March 26, 2014

SHARON HIGH SCHOOL

181 Pond Street | Sharon, Massachusetts

Executive Report - 2013 High School Conditions Study

Submitted by

SMMA

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SMMA

EXECUTIVE SUMMARY

1.1 ACKNOWLEDGEMENTS

Symmes Maini & McKee Associates (SMMA) would like to acknowledge the participation and guidance provided by the district administration, study committee, and the teachers and staff of the district.

School Committee

Emily Smith-Lee - Chair

Veronica Wiseman - Vice Chair

Katie Currul-Dykeman - Secretary

Jonathan Hitter

Marcy Kaplan

Laura Salomons

Executive Planning Committee

Timothy Farmer - Superintendent

Glenn Brand - Assistant Superintendent for Finance and Administration

Ken Wertz - Director of Operations

Steven Kaplan Director of Student Services

John Marcus - Director of Technology

Jose Libano - High School Principal

1.2 INTRODUCTION

This Existing Conditions Study is intended to:

- Provide an assessment to identify facility needs to be able to provide optimal conditions for 21st Century learning while sustaining the building components and protecting one of the town's largest assets.
- To explore options for the efficient use of the existing high school building, that are consistent with the educational goals of the district, specifically to maintain and improve the educational opportunities for students.
- Identify options and costs to address existing facility deficiencies and any adjustments of the program and adjacencies needed to fulfill the educational goals.

This report documents both the process and the resulting recommendations arrived at by the Executive Committee. Numerous meetings of the committee were held to discuss the existing building deficiencies (physical and educational) and options explored. In most cases through the process, unanimous or near unanimous agreement was reached on options and direction.

Based on the educational, enrollment and infrastructure needs, conceptual planning options for: renovation; renovation and additions and new construction were developed.

1.3 BACKGROUND

SMMA was tasked with review the high school building for physical condition and educational program. The study includes the high school facility, with a review of any potential impact on the associated wastewater treatment building.

The principal, teachers, and staff were interviewed at the school to understand how the school currently functions educationally and how they might change in the future to better accommodate 21st Century teaching and learning methodologies.

1.4 ENROLLMENT PROJECTIONS

SMMA engaged NESDEC, New England Schools Development Council, to review Sharon's' enrollment history and develop ten year enrollment projections for the district. The Enrollment Projections Report shows that the historical numbers are fairly consistent. The high school ten (10) year projected enrollment numbers decline slightly, from the current 1,152 students, to the 2023/24 projected 1,103 students. It should be noted that 10 year projected numbers are very similar to those of 10 years ago: 2003/04 year of 1,106 students. The projected decline is not enough to make any impact on the facilities needed to support the population.

Within that 10 year period (2013/14 to 2023/24) enrollments do increase to a high point of 1,260 students. We have developed program and space numbers around the population of 1,152 students. We have assumed the delta of 108 students, at the schools' high point, could be accommodated with a slightly higher room utilization rate or slightly higher class sizes or a combination of both.

1.5 EDUCATIONAL EVALUATION AND PROGRAM

In August and September 2013, SMMA met with teachers and staff at the high school to understand the needs of the school as related to teaching and learning and to get their perspective on many issues. In advance of these meetings, a list of questions and issues was distributed to the staff. Refer to Section 2 of this report for more information.

Existing Building Layout and Organization - The high school layout reflects the periods in which they were constructed. Traditional classrooms that line both sides of the corridor, what we call "double loaded corridors". In the older wings of the school, little has changed within the classrooms with the exception of the addition of intelligent technology boards at the front of each room. Many classrooms include traditional furniture that is focused towards the teaching wall.

The school has a departmental structure with little interdepartmental interaction. This is our impression from the teacher interviews and our observations.

21st Century Teaching and Learning Ideas - that are being implemented around the country include alternate delivery models that can affect classroom environments, sizes and types of teaching spaces and organizational structures.

Although many of these ideas were discussed with teachers as part of the interviews, implementation of many of them require modifications to curriculum, professional development for teachers, different types of furniture, and much more. Here are some elements that are part of 21st Century teaching and learning ideas. This is not to say that some may already being practiced at Sharon High School:

- Project Based and interdisciplinary learning
- Flipped classrooms
- Blended learning (combination of traditional and internet based learning)
- Active, student centric learning
- 1:1 technology environment for students and teachers
- Differentiated learning styles and instruction
- STEAM - Science, Technology, Engineering, Arts, Math curriculum
- Peer to peer learning
- Service learning
- Mastery based learning

Many of the Options developed are intended to accommodate many of this ideas and also have the "flexibility" to accommodate future changes in education.

Program of Studies Review - All course offerings from the Program of Studies was reviewed and entered into SMMA's format (Basic Educational Space for Planned Program) for determination of classroom spaces needed to fulfill the program within the current schedule format. Each department is analyzed individually. This process identifies the number of teaching spaces that are needed for the department. A classroom utilization of 85% is applied. This means that rooms are expected to be used 85% of the time. This often results in classrooms used by more than one teacher in any given day.

For the purpose of this analysis, we have limited the course offerings to those currently listed. There is a recognition that course offerings are constantly evolving, often new courses replacing other offerings within the discipline. We have assumed that the number of course offerings (currently at 149) will remain relatively stable, so a change of offerings in the future should not appreciably affect this analysis.

Space Types, Numbers and Sizes - The numbers and types of teaching spaces identified by the above process was then entered into the MSBA's "**Summary of Spaces**" spreadsheet along with the number and sizes of teaching spaces in the current building. The Summary of Spaces identifies all program spaces needed within the school for teaching, support functions, administration etc. This spreadsheet is included as Appendix 4.

This review process identifies that the existing Sharon High School building has a number of areas that do not meet current guidelines by the MSBA. It should be

noted that if a renovation of the school were considered, the MSBA would not necessarily require conformance with their guidelines for all academic and support areas. The one area that they are stricter for compliance with is Science.

The areas that are most out of compliance include:

- Core Academic (general classrooms and science) (14% under MSBA Guidelines)
- Special Education (45% under MSBA Guidelines)
- Music and Art (48% under MSBA Guidelines)
- Vocations and Technology (88% under MSBA Guidelines)
- Health and Physical Education (13% under MSBA Guidelines)
- Dining and Food Service (25% under MSBA Guidelines)
- Medical (50% under MSBA Guidelines)

The Summary of Spaces indicates that the current building is approximately 26,761 net square feet under the MSBA Guidelines. The gross square footage is only 14,500 under the MSBA Guidelines. This indicates that the existing building is inefficient in its use of space for teaching.

The information and analysis from this chapter was used to generate the "items" or building areas for possible upgrades to the current building. Those items were then prioritized by the district administration and assembled into Options.

1.7 EXISTING CONDITIONS

SMMA carefully documented the physical conditions of the building and surrounding site in August 2013. Physical environment, code compliance, and accessibility were addressed. A full description of our findings is documented in Section 3.

1.8 OPTIONS DEVELOPMENT

SMMA developed options to address the current physical plant and future educational needs of the high school. These options vary in scale from physical plant deficiency upgrades to new building construction. The options are explained in more detail in Section 4 of this report.

1.9 CAPITAL PLANNING AND COSTS

Based on the review of options presented by SMMA and the School Committee, SMMA has created a matrix of capital planning options for the high school. The matrix and description of options are in Section 5 of this report.

As discussed with the Executive Committee and School Committee, if MSBA reimbursement is sought for the high school project, the determination of a new school or renovation of the existing school will need to be studied and determined through the MSBA feasibility study process.

EDUCATIONAL PROGRAMMING

2.1 PROGRAMMING SCHEDULE

SMMA conducted twenty (20) programming sessions, meeting with 100 individuals covering all departments', administration and support staff during the month of September, 2013. Meeting minutes can be found in Appendix 2 of this report.

2.2 ENROLLMENT PROJECTIONS

SMMA engaged NESDEC, New England Schools Development Council, to review Sharon's' enrollment history and develop ten year enrollment projections for the district. The Enrollment Projections Report shows that the historical numbers are fairly consistent. The high school ten (10) year projected enrollment numbers decline slightly, from the current 1,152 students, to the 2023/24 projected 1,103 students. It should be noted that 10 year projected numbers are very similar to those of 10 years ago: 2003/04 year of 1,106 students. The projected decline is not enough to make any impact on the facilities needed to support the population.

Within that 10 year period (2013/14 to 2023/24) enrollments do increase to a high point of 1,260 students. We have developed program and space numbers around the population of 1,152 students. We have assumed the delta of 108 students, at the schools' high point, could be accommodated with a slightly higher room utilization rate or slightly higher class sizes or a combination of both.

For the complete NESDEC report detailing the historic or projected enrollment, please refer to Appendix 1.

2.3 EDUCATIONAL PROGRAMMING MEETINGS

Teacher Interviews

During the numerous meetings in September 2013, SMMA met with teachers and staff at the high school to understand the needs of the school as related to teaching and learning and to get their perspective on many issues. In advance of these meetings, the following memo was distributed to all who would participate:

> *Memo to teachers:*
>
> *Shortly, we will be setting up meetings with teachers, staff and students to understand how you currently work and how you would like to in the future. These meetings will focus on teaching and learning. There is a separate and parallel effort reviewing the physical building and its' systems. Those issues such as: temperature and its' control, lighting, acoustics, storage, availability of teacher toilet facilities etc will be addressed separately.*
>
> *Issues we would like you to be thinking about leading up to our meeting include:*
>
> - *What do you like about your current teaching environment / space?*

- *How much of the school / grounds do you use for teaching? Corridors, public spaces, exterior spaces, etc*
- *What would you like to do, that the current environment is hindering or preventing you from doing?*
- *What subject adjacencies would you like to have?*
- *What changes would improve project based learning and interdisciplinary opportunities?*
- *What changes would improve student centric learning opportunities? Self directed learning?*
- *Thoughts on: sustainability of the school building? Integration of sustainability into the curriculum?*
- *Student involvement in the programming and design process?*
- *How would you like to integrate technology into the curriculum?*
- *1:1, technology for every student*
- *Do you envision the exterior environment being part of the overall teaching environment? How?*
- *Does the building environment allow for differentiated instruction?*
- *Other thoughts?*

Most meetings were departmental with numerous participants in each meeting. The meeting reports developed from those meetings record thoughts and comments from those who participated. They do not, by themselves suggest a direction for the future of Sharon High School.

Identified and Reoccurring Themes and Issues

The following are issues that we heard, in some cases from numerous meeting; others from singular meetings as well as observations from the study team:

- Typical classrooms in the older areas of the school are dated and unattractive. Most lack acoustical isolation from sounds from adjacent classrooms and the corridors.
- Gym is too small, lack of alternative PE environments
- Cafeteria is too small and unattractive, traditional serving lines are by nature slow to serve the population. The school serves a large orthodox kosher community, is it possible to accommodate them? The kitchen is old, out of date and inadequate.
- Many science labs are undersized by current guidelines and out of date for current needs
- The school has a strong departmental structure which was not criticized, but as such, lacks a STEM, Science, Technology, Engineering and Math interdisciplinary program. A program that is desired.
- Currently have 50 VHS, Virtual High School, licenses.

- The library is very traditional in layout with a collection that is larger than needed. Reconfiguration of the library for more student collaboration and research would better serve student needs.
- The auditorium, which serves the larger community as well as the high school population has many issues including: lack of appropriate accessibility; visually unappealing; worn seating, wall, ceiling and floor finishes; stage and back stage upgrades needed
- The TV program and studio are very popular with students. The current facilities should be updated to better serve the student demand
- There is little transparency into learning environments that allow for showcasing the activities of the classrooms and showing of student work.
- The entry sequence at the "front door" lacks direct observation of people entering the school. The entry sequence needs to be set up for increased security.
- The building infrastructure has recently been upgraded to support student and teacher wireless needs. Looking to the future for 1:1 technology environments, additional upgrades are likely need to support multiple devices for individuals, e.g. tablets, smart phone and laptop for individuals.
- School need space for tools for the more "tactile" students.
- The High School is part of CHARMS collaborative
- An outdoor adventure course would be beneficial
- IT services need a bigger office, adjacent to the library.
- Currently, the school has 73 copiers. A more centralized copy services approach could more cost effective to operate
- The Guidance department, although accessible to students, is difficult to access by parents and other visitors
- Special education spaces are too few and undersized to serve the needs
- Art and music teaching spaces are inadequate
- The school lacks appropriate display areas for student work

2.4 PROGRAM ANALYSIS

Class Sizes

In accordance with the school department targets, and teacher contractual language:

Class size targets are: maximum of

- AP: 25 - 30 students
- Honors: 25 - 30 students
- Standard: 20 students
- Foundation: 15 students
- Art: 20 students

Curriculum and Space Review

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- Other?

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The form has a column for "Current Students per Subject" and a column for Projected Students per Subject". The form anticipates either an increased or decreased future enrollment. Since Sharon High School population projections are relatively flat, we have assumed the current and future populations are the same.

For the purpose of this analysis, we have limited the course offerings to those currently listed. There is a recognition that course offerings are constantly evolving, often new courses replacing other offerings within the discipline. We have assumed that the number of course offerings (currently at 149) will remain relatively stable, so a change of offerings in the future should not appreciably affect this analysis.

The spreadsheets are included in this report as Appendix 3.

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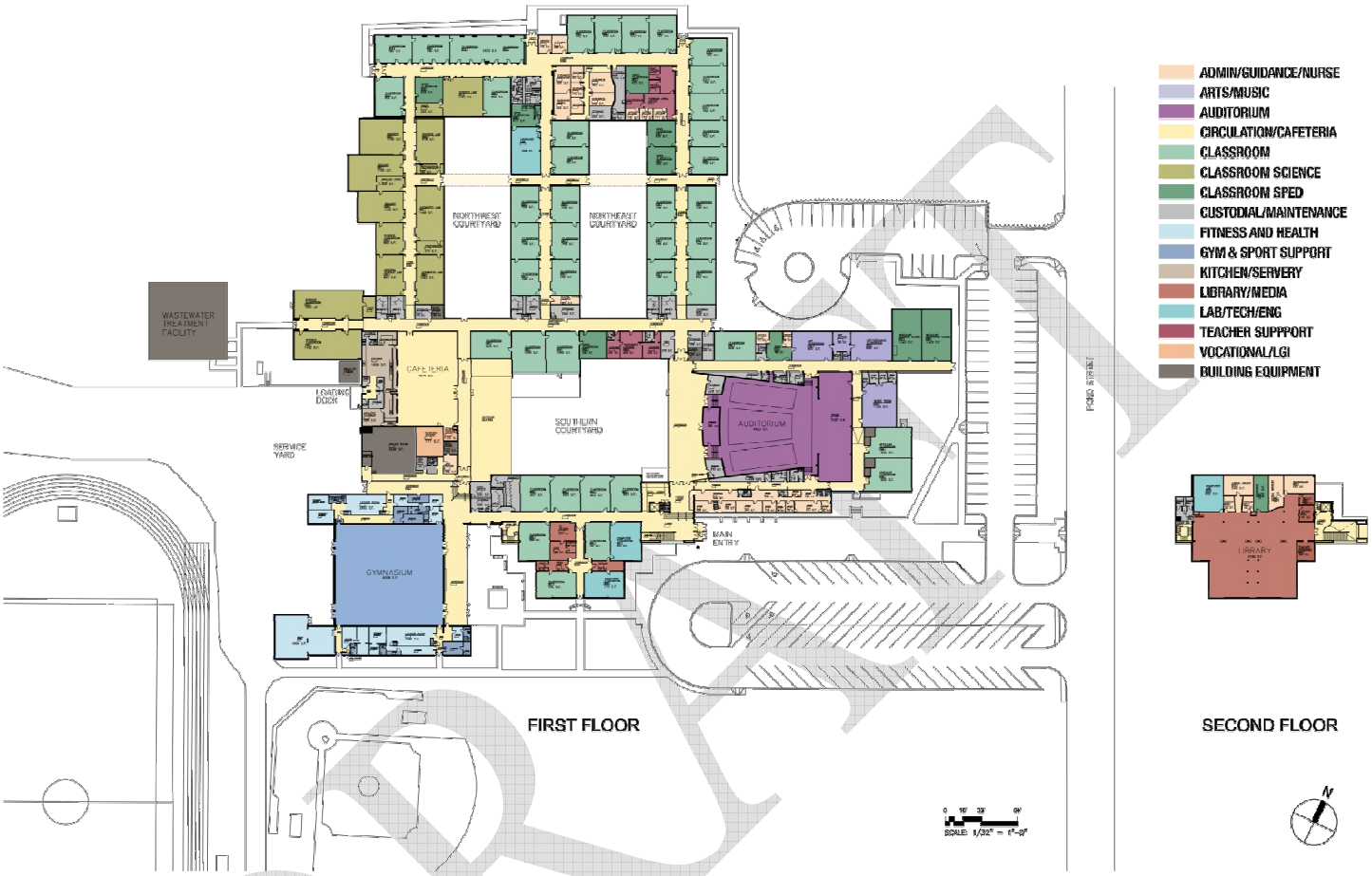
SMMA

EXISTING BUILDING - CURRENT USE OF SPACE



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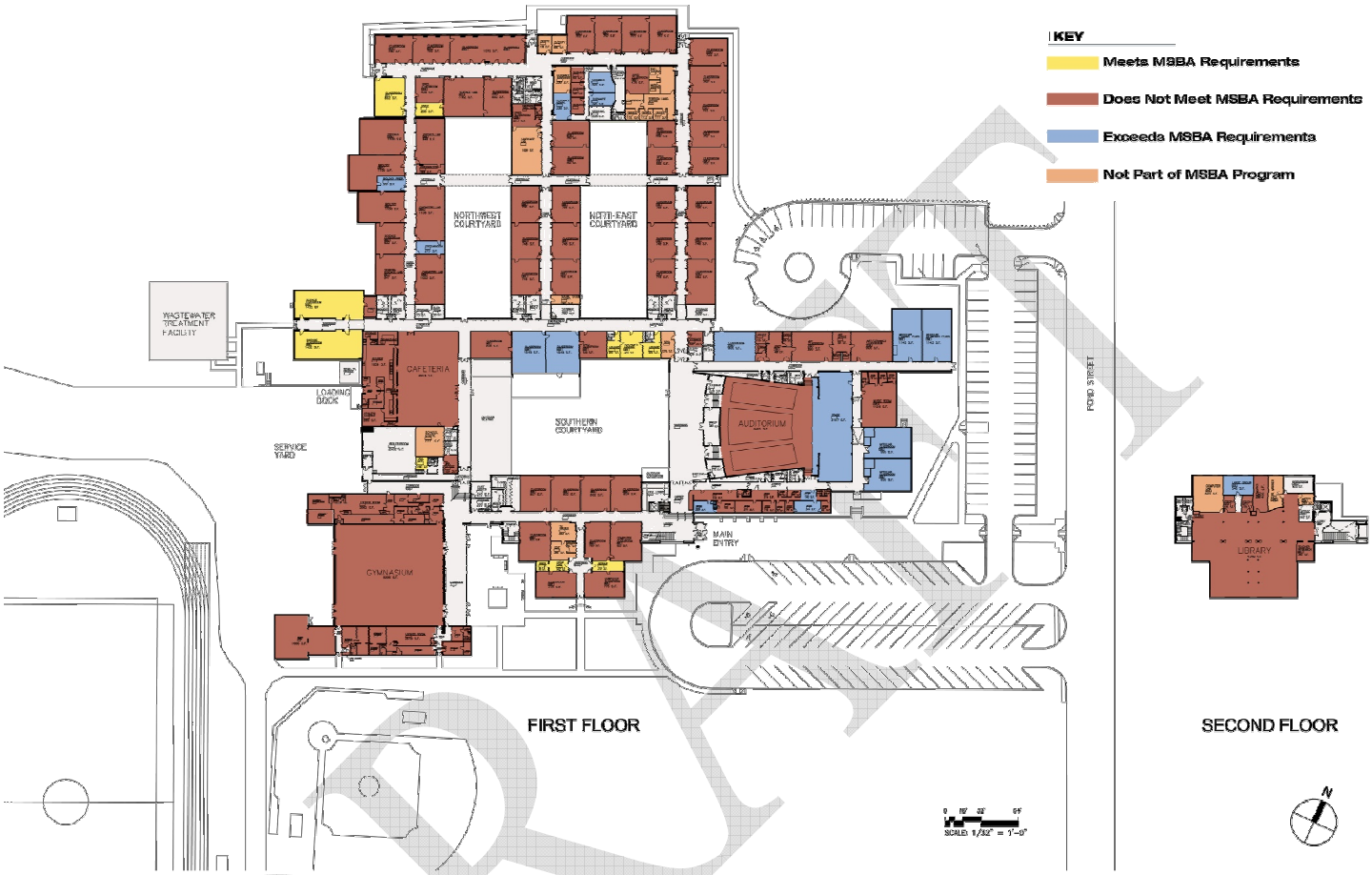
SPACE COMPARISON TO MSBA STANDARDS



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- Medical (50% under MSBA Guidelines)

There are few areas of the building that exceed the MSBA Guidelines.

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SMMA

Appendix 1

Enrollment Projections - NESDEC

Executive Report – 2013 High School Conditions Study

SHARON PUBLIC SCHOOLS

Sharon, MA Historical Enrollment DRAFT

School District: **Sharon, MA DRAFT** **10/11/2013**

Historical Enrollment By Grade

Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
1998	214	**2003-04**	62	244	235	270	300	255	276	265	260	285	284	262	282	278	0	3496	3558
1999	180	**2004-05**	59	196	274	225	278	303	264	268	270	263	304	283	262	272	1	3463	3522
2000	213	**2005-06**	68	200	226	282	236	278	317	276	270	271	260	302	284	264	0	3466	3534
2001	164	**2006-07**	63	213	221	231	284	242	274	314	269	262	282	254	289	280	0	3415	3478
2002	181	**2007-08**	57	189	228	222	233	284	245	275	312	270	280	282	251	287	0	3358	3415
2003	162	**2008-09**	53	196	212	248	221	235	290	255	286	319	272	280	284	248	71	3417	3470
2004	190	**2009-10**	76	222	218	215	257	229	242	297	256	290	318	273	286	281	0	3384	3460
2005	144	**2010-11**	46	207	227	214	272	240	243	282	250	257	318	255	312	310	0	3387	3433
2006	140	**2011-12**	43	195	198	261	224	230	269	240	248	305	251	310	313	277	0	3321	3364
2007	155	**2012-13**	46	207	227	214	272	240	243	282	250	257	318	255	312	310	0	3387	3433
2008	149	**2013-14**	61	187	230	227	224	292	266	248	289	258	258	324	256	314	0	3373	3434

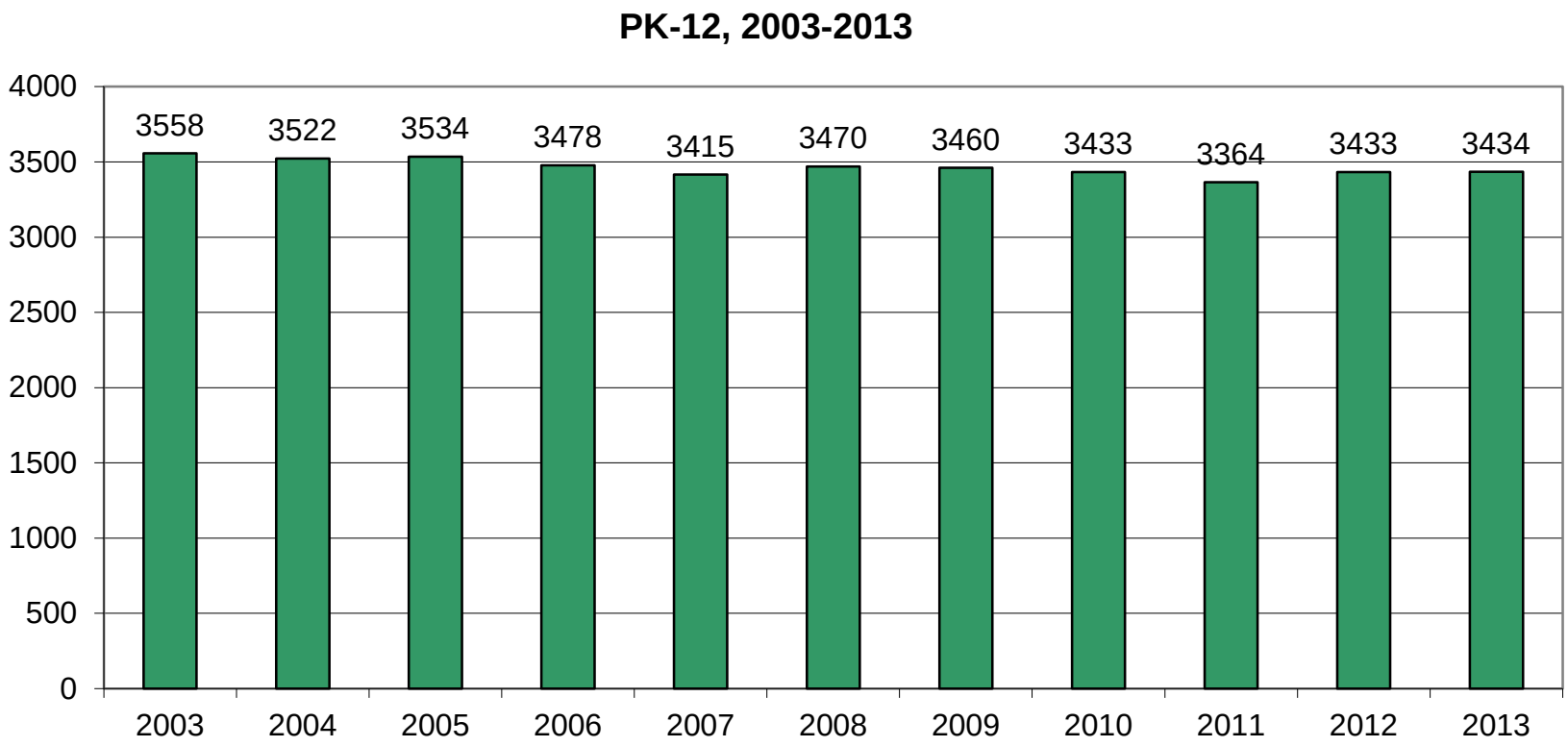
Historical Enrollment in Grade Combinations

Year	K-4	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2003-04	1304	1580	1845	2390	1086	810	545	1651	1106
2004-05	1276	1540	1808	2341	1065	801	533	1654	1121
2005-06	1222	1539	1815	2356	1134	817	541	1651	1110
2006-07	1191	1465	1779	2310	1119	845	531	1636	1105
2007-08	1156	1401	1676	2258	1102	857	582	1682	1100
2008-09	1112	1402	1657	2262	1150	860	605	1689	1084
2009-10	1141	1383	1680	2226	1085	843	546	1704	1158
2010-11	1160	1403	1685	2192	1032	789	507	1702	1195
2011-12	1108	1377	1617	2170	1062	793	553	1704	1151
2012-13	1160	1403	1685	2192	1032	789	507	1702	1195
2013-14	1160	1426	1674	2221	1061	795	547	1699	1152

Historical Percentage Changes

Year	K-12	Diff.	%
2003-04	3496	0	0.0%
2004-05	3463	-33	-0.9%
2005-06	3466	3	0.1%
2006-07	3415	-51	-1.5%
2007-08	3358	-57	-1.7%
2008-09	3417	59	1.8%
2009-10	3384	-33	-1.0%
2010-11	3387	3	0.1%
2011-12	3321	-66	-1.9%
2012-13	3387	66	2.0%
2013-14	3373	-14	-0.4%
Change		**-123**	**-3.5%**

Sharon, MA Historical Enrollment



Sharon, MA Projected Enrollment DRAFT

School District: **Sharon, MA DRAFT** **10/11/2013**

Enrollment Projections By Grade*

Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2008	149		**2013-14**	61	**187**	**230**	**227**	**224**	**292**	**266**	**248**	**289**	**258**	**258**	**324**	**256**	**314**	**0**	**3373**	**3434**
2009	102		**2014-15**	62	**135**	**201**	**248**	**237**	**223**	**320**	**271**	**244**	**317**	**260**	**259**	**350**	**246**	**0**	**3311**	**3373**
2010	125		**2015-16**	63	**166**	**145**	**216**	**259**	**236**	**244**	**326**	**266**	**267**	**319**	**261**	**280**	**337**	**0**	**3322**	**3385**
2011	129		**2016-17**	64	**171**	**179**	**156**	**226**	**258**	**258**	**249**	**320**	**292**	**269**	**320**	**282**	**269**	**0**	**3249**	**3313**
2012	143	(prov.)	**2017-18**	65	**190**	**184**	**193**	**163**	**225**	**283**	**263**	**245**	**351**	**294**	**270**	**345**	**271**	**0**	**3277**	**3342**
2013	130	(est.)	**2018-19**	66	**172**	**205**	**198**	**202**	**162**	**246**	**288**	**258**	**269**	**354**	**295**	**291**	**332**	**0**	**3272**	**3338**
2014	126	(est.)	**2019-20**	67	**167**	**185**	**221**	**207**	**201**	**177**	**251**	**283**	**283**	**271**	**355**	**318**	**280**	**0**	**3199**	**3266**
2015	130	(est.)	**2020-21**	68	**173**	**180**	**199**	**231**	**206**	**220**	**180**	**246**	**310**	**285**	**272**	**383**	**306**	**0**	**3191**	**3259**
2016	132	(est.)	**2021-22**	69	**175**	**186**	**194**	**208**	**230**	**226**	**224**	**177**	**270**	**312**	**286**	**294**	**368**	**0**	**3150**	**3219**
2017	132	(est.)	**2022-23**	70	**175**	**189**	**200**	**203**	**207**	**252**	**230**	**220**	**194**	**272**	**313**	**309**	**283**	**0**	**3047**	**3117**
2018	130	(est.)	**2023-24**	71	**172**	**189**	**204**	**209**	**202**	**227**	**257**	**226**	**241**	**195**	**273**	**338**	**297**	**0**	**3030**	**3101**

*Projections should be updated on an annual basis.

Based on an estimate of births — Based on children already born — Based on students already enrolled

Births through 2011 were obtained from the MADPH; for 2012 the Town Clerk has recorded 139 births to which NESDEC added 4, the average by which the MADPH exceeds the Town Clerk's local total.
Births from 2013 onward are a rolling five-year average, which NESDEC has found to be the most accurate.

Projected Enrollment in Grade Combinations*

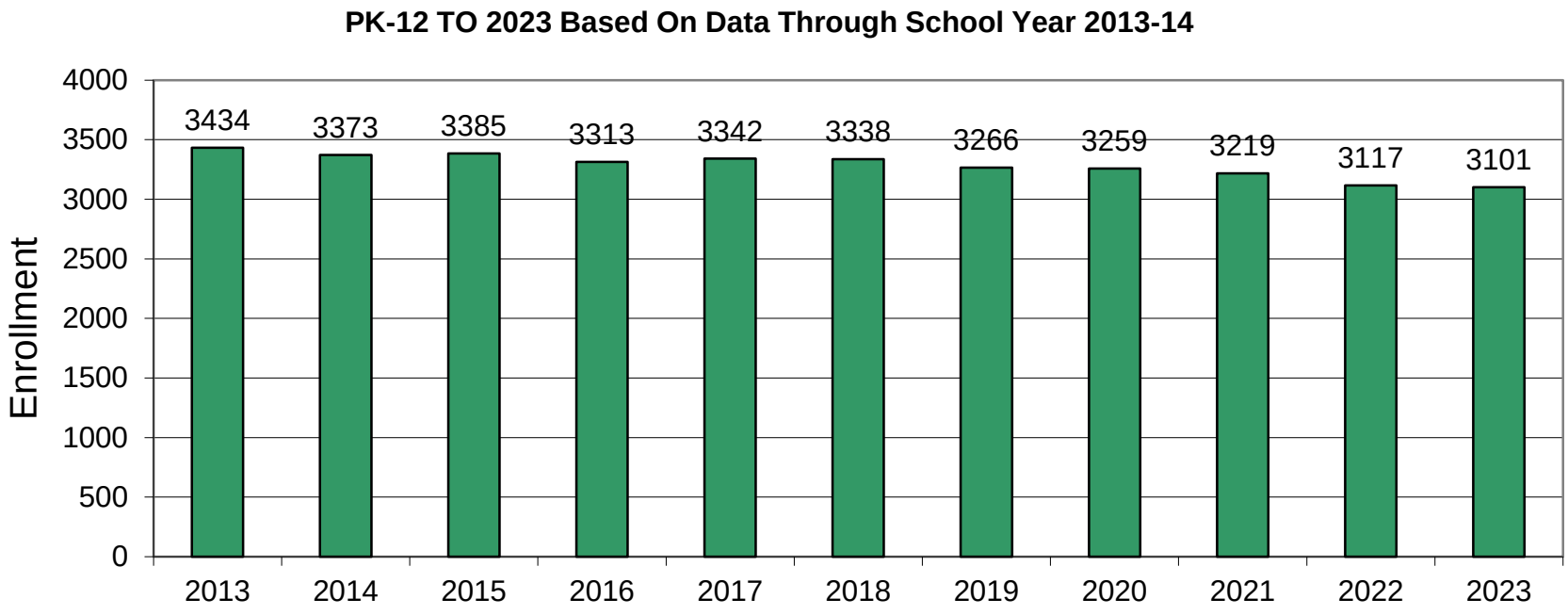
Year	K-4	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2013-14	1160	1426	1674	2221	1061	795	547	1699	1152
2014-15	1044	1364	1635	2196	1152	832	561	1676	1115
2015-16	1022	1266	1592	2125	1103	859	533	1730	1197
2016-17	990	1248	1497	2109	1119	861	612	1752	1140
2017-18	955	1238	1501	2097	1142	859	596	1776	1180
2018-19	939	1185	1473	2000	1061	815	527	1799	1272
2019-20	981	1158	1409	1975	994	817	566	1790	1224
2020-21	989	1209	1389	1945	956	736	556	1802	1246
2021-22	993	1219	1443	1890	897	671	447	1707	1260
2022-23	974	1226	1456	1870	896	644	414	1591	1177
2023-24	976	1203	1460	1927	951	724	467	1570	1103

See "Reliability of Enrollment Projections" section of accompanying letter.
Projections are more reliable for Years #1-5 in the future than for Years #6 and beyond.

Projected Percentage Changes

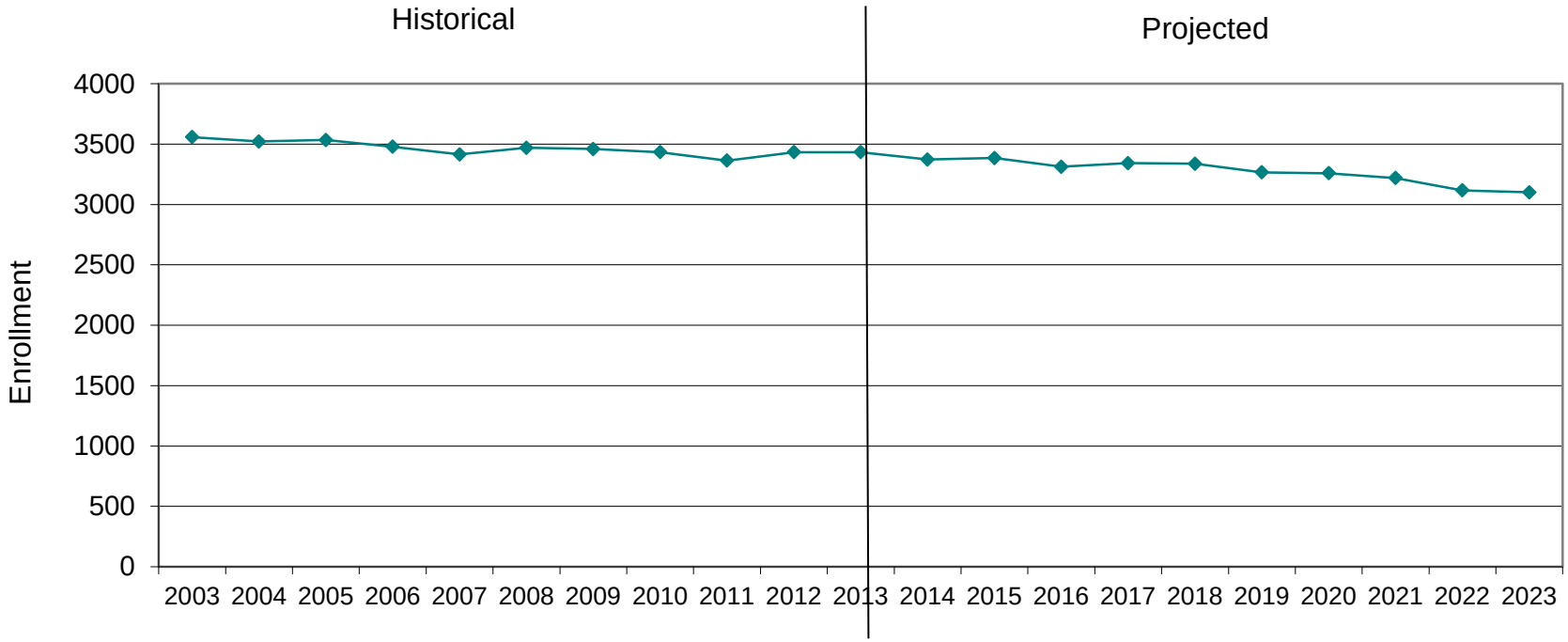
Year	K-12	Diff.	%
2013-14	3373	0	0.0%
2014-15	3311	-62	-1.8%
2015-16	3322	11	0.3%
2016-17	3249	-73	-2.2%
2017-18	3277	28	0.9%
2018-19	3272	-5	-0.2%
2019-20	3199	-73	-2.2%
2020-21	3191	-8	-0.3%
2021-22	3150	-41	-1.3%
2022-23	3047	-103	-3.3%
2023-24	3030	-17	-0.6%
Change		**-343**	**-10.2%**

Sharon, MA Projected Enrollment

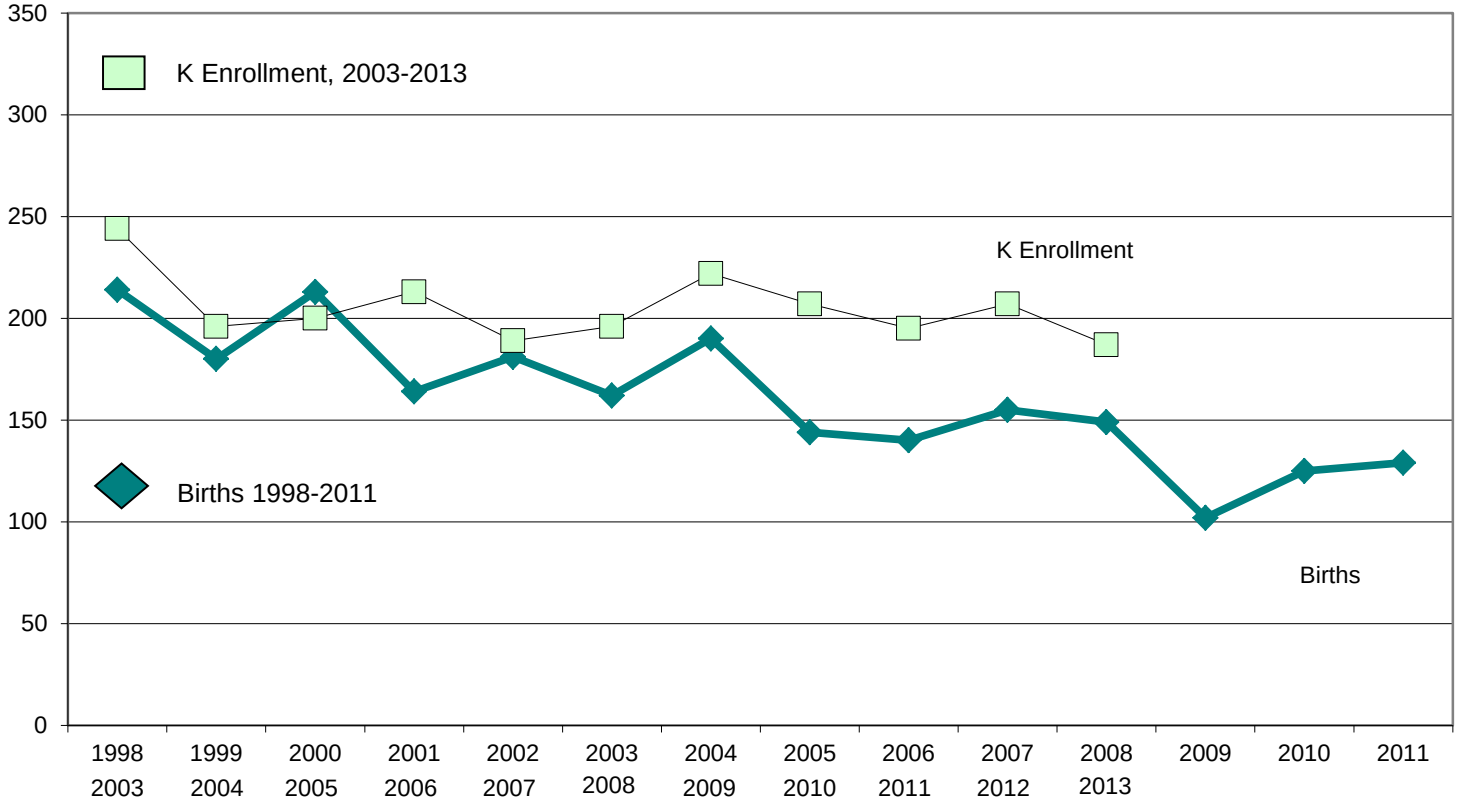


Sharon, MA Historical & Projected Enrollment

PK-12, 2003-2023



Sharon, MA Birth-to-Kindergarten Relationship



Sharon, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	18	0
2009	12	0
2010	17	0
2011	19	0
2012	32	0
2013	14 to Aug 31	0

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	20	525
2009-10	30	n/a
2010-11	n/a	n/a
2011-12	n/a	n/a
2012-13	n/a	n/a
2013-14	27	458

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	32	29	21	34	31	33	30	43	38	41	46	40	40	458

K-12 Home-Schooled Students	
2013	8

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2013	7

K-12 SpEd Outplaced Students	
2013	47

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2013	0

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.

SMMA

Appendix 2
Meeting Minutes

Executive Report – 2013 High School Conditions Study
SHARON PUBLIC SCHOOLS

PROJECT MINUTES

Project:	Sharon High School	Project No.: 13058.00
Prepared by:	Lorraine Finnegan	Meeting Date: 08.07.13
Re:	Kick off Meeting	Meeting No: 01
Distribution:	Attendees & (MF)	

Attendees: Glenn Brand, Kenneth Wertz, Jose Libano, Philip Poinelli, Lorraine Finnegan

Item #	Action	Discussion
1.01	PJP	Visioning: School starts on August 26th, PJP to bring slideshow of inventive ideas to the session.
1.02	PJP	Programming: PJP to prepare agendas and topics for the educational programming meetings and send them ahead to Jose/Glenn. Programming meeting with departments to be scheduled. School would like SMMA to meet with whole departments. This is possible because of shared planning time.PJP to share possible dates with Jose.
1.03	Record	Executive level programming: PJP suggested an executive level meeting with the Superintendent, Assistant Superintendent, and others. Exact make up TBD by administration to discuss goals of administrations' vision for the school and educational programming in advance of department and teacher meetings. Meeting scheduled for 9/9 at 2pm.
1.04	Glenn	District Planning: Glenn to share a copy of the Districts strategic Plan and technology Plan.
1.05	Record	Enrollment: Current enrollment is 1,200 students. There is an increase in enrollment at the elementary schools. Sharon does not participate in Choice. They are part of the Charms collaborative, where the H.S. students are in-house. The District loses approx. 10 students each year to South Eastern Voc-tech. 98-99% of their students go on to college. NESDEC enrollment projections to commence (need signed contract from SPS).
1.06	Jose	Class Size: There is no defined class size per the School Committee however the teachers contracts include language. Jose to forward to PJP.

1.07	LBF Glenn Ken	Existing Conditions Review: LBF to update org chart to identify the larger team beyond the project leads that may be present on site. CORI forms are required by all teams' members, Glenn to forward Sharon CORI form. Lorraine to collect teams and return to Dawn. Ken – advise of what existing conditions drawings he may have. RBA Allen maintains the Fire Alarm. Elevator is also maintained by an outside vendor.
1.08	PJP & Jose	Existing Space Review: PJP and Jose to walk the building to review current classroom arrangements, adjacencies and other pertinent observations. Walk through schedule for 8/15. Jose to match the room name to the numbers on the plan SMMA was provided.
1.09	Record	Modular Classrooms: The modular classrooms and the weight room should not control any decisions regarding realignments etc.
1.10	Record	Site Considerations: Maintaining existing fields should be considered in all options. The leaching field and septic system serves both the High school and middle school.
1.11	Record	Previous work considerations: Previous work within the last 3 years was discussed for the purpose of code upgrade triggers. With the exception of the $3.2 in roof repairs nothing else occurred.
1.12	Record	Shelter: The H.S. is a certified Red Cross Shelter. Once existing conditions and initial programming is complete, LBF & PG to meet with the Local Emergency Planning Committee (LEPC) to review any potential changes and impacts.
1.13	Record	ADA Compliance: LBF inquired about past ADA compliance issues, none noted of significance.
1.14	Record	School security: Current trends in school security were discussed. Hardware has recently been upgraded within the school. Cameras, shades etc. a topic for discussion for the future.
1.15	LBF	Document sharing: LBF to setup a SharePoint site for large file sharing.
1.16	Team	Check-In Meeting: Team suggested possibly bi-weekly check in meetings or conference calls to discuss project progress etc. No date targeted.

1.17	Record	Future Meetings: Future meetings to be schedule with LEPC; Fire and Police.
1.18	Glenn	Contract: Glenn to confirm the umbrella insurance added after the RFP was issued is not necessary for this study. Once this is complete LBF to finalize contract documents and send for signatures.

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.: 13058.00
Prepared by:	Philippe Généreux	Meeting Date: 09.09.2013
Re:	Status and Vision	Meeting No: 02
Distribution:	Attendees & (MF)	

Attendees:
Steve Kaplan - Director of Special Education
John Marcus - Director of Technology
Tim Farmer - Superintendent
Glenn Brand - Assistant Superintendent
Phil Poinelli and Philippe Généreux - SMMA

This meeting was an opportunity for SMMA to give a status on the study and to listen to the committee's vision. Phil explained the methodology used to transposed the curriculum into spaces and how this will be transposed in the MSBA spreadsheet. He then walked the committee through the MSBA spreadsheet, expressing the difference between the existing High School's program and the space allowed by MSBA.

Item #	Action	Discussion
2.01	Record	Tim asked to share any document with the SBC the Friday before the Wednesday meeting. The sharepoint site should be made available to everybody, through a shared username and password.
2.03	Committee	Wish list: • • Gym and Cafeteria are too small • School should move into a strong STEM program • Audio lab • Currently have 50 VHS seats. Could be combined with the audio lab • Library should be the hub of knowledge. It should be used by the teacher with groups of students. Currently used off-hours by students. The space should reflect 21st century teaching. • TV studio should be updated for new technology and trends • Glazing and security. Glazing is beneficial for collaboration and to attract students to take a class, but it is also a concern for security. • Building currently has the infrastructure for 1:1 technology, but does it have it for 3:1 [iPad, iPhone and Laptop]? • Need 5 times more Ethernet drops • School need space for tools for the more "tactile" students.

