the minimum and maximum program space allowances may be granted at the discretion of the Commissioner or the Board.

(6) **Space Computations**. Gross and net square footage and perimeter measurements shall be reported with all preliminary, revised, and final drawings submitted for approval, and shall be computed according to the following methods:

(a) *Gross Square Footage* The gross area of a building is the sum of all areas of the several floors, including mezzanines, stairwells, and basements having a floor slab and 7'6" or more headroom. Additionally covered walkways, roofed-over areaways or courts, and similar areas shall be included in the gross area at one half their actual area. All horizontal measurements shall be taken from the exterior face of enclosing walls, at the plane of the floor. The following shall not be included in gross area computation: basements having no floor slab or less than 7'6" headroom; pipe trenches; retaining walls; roof overhangs; exterior terraces; and courts open to the sky.
(b) *Net Square Footage* The net area of individual spaces shown on approved educational specifications and included in the plans shall be measured from the inside face of enclosing walls and partitions. Wall thicknesses shall be excluded.

1. "Basic Instructional Spaces" (classrooms) shall include the net area of all nonspecialized and special subject teaching areas, including directly-related preparation and equipment storage rooms. Do not include the area of such spaces as ancillary toilets, wardrobes, and teachers' supply closets.

2. "Miscellaneous Educational Space" shall include the net area of miscellaneous specified or required educational space, such as gymnasium locker rooms, cafeteria dining areas, kitchens, administration offices, health service unit, guidance quarters, teacher workrooms, storage, community rooms and serving rooms.

38.05 continued

TABLE 2
JUNIOR HIGH AND MIDDLE SCHOOL PROGRAM STANDARDS

Program spaces for junior high and middle schools shall be shared in by the Commonwealth if the fall within these ranges. A variation of 5% is permitted.

All spaces exclusive of storage	Minimum - Maximum (net area)
Classrooms 1. Small Group Seminar 2. Regular Interchangeable (20-30 pupils) 3. Large Group (80-125 pupils) 4. Storage	 300 - 500 square feet 750 - 850 square feet 1500 - 2000 square feet as needed
Computer Labs/Work Stations	30 square feet per work station
Art 1. General Area (storage not incl.) 2. Specialized Areas (storage not incl.) 3. Storage	 1200 - 1400 square feet 600 - 1200 square feet min. 100 -200 square feet/art room
Music 1. Rehearsal (band, chorus, etc.) 2. Theory & Choral 3. Practice Rooms 4. Ensemble Rooms 5. Storage	 1400 - 1600 square feet 900 - 1200 square feet 75 -130 square feet up to 200 square feet each as needed
Office Technology	1200 -1400 square feet
Family & Consumer Science	1400 -2400 square feet
Life Management Skills (incl. computer & demo space)	2400 -2600 square feet
Technology Education 1. Unified Lab 2. Technical Illustration (computer aided drafting)	 up to 100 square feet/pupil each lab. Min. 2000 square feet 1200 -1400 square feet
Science	1000 - 1200 square feet
Physical Education (2 stations) Additional teaching stations	6000 - 7500 square feet up to 3000 square feet each

38.05: continued

TABLE 3
SECONDARY SCHOOL PROGRAM STANDARDS

Program spaces for a secondary school shall be shared in by the Commonwealth if the fall within these ranges. A variation of 5% is permitted.

All spaces exclusive of storage	Minimum - Maximum (net area)
Classrooms 1. Small Group Seminar 2. Regular Interchangeable (20-30 pupils) 3. Large Group (80-125 pupils)	 300 - 500 square feet 750 - 850 square feet 1500 - 2000 square feet
Computer Labs/Work Stations	30 square feet per work station
Art 1. General Area (storage not incl.) 2. Specialized Areas (storage not incl.) 3. Storage	 1200 - 1400 square feet 600 - 1200 square feet min. 100 -200 square feet/art room
Music 1. Rehearsal (band, chorus, etc.) 2. Theory & Choral 3. Practice Rooms 4. Ensemble Rooms	 1400 - 1600 square feet 900 - 1200 square feet 75 -130 square feet up to 200 square feet each
Office Technology	1200 -1400 square feet
Family & Consumer Science	1400 -2400 square feet
Technology Education 1. Unified Lab 2. Technical Illustration (computer aided drafting)	 up to 100 square feet/pupil each lab. Min. 2000 square feet 1200 -1400 square feet
Science 1. Lecture-Laboratory 2. Demonstration/General Science	 1000 - 1200 square feet 900 - 1000 square feet
Physical Education 1. Gymnasium (2 stations) 2. Additional teaching stations	 6200 - 7500 square feet 1200 - 3500 square feet
Administration	up to 1500 square feet
Guidance	800 - 1000 square feet
Health	500 - 1000 square feet
Library (Instructional Materials Center) Reading room-up to 15% of enrollment x 40 square feet - maximum. (Other areas may be added, if planned, i.e., office, conference, etc.)	
Auditorium - Seating for not more than the planned enrollment nor more than 1000 persons. If the planned enrollment exceeds 1000, allow 7 square feet per person maximum.	
Cafeteria - 15 square feet per pupil computed to accommodate not more than ½ nor less than 1/3 the planned enrollment	