		• The academic lab should be adjacent to an office so exam or observation can take place there. • The High School is part of CHARMS collaborative • An adventure course would be beneficial • The High School serves a large orthodox kosher community. Could we accommodate them. • IT services need a bigger office, adjacent to the library and a student space. • Currently, the school has 73 copiers. Would like more centralized copy services.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	Kate Jessup	Meeting Date:	8/15/2013
Re:	Principal Mtg & Site Walk-Through	Meeting No:	1
Distribution:	(MF)		

Attendees: Jose Libano / SHS; Kate Jessup, Phil Poinelli / SMMA

Item #	Action	Discussion
1.01	Record	Met to review and understand student schedules for the purpose of completing the calculations for proper number of classes. The schedule is based on a 6 day period. High school implemented Eagle Block
1.02	Record	High school implemented Eagle Block which is a daily common teaching period where students can meet with groups, conduct project work, receive additional time with teachers for extra help, use the restrooms, eat a snack, etc. Time gives students the flexibility to plan and implement their own learning process.
1.03	Record	Class size targets are; • AP 25 - 30 students • Honors 25 - 30 students • Standard 20 students • Foundation 15 students
1.04	Record	Lockers have all been replaced in the last 5 years. Jose indicated that many students do not use their lockers on a regular basis.
1.05	JL	Jose to send list of after school activities to SMMA. Activity groups all meet after school hours. Largest groups include band and drama.
1.06	No action	Auditorium lobby is undersize for its use. Auditorium hosts school meetings as well as town gatherings. Would like to showcase schoolwork and town pride items in large scale millwork installation. School has a large drama program with approximately 150 student participants. They typically conduct 3 programs per year.
1.07	No action	Music room can server over 100 students at full capacity and is undersized. Former practice rooms have been repurposed for storage space for costumes, faculty offices, and general storage.
1.08	No action	Classrooms: Teachers have the ability to organize desks/classroom to fit their individual teaching style. Many teachers still organize their classrooms in the classic organizational

		scheme; all desks face forward, however they are encouraged to think outside the traditional organization scheme.
1.09	No action	Art classrooms are small and enclosed. Restrooms were repurposed for a kiln area and lack required mechanical ventilation. Class sizes are smaller for art teachers based on their contract.
1.10	No action	Charms: Part of the SPED program that incorporates special needs students from local towns into one group together. Continuation of public school placement for high school children with substantial communication and learning disabilities or autism spectrum and pervasive developmental disorders. They provide inclusion opportunities, pre-vocational training, community based training, assistive technology, life skills, social skills training, and transition planning to adult programming.
1.11	No action	Networks: Networks Program helps students and their families with re-entry and reintegration to school by supporting students academic, social and emotional needs. They help students successfully return to school from a hospital, treatment program or therapeutic school setting. Networks also addresses issues of school avoidance due to social/emotional or medical reasons.
1.12	No action	Outdoor courtyards are typically locked however sometimes in nicer weather they are opened to allow students to pass through. Security concerns are part of the reason that these times are limited because of lack of visibility from teachers. Maintenance for the north 2 courtyards does not occur. Ducklings create living installation.
1.13	No action	Foreign Language office: Serves partially as storage space for desks and books. Conference area provides space for small meetings. Hoteling offices for part time staff located here.
1.14	No action	Math and English coordinator offices have shared space for supplies and also has meeting space for teachers.
1.15	No action	Guidance: Amount of guidance counselors is determined by the quantity of students. 6 are required based on current enrollment. We noted that there was no college resource library/career center. Offices were carved from existing space and vary in size.
1.16	No action	There are 2 sets of faculty restrooms in the 200 corridor - could one of these cores be repurposed for student restrooms?
1.17	No action	Language lab is organized in the traditional fashion with individual desks with privacy separation and isolating headphones. Desks are maximized within the space making it appear crowded.
1.18	No action	Science classrooms have had some updated millwork. Classrooms still incorporate traditional teaching methods with desks and workstations. Some classrooms seem crowded due to the amount of furniture
1.19	No action	Cafeteria serves as a major gathering location for students. It serves breakfast in the morning and 4 lunch periods (1 per grade). A note was made about the comfort of seating being sacrificed for the ease of cleaning. An outdoor eating space has been added to the courtyard with seating. Wrestling team practices in the cafeteria after school which

		presents a concern about hygiene. All vending machines have been removed in recent years
1.20	No action	Teacher's Lounge: Recently updated. New furniture and updated decor, new paint, updated kitchen. Lounge consists of 3 adjoining spaces: one service, one quiet room, and one general lounge. Courtyard access from this space was mentioned.
1.21	No action	Student Resource officer has an office within the building but works at all of the district's schools.
1.22	No action	Parent Teacher Student Organization creates initiatives around the school and keeps the courtyard clean and tidy. 2 volunteers work to head this organization and more structure will be needed once the 2 retire.
1.23	No action	Gymnasium has newly added dividing partition to separate gym activities. Lack of auxiliary gym/life fitness area. Weight room is used mostly used for athletes only. It was noted that the principal is highly interested in a second level indoor track space.
1.24	No action	Locker rooms have shower areas that are essentially unused and cages have been added for equipment storage in shower areas as the showers. Locker rooms have one restroom each which causes lines at optimal times. Visiting team locker room has been repurposed for a training room. Visiting teams must use the opposite gender's locker room for home games. Equipment in the women's locker room does not have cage for security.
1.25	No action	Kitchen access doors to server line are too heavy and become problematic in the process of ordering/purchasing lunch.
1.26	No action	TV Studio is an important space that allows the principal/teachers/students to broadcast news items into the classrooms. Teleprompters have been added recently to allow for ease. Space seems adequate however immediate adjacencies do not allow for growth.
1.27	No action	Psychologist's offices are located in the library adjacent to the reading room. Sidelights and adjacency does not provide very much privacy. Although it was noted that the faculty didn't see any concern by students of the location of the space, sidelights were covered with paper and it may not be the most comfortable environment.
1.28	No action	Second floor only provides restrooms for faculty only.
1.29	No action	METCO official has office off of the reading room. METCO is intended to expand educational opportunities, increase diversity, and reduce racial isolation, by permitting students in certain cities to attend public schools in other communities that have agreed to participate
1.30	No action	Second floor small conference/office will now house a secondary space for the Networks group. It is important for the students to have a secondary space which will help them to move through the school and become more of a part of the school environment.
1.31	No action	Library reading room contains volumes of reference materials that are unused and taking up valuable space that would like to be repurposed for more flexible learning environments. Furniture wants to be more fluid. Current layout is not taking advantage of floor to ceiling

		glazing in the corners.
1.32	No action	Lobby was noted as being "awkward" and could use being larger in scale. Lobby and auditorium lobby become extremely congested before school and in passing time.
1.33	No action	Track is currently in the process of being redone. There is a push by the community to add lights for night games. Lack of a fence separating the track from the football field allows parents/viewers to stand "on the field" and it was noted that this needs to change to separate the players from the viewers. Also, there is no concession stand and boosters for the team must set up tables to sell items during games. Conversations have occurred about artificial turf however they have not made any decisions.
1.34	No action	4 tennis courts requires matches to be twice as long as 5 are preferred/required for events.
1.35	No action	Student parking across the street causes safety concern with no crossing guard on the main road.
1.36	No action	Main granite street sign is un-viewable for passing traffic as it faces the parking lot .
1.37	No action	Desire for a more cohesive traffic pattern - connecting back parking area to the front by a single traffic lane was mentioned.
1.38	No action	Desire was expressed for a Large Group Instruction (LGI) room. This room would serve ram teaching, small lectures, project based work

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	Library Programming Meeting	Meeting No:	1
Distribution:	PJP, LBF, PG (MF)		

Attendees: Cathy Collins (Library/Media), Kathy Dubrovsky (Library Coordinator K-12), SMMA/ Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
1.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
1.02	**Library Commons Overview** • Prefer to consider the space a library commons rather than a traditional library. • Last year, a task force identified an improvement plan that included bringing in a library design professional to review the space and conducted interviews of school faculty • Revere HS library was mentioned as a good example • Fishbowl space currently serves faculty only for teacher planning and professional development • Currently house 15,000 volumes (Target 8-10,000 volumes) • 2 classes occupying the library during any given period is typical. When a teacher is absent, students are also sent to the library and it can be very congested with students • Virtual High School - SHS has 25 licenses. VHS should have dedicated space. Librarian is responsible for observing VHS students (it would be ideal to have space located close to circulation desk) • Library can be reserved in the evenings through the front office. Many groups reserve the library including Professional Development
1.03	**Library Configuration** • Currently has 23 desktop computers and a laptop cart • Current space is one uninterrupted area however it is desired to have smaller break-out space/ small group which would serve to break up the space and provide a quiet space - mention of repurposing Psychology offices back to originally intended small group rooms • Adding a coffee/snack/break area possibly located within "fishbowl space" • The majority of periodicals can be removed because they are available online. Replace current tall stacks housing periodicals with short stacks for those to remain

- Discussed placing short stacks on wheels for flexibility
- Differentiation of flooring materials. Although carpet in many spaces is appropriate, introduction of other materials was mentioned.
- Additional outlets, perhaps floor boxes as many students bring laptops, especially helpful when the 1:1 program is fully adopted
- Student restrooms in the library
- Desire to have a large space for group meetings / classes
- Need more/enhanced technology (mention was made of the district's technology plan)
- The workroom needs update, but book repair is not and will not be performed in the space
- The current security system is used but may not be necessary in the future

Library Goals

- Librarians would like to develop their roles more of helping teachers to provide students with the support they need.
- Develop library commons into the social and intellectual hub of the school
- Open the library commons later into the evening (6:00PM)
- Want to maintain SHS library as a library space for students rather than general public
- Want to create "Maker Spaces" which can allow library faculty to help tie in outside groups such as technology/media, TV Studio, Graphic Arts
- Provide a dedicated area for professional development resources for teachers

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ	Meeting Date:	9/17/2013
Re:	Wellness/PE Programming Meeting	Meeting No:	2
Distribution:	PJP, LBF, PG (MF)		

Attendees: Ronde Gassman (Wellness), David Christiansen (Wellness), Barbara Munden (Wellness), SMMA/ Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
2.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
2.02	**Wellness/PE Overview** • 3 teachers share one classroom for Wellness instruction • 9th and 10th grade students for one semester (50% of time spent in PE, 50% in wellness classroom), Juniors and seniors can take PE electives • Wellness classroom curriculum studies values, morals, decision making, sexuality, drugs, addiction, bullying, law and consequences. Study current events and do groupwork in the classroom regularly. Utilize modern films (e.g. Remember the Titans) and apply life skills and values to the film to connect with students • Students find difficulty in fitting into the classroom due to class size and small furniture • Yoga club takes place in the library before school. It is not a part of wellness/PE program • There is currently very limited cross-curriculum teaching (anatomy teachers during birth control lessons) however there was a desire for more. Currently, only anatomy teachers work with wellness.
2.03	**Wellness/PE Configuration** • Currently Wellness classes take place in 2 different periods there is no connection between the classes. • PE alternative activities take place in hallway outside of the gym. • Female teachers office located in female locker room. Creates a boundary and does not foster collaboration being separate from the male teachers and other PE/Wellness staff • Ideally, there would be a connection with gymnasium offices, a teaching classroom, and fitness room. • Visiting athletic teams use wellness classroom as their locker room. They erase white board notes within wellness classroom

	• Lack of privacy in locker rooms inhibits many students from changing clothes for PE classes. Changing clothes is required however many students wear PE shirts on top of their normal clothing and teachers do not find this sanitary • They currently have one permanent volleyball court with stanchion and portable net for cross court
2.04	**Wellness/PE Goals** • Fitness for life is the primary goal for the program • Classroom with dividing partition so that Wellness teachers can work as a team with varying size groups of students • Auxiliary gymnasium/fitness and exercise rooms that could be available after school hours for those who do not participate in school team sports. Room would include treadmills, yoga mats, dedicated space for virtual activities (kinect, wii) • Dedicated PE small lockers - currently students can bring a lock however it must be removed after class. Provide dedicated (12"x12"x12") locker for each student taking PE each semester (estimated 150) • Showers with privacy dividers for students that may wish to shower after PE classes - currently shower area serves as equipment storage • Additional toilet rooms. Currently, only one toilet in each locker room • Water fountains with bottle filling stations • Outdoor basketball hoop. (Indoor hoops take over 20 minutes to bring down) • Bleachers for more individuals - cannot currently accommodate the student population during all school activities • Heart rate station • Space should be open to the public after hour • Need better ventilation of locker rooms

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

KAJ/KAJ/P:\2013\13058\04-MEETINGS\4.4 Teacher Programming\2013_09_17 Wellness And PE.Doc

PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	Nurse Programming Meeting	Meeting No:	3
Distribution:	PJP, LBF, PG (MF)		

Attendees: Debbie Feldman (Nurse), SMMA / Phil Poinelli, Philippe Généeux, Kate Jessup

Item #	Discussion
3.01	The meeting was held to understand needs of the individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
3.02	**Nursing Overview** • Current nurse began this school year and estimates seeing roughly 60 students per day, expects more during flu season • 6 seats are provided in the waiting area and this is the appropriate amount • Sign-in sheet located outside of the office in the waiting area and a white noise machine provide a level of privacy • LPN assists for 2 days a week and every other Friday. An administrator shares this role providing one fulltime equivalent however administrator cannot provide medical care • 2 desks required • Exam room also is storage rooms - these functions should be separated • Screening room: Nurse provides tests on eyes, ears, pastilles (throat). Room is not the required length for vision testing. Room is not acoustically separated for hearing tests • Refrigerator and double locked medicine cabinet required
3.03	**Nursing Configuration** • Separate waiting area is in line with HIPA privacy concerns • Nurse and students visiting the nurse's office need to have their own restrooms that are not shared by others. Current restroom is not handicap accessible. • Must have proximity to administration. Also, to mental health professionals and guidance. Often there are transactions of students between nurse and guidance. Charms students often visit the nurse.

3.04	**Nursing Goals** • Nurse and students visiting the nurse's office need to have their own restrooms that are not shared by others • Screening room that meets minimum size for vision testing, acoustically separated for hearing testing • Provide dedicated separate storage area and exam room • Secondary exit for privacy laws. • Treatment room with exam table, sink • 3 rest cots required

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	Foreign Language Programming Meeting	Meeting No:	4
Distribution:	PJP, LBF, PG (MF)		

Attendees: Barbara Radler (Spanish), Abigail Theberge (Spanish), Stephen MacVicar (Latin), Nicole Strandson (Spanish), Leah Silipo (Spanish), Dana Buck (Spanish and Art), Kathy Turner (French), Jennifer Orthman (Latin), Jacqueline Turbin (French), Christopher Brillant (Spanish), Valerie Gundlah (Spanish/American Sign Language), Dan Innes (French), Wei Li (Chinese), Jian Xu (Chinese), Kristina Dahlen (French/Foreign Languarge Coordinator), SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
4.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
4.02	**Foreign Language Overview** • Languages taught: French, Spanish, Latin, Chinese, American Sign, Greek (some semesters) • Size of desks a concern for larger students. Groupwork is difficult because of mismatching desk size and heights • Teachers prefer white boards to smart boards because it takes up critical board space that cannot be written on. Mention was made of new technology that combines technology with writeable white boards • Project size is limited by desk size - posters size limited as only traditional desks exist within classrooms • Teaching the culture is best done with full emersion. Access to a kitchen would allow for ethnic food preparation.
4.03	**Foreign Language Configuration** • Many teachers typically re-arrange classrooms to suit their needs. Because teachers share classrooms, several minutes of each class can be spent moving furniture because it is heavy • Language classrooms are interchangeable and consequently, immersion language items cannot be put in the classrooms. • Teachers use their own computers/devices because the laptop carts that are school issued are too large to navigate the corridors during passing time • Teachers would prefer project based learning in the classroom. Currently, project work is done at home and some students do not have access to the necessary resources/means to do this

	• Current language lab is utilized by teachers. Many mentioned that this type of lab needs to be updated to meet current teaching and provide a less physically rigid environment (e.g. shared circular desks with computers and no dividing partitions). Some teachers preferred the lab as it is currently with dividing partitions
4.04	**Foreign Language Goals** • Provide a variation of furniture including small group areas along with typical desks for individual work • A sink with a drinking fountain located within the classrooms so students can work on craft projects within the classroom and clean up properly. It would also reduce breaks for students • Provide (within the building) a space for teachers to prepare food and create projects. This may include a kitchen and a tech area/woodshop • Access to fitness/wellness area - teach culture (i.e. Salsa dancing)

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	Special Education Programming Meeting	Meeting No:	5
Distribution:	PJP, LBF, PG (MF)		

Attendees: Barara Ferrara, Sean Bowen, Julie Piazza, Aaron Waite, Ken Watson, Cheryl Harris, Alanna Hicks, Meghan Alson, Jessica Garbriel, Stephanie Quintal, Dave Morse, James Charest, Adam Pigeon, Janet Cole, Jackie Klassman, Wendy Nason, Maureen McGonagle, Patricia Kelley, Mike Perron, Janet Denzer, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
5.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
5.02	**Special Education Overview** • 8 Academic Lab spaces which include: 107, 109, 209, 310 (windowless),402, 501, 701, 708 (networks), 209 in Library (Networks) • No life skills program for the district. Charms Collaborative program meets in room 707. Charms Collaborative is a six-district consortium of public schools with current classrooms located in public school settings in Canton, Sharon and Stoughton. Charms offers a menu of sequential programs for students with diverse special needs, ranging in age from 5 to 22. Staff includes teachers, therapists, specialists and paraprofessionals, that provide continuous educational development to students from more than 25 communities in Eastern Massachusetts. In addition, the Collaborative provides a range of contracted services to districts including vision, mobility, speech, occupational and physical therapy, vocational, cognitive and behavioral assessments. • No space for testing students - SPED tests often and each students' needs are different • Some classrooms and Psychologist's offices (2) do not have windows to outside • Classrooms are small making it difficult to provide the proper space for each student • SPED classrooms do not have smart board technology
5.03	**Special Education Configuration** • Teachers need small group instruction space - could also serve as a testing space, IEP group counseling as required by the state • Desire for classroom dividers or partitions within classroom that would provide flexibility of space and allow for more private areas within classroom, dividers should be movable to provide flexibility

	• SPED teachers are required by the state to print confidential documents for the students. Either a central confidential SPED only printer in centralized location or a printer in each classroom is preferred • Psychologists like being located adjacent to the library as they can request a student report to the library which allows the student to anonymously see the psychologists. • Furniture and Casework which must be lockable • Magnetic or white board paint desired • SPED faculty uses TBL (Team based learning) approach • Provide many outlets for flexibility • Kitchenette facilities are desirable within SPED classrooms
5.04	**Special Education Goals** • Windows or outside light is desirable for SPED classrooms • Adequate technology in line with technology plan - provide smart technology in these classrooms. Use technology to reduce waste/paper consumption • Create a special education office for teachers to keep records and documents which would have printer for confidential documentation • Department is interested in expanding the SPED program so that students who have left the district for private programs can be reintroduced back into the district's SPED program • Provide dimmed lighting at all SPED classrooms • Provide furniture for individual work in addition to group work • Need 4 offices

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

KAJ/KAJ/P:\2013\13058\04-MEETINGS\4.4 Teacher Programming\2013_09_17 Special Education #5.Doc

PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	English Programming Meeting	Meeting No:	6
Distribution:	PJP, LBF, PG (MF)		

Attendees:, Lisa Jalicoeur (English), David Heller(English), Amy Strasnick(English), Kelly Behbehani (English), Lori Novick (English), Sandy Dennis (English/Theater/Drama), Rachel Walker (English), Jim Sanford (English), Kee Arguymbau (English), SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
6.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
6.02	**English Department Overview** • Teachers often reconfigure the classroom depending on their lessons (i.e. inner and outer Socratic dialogues, round robin "speed dating" style discussion • Furniture is noisy, heavy, and mismatched making moving/reconfiguring difficult • Smart boards often fail to calibrate • Staff is not adequately trained with their current technology • Laptop/technology carts are too large and become a burden for teachers to move throughout the building during passing time • No storage for teachers because they share classrooms
6.03	**English Department Configuration** • Because teachers share classrooms, it is critical to maximize board space on all 4 walls • Provide flexible environment which is easily movable for all different types of instruction and groupwork
6.04	**English Department Goals** • After school writing lab - ideal location would be adjacent to or within the library if library hours are increased. • Space for the display of student projects and artwork is desired • Provide technology training for the teachers • Interdepartmental teacher planning time and space is desired

- Create small group/breakout space where students can read aloud and not bother other group work taking place within the classroom
- More storage for teachers, some lockable
- Large group instruction or black box theater is desired. It is important for interdepartmental teaching
- Outdoor classroom is desired. Not yet in the rhythm of using the current one

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

KAJ/KAJ/P:\2013\13058\04-MEETINGS\4.4 Teacher Programming\2013_09_17 English #6.Doc

PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/17/2013
Re:	Science Programming Meeting	Meeting No:	7
Distribution:	PJP, LBF, PG (MF)		

Attendees:, Andrew Tessier (Science), Tae Cho (Science), Gayle Logan (Science), SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
7.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
7.02	**Science Department Overview** • Furniture needs to be uniform and mobile - video from MSBA website shown • Currently most of the science rooms and undersized • http://www.massschoolbuildings.org/news_events/Science_Lab_Video
7.03	**Science Department Configuration** • In order to serve all sciences, each workstation should be able to provide gas, electricity, and plumbing (as appropriate for each science discipline) • Double sided fume hoods shared - preferred • All labs should accommodate computer technology at all lab stations - wired or wireless • Storage required for beakers and test tubes • Provide sinks at each lab station • Current classrooms lack dust collection and adequate ventilation • Provide emergency shut offs at all locations throughout classroom for gas/electrical
7.04	**Science Department Goals** • While maintaining security, provide access for science students to exterior space for experiments • Foster the growth and cross-curriculum for new Bio Engineering technology program being developed • There is a desire to work on more cross-curriculum projects and develop partnerships with other departments particularly science and math • There is a desire for a stem technology/woodshop with simple power tools for engineering projects [3D modeling, 3D printing]

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

KAJ/KAJ/P:\2013\13058\04-MEETINGS\4.4 Teacher Programming\2013_09_17 Science #7.Doc

PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Social Studies Programming Meeting	Meeting No:	8
Distribution:	PJP, LBF, PG (MF)		

Attendees:, Nina Georges, Laura Smolcha, Emily Garr, Jill Stevens, Courtney Malcolm, Sean O'Reilly, Dorothy Macoritto, Andrew Marrone, Mara Georgi, Bernadetter Murphy, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
8.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
8.02	**Social Studies Department Overview** • Furniture needs to be uniform and mobile to rearrange classrooms • Moving from room to room and rearranging furniture to suit needs takes away from valuable class time • Teachers do take advantage of exterior space. Hallway niche instruction disrupts other classrooms and has been discouraged
8.03	**Social Studies Department Configuration** • Need small and large meeting space for different activities including guest speakers • A suggestion to re-open covered walkways giving students access to quickly move across courtyards would reduce travel time for students to classes • Concern expressed regarding exterior landscapes / courtyards • Ability to differentiate lighting is important (e.g. shutting lights off at portions of classroom) - would allow for different activities to take place within one space • Need more storage including: book cases, casework, and closets • Current computer classrooms do not provide a group environment - Faculty mentioned moving towards groups rather than long rows • Provide solar glare control at the windows.
8.04	**Social Studies Department Goals** • Create "little nooks where things happen" and space for students to gather • Create teacher planning space/small conference and large group instruction space

- Create a common teacher office suite with conference table - Faculty member mentioned liking the model from Winchester HS
- Upgrade outdoor classroom
- Operable partitions would be practical and used if they were simple to use
- Teacher planning area is desired
- Need for desktop computers for projects even if the school goes 1:1

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

KAJ/KAJ/P:\2013\13058\04-MEETINGS\4.4 Teacher Programming\2013_09_18 Social Studies #8.Doc

PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Math Programming Meeting	Meeting No:	9
Distribution:	PJP, LBF, PG (MF)		

Attendees: E Sodhinow, Thomas Charest, Michelle Fox, Tracey Smith, James Acone, Bob Foley, Jeff Sonis, Eileen Alberico, Marie Cioffi, Ellie Goodman, Lesley Reardon, Thor Van Vaerenewyck, Tom Gorsuch, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
9.01	The meeting was held to understand the needs of the individual teachers. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
9.02	**Math Department Overview** • Faculty share classrooms - moving and recalibrating smart boards takes away valuable class time • Current classrooms have noise transmission between classrooms. Need to be acoustically separated • Classrooms are not properly ventilated • Faculty expressed concern regarding moisture in the building • Student lunch periods are very late and students lose focus • Classrooms should not have carpet • Math department does not feel a part of any STEM group
9.03	**Math Department Configuration** • Need localized teacher planning areas - No space for confidential activities • Current furniture is mismatched, need uniform furniture • Need for updated technology - Mention to the district's 1:1 technology plan was made • Need updated security for the school as a whole • Need seminar/large group instruction space for 80 or more students - this would allow different groups to come together and foster cross-curriculum • Would like more localized computer labs • Concern for current glare control
9.04	**Math Department Goals**

- Would like to have operable shades to be able to provide blackout and filtered light
- Provide uniform furniture
- Combination of large group instruction space and smaller localized shared space throughout building

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	TV Studio Programming Meeting	Meeting No:	10
Distribution:	PJP, LBF, PG (MF)		

Attendees: Mary Ann Janosko, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
10.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
10.02	**TV Studio Overview** • Current adjacency between classroom and studio is ideal • Windows were added to create more of a connection with the classroom • Program began in 1997 when new addition was completed • Program is very popular and well subscribed • 15 editing computers are required for students • Studio and control area are unsubscribed • Often students work in groups • Class begins with a short lecture/introduction and then group work occurs • Need to accommodate seating for 25 students • When wall was opened with glazing, students could see into the studio and it distracted talent
10.03	**TV Studio Configuration** • Create small group areas to accommodate 2-4 students around a single computer • Viewing window from editing room into studio should be straight view towards the students presenting • Need dedicated storage for cameras, accessories, props, and sets • Anteroom for the back stage area serves as additional space for support persons and collaboration
10.04	**TV Studio Goals** • Provide larger group stations rather than traditional desks • Re-orient controls and editing area to provide direct viewing of talent

- Larger studio and control room
- Larger anteroom for more student collaboration

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Guidance Programming Meeting	Meeting No:	11
Distribution:	PJP, LBF, PG (MF)		

Attendees: Dawn Phelps, Jacquie Kaye, Shelley Myerson, Maureen Olsen, Tanya Keeney, Susan McAvoy, Andrea d'Entremont, Erin Regan, Bob Pomer, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
11.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
11.02	**Guidance Department Overview** • Guidance is its own entity but they do work closely with school Psychologists and other clinicians • Department includes 6 counselors (1 per 200 students maximum), 2 secretaries, and one director • File storage needs to be located in proximity to the offices • Current space is located far from the front entrance and it causes confusion with people visiting the office • It is common for up to 12 people (students and parents) to be waiting for counselors at the start of each day • No acoustic privacy - acoustic privacy required • Space is active all year round and requires air conditioning for summer months • Student courses: sometimes students realize later in their education that they may be more suited for tactile work and counselors would like to see some curriculum that would work better for tactile learners • Summer internship program: becomes difficult to foster this type of activity because many students are enrolled in at least one AP level class which has testing in May and class schedules are based on 6 day cycle which means free time changes each week. Guidance would like to redevelop the internship program
11.03	**Guidance Department Configuration** • Guidance department belongs at the entry to the building. Parents and colleges have trouble locating the office from the entry • No locations for college presentation. Visits occur 7:30-8, Eagle block, 2:30-3. Up to 40 students for larger/more popular colleges

	• Lack of space for counselors to meet with their entire group of students (50 students each grade) - space could also serve as large group instruction space • Desired connection/adjacency to psychologists, administrative area, SPED, and nurse • Desire to have the administrative staff for guidance serve as a first point of contact with students. "Gate keepers" • Guidance department does not hear the bells or announcements and space has no windows - counselors feel disconnected from the school
11.04	**Guidance Department Goals** • Create a space which could serve as a career center/conference room/resources space - also serve as a space for college visits • Provide adequate file storage with fire rated walls and within lockable fire rated cabinets • Provide welcoming entrance and feeling with ambient light to encourage students in a comfortable environment • Provide adult restrooms adjacent to office for parents and college recruiters • Task light or other means of light control is desired

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Music Programming Meeting	Meeting No:	12
Distribution:	PJP, LBF, PG (MF)		

Attendees: Linda Ethier (Orchestra/Music), Laura Frye (Vocal/Choir/Music Theory/Music), Tim McGee (Band/Music Tech./Guitar/Music), SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
12.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
12.02	**Music Department Overview** • Band: 65 students enrolled but are limited by lack of space. Larger space would allow more students to enroll. Class takes place during eagle block. Much of the time in the block is taken for setting up music stands and instruments. Because room is shared by 3 teachers, it cannot be set up normally in advance of eagle block • Guitar: 25 students enrolled - Class takes place in music room. Guitar storage against wall in teacher's office - lack of storage • Music Tech: 25 students enrolled - Class takes place in the computer lab in the library • Orchestra: 38 students this year with increased projections based on middle school attendance, string only, full orchestra preferred if possible. Class takes place in "any" classroom. Instruments and music stands must be carried from music room to classroom, classroom furniture moved, instruments set up, classroom furniture reorganized, and then instruments and music stands returned at the end of the period which reduced amount of time significantly. • During performances/theater events typically 18 to 20 students in the auditorium pit orchestra as volunteers • Teachers have no work space and not enough storage for instruments. Currently practice rooms serve as storage. Practice rooms are needed. • Choir: Select Choir enrollment 20-30 students, Music Theory enrollment 10-20 students, Concert Choir 100-130 students. • Uniform storage: limited amounts of concert uniforms have been purchased because of lack of storage space for the uniforms
12.03	**Music Department Configuration** • Room is shared by 3 teachers and is reset every class period which takes away valuable

	teaching/playing time • Need for additional instrument storage: follow criteria for humidity and temperature control • Need to provide storage space for risers • Grand piano [Steinway] can only move in and out of the auditorium through one door when it needs to be moved onto the stage
12.04	**Music Department Goals** • Provide practice rooms • Provide a ensemble/chamber space which could be utilized for smaller groups such as guitar/orchestra/etc. • Uniform storage for full concert uniforms for all of those enrolled (250 uniforms) • Provide multiple music spaces to serve curriculum

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Art Programming Meeting	Meeting No:	13
Distribution:	PJP, LBF, PG (MF)		

Attendees: Jeannine Lazzaro, Liz Renke, Dana Buck, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
13.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
13.02	**Art Department Overview** • Curriculum includes Graphic Design/Computer arts, 2D art, 3D art (sculpture and ceramics) • Faculty has no common planning time within the department and must meet on their own time • PTSO paid for a spray booth and because there is no space it has not been purchased • Lack of general storage, artwork storage, and extremely limited display areas • Classrooms are undersized
13.03	**Art Department Configuration** • Teachers have a desire to work with other departments and bring art into the classrooms and core curriculum • Would like to teach printmaking however there is no space for the equipment • Kiln is a good size but it is overworked; having an additional kiln would make firing ceramics much easier • Currently still lifes cannot remain for more than one class period which limits students • No standing easels used because of lack of space however they are desired • Windows provide great natural light but sometimes it is too much light and blinds remain down • Need proper ventilation and dust removal system because ceramics and sculpture are in the same classroom which creates issues with clay/plaster
13.04	**Art Department Goals** • Create art display areas throughout the school that are safe and secure from vandalism (accidental or intentional) • A more central location is desired

- Provide properly sized classrooms
- Have an art gallery space where art can be displayed in prominent area within the school
- Create smaller shared critique spaces within the larger classroom environment
- Have access to a wood shop for sculpture students including: hand tools, framing materials, glass cutting, etc.
- Provide portfolio storage for senior students
- Accommodate necessary equipment including wheels (currently 4, 6 preferred), slab roller, spray booth, additional kiln
- Provide space for large scale sculpture storage
- Sculpture garden - take advantage of large secure courtyards

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/18/2013
Re:	Drama Programming Meeting	Meeting No:	14
Distribution:	PJP, LBF, PG (MF)		

Attendees: Sandra Dennis, SMMA / Phil Poinelli, Philippe Généreux, Kate Jessup

Item #	Discussion
14.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
14.02	**Drama Overview** • Drama program performs 5-6 shows each year • 2 Faculty members, choir and theater, run the program • Host competitions each year in Auditorium where several other schools perform together • Public Speaking, Concert Choir, Theater, Acting, all take place in auditorium and on stage • Sharon community has gatherings and meetings in Auditorium • Stage is 40X28 • Stage is covered with sacrificial floor
14.03	**Drama Configuration** • Drama must relocate chairs from the music room and return them regularly • No hydraulic lift for changing lighting or relocating speakers • All set construction is done on the stage • No backstage dimming • No stage lights - cannot separate stage from house • No front curtain so in between acts/performances adjustments occur in front of audience with house lights on • Ventilation system is loud - no air conditioning • Catwalk above with access to lighting above stage is (2) 2X12 lumber on its side with no fall protection • Lack of costume storage / prop storage

	• No dressing rooms • Choral risers need dedicated space for storage off stage - currently risers are temporary collapsible and are stored against rear wall of auditorium • Lighting and sound boards are moved from sound booth and sit on table that is placed over existing auditorium seating • Auditorium area of building has no access to boys restrooms
14.04	**Drama Goals / Desires** • Addition of black box theater / rehearsal space desired • More lockable storage for items to remain on stage • Additional storage area outside of the stage area • Small woodshop with ability to create set designs off of the stage area • Dedicated costume and prop storage for drama department • Light lock and acoustic separation vestibule • Provide more accessibility • Updated auditorium seating and floor finishes • Dressing rooms with mirrors and bathrooms

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Administration Programming Meeting	Meeting No:	15
Distribution:	PJP, LBF, PG (MF)		

Attendees: Bill Klements (Vice Principal), Phil Poinelli, Kate Jessup

Item #	Discussion
15.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
15.02	**Administration Overview** • 2 Vice Principals - coordinate many times throughout each day so they must be located near each other, prefer near the entry for security • Master Schedule created by Mickey Hughes (Principal's Secretary) and Bob Palmer (Director of Guidance)
15.03	**Administration Configuration/Concerns** • Auditorium cannot fit entire school, would like a space everyone can fit together • Building lacks security cameras • Vandalism has occurred in the bathrooms that estimate $10k in repair costs - cameras could monitor individuals going into and out of spaces and reduce vandalism and theft • Lockdown/Shelter in place: 1/3 of the day is spend with students (estimated 300) occupying the cafeteria and administration is concerned with how security can be addressed • Fire drills: now utilize all of the doors in the building, part of evacuation plan is to the field at the north which is up a hill and is not plowed • Building lacks continuous fire lane at the perimeter of the building • Areas of high congestion: either hallways need to be wider or students need to utilize their lockers - a plan for no backpacks may encourage students to use their lockers. Currently, School culture is that students do not use their lockers. • Breezeways should be opened for use, enclosed with glass and utilized for alleviate congestion in hallways • PTSO and National Honor Society clean and organize southern courtyard • Wish that the outdoor classroom was more used by faculty

	• Student parking: lots owned by the town of Sharon, students pay $72 to park per semester. Lot across the street from the school provides 130 parking spaces. Lot at Temple Israel down the street has an additional 30 spaces for Juniors. Discussions to add spaces at town park are taking place.
15.04	**Administration Goals** • Provide security cameras throughout the building interior and exterior • Provide more tactile learning environments which may include a greenhouse • Provide continuous fire lane at perimeter of the building for safe evacuation of students • Create a physically closer connection between administration and guidance • School psychologists need to be more closely tied to the guidance department • Provide parking for up to 250 students with camera security • Priorities: increase classroom size (particularly in science classrooms), updates to auditorium, gymnasium, and cafeteria. Safety and communication upgrades. Fine arts (art, drama, music) all limited enrollment because of the size of the space

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Athletics Programming Meeting	Meeting No:	16
Distribution:	PJP, LBF, PG (MF)		

Attendees: Bill Martin (Athletic Director), SMMA / Phil Poinelli, Kate Jessup

Item #	Discussion
16.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
16.02	**Athletics Overview** • Athletic director and 1/2 time secretary • Fall Teams: Soccer: 6 (Mens and Womens F, JV, V), Field Hockey: 3 (F, JV, V), Girls Volleyball: 3 (F,JV,V), Football: 3 (F,JV,V), Cross Country: 2 (Mens and Womens), Golf: 1, Cheer: 2 (JV,V), Sailing: 1 • Winter Teams: Basketball: 6 (Mens and Womens F, JV, V),Winter Track: 2 (Mens and Womens), Wrestling: 2 (JV,V), Swimming: 2 (Mens and Womens), Gymnastics:1 (Womens), Cheer: 2 (JV,V) • Spring Teams: Baseball: 3 (F,JV,V), Softball: 2 (JV,V), Tennis: 2 (Mens and Womens), Track\: 2 (Mens and Womens), Lacrosse: 4 (Mens and Womens JV, V), Sailing: 1
16.03	**Athletics Configuration/Concerns** • Gymnasium is undersized • Limited locker space means students cannot securely lock bags • School locks down after school hours and late away games do not have access to the building. Perhaps adding a security feature that would allow teams to access locker rooms but not enter the building proper • One toilet in each locker room is inadequate • Training room does not have phone or computer access - needs phone for emergencies - dead cell area • Broken basketball hoops - take at least 20 minutes to come down • 2 sides of clerestory windows causes glare - need sun control • Visiting team uses opposite gender's locker room • Coaches bring equipment home or keep it in their cars because of lack of building storage

- Weight room is great for football team however it is not the best solution for other teams or the general student population. Want more space for cardiovascular equipment.
- At a football game, there can be up to 6 officials that currently use coaches office to change/prepare for games. They should have dedicated space for 4-6 individuals out of the public eye for their own protection
- Current office has no view to the outside. Director has not been able to notice when rain/snow may impact outdoor facilities without window.
- Limited facilities: HS has only 4 tennis courts, 5 required in tournaments. Swim practice takes place at Randolf HS and costs $500/day for bus and pool rental (Staff looking into relocating to Foxboro YMCA), Winter track practices in the hallways inside the school, Gymnastics practice takes place at a gym in Canton, Middle school and East elementary host many practices and games but students must find their own way there, Wrestling team practices in cafeteria (Mats rolled up in corner)
- 6 outdoor storage containers are currently being used to house equipment
- Current stadium area has non-accessible press box, bleachers with limited accessibility, new track, grass field with sprinklers, no fence separating spectators from new track, 2 long jump pits with one runway, discus area requires removing football uprights, no pole vault area
- 2 indoor cross courts are short of regulation size
- Softball field needs access gate from bench to batters box - currently they must go around the entire fence
- Baseball field fence is deteriorating - residential quality
- Wiring unreliable at scoreboard

16.04 **Athletics Goals**

- Create a gym large enough for 3 teams to practice at once (currently only 2)
- Indoor walking/running track
- Provide dedicated athletic storage for equipment, uniforms,
- Incorporate indoor drop down batting cage
- Provide accessible bleachers for more viewers - add fence to separate spectators from track/field. Provide 2 long jump runways, relocate discus area to not interfere with football uprights
- Lights at the track/football field for night games
- Create visual connection between training area and gymnasium., Training room to include: ice machine, taping areas, exam area, phone, computer, whirlpool, storage
- Update scoreboard electrical
- Update fencing: provide access gate at womens softball, update fencing at mens baseball
- Provide outdoor basketball hoops for students and athletes to use
- Provide emergency access lane around entire school

- Provide outdoor dedicated storage at the bleachers/press box area

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Main Office Programming Meeting	Meeting No:	17
Distribution:	PJP, LBF, PG (MF)		

Attendees: Kathy Abdelahad, Susan Gilbert-Sexton, Rachelle Levitts, SMMA / Phil Poinelli, Kate Jessup

Item #	Discussion
17.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.

17.02	**Main Office Overview**
	• 4 individuals;
	  o 1. Academic Coordinator and run club financial accounts
	  o 2. Attendance/Security/Phone line/passes
	  o 3.Principal's secretary
	  o 4. Vice Principals' secretary
	• Current security protocol is a video screen at reception which views individual trying to enter the building. Once inside, a rope leads to a small office area where they are screened. No physical boundary to prevent a visitor from being buzzed in and then running into the building before being screened
	• 80% of students enter through the front doors, all visitors enter through front doors during school hours
	• Teachers do not have to sign-in in the morning but if a teacher leaves during a portion of the day they must sign out and then sign in
	• Students under in-school suspension or being disruptive fall under the supervision of the secretaries - suspension takes place in VP offices, 4-5 students in a worst case situation
	• Students utilize main office secretaries for making phone calls, helping students who are having a crisis situation. Teachers utilize fast paces copy machine in presidents' secretary's space
	• Current mail area is located in security desk area - creates congestion in the morning and is too narrow for secretary and mail
	• Have dedicated bathrooms which are key locked. Need to be updated.

17.03	**Main Office Configuration/Concerns**

	• Desks are in circulation space which is narrow and provides no space for a visitor to sit down - constant sense of disruption • Current supply storage is under auditorium. Secretary gathers the requested supplies for the teachers and then will email the teacher when they have been gathered
17.04	**Main Office Goals** • Create an office layout where administration's desks are not part of the circulation of the space and have separation from disruptions - with visitor seating - Like the idea of having a counter to separate visitors before open office area • More security cameras and bullet resistant glazing for emergencies • Dedicated secretary work room with supplies, copiers, storage • Maintain private office staff restrooms • Separate mail area from security desk - must have some security for confidential documents and be near the entrance • Create a secure environment - security concerns are major priority of main office staff • Create proximity to guidance office. Currently, Guidance has majority of visitors into the building and security secretary gives them a pass and sends them out into the building - not ideal • Maintain security database with information regarding parental custody • Create conference/group area at the main office

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Faculty Programming Meeting	Meeting No:	18
Distribution:	PJP, LBF, PG (MF)		

Attendees: Multiple Faculty Members / Teachers work room, SMMA / Phil Poinelli, Kate Jessup

Item #	Discussion
18.01	The meeting was held to understand the needs of individual teachers and staff. In particular, to understand how they teach today, how they would like to teach, and how the physical environment can support that.
18.02	**Extra Faculty Concerns** • Odors from restrooms can be smelled from some classrooms closer to the dividing corridor • 5 classrooms (302, 304, 305, 307, 309) have furniture with connected chair/desk • Room layouts primary boards have glare and even with the blinds it's hard to see • Smartboards are located in the middle of large white boards leaving limited space on white boards • Teachers would prefer to share classrooms within their department because teaching styles are more similar • Administration has been in discussions to add school days to the year and it raises a concern about cooling the building if school year is extended into summer heat • Locker rooms too small - male student athletes get dressed in the hallway after school
18.03	**Extra Faculty Goals** • Provide classrooms that are very similar - technology needs to work the same in each classroom • Provide acoustical separation between classrooms • Have a shared large group instruction space - amphitheater style • Provide acoustic separation in guidance area • Have a secondary auditorium space for smaller performances. This would be good for music, drama and other clubs. Example: Euphany is an open mic club/group that presents in a coffeehouse style performances for poets and songwriters. Also they publish the literary magazine • Provide a consistant design philosophy for each classroom • Provide more storage for everyone • Open the breezeway/corridor connectors for student use - would also reduce congestion

- Outdoor amphitheater style space
- Provide exterior maintenance for the courtyards - resolve standing water issues
- Increase size of cafeteria

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Kitchen staff Programming Meeting	Meeting No:	19
Distribution:	PJP, LBF, PG (MF)		

Attendees: Deborah Wells (HS Staff Manager), Carol Judd (Food Service Director for Sharon Public Schools), SMMA / Phil Poinelli, Kate Jessup

Item #	Discussion
19.01	The meeting was held to understand the needs of the individuals who work in the kitchen and provide food service in the building. In particular, to understand how they work today, how they would like to work, and how the physical environment can support that.
19.02	**Kitchen Overview** • 4 lunches are served, one for each grade • 6 staff members • Lunch servery is comprised of stations: pizza, salad bar, main meal, and grab 'n' go (estimated 275-300 per day served) • Breakfast: serve breakfast sandwiches, bagels, cereal (estimated 50 per day served) • Lunch periods are 30 minutes long and with lines there is limited time for students to eat their lunch
19.03	**Kitchen Staff Concerns** • Tall ovens: not enough space to open doors and move around, sight lines impeded by location of adjacent refrigerator, no space to put down hot items which leaves individuals walking into congested circulation area with hot items which is dangerous • Outdoor refrigerator is unsanitary. Servers must go in and out several times a day even in snow, ice, and rain • Exterior door is a security concern. No buzzer at back door. Door remains unlocked throughout the time staff is in the kitchen. • Inadequate dry food storage especially on delivery day • Inadequate walk in • Lines for servery back up because of lack of space, need more registers • Need more sinks: currently 1 for meat, 1 for vegetables, 1 for hands • Wood butcher block counter surface fosters bacteria growth, unsanitary

	• Flooring is inappropriate for kitchen area (12x12 VCT) • Staff does some catering however it interferes with serving the children which is the primary purpose of the kitchen.
19.04	**Kitchen Staff Goals** • Find an effective balance between providing quality foods with low sodium and working with a budget • Provide more healthy scratch cooking rather than processed foods • Provide monolithic flooring option • Provide a cooler at the deli line so that servers do not have to traverse the entire kitchen to get refrigerated items when they need to restock • Remove walls to servery to create a large open servery area which will open up the flow of the space • Make cafeteria feel like a food court - move registers out of the back area • Reorganize and evaluate current equipment to provide the proper equipment for the serving being done. Currently, many machines are unused or oversize and could be replaced with smaller items. • Important to retain the ability to scratch cook

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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PROJECT MINUTES

Project:	Sharon High School	Project No.:	13058
Prepared by:	KAJ/PG	Meeting Date:	9/30/2013
Re:	Custodians Programming Meeting	Meeting No:	20
Distribution:	PJP, LBF, PG (MF)		

Attendees: Terry Cronin, Dimitri Marbenos, SMMA / Phil Poinelli, Kate Jessup

Item #	Discussion
20.01	The meeting was held to understand the needs of the individuals who work in the in the building. In particular, to understand how they work today, how they would like to work, and how the physical environment can support that.
20.02	**Custodian Overview** • Staff: (1) Head Custodian comes in at 6:30, (1) 11:30 AM, (4) evening staff at 2:30PM • Maintenance staff: District-wide union plumber and electrician. • Exterior Maintenance staff: DPW maintains exterior and does plowing. Custodial staff does localized plowing and shoveling • Courtyards are addressed once per year before the start of each school year. • Parks and Recreation department maintains playing fields • Custodians have lockers for personal item storage adjacent to break room • Break room with refrigerator, locker area, private ADA toilet room, storage, boiler room • Not enough storage space provided - there was more in the past but that space became the school store • Cleaning: 2 walk-behind machines, sweeping and spot mopping takes place daily in classrooms. Trash changed each day. • There are the proper quantity of mop sinks
20.03	**Custodian Concerns** • Need more convenience outlets • Mold and mildew spaces within the building have been tested. Each summer it comes back, is addressed, and then is fine for the remainder of the school year
20.04	**Custodian Goals** • Provide adequate storage space

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

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SMMA

Appendix 3

Basic Educational Space for Planned Program

Executive Report – 2013 High School Conditions Study

SHARON PUBLIC SCHOOLS

ENGLISH

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH									
611002	English I	242	242	24	10	4.00	40	26	1.54	
611222	Creative Writing	46	46	24	2	2.00	4	26	0.15	Semester
611442	Hollywood Film Directors	16	16	24	1	2.00	2.0	26	0.08	Semester
611642	Hollywood Film Genres	19	19	24	1	2.00	2.0	26	0.08	Semester
611822	Public Speaking	44	44	24	2	2.00	4.0	26	0.15	Semester
611912	Intro to Journalism	39	39	24	2	2.00	4.0	26	0.15	Semester
612001	Foundations of English II	18	18	24	1	2.00	2.0	26	0.08	
612002	English II	148	148	24	7	4.00	28.0	26	1.08	
612003	Honors English II	156	156	24	7	4.00	28.0	26	1.08	
612013	Honors Print & Digital Journalism	14	14	24	1	4.00	4.0	26	0.15	
613002	English III	100	100	24	5	4.00	20.0	26	0.77	
613003	Honors English III	100	100	24	5	4.00	20.0	26	0.77	
614002	English IV	75	75	24	4	4.00	16.0	26	0.62	
614003	Honors English IV	73	73	24	4	4.00	16.0	26	0.62	
614004	AP English IV	34	34	24	2	4.00	8.0	26	0.31	
615002	American Studies / English	60	60	24	3	4.00	12.0	26	0.46	
616002	Humanities / English	122	122	24	5	4.00	20.0	26	0.77	
17	ENGLISH SUBTOTAL	1306	1,306						8.85	
							8.85	**/ .85 =**	**10.4**	**Say 11 classrooms**
681203	Honors Advanced Acting I	11	11	24	1	2.00	2.0	26	0.08	Semester
681213	Honors Advanced Acting II	6	6	24	1	2.00	2.0	26	0.08	Semester
681223	Honors Advanced Acting III	6	6	24	1	2.00	2.0	26	0.08	Semester
681303	Honors Theater Production	5	5	24	1	2.00	2.0	26	0.08	Semester
681600	Improvisation Workshop U	17	17	24	1	2.00	2.0	26	0.08	Semester
681100	Intro to Theater U	24	24	24	1	2.00	2.0	26	0.08	Semester
5		69							0.46	
							0.46	**/ .85 =**	**0.5**	**Say 1**
									ASSUME 1 Advanced Eng CR	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

SOCIAL STUDIES

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SOCIAL STUDIES									
621001	Foundations of World History	17	17	24	1	4.00	4	26	0.15	
621002	World History I	240	240	24	10	4.00	40	26	1.54	
621112	Hidden Histories	14	14	24	1	2.0	2	26	0.08	Semester
621212	Psychology	49	49	24	2	2.0	4	26	0.15	Semester
621312	Economics	75	75	24	3	2.0	6	26	0.23	Semester
621412	Media Awareness	26	26	24	1	2.0	2	26	0.08	Semester
621512	American Legal Sys & Govt	23	23	24	1	2.0	2	26	0.08	Semester
621612	Since JFK	49	49	24	2	2.0	4	26	0.15	Semester
621622	Since Reagan	25	25	24	1	2.0	2	26	0.08	Semester
621712	Current Events - World Today	25	25	24	1	2.0	2	26	0.08	Semester
621812	Ethics, Phil. & Hist of Altruism	74	74	24	3	2.0	6	26	0.23	Semester
621912	World Religions	18	18	24	1	2.0	2	26	0.08	Semester
622002	World History II	176	176	24	8	4	32	26	1.23	
622003	Honors World History II	128	128	24	6	4	24	26	0.92	
622012	Genocide & Human Nature	23	23	24	1	2	2	26	0.08	Semester
622022	Introduction to Debate	23	23	24	1	2	2	26	0.08	Semester
623002	US History	64	64	24	3	4	12	26	0.46	
623003	Honors US History	69	69	24	3	4	12	26	0.46	
623004	AP US History	62	62	24	3	4	12	26	0.46	
625002	American Studies/Social St	60	60	24	3	4	12	26	0.46	
626002	Humanities/Social Studies	122	122	24	5	4	20	26	0.77	
626004	AP Government & Politics (US)	48	48	24	2	4	8	26	0.31	
627004	AP European History	16	16	24	1	4	4	26	0.15	
628004	AP Psychology	139	139	24	6	4	24	26	0.92	
									9.23	
							9.23	**/ .85 =**	**10.9**	**Say 11**
23	**SOCIAL STUDIES SUBTOTAL**	**1565**	**1565**						**ASSUME 11 SOCIAL STUDIES CLASSROOMS**	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

SOCIAL STUDIES

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SOCIAL STUDIES									

MATH

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	MATHEMATICS									
630111	Foundations of Algebra II	10	10	24	1	4.00	4.0	26	0.15	
630132	Concepts in Algebra II	4	4	24	1	4.00	4.0	26	0.15	
630203	Honors Geometry	76	76	24	3	4.00	12.0	26	0.46	
630222	Geometry	140	140	24	6	4.00	24.0	26	0.92	
630242	Concepts of Geometry	96	96	24	4	4.00	16.0	26	0.62	
630302	Algebra & Trigonmetry	106	106	24	5	4.00	20.0	26	0.77	
630402	Pre-Calculas & Trigonmetry	89	89	24	4	4.00	16.0	26	0.62	
630403	Honors Pre-Calculas & Trig	28	28	24	2	4.00	8.0	26	0.31	
630502	Calculus	63	63	24	3	4.00	12.0	26	0.46	
630512	Introduction to Calculus	36	36	24	2	4.00	8.0	26	0.31	
630514	AP Calculas BC	24	24	24	1	4.00	4.0	26	0.15	
630524	AP Calculas AB	27	27	24	2	4.00	8.0	26	0.31	
630612	Statistics	90	90	24	4	4.00	16.0	26	0.62	
630614	AP Statistics	20	20	24	1	4.00	4.0	26	0.15	
630712	Discrete Math	53	53	24	3	4.00	12.0	26	0.46	
630722	Advanced Math Reasoning	36	36	24	2	4.00	8.0	26	0.31	
631102	Concepts Algebra I	63	63	24	3	4.00	12.0	26	0.46	
631112	Algebra I	94	94	24	4	4.00	16.0	26	0.62	
631113	Honors Algebra I	93	93	24	4	4.00	16.0	26	0.62	
631211	Math 9	9	9	24	1	4.00	4.0	26	0.15	
631311	Math 10	8	8	24	1	4.00	4.0	26	0.15	
21	**MATHEMATICS SUBTOTAL**	**1165**	**1,165**						8.77	
							8.77	**/ .85 =**	**10.3**	**Say 10**
									ASSUME 10 MATH CLASSROOMS	

SCIENCE

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Environmental Sciences									
646002	Environmental Science	25	25	24	1	2	2.0	26	0.08	Semester
647002	Astronomy	25	25	24	1	2	2.0	26	0.08	Semester
2									0.15	
							0.15	**/ .85 =**	**0.2**	use other science labs
	Biology									
642002	Biology	110	110	24	5	4	20.0	26	0.77	
642003	Honors Biology	137	137	24	6	4	24.0	26	0.92	
642004	AP Biology	55	55	24	3	4	12.0	26	0.46	
645002	Anatomy & Physiology	58	58	24	3	4	12.0	26	0.46	
645003	Honors Anatomy & Physiology	21	21	24	1	4	4.0	26	0.15	
648102	Biotechnology	45	45	24	2	4	8.0	26	0.31	
6									3.1	
							3.08	**/ .85 =**	**3.6**	say 4
	Physics									
641001	Foundations of Physics	14	14	24	1	4	4	26	0.15	
641002	Physics I	143	143	24	6	4	24	26	0.92	
641003	Honors Physics I	100	100	24	4	4	16	26	0.62	
644004	AP Physics C	22	22	24	1	4	4	26	0.15	
644014	AP Physics B	13	13	24	1	4	4	26	0.15	
644103	Honors Advanced Physics	40	40	24	2	4	8	26	0.31	
644112	Physics and Engineering	50	50	24	2	4	8	26	0.31	
7									2.62	
							2.62	**/ .85 =**	**3.1**	Say 3
	Chemistry									
643001	Foundations of Chemestry	19	19	24	1	4	4	26	0.15	
643002	Chemistry	178	178	24	8	4	32	26	1.23	
643003	Honors Chemistry	123	123	24	6	4	24	26	0.92	
643004	AP Chemistry	27	27	24	2	4	8	26	0.31	
5									2.62	
							2.62	**/ .85 =**	**3.08**	Say 3

SCIENCE

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
19	**SCIENCE SUBTOTAL**	**1205**	**1205**							
	Interhangeable labs									
	Environmental Sciences		0.15							
	Biology		3.08							
	Physics		2.62							
	Chemistry		3.08							
			8.92	**/ .85 =**	**10.50**	**Say**	**11**			
	NOTE: All science courses are to be taught in a lecture / lab								**ASSUME 11 SCIENCE LECTURE / LABS**	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

FOREIGN LANGUAGE

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, Ea. Class	Projected Students, Ea. Class	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGE									
651012	French I	11	11	24	1	4.00	4.0	26	0.15	
651022	French II	20	20	24	1	4.00	4.0	26	0.15	
651023	Honors French II	44	44	24	2	4.00	8.0	26	0.31	
651032	French III	24	24	24	1	4.00	4.0	26	0.15	
651033	Honors French III	71	71	24	3	4.00	12.0	26	0.46	
651042	French IV	21	21	24	1	4.00	4.0	26	0.15	
651043	Honors French IV	45	45	24	2	4.00	8.0	26	0.31	
651053	Honors French V	14	14	24	1	4.00	4.0	26	0.15	
651054	AP French V	22	22	24	1	4.00	4.0	26	0.15	
9	total	272							2.00	
							2.0	**/ .85 =**	2.35	say 2
652012	Spanish I	25	25	24	1	4.00	4.0	26	0.15	
652022	Spanish II	91	91	24	4	4.00	16.0	26	0.62	
652023	Honors Spanish II	63	63	24	3	4.00	12.0	26	0.46	
652032	Spanish III	78	78	24	4	4.00	16.0	26	0.62	
652033	Honors Spanish III	72	72	24	3	4.00	12.0	26	0.46	
652042	Spanish IV	49	49	24	2	4.00	8.0	26	0.31	
652043	Honors Spanish IV	39	39	24	2	4.00	8.0	26	0.31	
652052	Spanish V	31	31	24	2	4.00	8.0	26	0.31	
652053	Honors Spanish V	17	17	24	1	4.00	4.0	26	0.15	
652054	AP Spanish V	21	21	24	1	4.00	4.0	26	0.15	
652102	Spanish Culture & Conversation	13	13	24	1	4.00	4.0	26	0.15	
652112	Introduction to Spanish	18	18	24	1	4.00	4.0	26	0.15	
12	total	517							3.85	
							3.8	**/ .85 =**	4.52	say 5
653012	Latin I	38	38	24	2	4.00	8.0	26	0.31	
653022	Latin II	14	14	24	1	4.00	4.0	26	0.15	
653032	Latin III	18	18	24	1	4.00	4.0	26	0.15	
653042	Latin IV	3	3	24	1	4.00	4.0	26	0.15	
653044	AP Latin	13	13	24	1	4.00	4.0	26	0.15	
5	total	86	86						0.92	

FOREIGN LANGUAGE

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, Ea. Class	Projected Students, Ea. Class	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGE									
							0.9	**/ .85 =**	1.09	say 1
654022	Mandarin Chinese II	25	25	24	1	4.0	4.15	26	0.16	
654032	Mandarin Chinese III	25	25	24	1	4.0	4.15	26	0.16	
654042	Mandarin Chinese V	16	16	24	1	4.0	4.15	26	0.16	
654044	AP Mandarin Chinese V	6	6	24	1	4.0	4.15	26	0.16	
654052	Mandarin Chinese V	11	11	24	1	4.0	4.15	26	0.16	
5	total	83							0.80	
							0.80	**/.85 =**	1.09	Say 1
656012	American Sign Language I	49	49	24	2	4.0	8.0	26	0.31	
1	total	49							0.31	
							0.31	**/ .85 =**	0.36	Say 1
	Interhangeable labs									
	French		2.00							
	Spanish		3.85							
	Latin		0.92							
	Mandarin Chinese		0.80							
	American Sign		0.31							
			7.88							
	7.88		/ .85 =	**9.26**	**Say 9**					
	TOTAL	**2014**	**1,093**							

Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.

VISUAL ART

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	FINE ARTS									
	3D									
682412	Sculpture I	16	16	24	1	2	2	26	0.08	Semester
682512	Ceramics I	60	60	24	3	2	6	26	0.23	Semester
682522	Ceramics II	9	9	24	1	2	2	26	0.08	Semester
3		85							0.38	
							0.38	**/ .85 =**	**0.45**	Assume 1
	2D									
682052	Drawing and Painting	68	68	24	3	2	6	26	0.23	Semester
682100	Intro to Art U	136	136	24	6	2	12	26	0.46	Semester
682112	2D / 3D Animation I	43	43	24	2	2	4	26	0.15	Semester
682244	AP Studio Art	11	11	24	1	4	4	26	0.15	
4		258							1.00	
							1.00	**/ .85 =**	**1.18**	Assume 1
	Computer Art									
682142	Digital Photography I	64	64	24	3	2	6	26	0.23	Semester
682162	Graphic Design I	22	22	24	1	2	2	26	0.08	Semester
682283	Honors 3D Animation II	9	9	24	1	2	2	26	0.08	Semester
682293	Honors 3D Animation III	2	2	24	1	2	2	26	0.08	Semester
3		97							0.46	
							0.46	**/ .85 =**	**0.54**	
	FINE ARTS SUBTOTAL	**440**								
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

MUSICAL ARTS

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	MUSIC									
	Instrumental									
683200	Concert Band U	64	56	30	1	4	4	26	0.15	
683213	Honors Jazz Band	9	8	30	1	1.25	1.25	26	0.05	
683220	Guitar I U	12	10	30	1	2	2	26	0.08	semester
683233	Honors Guitar II	5	4	30	1	2	2	26	0.08	semester
683240	Digital Music Composition U	24	21	25	1	2	2	26	0.08	semester
683253	Honors Digital Music Comp II	4	3	25	4	2	8	26	0.31	semester
683260	Orchestra U	36	31	30	1	4	4	26	0.15	
7									0.89	
							0.89	**/ .85 =**	**1.05**	
	Vocal									
683010	Concert Chorus U	101	101	30	1	4	4	26	0.15	
683123	Honors Treble Choir	28	28	30	1	1.25	1.25	26	0.05	
683133	Honors Treble / Bass Choir	15	15	30	1	1.25	1.25	26	0.05	
683143	Honors Select Choir	13	13	30	2	4	8	26	0.31	
683170	Music Theory U	7	7	30	1	2	2	26	0.08	semester
683523	Honors Select Choir 10	4	4	30	1	2	2	26	0.08	semester
6									0.71	
							0.71	**/ .85 =**	**0.84**	
									ASSUME 3 MUSIC ROOMS	
	MUSIC SUBTOTAL		302							
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

PE - Wellness

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Gym Environment									
684500	Wellness 9 U	247	247	24	11	1.25	13.75	26	0.53	
684600	Wellness 10 U	319	319	24	14	1.25	17.5	26	0.67	
			566						1.20	
							1.20	**/ .85 =**	**1.4**	
									ASSUME 2 PHYS. ED. STATIONS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

ELECTRONIC MEDIA COMMUNICATIONS

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
687010	Inro to Media & TV Production U	54	54	24	2	2	4	26	0.15	
687022	Newsroom / Digital Editing	36	36	24	2	2	4	26	0.15	
687033	Honors TV Production Wrkshop I & II	16	16	24	1	4	4	26	0.15	
									0.46	
							0.46	**/ .85 =**	**0.54**	**Say 1 lab**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SUMMARY

1152 STUDENTS
24 max / class

# of Offerings		Classrooms Required	Comments
Core Academic			
22	English	11	
5	Theater		
23	Social Studies	11	* + Language Lab
21	Math	10	
32	Foreign Language	9	
0	Wellness	0	
	Classroom total	**41**	
0	ELL		half size classroom
	Science		
2	Environmental Sci		
6	Biology	4	
7	Physics	4	
5	Chemistry	3	
20	**Sci Total**	**11**	
Special Education			
Art and Music			
4	Art 2D	1	
3	Art 3D	1	
3	Graphics Lab	1	
7	Band / Orchestra	2	
6	Chorus	1	
Vocational & Technology			
	Computer Tech		
3	TV	1	
0	STEM	2	
	Arch / Engineering		
	Business Classroom		one lab, one classroom
Health and Physical Education		Gym	
	Alternate PE	2	
149			

SMMA

Appendix 4

MSBA Summary of Spaces

Executive Report – 2013 High School Conditions Study

SHARON PUBLIC SCHOOLS

Proposed Space Summary - High Schools

Sharon High School	Existing Conditions			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	Comments
CORE ACADEMIC SPACES			**47,404**			**55,150**	14% under
(List classrooms of different sizes separately)							
Classroom - General				850	39	33,150	825 SF min - 950 SF max
Classroom - General	906	1	906				
Classroom - General	950	3	2,850				
Classroom - General	825	3	2,475				
Classroom - General	800	4	3,200				
Classroom - General	775	4	3,100				
Classroom - General	1,050	2	2,100				
Classroom - General	750	24	18,000				
Classroom - General	850	1	850				
		42					
Teacher Planning				100	39	3,900	
Teacher Planning - Small Gathering	290	1	290				
Teacher Planning - Foreign Language	400	1	400				
Small Group Seminar (20-30 seats)				500	3	1,500	
Science Classroom / Lab				1,440	10	14,400	3 x85% ut=20 Seats-1 per /day/student
Science Classroom / Lab	1,432	2	2,864				
Science Classroom / Lab	1,100	3	3,300				
Science Classroom / Lab	1,200	1	1,200				
Science Classroom / Lab	1,050	1	1,050				
Science Classroom / Lab	650	1	650				
Science Classroom / Lab	850	1	850				
Science Classroom / Lab	1,150	1	1,150				
Science Classroom / Lab	950	1	950				
		11					
Prep Room	VARIES	5	1,158	200	10	2,000	
Foreign Language Storage	61	1	61				
Foreign Language Office	300	1					
Central Chemical Storage Rm				200	1	200	
SPECIAL EDUCATION			**6,547**			**12,080**	45% under
(List classrooms of different sizes separately)							
Self-Contained SPED				950	8	7,600	assumed 8% of pop. in self-contained SPED
Self-Contained SPED	525	1	525				
Self-Contained SPED	417	1	417				
Self-Contained SPED	560	2	1,120				
Self-Contained SPED	475	1	475				
Self-Contained SPED	540	1	540				
Self-Contained SPED Toilet			0	60	8	480	
Self-Contained SPED Suite with Toilet	790	1	790				
SPED Charms	1,140	1	1,140				
SPED Networks	1,140	1	1,140				
SPED Networks	400	1	400				
Resource Room				500	4	2,000	1/2 size Genl. Clrm.
Small Group Room				500	4	2,000	1/2 size Genl. Clrm.
ART & MUSIC			**3,540**			**6,775**	48% under
Art Classroom - 25 seats				1,200	2	2,400	Assumed use - 25% Population - 5 times/week
Art Classroom - 18 seats	900	2	1,800				
Art Workroom w/ Storage & kiln			0	150	2	300	
Art Workroom w/ Storage & kiln	375	1	375				
Band - 50 - 100 seats			0	1,500	1	1,500	Assumed use - 25% Population - 5 times/week
Chorus - 50 - 100 seats			0	1,500	1	1,500	
Ensemble			0	200	1	200	
Music - General	1,125	1	1,125				
Music Office	60	1	60				
Music Practice			0	75	5	375	
Music Storage	60	3	180	500	1	500	
VOCATIONS & TECHNOLOGY			**1,528**			**12,800**	88% under
Tech Clrm. - (E.G. Drafting, Business)				1,200	4	4,800	Assumed use - 50% Population - 5 times/week
Tech Shop - (E.G. Consumer, Wood)				2,000	4	8,000	Assumed use - 50% Population - 5 times/week
TV Studio + CR Approx	1,528	1	1,528				

Version
11.24.2010

Proposed Space Summary - High Schools

Sharon High School	Existing Conditions			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	Comments
HEALTH & PHYSICAL EDUCATION			**19,901**			**22,651**	13% under
Gymnasium	9,200	1	9,200	12,000	1	12,000	
PE Alternatives			0	3,000	1	3,000	
Gym Storeroom			0	300	1	300	
Locker Rooms - Boys w/ Toilet	3,000	1	3,000	6,451	1	6,451	5.6 sf/student total
Locker Rooms - Girls w/ Toilet	3,550	1	3,550				
Weight Room	1,675	1	1,676				
Phys. Ed. Storage	VARIES	4	975	500	1	500	
Athletic Faculty Office	VARIES	4	950	150	1	150	
Athletic Trainer's Office with Showers & Toilet	550	1	550				
Health Instructor's Office w/ Shower & Toilet				250	1	250	
MEDIA CENTER			**8,684**			**7,100**	22% over
Media Center / Reading Room/Library	5,769	1	5,769	7,100	1	7,100	
Teacher Research/Library annex	340	1	340				
Library Office	150	1	150				
Computer Lab	825	2	1,650				
Computer Lab	775	1	775				
AUDITORIUM / DRAMA			**10,520**			**10,400**	1% over
Auditorium	6,423	1	6,423	7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
Stage	3,197	1	3,197	1,600	1	1,600	
Auditorium Storage	VARIES	3	900	500	1	500	
Make-up / Dressing Rooms				300	2	600	
Controls / Lighting / Projection				200	1	200	
DINING & FOOD SERVICE			**7,314**			**9,788**	25% under
Cafeteria / Student Lounge / Break-out	4,974	1	4,974	5,760	1	5,760	3 seatings - 15SF per seat
Chair / Table Storage				438	1	438	
Scramble Serving Area				600	1	600	
Kitchen/Servery/Dishwashing	1,660	1	1,660	2,452	1	2,452	1600 SF for first 300 + 1 SF/student Add'l
Kitchen Storage	VARIES	4	380				
Exterior Refrigerator	300	1	300				
Staff Lunch Room				538	1	538	20 SF/Occupant
MEDICAL			**501**			**1,010**	50% under
Medical Suite Toilet	27	2	54	60	1	60	
Nurses' Office / Waiting Room	365	1	365	250	1	250	
Interview Room	82	1	82	100	2	200	
Examination Room / Resting				100	5	500	
ADMINISTRATION & GUIDANCE			**7,330**			**4,729**	55% over
General Office / Waiting Room / Toilet				576	1	576	
General Office / Waiting Room	421	1	421				
Teachers' Mail and Time Room				100	1	100	
Teacher's Lounge/Suite with Restrooms	VARIES	5	1,100				
Duplicating Room				200	1	200	
Records Room				200	1	200	
Principal's Office w/ Conference Area	245	1	245	375	1	375	
Principal's Secretary / Waiting	214	1	214	125	1	125	
Assistant Principal's Office - AP1	206	1	206	150	1	150	
Assistant Principal's Office - AP2	160	1	160	150	1	150	
Supervisory / Spare Office	VARIES	4	342	120	1	120	
Conference Room				450	1	450	
Small Conference	201	1	201				
Guidance Office	VARIES	5	1,050	150	6	900	
Guidance Director's Office	330	1	330				
Guidance Waiting Room				100	1	100	
Guidance Storeroom	225	1	225	100	1	100	
Guidance Administration Office	330	1	330				
Psychologist Office	122	2	244				
Social Worker	367	1	367				
Administrative Storage	VARIES	2	102				
Career Center				438	1	438	
Records Room				169	1	169	
Teachers' Work Room				576	1	576	
Small Group	291	1	291				
Large Group	548	1	548				

Proposed Space Summary - High Schools

Sharon High School	Existing Conditions			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	Comments
Large Group/Workroom	410	1	410				
Metco	204	1	204				
Hoteling Offices	VARIES	3	340				
CUSTODIAL & MAINTENANCE			**3,185**			**2,489**	27% over
Custodian's Office	240	1	240	150	1	150	
Custodian's Offices (2) with Restroom	515	1	515				
Custodian's Workshop				250	1	250	
Custodian's Storage				375	1	375	
Recycling Room / Trash				400	1	400	
Receiving and General Supply				438	1	438	
Storage	VARIES	9	1,990	676	1	676	
Network / Telecom Room				200	1	200	
Head End	230	1	230				
Comuter repair	210	1	210				
OTHER			**1,757**			**0**	
School Store	775	1	775				
TV Studio, Controls, and Editing	712	1	712				
SRO	270	1	270				
Total Building Net Floor Area (NFA)			**118,211**			**144,972**	32,912 net = 23% under
Proposed Student Capacity / Enrollment						**1,152**	186
Total Building Gross Floor Area (GFA)[2]			199,775			**214,272**	
Grossing factor (GFA/NFA)			**1.69**			**1.48**	

[1] **Individual Room Net Floor Area (NFA)** 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

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date:

EVALUATION OF EXISTING CONDITIONS

EXECUTIVE SUMMARY

The following evaluations are based on building walk-throughs and reviews of the original construction documents performed by design professionals in August 2013. The building, originally constructed in 1956, and major additions completed in 1963 and 1997 are generally in their original condition. The building and systems have been well maintained, however building enclosure components, building systems and interior finishes are nearing or beyond their useful life expectancies and, in many cases are in need of upgrade.

The building was built per code requirements in force at the time of construction. As these codes have evolved, and as accessibility standards have been established, the building and surrounding site are no longer in compliance with current regulations. Depending on the scope of proposed alterations, additional renovation may be required to meet current codes.

3.1 EXISTING SITE CONDITIONS

The following information is based on a walk-through of the site performed in August 2013, an existing conditions survey performed in 1996 by Norwood Engineering Company, design plans dated 1996 by Symmes Maini & McKee Associates, and review of available record plans and reports. For consistency we are referring to the building wings as the original building (1956), 1963 addition, and the 1997 addition.

The existing Sharon High School is located at 181 Pond Street in Sharon, Massachusetts. The site is centrally located within the town and is shown as Assessor's Map 81 Lot 124 and is located in the Rural District 2 and the Water Resource Protection zoning districts. It is bounded by Beach Street to the south; residential properties and Ames Street to the north, undeveloped land to the west, and Pond street to the east.

Existing High School Site

The site measures 28.5 acres and contains the high school building on the northern portion of the site along with a small waste water treatment plant to the west of the school. There are many play fields on the site including a track and field complex to the southeast, baseball field, softball field and five tennis courts to the south. Vehicular access to the building is provided from Pond Street and Ames Court. The site has about 200' of frontage on Ames Street and currently serves as a pedestrian access point only; there is a paved walkway through the wooded portion of the site.

Topography across the site ranges from elevation 270' at Ames Street to 258' along Beach Street to approximately 255' at the undeveloped corner of the site to the southwest. The school building has a finished floor elevation of 262' and the wastewater treatment plant building has a finished floor elevation of 256'. In general the site slopes from north to south and plateaus to accommodate the school and various fields.

The school is comprised primarily of a one story building with a two story portion at the south east which is the 1997 addition. The main entrance is on southeastern portion of the building. There is a boiler room and maintenance facility located in west portion of the building and contains mechanical equipment that serves the building (see Mechanical Systems and Plumbing System descriptions).

Wetland resource areas were identified on the existing conditions survey completed for the 1996 addition project. Wetlands were located in the south portion of the site: west and south of the track facility and between the tennis courts and baseball field north of Beach Street. A review of MassGIS identifies wetlands west of the track.

According to the Flood Insurance Rate Map (FIRM) for Middlesex County (Map Number 25017C0068E, Panel 356 of 430), the site is located within an un-shaded Zone X. FEMA defines this as an area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

The project site is not within an Area of Critical Environmental Concern (ACEC), known Zone I, II, or Interim Wellhead Protection Areas or Zone A, B, or C Surface Water Protection Areas as designated by Massachusetts Department of Environmental Protection.

A review of Massachusetts Natural Heritage Atlas indicates no Priority Habitats of Rare Species, Estimated Habitats of Rare Wildlife, or Certified Vernal Pools are located on the site.

SMMA visited Massachusetts Historical Commission (MHC) in August 2013 and confirmed that the building and site are currently not listed on the Inventory of Archaeological and Historic Assets of the Commonwealth and the State Register of Historic Places.

Zoning

As previously noted the site is located in the Rural District 2 and the Water Resource Protection zoning districts. Educational uses are permitted as right within the Rural District 2; however sewage treatment plants are a allowed if a Special Permit is granted by the Sharon Zoning Board of Appeals. The Rural District 2 has the following dimensional requirements:

Sharon Zoning Bylaw – Dimensional Requirements

	Lot Area Minimum	Frontage Minimum	Front Yard	Side/Rear Yard	Minimum Separation btwn Buildings	Maximum Height
Required	80,000 sf*	175 ft	50 ft	30 ft** 10 ft***	10 ft	2-1/2 stories 35 ft
Existing	28.5 acres	1,053 ft (Pond) 200 (Ames)	145 ft (Pond)	14 ft	57 ft	2 stories 39 ft

* Minimum Lot Area is also 80,000 sf in Water Resource Protection District

** Principal Buildings

*** Accessory Buildings

Sharon Zoning Bylaw – Lot Coverage Limits

	Maximum Lot Coverage	Maximum Impervious Coverage	Minimum Vegetation Area
Required	15%	15%^	50%
Existing	±12%	±27%	±42%

^ Maximum Impervious Coverage is also 15% in Water Resource Protection District

Based on the dimensional requirements above, the existing building is in non-conformance. Any development on the high school site will likely require a Special Permit from the Sharon Zoning Board of Appeals due to development within the Water Resource Protection District.

Development on this site will also likely require filing of a Notice of Intent under the Massachusetts Wetland Protection Act with the Sharon Conservation Commission. The development could include work within the resource areas including the Buffer Zone of Bordering Vegetated Wetlands.

It is possible that a State filing could be required with the Massachusetts Environmental Policy Act (MEPA) office of the Executive Office of Energy and Environmental Affairs (EEA), which would be determined by the scope of development and if the scope exceeds MEPA thresholds.

Parking and Circulation

Primary vehicular access to the site is gained from one of three curb cuts in Pond Street. The primary main drop-off loop at the building's main entrance off of Pond Street is one-way in and out, which accounts for two of these curb cuts. There is an additional two 2-way curb cut that serves a secondary drop-off loop. A secondary access to the site for service vehicles is provided from Ames Court to the west and serves as access to the loading dock.

The site provides striped parking for approximately 147 total vehicles east of the school and these spaces are distributed in three main parking areas. The parking lot to the southeast at the main drop-off loop accommodates approximately 73 vehicles, the parking lot to the east accommodates approximately 46 vehicles, and the parking lot to the northeast at the secondary drop-off loop accommodates approximately 28 vehicles. There are additional striped spaces to the west of the school at the end of Ames Court for approximately 30 vehicles. Walter Griffin Playground is located across Pond Street on town-owned land to the east and provides approximately 130 student parking spaces. Temple Israel is located east of Walter Griffin Playground and provides an additional 30 parking spaces for juniors. The loading dock is also located on the west side of the building along with the wastewater treatment building.

Morning drop-off activities were observed in the fall of 2013 on a typical school day. Approximately 12-15 buses dropped-off at the main entrance loop, which was clearly dedicated for bus use. Other vehicular student drop-off occurred within the eastern parking lot, at the secondary drop-off loop, or within the street. Students who drove themselves parked either in the lot at the Playground or further east. Pond Street was quite congested during the observed morning with bus, vehicular, and pedestrian travel crossing each other off the school site within the right-of-way.

Afternoon pick-up activities were also observed in the fall of 2013 on a typical school day. The first bus observed arriving three minutes before the last bell of the day. Approximately 12-15 buses continued arriving and loading students from the plaza/walkway at the main entrance, from the dedicated main traffic loop. Other vehicles were queued in the street and were parked in the eastern parking lot waiting to pick-up. Students also made their way through the pick-up activities at the entrance and within the street to the student lots. A police detail was noted during the afternoon pick-up although the officer remained in his cruiser. Similar to the morning, there was a high level of congestion due to activities occurring off site within the street.

In general the existing pavement and walkways are in fair condition. Portions of the driveways, parking lots and walkways have longitudinal surface cracks and alligator cracking. Asphalt adjacent to utility frames and covers are cracked, indicating some type of settlement over time. Nearly all of the curbing on the site is precast concrete and is in poor condition and is chipped and cracked. There are some portions of vertical granite curb along Pond Street that are in good condition.

MAAB/ADA Site Accessibility

There is partial compliance with current ADA accessibility requirements throughout the site. There are currently nine accessible parking spaces; four located at the main entrance in the southeast parking lot, two located in the east parking lot, and three located in the northeast parking lot. The nine accessible parking spaces exceed minimum quantity required; however there are no van spaces provided, which two are required. Accessible routes from these spaces to ADA compliant building entrances are only provided from the southeast and east lots but not from the northeast lot.

Some of the building entrances have code compliant access where ramps have been added. Other secondary doors however require a step down to grade.

Athletic Facilities

Track and Field

To the southwest of the high school building is a track and field complete with bleachers and press box. Just north of the track are long jump/triple jump pits and within the track are a high jump apron, discus cage, and football uprights. The infield is natural turf in good condition. At the time of observation, the track was being resurfaced and was under construction. Design drawings indicate a 6-lane 400 meter track. A scoreboard is also located northwest of the track.

Multiple sets of bleachers seat roughly 1,120 spectators to the east of the track and are all in good condition. A large portion of the seats, roughly 960 are provided in a main set of bleachers with the press box located at midfield. Four smaller bleachers make up the remainder of the seats. While the main set of bleachers has accessible ramps, the press box and smaller bleachers are not accessible.

Baseball and Softball Fields

The softball field is located south of the school building and has a skinned infield and fenced backstop and is in fair condition. The softball field is the only field lit on the site by six fixtures. The baseball field has two above grade dugouts along the first and third base lines, and the foul poles and a fence in the back of the outfield appear to be in fair condition. There are no formal pathways to the fields, including an accessible route.

Tennis Courts

Four tennis courts are located south of the school building adjacent to Pond Street. 8-foot tall fencing surrounds the courts and is in good condition. The court surface is currently in fair condition however a few surface cracks were observed.

Site Utilities and Drainage

The site is currently served by municipal water. An on-site wastewater treatment plant and disposal systems serve the school. Storm drainage generally discharges to municipal mains that eventually discharge to resource areas previously identified to the south.

A 6-inch water main taps from the existing 8-inch service in Pond Street east of the school building. The main continues into the site where it branches into domestic and fire protection supplies before entering the building to the south. There is one hydrant to the south that is served by the main. An additional hydrant is on the site to the west of the school building and is served directly from the school. There is a third hydrant in the vicinity of the school located on Pond Street across the street.

A 4-inch gas service to the high school is provided from a 12-inch main in Pond Street, and extends to the gas meter on the southeast portion of the building before it enters the school building through an exterior gas meter located on the west side of the building near the loading dock.

Surface runoff follows the site's topography and flows from north to south and in general away from the building. Runoff is collected by catch basins within the parking areas and interior roads and piped to the drainage main within the Pond Street to the east and Ames Court to the west.

Many of the catch basins on site were observed to be full of sediment and debris; however design documents indicate that catch basins have 4-foot sumps with hoods on the outlets. The loading dock/east side of the building is not graded to provide positive drainage away from the building so water collects adjacent to the foundations.

Electrical and telecommunication services are provided from the existing services in Pond Street. These services are carried underground from utility poles on the street into the site along near the secondary drop-off loop on the northeast side of the school building. See Electrical Systems description.

Septic System

Before the 1996 addition project, the school operated with an outdated sanitary system of a 22,000 gallon septic tank with and 2 leaching areas totaling 32,400 sf, providing a system capacity of 14,000 gallons per day. The 1996 project captured an increase in enrollment, therefore upgrades to the sanitary system were required. A new wastewater treatment plant with a capacity of 20,400 gallons per day was constructed utilizing rotating biological contactors along with a new leach field. The small concessions and restroom buildings at Memorial Park Beach, located across the street from the high school south of Beach Street, were also connected to the WWTP and contribute seasonal flow.

A study for a new middle school was completed in 2002 by Weston & Sampson and included evaluation of the high school's treatment plant as a source for sanitary disposal. The study indicated that the high school's system was underutilized, not receiving adequate flow, and had capacity for additional effluent. The Middle School, located on Mountain Street about 1.5 miles from the high school, was constructed in 2012 and included a sanitary force main to the high school's treatment plant.

According to available documents, the WWTP operates below design capacity. July, August, and September 2013 daily logs were used to calculate an average flow of about 1,500 gallons per day in the summer months and about 3,500 gallons per day when school was is session.

Site Lighting

The exterior site lighting at the parking lots are comprised of either shoebox type fixtures or building-mounted fixtures. These fixtures appear to be in fair condition. In addition, inadequate pedestrian lighting is provided. See Electrical Systems descriptions.

Soils and Geotechnical Investigation

According to the USDA Soil Survey of Norfolk County, the majority of soils within undeveloped portions of the site consist of Woodbridge Fine Sandy Loam, which is typically associated with having slow infiltration rates when thoroughly wet. The majority of developed portions are identifies as Udorthents, which is an urban land complex typical of developed sites. It is anticipated that soil conditions will be consistent with the sandy loam across the site.

3.2 EXISTING BUILDING CONDITIONS

HISTORY AND USE

The following information is based on a walk through performed in August 2013 and review of construction documents. The original single story slab on grade building was constructed with CMU and brick veneer. This building included an 850 seat auditorium, gymnasium, cafeteria, classrooms, and administration space. In 1963, a similar single story addition of CMU with brick veneer was built to increase the number or classrooms and enclose two northern courtyards.

In 1997, a two story addition was completed that enclosed the southern courtyard and was cavity wall construction of steel studs and brick veneer. This addition created a new entry, added additional classrooms, a small addition to three science classrooms, and a new library on the second level. This addition also created a new fire zone that was enclosed with fire and smoke partitions in addition to fire shutters to separate the two previous projects. Additionally, part of the 1997 project also included the replacement of the original windows of the 1956 and 1963 projects. The 1997 renovation/addition documents were prepared by Symmes, Maini & McKee Associates.

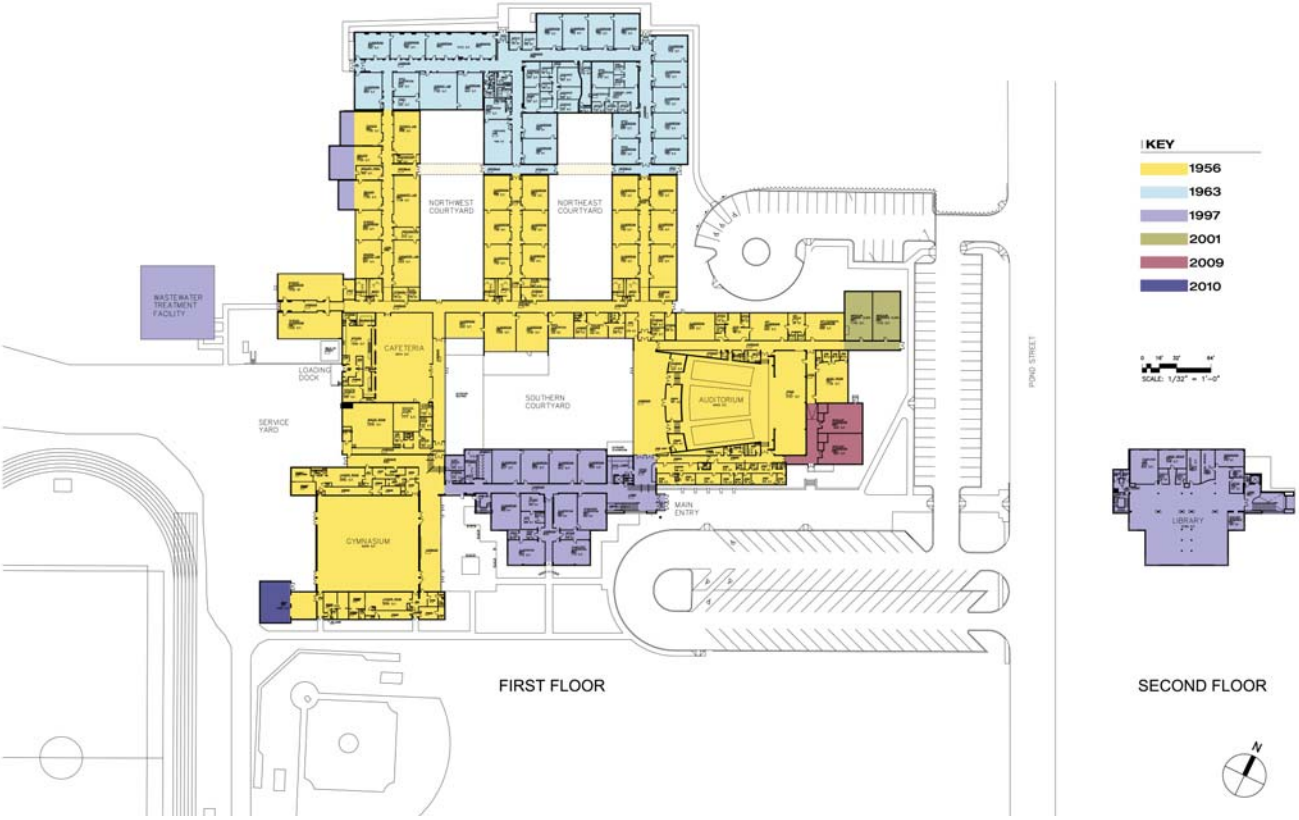
The floor slab at the 1997 addition second floor is a 5” concrete slab supported by open web joists that sit on steel wide flange beams and rectangular tube columns. The roof from the original building incorporates a mixture of steel wide Flange or channel shaped beams, and girders, long span “L” series steel joists, and custom fabricated long span roof trusses. The roof decking is also a mixture of materials from a shredded fiber board structural deck material (referred to as Tectum in the Baker/Wohl Architects report dated 14 March 2011) or a narrow rib steel deck. The 1963 addition also incorporates structural steel beams and girders supported on wide flange steel columns.

Typical beam spacing varies from 6’ to 8’ o.c. The roof decking is a shredded fiber board structural deck material supported on WT purlins and roof beams. The typical column grid dimensions vary from 12’ to 24’. For the 1997 addition, the structural design included a lateral force resisting system consisting of ordinary steel braced frames to resist the anticipated wind and seismic loads. This system was limited to the portion of the addition that was structurally isolated from the original building via a separation joint.

Primary building facade

In 2001 a permanent modular was added which contained two additional classrooms. Another permanent modular also containing two classrooms was added in 2009.

In 2010 an addition to the weight room was added which is constructed of CMU. In 2011 the entire roofing system was replaced on the 1956 and 1963 portions of the building.



The building in its entirety is Use Group E - Education with accessory occupancies A1 – Theater/Auditorium and A-3 Gymnasium. The student cafeteria is an incidental use to the prime use E, Educational (313.1.4). The type of construction at the time of the 1997 addition was IIC Noncombustible, Unprotected, and Equipped throughout with fire suppression system. Current building code would refer to this construction type as IIB.

For consistency, we will refer to the projects as the original 1956 building, the 1963 addition, and the 1997 addition.

Main building entry

1997 classroom and library addition wing

2001 Modular classroom addition

2009 Modular classroom addition

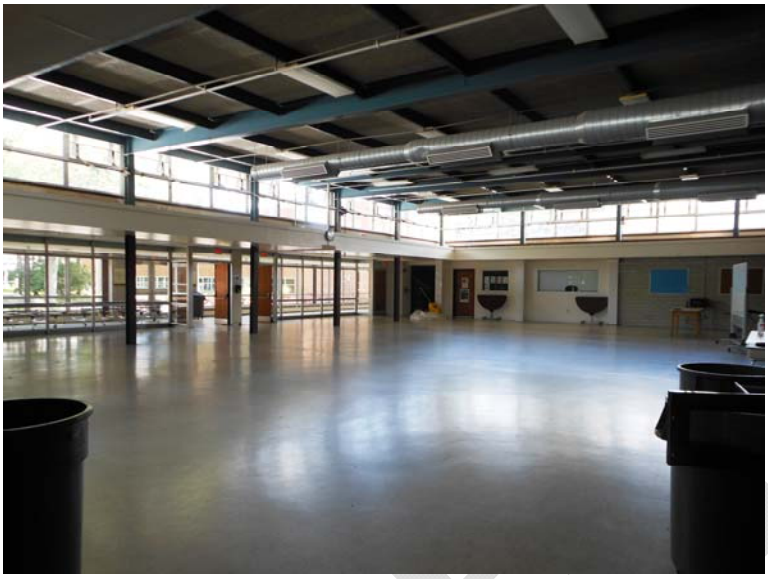
2010 Weight room addition

View from entry doors into main lobby space

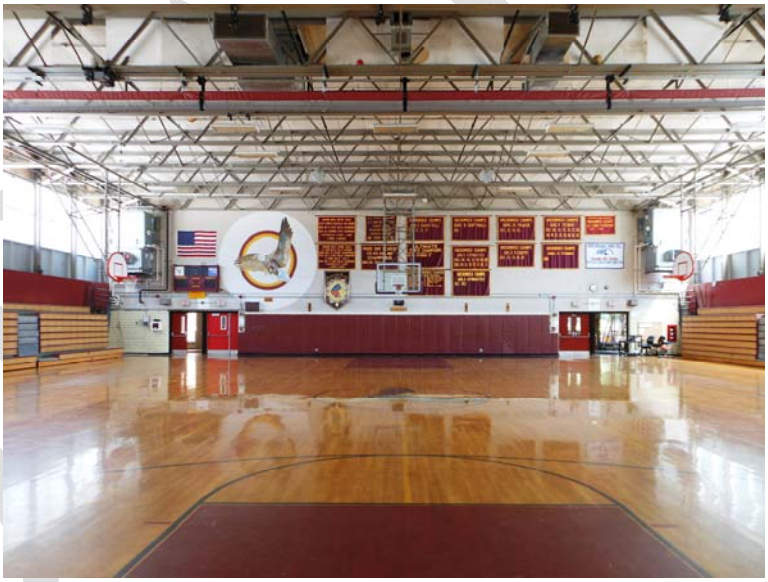
View of main administrative open office and reception

Auditorium

Library reading room



Cafeteria



Gymnasium

BUILDING STRUCTURE AND ENCLOSURE

Exterior Walls

The exterior walls from the 1956 and 1963 projects were constructed of concrete masonry units (CMU) with brick veneer. The exterior walls of the 1997 addition were constructed of 6" metal studs with batt insulation and exterior brick veneer. The structural condition is generally good, but these walls are not seismically braced in compliance with the current building codes. Neither type of wall construction meet the current energy code insulation requirements.

The exterior walls show evidence of water damage. Not only can this been seen from water stains on the exterior of the building, it can also be seen on the interior of the building as wall and floor damage.

Water damage on the exterior of the building throughout.

Water damage shown on the interior of the building

New sealant added as a temporary solution blocks weeps creating water issues within wall

A number of walls exhibit approximately 12-24" of efflorescence at the base, indicating moisture issues within the exterior wall assembly. Additionally, in several locations, moss is growing in the mortar joints of the brick. This is another example of how water presence in the brick is adversely affecting the exterior wall construction.

Brick columns at the south entry portion of the 1997 addition are in very poor condition with many extensive efflorescence and calcium buildup due to lack of flashing.

Some masonry damage was also evident at building corners. In general, sealant at joints is in need of replacement, particularly at building expansion joints and control joints.

Damage is apparent at the west exterior wall of the auditorium. Missing bolts have caused the support lintels to become separated and closure panels to become loose. Additionally, at the window base, backer rods have come out of place which allows moisture into the building. Damage can also be seen on the interior of the building at this location.

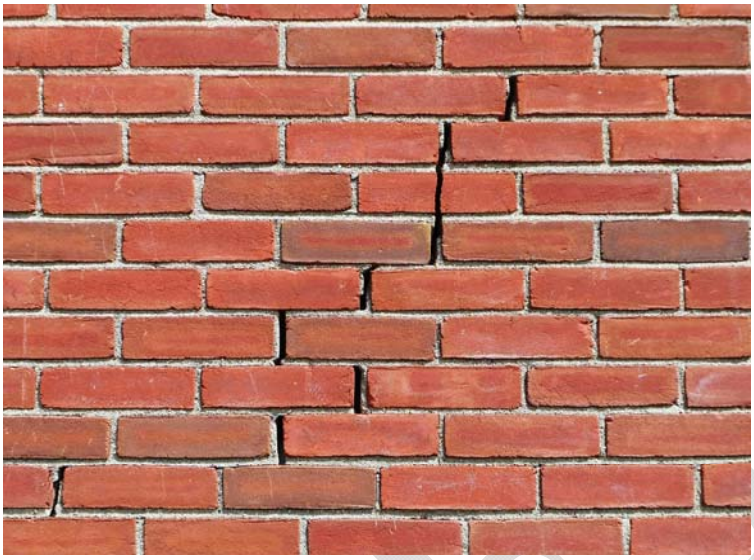
Evidence of brick settlement is apparent in many locations. At most exterior doors, diagonal cracks extend from the structural steel lintel away from the opening in both directions.

Damaged to exterior wall at Auditorium exterior - loose lintel and backer rods

Water damage at interior wall at clerestory windows above auditorium lobby

Efflorescence seen at building entry archway

Brick settlement cracks at door openings (flashing damage).



Brick settlement cracks at south wall of original building

Moss growth on the exterior walls

Roofing

In 2011 as part of the MSBA Green Repair program, there was a replacement of the entire roof system from the original building and the 1963 addition. The scope of this work was to remove all of the roofing components down to the shredded fiber board structural deck and installing a new vapor retarder, insulation, white Sarnafil PVC roof membrane, new metal fascia and flashing. All of this new roof is in good condition.

The 1997 addition's roofing system is comprised of a vapor retarder, insulation, protection board, EPDM membrane, and lead coated copper flashing/coping. This

roofing system was indicated in the 2011 report to be in fair condition and that it had several years remaining under warranty.

2011 roof replacement

Part of the 2011 roofing projects was the addition of a scupper system to the building which is in like-new condition. The base of the majority of these scuppers terminate at a stone splash pad however several of the scuppers transition into a plastic basin and underground drainage system which distributes the water beneath the asphalt.

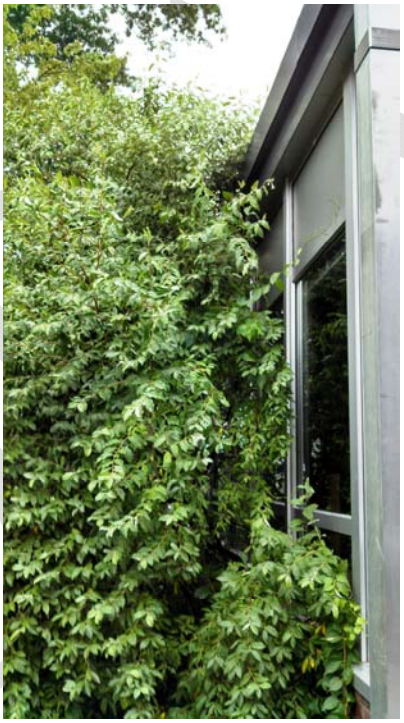
There was indication that ponding has occurred at the internal drains. Although the drains have been cleared, dense tree cover may cause future blockages of roof drawings and any build-up over time on the roof membrane can lead to faster degradation over time.

At the main building entry, no gutters are provided at the arched roof which creates water damage from runoff to the ground below. Additionally, in heavy rains, it creates a condition where water cascades off of the sides of the arch which is unpleasant.

Typical scupper with stone splash pad

Roof overflow drain dripping onto make-shift splash pad

Scupper base at asphalt condition



Trees close to the building deposit debris on roof

Arched roof at main entry

Exterior Windows/Louvers

During the 1997 project, part of the work involved was replacing all of the windows with the exception of those adjacent to the boiler room and kitchen service/prep areas. The original windows were replaced with Low-E insulated glazing and aluminum storefront. Portions of the storefront system are in-filled with insulated metal panel.

At the 1963 addition, portions of the facade above the storefront system were constructed of exposed painted plywood which is delaminating and in very poor condition. Although it has been maintained by repainting the plywood, the exposed plywood needs replacement.There is an operable lite at each portion of these units. Many of the insulated metal panel portions of the storefront have been vandalized.

The exterior storefront sill extrusion at the 1997 addition shows lack of caulking at the exterior joints. Exposed rusty screws also show evidence of water damage. Also, sill overlaps have gaps which allows water to infiltrate the wall below creating moisture issues. Several of the snap-on mullion caps have been dented or damaged and need replacement. Some of the storefront gaskets are either loose or have fallen out of place.

Damaged plywood and rusty damaged storefront

Vandalized metal panel infill

Exterior sill extrusion with missing caulk and rusty screws

Damaged snap-on mullion cap

Storefront sill overlaps create water damage to wall below

| Moisture damage to wall because of storefront caulking and overlaps

Efflorescence on the exterior wall and snap-on mullion removed and sitting on the ground

Missing and loose gasketing at storefront infill panels

The storefront and glazing that was not replaced as part of the 1997 addition/renovation is in poor condition. These windows are inefficient single pane glass in non-thermally separated frames. The perimeter sealant at all window units throughout the building is in disrepair or missing entirely. Portions of the original 1956 building show that the caulking is missing completely at some existing openings. Without proper caulking or gasketing, glazing panels could fall out of place.

Louvers and vents for classroom and office HVAC units appear to be in fair condition, although sealant around them needs to be replaced. The large mechanical equipment louvers are in various states of disrepair, several having damaged or missing blades.