38.05 continued

3. "Other" square footage is determined by subtracting "*Basic Instructional*" and "*Miscellaneous Educational*" spaces, determined as above, from the calculated gross area. Thus, "Other" will include wall thicknesses; corridors, stairways, and other circulation spaces; general storage areas; custodians' closets and receiving areas; toilets; and heating and mechanical spaces.

(c) *Perimeter*. The perimeter of a building shall be the sum of the lineal length of the enclosing walls (including piers, wall extensions and courts) taken at the plan of the floor level, including finished basements.

38.06: Cost Standards: Capital Construction

(1) Grants for capital construction projects approved under 603 CMR 38.00 shall be computed at not more than the following amounts per square foot.

Elementary School	~~$161.00 per square foot~~	SEE
Middle School/Junior High School	~~$171.00 per square foot~~	NEW
High School	~~$183.00 per square foot~~	
Vocational School	~~$195.00 per square foot~~	RATES

(2) The square foot costs listed in 603 CMR 38.06(1) shall include the cost of the general contract fees, all equipment, allowable site preparation, site development, insurance, contingency amounts and miscellaneous costs and shall apply to projects approved after June 1, 1999.

3) For the purpose of calculating the state construction grant, the estimated approved cost and the final approved cost for a school project shall not exceed the cost that would result by multiplying the gross square footage per pupil by the planned enrollment and by multiplying the result by the established cost per square foot.

(4) The provisions of 603 CMR 38.05 and 38.06 shall not be deemed to preclude a city, town or regional school district from including in an approved school project such facilities or design as it determines, in addition to those required to conform to minimum program standards and costs. The cost of such additional facilities and design shall not, however, be included in the estimated approved cost and final approved cost on the basis of which the state construction grant is calculated.

(5) In determining the allowable costs for an addition, the Board shall consider the nature of the approved spaces to be added, the nature of the required equipment and other furnishings, the relationship of the addition to other elements of the school and any factor which would cause the cost of the addition to exceed substantially the cost standard established for new construction, and may in its discretion allow the increased costs or a lesser amount. The intent of 603 CMR 38.06(5) is to make allowance for the varied nature of additions to school buildings.

(6) The approved cost of includable renovation in an existing school building to which an addition is proposed shall be determined by comparing the architect's estimate of the actual cost of the proposed renovation with the per square foot cost estimate, as set forth in 603 CMR 38.06(1), of constructing a similar new facility.

The Commonwealth of Massachusetts
Department of Education

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NOTICE OF PUBLIC COMMENT

Pursuant to its authority under M.G.L. c. 69, s.1B, and Chapter 70B, and in accordance with the Administrative Procedure Act, M.G.L. c. 30A, the Massachusetts Board of Education is soliciting public comment regarding proposed changes to 603 CMR 38.00, School Construction Regulations.

The Board of Education is required to review annually the cost standards used for the school building assistance program. For the past several years the Board has used the ENR January building cost index for Boston as a guide for recommended changes. This year's cost index shows an increase of 7.3% over the 2003 index.

The proposed square foot cost allowance for capital construction for fiscal year 2004 reflects this 7.3% increase and is as follows:

	FY 2003 Cost Standards	FY 2004 Proposed Cost Standards
Elementary	$159.00	$171.00
Middle/Jr. High	$169.00	$182.00
High School	$181.00	$195.00
Vocational	$193.00	$209.00

In addition the cost allowance for furnishings and equipment has been increased from $15 to $16 per square foot.

The proposed amendments include reference to the current procedure used for auditing the final construction and interest costs of an approved school project and highlight the need for financial information during various phases of the application and auditing process.

In accordance with Chapter 70B, Section 15, the proposed amendments define procedures governing the sale or lease of school buildings that have received a state construction grant. The Board will also consider minor technical amendments to 603 CMR 38.00.

Copies of the proposed amendments are available on the Department of Education's School Finance web site at finance1.doe.mass.edu, or by calling 781-338-