Typical classroom louver

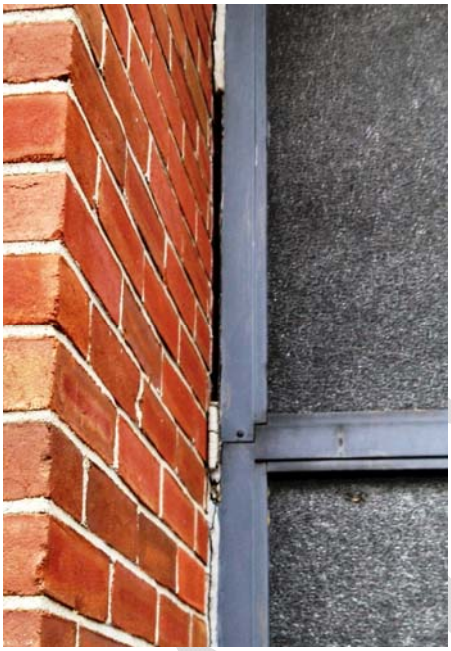
Bent blades on mechanical louvers

Exterior Doors

Doors and frames at the from the original building and the 1963 addition still remain and are in poor condition and in need of replacement. The doors sit within metal frames and show signs of rust and deterioration in many locations. Most of these entries are missing some of all of the caulking. This creates a thermal issue at these entries, specifically where there are not vestibules located inside the space.

Additionally, the thresholds at these doors are damaged. Signs of water infiltrations and condensation are evident at all entries. Rusted frames and damages tiles have resulted from this. The single pane glass is missing caulking and gasketing at these doors as well.

1956 Building original metal doors exhibiting rust



Exterior door systems showing portions of caulking completely missing

Exterior door showing damaged floor tiles and threshold

Main entry doors

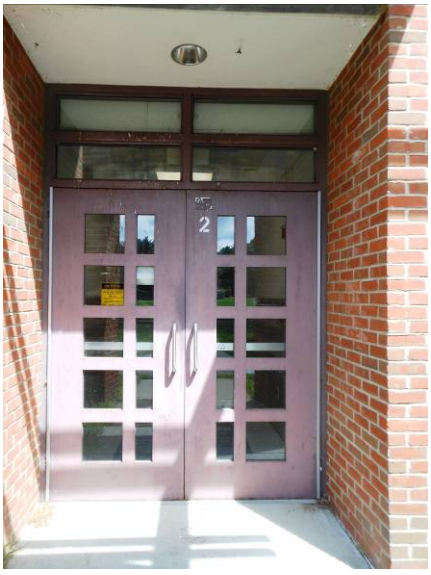
Few of the doors were replaced as a part of the 1997 addition because they were a part of an aluminum storefront system. These framed storefront doors are in good condition however there is some damage shown at the thresholds and adjacent floor finishes as well. These doors also have updated door egress hardware.

The new doors at the main building entry and lobby which were a part of the 1997 addition are painted metal doors. The base of this system shows evidence of rust on the interior of the vestibule and lobby which is evidence of water infiltration. The closer at the double entry doors does latch securely but does not sit in the frame properly which creates a 1/2" gap that allows wind, water, and debris to enter the vestibule. This may also account for rust and water damage to the finishes and storefront at the entry. These are the only doors equipped with automatic closers. A security system is in place which requires a visitor to buzz to the front desk when they arrive at the school during operating hours.

Automatic door opener and security at main entry doors

Main entry doors that do not latch closed tightly.
Rust damage and broken tiles showing signs of water damage

Typical exterior door showing step down, overgrowth, and damage



Gymnasium egress doors with lintel damage 1997 addition doors with rust damage above

Soffits

Many of the soffits appear to be original wood or plaster soffits. They show extensive mold/mildew presence and water damage. At exterior doors, many of the soffits have been removed and show exposed painted metal deck and are in very poor condition. In these soffits, exposed wiring and loosely attached lighting creates a dangerous condition.

At the main entry, mold and mildew on the exterior show evidence of water infiltration from the exterior canopy above. There are many other locations where the soffits are deteriorating. There are several locations with major cracks and water stains are evident.

Mildew and bubbling at main entry soffit vestibule.
Rust damage on exterior shows water infiltration.

Exterior soffit with exposed metal deck and exposed abandoned wiring

Exterior plywood soffit showing mold and abandoned light fixture

Exterior plywood soffit showing mold

In some areas the wood soffits have been repainted recently, however the mold and chipping paint indicates that there is dry rot and the wood soffit and fascia trim needs replacement.

Locker room egress doors show damage to the lintel above and rust jacking has loosened the bricks

Rust jacking at the exposed steel lintel

EXTERIOR SPACES AND FINISHES

Courtyards

Southern courtyard panorama showing eating area

There are three courtyards located within the building. Much of the natural landscape has been overgrown due to the lack of access for any landscape maintenance equipment. The northern two courtyards are bisected by outdoor covered walkways however the paint and structure of these is in very poor condition. The doors to the walkways remain locked during most of the school year because of security concerns. The soffits show exposed structure which has chipping and peeling paint. Additionally, the columns and deck show extensive rust damage.

Northern courtyard breezeways with rusted structure

A greenhouse is located in the northwestern courtyard and appears unused and is in very poor condition. There are several recycling bins that are stored inside and it which serves as its only current function. The CMU and brick walls are significantly deteriorated and there are instances of cracks in the masonry, broken bricks, and cracked or missing mortar. There is extensive moss and mold growth indicating serious moisture issues. Portions of the greenhouse glazing have been removed.

In the springtime, a family of ducklings inhabits the northeast courtyard which creates a living installation for the students. Despite how teachers and students enjoy the ducklings, their proximity to the air intake at the classrooms have raised concerns for indoor air quality. Additionally, concern with a lack of access to water for the ducklings has been raised.

The northwest has access from the south by a double door to the corridor. Grade at the south wall is higher than the adjacent floor. Water enters the corridor from a depressed slab at the door to this courtyard and has damaged the threshold and tiles at this location.

Northwest courtyard with greenhouse showing overgrown condition

Northeast courtyard where ducks inhabit

Northwest corridor water infiltration concern area

Recently, an outdoor learning space was added in the southern courtyard however tall grasses impede foot traffic from the interior spaces to the outdoor classroom. It also will need modifications to the landscape in order to provide accessibility to the space.

Additionally, the southern courtyard has been recently renovated to provide outdoor dining for the students opposite the cafeteria.

Outdoor classroom space in southern courtyard

Loading Dock and Service Yard

The loading dock is in poor condition with concrete and brick damage throughout the area. There is an absence of bumpers, bollards, and wall protection at the loading area which has caused damage to the concrete over time.

Over time as changes were required, brick infill has been added to patch holes in the masonry and not only does it not match the surrounding brick, but in many cases has been filled with grout. Other infill areas have been covered by plywood which is rotting and loose which can potentially allow water and insects to enter the building.

Loading dock stairs and infill plywood panel

Haphazardly placed dumpsters at loading dock area

An outdoor refrigerator/freezer is located in the loading dock area. This transfer food through an unsanitary outdoor space before moving indoors. The space between it and the exterior building wall stores miscellaneous items. The main kitchen loading dock is not equipped with a call button.

The custodial service door is in poor condition and is in need of replacement. Also services, conduit, and wiring on the exterior of the building are poorly organized and in various states of disrepair.

The space provided at the loading dock in its current configuration is adequate although the sporadic placement of the dumpsters impedes access to the loading dock stairs.

Outdoor refrigerator and clutter at loading dock

Plywood custodial service door

Outbuildings

Part of the 1997 project included the addition of an outbuilding for a wastewater treatment facility. It is in fair condition and does not show signs of rust on the exterior.

Wastewater Treatment Facility Building

SMMA

Exterior Signage

There is one masonry sign which is visible from the street which is in good condition. This sign, which faces the street is difficult to see when approaching the site by passing motorists because it is parallel to the street.

The building itself has metal signage which is visible from the roadway and also in good condition.

Granite main building sign

Metal building signage

INTERIOR AND FINISHES

Interior Partitions

The interior partitions are generally CMU or Glazed CMU (GCMU) at all corridors, common areas and at maintenance/custodial areas as well as classrooms and administration spaces. The partitions at the Gymnasiums and Locker Rooms are CMU or GCMU. The Kitchen and Cafeteria walls are GCMU as well.

Classrooms

Classroom partitions are generally painted CMU with entries highlighted by floor to ceiling ceramic tile. Many classrooms have acoustic panels adhered to the walls to dampen sound however the location of these changes each year and directly relates to the classrooms that will house hearing-impaired students. Most classrooms have two teaching walls with white boards. Smart-boards have also been added to many classrooms throughout the building.

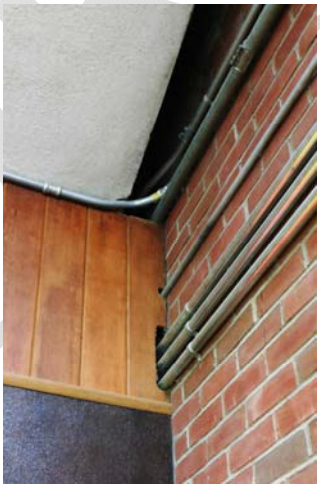
Typical classroom entry portal

Typical classroom with two teaching walls, smart board, and whiteboards

Gypsum walls were added to reconfigure space and are poorly built. Areas include the OT/PT classroom and offices as well as the art classrooms north of the auditorium, the foreign language, and the guidance office.

Auditorium and Lobby

The walls on the Auditorium lobby have a wood paneling which is in poor condition. On the interior of the Auditorium walls are painted CMU with wood baffles at the sides and rear of the auditorium. Dust and debris accumulate behind the wood system. The Proscenium wall is clad in wood veneer from floor to ceiling. Additionally, at the auditorium lobby, plastic panels have been added to protect the wood walls. This material may not meet building code for flame spread rating. Pipes leaving the emergency electrical closet underneath of the auditorium lack the required fireproofing to maintain the 1-hour rating required by building code. Carpet throughout the space is in poor condition and dated.



Missing required fireproofing at 1 hour rated fire wall and fiberglass wall panels

Administrative Area

In the administration areas, the original wood storefront partitions with wire mesh glazing and wood trim likely do not meet egress path fire rating requirements.

Toilet Areas

Toilet rooms are generally GCMU. Restrooms built as part of the 1997 project are in good condition and the finishes include ceramic tile over plaster. In the 1956 and 1963 portions of the building, typical toilet rooms generally have a GCMU wainscot that transitions to painted CMU above. Walls in the stairs have painted gypsum. Generally, CMU and GCMU walls are in good condition.

Egress Stair

A large gap at the bottom of the door to the roof and a lack of threshold allows water to enter into the egress stair. Although the GWB has been replaced, there is still evidence of water damage on the walls and from bubbling of rubber flooring.

Gap at base of roof access door for water infiltration

Flooring

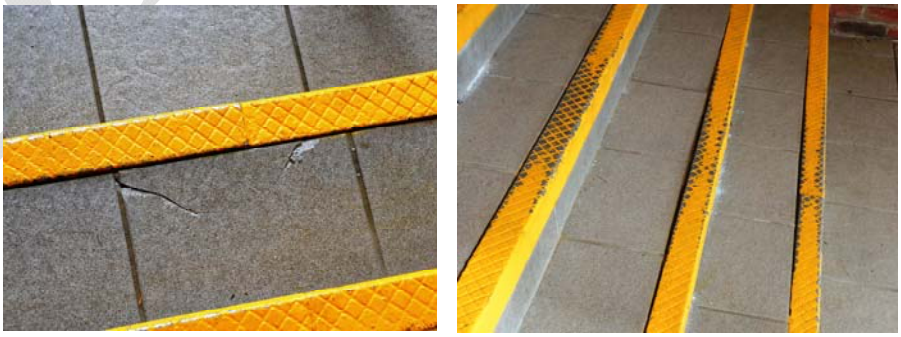
The flooring in the original building as well as the 1963 addition has not been updated and it is beyond its useful life. In the classrooms and corridors mismatched vinyl composition tile has been patched in where worn tiles were removed.

Patched or mismatched tile infill

Additionally, there are many locations throughout the building where evidence of wear and water infiltration have damaged vinyl floor tiles that remain in place. As was previously mentioned, many of these cases are as the result of water infiltration. In other locations it is typical wear and damage as a result of age.

Damaged floor tile

Damaged floor tile



Broken floor tile and damaged nosings at building lobby

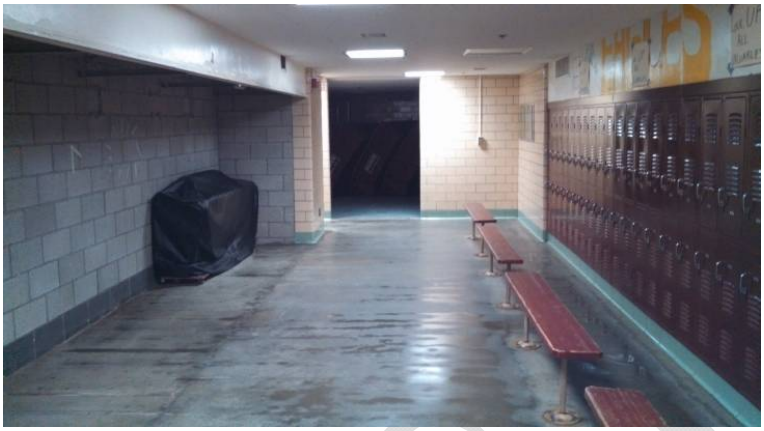
Damaged floor tile in building lobby

In the main building entry, ceramic tile from the 1997 addition is in mostly good condition however some tiles throughout the vestibule, lobby, and upper lobby have cracks and chips.

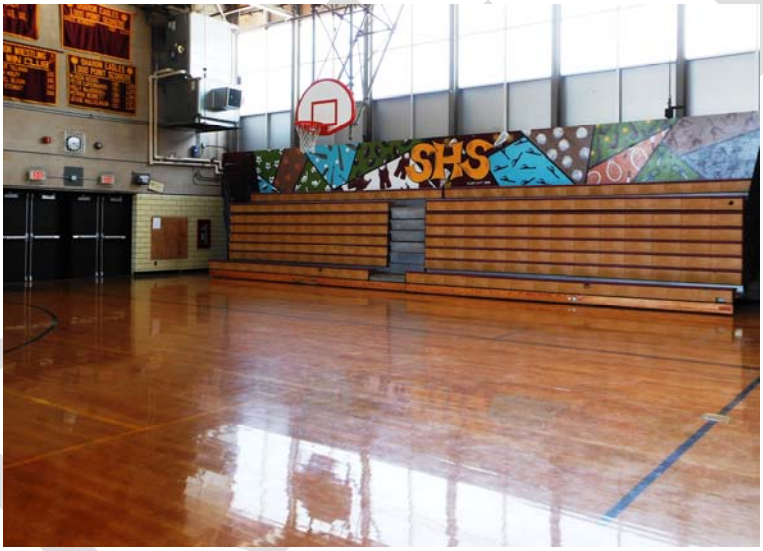
Tile and metal nosings at the entry stairs have also been worn in the heavy traffic areas. Flooring in the 1997 addition including the carpeting in the library and the VCT in the classrooms is generally in fair condition but the carpet does show signs of wear in high traffic areas. The carpeting in the original building, the 1963 addition, and the first floor of the 1997 addition all shows sign of wear however it is in good condition.

Locker areas and the gymnasium lobby have polished concrete floors in good condition. In the locker room shower areas there is ceramic tile in poor condition. Gymnasium wood flooring is in good condition. Kitchen VCT flooring is chipped and damaged. Generally, all original floor tiles are in fair condition however tile at exterior walls and building entries is severely damaged and should be replaced in those areas.

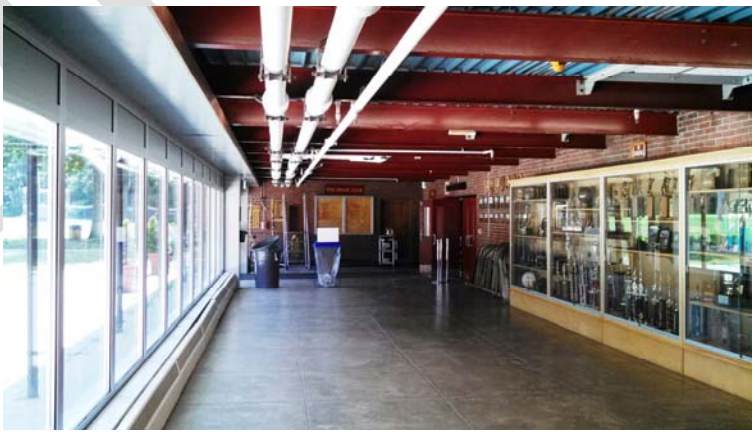
Carpeting in 1997 addition classroom



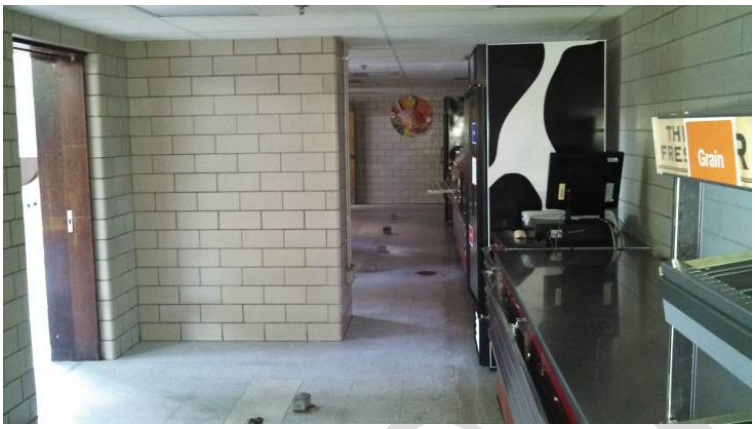
Locker room polished concrete flooring



Wood flooring in gymnasium



Polished concrete flooring in gymnasium lobby



Kitchen VCT flooring

Ceilings

The ceilings within the building are generally in good condition. The majority of classrooms have the original shredded fiber board structural ceilings with exposed steel. These spaces have pendant style strip light fixtures that hang below the exposed structure. Other areas have suspended acoustic ceilings.

Typical classroom ceiling with exposed shredded fiber board

The corridors generally have 2x2 acoustical ceiling tiles with metal grid and recessed 2x2 light fixtures. Acoustical ceiling tiles are also incorporated into the gathering spaces such as the auditorium lobby. The 1997 addition incorporates 2x2 acoustical ceiling tiles as well as renovated spaces with updated pendant strip light fixtures.

Corridor ceiling heights are generally 7’-8” above the finished floor. Classroom ceilings are generally 10'-10" to the underside of the exposed shredded fiber board structural ceilings. In the classrooms, there is also roughly 12" of exposed steel structure below the shredded fiber board structural ceilings and pendant linear light fixtures hang below the steel.

Plaster and gypsum ceilings are present at the main entry corridor, in the Auditorium, and at Toilet and Locker Rooms. Generally, these ceilings are in fair condition. Service and storage areas typically have exposed structure.

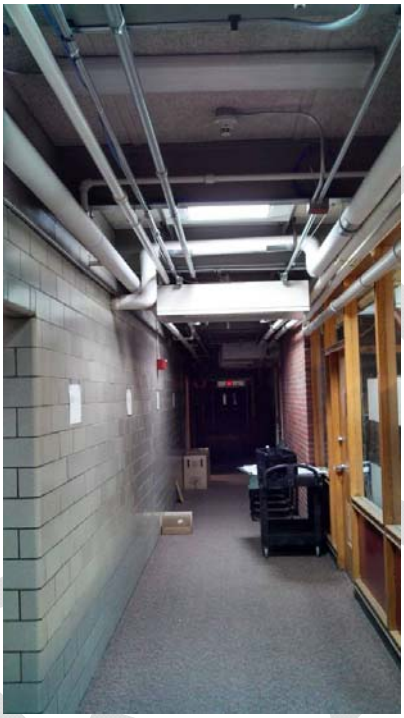
| *Damaged plaster ceiling in the auditorium projection room*

| *ACT ceilings in auditorium lobby*

| *Original 12x12 ACT in teacher prep area*

Some spaces have 12"x12" concealed spline acoustical ceiling tiles however these are in very poor condition. Most noticeable is the damaged and missing tiles in the language lab.

In the administrative corridor and in a landlocked SPED classroom, skylight tubes have been added to bring in natural light in the absence of windows. These are in good condition.



Skylight tubes in administrative area bring light into windowless space

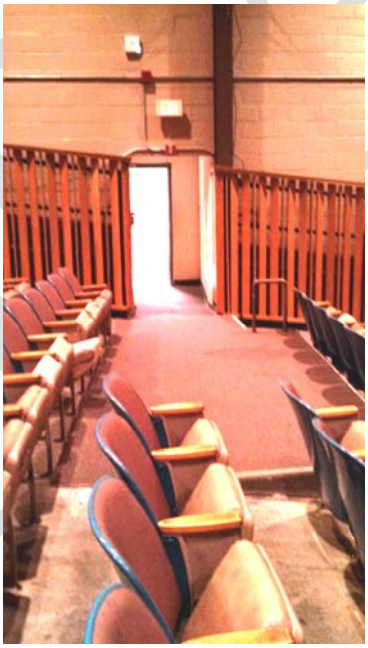
Auditorium

The auditorium is generally in good condition, but is dated and lighting quality is poor. The seating is original but is in good condition but the fabric is work in some places. The space is utilitarian and well shaped acoustically, although the concrete walls and partially uncarpeted floors provide a very hard surface that is too reflective. The portions of the auditorium with carpeting are in poor condition and are in need of replacement. There is insufficient insulation to prevent hallway noise from entering the space. Additionally, lack of a vestibule into the space causes light infiltration and disruptions when doors are opened during performances. The space is not air conditioned, making it very uncomfortable during presentations and hot days.

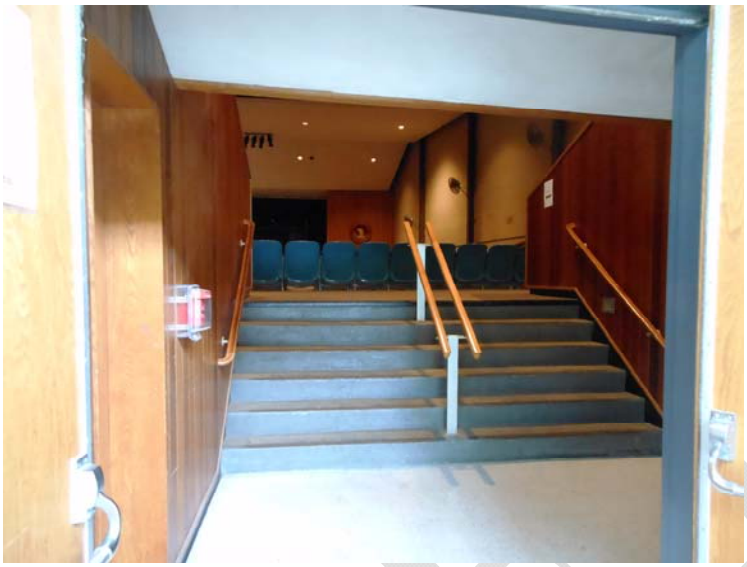
The stage is somewhat shallow and consequently, a temporary addition has been added to make the stage deeper. The stage does not include a fly loft or sufficient storage pace for the required sets.

View of stage in the auditorium

During the 1997 addition, accommodation was made for an accessible entrance into the auditorium. This entry is located off of the north corridor and provides a landing area only in one portion of the viewing area. As mentioned above, this does not meet accessibility code because the accessible route must follow the primary entry for the general public. Additionally, accessibility code requires viewing areas throughout the space.



ADA Accessible viewing area located next to accessible side entry



Public entry into the auditorium is not accessible

Lack of storage for auditorium and related curriculum and performances creates cluttered storage areas that create a fire hazard.

Toilet Rooms

The toilet facilities have been updated slightly to meet accessibility code however in the 1956 and 1963 portions of the building, additional modifications will be required to meet current code fully. In these portions of the building the finishes are in poor condition and beyond their useful lifetime. In 2009, the school paired with the Town of Sharon on a water conservation initiative which included the addition of water efficient fixtures with dual flush technology. The finishes in the restrooms of the 1997 addition are in good condition however those in the 1956 and 1963 portions of the building have finishes in poor condition.

Passageways and Corridors

Corridors in the original 1956 original building are 7'-10" wide with lockers on either side. This results in congestion between classes, and “traffic jams” at certain intersections. Corridors in the 1963 addition are 10' wide with areas that have lockers on both sides, and some areas with lockers on only one side. These corridors are more comfortable, although it would be preferable to have 10’ wide corridors with lockers on only one side.

Vestibules are present at most entries however there are some that do not include a vestibule. These include the secondary entrance at the connecting corridor north of the auditorium. This door serves as a secondary entry for the Networks and Charms students.

Typical corridor with lockers on one side

Lockers

Student lockers are in very good condition, having been replaced just five years ago. They include built-in combination locks and are top/bottom configuration. Students use the same locker for all four years of school and it was mentioned that many students do not use their lockers at all. Because of this, students carry overloaded backpacks which adds to congestion in the corridors. Lockers in the locker rooms were replaced at the same time and are in good condition.

Most classrooms also have 3 double wide lockers for teacher storage. These lockers are in poor condition, are dented, and need replacement.

Typical corridor with lockers on both sides in corridors

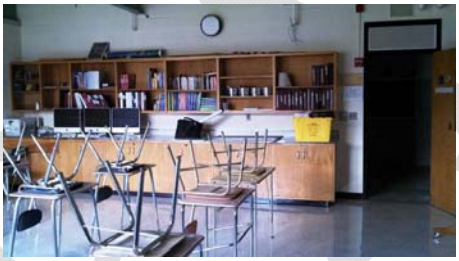
Lockers in athletic locker rooms

Teacher storage lockers

Casework

Offices, workrooms, and classrooms have original built-in wood casework which is in good condition. Some of the science classrooms have updated casework which is in good condition. Administrative and athletic offices have recently incorporated new systems furniture and it is generally in good condition.

Science millwork with ADA accessible station



Typical millwork in SPED and science classrooms

Classroom storage is typically provided in the form of movable shelving furniture units located depending on each teacher's needs. These shelving units are in good condition. Adjacent to unit heaters some classrooms also incorporate built-in storage which is also in good condition.

Built-in shelving units at unit heaters

The language lab furniture is in fair condition with minimal damage and signs of age.

Language lab furniture

Signage, Way finding, and Keying

Typically, each room has two different signs - one temporary laminated paper sign with the room number, and one permanent sign with the room number. The permanent classroom signage is inconsistent throughout the building and in some cases is illegible due to age.

Classroom laminated signage

Corridor way finding is minimal for the layout and geometry of the building. It appears that when the original building was constructed, strips of colored flooring material delineated the different wings of the school. Over time this philosophy has been abandoned.

Classroom wings are named are 100s, 200s, 300s, etc. and egress maps refer to these designations in text format. In the absence of a visual plan showing the egress paths from classrooms, a visitor may have trouble making a safe exit. This is not only a concern for a new user in the space, but does not comply with the code for current signage requirements.

Yellow striping in corridor evidence of wayfinding

CODE AND ACCESSIBILITY

Energy Code and Exterior Issues

As indicated above, the lack of insulated exterior walls in most locations, ground floor slab, lack of vestibule airlocks, and the absence of any continuous air barrier make the existing building non-compliant with the current energy code or stretch code.

Means of Egress and Doors

The configuration of the corridor egress system and capacity of the egress doors appear to meet egress code requirements to allow the calculated population of the various building wings to safely exit the building. There are many exits located throughout the building which reduces travel distances allowing for a quick and safe exit from the building. The configuration of corridors and doors meet code requirements for the calculated occupancies with a few exceptions.

Administrative Areas

In the administrative area, there is an existing egress corridor partition system constructed with combustible (wood) materials and large glazing panels that are of questionable fire rating.

Door Widths

Single leaf door width in the auditorium and cafeterias for example do not meet current code requirements of 36" minimum per door leaf.

Courtyards

Courtyard doors to not swing in the direction of the path of travel. The egress doors from the courtyards do not have panic hardware on the correct side of the door to allow egress from these spaces. This is critical as outdoor classrooms and gathering spaces have been added to the southern courtyard.

Exterior Landings

Some of the egress doors open on to stepped landings with no ramps or area of refuge provided. The doors have been updated to include the code compliant hardware.

UL Labels

No indications were visible (label either missing or painted over) to indicate that stair doors were labeled by UL or other testing agency to indicate the required fire rating. In addition, almost all of the glazed doors contain wired glass (characteristic of correctional facilities) which is should be updated for educational use.

Fire Doors

In most corridors, there are several pairs of non latching doors. In most cases, these were the exterior doors to the original project and were not removed when the additions in 1963 and 1997 were added. It appears that these doors serve as

fire/smoke separations elements. Many of these doors have full transoms and sidelights of wired glass. The doors themselves have no fire rating as the label is either missing or was never a labeled door making these doors non-compliant for fire or smoke separation.

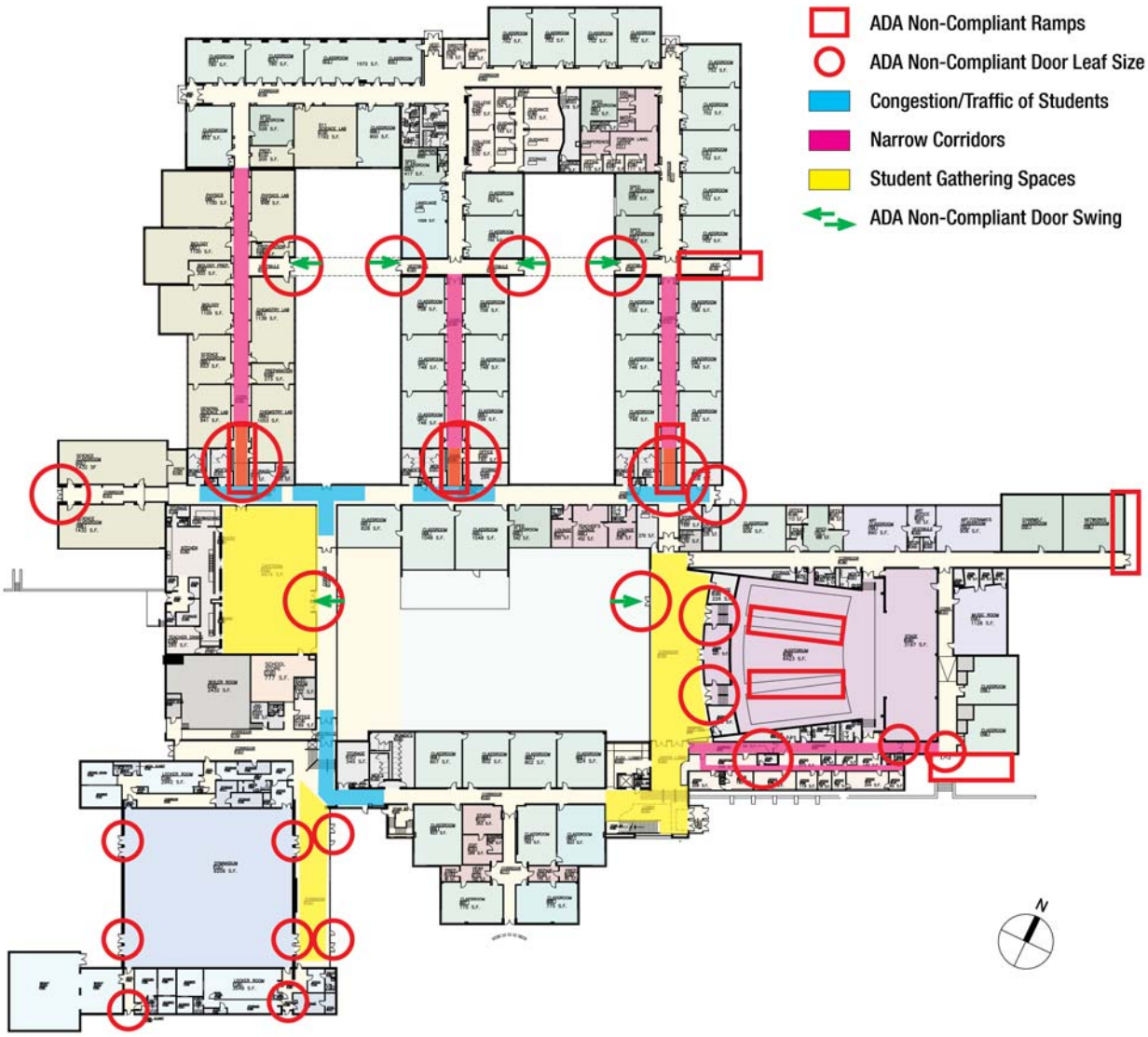


Diagram showing the areas of ADA compliance concern for egress and problem areas for congestion

Fire Separation of the Buildings

As mentioned above, the building was built in three phases: 1956, 1963, and 1997. The 1997 addition incorporated compliant building separations (fire-walls) to comply with the area limitations of the current building code. This building, primarily use group E-Education also contains A-Assembly use (Auditorium and Gymnasium) and there are no fire separations provided between these spaces and the educational use areas. Due to the additional 28,000 square feet added to the building in 1997, fire shutters were added for the addition due to the restrictions of area limitations. These fire shutters separate the two story portion of the building.

Wire glass is present at the fire doors that separate the corridor lengths. This glass may not be compliant with current code without modification or the addition of a glazing film.

Fire shutter at upper lobby

MAAB/ADA Accessibility

In general the building may need modifications to meet current accessibility standards. Ramps throughout the building are too steep to conform to current accessibility codes. Many of the toilet rooms do not meet current standards, and some multi-fixture toilet rooms do not provide any accessible stalls. Additionally, ramps are too steep to provide accessibility.

Doors and Hardware

Most of the exterior doors are ADA compliant and those that are not would result in compliance with minimal modifications. Automatic door operators are only installed at the main entry. Force required to open entrance doors appears to be compliant. Main entries are accessible, but other Means of Egress doors open onto stepped pads without ramps. Some entry access is flat before sloping away from the building, but many begin to slope immediately from the door threshold. In general, most of the door hardware throughout the building is accessible.

Auditorium

While the Auditorium is accessible, the path of travel to gain access is located off a side corridor. Code dictates that the accessible route must coincide with the route for the general public. The area for accessible seating does not provide the adequate number of compliant space and they are only located in a single area of the overall seating within the Auditorium. Current codes require accessible seating to be included as an integral part of the overall seating plan and the seating is to be located in all areas within the auditorium. The slope of the access and exit aisles is too steep for ramped aisles, and also the length of the aisles are longer than what is allowed for ramps at that slope. The projection booth is only reachable by stairs and is not accessible. The stage is only accessible to the seats through a circuitous route out of the auditorium and through the corridor.

Courtyard Access

The courtyard includes an outdoor classroom and was renovated to include outdoor seating and gathering space for students. The path to the outdoor classroom may need to be updated to meet accessibility standards. Additionally, steps down from the door openings into the courtyard render the space inaccessible for students with disabilities. The doors to the northern courtyard open air walkways have knobs which are not code compliant and remain locked for most of the school year.

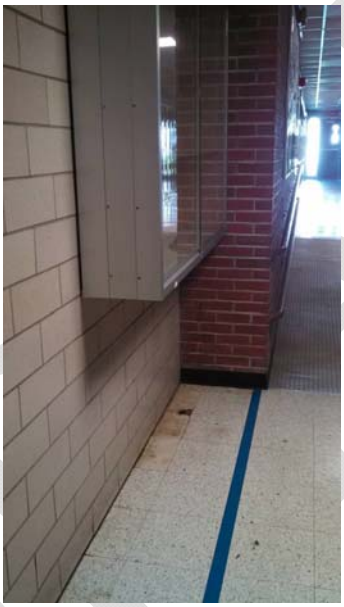
Non-compliant entry into courtyard

Classrooms and Casework

There are limited accessible work stations and fume hoods in the science classrooms. Many of the classroom entrance doors are without the necessary side maneuvering clearances required to meet accessibility code. There are also limited accessible sinks and sections of casework provided within the building. Existing classroom casework does not consistently provide accessible stations in each space.

Corridor Projections

There are a number of projections in rooms and corridors along the accessible that do not meet the 4" maximum projection rules under the MAAB. These conditions pose a hazard to vision-impaired students and teachers. Included are drinking fountains as well as storage casework.



Non-compliant projects for visually impaired students

Handrails

At the loading dock and service yard, minor modifications to the stairs and handrails at the loading dock would result in accessibility compliance however the metal nosings are bent and damaged which creates a trip hazard.

Stairs

The riser and tread dimensions of all the stairs appear to comply with code. The treads have metal nosings that are in poor condition at some locations. The railings and guardrails do comply with current code and are in good condition.

Elevator/Lift

The existing elevator provides accessibility to the second floor library and office spaces and meets current code. Near the gymnasium there is also a lift that provides accessibility.

Lift at athletic wing

Ramps

There are several interior ramps linking the northern classroom areas of the building to the lower southern portion of the building. These ramps have a 9% or greater slope which does not comply with the current accessibility code. Exterior ramps do not meet current building code. Modifications to the handrails and slope may be required.

Non-compliant ramp

Non-compliant ramp

Non-compliant ramp

ADA compliant ramp

3.3 EXISTING STRUCTURAL CONDITIONS

1956 Building

The existing roof framing incorporates a mixture of steel wide Flange or channel shaped beams, and girders, long span "L" series steel joists, and custom fabricated long span roof trusses. The roof decking is also a mixture of materials from tectum structural deck or a narrow rib steel deck.

The original design live load for the building is indicated on the structural drawing to be 30 PSF, which is 8 PSF less than the 38 PSF presently required by code. The existing roof structure in-total appears to be marginal in its capability to support the design live load and assumed dead loads. Further study is required in order to determine the actual dead load of the different roofing systems in order to more effectively determine the true live load capacity. Assuming the most benign conditions, the following areas appear to be undersized or marginally sufficient to meet present code requirements:

a. The long span joists over the gymnasium
b. The adjacent roof girders at the long span joists over the gym
c. The roof girders over the cafeteria
d. Most roof framing adjacent to the high roofs at the gym, auditorium, and cafeteria, etc. Does not appear to have sufficient strength to carry drifted show as required by present building codes.
e. The typical roof girders at the classroom wing also appear to have insufficient strength.

1963 Addition

The roof framing is comprised of structural steel beams and girders supported on wide flange steel columns. Typical beam spacing varies from 6' to 8' o.c. The roof decking is a tectum structural deck supported on WT purlins and roof beams. The typical column grid dimensions vary from 12' to 24'. The original design live load was 30 pounds per square foot (PSF), which is 8 PSF less than the 38 PSF required under the current Mass. State Building Code. The existing roof structure appears to have sufficient residual strength to carry the additional 8 PSF live load; however, this is dependent upon having a roof decking material that does not exceed 10± PSF. This would represent a fairly light plank, and depending upon the actual plank used, the weight of the plank could be as high as 25 PSF, in which as certain roof girders would be over stressed. In order to verify the actual roof live load capacity, samples of the roof deck should be taken and weighed in order to determine the actual unit weight, of the roofing system.

1997 Addition

This recent addition was structured with open web bar joists, wide flange steel beams and girders, supported by structural steel columns. The current building code has increased the design snow loads slightly from 35 PSF to 38 PSF, and the wind pressures a relatively the same. The majority of the addition was building with a building separation joint, keeping the structure independent from the original

structure and prior addition(s). This portion of the addition has its own deliberate lateral force resisting system to resist wind and seismic loads, which is still adequate under the current building code.

Lateral Force Resisting System

There appears to be no verifiable lateral force resisting system for the original building or the 1963 building addition. The original building and the addition were designed and constructed before the modern Massachusetts State Building Code (780 CMR MSBC) went into effect in 1975. The prevailing codes at those times did not require the structure to be designed or detailed with conventional seismic resisting systems. If significant architectural or mechanical renovations are proposed to the existing structure, the building code will most likely require upgrading the existing structure with a lateral force resisting system. The system would likely consist of new diagonal steel braces, welded to existing columns and beams, located strategically throughout the building to work within the proposed architectural renovation. The system would be allowed to comply with reduced wind and seismic forces that are prescribed under the building code for existing structures.

Existing Masonry Construction

The walls of the original building and addition appear to be primarily comprised of unreinforced CMU, for both the interior partition walls and for the back-up walls for the exterior brick veneer as well. If significant renovations are planned for the building, the building code for existing structures will require that the top of these walls are mechanically fastened to the existing structural steel that supports the roof. This is typically done by bolting short lengths of steel angles near the top of the wall, which are in turn, fastened to the steel structure.

3.4 EXISTING FIRE PROTECTION SYSTEM CONDITIONS

A complete automatic fire protection sprinkler system was installed as part of the 1997 project.

The fire water service is extended to building ‘A’ on the south side through a 6” CLDI pipe. Once inside the building, the system is equipped with a double check valve assembly (DCVA), backflow prevention device. The DCVA is in need of service due to a paint spill filling one of the test ports.

The system is split into three (3) separate sprinkler zones, each with a dedicated wet alarm check valve. A common 2-1/2" x 2-1/2" x 4" Fire Department Connection is provided on the wall of 'C' building. This location is more than 100 feet from the nearest fire hydrant and would be subject to the approval of the authority having jurisdiction (NFPA-14).

All sprinkler systems are wet type with design densities and layouts are in accordance with NFPA-13. All piping is black steel with both mechanical and threaded fittings. Piping appeared to be in good working order.

During the site visit, heads in multiple corridors were observed without escutcheons. This is typically due to a bow or sag in the ceiling structure and cause a delayed response in sprinkler activation.

3.5 EXISTING PLUMBING SYSTEMS CONDITIONS

The system evaluation is based on a site visit performed in August 2013 and review of the 1997 construction documents. In general, all plumbing systems appear to have adequate capacity for present and future conditions.

Domestic Cold Water

Domestic cold water for the facility is fed from a 4”CLDI main installed as part of the 1997 project. Once in the building a main shut-off valve, 2” meter and main house drain is provided. No backflow prevention device is provided.

All piping outside the 1997 project areas is original and appears to be in fair to poor condition, and has insulation missing. Valves appear to be original in many cases and in poor condition. Domestic cold water piping is not expected to last more than 10 years without exhibiting widespread problems and possible failure.

Domestic Hot Water

The main facility hot water system has been decommissioned and replaced by two high efficiency, gas fired boilers with a 450 gallon storage tank. This system feeds the majority of the buildings fixture. A master mixing valve is used to reduce the hot water from 140°F to 120°F before distribution. A second, smaller system feeding the Auditorium area fixtures was replaced with an electric storage tank, as part to the 1997 project.

Hot water is circulated from the hot water distribution loops in each system by pumps in each respective area.

Natural Gas

The existing natural gas system enters the building through the Boiler Room where pressure reducing valves are used to regulate the pressure as required for equipment operation. Gas is distributed throughout the facility for the kitchen equipment, water heaters, Gas boilers and Laboratory Classroom gas turrets. Piping appears to be in fair condition and should last 20 more years. The gas pressure feeding the science classrooms provides inadequate volume to run multiple labs simultaneously.

No gas detection or fan interlock is provided on the line feeding the kitchen equipment under the exhaust hood for gas shut-down.

Sanitary Waste and Vent

Sanitary waste and vent for the facility is comprised of multiple systems; each exiting the building to separate septic fields in the site. Each system is collected below the slab. Some below slab piping was observed through accessible crawl spaces. The majority of the piping outside the 1997 project area is expected to be in fair to poor condition due to its age and observed external condition. Sanitary drainage piping may not last more than 10 years without exhibiting widespread problems.

The Kitchen does not have a separate kitchen waste system, and there is no exterior grease trap present.

Lab Services

As part of the 1997 project, an Acid Waste and Vent system for the Laboratory Classrooms was installed. This system was piped to a pH adjustment system to be treated before discharging to the building sanitary drainage system. The pH monitoring system did not appear to be operational. Secondary containment is not provided for acid and caustic tanks creating a serious potential for a chemical spill.

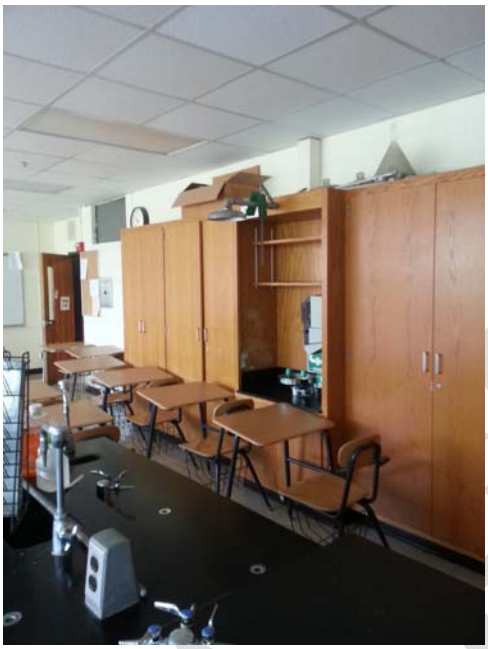
The pH is within a common storage room and has no ventilation or emergency shower.

Emergency shower and eyewash units were viewed at times in the facility but appear to be fed from the domestic cold water system only. ANSI publication Z-358.1 and the Massachusetts Plumbing Code require these units no further than 50 ft away from any hazard and also require they be fed by tempered/tepid water.

Non-potable hot and cold water systems were added as part of the 1997 project to feed Science Lab sinks. This system consisted of two reduced pressure backflow preventer (RPBP) and temperature maintenance cable. It appears the hot water BPBP has been removed creating a serious potential for cross contamination.

The lab gas system is seriously undersized and lacks emergency gas shut-off valves in multiple science class rooms.

No evidence of ADA compliance was seen in the Laboratory Classrooms.



Storm Drainage

The majority of the building's roof is drained by a series of down spouts; however, there are spaces where interior roof drains are provided. These drains are served by multiple storm drainage systems which collect below slab and exit the facility from various locations. Piping is original to the building and is expected to be in fair to poor condition due to its age and may not last another 10 years without problems.

Plumbing Fixtures

Some of the toilet facilities were updated as part of the 1997 project to provide accessible fixtures. Dual flush technology was added in 2009. These areas appeared to be in fair to good condition.

- Urinals are wall mounted with manual flush valves, generally in poor condition.
- Lavatories are wall hung with self-closing push-down faucets or lever handles. Some lavatories appear to have state approved insulation on the traps and risers.
- Showers consist of newer lever type mixing valves, in fair condition, but with no ADA compliant fixtures. Showers in the Girl's Locker room have been removed and area is being used for storage.
- Drinking fountains are scattered throughout and are generally in fair to poor condition. Most drinking fountains are not ADA accessible units.
- Exterior wall hydrants and interior hose bibs are in fair to poor condition and need vacuum breaker backflow preventers.

- Janitor's Sinks are scattered throughout and are generally in fair condition. Several sinks were observed without vacuum breaker backflow preventers causing a serious potential for cross contamination.

3.6 EXISTING HVAC SYSTEM CONDITIONS

The system evaluation is based on multiple site visits performed in August 2013 and review of the construction documents of the 1997 project.

Sharon High School appears to have received above average maintenance of the HVAC systems over its occupied years. Even with proper maintenance, through normal operation, systems gradually deteriorate due to scale, poor water conditions, and lack of preventive maintenance. Systems will gradually deteriorate to a point of exceeding their maximum serviceable life. Generally, most systems are operational and maintain space temperature. However, some areas of the building do require changes/upgrading to their HVAC systems based on verbal communication with the facility group at the high school.

Boiler Room

The boiler room houses four gas-fired Burnham boilers. Each boiler generates 200 degree F heating water which is distributed to various heating coils throughout the facility using a primary/secondary pumping configuration. The secondary loop has been retrofitted with variable frequency drives to increase efficiency. The group was informed that only two boilers are required to heat the facility during the middle of the winter months. This indicates the building is tight and without infiltration issues. One boiler does appear to have some damage on the casing/panel and should be repaired. Overall there have been no complaints involving these boilers and they appear to be in great working condition. The expected service life of these boilers are estimated by ASHRAE to be 25 years leaving approximately 10 years of suitable service life.

Four base-mounted end suction pumps distribute the hot water throughout the building. Pumps P-5 & 6 are used for zones C, D & E while pumps P-7 & 8 are used for zones A, B & F. Variable frequency drives (VFD's) were added later after construction was complete to help with reducing energy costs. Pumps are operating very well without issue. Additionally, four inline primary loop pumps are used to maintain minimum flow through the boilers. These pumps are constant volume, operating well and in good condition. The expected service life of the primary and secondary pumps are estimated by ASHRAE to be 15 years leaving approximately one year of suitable service life. However it's apparent that these pumps have been maintained very well and could produce efficient rated flow for several years past the ASHRAE estimates. All hot water piping throughout the entire boiler room appears to be insulated and in good condition. There is no evidence of leakage on the piping or the insulation.

Combustion air for the boiler room is provided via a suspended air handling unit with a supply fan, hot water coil and filters. Combustion air quantity appears to be adequate and there was no indication of flame outs during boiler operation.

The Building Management System (BMS) is an Invensys ENE 8000 Direct Digital Control system. Operates well and is considered to be user friendly. A possible upgrade to the existing system may be necessary.

Library

The Library is provided with multiple VAV and Fan Powered boxes some with hot water re-heat coils located above the ceiling discharging conditioned air through ceiling diffusers and tied to wall mounted thermostats. All library terminal units, piping and ductwork is in good condition and operating properly. Two York roof-mounted DX cooling air handling units provide the necessary heating, cooling and ventilation and appear to be in good condition without issue. The expected service life of these air handlers are estimated by ASHRAE to be 15 years leaving approximately one year of suitable service life. Again they appear to be well maintained resulting in several more suitable service years.

Administration

Heating, cooling and ventilation to the administration area is provided by a roof mounted packaged unit with a DX cooling coil and a gas fired furnace for heat. The supply air is routed through medium pressure ductwork in the ceiling space to multiple VAV boxes and then ceiling supply diffusers. This air is then returned back to the roof top unit through ductwork and not a ceiling plenum. Unit operates well and is good working condition. The expected service life of these air handlers are estimated by ASHRAE to be 15 years leaving approximately one year of suitable service life. Again they appear to be well maintained resulting in several more suitable service years.

Guidance & Special Education

Mezzanine mounted air handling units AHU-5 & 6 were installed in 1997 and connected to existing supply and return ductwork in both the guidance and special education spaces. These two units provide heating, cooling and ventilation. It is our understanding that the existing ductwork re-used is undersized and very noisy. Right-sized ductwork should be installed in these spaces for adequate and possibly code complaint ventilation and space comfort.

Auditorium

The auditorium is provided with a single heating and ventilating air handling unit, which is located on the roof. This air handling unit has a similar service life of 15 years and should be considered for replacement. The air handling unit is provided with a supply fan, exhaust fan, filters and hot water heating coil. The return air is drawn from two individual return air grilles located on either side of the stage at the floor level. Supply air is provided to the space through a lined un-insulated galvanized sheet-metal distribution system above the ceiling to a series of open ended ducts above the cloud overlaps at the ceiling level. Multiple oscillating fans are also installed along the outer walls of the auditorium for supplemental air circulation. It does appear that the amount of air provided to the space is adequate for the overall population however considering these fans it appears the overhead supply air distribution system does not provide the occupants with a level of comfort expected for this type of space. Cooling is recommended for the auditorium to achieve thermal comfort throughout the space at all times.

Additionally, two older air handling units have been abandoned above the auditorium space. These should be removed.

Stage

The stage is also provided with a single heating and ventilating air handling unit, which is located on the roof. The air handling unit is provided with a supply fan, exhaust fan, filters and hot water heating coil. The return air is drawn from one individual return air grille located on the north side of the stage at the floor level. This air is routed through lined ductwork back to the roof top unit. Supply air is provided to the space through a lined un-insulated galvanized sheet-metal distribution system high above the stage to a series of duct mounted linear type supply grilles. It does appear that the amount of air provided to the space is adequate for the overall lighting and equipment.

Entrances, Vestibules, Corridors

The individual communicating corridors are provided with heating and ventilation using ceiling mounted horizontal unit vents. Supplemental ceiling recessed cabinet unit heaters and fin tube radiation is also provided in the corridors to assist in heating these spaces as required.

The primary entrances and exits throughout the building are provided with vestibule interlocks to prevent infiltration of cold air during frequent use. Ceiling recessed cabinet unit heaters are provided to heat these spaces adequately.

Classrooms

The original building classrooms are provided with a vertical discharge classroom unit ventilator located along the exterior wall of the building as well as finned tube radiation for unoccupied and nighttime setback periods. Each unit is provided with a supply fan which discharges vertically into the space, hot water heating coil with control valve which ties into the main hot water heating loop, return air drawn at the base of the unit, filters, and outside air drawn directly at the rear of the unit through a wall mounted louver. Each unit is controlled by a wall mounted thermostat. The interior areas of the cabinets appear to be well maintained. However, these units are approaching there maximum serviceable life of 18 years and should be replaced.

Located on the interior wall of each classroom is a wall mounted exhaust register which communicates to a roof mounted exhaust fan through a series of galvanized sheet metal exhaust ductwork. The interior of all registers were extremely soiled. However, it does appear that all classroom associated roof exhaust fans are in good condition and operating properly.

Heating, cooling and ventilation to the computer lab spaces is provided by a roof mounted packaged unit with VFD controlled supply fan and exhaust fan, a DX cooling coil, hot water heating coil, filters and a hot gas bypass. The supply air is routed through medium pressure ductwork in the ceiling space to multiple VAV and FP boxes (some with re-heat coils) and then through ceiling supply diffusers. This air is then returned back to the roof top unit using part of the ceiling space as a plenum. Unit operates well and is good working condition.

Fume Hood Exhaust

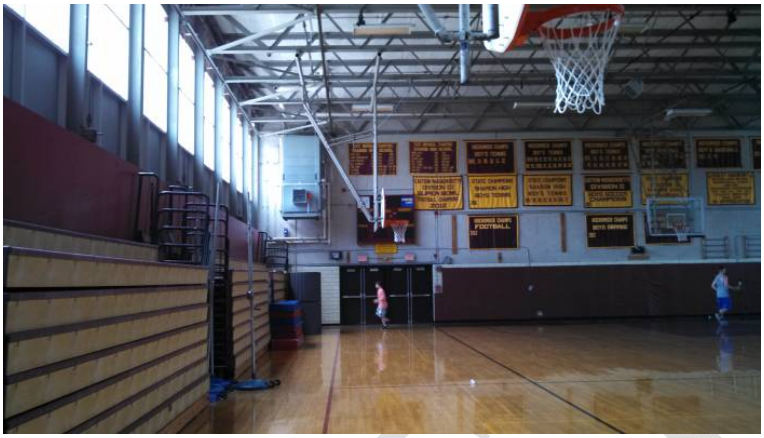
The roof mounted fume hood exhaust utility fan is in very poor condition and should be replaced.

IDF Room

The IDF room is provided with a ductless split system AC unit. The system appears to be in fair condition and maintaining proper temperature control however it does not of means for redundancy and is not on emergency power.

Gymnasium

The gymnasium is provided with four space mounted vertical air handling units discharging horizontally into the space. Each air handling unit is sized for an airflow of 3000 cfm, and is provided with a supply fan, hot water heating coil, filters, return air drawn at the top of the unit, and outside air drawn in through a wall mounted louver. It does appear that the amount of ventilation provided for the space may be undersized by current building code requirements. Overall the units appear to working fine and in good condition.



The ventilation air brought into the gymnasium is exhausted to the outside through two roof-mounted exhaust fans. The air is drawn through open ended ductwork mounted high above the gym between the structural joists.

Locker Rooms

The boys and girls locker rooms are similar and are each provided with one roof mounted heat recovery unit tied to supply and exhaust ductwork routed within the spaces. Each unit is provided with a supply fan, exhaust fan, hot water heating coil, plate heat exchanger, and supply and exhaust filters. It is our understanding that these two units have caused many problems throughout the past 15 years apparently breaking down frequently resulting in several maintenance calls. The schools facilities group would highly recommend replacing these units.

Cafeteria

The cafeteria area is provided with one roof-mounted air handling unit with roof-mounted supply ductwork. The roof-mounted supply ductwork penetrates the building and is branched out to three exposed spiral fingers with slotted duct-mounted supply grilles. The unit is provided with a supply fan, exhaust fan, a hot water heating coil and filters. The return air is routed through three wall-mounted return grilles back to the unit. The unit is controlled by a wall-mounted thermostat in the space. It's our understanding that this unit is operating well and maintaining temperature within the cafeteria.

Kitchen

The kitchen is provided with three canopy hoods located over the cooking areas. The exhaust from these hoods tie together and discharge vertically to a roof mounted exhaust fan. The entire hood is of the single wall stainless steel design and appears to be of the proper height and size to completely cover all cooking equipment. The hood was noted to be clean and in fair condition. It was not possible to determine if the proper air volume is being exhausted through the hoods.

Waste Water Treatment Facility

It is our understanding that the roof mounted makeup air unit is not performing and/or providing the necessary heated ventilation air and should be replaced.

3.7 EXISTING ELECTRICAL SYSTEMS CONDITIONS

The system evaluation is based on a walk through performed in August 2013 and review of the construction documents of the 1997 project.

Electrical Power Distribution System

The NSTAR electrical power service for Sharon High School is originated at the medium-voltage utility pole located at Pond Street. The NSTAR medium-voltage feeder line is installed in the underground duct bank from the utility pole to the 500kVA pad-mounted transformer on the school site at the building exterior in proximity to the exit door #20. The pad-mounted transformer is owned by NSTAR. The duct bank includes two 4" conduits, one of them is spare.

Utility Riser Pole

Pad-mounted Transformer

The pad-mounted transformer's secondary 120/208 volt 3 phase underground feeder had been installed in 1997 and was terminated at the main electrical switchboard in the electrical room (in vicinity of the north end of the auditorium lobby). The main switchboard had been manufactured in 1997 by Square D and is rated 3000Amp at 120/208 volt 3 phase 4 wire. The switchboard includes a main 3000Amp frame/2500Amp trip power circuit breaker and the feeder molded case circuit breakers. The feeder breakers 400Amp and larger are of the electronic trip type, are the smaller size breakers are of thermal-magnetic type. The switchboard is equipped with a PowerLogic metering (amps, volts, kW) unit.

The switchboard and the service feeder have been sized to support the building load up to 900kVA. At the time of the site visit, the building load was 75kVA.

NSTAR utility revenue meter is located in the main electrical room.

Main Electrical Switchboard

The main switchboard is in a good working condition, but it's installation in the electrical room is not in compliance with the latest Electrical Code (number of the egress doors and lack of door panic hardware).

Power at 120/208 volt 3 phase is distributed from the main switchboard to the set of the distribution, lighting and power panels located throughout the building. The distribution panels and most of the power panels are installed in the electrical closets and storage rooms, but some lighting panels are installed flush mounted in the corridors. Some panels in the corridors are the original Franklin Adams panels dated 1950s.

Two new 800Amp power distribution panels MP-1 and MP-2 have been provided in 1997 to re-feed all existing original lighting "L" and power "P" panels. The new distribution panels have been installed in the electrical closets adjacent to the original distribution panels that remain in place to function as the splice boxes. The panels MP-1 and MP-2 are in good operational condition.

Old and New Panel MP2

The branch circuit panels L1 to L5, L7 to L14, and P2 to P7 of 1956 and 1963 construction exceeded their expected useful life.

Panel L5

Panel P6

Panel L9

All panels of 1997 construction (LA1 to LA4, PPB, PBR and PPD1 are in good operational condition.

Panels PPB and PBR

Emergency Power Distribution

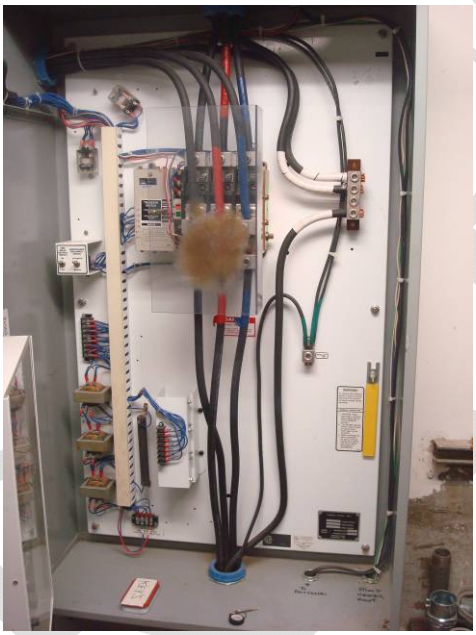
The outdoor natural gas engine-generator set in a weatherproof enclosure, two ATS and all power panels have been installed in 1997. The generator set is rated 100kW at 120/208 volt 3 phase and supports the building emergency (life safety) and standby power distribution systems.

Natural gas engine-generator set

An installation of the generator set distribution equipment is in compliance with the Massachusetts Electrical Code requirements for the emergency power equipment and feeders be the 2-hour fire-rated protected.

The emergency (life safety) ATS#1, distribution panel EDP and lighting panels ELP-1 to ELP-5 are located in the 2-hour fire-rated closets, and they are in good working condition. All power feeders from the panel EDP to the ELP panels are UL listed, 2-hour fire rated MI cables installed above ceilings.

The standby ATS#2 and distribution panel SDP are located in the boiler room, and they are in good working condition. The panel SDP had been sized at 400Amp to support multiple boilers, pumps, kitchen panels, walk-in refrigerator, AHUs, and WWTF, but the 100kW generator, ATS#2 and 225 Amp standby power feeders have been undersized for the design load. As a result, the standby power feeder overheating required some loads be removed from the SDP panel.



ATS#2 (inside)

ATS#2

Branch Circuit Power Circuits

Based on appearance, majority of the receptacles are in fair condition, however the branch circuits conductors (installed in 1956 and 1963) have exceeded their expected useful life.

Typical original (1956 and 1963 construction) classrooms have been provided with just few duplex receptacles – one receptacle on front and back walls. Most of these receptacles are not in ideal locations for today's teaching methods. As a result, the long extension cords (a code violation) or supplemental surface mounted devices and surface plug-in strips have been added over time to accommodate the technology equipment (a teacher' computer, smart board, etc.). In some cases (e.g. classroom 511), the circuits serving the plug-in strips are undersized that leads to the circuit breakers tripping.

| *Typical Original Classrooms*

The overhead unistruts with the power outlets drops had been provided in the some original science labs (rooms 311 and 511).

New computer grade (surge protection, isolated ground bus and 200% neutral) panels CPPA to CPPD have been provided in 1997 to upgrade power circuiting in the existing science labs, and for the circuits in the labs and classrooms in the new addition. The power circuiting included the two compartment (power/data) raceways on the classrooms/labs walls.

| *Panel CCPC*

| *Computer Labs Raceways*

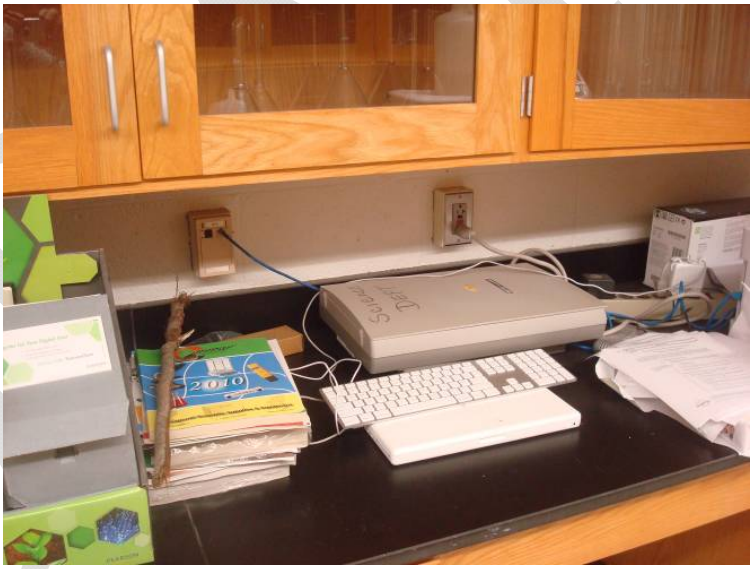
Power wiring for the computer labs and library workstations have been provided from the wall raceways, power/data/poles and the floor boxes.

Library computer workstations

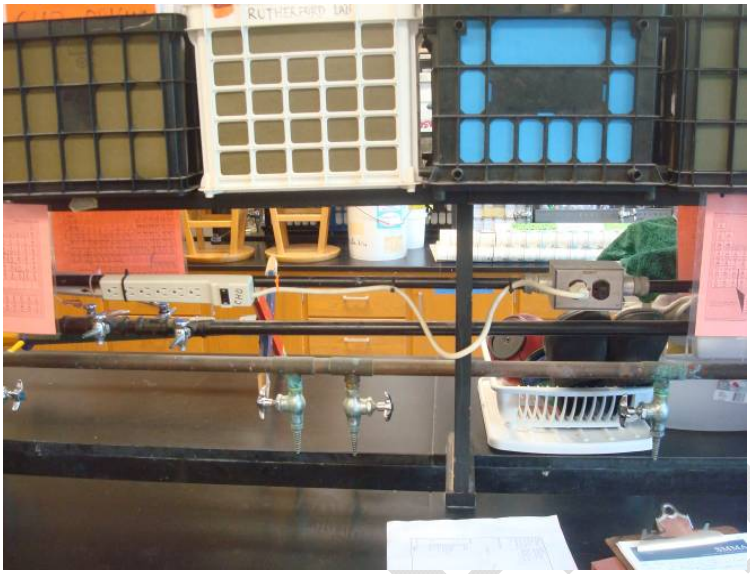
The science lab counters in the rooms 306 and 309 have been provided with the (4) duplex receptacles and (8) DC power outlets fed by a local variable voltage distribution panel.

The benches in the Science Labs are provided with the duplex receptacles. The receptacles in proximity of the sinks are of the GFI type in the some labs (e.g. room 307) and in the prep rooms as required by the Electrical Code, but there are non-GFI type receptacles in the other labs (e.g. rooms 302, 304).

Science Room 307



Prep Room



| *Science Rooms 302 and 304*

The duplex receptacles in the kitchen area are not of GFI type that is required by the Code. Also, use of the extension cords creates unsafe operational conditions.

| *Kitchen non-GFI Receptacle and Cord*

| *Servery area outlets*

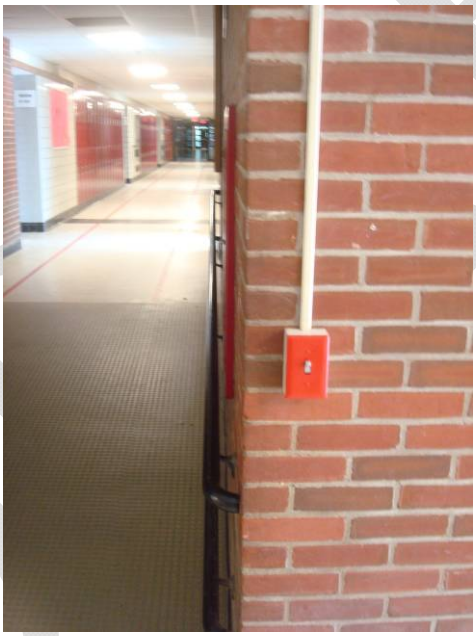
In general, the quantity of convenience receptacles in the corridors is adequate.

Building Lighting

The major renovation of the building lighting system has been done in 2007 when apr. 85% of the lighting have been upgraded through the NSTAR rebate program with the energy efficient electronic ballasts and Super T8 lamps. Occupancy sensors have been installed in the most areas for lighting control.

All corridor light fixtures and exit signs have been replaced in 1997.The corridor light levels are adequate. In general, corridor lighting fixtures are 2x2 fluorescent recessed fixtures with lens and (2) U6 lamps. Exit signs in the corridors are in good working condition but, in the some areas, additional signs are needed for better visibility.

Both normal and emergency corridor lighting fixtures are controlled by the local manual switches. The bypass relays are provided to automatically turn on emergency lights in a case of utility power failure. Lighting control doesn't comply with the latest Energy Code that requires automatic lights OFF control at unoccupied night time.



Local Switch for Emergency Corridor Lights Control

Wiring of the all corridor and lobby emergency egress lights and exit signs has been changed in 1997 in order to connect them to the generator emergency power system.

The original classroom lighting consist of the pendant mounted 1x4 fluorescent wraparound fixtures installed in two or three rows. Pendant indirect 2-lamp fluorescent lighting fixtures have been provided in the classrooms, labs and library built in 1997. Lighting levels are satisfactory.

Original Classroom Lighting

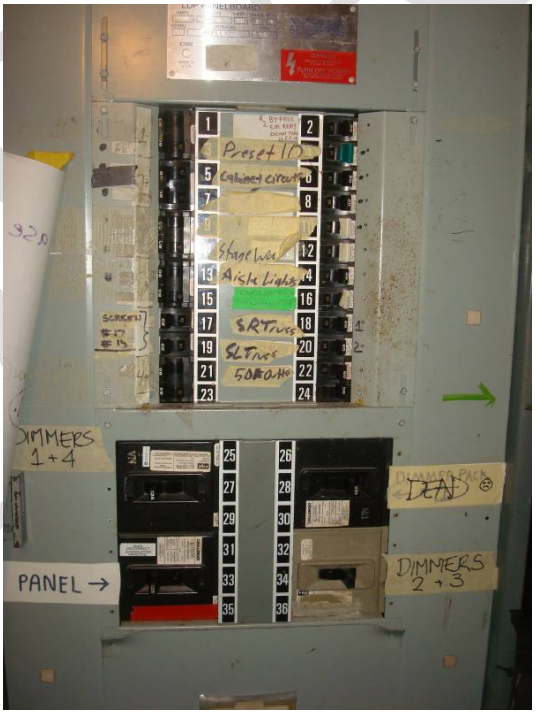
Library Lighting

Local line voltage switches are used for control in the all interior spaces. Typically, the local switches in each class/lab/library room control separately each row of lights. The occupancy sensors are installed in the all classrooms and labs.

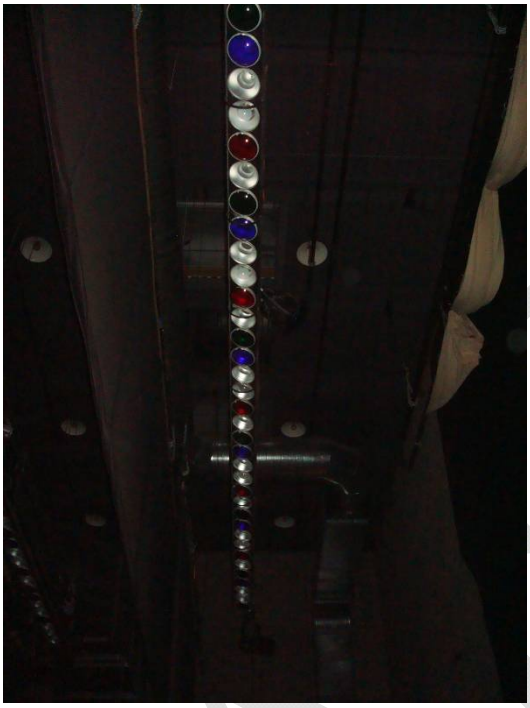
Classroom Lighting Control

| *Typical Occupancy Sensor*

Auditorium house and theatrical dimming system are in very poor operational condition and are obsolete. Under1997 project scope of work emergency lighting has been added on stage with the bypass relays to turn these lights automatically upon fire alarm or utility power failure.



| *Stage Panel*



| *Stage House and Theatrical Lights*

| *Stage Entrance and Bypass Relays*

The lighting fixtures in the cafeteria hi-bay area are the surface mounted 2x4 fluorescent wraparound fixtures. The new downlights with the compact fluorescent lamps and the exit signs have been provided in the low ceiling area in 1997. Local switches are used for the all lights control including emergency (with a bypass relay).

Cafeteria Hi-Bay Lighting

Cafeteria Downlights

Fire Alarm System

The new fire alarm system for the entire building had been provided in 1997. In general, the system is a Code compliant and in a good operational condition.

The master voice evacuation FACP (manufactured by EST) is installed in the electrical closet adjacent to the main electrical room. A Fire Department connection cable is installed underground from the FACP to the exterior master box installed on the building front wall. The remote alarm/test stations of the all duct type smoke detectors are located adjacent to FACP. The FACP is an old technology and at a minimum requires a system software/hardware upgrades.

Fire Alarm Control Panel (FACP)

Fire Alarm Master Box

The area type smoke detectors and speaker/strobes are installed in the all corridors with spacing required by the Code. The manual pull stations are provided at the all exit doors. The smoke detectors have not been observed in any of the classrooms, labs, electrical and communication rooms.

Speaker/strobe alarm units are provided in the all classrooms, labs, library, lobby, etc. where they are required by the Code. The alarm strobes are installed in the toilet rooms.

| *Lobby Speaker/Strobe*

Smoke detectors for the elevator recall are provided as required by the Code. Kitchen hood fire suppression panel interface with FACP is also provided.

Exterior Lighting System

The roadway and parking lighting standards are the pole mounted HID fixtures. The exterior, egress and entrance points to the building lighting use either surface mounted under the canopies, wall-mounted packs or floodlights. Neither of these fixtures provide cut-off lighting distribution. The new wall packs installed on the weight room addition are of the full cut-off distribution type.

Parking Lot Standard

Building Front Wall Packs

Weight Room Addition

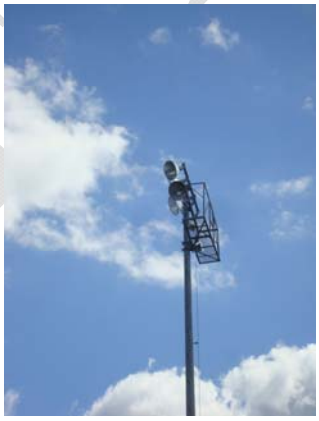
Floodlight at Boiler Room Exterior

Exterior building mounted lighting is controlled via time clocks, and some of them by photocell.

Parking Lot Time Clocks

The sports field lighting is accomplished using concrete poles (total – 6) with the multi-fixture with metal-halide lamps arrangement at cross arms located at the top of the respective poles. Sport lighting is separately metered at the field located power and control enclosure.

Sport Lighting Power/Metering Enclosure



Sport field lighting standards

Security

The security systems at the High School are comprised of analog CCTV cameras, motion sensors and some door position switches. Access control is limited to the main entrance where a dedicated CCTV camera transmits video to a monitor where an attendant can view who is at the door, establish two-way communication using an intercom and release the door using a push button to admit the visitor. There is no card access system in the building. Some exterior entrance doors are equipped with door contact switches.

The school is equipped with eight analog, outdoor CCTV cameras that are approximately 10 years old. The CCTV cable plant is coaxial. The cameras are recorded to a Philips digital video recorder with limited performance features. The cameras are monitored on a small screen in the Main Office.

CCTV Camera and Monitor

Motion sensors are distributed in corridors and in a classroom section of the building where computer labs were once located. The intrusion system has limited programming and partitioning features, and has limited keypad functions for conveying information to users or the local Police.

Typical Motion Sensor

Door Propped Open

Exterior doors are numbered. Noted exterior doors propped open with no means of remote detection of the open condition.

Doorways and outdoor areas of concern (recesses or windowless locations where trouble may develop) include:

- Exterior doorway outside Door 12 – blind spots.
- Exterior doorway outside Door 15 – blind spots.
- Exterior doorway outside Door 16 – blind spots and dense growth.
- Exterior doorway outside Door 18 – blind spots.
- Loading Dock area – blind spots and unmonitored dumpsters.

- Parking area outside Gym at rear of building – blind spots and unmonitored spaces (no windows onto the area).
- Space between Doors 7 and 8 - blind spots and unmonitored spaces (no windows onto the area).
- Noted dense growth directly against the building providing hide-out opportunities.

The front entry is locked during school hours. As described above, visitors must use the intercom to establish contact with the Office Attendant. The Attendant confirms the visitor using a CCTV monitor and releases the lock remotely, allowing the visitor to pass through a vestibule and enter the building. Upon entry, the Administrative Offices are on the right. There is no holding vestibule where visitors may be temporarily detained before proceeding up to the Library or into the first floor sections of the building.

Corridors range from narrow and congested in the 1956 portion of the building to adequate width in the 1963 areas. Corridors are typically long with straight views. Lighting is adequate for CCTV purposes. There are numerous corridor intersections throughout the building where CCTV cameras would be useful for documenting events. Classroom doors are keyed.

All classrooms are equipped with telephone handsets. Classroom handset locations are not well coordinated with other devices in the room.

Paging System Head End

The paging system is integrated with the telephone system. It operates as a one-way means of broadcasting from the Main Office with all call and some zone capability. Two-way voice communication with the classroom is available through the telephone handsets only.

Communications

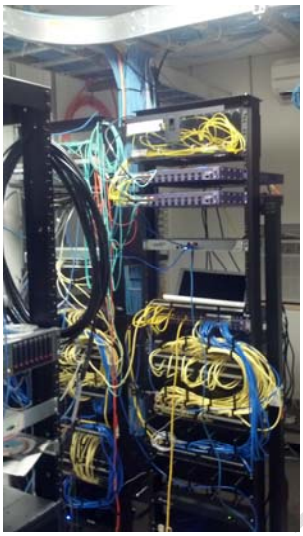
The High School serves as the data head end for the entire school district. Internet service is transmitted over 100/100 synchronous fiber optic cable provided by Cogent. The Middle School and Elementary Schools connect to the High School over a single-mode fiber optic network. Comcast provides Cable TV service. Verizon provides approximately 15 Centrex lines for standard and emergency telephone services. The District uses the fiber optic WAN to place calls between schools.

Overhead communications service cabling comes to the building from Pond Street. A riser pole located at the southeast corner of the school property on Pond Street provides conduits for Verizon, District fiber optic and Cogent service lines to be routed underground to a man hole across the drive way from the pole. An underground duct bank extends north from the man hole to the school (approximately 200') where it enters the Electric Room (also referred to as the Main Trunk Room) near Door #20. It was noted that the duct bank is near capacity with little spare room for additional cables. Comcast services lines are direct buried, extending from a utility pole on Pond Street located near the larger oval parking area and entering the building on the south west side.

Main Trunk Room with PBX

Verizon Demarcation Point in Main Trunk Room

The Verizon cables terminate in the Main Trunk Room where the School PBX is located. The Cogent cables also terminate in the Electric Room where they cross connect to the school fiber that extends to the Main Distribution Frame (MDF). The Single-mode fiber optic cables from the other schools in the district pass through the Electric Room and extend to the MDF.



MDF Switch Racks

MDF Server Rack

MDF Power Receptacles

The MDF is the only communications equipment room with air conditioning. The unit is inadequate to maintain appropriate temperature and humidity levels for the current load. Lighting is adequate on the front of the equipment cabinets and poor on the back side. Electrical receptacles located behind the equipment racks are poorly located causing cable management problems. There is a total of five equipment racks in the room (four 4-post racks and two 2-post racks). Two racks have UPS back-up units with a total capacity of 10 KVa. One of the two UPS units is on the generator system. The other three racks are on standard power. Power services in the room will require that all service to network equipment be supplied from the emergency generator as well as upgrades to accommodate future equipment loads and to provide higher backup reliability in the event of power failure.

Four IDF rooms, including the Electric Room, are distributed in the building. Each is connected to the MDF over 50-micron multimode fiber optic cable providing a 10G pipe line to the MDF. The IDFs are densely populated with network equipment. They are not air conditioned, and are located in closets or storage spaces where conditions are cramped and access to equipment is difficult. The equipment is not securely protected from tampering or accidental damage. There are no UPS units in these rooms with the exception of the Main Trunk Room where the telephone switch is located. The electrical services in each location will require upgrades to accommodate future equipment loads. Some spaces at the far end of the Gym are beyond the 300' standard for data cabling.

The horizontal cable plant is composed of a mix of Category 5 (90%), 5e (6%) and Category 6 (4%) cable. The rating of the horizontal cabling system should be standardized on Category 6 in order to ensure consistent bandwidth throughout the building and to support the requirements of current and emerging network and computer devices. 65 Aerohive wireless access points were installed in 2012. They have been distributed in the building to providing sufficient coverage to eliminate any dead spots. To support a future 1:1 environment, a robust infrastructure consisting of a standardized cable plant, upgraded power service and wireless access points strategically distributed will be required.

Typical Classroom with Interactive White Board and Classroom with Coaxial Cable extended from Wall Outlet

The typical Classroom is equipped with two data jacks. One is used by the Teacher. The second is used as the classroom telephone jack. The cable from this jack is patched onto the telephone backbone punch down blocks in each IDF and the MDF. Several classrooms have as many as four data jacks. Cable management in classrooms is poor.

The Library has approximately 8 data outlets but needs at least 24 to support the equipment in the space. The Computer Lab in the Library also has 8 data outlets but needs at least 28. Offices are typically equipped with one or two data outlets. To compensate for the lack of data outlets, the IT Dept. has distributed small network switches in classrooms and other spaces where needed.

Computer Lab

The High School has five computer Labs:

- Media Arts
- Television Production with a computer editing lab
- General Use Lab – sign-up
- Library General Use Lab General Use Lab
- Language Lab

The cash registers in the Cafeteria use the school's data network for transmitting transactions.

Cable television and in-house programming is distributed throughout the building over the IP network. The existing coaxial cable plant is being phased out as a result.

The Auditorium is equipped with a video projector and sound system. It was noted that the sound system emits a loud hum when operating with the video projector, indicating the need for investigating the interface of the two systems. The Sound System in the Gym is old and in poor working condition.

The clock system is original to the building. The master clock is scheduled for updates during the summer of 2013.

3.8 EXISTING HAZARDOUS MATERIALS SUMMARY

SMMA contracted CDW Consultants, Inc. to review the AHERA report and provide a visual asbestos containing material study for Sharon High School. The scope of work was to review the AHERA reports and determine what has already been determined to be asbestos containing material (ACM). They provided a visual inspection of the site buildings rather than a comprehensive inspection. The AHERA report is included as Appendix 5. CDW's visual inspection results are included as Appendix 6.

3.9 SECTION APPENDICES

SMMA

Appendix 5
AHERA Report

Executive Report – 2013 High School Conditions Study
SHARON PUBLIC SCHOOLS

Three – Year Asbestos Re-Inspection and Management Plan Update

Sharon High School
181 Pond Street
Sharon, Massachusetts 02067

Sharon Public Schools

Sharon, Massachusetts

November 17, 2008

FUSS & O'NEILL
Disciplines to Deliver

Fuss & O'Neill EnviroScience, LLC
50 Redfield Street, Suite 100
Boston, Massachusetts 02122

For Compliance with
EPA Asbestos Hazard Emergency Response Act (AHERA)
40 CFR Part 763

FUSS & O'NEILL
EnviroScience, LLC

Disciplines to Deliver

November 17, 2008

Mr. Ken Wertz
Sharon Public Schools
One School Street
Sharon, MA 02067

RE: 2008 Three Year AHERA Management Plan Update
Sharon High School, Sharon, MA
Fuss & O'Neill EnviroScience, LLC No. 20071400.A1E

Dear Mr. Wertz:

Fuss & O'Neill EnviroScience, LLC (EnviroScience) is pleased to submit the enclosed report of the three-year AHERA asbestos re-inspection and management plan update performed at the Sharon High School located at 181 Pond Street in the Town of Sharon, Massachusetts 02067. This report is an important document that must be kept on file at the school as well as at a central location where all the Management Plans are preserved.

If you have any questions regarding this report, please do not hesitate to contact Bob May at 617-282-4675 extension 4701. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Robert L. May, Jr.
Vice President

Stephen W. Connelly
Senior Vice President

RLM:adw

Enclosure

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Suite 100
Boston, MA
02122

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Connecticut
Massachusetts
New York
Rhode Island
North Carolina
South Carolina

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APPENDICES

1.0 INTRODUCTION

1.1 Background

The Clean Air Act of 1977 required the United States Environmental Protection Agency (USEPA) to develop standards to address the potential health aspects associated with adverse effects of asbestos exposure as an indoor contaminant. In October 1986 the USEPA promulgated the Asbestos Hazard Emergency Response Act (AHERA).

The AHERA regulations required that all local education agencies conduct inspections of each school building that they lease, own, or otherwise use as a school building in order to identify all locations or friable and non-friable asbestos containing building materials (ACBM). The original inspections were required to have been completed prior to October 12, 1988.

Any building leased or acquired on or after October 12, 1988 that is to be used as a school building shall be inspected for friable and non-friable ACBM prior to use as a school building. In the event of an emergency use of a building that has not been inspected for ACBM, the building shall be inspected within 30 days after commencement of such use.

The regulatory requirements are still in full force and effect for any private or public school system, a church affiliated school of any denomination, a school dedicated to the education of children with special needs, or a charter school. In the Commonwealth of Massachusetts the Division of Occupational Safety (DOS) Asbestos and Lead Program is responsible for enforcement of the AHERA regulations.

1.2 Local Education Agency (LEA) Responsibilities

A. The LEA is responsible for compliance with AHERA regulation 40 CFR Part 763. The following responsibilities must be adhered to. (Refer to above mentioned regulation for full requirements and responsibilities):

1. The LEA must designate a person to ensure that all of the AHERA requirements are properly implemented. The Designated Person must receive adequate training to perform his/her duties.

2. The LEA must ensure that management plans are maintained in a central location as well as at each facility and such plans and records are available for inspection or review at all times.

3. The LEA must inform all workers, building occupants or their legal in writing at least once each school year about asbestos related activities, and the availability of the AHERA management plans for the school buildings.

4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, develop/update management plans, develop response actions, and perform required response actions including operations and maintenance activities that may disturb asbestos.

5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where asbestos containing building materials (ACBM) are present. The training must be provided upon initial hire as well as updated annually.

6. The LEA must provide information (disclosure) to any workers who may perform short-term work and come in contact with asbestos in school buildings where ACBM or presumed ACBM are present.

7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.

8. The LEA must ensure that periodic surveillance is performed at least once every six months, after a management plan is in effect, in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

9. The LEA must ensure that once every three years, after a management plan is in effect, a re-inspection is performed in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

1.3 Accreditation

A. Local Education Agency (LEA)

LEA:	Sharon Public Schools
Address:	One School Street Sharon, MA 02067
Phone:	(781) 784-1570
Fax:	(781) 784-1573

B. Designated Person

Designated Person:	Mr. Ken Wertz Supervisor of Maintenance and Operations for School Department

C. Asbestos Consultant Data

Firm:	Fuss & O'Neill EnviroScience, LLC.
Address:	50 Redfield Street, Suite 100 Boston, Massachusetts 02122
Phone:	(617) 282-4675
Fax:	(617) 282-8253

D. Asbestos Inspectors:

Inspector:	Mr. Dustin Diedricksen
Accreditation Number:	AI041867
State of Accreditation:	Massachusetts
Expiration Date:	04/26/09

Inspector:	Mr. Jonathan Hand
Accreditation Number:	A1041945
State of Accreditation:	Massachusetts
Expiration Date:	02/26/09

E. Asbestos Management Planner:

Planner:	Mr. Robert May
Accreditation Number:	AP041719
State of Accreditation:	Massachusetts
Expiration Date:	03/30/09

1.4 Inspection History and Schedule

A. Original AHERA Inspection Management Plan

Report Date:	March 1988
Prepared By:	Briggs Associates, Inc.
Address:	Rockland, Massachusetts
Inspector:	Unknown

B. Three Year Re-Inspections

Report Date:	August 1991
Prepared By:	Covino Environmental Consultants, Inc.
Address:	Woburn, Massachusetts
Inspector:	Unknown

Report Date:	February 1995
Prepared By:	Pennoni Associates, Inc. (formerly Barnes and Jarnis, Inc.)
Address:	Boston, Massachusetts
Inspector:	Unknown

Report Date:	June 1998
Prepared By:	Pennoni Associates, Inc.
Address:	Boston, Massachusetts
Inspector:	Tyson Rose

Report Date:	September 2004
Prepared By:	Envirotest Laboratory, Inc.
Address:	Westwood, Massachusetts
Inspector:	Sam Cohen

2.0 THREE YEAR RE-INSPECTION

2.1 Re-inspection Procedures

This three-year asbestos re-inspection was conducted in accordance with the requirements of the following regulations:

- United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) regulation (40 CFR Part 763, Section 763.85 (b)).

Mr. Dustin Diedricksen and Mr. Jonathan Hand of Fuss & O'Neill EnviroScience, LLC (EnviroScience) performed the re-inspection on August 8, 2008. Mr. Diedricksen and Mr. Hand are accredited Asbestos Inspectors in the Commonwealth of Massachusetts (License No. AI041867 and AI041945 respectively).

A. During the re-inspection the following required tasks were performed:

1. A visual re-inspection and re-assessment of all friable known or assumed asbestos-containing building materials (ACBM).

2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has made it friable.

3. Identification and assessment of any homogeneous area that contained new friable ACBM since the last inspection or re-inspection

Note: The limits of an AHERA inspection involve visible and accessible areas only. ACBM may exist in concealed chases, above fixed ceilings or concealed below floors. Additionally, material such as glue associated with chalk and tackboards, flooring adhesives and mastics, and concealed thermal system insulation may contain asbestos and are presumed to be present.

AHERA requires that for any new additions, renovations, and modular classrooms, documentation be provided stating that the materials used in the construction do not contain asbestos. This can be documented by one of the following:

1. A letter from architect stating that "no asbestos containing materials were specified or installed" in the new addition or renovation.

2. Material Safety Data Sheets and/or product information for new materials installed including for replacement or used to cover asbestos containing materials (e.g. new tile over asbestos tile).

3. An inspection under AHERA protocols by an accredited and licensed asbestos inspector including collection of bulk samples to prove that materials do not contain asbestos.

2.2 Limited Building Description

Sharon High School has a single main level and a smaller second level consisting of the library, library classroom, library offices, and work room. The original building was constructed in 1956. Extensive building additions were completed in 1963 and 1997 and added approximately 33,500 and 25,000 square feet respectively. Modular classrooms, totaling about 2,500 square feet, were added in 2001. The school building encompasses an area of approximately 165,500 square feet.

3.0 RE-INSPECTION REPORT

3.1 Review of Existing Records

An important part of this AHERA re-inspection involved checking documentation that was required to be present at the building being inspected as well as at the central location where all management plans are preserved.

Please see Appendix A for details of our findings.

3.2 Re-inspection Summary

The on-site portion of the re-inspection was documented on forms modeled based on examples provided by the United States Environmental Protection Agency (USEPA). A single form has been created which summarizes the inventory of materials by type, location, quantity and category. Each location of a given material type is provided and exposure assessment including friability, a previous condition assessment category consistent with AHERA rankings, a current assessment category ranking and notes regarding the current assessment. The forms also identify any previous recommendations from last recorded three year inspection and current recommendations based on the re-inspection.

Any newly identified materials are also recorded and identified as newly identified materials. Note no samples were collected of materials as part of the re-inspection. Any newly identified materials are presumed to contain asbestos.

The information obtained during this re-inspection was transmitted to Mr. Robert May, an accredited Management Planner, so that response actions relative to the condition of the ACBM could be designed. Mr. May is a licensed Asbestos Management Planner in the Commonwealth of Massachusetts (License No. AP041719).

3.3 Newly Identified ACBM Material

Newly identified materials not included in the previous three year inspection or the initial inspection include the following:

1. Sinks with undercoating – non friable - presumed ACBM
2. Composite countertops and window sills – non friable – presumed ACMB
3. Flex connectors (vibration isolators) – non friable – presumed ACBM

Sinks with undercoatings were observed in several areas throughout the school building. Material is non-friable and applied to underside of sinks to prevent condensation. No samples were collected. Refer to assessment forms for specific information.

Flex Connectors associated with duct systems were identified in the science department storage room and bathroom near Classroom #402. Material is non-friable and for purposes of isolating vibration between duct lengths. No samples were collected. Refer to assessment forms for specific information.
Composite countertops and window sills were observed in several areas throughout the school building. Material is non-friable and no samples were collected. Refer to assessment forms for specific information.

Any suspect material encountered during renovation/demolition that is not specifically identified in this report as a non-ACM should be assumed to contain asbestos unless sample results prove otherwise. AHERA inspections do not satisfy the requirements for the U.S. EPA survey requirements for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). A NESHAP survey should be performed prior to renovation or other planned disturbance within a building.

3.4 Physical Assessment of ACBMs

During the inspection, suspect ACBM were separated into three USEPA categories. These categories are thermal system insulation (TSI), surfacing ACBM, and miscellaneous ACBM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe fittings. Surfacing ACBM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACBM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

Finally, all ACBM were quantified in linear and/or square footage depending on the nature of the material.

All ACBM identified during the inspection and still remaining in the school were reassessed using the AHERA guidelines for assessment of ACBM. The assessment categories are listed as follows:

1 = Damaged or significantly damaged TSI ACBM
2 = Damaged friable surfacing ACBM
3 = Significantly damaged friable surfacing ACBM
4 = Damaged or significantly damaged friable miscellaneous ACBM
5 = ACBM with potential for damage
6 = ACBM with potential for significant damage
7 = Any remaining friable ACBM or friable suspected ACBM

Material locations, assessments, and recommended response actions are listed in the Re-inspection forms located in Appendix B.

4.0 MANAGEMENT PLAN UPDATE

4.1 Recommended Response Actions

Based on the inspection report, physical walk-through inspection and existing condition of the ACBM, the following response actions are recommended:

1. Loose AirCell TSI was observed on the ground within a pipe chase accessible from the custodians' closet across the hallway from the teachers' lounge (#400). Three damaged fittings were also observed at this area. Material is friable and should be removed or repaired appropriately. This area is characterized as being of limited access to students.

2. Noted locations of 9x9 vinyl floor tile were observed to be damaged. Cracked floor tiles should be repaired or replaced to prohibit further damage.

3. 1x1 white ceiling tile was observed to be in good condition in the office/classroom area that was formerly Lecture Room A. Material is friable and preventive measurements should be taken to minimize disturbance.

4. Transite materials are present within the school building and were in good condition at the time of inspection. Materials are non-friable and should be managed in place in accordance with the AHERA O&M Program.

5. Sink undercoatings, composite countertops and window sills, and flex connectors associated with duct systems, were newly identified suspect materials and are presumed asbestos and included in this e year re-inspection. Samples were not collected at the time of inspection. These materials are non-friable and should be managed in place in accordance with the AHERA O&M Program. Additionally, samples may be collected to determine asbestos content of each material type.

6. Comply with documentation requirements for newly installed materials, additions, and modular classrooms. These materials, locations, and modular classrooms were not inspected as part of this AHERA inspection. Documentation for the following should be added to the management plans:

    a. 1997 Building Addition
    b. Modular Classrooms

Operations and Maintenance (O & M)

All ACBM in the school shall be managed in place in accordance with the original AHERA Operations and Maintenance (O & M) Program. The condition of such materials will be monitored until all the ACBM have been removed from the building. A successful O & M Program includes the following elements:

a) Cleaning: All areas of the school where friable ACBM or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the initial inspection. Additional cleaning may be necessary if the Management Planner makes a written recommendation indicating methods and frequency of such cleaning.

b) O & M Activities: The LEA shall ensure that the procedures described below are followed to protect building occupants from any O & M activities that may disturb known or assumed ACM:

1. Restrict entry into the area either by physically isolating or by scheduling.
2. Post warning signs to prevent entry by unauthorized persons.
3. Shut off or temporarily modify the air-handling system.
4. Use proper work practices and engineering controls such as wet methods, protective clothing, HEPA-vacuums, mini enclosures/glove bags etc., to inhibit spread of fibers.
5. Place all asbestos debris and other contaminated materials in a sealed, leak-tight container for eventual disposal.

c) Minor Fiber Release Episodes: The LEA shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., disturbance of 3 linear/square feet or less of friable ACM):

1. Saturate the debris using wet method.
2. Place the debris in a sealed leak-tight container and clean the area.
3. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.

d) Major Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., disturbance of more than 3 linear/square feet of friable ACBM):

1. Restrict entry into the area and post warning signs.
2. Shut off or temporarily modify the air handling system to prevent spread of fibers to other areas of the school.
3. **The response for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.**
4. The LEA shall notify the Massachusetts Department of Labor and Workforce Development of any major fiber release episode within twenty-four hours of its occurrence and, if necessary, provide written notification as required by applicable federal and/or state regulations.

4.2 Periodic Surveillance

At least once every six (6) months after a management plan is in place, the LEA shall conduct periodic surveillance in the school that contains ACBM or assumed to contain ACM. The person conducting periodic surveillance shall visually inspect all areas in the school that have been identified in the management plan as having ACBM, record the date of surveillance, his/her name, and any changes in the condition of the materials and submit the record to the LEA Designated Person for inclusion in the management plan.

Please see Appendix C for Periodic Surveillance Forms that may be used for conducting periodic surveillance.

4.3 Preventive Measures

The LEA shall institute appropriate preventive measures to eliminate the reasonable likelihood that the ACBM will become damaged, deteriorated or delaminated.

Please see Appendix D for preventive measures designed for various types of ACM that may exist in the school.

5.0 EPA CERTIFICATION REQUIREMENTS

The certificates and the licenses for the individuals (Dustin Diedricksen, Jonathan Hand, and Robert L. May Jr.) involved in performing the re-inspection and updating the management plan are provided in Appendix E.

Dustin Diedricksen

Inspector: Dustin Diedricksen

Robert L. May Jr.

Management Planner: Robert L. May, Jr.

Designated Person: Ken Wertz

LEA Representative

APPENDIX A

CHECKLIST FOR EXISTING RECORDS

CHECKLIST FOR EXISTING RECORDS

Local Education Agency (LEA): Sharon Public Schools
One School Street, Sharon, MA 02067

School Building: Sharon High School
181 Pond Street, Sharon, Massachusetts 02067

The following documentation is required to be present in both the LEA's Office as well as in a centralized location in the administrative office of the school. The information included in this checklist shall be verified to be present and complete as part of three year re-inspection.

DOCUMENTATION		LOCATION	
		School	LEA Office
1.	Original AHERA Inspection/Management Plan	N	N
2.	Three year Re-inspections (List Dates)	N	1998, 2004
3.	Notifications to Parents/Guardians and Teachers (yearly since last re-inspection)	N	Y
4.	Designated Person Identified and Proper Training (person must be named and have appropriate training)	N	Y
5.	Designated Person Periodic Surveillance (every six months since last re-inspection)	N	N
6.	Record of Awareness Training for Maintenance Staff	N	Y
7.	Outside Vendor Awareness Notification	N	Y
8.	Warning Signs and Labels (required posting in Boiler room and mechanical spaces only)	N	N/A
9.	Record of Response Actions (includes any abatement done since last re-inspection)	N	Y

Inspector: Dustin Diedricksen and Jonathan Hand Date: 8-08-2008

APPENDIX B

RE-INSPECTION FORMS

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type Pipe Insulation and Mudded Fittings

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommend-ations
Storage Room Off of Boys' Locker Room	7 LF	TSI	F	Potential for Damage	5	N/A (No Access)	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	N/A
Gymnasium	200 LF	TSI	F	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Custodians' Closet Across Hallway from Teachers' Lounge (#400)	40 LF AirCell Pipe; 8 Mudded Fittings	TSI	F	N/A	5	10 LF of AirCell Pipe on Ground; 3 Damaged Fittings	N/A	Properly Dispose of AirCell Pipe on Ground; Repair Damaged Fittings Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type Grey 9x9 Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommend-ations
Hallway Between Gymnasium and Boiler Area	N/A	Miscellaneous	N	50 SF Damaged	5	25 SF Exposed (Underneath 12x12 Floor Tile)	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Main Office	2,700 SF	Miscellaneous	N	Covered with Rug	5	Covered with Rug	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Administrative Areas of Main Office	640 SF	Miscellaneous	N	Covered with Rug	5	Covered with Rug	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Classroom #402 (Formerly Conference and Office Rooms)	680 SF	Miscellaneous	N	Potential for Damage	5	Covered with Rug	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type Red 9x9 Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend-ations	Current Recommend-ations
Maintenance Locker Room in Boiler Area	72 SF	Miscellaneous	N	Potential for Damage	5	6 SF Damaged	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Repair Cracked Floor Tile and Continue O&M
Office in Boiler Area	120 SF	Miscellaneous	N	Potential for Damage	5	16 SF Damaged	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Repair Cracked Floor Tile and Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type 12x12 Beige Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommend-ations
End of Hallway Between Computer Room and Music Room (Formerly Storage Room)	90 SF	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type 12x12 Green Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommend -ations
Room #111 Office of Student Services (Formerly Lecture Room A)	2,000 SF	Miscellaneous	N	<1% Damage	5	Covered with Rug	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Conference Room Off of Room #111	130 SF	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Classroom #501	400 SF	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type 1x1 White Ceiling Tile

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommend-ations
Room #111 Office of Student Services (Formerly Lecture Room A)	130 SF (2 Layers)	Miscellaneous	Y	<1% Damage	5	Good Condition	Take Preventive Measures to Reduce Disturbance	Continue O&M
Classroom #501	75 SF	Miscellaneous	Y	N/A	5	Good Condition	N/A	O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type Transite Panels

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend -ations	Current Recommend-ations
Art Office #410 (Hallway Wall)	20 SF	Miscellaneous	N	Potential for Damage	5	Good	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Storage Room Between Classrooms #304 and #302 (Pipe at Ceiling)	10 SF	Miscellaneous	N	N/A	5	Good	N/A	O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
Inspector: Dustin Diedricksen & Jonathan Hand

Sharon High School, Town of Sharon

ACM Type Fire Curtain

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend-ations	Current Recommend-ations
Auditorium	1 EA	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Sharon High School, Town of Sharon

ACM Type Newly Identified Suspect Material-Sink Undercoating

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend-ations	Current Recommend-ations
Throughout School	N/A	Miscellaneous	N	N/A	5	Good Condition	N/A	O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Inspection Date: August 8, 2008
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Sharon High School, Town of Sharon

ACM Type Newly Identified Suspect Material-Composite Countertops and Window Sills

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend-ations	Current Recommend-ations
Throughout School	N/A	Miscellaneous	N	N/A	5	Good Condition	N/A	O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

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Sharon High School, Town of Sharon

ACM Type Newly Identified Suspect Material-Flex Connector (Vibration Isolator)

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommend-ations	Current Recommend-ations
Science Department Storage Room	2 EA (5 SF Total)	Miscellaneous	N	N/A	5	Good Condition	N/A	O&M
Bathroom Near Classroom #402	1 EA (2 SF)	Miscellaneous	N	N/A	5	Good Condition	N/A	O&M

AHERA assessment category:
1= Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM,
4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage,
7=Any remaining friable ACBM or friable suspected ACBM

APPENDIX C

PERIODIC SURVELLIANCE FORM

PERIODIC SURVEILLANCE FORM – List of ACBM Asbestos-Containing Materials

School: Sharon High School
Address: 181 Pond Street, Sharon, MA

Date(s) of Original Inspection: 03/1988
Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008

Periodic Inspection Date: _____ **Conducted By:**_____

Asbestos Containing Material	Location	Estimated Quantity	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
Pipe Insulation and Mudded Fittings	Storage Room Off of Boys' Locker Room	7 LF	N/A (No Access)				
Pipe Insulation and Mudded Fittings	Gymnasium	200 LF	Good Condition				
Pipe Insulation and Mudded Fittings	Custodians' Closet Across Hallway from Teachers' Lounge (#400)	40 LF AirCell Pipe; 8 Mudded Fittings	10 LF of AirCell Pipe on Ground; 3 Damaged Fittings				
Grey 9x9 Floor Tile & Mastic	Hallway Between Gymnasium and Boiler Area	N/A	25 SF Exposed (Underneath 12x12 Floor Tile)				
Grey 9x9 Floor Tile & Mastic	Main Office	2,700 SF	Covered with Rug				
Grey 9x9 Floor Tile & Mastic	Administrative Areas of Main Office	640 SF	Covered with Rug				
Grey 9x9 Floor Tile & Mastic	Classroom #402 (Formerly Conference and Office Rooms)	680 SF	Covered with Rug				
Red 9x9 Floor Tile & Mastic	Maintenance Locker Room in Boiler Area	72 SF	6 SF Damaged				
Red 9x9 Floor Tile & Mastic	Office in Boiler Area	120 SF	16 SF Damaged				

LF- Linear feet, SF- Square Feet, EA- Each

PERIODIC SURVEILLANCE FORM – List of ACBM Asbestos-Containing Materials

School: Sharon High School
Address: 181 Pond Street, Sharon, MA

Date(s) of Original Inspection: 03/1988
Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008

Periodic Inspection Date: _____ **Conducted By:**_____

Asbestos Containing Material	Location	Estimated Quantity	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
12x12 Beige Floor Tile & Mastic	End of Hallway Between Computer Room and Music Room (Formerly Storage Room)	90 SF	Good Condition				
12x12 Green Floor Tile & Mastic	Room #111 Office of Student Services (Formerly Lecture Room A)	2,000 SF	Covered with Rug				
12x12 Green Floor Tile & Mastic	Conference Room Off of Room #111	130 SF	Good Condition				
12x12 Green Floor Tile & Mastic	Classroom #501	400 SF	Good Condition				
1x1 White Ceiling Tile	Room #111 Office of Student Services (Formerly Lecture Room A)	130 SF (2 Layers)	Good Condition				
1x1 White Ceiling Tile	Classroom #501 (Formerly Lecture Room A)	75 SF	Good Condition				
Transite Panel	Art Office #410 (Hallway Wall)	20 SF	Good Condition				
Transite Panel	Storage Room Between Classrooms #304 and #302 (Pipe at Ceiling)	10 SF	Good Condition				
Fire Curtain	Auditorium	1 EA	Good Condition				

LF- Linear feet, SF- Square Feet, EA- Each

PERIODIC SURVEILLANCE FORM – List of ACBM Asbestos-Containing Materials

School: Sharon High School
Address: 181 Pond Street, Sharon, MA

Date(s) of Original Inspection: 03/1988
Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008

Periodic Inspection Date: _____ **Conducted By:**_____

Asbestos Containing Material	Location	Estimated Quantity	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
Sink Undercoating	Throughout School	N/A	Good Condition				
Composite Countertops and Window Sills	Throughout School	N/A	Good Condition				
Flex Connector (Vibration Isolator)	Science Department Storage Room	2 EA (5 SF Total)	Good Condition				
Flex Connector (Vibration Isolator)	Bathroom Near Classroom #402	1 EA (2 SF)	10 SF Damaged				

LF- Linear feet, SF- Square Feet, EA- Each

APPENDIX D

PREVENTIVE MEASURES

PREVENTIVE MEASURES FOR VARIOUS ASBESTOS-CONTAINING MATERIALS

A. SURFACING MATERIALS

"Surfacing Materials" means materials in a school building that are sprayed-on, troweled-on, or otherwise applied to surfaces. These include sprayed-on fireproofing materials on structural members, ceiling and wall plasters, or other materials applied to surfaces for acoustical, fireproofing, or other purposes.

Surfacing Materials are generally considered friable and can release asbestos fibers if damaged by impact, air erosion, vibration, and/or water intrusion. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Sprayed-on fire-proofing

   a) Identify the materials and post warning signs on the laid-in or glued-in ceiling tile. If the decking is not covered, place the sign on the wall.
   b) Maintain the materials in intact state and undamaged condition. During winter, pigeons, squirrels and other rodents tend to roost in boiler/machine rooms and dislodge sprayed-on fireproofing on the decking. Prevent such possibilities.
   c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, enclosure is a temporary solution. Encapsulation of damaged sprayed-on fireproofing material is not recommended.
   d) Train the custodial people who are responsible for care and maintenance of surfacing materials. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Ceiling and wall plaster

   a) Identify the materials and post warning signs.
   b) Maintain the materials in intact state and undamaged condition. Avoid storing/stacking on/near the materials to reduce contact damage.
   c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, repair or enclosure is a temporary solution.
   d) Train the custodial people who are responsible for care and maintenance of surfacing materials.

B. THERMAL SYSTEM INSULATION (TSI)

"Thermal System Insulation (TSI)" means insulating materials applied to pipes, pipe fittings, boilers, breechings, tanks, ducts, or other components to prevent process heat loss or gain, water condensation, or for other purposes (e.g., fire door insulation core).

TSI is generally considered friable ACM. This means it can be easily damaged, increasing the potential for fiber release. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Boiler and breeching insulation

   a) Identify the locations and label the boiler. Warning signs should be posted outside the boiler room.
   b) Reduce the likelihood of fiber release by ensuring that the insulation is not damaged. Avoid storing/stacking on/near the boiler to reduce contact damage.
   c) Maintain the insulation in intact state and undamaged condition. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
   d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Pipe, pipe-fittings, tank and duct insulation

   a) Identify the locations and label the materials. Warning signs should be posted outside of rooms that have TSI materials.
   b) Reduce the likelihood of fiber release by ensuring that the materials are not damaged. Avoid storing/stacking near the materials to reduce contact damage.
   c) Maintain all TSI materials in intact state and undamaged condition. Inspect the protective jackets for damage. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
   d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

3. Fire door

   a) Identify the locations and label the materials.
   b) Since there may be a number of different types of fire doors throughout a building, fire door cores must be considered to have asbestos-containing interior insulation unless sample result prove otherwise. Prior to performing any maintenance on any door (lock change, drilling, etc.), the door should be surveyed by qualified personnel to rule out the existence of an asbestos core.
   c) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

C. MISCELLANEOUS MATERIALS

"Miscellaneous Materials" are all other asbestos-containing materials in a school building that do not fall under the categories of Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastic, gypsum wallboard and joint compound, ceiling tiles, glue daubs, transite panels, laboratory counter tops, wallbase and associated glue, window caulking and glazing compounds etc. The following maintenance procedures are recommended for these materials:

1. Vinyl Asbestos Floor Tiles (VAT)

Vinyl Asbestos Floor Tiles (VAT) are considered non-friable, however routine maintenance procedures such as spray-buffing, burnishing, wet scrubbing, and stripping can generate asbestos fibers. Following procedures, when properly implemented, will reduce the potential of fiber release:

a) Do not sand, grind or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. Never perform dry stripping.
b) During spray-buffing or burnishing the floor, operate the machine at the lowest workable speed and use the least abrasive pad. Use a wet mop for routine cleaning whenever possible.
c) Routinely check whether chair and desk glides are in good condition and replace when necessary. Worn glides can gouge the floor and cause fiber release.
d) Place carpets/floor mats in all entrances to reduce abrasion of floor tiles by sand and pebbles. During winter, have parking lots and walkways swept to the extent possible to avoid the tracking of salt and ice-melting compounds into the school by the students.
e) Train the custodial people who are responsible for care and maintenance of VAT. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Gypsum wallboard and joint compound assembly

a) Since there may exist a number of different homogeneous assemblies in a building, all sheetrock/joint compound must be assumed to be ACBM unless sample result prove otherwise. If any specific areas are going to be disturbed, the material in that area should be sampled.
b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.

3. Ceiling Tile and Glue Daubs

a) Reduce the likelihood of fiber release by limiting access to the area above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.

b) If the ceiling tiles are negative for asbestos, sample and analyze the glue daubs to ascertain whether these are asbestos-containing before the tiles are replaced.

4. Transite Panels, Laboratory Counter Tops, Window Caulking and Glazing Compounds

a) Reduce the likelihood of fiber release.
b) Maintain transite panels, lab tabletops and window caulking and glazing compounds in undamaged condition.

5. Carpet Glue, Blackboard/ Tack Board Glue, Sink Undercoating, Floor Tile Mastic, Baseboard and Mastic

a) Reduce the likelihood of fiber release by leaving base cove and carpets in place.
b) Maintain carpets and base cove in good condition. Sample and analyze the glue and the mastic to ascertain whether these are asbestos-containing if the renovation activities are going to impact the carpet and the baseboard.

APPENDIX E

AHERA TRAINING CERTIFICATES

INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

16 Upton Drive, Wilmington, MA 01887

(Phone) 978.658.5272

IEE

This is to certify that

Dustin A Diedricksen

IEE

has completed the requisite training, and has passed an examination for reaccreditation as:

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

September 21, 2007

Course Dates

Course Location

Institute for Environmental Education
16 Upton Drive
Wilmington, MA 01887

September 21, 2007

Examination Date

07-2601-106-208040

Certificate Number

September 21, 2008

Expiration Date

Training Director

Commonwealth of Massachusetts
Division of Occupational Safety
Laura M. Marlin, Commissioner
Asbestos Inspector

DUSTIN A. DIEDRICKSEN

Eff. Date 04/10/08
Exp. Date 04/26/09
AI041867
Member of C.O.N.E.S.
NB

09

NB-RENEWAL

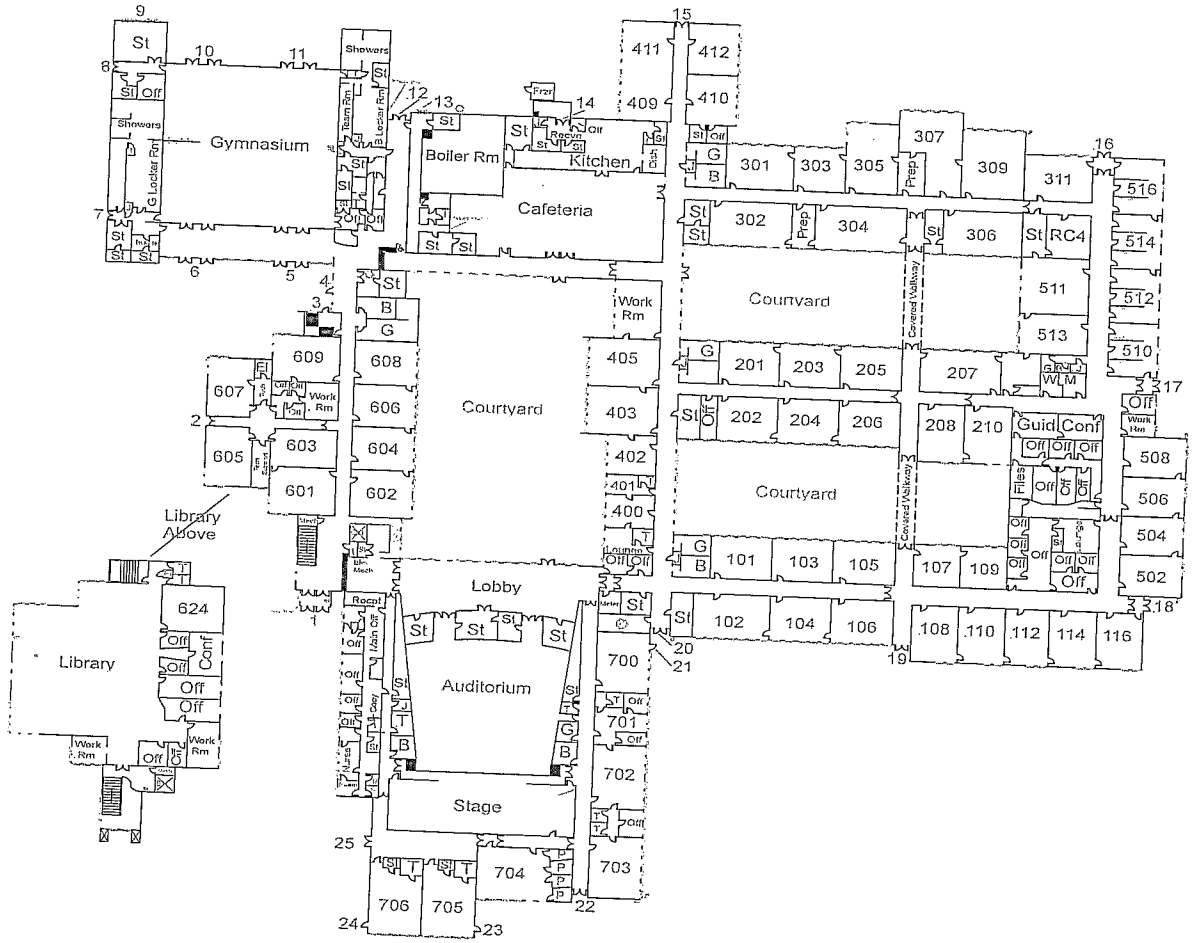
APPENDIX F

BUILDING SCHEMATIC

FUSS & O'NEILL
EnviroScience, LLC
50 Redfield St, Suite 100, Boston, MA 02122
www.fando.com
(617) 282-4675 Fax (617) 282-8253

School Name:	Sharon High School
Address:	181 Pond Street Sharon, MA 02067

1ST FLOOR PLAN



ASBESTOS HAZARD EMERGENCY RESPONSE ACT THREE-YEAR RE-INSPECTION AND MANAGEMENT PLAN UPDATE FOR SHARON HIGH SCHOOL

181 Pond Street
Sharon, Massachusetts 02067

For Compliance with EPA Asbestos Hazard Emergency Response Act (40 CFR part 763)

Sharon Public Schools

Sharon, Massachusetts

November 10, 2011

FUSS & O'NEILL

Fuss & O'Neill EnviroScience, LLC
50 Redfield Street, Suite 100
Boston, MA 02122

Project No. 20071400.A4E

FUSS & O'NEILL
EnviroScience, LLC

November 10, 2011

Mr. Ken Wertz
Sharon Public Schools
75 Mountain Road
Sharon, MA 02067

RE: 2011 Three Year AHERA Management Plan Update
Sharon High School, Sharon, MA
Fuss & O'Neill EnviroScience, LLC No. 20071400.A4E

Dear Mr. Wertz:

Enclosed is the report of the three-year AHERA asbestos re-inspection and management plan update conducted by Fuss & O'Neill EnviroScience, LLC (EnviroScience) at the Sharon High School Building located at 181 Pond Street in Sharon, Massachusetts. This report is an important document that must be kept on file at the school as well as at a central location where all the Management Plans are preserved.

If you have any questions regarding this report, please do not hesitate to contact me at (617) 282-4675, ext. 4701. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Robert L. May, Jr.
Vice President

RLM/asn

Enclosure

50 Redfield Street
Suite 100
Boston, MA
02122
t 617.282.4675
f 617.282.8253

www.fando.com

Connecticut
Massachusetts
Rhode Island
South Carolina

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FUSS & O'NEILL
EnviroScience, LLC

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Sharon Public Schools

1 Introduction

1.1 Background

The Clean Air Act of 1997 required the United States Environmental Protection Agency (USEPA) to develop standards to address the potential health aspects associated with adverse effects of asbestos exposure as an indoor contaminant. In October 1986 the USEPA promulgated the Asbestos Hazard Emergency Response Act (AHERA).

The AHERA regulations required that all local education agencies conduct inspections of each school building that they lease, own, or otherwise use as a school building in order to identify all locations or friable and non-friable asbestos containing building materials (ACBM). The original inspections were required to have been completed prior to October 12, 1988.

Any building leased or acquired on or after October 12, 1998 that is to be used as a school building shall be inspected for friable and non-friable ACBM prior to use as a school building. In the event of an emergency use of a building that has not been inspected for ACBM, the building shall be inspected within 30 days after commencement of such use.

The regulatory requirements are still in full force and effect for any private or public school system, a church affiliated school of any denomination, a school dedicated to the education of children with special needs, or a charter school. In the Commonwealth of Massachusetts the Department of Labor Standards (DLS) formerly known as the Division of Occupational Safety (DOS) Asbestos and Lead Program is responsible for enforcement of the AHERA regulations.

1.2 Local Education Agency (LEA) Responsibilities

A. The LEA is responsible for compliance with AHERA regulation 40 CFR Part 763. The following responsibilities must be adhered to. (Refer to above mentioned regulation for full requirements and responsibilities):

1. The LEA must designate a person to ensure that all of the AHERA requirements are properly implemented. The Designated Person must receive adequate training to perform his/her duties.

2. The LEA must ensure that management plans are maintained in a central location as well as at each facility and such plans and records are available for inspection or review at all times.

3. The LEA must inform all workers, building occupants or their legal in writing at least once each school year about asbestos related activities, and the availability of the AHERA management plans for the school buildings.

4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, develop/update management plans, develop

response actions, and perform required response actions including operations and maintenance activities that may disturb asbestos.

5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where asbestos containing building materials (ACBM) are present. The training must be provided upon initial hire as well as updated annually.

6. The LEA must provide information (disclosure) to any workers who may perform short-term work and come in contact with asbestos in school buildings where ACBM or presumed ACBM are present.

7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.

8. The LEA must ensure that periodic surveillance is performed at least once every six months, after a management plan is in effect, in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

9. The LEA must ensure that once every three years, after a management plan is in effect, a re-inspection is performed in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

1.3 Accreditation

A. Local Education Agency (LEA)

LEA:	Sharon Public Schools
Address:	75 Mountain Street Sharon, MA 02067
Phone:	(781) 784-1570
Fax:	(781) 784-1573

B. Designated Person

Designated Person:	Mr. Ken Wertz Supervisor of Maintenance and Operations for School Department

C. Asbestos Consultant Data

Firm:	Fuss & O'Neill EnviroScience, LLC
Address:	50 Redfield Street, Suite 100 Boston, Massachusetts 02122
Phone:	(617) 282-4675
Fax:	(617) 282-8253

D. Asbestos Inspector

Inspector:	Mr. Paul Bateman
Accreditation Number:	AI071329
State of Accreditation:	Massachusetts
Expiration Date:	11/29/11

E. Asbestos Management Planner:

Planner:	Mr. Robert May
Accreditation Number:	AP041719
State of Accreditation:	Massachusetts
Expiration Date:	03/27/12

1.4 Inspection History and Schedule

A. Original AHERA Inspection Management Plan

Report Date:	March 1988
Prepared By:	Briggs Associates, Inc.
Address:	Rockland, Massachusetts
Inspector:	Unknown

B. Three Year Re-Inspections

Report Date:	August 1991
Prepared By:	Covino Environmental Consultants, Inc.
Address:	Woburn, Massachusetts
Inspector:	Unknown

Report Date:	February 1995
Prepared By:	Pennoni Associates, Inc. (formerly Barnes and Jarnis, Inc.)
Address:	Boston, Massachusetts
Inspector:	Unknown

Report Date:	June 1998
Prepared By:	Pennoni Associates, Inc.
Address:	Boston, Massachusetts
Inspector:	Tyson Rose

Report Date:	September 2004
Prepared By:	Envirotest Laboratory, Inc.
Address:	Westwood, Massachusetts
Inspector:	Sam Cohen

Report Date:	November 2008
Prepared By:	EnviroScience Consultants, Inc.
Address:	50 Redfield St, Boston, Massachusetts
Inspector	Dustin Diedricksen and Jonathan Hand

2 Three-Year Re-Inspection

2.1 Re-inspection Procedures

This three-year asbestos re-inspection of the Sharon High School Building was conducted in accordance with the requirements of the following regulations:

- United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) regulation (40 CFR Part 763, Section 763.85 (b)).

Mr. Bateman of EnviroScience performed the re-inspection on September 23, 2011. Mr. Bateman is an accredited Asbestos Inspector in the Commonwealth of Massachusetts (License No. AI071329).

A. During the re-inspection the following required tasks were performed:

1. A visual re-inspection and reassessment of all friable known or assumed asbestos-containing building materials (ACBM).

2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has made it friable.

3. Identification and assessment of any homogeneous area that contained new friable ACBM since the last inspection or re-inspection

Note: The limits of an AHERA inspection involve visible and accessible areas only. ACBM may exist in concealed chases, above fixed ceilings or concealed below floors. Additionally, material such as glue associated with chalk and tack boards, flooring adhesives and mastics, and concealed thermal system insulation may contain asbestos and are presumed to be present.

AHERA requires that for any new additions, renovations, and modular classrooms, documentation be provided stating that the materials used in the construction do not contain asbestos. This can be documented by one of the following:

1. A letter from architect stating that "no asbestos containing materials were specified or installed" in the new addition or renovation.

2. Material Safety Data Sheets and/or product information for new materials installed including for replacement or used to cover asbestos containing materials (e.g. new tile over asbestos tile).

3. An inspection under AHERA protocols by an accredited and licensed asbestos inspector including collection of bulk samples to prove that materials do not contain asbestos.

2.2 Building Description

Sharon High School has a single main level and a smaller second level consisting of the library, library classroom, library offices, and work room. The original building was constructed in 1956. Extensive building additions were completed in 1963 and 1997 and added approximately 33,500 and 25,000 square feet respectively. Modular classrooms, totaling about 2,500 square feet, were added in 2001. The school building encompasses an area of approximately 165,500 square feet.

3 Re-Inspection Report

3.1 Review of Existing Records

An important part of a management plan involves maintaining documentation that is required to be present at the building as well as at the central location where all management plans are preserved. EnviroScience has provided a checklist for the LEA to utilize in documenting that required information is maintained.

Please see *Appendix A* for checklist.

3.2 Re-inspection Summary

The on-site portion of the re-inspection was documented on forms modeled after examples provided by the United States Environmental Protection Agency (USEPA). The first form, **Re-inspection Form 1A**, abstracts inspection data gathered during the initial AHERA inspection (see *Appendix B*). This form is useful to reference response actions (if any) which have been performed since the last inspection. It additionally provides the inspector a "quick glance" reference when performing the re-inspection.

The second EPA form, **Re-inspection Form 1B,** is used to list all known or assumed asbestos-containing materials (ACM) that were previously unidentified (see *Appendix C)*. It also lists the ACBM in areas newly acquired by the school for student use either permanently or temporarily.

The third EPA form, **Re-inspection Form 2**, was used to provide information and justification regarding reassessment of the ACBM (see *Appendix D*). This form also provides response action recommendations including a tentative schedule for completing response actions that recommended removal or repair.

Using the USEPA protocol and criteria, the following materials existing at the time of this re-inspection have been determined and/or assumed to be **ACBM**. Please refer to the above

mentioned Re-inspection Forms for specific locations of the materials identified on these forms.

Homogeneous Material	Reference	Location(s)
Pipe Insulation and Mudded Fittings	2008 AHERA	Storage Room Off of Boys' Locker Room
Pipe Insulation and Mudded Fittings	2008 AHERA	Gymnasium
Grey 9x9 Floor Tile & Mastic	2008 AHERA	Hallway Between Gymnasium and Boiler Area
Grey 9x9 Floor Tile & Mastic	2008 AHERA	Main Office
Grey 9x9 Floor Tile & Mastic	2008 AHERA	Administrative Areas of Main Office
Grey 9x9 Floor Tile & Mastic	2008 AHERA	Classroom #402 (Formerly Conference and Office Rooms)
Red 9x9 Floor Tile & Mastic	2008 AHERA	Maintenance Locker Room in Boiler Area
Red 9x9 Floor Tile & Mastic	2008 AHERA	Office in Boiler Area
12x12 Beige Floor Tile & Mastic	2008 AHERA	End of Hallway Between Computer Room and Music Room (Formerly Storage Room)
12x12 Green Floor Tile & Mastic	2008 AHERA	Room #111 Office of Student Services (Formerly Lecture Room A)
12x12 Green Floor Tile & Mastic	2008 AHERA	Conference Room Off of Room #111
12x12 Green Floor Tile & Mastic	2008 AHERA	Classroom #501
1x1 White Ceiling Tile	2008 AHERA	Room #111 Office of Student Services (Formerly Lecture Room A)
1x1 White Ceiling Tile	2008 AHERA	Classroom #501 (Formerly Lecture Room A)
Transite Panel	2008 AHERA	Art Office #410 (Hallway Wall)
Fire Curtain	2008 AHERA	Auditorium
Sink Undercoating	2008 AHERA	Throughout School
Composite Countertops and Window Sills	2008 AHERA	Throughout School
Flex Connector (Vibration Isolator)	2008 AHERA	Science Department Storage Room
Flex Connector (Vibration Isolator)	2008 AHERA	Bathroom Near Classroom #402

3.3 Newly Identified or Re-sampled ACBM Material

No newly identified materials were determined and/or assumed to be **ACBM**.

The information obtained during this re-inspection was transmitted to Mr. Robert May, an accredited Management Planner, so that response actions relative to the condition of the ACBM could be designed. Mr. May is a licensed Asbestos Management Planner in the Commonwealth of Massachusetts (License No. AP041719).

Any suspect material encountered during renovation/demolition that is not specifically identified in this report as a non-ACM should be assumed to contain asbestos unless sample results prove otherwise. AHERA inspections do not satisfy the requirements for

the U.S. EPA survey requirements for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). A NESHAP survey should be performed prior to renovation or other planned disturbance within a building.

3.4 Physical Assessment of ACBMs

During inspection, suspect ACBM were separated into three USEPA categories. These categories are thermal system insulation (TSI), surfacing ACBM, and miscellaneous ACBM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe fittings. Surfacing ACBM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACBM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

Finally, all ACBM were quantified in linear and/or square footage depending on the nature of the material.

All ACBM identified during the inspection and still remaining in the school were reassessed using the AHERA guidelines for assessment of ACBM. The assessment categories are listed as follows:

1 = Damaged or significantly damaged TSI ACBM
2 = Damaged friable surfacing ACBM
3 = significantly damaged friable surfacing ACBM
4 = Damaged or significantly damaged friable miscellaneous ACBM
5 = ACBM with potential for damage
6 = ACBM with potential for significant damage
7 = Any remaining friable ACBM or friable suspected ACBM

Material locations, assessments, and recommended response actions are listed in the Re-inspection forms.

4 Management Plan Update

4.1 Recommended Response Actions

Based on the inspection report, physical walk-through inspection and existing condition of the ACBM, following response actions are recommended:

1. Noted locations of 12" x 12" vinyl floor tile were observed to be damaged. Cracked floor tiles should be repaired or replaced to prohibit further damage.

2. Noted locations of 9x9 vinyl floor tile were observed to be damaged. Cracked floor tiles should be repaired or replaced to prohibit further damage.

3. 1x1 white ceiling tile was observed to be in good condition in the office/classroom area that was formerly Lecture Room A. Material is friable and preventive measurements should be taken to minimize disturbance.

4. Transite materials are present within the school building and were in good condition at the time of inspection. Materials are non-friable and should be managed in place in accordance with the AHERA O&M Program.

5. Sink undercoatings, composite countertops and window sills, and flex connectors associated with duct systems, are suspect materials and are presumed asbestos and were discovered in the last 3 year re-inspection. Samples were not collected at the time of the inspection. These materials are non-friable and should be managed in place in accordance with the AHERA O&M Program. Additionally, samples may be collected to determine asbestos content of each material type.

6. Comply with documentation requirements for newly installed materials, additions, and modular classrooms. These materials, locations, and modular classrooms were not inspected as part of this AHERA inspection. Documentation for the following should be added to the management plans:

    a. 1997 Building Addition
    b. Modular Classrooms

Operations and Maintenance (O & M)

All ACBM in the school shall be managed in place in accordance with the original AHERA Operations and Maintenance (O & M) Program. The condition of such materials will be monitored until all the ACBM have been removed from the building. A successful O & M Program includes the following elements:

a) Cleaning: All areas of the school where friable ACBM or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the initial inspection. Additional cleaning may be necessary if the Management Planner makes a written recommendation indicating methods and frequency of such cleaning.

b) O & M Activities: The LEA shall ensure that the procedures described below are followed to protect building occupants from any O & M activities that may disturb known or assumed ACM:

    1. Restrict entry into the area either by physically isolating or by scheduling.
    2. Post warning signs to prevent entry by unauthorized persons.
    3. Shut off or temporarily modify the air-handling system.
    4. Use proper work practices and engineering controls such as wet methods, protective clothing, HEPA-vacuums, mini enclosures/glove bags etc., to inhibit spread of fibers.
    5. Place all asbestos debris and other contaminated materials in a sealed, leak-tight container for eventual disposal.

c) Minor Fiber Release Episodes: The LEA shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., disturbance of 3 linear/square feet or less of friable ACM):

1. Saturate the debris using wet method.
2. Place the debris in a sealed leak-tight container and clean the area.
3. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.

d) Major Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., disturbance of more than 3 linear/square feet of friable ACBM):

1. Restrict entry into the area and post warning signs.
2. Shut off or temporarily modify the air handling system to prevent spread of fibers to other areas of the school.
3. **The response for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.**

The LEA shall notify the Massachusetts Department of Labor Standards (DLS) of any major fiber release episode within twenty-four hours of its occurrence and, if necessary, provide written notification as required by applicable federal and/or state regulations

4.2 Periodic Surveillance

At least once every six (6) months after a management plan is in place, the LEA shall conduct periodic surveillance in the school that contains ACBM or assumed to contain ACM. The person conducting periodic surveillance shall visually inspect all areas in the school that have been identified in the management plan as having ACBM, record the date of surveillance, his/her name, and any changes in the condition of the materials and submit the record to the LEA Designated Person for inclusion in the management plan.

Please see *Appendix E* for Periodic Surveillance Form that may be used for conducting periodic surveillance.

4.3 Preventive Measures

The LEA shall institute appropriate preventive measures to eliminate the reasonable likelihood that the ACBM will become damaged, deteriorated or delaminated.

Please see *Appendix F* for preventive measures designed for various types of ACM that may exist in the school.

FUSS & O'NEILL
EnviroScience, LLC

5 EPA Certification Requirements

The certificates and the licenses for the individuals (Paul Bateman and Bob May) involved in performing the re-inspection and updating the management plan are provided in *Appendix G*.

Report prepared by Paul Bateman.

Reviewed by:

Robert L. May, Jr.
Vice President

FUSS & O'NEILL
EnviroScience, LLC

Appendix A

Checklist for Existing Records

FUSS & O'NEILL
EnviroScience, LLC

CHECKLIST FOR EXISTING RECORDS

Local Education Agency (LEA): Sharon Public Schools
75 Mountain Street, Sharon MA 02067

School Building: Sharon High School
181 Pond Street, Sharon MA 02067

The following documentation is required to be present in both the LEA's Office as well as in a centralized location in the administrative office of the school. The information included in this checklist shall be verified to be present and complete as part of three-year re-inspection.

DOCUMENTATION		LOCATION	
		School	LEA Office
1.	Original AHERA Operations and Maintenance Plan/Inspection	N	Y
2.	Three year Re-inspection (Dates)	N	1998, 2001, 2004
3.	Notifications to Parents and Teachers (yearly since last re-inspection)	N	Y
4.	Designated Person Identification and Proper Training (person must be named and have appropriate training)	N	Y
5.	Designated Person visual assessments (every six months since last re-inspection)	N	Y
6.	Record of Awareness training for Maintenance Staff	N	Y
7.	Outside Vendor Awareness Notification	N	Y
8.	Warning Signs and Labels (required posting in Boiler rooms and mechanical spaces only)	N	N/A
9.	Record of Response Actions (includes any abatement done since last re-inspection)	N	Y

Comments:_____

Inspector (LEA Office): Paul Bateman Date: 9/23/11
Inspector (School): Paul Bateman Date: 9/23/11

FUSS & O'NEILL
EnviroScience, LLC

Appendix B

Re-Inspection Form 1A

FUSS & O'NEILL
EnviroScience, LLC

Re-inspection Form 1 (A) – List of ACBM Asbestos-Containing Materials

School: Sharon Public Schools_____ Building: Sharon High School_____ Date(s) of Original Inspection: 03/1988_____
Address 181 Pond Street Sharon, MA Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008

Homogeneous Material			Material Category	Friability F/NF	Assessment Category (1-7)	Recorded locations	Response actions taken/ renovations/other comments
Sample Number	Asbestos Content	Material Description					
N/A	N/A	Pipe Insulation and Mudded Fittings	TSI	F	5	Storage Room Off of Boys' Locker Room	N/A (No Access)
N/A	N/A	Pipe Insulation and Mudded Fittings	TSI	F	5	Gymnasium	Good Condition
N/A	N/A	Grey 9x9 Floor Tile & Mastic	MISC	NF	5	Hallway Between Gymnasium and Boiler Area	25 SF Exposed (Underneath 12x12 Floor Tile)
N/A	N/A	Grey 9x9 Floor Tile & Mastic	MISC	NF	5	Main Office	Covered with Rug
N/A	N/A	Grey 9x9 Floor Tile & Mastic	MISC	NF	5	Administrative Areas of Main Office	Covered with Rug
N/A	N/A	Grey 9x9 Floor Tile & Mastic	MISC	NF	5	Classroom #402 (Formerly Conference and Office Rooms)	Covered with Rug
N/A	N/A	Red 9x9 Floor Tile & Mastic	MISC	NF	4	Maintenance Locker Room in Boiler Area	6 SF Damaged
N/A	N/A	Red 9x9 Floor Tile & Mastic	MISC	NF	4	Office in Boiler Area	16 SF Damaged
N/A	N/A	12x12 Beige Floor Tile & Mastic	MISC	NF	4	End of Hallway Between Computer Room and Music Room (Formerly Storage Room)	2 SF damaged near corridor double doors
N/A	N/A	12x12 Green Floor Tile & Mastic	MISC	NF	5	Room #111 Office of Student Services (Formerly Lecture Room A)	Covered with Rug
N/A	N/A	12x12 Green Floor Tile & Mastic	MISC	NF	5	Conference Room Off of Room #111	Good Condition
N/A	N/A	12x12 Green Floor Tile & Mastic	MISC	NF	5	Classroom #501	Good Condition
N/A	N/A	1x1 White Ceiling Tile	MISC	F	5	Room #111 Office of Student Services (Formerly Lecture Room A)	Good Condition

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Re-inspection Form 1 (A) – List of ACBM Asbestos-Containing Materials

School: Sharon Public Schools_____ Building: Sharon High School_____ Date(s) of Original Inspection: 03/1988_____
Address 181 Pond Street Sharon, MA Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008

Homogeneous Material			Material Category	Friability F/NF	Assessment Category (1-7)	Recorded locations	Response actions taken/ renovations/other comments
Sample Number	Asbestos Content	Material Description					
N/A	N/A	1x1 White Ceiling Tile	MISC	F	5	Classroom #501 (Formerly Lecture Room A)	Good Condition
N/A	N/A	Transite Panel	MISC	NF	5	Art Office #410 (Hallway Wall)	Good Condition
N/A	N/A	Fire Curtain	MISC	NF	5	Auditorium	Good Condition
N/A	N/A	Sink Undercoating	MISC	NF	5	Throughout School	Good Condition
N/A	N/A	Composite Countertops and Window Sills	MISC	NF	5	Throughout School	Good Condition
N/A	N/A	Flex Connector (Vibration Isolator)	MISC	NF	5	Science Department Storage Room	Good Condition
N/A	N/A	Flex Connector (Vibration Isolator)	MISC	NF	5	Bathroom Near Classroom #402	Good condition

Information abstracted by: Paul Bateman Date: September 23, 2011

Material Category: TSI = Thermal System Insulation, Surf. = Surfacing, Misc. = Miscellaneous

Friability: F = friable, NF = non-friable

AHERA assessment category: 1 = Damaged or significantly damaged TSI ACBM; 2 = Damaged friable surfacing ACBM; 3 = Significantly damaged friable surfacing ACBM; 4 = Damaged or significantly damaged friable miscellaneous ACBM; 5 = ACBM with potential for damage: 6 = ACBM with potential for significant damage; 7 = Any remaining friable ACBM or friable suspected ACBM

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Appendix C

Re-Inspection Form 1B

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Re-inspection Form 1 (B) – List of Suspect Asbestos-Containing Materials (ACM) previously unidentified

School _____ Building _____ Date(s) of Original AHERA Inspection _____
Address _____ Date(s) of Re-inspection _____

NONE -Newly UNIDENTIFIED MATERIALS

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Appendix D

Re-Inspection Form 2

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Sharon
Inspector: Paul Bateman

Sharon High School, Town of

ACM Type Pipe Insulation and Mudded Fittings

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Storage Room Off of Boys' Locker Room	7 LF	TSI	F	Potential for Damage	5	N/A (No Access)	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	N/A
Gymnasium	200 LF	TSI	F	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Grey 9x9 Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Hallway Between Gymnasium and Boiler Area	N/A	Miscellaneous	N	50 SF Damaged	5	25 SF Exposed (Underneath 12x12 Floor Tile)	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Main Office	2,700 SF	Miscellaneous	N	Covered with Rug	5	Covered with Carpet	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Administrative Areas of Main Office	640 SF	Miscellaneous	N	Covered with Rug	5	Covered with Carpet	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Classroom #402 (Formerly Conference and Office Rooms)	680 SF	Miscellaneous	N	Potential for Damage	5	Covered with Rug	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Red 9x9 Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Maintenance Locker Room in Boiler Area	72 SF	Miscellaneous	N	Potential for Damage	5	6 SF Damaged	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Repair Cracked Floor Tile and Continue O&M
Office in Boiler Area	120 SF	Miscellaneous	N	Potential for Damage	5	16 SF Damaged	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Repair Cracked Floor Tile and Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type 12x12 Beige Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
End of Hallway Between Computer Room and Music Room (Formerly Storage Room)	90 SF	Miscellaneous	N	Potential for Damage	4	2 SF damaged near corridor double doors	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Repair Cracked Floor Tile and Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type 12x12 Green Floor Tile & Mastic

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Room #111 Office of Student Services (Formerly Lecture Room A)	2,000 SF	Miscellaneous	N	<1% Damage	5	Covered with Carpet	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Conference Room Off of Room #111	130 SF	Miscellaneous	N	Potential for Damage	5	Covered with Carpet	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M
Classroom #501	400 SF	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type 1x1 White Ceiling Tile

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Room #111 Office of Student Services (Formerly Lecture Room A)	130 SF (2 Layers)	Miscellaneous	Y	<1% Damage	5	Good Condition	Take Preventive Measures to Reduce Disturbance	Continue O&M
Classroom #501	75 SF	Miscellaneous	Y	N/A	5	Good Condition	N/A	O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Transite Panels

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Art Office #410 (Hallway Walls on columns)	20 SF	Miscellaneous	N	Potential for Damage	5	Good	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Fire Curtain

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Auditorium	1 EA	Miscellaneous	N	Potential for Damage	5	Good Condition	Continue O&M Until Major Renovation or Demolition Requires Removal Under EPA NESHAP, or Until Hazard Assessment Factors Change	Continue O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspector: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Suspect Material-Sink Undercoating

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Throughout School	N/A	Miscellaneous	N	5	5	Good Condition	O&M	O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23, 2011
Inspectors: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Suspect Material-Composite Countertops and Window Sills

Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Throughout School	N/A	Miscellaneous	N	5	5	Good Condition	O&M	O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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(617) 282-4675 Fax (617) 282-8253

Inspection Date: September 23 2011
Inspectors: Paul Bateman

Sharon High School, Town of Sharon

ACM Type Suspect Material-Flex Connector (Vibration Isolator) Sample # N/A

ACM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friable	Previous Conditions	Current Assessment Category	Current Assessment Description	Previous Recommendations	Current Recommendations
Science Department Storage Room	2 EA (5 SF Total)	Miscellaneous	N	5	5	Good Condition	O&M	O&M
Bathroom Near Classroom #402	1 EA (2 SF)	Miscellaneous	N	5	5	Good Condition	O&M	O&M

AHERA assessment category: 1=Damaged or significantly damaged TSI ACBM, 2=Damaged friable surfacing ACBM, 3=Significantly damaged friable surfacing ACBM, 4=Damaged or significantly damaged friable miscellaneous ACBM, 5=ACBM with potential for damage, 6=ACBM with potential for significant damage, 7=Any remaining friable ACBM or friable suspected ACBM

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Appendix E

Periodic Surveillance Form

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PERIODIC SURVEILLANCE FORM – List of ACBM Asbestos-Containing Materials

School: Sharon High School
Address: 181 Pond Street, Sharon, MA

Date(s) of Original Inspection: 03/1988
Date(s) of Subsequent Re-Inspections: 08/1991, 02/1993, 06/1995, 06/1998, 09/2004, 08/2008, 09/2011

Periodic Inspection Date: _____ **Conducted By:**_____

Asbestos Containing Material	Location	Estimated Quantity	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
Pipe Insulation and Mudded Fittings	Storage Room Off of Boys' Locker Room	7 LF	N/A (No Access)				
Pipe Insulation and Mudded Fittings	Gymnasium	200 LF	Good Condition				
Grey 9x9 Floor Tile & Mastic	Hallway Between Gymnasium and Boiler Area	N/A	25 SF Exposed (Underneath 12x12 Floor Tile)				
Grey 9x9 Floor Tile & Mastic	Main Office	2,700 SF	Covered with Rug				
Grey 9x9 Floor Tile & Mastic	Administrative Areas of Main Office	640 SF	Covered with Rug				
Grey 9x9 Floor Tile & Mastic	Classroom #402 (Formerly Conference and Office Rooms)	680 SF	Covered with Rug				
Red 9x9 Floor Tile & Mastic	Maintenance Locker Room in Boiler Area	72 SF	6 SF Damaged				
Red 9x9 Floor Tile & Mastic	Office in Boiler Area	120 SF	16 SF Damaged				
12x12 Beige Floor Tile & Mastic	End of Hallway Between Computer Room and Music Room (Formerly Storage Room)	90 SF	2 SF damaged by hallway double doors				

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Asbestos Containing Material	Location	Estimated Quantity	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
12x12 Green Floor Tile & Mastic	Room #111 Office of Student Services (Formerly Lecture Room A)	2,000 SF	Covered with Rug				
12x12 Green Floor Tile & Mastic	Conference Room Off of Room #111	130 SF	Good Condition				
12x12 Green Floor Tile & Mastic	Classroom #501	400 SF	Good Condition				
1x1 White Ceiling Tile	Room #111 Office of Student Services (Formerly Lecture Room A)	130 SF (2 Layers)	Good Condition				
1x1 White Ceiling Tile	Classroom #501 (Formerly Lecture Room A)	75 SF	Good Condition				
Transite Panel	Art Office #410 (Hallway Wall)	20 SF	Good Condition				
Fire Curtain	Auditorium	1 EA	Good Condition				
Sink Undercoating	Throughout School	N/A	Good Condition				
Composite Countertops and Window Sills	Throughout School	N/A	Good Condition				
Flex Connector (Vibration Isolator)	Science Department Storage Room	2 EA (5 SF Total)	Good Condition				
Flex Connector (Vibration Isolator)	Bathroom Near Classroom #402	1 EA (2 SF)	Good Condition				

Conditions: G = Good D = Damaged F = Fair SD = Significant damage

Surveillance conducted by: Paul Bateman Paul Bateman
(Signature)

I, the LEA's Designated Person, have read and understood the findings noted above: Paul Bateman Date: 11/10/11

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Appendix F

Preventive Measures

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100%

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OPERATIONS AND MAINTENANCE PROCEDURES FOR VARIOUS ASBESTOS-CONTAINING MATERIALS

A. SURFACING MATERIALS

"Surfacing Materials" means materials in a school building that are sprayed-on, troweled-on, or otherwise applied to surfaces. These include sprayed-on fireproofing materials on structural members, ceiling and wall plasters, or other materials applied to surfaces for acoustical, fireproofing, or other purposes.

Surfacing Materials are generally considered friable and can release asbestos fibers if damaged by impact, air erosion, vibration, and/or water intrusion. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Sprayed-on fire-proofing

   a) Identify the materials and post warning signs on the laid-in or glued-in ceiling tile. If the decking is not covered, place the sign on the wall.
   b) Maintain the materials in intact state and undamaged condition. During winter, pigeons, squirrels and other rodents tend to roost in boiler/machine rooms and dislodge sprayed-on fireproofing on the decking. Prevent such possibilities.
   c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, enclosure is a temporary solution. Encapsulation of damaged sprayed-on fireproofing material is not recommended.
   d) Train the custodial people who are responsible for care and maintenance of surfacing materials. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Ceiling and wall plaster

   a) Identify the materials and post warning signs.
   b) Maintain the materials in intact state and undamaged condition. Avoid storing/stacking on/near the materials to reduce contact damage.
   c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, repair or enclosure is a temporary solution.
   d) Train the custodial people who are responsible for care and maintenance of surfacing materials.

B. THERMAL SYSTEM INSULATION (TSI)

"Thermal System Insulation (TSI)" means insulating materials applied to pipes, pipe fittings, boilers, breeching, tanks, ducts, or other components to prevent process heat loss or gain, water condensation, or for other purposes (e.g., fire door insulation core).

TSI are generally considered friable ACM. This means they can be easily damaged, increasing the potential for fiber release. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Boiler and breeching insulation

   a) Identify the locations and label the boiler. Warning signs should be posted outside the boiler room.
   b) Reduce the likelihood of fiber release by ensuring that the insulation is not damaged. Avoid storing/stacking on/near the boiler to reduce contact damage.
   c) Maintain the insulation in intact state and undamaged condition. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
   d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Pipe, pipe-fittings, tank and duct insulation

   a) Identify the locations and label the materials. Warning signs should be posted outside of rooms that have TSI materials.
   b) Reduce the likelihood of fiber release by ensuring that the materials are not damaged. Avoid storing/stacking near the materials to reduce contact damage.
   c) Maintain all TSI materials in intact state and undamaged condition. Inspect the protective jackets for damage. Repair damaged areas as soon as possible, to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
   d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

3. Fire door

   a) Identify the locations and label the materials.
   b) Since there may be a number of different types of fire doors throughout a building, fire door cores must be considered to have asbestos-containing interior insulation unless sample result prove otherwise. Prior to performing any maintenance on any door (lock change, drilling, etc.), the door should be surveyed by qualified personnel to rule out the existence of an asbestos core.
   c) Train the custodial people who are responsible for care and maintenance of TSI.

Please note that the repair/removal can only be performed by a licensed abatement contractor.

C. MISCELLANEOUS MATERIALS

"Miscellaneous Materials" are all other ACM in a school building that does not fall under the categories of Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastic, gypsum wallboard and joint compound, ceiling tiles, glue daubs, transite panels, laboratory counter tops, wallbase and associated glue, window caulking and glazing compounds etc. The following maintenance procedures are recommended for these materials:

1. Vinyl Asbestos Floor Tiles (VAT)

Vinyl Asbestos Floor Tiles (VAT) are considered non-friable, however routine maintenance procedures such as spray-buffing, burnishing, wet scrubbing, and stripping can generate asbestos fibers. Following procedures, when properly implemented, will reduce the potential of fiber release:

a) Do not sand, grind or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. Never perform dry stripping.
b) During spray buffing or burnishing the floor operate the machine at the lowest workable speed and use the least abrasive pad. Use a wet mop for routine cleaning whenever possible.
c) Routinely check whether chair and desk glides are in good condition and replace when necessary. Worn glides can gouge the floor and cause fiber release.
d) Place carpets/floor mats in all entrances to reduce abrasion of floor tiles by sand and pebbles. During winter, have parking lots and walkways swept to the extent possible to avoid the tracking of salt and ice-melting compounds into the school by the students.
e) Train the custodial people who are responsible for care and maintenance of VAT. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Gypsum wallboard and joint compound assembly

a) Since there may exist a number of different homogeneous assemblies in a building, all sheetrock/joint compounds must be assumed to be ACM unless sample results prove otherwise. If any specific areas are going to be disturbed, the material in that area should be sampled.
b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.

3. Ceiling Tile and Glue Daubs

a) Reduce the likelihood of fiber release by limiting access to the area above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.

b) If the ceiling tiles are negative for asbestos, sample and analyze the glue daubs to ascertain whether these are asbestos containing before the tiles are replaced.

4. Transite Panels, Laboratory Counter Tops, Window Caulking and Glazing Compounds

a) Reduce the likelihood of fiber release.
b) Maintain transite panels, lab table tops and window caulking and glazing compounds in undamaged condition.

5. Carpet Glue, Baseboard and Mastic

a) Reduce the likelihood of fiber release by leaving base cove and carpets in place.
b) Maintain carpets and base cove in good condition. Sample and analyze the glue and the mastic to ascertain whether these are asbestos containing if the renovation activities are going to impact the carpet and the baseboard.

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Appendix G

Training Certificates/Licenses

Commonwealth of Massachusetts
Division of Occupational Safety
Heather E. Rowe, Acting Commissioner
Asbestos Inspector

PAUL ANTHONY BATEMAN

Eff. Date 11/30/10
Exp. Date 11/29/11
AI071329
Member of C.O.N.E.S.
SP

11

SP-REN

Commonwealth of Massachusetts
Division of Occupational Safety
Heather E. Rowe, Acting Commissioner
Asbestos Project Monitor

PAUL ANTHONY BATEMAN

Eff. Date 03/01/11
Exp. Date 02/28/12
AM070532
Member of C.O.N.E.S
SP

12

SP-REN

Fuss & O'Neill EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040 – (860) 646-2469

This is to certify that

Paul Bateman

xxx-xx-4693

has successfully completed the

4 Hr. Asbestos Inspector Refresher

Asbestos Accreditation under TSCA Title II

40 CFR Part 763

James L. Scott, Principal Instructor

Kevin W. Miller, Training Manager

September 7, 2011

Date of Course

AI-R-09/10-8

Certificate Number

September 7, 2011; A-

Examination Date & Grade

September 7, 2012

Expiration Date

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8 Hr. Asbestos Project Monitor Refresher

Asbestos Accreditation under TSCA Title II

40 CFR Part 763

James L. Scott & Matthew Myers
Principal Instructors

January 11 & 13, 2011
Date of Course

January 13, 2011; A
Examination Date & Grade

Kevin W. Miller, Ph.D.
Training Manager

APM-R-1/11-04
Certificate Number

January 13, 2012
Expiration Date

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Appendix 6
CDW Report

Executive Report – 2013 High School Conditions Study
SHARON PUBLIC SCHOOLS

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

November 25, 2013

Ms. Lorraine Finnegan, AIA, LEED AP
Symmes Maini & Mckee
1000 Massachusetts Avenue
Cambridge, MA 02138

RE: Hazardous Materials *Preliminary Observations*
Sharon High School
Sharon, Massachusetts

Dear Ms. Finnegan:

CDW Consultants, Inc. (CDW) is pleased to present this preliminary observation of visual asbestos containing materials (ACM) and other hazardous materials at the Sharon High School in Sharon, Massachusetts. No samples were taken for confirmatory laboratory analysis. This was not a comprehensive inspection under the Asbestos Hazardous Emergency Response Act (AHERA) and conclusions cannot be relied upon for design or construction.

According to the last AHERA report for this building dated November 10, 2011, prepared by others, ACM include; 9” x 9” and 12” x 12” floor tile and mastic, hard fittings on fiberglass pipe throughout, white spline ceiling tile, linoleum counter top, stage fire curtain, sink undercoating, and flex connectors in mechanical rooms.

Other suspect ACM observed by CDW include; interior door caulk at hall assemblies, black cementious table top, transite fume hoods, exterior door caulk, boiler materials on abandoned boiler, textured ceiling in auditorium, classroom door window glaze, joint compound and sheet rock. Other suspect ACM assumed to be present but not observed include; vapor barrier behind masonry, roofing materials, paper under wood gym floor and stage, transite panels, and pipe insulation behind walls.

Windows were observed to be new with non-suspect silicone and rubber caulking and glazing. Non-suspect rubber was observed around exterior univents.

Due to the building construction age (1960s), Polychlorinated biphenyls (PCBs) are likely present in some sealants/caulking. Suspect caulking was observed around the exterior doors and expansion joints. Other hazardous materials observed are; fluorescent tubes, compact fluorescent bulbs, ballasts, thermostats and switches, batteries associated with exit signs, and various laboratory chemicals. Prior to any renovations or demolition at the school building ACM and hazardous materials will require proper abatement, handling and disposal.

40 Speen Street Suite 301, Framingham, MA 01701 508-875-2657 FAX 508-875-6617
www.cdwconsultants.com

A list of observed ACM and abatement costs are provided in Table 1. Table 1A contains typical current costs for removal of other hazardous materials observed.

Please call if you have any questions or require additional information.

Very truly yours,

CDW CONSULTANTS, INC.

Susan Cahalan, P.G.
Project Manager

Table 1
Preliminary Asbestos Abatement Cost Estimates - Visual Inspection
Sharon High School
Sharon, Massachusetts
November, 2013

Material Description	Location	Est. Quantity	Units	Unit Price	Est. Cost	Comments
9" x 9" red floor tile and mastic	Boiler room - Maintenance break room & locker areas	200	SF	$10	$2,000	
9" x 9" red floor tile and mastic	Hallway between gym & boiler room	500	SF	$10	$5,000	Majority of football locker hallway previously abated and replaced with new 12" tile. Note: Misc. 9" tile sections present under previously fixed equipment.
Cementitous fitting insulation	Middle storage room ("The Pit") - on domestic water line	4	SF	$50	$200	Assumed asbestos - Confirmatory sampling recommended
Stage fire curtain	Auditorium stage (1st upper level white woven curtain)	700	SF	$8	$5,600	Assumed - present on AHERA report. Confirmatory inspection/sampling recommended
Sink undercoating	Stainless steel sinks throughout school	25	EA	$25	$625	Assumed - present on AHERA report. Confirmatory sampling recommended
12" x 12" light green fleck floor tile	Room 501, 111 conference room and side offices	1800	SF	$3	$5,400	Assumed - present on AHERA report. Confirmatory sampling recommended
12" x 12" light green fleck floor tile	Hallway at classroom entrances - room #s 501-514C, 516B, 309	500	SF	$6	$3,000	(17 rooms -10-15 SF each) Assumed - present on AHERA report. Confirmatory sampling recommended
12"x12" white spline ceiling tile	Room 501, 111 conference room and side offices	475	SF	$8	$3,800	Assumed - present on AHERA report. Confirmatory sampling recommended
Old white caulking (interior)	At hallways on metal double door frames at brick walls at 700 wing, cafeteria, music room, Nurse's office	350	LF	$10	$3,500	Assumed - Newly identified material. Confirmatory sampling recommended
Black cementitious table top	Fume hood table top - Chemistry Prep room between 305/307	6	SF	$25	$150	Assumed - Newly identified material. Confirmatory sampling recommended
Transite in fume hoods	Science rooms	125	SF	$25	$3,125	Visual
Pipe and fitting insulation	Enclosed at restroom pipe chases and exit wall heater units	300	LF	$25	$7,500	Assumed - Newly identified material. Confirmatory inspection and sampling recommended
Old white caulking (exterior)	At exterior exit door frames lining brick facade at each exit.	250	LF	$10	$2,500	Assumed - Newly identified material. Confirmatory sampling recommended
Boiler insulation and interior rib packings/linings	Boiler room on old abandoned HB Smith hot water boiler	175	SF	$15	$2,625	Assumed - Newly identified material. Confirmatory sampling recommended
Composite (linoleum) counter tops at window sills	Throughout classrooms at top of perimeter univents	1000	SF	$10	$10,000	Assumed - present on AHERA report. Confirmatory inspection/sampling recommended
Pipe insulation fittings	Corridors above ceilings, behind wet walls, mechanical rooms	7500	LF	$17	$127,500	Assumed. Confirmatory sampling recommended
Floor tiles and mastic	Corridors and classrooms possibly under new	75000	SF	$4	$300,000	Assumed. Investigation recommended
Textured ceiling	Auditorium	5000	SF	$9	$45,000	Investigation and sampling recommended
Joint compound/sheet rock	Various	15000	SF	$7	$105,000	Investigation and sampling recommended

Table 1
Preliminary Asbestos Abatement Cost Estimates - Visual Inspection
Sharon High School
Sharon, Massachusetts
November, 2013

Material Description	Location	Est. Quantity	Units	Unit Price	Est. Cost	Comments
Paper underlayment	Auditorium under stage	2500	SF	$8	$20,000	Investigation and sampling recommended
Paper underlayment	Beneath gym floor	10000	SF	$8	$80,000	Investigation and sampling recommended
Interior door window glaze	Windows on classroom doors	75	EA	$100	$7,500	Investigation and sampling recommended
Flashing/Vapor Barrier	Behind brick - all sides	50000	SF	$12	$600,000	Investigation and sampling recommended
Roofing and Flashing	Roofing materials - remnant	50000	SF	$7	$350,000	Roof appears to have been replaced, investigation recommended
Cloth flex connectors	Science storage room, bathroom near classroom 402, mechanical room	10	EA	$50	$500	Investigation and sampling recommended
Transite panels	Various locations - possibly behind heating units	500	SF	$25	$12,500	Investigation and sampling recommended
				Total:	**$1,703,025**	

Table 1A
Preliminary Hazardous Materials Cost Estimate - Visual Inspection
Sharon High School, Sharon, Massachusetts
November, 2013

Material Description	Location	Est. Quantity	Units	Unit Price	Est. Cost	Comments
Ballasts (PCBs)	Throughout	5000	EA	$5	$25,000	
Compact Flourescent Bulbs	Throughout	500	EA	$3	$1,500	
Fluorescent Bulbs (Mercury)	Throughout	20000	Tubes	$2	$40,000	6' Tubes
Thermostats and Switches (Mercury)	Throughout	100	Ampules	$25	$2,500	
Emergency Light Batteries (Lead)	Throughout	75	EA	$20	$1,500	
Refrigerants Associated with Window-Mounted AC Units	Throughout	50	EA	$20	$1,000	
Lead-Based Paint	Various	NA	NA	NA	$5,000	TCLP Only
Refrigerants Associated with Water Bubblers	Throughout	30	EA	$100	$3,000	
Batteries in Exit Signs (Tritium)	Throughout	60	EA	$25	$1,500	
Chemicals (Mercury and Lead)	Science Sink Traps	NQ	NA	NA	$2,500	TCLP Laboratory Analytical Costs
Laboratory Chemicals	Science Labs	NQ	NA	NA	NA	Reuse Recommended
Fire Extinguishers (Compressed Gas)	Throughout	50	EA	NA	$0	Reuse Recommended
PCB Caulk >50 PPM	Assumed exterior door caulk, exterior expansion joint	1200	LF	$50	$60,000	
NA: Not Applicable. NQ=Not Quantified					**$143,500**	

OPTIONS DEVELOPMENT

4.1 INTRODUCTION

Based on the data that has been compiled regarding enrollment, educational programming and existing conditions, SMMA developed several options for the high school from physical plant deficiencies to capital projects for major building renovations or new construction. Included in many of the options that were developed are upgrades for 21st Century teaching and learning.

Based on the existing conditions report, a list of potential areas for upgrades or building projects were developed. SMMA requested the school committee and Superintendent to prioritize the potential areas for upgrade to be included in further option development.

A plan was developed which indicates the sixteen areas of proposed improvement and a detailed description by trades. Based on this comprehensive list, options were developed which range from physical plant upgrades to capital projects that capture some or all of the sixteen areas of improvements listed. A detailed spreadsheet of the options is included as Appendix 7 and a general listing is included below.

The options that were developed include the following:

- **Option 1**: Physical Plant Deficiencies / Deferred Maintenance and Code Required Upgrades Only
- **Option 2:** Includes Option 1 + 6 Priority Areas of Improvement
- **Option 2A**: Includes Option 2 + 2 Additional Priority Areas of Improvement
- **Option 3**: Option 1 + All 16 Priority Areas of Improvement
- **Option 4**: New High School Building

Massing studies depicting the options including the priority areas of improvement are also included.

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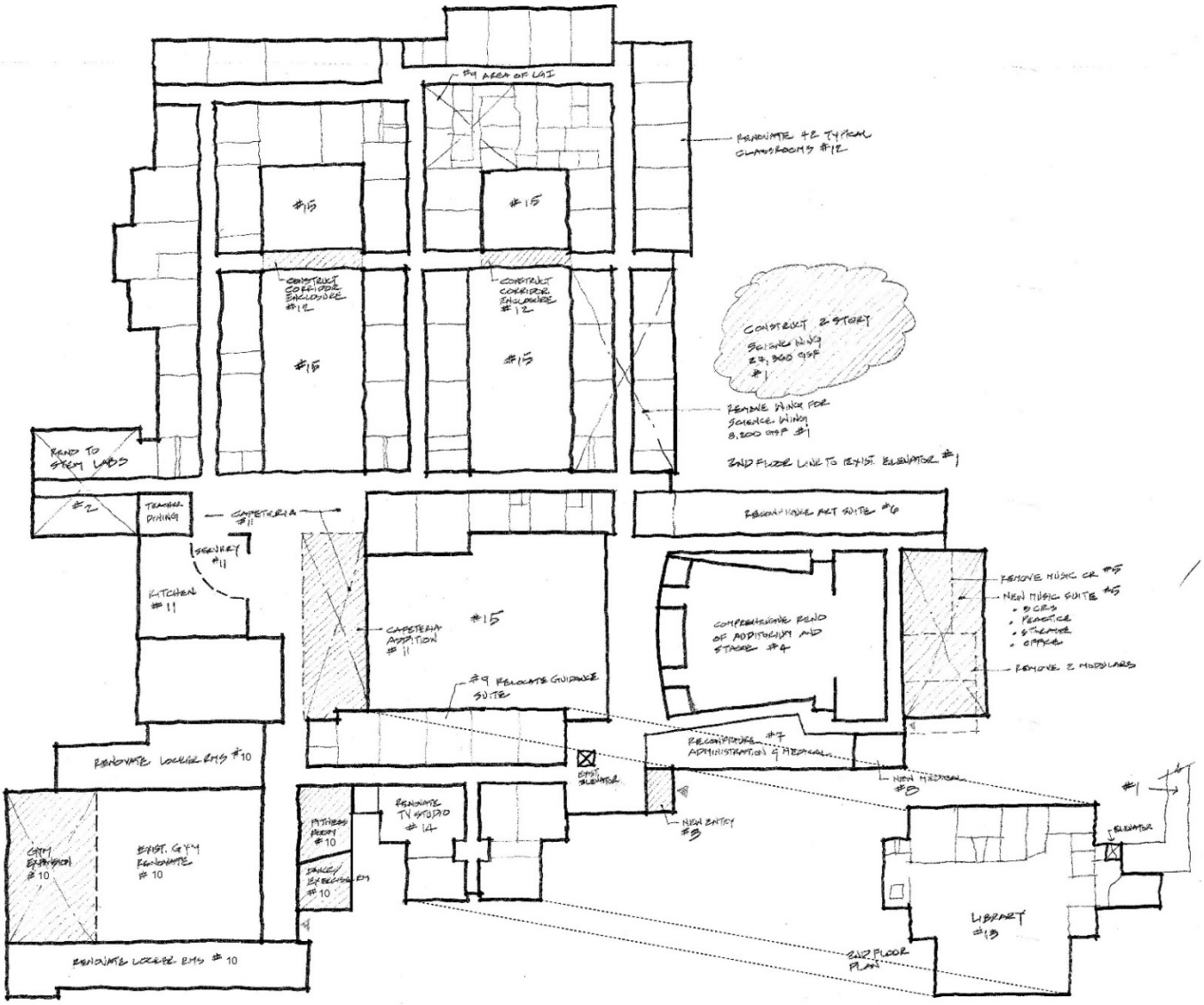

Conceptual Improvement Plan

Priority Areas of Improvement – Comprehensive List				
Item #	Building / Subject Area	General Comment	SF of Renovation	SF of Addition
1	Science	Properly size labs and prep for curriculum and safety.	Demo: 8,200	29,860
2	Creation of Technology Space(s)	Working towards STEM	4,000	
3	Entry Sequence	Safety	500	
4	Auditorium	Up to date, attractive, serve the school and community	9,623	
5	Expansion of Music	To meet curriculum needs		6,000
6	Expansion of Art	To meet curriculum needs, preferably more central	2,700	
7	Reconfigure Administration Suite	Reconfigure for size and flow, tie to entry sequence in Item #3	2,500	
8	Expansion of Medical Suite	To meet needs	500	600
9	Relocation of Guidance	Closer to administration	2,000	
10	PE Complex	Right size, fitness for life, community use	18,000	8,200
11	Dining/Servery/Kitchen	Right size, multi-use of café, scramble server, update and enlarge kitchen	6,900	3,500
12	Typical Classrooms	Update for acoustics, technology, furniture, appearance	33,500	
13	Library Suite	Update to meet current media center needs	8,684	
14	TV Studio	Enlarge to meet curriculum needs and demand	2,000	
15	Exterior Courtyards	Enliven, make more attractive and useful		
16	SPED	Improve/increase number and size of spaces	12,000	

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4.2 OPTION 1: PHYSICAL PLANT DEFICIENCIES

Based on the existing conditions investigation, SMMA created a list of items which are more critical and urgent and would need to be addressed in absence of a large capital project or could be incorporated with any of the sixteen priority areas of improvement. These items include accessibility upgrades, systems replacement, upgrades for MEP systems, envelope water infiltration, exterior damage, technology upgrades, and security. The deficiency items are included below and the scope includes the architectural exterior envelope, interior spaces, and engineering systems.

Summary

Included is a keynote list, description of work, plans and diagrams which was used to estimate the costs for the repairs to the physical plant deficiencies at Sharon High School located at 181 Pond Street in Sharon, Massachusetts.

Keynote list

A keynote list was developed that indicates the physical plant deficiencies and their locations. SMMA developed a plan to locate specific keynotes in relationship to the overall building plan. Some keynotes are general and are un-keyed as they do not have a specific location. Refer to the quantities and additional comments on the spreadsheet for further information. Included are several additional alternative pricing values that can be determined from the additional comments section in the Physical Plant Conditions Keynotes shown below.

Sharon High School - Physical Plant Deficiency Keynotes

Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
Civil / Site				
C1	Provide accessible curb ramp and walkway from existing accessible parking spaces to building entrance			
C2	Provide drainage structure and re-grade service apron to allow positive drainage away from building			
Structural				
S1				
Architectural				
A1	Repair exterior wall water damage		Refer to envelope narrative for more information	
A2	Repair masonry - repointing		Refer to envelope narrative for more information	
A3	Repair auditorium wall lintels and backer rod		See exhibit D	
A4	Exterior walls - brick settlement and cracking		See exhibit E	

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Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
A5	Provide gutters at building entry rounded standing seam roof			
A6	Replace all single pane glazing at service area		See exhibit C	
A7	Replace all painted plywood at window heads in 1956 and 1963 portions of building		See exhibit G	
A8	Repair/replace damaged storefront	Approximately 10 pieces	Snap on mullion covers to be replaced where damage/dents occur	
A9	Remove and replace sealant at all exterior louvers	Estimated 50 louvers		
A10	Replace aluminum storefront doors and frames at 1956 and 1963 portions of building	19	Double doors in storefront with sidelights	
A11	Replace all door thresholds	27 exterior doors	Provide new thresholds at all exterior doors	
A12	Repair finishes at door threshold that is damaged		Repair estimated 20 sf of floor finishes at all exterior doors	
A13	Replace main entry storefront and doors		Replace storefront system in its entirety	
A14	Repair and repaint plaster soffits			
A15	Replace plywood soffits			
A16	Replace GWB soffits at main entry vestibule			
A17	Replace soffits where exposed metal deck		Provide new soffits	
A18	Replace abandoned light fixtures		Estimated 10 abandoned fixtures to be replaced	
A19	Replace lintels at exterior walls	4 Doors/Locations	Refer to envelope narrative for more information	
A20	Replace covered walkway soffits and paint exposed steel structure			
A21	Provide bollards and bumpers at loading dock		New bumpers and 6 new bollards	Add Alt: 1
A22	Replace exterior door at the kitchen	1		
A23	Provide call button at loading dock			Add Alt: 1
A24	Remove plastic paneling covering wall at auditorium lobby. Repair damage to wood finish below.			
A25	Provide firestopping at rated electrical closets			
A26	Remove wood storefront with wired glazing at the administrative area - replace with new interior storefront		Wood storefront is length of administrative suite corridor	

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Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
A27	Sealant at all edges of storefront and window systems to be removed and replaced with backer rod and sealant			
A28	Replace roof access door to provide water tight condition			
A29	Replace GWB wall of stair column enclosure and replace rubber flooring materials in stair in its entirety			
A30	Repair flooring with water damage	Approximately 5,000 SF	Damaged tile to be removed and new tile to be installed	
A31	Replace tile at building entry that has been damaged	Approximately 25 SF		
A32	Replace flooring at restrooms in 1956 and 1963 restrooms			
A33	Replace nosings at stairs at building entry	6 Risers	Stair connecting lobby to upper lobby	
A34	Replace carpet and seating in auditorium			
A35	Replace tile at locker room shower areas			
A36	Replace VCT flooring in kitchen area			
A37	Replace damaged plaster ceiling in auditorium projection room			
A38	Remove rust on exposed exterior steel and repaint		Steel located building entry (exposed canopy and columns, white), covered walkways through corridors (10 total, black), at exterior doorways (6 total)	
A39	Replace all 12x12 concealed spline ACT			
A40	Update ramps in corridors and auditorium to meet ADA requirements			Add Alt: ADA upgrades
A41	Update exterior ramps to meet current ADA requirements			Add Alt: ADA upgrades
A42	Provide ADA casework in each classroom			Add Alt: ADA upgrades
A43	Provide code compliant signage and egress map in each classroom		New signage package for entire building	
A44	Replace doors to auditorium and cafeteria which are 30" leafs			
A45	Repair doors with incorrect swings (6 total)			
A46	Update door hardware at exterior doors for ADA accessibility			Add Alt: ADA upgrades

Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
A47	All toilet rooms in the 1956 and 1963 areas to be modified to meet current ADA and codes			Add Alt: ADA upgrades
A48	Remove/replace non-compliant display cases and non-compliant drinking fountains		Estimated 5 drinking fountains, estimated 5 display cases	Add Alt: ADA upgrades
A49	Replace service bay doors roll up door and louver above			
Fire Protection				
FP1	The Fire service double check valve backflow preventer should be serviced/repaired - leaking.			
FP2	Replace existing sprinkler head escutcheons where missing in corridors throughout the facility.			
FP3	Install sprinkler protection under Boiler Room ramp			
Plumbing				
P1	Replace existing domestic cold water systems in all areas outside the 1997 building (10 yr maximum lifespan left)			
P2	Provide carbon monoxide detection at kitchen hood and interlock with the gas for shutdown and hood exhaust for exhaust ramp-up			
P3	Provide separate kitchen waste from the building for grease containment.			
P4	Repair Acid waste monitoring & recording components			
P5	Provide secondary containment of acid and caustic tanks at pH adjustment system			
P6	Emergency shower and eyewash units are to be re-fed with new tepid water system, including mixing valves and distribution from domestic hot water system.			
P7	Reinstall the laboratory hot water system backflow preventer, together with hot water recirculating loop including circulation pump and small 5 gallon electric water heater to maintain system temperature.			
P8	Re-pipe laboratory natural gas piping with upsized piping and include new emergency shutoff valve boxes (typical each Lab Classroom)			
P9	Provide ADA compliant Laboratory Classroom sinks and emergency shower/eyewash fixtures.			
P10	Replace existing interior roof drainage piping throughout all spaces except the 1997 building (10 yr maximum lifespan expected, leaks in Stage area)			
P11	Replace urinals (in poor condition) throughout the facility			
P12	Install pre-formed insulation under all ADA accessible lavatories and sinks.			

Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
P13	Replace all drinking fountains with new ADA accessible refrigerated units			
P14	Provide vacuum breakers for existing exterior wall hydrants throughout the facility.			
P15	Replace existing janitors sink faucets with new faucets with integral vacuum breakers (typical for all janitor's sinks).			
P16	Replace leaking cast iron piping in crawl space (carry 20 ft x 5 locations = 100 ft)			
P17	Replace existing grease trap with larger unit and flow control at existing Kitchen 3 compartment sink.			
P18	Provide new emergency shower and eyewash station in Chemical storage room			
P19	Provide additional floor drains in Boy's shower area to meet Code (carry 2 additional 3 inch FD's)			
P20	Replace existing Men's staff shower valve at locker area			
P21	Remove existing abandoned domestic hot water plant in Boiler room.			
P22	Provide new floor drains in the Boiler room complete with new Boiler room waste ejector in pit with cover (3 HP, 3 ft round x 4 ft deep basin)			
Mechanical				
M1	Replace the existing (4) boilers with high efficiency type condensing boilers to meet new energy code requirements.			
M2	Replace the existing (4) inline primary pumps with new to match up with new boilers.			
M3	Replace the (2) DX cooling rooftop units serving the Library with new energy efficient type rooftop units.			
M4	Replace the DX cooling, gas fired heating rooftop unit serving the administration with a new energy efficient type rooftop unit.			
M5	Replace the (2) mezzanine mounted air handlers for the Guidance area and Special education as well as the undersized supply and return ductwork.			
M6	Replace the auditorium air handling unit with a new energy efficient unit with cooling to provide the necessary comfort level.			
M7	Replace all original classroom unit ventilators.			
M8	Replace fume hood utility type exhaust fan.			
M9	Replace (4) vertical gymnasium units with new energy efficient and right sized ventilation type units.			
M10	Replace both locker room heat recovery units with new.			

Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
M11	Replace the roof mounted makeup air unit serving the Waste Water Treatment facility with new.			
Electrical				
E1	Replace existing electrical 120/208 volt 3 phase panels L1 to L5, L7 to L14, and P2 to P7.			
E2	Replace in place an existing outdoor natural 100kW generator set with a 175kW unit. Provide new ATS #3 and power panel, rated 200Amp. Provide power feeder from the generator to the ATS#3 in the boiler room.			
E3	Replace original (installed in 1956 and 1963) branch power circuits			
E4	Add two wall power plug-in strips and new power circuits in the original classrooms (1956 and 1963 construction)			
E5	Provide GFI type receptacles in the labs (rooms 302, 304, etc.) at the sinks, and in the kitchen.			
E6	Provide new power feeder, house and theatrical lighting and dimming system in the auditorium			
E7	Provide smoke detectors in the electrical and communication rooms.			
E8	Upgrade hardware/software of the existing fire alarm control panel, and provide new remote annunciator.			
E9	Provide programmable lighting relay panels to accomplish automatic corridor lights "OFF" during unoccupied time.			
E10	Provide back-up generator power to all Telecom Equipment Rooms			
E11	Upgrade lighting in all Telecom Equipment Rooms			
E12	Provide a UPS that serves a dedicate electrical panel in the Main Telecom Equipment Room			
E13	Provide new branch circuit wiring and receptacles in the kitchen area.			
Technology/Security				
T1	Provide new riser pole hand holes and conduit duct bank to accommodate the incoming services including Verizon, Comcast, Cogent and the fiber optic cables from the Middle and Elementary Schools.	Minimum (5) 4-inch conduits		
T2	Provide a secure, dedicated Telecom Entrance Facility, separated from other utilities and building services.	(1) Secure space		
T3	Provide air conditioning in all Telecom Equipment Rooms	(6) Locations		
T4	Reconfigure the layout of the Main Telecom Equipment Room to improve equipment patching and access to racks/cabinets		Coordinate with Electrical	

Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
T5	Provide secured, dedicated Intermediate Distribution Frame rooms (IDFs) located to ensure no cable runs exceed the industry standard 100-meters from the patch panel to the outlet. Requires adding one IDF in the vicinity of the Gym.	(6) Locations		
T6	Replace all UTP cabling with Category 6 rated cable		Building-wide replacement	
T7	Provide additional Category 6 cable infrastructure to support a robust 1:1 wireless computing environment.		Building-wide installation. Minimum (1) outlet in each classroom. More in larger spaces.	
T8	Provide standardized, easily accessed and managed data outlet configurations for all Learning, Office and applicable Building Service spaces based on programmatic requirements		Building-wide replacement	
T9	Replace existing CATV coaxial cable plant with an IP-based network		Building-wide replacement	
T10	Provide conduit, box and power infrastructure for future, Owner provided interactive display equipment in all Learning spaces.		Building-wide installation	
T11	Replace Auditorium audio and video projection systems			
T12	Replace existing clock system with wireless GPS clock system		Building-wide installation	
T13	Replace main entry security systems with integrated video/intercom door control. Include two additional stations control substations in the building should the Main Office Attendant be away from their desk.			
T14	Coordinate with Architecture to provide a holding vestibule to temporarily detain visitors for further security clearance.			
T15	Provide integrated video/intercom at the loading dock with two additional stations control substations in the building.			
T16	Provide Auto-Dialer device at the Loading Dock that is programmed to hunt a series of telephone numbers to contact personnel inside the building after hours.			
T17	Provide proximity card readers at main entry and at selected entry points around the building including entry doors from the parking lot, loading dock, TER and entries where after school activities are often scheduled (night school classes, the Gymnasium)	Minimum (6) Locations		
T18	Provide motion sensors in all entry vestibules and in all rooms on the first floor that have exterior windows that can easily be accessed from ground level. Provide features that enable zone control of areas of the building that are programmed to automatically arm/disarm with Owner option to manually override.			

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Sharon High School - Physical Plant Deficiency Keynotes				
Keynote	Building Deficiency	Quantity/ SF	Additional Comments	Pricing Package / Alternative
T19	Provide door contact switches at all exterior doors including any overhead coiling doors.			
T20	Replace existing analog CCTV system with an IP, network-based system recorded onto a high capacity DVR with monitoring capability provided over a protected data network. Includes increasing the number of cameras to provide coverage of the building exterior (parking areas and recessed areas where students may congregate) and interior areas (corridor intersections, corridors outside of rest rooms, Gymnasium, Auditorium, Cafeteria, building entrances and stairways).			
T21	Replace the existing paging system with a fully featured system including all call, announcement to user selected zones or individual spaces, two-way communication through classroom speakers and telephone system integration.		Building-wide installation	
T22	Locate all classroom telephone handsets to a standard that makes access to them easy and consistent		Building-wide installation	

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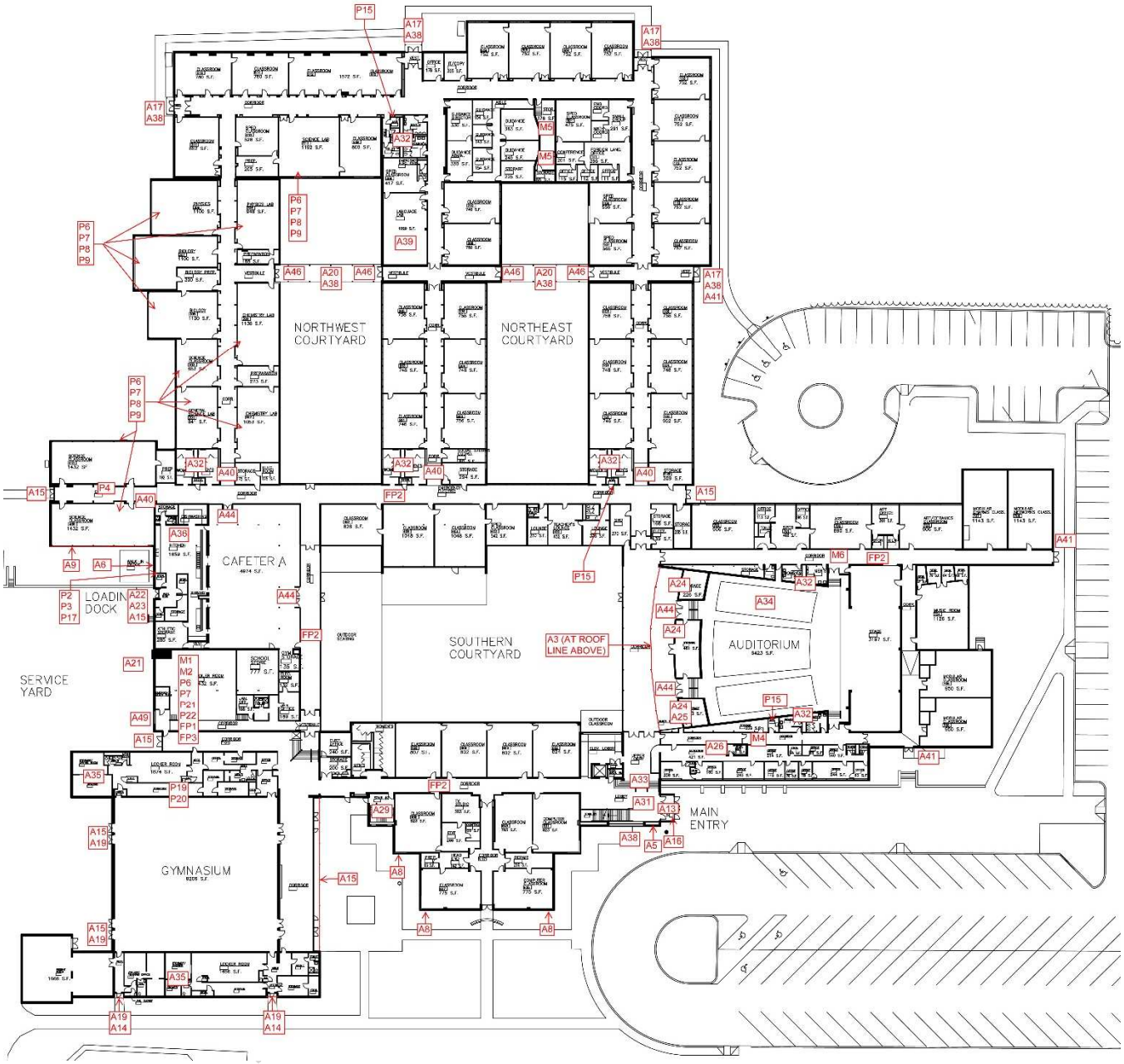
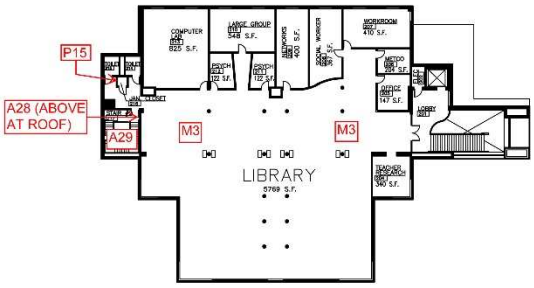
Building Plan

This plan which includes references to the physical plant condition keynote



First Floor Plan



Second Floor Plan

Envelope Narrative

In addition to the items that have been included in the plans and keynotes list, repairs are required in relationship to the exterior envelope that applies to the building as a whole.

- All sealant at all edges of the storefront and windows must be removed, cleaned out, and replaced with new backer rod and sealant.
- At the base of all brick walls, sealant to be removed. Where weeps occur (1997 portion of the building) they are to be cleaned and replaced. Weep tubes with wick will require the removal of mortar joint one brick course high, installation of tube and wick, and replacement of mortar.
- Brick repointing to be completed on 15% of brick wall surface. Estimated 7,500 SF of brick to be repointed (brick calculated at 50,000 SF).
- Waterproof sealant coating (Silane) to be applied to the building surface in its entirety. Note that the coating must be reapplied every five years.
- All exterior surfaces of the building to be power-washed (50,000 SF of brick).
- At the northern interior courtyards, earth to be excavated at perimeter wall and dampproofing to be applied (approximately 1,000 linear feet of wall surface).
- Sealant at all brick expansion joints (estimated 20) sealant to be removed, joint to be cleaned out, and sealant to be reapplied.

Photograph exhibits

Included below are a few photo diagrams which will begin to inform the repairs to be completed or performed. These are just an example to help clarify some of the comments that are included on the keynote list and plans. Note that not all exterior elevations are shown in these diagrams. The intention of these photographs is to aid in understanding elements that need to be repaired that can be described through photographs for scale and scope. These are the following:

- Keynote A6 - Replace single pane glazing at service area

- Auditorium wall repairs including removing and replacing sealant on all sides of glazing and removing and replacing backer rod at the windows. Also, repairing bolt connecting lintels to each other and to the building.

- Keynote 19 - Replace lintels. Diagram shows additional work required at these locations.

- Typical elevation showing work to be performed at exterior envelope. Work includes replacing all sealant at window/storefront perimeter, replacing entry doors, providing new sealant at louvers, power-washing entire facade, brick repointing.

- Typical elevation showing work to be performed at classroom wings. Work includes replacing exterior doors, replacing door thresholds, replacing soffits, replacing abandoned light fixtures (where only housing and loose wiring remains), replacing sealant at louvers, power-washing entire facade, and brick repointing.

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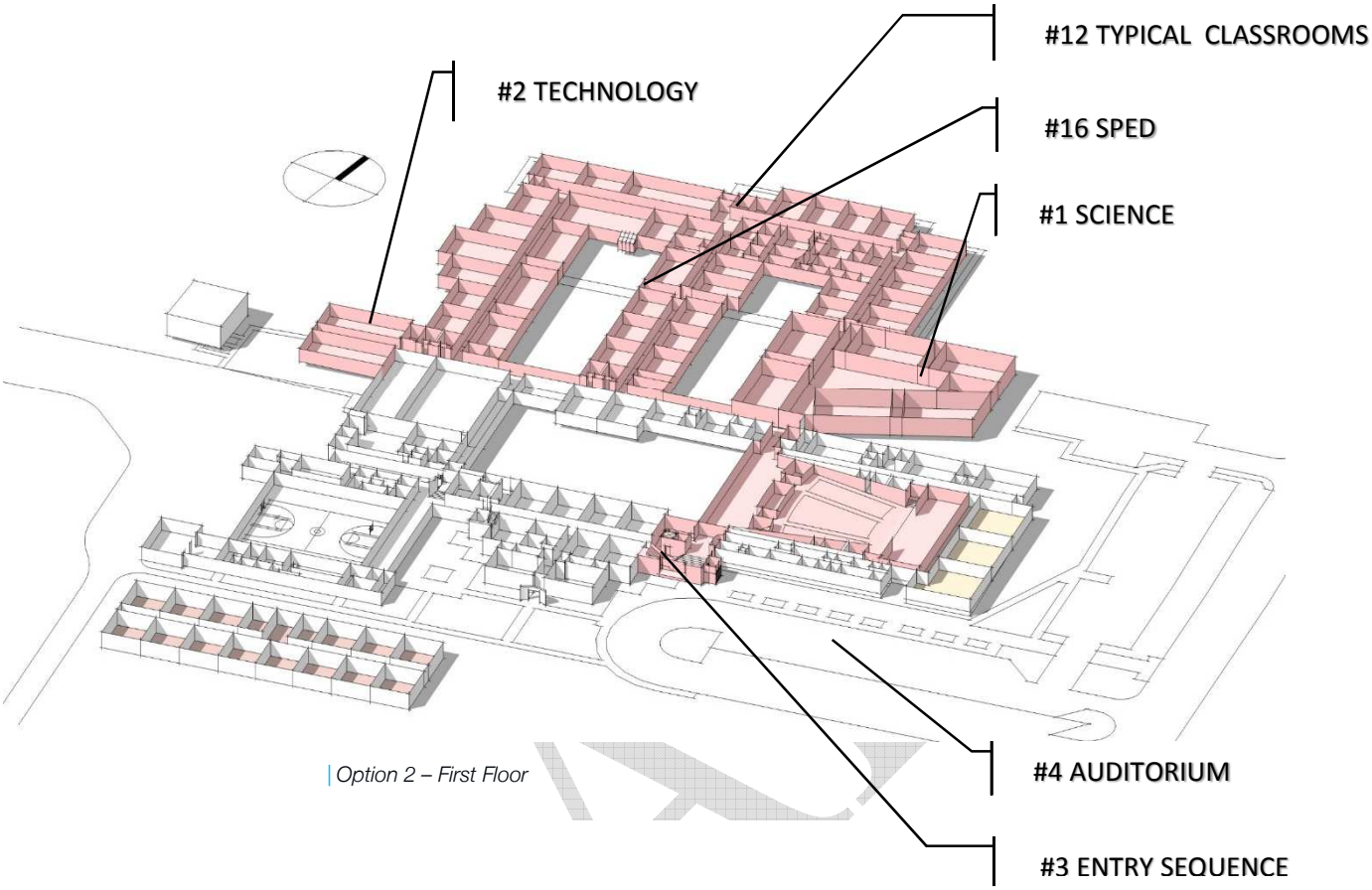
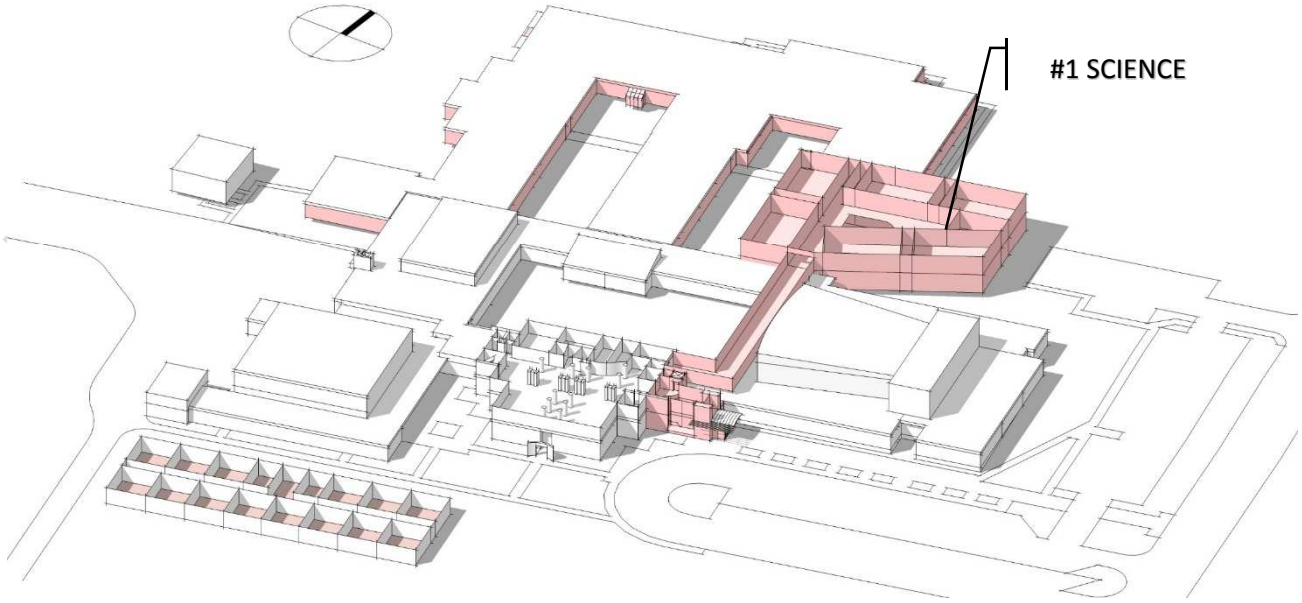
4.3 OPTION 2

The list of Improvements contained in Option 2 is shown in the chart below. Option 2 scope selects 6 of the 16 priority areas of improvement plus the physical plant deficiencies scope described in option 1.

Priority Areas of Improvements – Option 2				
Item #	Building / Subject Area	General Comment	SF of Renovation	SF of Addition
1	Science	Properly size labs and prep for curriculum and safety. Construct a new 2-story science wing [27,360 GSF] for 11 labs and 5 prep rooms. New wing will be connected to the existing library (2nd floor) and existing elevator by a corridor [2,500 GSF] running on the west side of the existing auditorium. Includes demo of existing 1-story classroom wing 8,200 SF.	Demo: 8,200	29,860
2	Creation of Technology Space(s)	Working towards STEM	4,000	
3	Entry Sequence	Safety	500	
4	Auditorium	Up to date, attractive, serve the school and community	9,623	
12	Typical Classrooms	Update for: acoustics, technology, furniture, appearance	33,500	
16	SPED	Improve / increase number & size of spaces	12,000	



Option 2 – First Floor



Option 2 – Second Floor

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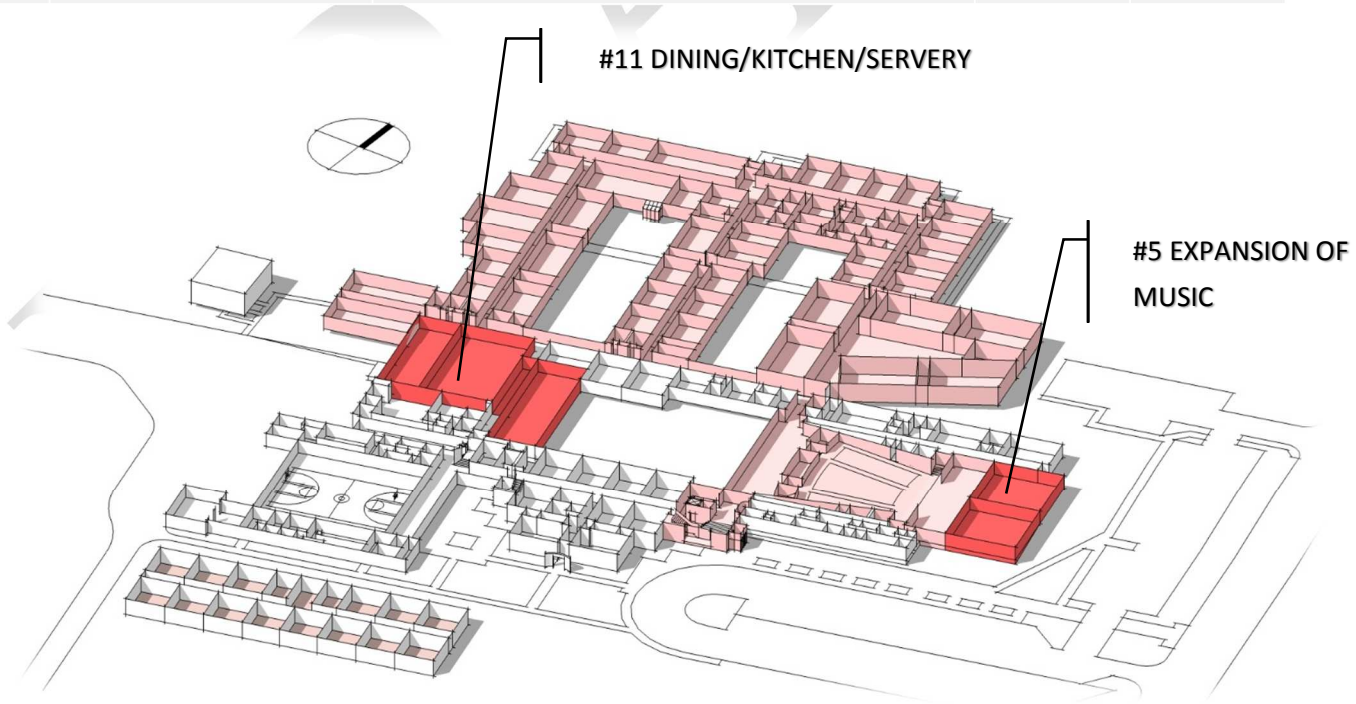
4.3 OPTION 2A

The list of Improvements contained in Option 2A is shown in the chart below. These items include all of those from Option 2 plus Items #5 and #11 plus the physical plant deficiencies scope described in option 1.

Priority Areas of Improvement – Option 2A				
Item #	Building / Subject Area	Comments	SF of Renovation	SF of Addition
1	Science	Properly size labs and prep for curriculum and safety.	Demo 8,200	29,860
2	Creation of Technology Space(s)	Working towards STEM	4,000	
3	Entry Sequence	Safety	500	
4	Auditorium	Up to date, attractive, serve the school and community	9,623	
5	**Expansion of Music**	**To meet curriculum needs**		6,000
11	**Dining/Servery/Kitchen**	**Right size, multi-use of café, scramble server, update and enlarge kitchen**	6,900	3,500
12	Typical Classrooms	Update for acoustics, technology, furniture, appearance	33,500	
16	SPED	Improve/increase number and size of spaces	12,000	



| *Option 2A*

4.4 OPTION 3

The list of Improvements contained in Option 3 includes all 16 Priority Areas of Improvement. These items include all of those from Option 2 plus Option 2A plus the physical plant deficiencies scope described in option 1.

Priority Areas of Improvements				
Item #	Building / Subject Area	Comments	SF of Renovation	SF of Addition
1	Science	Properly size labs and prep for curriculum and safety.	Demo: 8,200	29,860
2	Creation of Technology Space(s)	Working towards STEM	4,000	
3	Entry Sequence	Safety	500	
4	Auditorium	Up to date, attractive, serve the school and community	9,623	
5	Expansion of Music	To meet curriculum needs		6,000
6	**Expansion of Art**	**To meet curriculum needs, preferably more central**	**2,700**	
7	**Reconfigure Administration Suite**	**Reconfigure for size and flow, tie to entry sequence (3)**	**2,500**	
8	**Expansion of Medical Suite**	**To meet needs**	**500**	**600**
9	**Relocation of Guidance**	**Closer to administration**	**2,000**	
10	**PE Complex**	**Right size, fitness for life, community use**	**18,000**	**8,200**
11	Dining/Servery/Kitchen	Right size, multi-use of café, scramble server, update and enlarge kitchen	6,900	3,500
12	Typical Classrooms	Update for acoustics, technology, furniture, appearance	33,500	
13	**Library Suite**	**Update to meet current media center needs**	**8,684**	
14	**TV Studio**	**Enlarge to meet curriculum needs and demand**	**2,000**	
15	**Exterior Courtyards**	**Enliven, make more attractive and useful**		
16	SPED	Improve/increase number and size of spaces	12,000	

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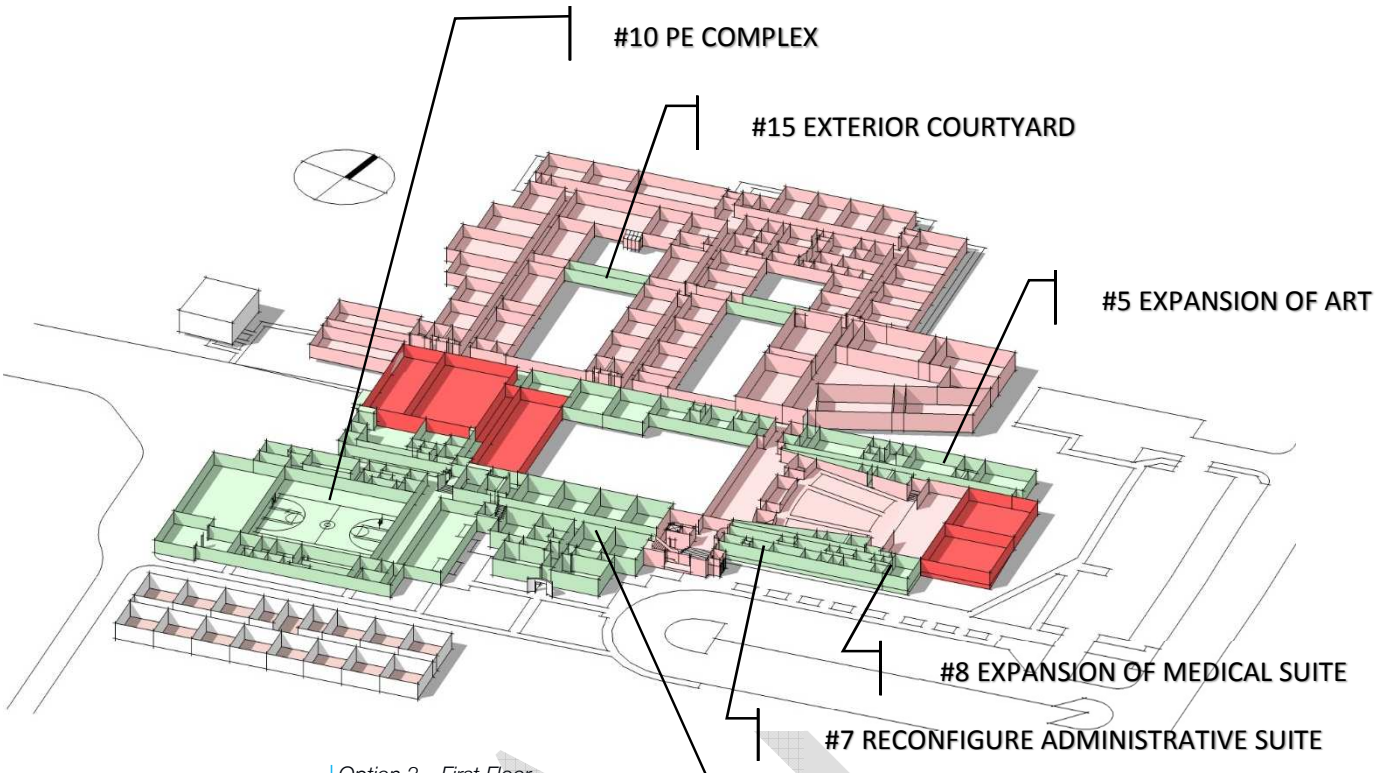
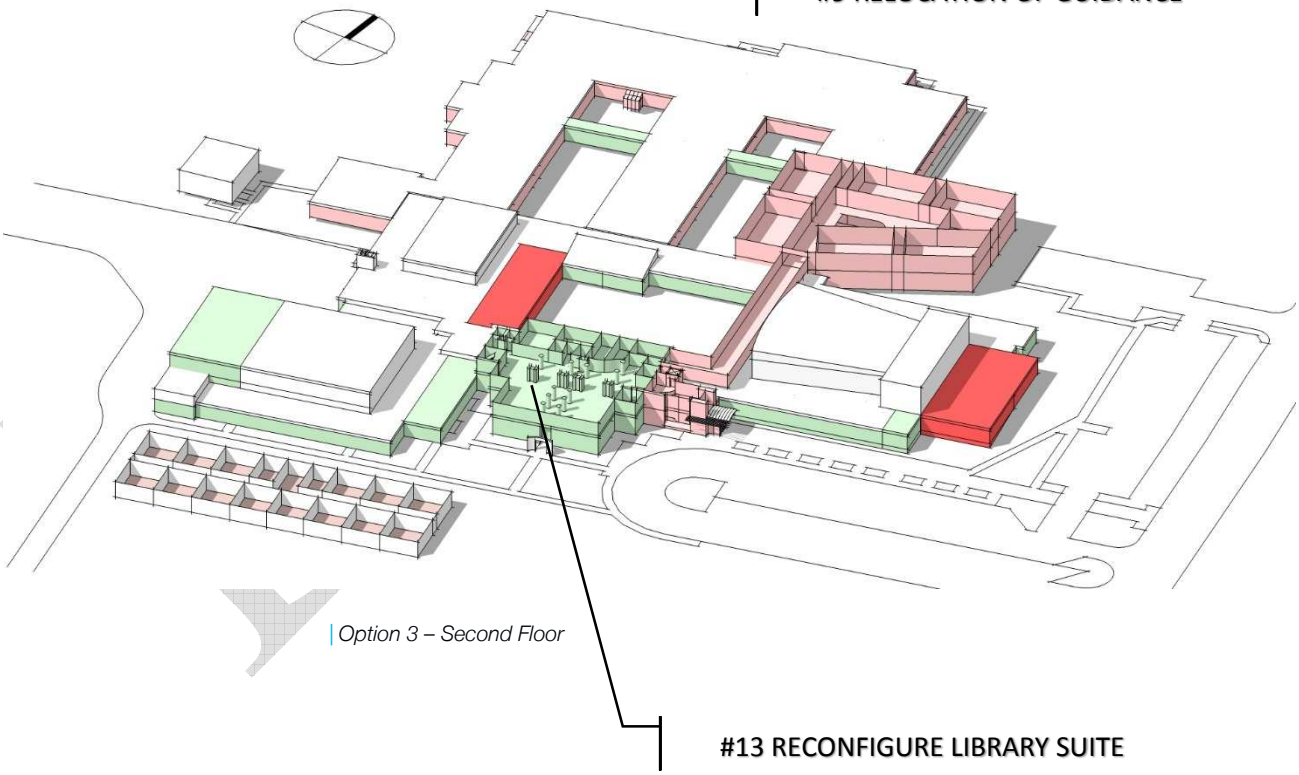


Option 3 – First Floor



Option 3 – Second Floor

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4.5 OPTION 4

Option 4 is a new school building. Based on the population of 1152 students, the new building would be 218,400 GSF.

4.6 MODULAR CLASSROOM LOCATION

While portions of the building are being constructed, modular classrooms will be required in order to accommodate the student population. Included in the image below is a hatched area which would be a possible location for modular classrooms.

Modular Classroom Locations

TEMPORARY MODULAR CLASSROOMS

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Appendix 7

Priority Areas of Improvement

Executive Report – 2013 High School Conditions Study

SHARON PUBLIC SCHOOLS

Priority Areas of Improvement
Existing High School GSF 199,775

1	Science	Properly size labs and prep for curriculum and safety: Construct a new 2 story science wing [27,360 GSF] for 11 labs and 5 prep rooms. The new wing will be connected to the existing library (2nd floor) and existing elevator by a corridor[2,500 GSF] running on the west side of the existing auditorium. is the link more expensive than a new elevator in the new wing? Includes demo of existing 1 story classroom wing 8,200 sq.ft.			29,860		Site clearing and demolition of existing parking, walkways, and utilities. New utility connections to serve science pod addition. Re-route existing drainage around new addition. Relocate displaced accessible parking. Re-establish accessible pedestrian walkways from parking to building entrance(s).	New 2-story addition will consist of structural steel wide flange beams and girders supported by HSS columns. Roof system will be 1-1/2" metal roof deck with portions of concrete slab at location of new rooftop mechanical units. Second floor to consist of composite slab system with lightweight concrete and metal deck. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. Interior columns will be founded on interior spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric. The structure will include a lateral force resisting system consisting of ordinary braced frames. Reinforce portions of existing roof and add install new steel members for proposed 'link' structure to library.	Construct a new 2 story science wing [27,360 GSF] for [11) 1,440 sf science lecture / labs and 6 prep rooms. The new wing will be connected to the existing library (2nd floor) and existing elevator by a corridor[2,500 GSF] running on the west side of the existing auditorium. Is the link more expensive than a new elevator in the new wing? Includes demo of existing 1 story classroom wing 8,200 sq.ft.	New wet sprinkler system protection throughout. Fire Department valves provided where required.	New Acid waste and vent system, together with new pH adjustment system. New non-potable cold, hot and hot water re-circulation systems, complete with non-potable gas-fired water heaters. New tepid water supply and re-circulation system feeding new emergency showers and eyewash units. Included will be a tepid water heater and mixing valve station. Gas to each Science classroom bench, including emergency gas shutoff valve insid ethe entry door, located in recessed cabinet.	New rooftop unit with hot water coil for makeup and conditioning of spaces. Supply and return ductwork, New registers and grilles. New thermostats. (5) new fumehood exhaust fans connected by an exhaust duct manifold. New controls to tie into existing BMS.	New 200Amp and 600Amp 120/208 volt 3 phase power feeders from the main switchboard. 200 Amp feeder for HVAC RTU wiring. New 600Amp distribution panel, (4) 150Amp lighting/receptacle panels. Multiple branch circuits (8) and receptacles for each Lab. Power and devices in the prep. rooms. Power for a smart board. Pendant indirect lighting, switches, occupancy sensors and daylight controls in the Labs. Provide two emergency circuits for egress/exit lighting in the corridors and stairs. Recessed troffers in the corridors and in the prep. rooms. Smoke detectors in the corridors, fire alarm speaker/strobes in the all areas.	Provide two data outlets at each lab station (estimate 7 stations), two data outlets at the wall mounted projector location, two ceiling mounted data outlets for wireless access, two data outlets at the Teacher's station, one wall mounted data outlet for voice and four data outlets for the Prep Rooms. Total = 25 data outlets in each Science Lab. Provide paging system speakers in each Lab and Prep Room. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display system. Provide wireless clocks.
2	Creation of Technology Space(s)	Working towards STEM: Renovate 4,000 nsf of the existing science labs into (2) STEM labs	4,000	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment. Provide new concrete slabs/walls as require to match new floor profile. Incorporate items 'A" and 'D' below.	Renovate 4,000 nsf of the existing science labs into (2) STEM labs	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. Provide new sinks and systems as required to accommodate new spaces.	Reconfigure existing HVAC system to suit renovation.	Provide new 200Amp panel and power feeder from the power distribution panel. Provide multiple branch circuits (12) and receptacles in each lab. Power for a smart board. New pendant indirect rows of lights, switches, occupancy sensors and daylight controls. New fire alarm speaker/strobes and smoke detectors.	Provide four data outlets at the projector locations, four ceiling mounted data outlets for wireless access, four data outlets at the Teacher's stations, one wall mounted data outlet for voice and twenty-four data outlets general use. Total = 37 data outlets in each STEM Lab. Provide paging system speakers in each Lab. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for two future interactive display systems. Provide local sound system for voice and program audio reinforcement. Provide wireless clocks.
3	Entry Sequence	Safety: Construct a 500 GSF addition at the existing main entrance to accommodate a double vestibule entry sequence with an administration station to monitor the doors.	500	NSF			Demolish and re-establish existing entrance plaza.	New addition will consist of structural steel wide flange beams and girders supported by HSS columns. Roof system will be 1-1/2" metal roof deck. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. Interior columns will be founded on interior spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric. Incorporate items 'A" and 'D' below.	Construct a 500 GSF addition at the existing main entrance to accommodate a double vestibule entry sequence with an administration station to monitor the doors. Assume bullet resistant glazing in this area.	New wet sprinkler system protection throughout.	No work anticipated.	Add additional heating in the form of a hot water cabinet unit heater totaling approx 120 MBH.	New lighting fixtures and exit signs and their wiring including wiring to the existing emergency circuits. New fire alarm manual pull station, smoke detector and speaker/strobe. Convenience receptacles and power for automatic door openers.	Provide Access Control Card Reader at the exterior door and the interior door. All doors will be equipped with door position switches to monitor status. Provide video/intercom system with two-way audio communication between the visitor and the Main Office. System will have capability of ringing off to two additional stations in the building should the Main Office be unoccupied. Provide CCTV camera coverage to record those coming and going to the main entrance during predetermined hours.
4	Auditorium	Up to date, attractive, serve the school and community: Addition of a full stage fly Comprehensive renovation of the auditorium, stage and control room; Removal of the slab and stairs to re-profile the floor to an accessible configuration New rigging, new light and sound system New seating New acoustical treatment Improve access to existing catwalk	9,623	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment. Provide new concrete slabs/walls as require to match new floor profile. Incorporate items 'A" and 'D' below.	Addition of a full stage fly Comprehensive renovation of the auditorium, stage and control room; Removal of the slab and stairs to re-profile the floor to an accessible configuration New rigging, new light and sound system New seating New acoustical treatment Improve access to existing catwalk	Reconfigure existingWet Sprinkler system to suit renovation, per current Code requirements.	No work anticipated.	No work anticipated.	New 250 Amp power feeder from the main switchboard to the theatrical lighting dimming cabinet. New house, theatrical, emergency and aisle safety lighting. New dimming lighting control and the remote control stations. New fire alarm devices in the house and on stage. New convenience power receptacles and circuits.	Provide local sound system to support vocal and program audio reinforcement. System will include mixing console. Provide high resolution projection system and electrically operated projection screen. Provide cable infrastructure to support video recording and broadcasting from the Auditorium. Provide four ceiling mounted data outlets for wireless access. Provide voice and data outlets in the Control Booth and stage areas (12 total). Provide production intercom system. Provide paging system speakers.
5	Expansion of Music	To meet curriculum needs: Remove existing music classroom (approx. 6,000 GSF), construct 6,000 GSF for 3 CR music suite			6,000	GSF	Site clearing to accommodate building addition.	New 2-story addition will consist of structural steel wide flange beams and girders supported by HSS columns. Roof system will be 1-1/2" metal roof deck with portions of concrete slab at location of new rooftop mechanical units. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. Interior columns will be founded on interior spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric. The structure will include a lateral force resisting system consisting of ordinary braced frames.	Remove existing music classroom corridor; Remove (2) permanent modular classrooms (approx 6,000 GSF) Construct 6,000 GSF for 3 CR music suite	New wet sprinkler system protection throughout. Fire Department valve provided if/where required	Reconfigure/add existing Plumbing systems to suit renovation . A new sink may be installed.	New VAV type rooftop unit with hot water coil, VAV/FPB's, supply and return ductwork, registers and grilles, thermostats, and controls.	Power for the new RTU and FPBs. New lighting, switches and occupancy sensors in each music suite. New power circuits and receptacles. New fire alarm speaker/strobes in each room.	In each Music Room, provide two data outlets the wall mounted projector location, two ceiling mounted data outlets for wireless access, two data outlets at the Teacher's station, one wall mounted data outlet for voice and up to 24 additional outlets in the Midi Lab or as program requires. Provide paging system speakers. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display system. Provide local sound system in each location for vocal and program audio reinforcement and digital recording. Provide wireless clocks.
6	Expansion of Art	To meet curriculum needs, preferably more central: Comprehensive renovation including internal reconfiguration	2,700	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment. Incorporate items 'A" and 'D' below.	Comprehensive renovation including internal reconfiguration of classroom partitions	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. New art romm sinks with sediment traps.	No work anticipated.	New lighting, switches, daylight controls and occupancy sensors in each room. New power circuits, receptacles and fire alarm speaker/strobes as required for the space reconfiguration.	In each Art Room, provide two data outlets the wall mounted projector location, two ceiling mounted data outlets for wireless access, two data outlets at the Teacher's station, one wall mounted data outlet for voice and up to 24 additional outlets in the Graphics Labs or as program requires. Provide paging system speakers. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display system. Provide wireless clocks.
7	Reconfigure Administration Suite	Reconfigure for size and flow, tie to entry sequence (3): Expand the administration by appropriation of the auditorium storage and elimination of the corridor	2,500	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment. Incorporate items 'A" and 'D' below.	Expand and reconfiguration of the administration area by appropriation of the auditorium storage and elimination of the corridor. Assume all new partitions.	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. Provide new kitchenette sink.	Reconfigure existing ductwork and supply and return grilles.	New lighting, controls, occupancy sensors in each room. New power circuits, receptacles and fire alarm speaker/strobes as required for the space reconfiguration.	In each Office, provide minimum two outlets (1-voice/1-data) for each desk location., eight outlets (seven - voice/1-data) for each Conference Room, ceiling mounted data outlets as required for wireless access. Provide paging system speakers. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display systems in Conference Rooms. Provide wireless clocks.
8	Expansion of Medical Suite	Reconfigure admin area to expand for larger medical suite including 600 GSF addition	500	NSF	600	GSF	Site clearing and demolition of existing walkways. Minor work to re-establish accessible walkways to exterior doors.	New addition will consist of structural steel wide flange beams and girders supported by HSS columns. Roof system will be 1-1/2" metal roof deck. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. Interior columns will be founded on interior spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric.	Construct an addition to enlarge the medical suite; assume a 600 GSF addition to be coupled with item #7 above	Reconfigure existingWet Sprinkler system to suit renovation. New wet sprinkler protection as required for new construction..	Reconfigure existing Plumbing systems to suit renovation. Provide new sinks and emergency eye/face wash units fed from new tepid water system.	Reconfigure existing ductwork and supply and return grilles. Expand existing to system to accommodate new 600 GSF.	New lighting, controls, occupancy sensors in each room. New power circuits, receptacles and fire alarm speaker/strobes as required for the space reconfiguration. Provide emergency power circuit for lighting and some receptacles.	Provide minimum two outlets (1-voice/1-data) for each desk location, ceiling mounted data outlets as required for wireless access. Provide paging system speakers. Provide motion sensors in each ground floor location with exterior windows. Provide wireless clocks.
9	Relocation of Guidance	Closer to administration - renovate 3 classrooms into offices, conference etc for Guidance; renovate existing Guidance space ino a Large Group Instruction space	2,000	NSF			No sitework anticipated.	Reinforce existing rood structure to support new roof mounted mechanical equipment. Provide minor strucutral reinforcement/modifications as required for new program. Incorporate items 'A" and 'D' below.	renovate 3 classrooms in the lower level of the 1997 wing into offices, conference room etc for Guidance; renovate existing Guidance space into a Large Group Instruction space	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. A new kitchenette sink may be installed..	New VAV type rooftop unit with hot water coil, VAV/FPB's, supply and return ductwork, registers and grilles, thermostats, and controls. AHU-6 serving the current guidance spaces would need to be evaluated and possibly upgraded to provide the necessary ventilation and comfort control for the new LGI.	Power for the new RTU and FPBs from the existing panels. New lighting, switches and occupancy sensors in the each area. Emergency lighting and exit signs in the corridors and in LGI room. New power circuits, receptacles and fire alarm speaker/strobes in each area.	In each Office, provide minimum two outlets (1-voice/1-data) for each desk location., eight outlets (seven - voice/1-data) for each Conference Room, ceiling mounted data outlets as required for wireless access. Provide paging system speakers. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display systems in Conference Rooms. Provide wireless clocks.
10	PE Complex	Right size, fitness for life, community use: Add a 3rd gym bay Add (2) alternative Gym spaces, Fitness and Dance / Exercise Renovate both locker room suites	18,000	NSF	8,200	GSF	Minor site clearing and demolition of existing parking, walkways, and utilities. Relocate displaced parking and accessible walkways.	New addition will consist of structural steel wide flange girders and LH joists supported by HSS columns. Roof system will be 1-1/2" metal roof deck. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric. The structure will include a lateral force resisting system consisting of ordinary braced frames.	Add a 3rd gym bay Add (2) alternative Gym spaces, Fitness and Dance / Exercise assume large amounts of glazing to the corridor and the exterior. Renovate both locker room suites Expand locker area to include the corridor adjacent to the girls locker room	New wet sprinkler system protection throughout. Fire Department valves provided where required. New wet sprinkler protection as required for new construction..	Reconfigure existing Plumbing systems to suit renovation. New shower/toilet facilities. New plumbing as required for new construction..	Upgrade existing fitness space system with new air handling equipment. Add a new air handler for the new gym bay and the alternative spaces. Upgrade existing locker room systems.	Power for the new AHU. Provide normal and emergency lighting, wiring and controls for the 3rd gym bay. New normal and emergency lighting, switches and occupancy sensors in the Fitness, Dance/Exercise and Lockers areas. New power circuits, receptacles and fire alarm speaker/strobes in each area. Provide power to the new gym and fitness areas equipment (basketball boards, time clocks, treadmills, etc.)	Provide local sound system to support vocal and program audio reinforcement in each of the two alternative spaces and another for the expanded Gym. Provide cable infrastructure to support video recording and broadcasting from the Gym. Provide six ceiling mounted data outlets for wireless access. Provide data outlets at Gym perimeter locations (16 total). Provide paging system speakers. Provide Card Access Control to selected doors with door position switches, motion sensors at all exterior doors and CCTV Camera coberage (one at each entrance and minimum six in the Gym). Provide wireless clocks with wire guards.

Priority Areas of Improvement
Existing High School GSF 199,775

11	Dining / Servery / Kitchen	Right size: multi-use of café, scramble servery, update & enlarge kitchen: Comprehensive renovation to the kitchen and servery Building addition within the courtyard to right size the café	6,900	NSF	3,500	GSF	Site clearing and removal of existing site furnishings.	New addition will consist of structural steel wide flange beams and girders or LH joist supported by new or existing steel columns. If new roof is supported by existinh columns, they will likely require reinforcing. Roof system will be 1-1/2" metal roof deck with portions of concrere slab at location of new rooftop mechanical units. If new perimeter foundation walls are required, they will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings. Interior columns, if required, will be founded on interior spread footings. The ground floor will consist of a slab on grade reinforce with welded wire fabric. The structure will include a lateral force resisting system consisting of ordinary braced frames.	Renovate the kitchen and cafeteria. Comprehensive renovation to include a scramble servery; update & enlarge kitchen: Building addition within the courtyard to right size the cafeteria.	Reconfigure existingWet Sprinkler system to suit renovation. New wet sprinkler protection as required.	Reconfigure existing Plumbing systems to suit kitchen renovation/enlargement. New plumbing as required	Remove existng makeup air unit, ductwork, registers and grilles, exhaust fans and replace with right sized equipment to accommodate addition and reconfiguration.	New normal and emergency lighting in the kitchen (recessed troffers), dinning and servery (LED downlights), switches and wiring. Provide daylight controls in the dining room. Provide new kitchen power panels, kitchen/servery equipment wiring and receptacles. Provide power to new make-up and exhaust fans. Provide new fire alarm manual pull stations and speaker/strobes units.	Provide local sound system to support vocal and program audio reinforcement. Provide high resolution projection system and electrically operated screen. Provide cable infrastructure to support video recording and broadcasing. Provide six ceiling mounted data outlets for wireless access. Provide data outlets at perimeter locations (16 total). Provide paging system speakers. Provide Card Access Control to selected doors with door position switches, motion sensors at all exterior doors and CCTV Camera coverage (one at each entrance and minimum six in the Cafeteria). Provide cable infrastructure for future digital signage/menue display system. Provide voice/data cable infrastructure for Food Service Manager's Office. Provide wireless clocks.
12	Typical Classrooms	Update for: acoustics, technology, furniture, appearance: All classrooms (42): acoustical isolation of demising partitions (see detail); cosmetics, new marker boards, improve technology, new furniture, classroom storage	33,500	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment. Incorporate items 'A" and 'D' below.	Renovation of classrooms for acoustics, technology, furniture, appearance: All classrooms (42): acoustical isolation of demising partitions (see detail); cosmetics, new marker boards, improve technology, new furniture, (3) classroom tall storage units per classroom. Construct enclosed corridors across each of the two courtyards (see sketch)	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. Provide new classroom sinks where required/desired	No work anticipated.	Replace pendant 1x4 fluorescent wraparound lights (in the all "original" classrooms of 1963 construction) with the pendant direct/indirect fluorescent fixtures installed in the two rows. Include the fixtures re-wiring and new controls (switches and daylight).	Provide two data outlets at the wall mounted projector location, two ceiling mounted data outlets for wireless access, two data outlets at the Teacher's station, one wall mounted data outlet for voice and two data outlets for general use. Total = 9 data outlets in each Classroom. Provide paging system speakers in each Classroom. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display system. Provide wireless clocks.
13	Library Suite	Update to meet current media center needs: Modest renovation to include reconfiguration to include 4 collaboration rooms, cosmetics, furniture, stacks, technology	8,684	NSF			Site clearing and demolition of existing walkways and utilities. Minor work to re-establish accessible plaza and walkways to exterior door(s).	Provide minor strucutral reinforcement/modifications as required for new program and new equipment.	Modest renovation to include reconfiguration to include (4) glass walled collaboration rooms, room cosmetics, new furniture, new stacks, improved technology	Reconfigure existingWet Sprinkler system to suit renovation.	No work anticipated.	Reconfigure supply and return ductwork to suit renovation.	Re-arrange existing lighting fixtures and provide new fixtures of the same type as required for space reconfiguration and adding (4) collaboration rooms. Provide switches and occupancy sensors in the (4) new rooms. Provide receptacles and fire alarm speaker/strobes in the (4) new rooms.	Provide cable infrastructure to support video recording and broadcasting. Provide minimum six ceiling mounted data outlets for wireless access. Provide data outlets at perimeter locations and in Computer Classroom if indicated by program (40 total). Provide conduit infrastructure for future interactive display system. Provide paging system speakers. Provide Card Access Control to selected doors with door position switches, motion sensors at all exterior doors and CCTV Camera coverage (one at each entrance and minimum six as required). Provide voice/data cable infrastructure for each Office and Work Room. Provide wireless clocks.
14	TV Studio	Enlarge to meet curriculum needs and demand: Renovate / enlarge the existing TV studio to 2,000 nsf total;	2,000	NSF			No sitework anticipated.	Provide minor strucutral reinforcement/modifications as required for new program and new equipment.	Renovate / enlarge the existing TV studio to 2,000 nsf total;	Reconfigure existingWet Sprinkler system to suit renovation.	No work anticipated.	Reconfigure supply and return ductwork to suit renovation. Possible additional cooling will added to space.	Provide new general lighting and controls. Provide 100Amp power panel and a grid of the receptacles for TV studio light fixtures. Provide a TV lights dimming control. Provide new convenience receptacles and fire alarm devices. Provide power to the equipment in the control room.	Provide cable infrastructure to support video recording and broadcasting. Provide minimum four ceiling mounted data outlets for wireless access two data outlets at the Teacher's station, one wall mounted data outlet for voice. Provide data outlets at perimeter locations and in Video Editing Classroom (24 total). Provide conduit infrastructure for future interactive display system. Provide paging system speakers. Provide Card Access Control to selected doors with door position switches). Provide wireless clocks.
15	Exterior Courtyards	Enlven, Make more attractive and useful: Add outdoor classroom to main courtyard		NSF			Site clearing and demolition of the 5 existing courtyards. Site improvements will include a 60% hardscape (Concrete pavement and paving units) to 40% landscape (Trees, shrub material, ground cover and lawn areas). Site furnishings and lighting to establish areas for dining, gathering and visual focus while minimizing maintenance requirements.	New cooridor enclosure will consist of structural steel wide flange beams and girders supported by HSS columns. Roof system will be 1-1/2" metal roof deck. Perimeter foundation walls will be minimum 12" thick and 4'-0" deep, and will be supported by continous spread footings The ground floor will consist of a slab on grade reinforce with welded wire fabric.	Corridors across the courtyards is included item 12 above.	No work anticipated.	No work anticipated.	No work anticipated.	Add outdoor type lights and their wiring.	Provide data outlets to support wireless access. Provide CCTV camera coverage. Provide exterior paging speakers.
16	SPED	Improve / increase # & sizes of spaces: Reconfigure / renovate areas throughout the school for varying sizes of classrooms, offices, support spaces	12,000	NSF			No sitework anticipated.	Incorporate items 'A" and 'D' below.	Reconfigure / renovate areas throughout the school for varying sizes of classrooms, offices, support spaces	Reconfigure existingWet Sprinkler system to suit renovation.	Reconfigure existing Plumbing systems to suit renovation. Provide new sinks where required/desired	Upgrade/right size HVAC to accommodate.	New lighting, switches and occupancy sensors in the each area. New power circuits, receptacles and fire alarm speaker/strobes in each area.	Provide two data outlets at the wall mounted projector location, two ceiling mounted data outlets for wireless access, two data outlets at the Teacher's station, one wall mounted data outlet for voice and two data outlets for general use. Total = 9 data outlets in each Classroom. Provide 1-voice/1-data outlets in each new Office. Provide paging system speakers in each Classroom. Provide motion sensors in each ground floor location with exterior windows. Provide conduit infrastructure for future interactive display system. Provide wireless clocks.
			102,907		48,160										
	Option 1 - all issues identified in the Existing Conditions Report														
	Option 2 - All areas indentified in light blue + scope identified in the Existing Conditions Report less work eliminated by the option														
	Option 2A - Option 2 with 2 additional items in pink + scope identified in the Existing Conditions Report less work eliminated by the option														
	Option 3 - all items #1 - #16 above and Option 1														

A	Seismic Code Upgrades from the scope identified above for all Options							For Options 1, 2, 2A and 3, all existing masonry walls are required to be fastened at the top to the steel structure above via epoxy anchors bolts and steel angles field welded to the existing framing at approximately 6-0" o.c.		Sprinkler system seismic bracing to be added.	Natural gas piping to be seismically braced.		N/A	
B	Accessible Code Upgrades from the scope identified above for all Options								Refer to Option 1 Physical Plant Deficiencies Final Report, Alternates for ADA compliance	No work anticipated.	Non-accessible toilet rooms/drinking fountains to be renovated & replaced to accommodater ADA/MAAB guidelines		N/A	
C	Energy Code Upgrades from the scope identified above for all Options								Option 1 - Comply with the Energy Code Option 2 - No Energy Code upgrades Option 3 - 500 sf addition to comply with Energy Code. Remaining space, no upgrade required. Option 4 - New slab on grade to receive vapor barrier and 2" of insulation. New fly loft will comply with the Energy Code. Option 5 - Comply with the Energy Code Option 6 - No Energy Code upgrades Option 7 - No Energy Code upgrades Option 8 - Comply with the Energy Code Option 9 - No Energy Code upgrades Option 10 - Addition will comply with the Energy Code. Remaining spaces, no Energy Code upgrades. Option 11 - Courtyard addition to comply with the Energy Code. Renovation, Energy Code upgrades for equipment only. Option 12 - New enclosed corridors will comply with the Energy Code. Remaining of the spaces, no Energy Code upgrades. Option 13 - No Energy Code upgrades Option 14 - No Energy Code upgrades Option 15 - See option 12 Option 16 - No Energy Code upgrades	No work anticipated.		Replace all existing to remain HVAC equipment with higher efficiency type, possibly add energy to units where required.	Provide automatic daylighting control (dimming) in the classrooms, Labs, offices, Library, and other areas with exterior windows.	
D	Other Code Upgrades from the scope identified above for all Options							For Options 2, 2A and 3, per the IEBC with 780 CMR amendments, the portions of the existing building constructed prior to 1974 will be required to meet the performance critera of the current building code to resist lateral forces due to wind and seismic. Since these current portions of the existing building do not meet this criteria, addtional structural steel braced frames will needed to be strategically added throughout. Material quantities for new braces are typically 1.5 PSF for new school structures. The new members will be field welded to the existing structural steel with new gussets and anchored to the concrete foundation with epoxy anchors. Some of the existing beams and columns will require reinforcement to resist the increase of prescribed forces.	Fire wall to be built between the existing building and all new additions.					

Appendix 7 - 2 of 2

SMMA

CAPITAL PLANNING AND COST ESTIMATES

5.1 INTRODUCTION

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Facility Needs

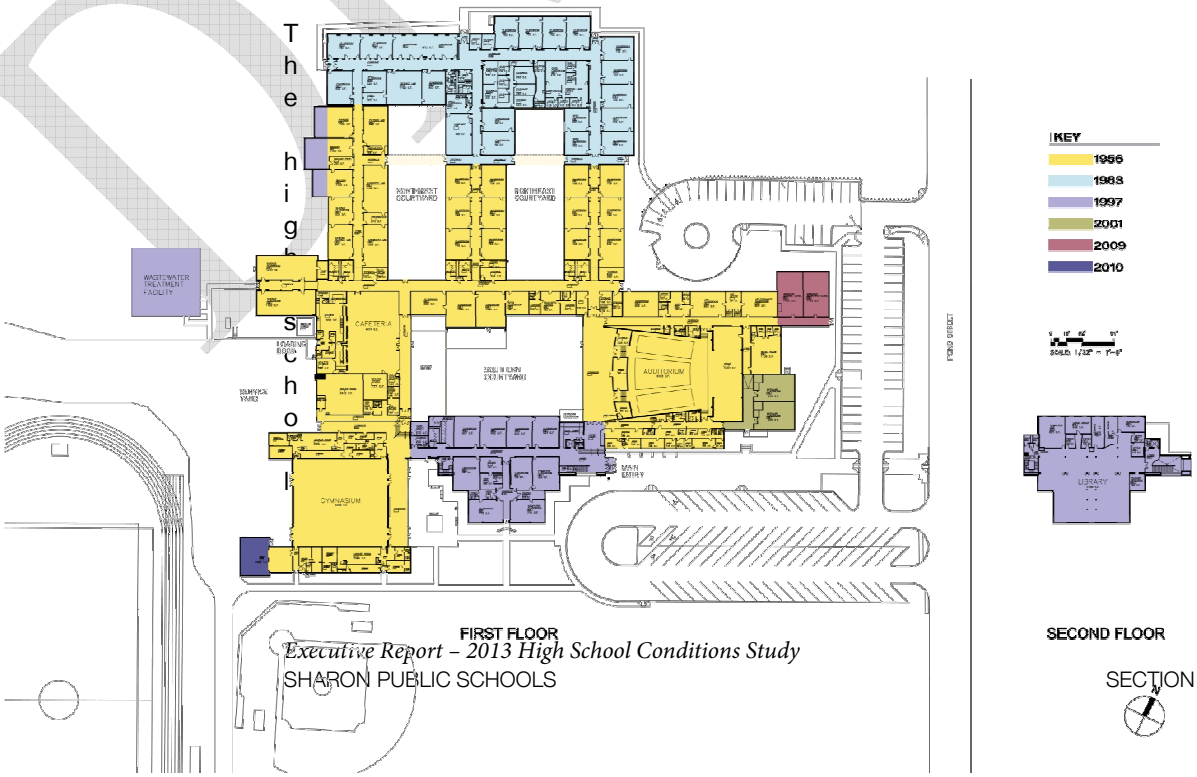
- There are numerous "repairs" items throughout the high school that are identified through the existing conditions analysis (section 3) and defined as Option 1. Depending on the size and nature of repairs and how they may or may not be bundled, some may qualify by the town or school department as Capital Projects.
- Some of the 16 "items" could be considered facilities needs rather than educational needs. These include: 35, Entry Sequence; #7, Reconfiguration of Administration; #8 Expansion of Medical; #11, Dining, Servery, Kitchen; and #15 Exterior Courtyards

Educational Needs

Most of the 16 "items" discussed in Option 4 address issues related to teaching and learning. They include a variety of solutions involving: changes to room sizes and uses; space adjacencies; educational upgrades for improved safety such as the enlarged science rooms.

More specifically, they address the 21st Century concepts discussed in SECTION 2 of this report.

The high school



The high school building portions of which date from 1956 to 2010 need attention in various locations. Not only are there concerns regarding the physical building and its systems, but many of the spaces within the buildings do not meet current MSBA guidelines, do not support the current and proposed curriculum and in some cases are impacting educational delivery and in other cases are limiting potential changes to educational delivery.

5.2 CODE COMPLIANCE TRIGGERS

For capital planning purposes it is important to understand the potential code compliance triggers that may affect Sharon high School.

The **Building Code (780 CMR, 2009 IBC)** refers to the following categories of construction:

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Alterations: Any construction or renovation to an existing structure other than repair or addition. Alterations are broken into 3 sub categories – Level 1, 2 and 3.

Level 1: Includes removal and replacement in kind and in the same location e.g. replacement of a window/door in the exact same location with a window/door or replacing a roof or aluminum siding with vinyl siding.

There is a trigger within Level 1 if "substantial improvement" is occurring within a flood hazard. Substantial improvement is defined as scopes of work that cost more than 50% of the value of the building. If this trigger occurs you are immediately a Level 2 or 3.

Level 2: Relocation of one window or door would trigger this level of renovation. Also includes the reconfiguration of any space, or the reconfiguration or extension of any systems.

If the scope of work being performed places an increased structural load on the building of more than 5% then the entire structure must be brought up to full code compliance with respect to seismic bracing.

For Sharon High School if full seismic bracing was triggered under a Level 2 renovation the impact of adding these braces to your building would result in

more than 50% of the floor area being disturbed and as such would automatically move you to a Level 3.

Level 3: Is used when the work exceeds 50% of the aggregate area of the building. There is no good definition within the code if this is based on floor area or component area but the assumption is floor area. Full seismic upgrades are absolutely required under this level of renovation.

The **Massachusetts Architectural Access Board (521 CMR)** refers to the following categories of construction:

- New Construction
- Existing Buildings

New Construction: A new facility.

Existing Buildings: All additions, reconstruction, remodeling, alterations and repairs.

If the work being performed amounts to <u>less than 30%</u> of *the full and fair cash value* of the building and

If the work costs less than $100,000 then only the work being performed is required to comply

If the work costs $100,000 or more then the work being performed must comply plus an accessible entrance, toilet room and drinking fountain must be provided.

Exceptions are provided for general maintenance and on-going upkeep.

If the work being performed amounts to <u>more than 30%</u> of *the full and fair cash value* of the building then entire building is required to comply.

Work over time: When work is performed over a 36 month period the cost of such work shall be added together.

Full and Fair Cash Value is the assessed value of the building (only, not the land) multiplied by the Assessment Ratio factor applied by the Department of Revenue (for Sharon this is .91).

The assessed value of Sharon high school is approximately $16.1M.

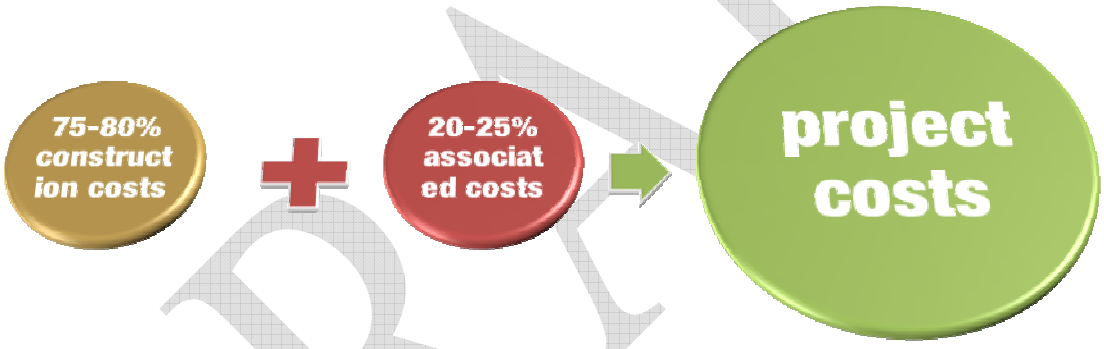
$16.1M x .91 = $14.7M of which 30% = $4.4M

If the repair work being discussed under any scenario costs more than $4.4M full ADA/MAAB compliance is required. The level of work required to meet full compliance for ADA/MAAB would be of such a significant/disruptive nature that it would trigger a Level 3 Building Code renovation.

5.2 PROJECT COSTS

Estimated Construction Cost Estimates (ECC) were developed by Daedalus Projects, Inc. and are included herein dated March 17, 2014 (revised). The costs provided in the matrices below are shown as ECC and projected to project costs (PC) to include the associated costs required to complete a projects such as swing space, design fees, OPM fees, testing and inspections, furnishings, and technology.

Construction Costs	Associated Project Costs	
• Bricks & Mortar • General Contractor Fee • General Conditions • General Requirements • Design Contingency • Construction Escalation • Construction for temporary Swing Space	• OPM Fee • Designer Fee • Other Consultants Fee • Furniture & Equipment • Technology Equipment • Materials Inspection and Testing During Construction	• Owner's Contingency • Construction Contingency • Utility Company Backcharges • Owner's Insurance, etc. • Legal Cost • Moving Cost • Printing Cost



SMMA

Option Details	Option 1	or	Option 2	or	Option 2A	or	Option 3	or	Option 4
Description	**All issues identified in existing conditions report**		**Option 1 plus items 1,2,3,4,12 & 16**		**Option 2 plus items 5 & 11**		**Option 1 plus all 16 items**		**New High School**
Base Construction Cost (ECC) (including siesmic upgrades)	$ 11,582,000		$ 40,744,000		$ 55,643,000		$ 61,638,000		$ 78,624,000
ADA Upgrades	$ 1,282,000		$ 1,156,300		$ 1,128,130		$ 1,082,280		$ -
ACM and PCB removal	$ 2,031,177		$ 2,031,177		$ 2,031,177		$ 2,031,177		$ 2,031,177
Demolition Existing Building Opt 4	$ -		$ -		$ -		$ -		$ 1,198,650
ECC Subtotal	$ 14,895,177		$ 43,931,477		$ 58,802,307		$ 64,751,457		$ 81,853,827
Escalation (4% per annum, assumes 2 years)	$ 1,191,614		$ 3,514,518		$ 4,704,185		$ 5,180,117		$ 6,548,306
Design Contingency (10%)	inc		inc		inc		inc		$ 8,840,213
Construction Manager at Risk preminum (10%)	$ 1,608,679		$ 4,744,600		$ 6,350,649		$ 6,993,157		N/A
Total Construction Budget	**$ 17,695,470**		**$ 52,190,595**		**$ 69,857,141**		**$ 76,924,731**		**$ 97,242,346**
ECC per sq.ft.	$ 88.58		$ 235.69		$ 310.57		$ 329.11		$ 445.25
Modulars	$ 1,690,000		$ 1,990,000		$ 1,990,000		$ 3,471,333		$ -
Associated Costs - Professional services, testing, furntiure, technology etc.	$ 4,423,868		$ 13,047,649		$ 17,464,285		$ 19,231,183		$ 24,310,587
Total Project Budget	**$ 23,809,338**		**$ 67,228,243**		**$ 89,311,426**		**$ 99,627,247**		**$ 121,552,933**
Project Cost per sq.ft.	**$ 119.18**		**$ 303.60**		**$ 397.05**		**$ 426.24**		**$ 556.56**
Estimated durations	**5 years**		**2-3 years**		**3-4 years**		**3.5 years**		**2.5 + 1 yr demo/site**
All Costs in Feb 2014 Dollars									

5.3 MASSACHUSETTS SCHOOL BUILDING AUTHORITY (MSBA) PROCESS

Capital Projects that desire MSBA grant reimbursement must follow a well defined process that is described below: The full MSBA Process can be found on their website http://massschoolbuildings.org/building. The process is subject to change. Please refer to the website for current information.

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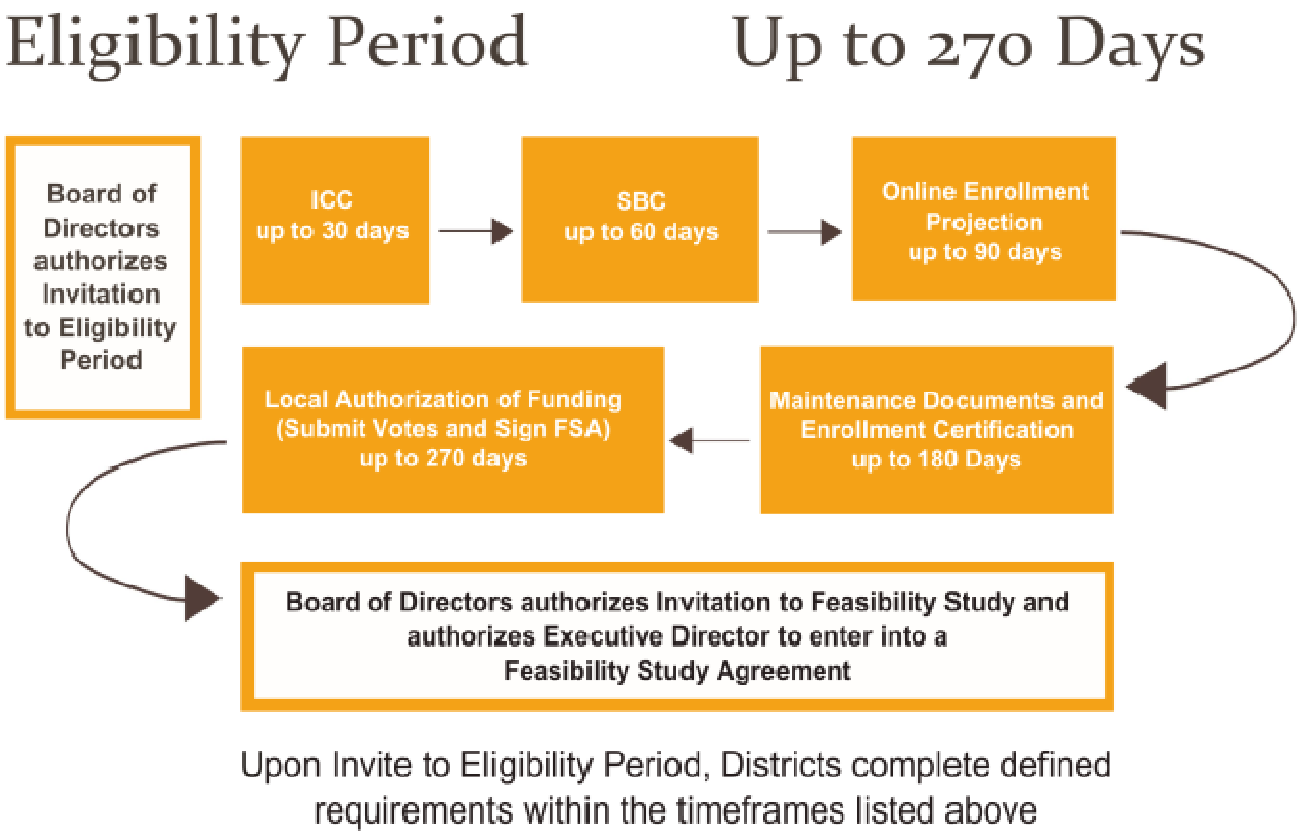

The MSBA has formalized its grant process with the establishment of an **Eligibility Period.** The **Eligibility Period** assists the MSBA with:

- Identifying early whether a District is ready to manage and fund a capital project.
- Determine a District's financial and community readiness to enter the capital pipeline.
- Providing a definitive schedule and identifying needs for planning and budgeting.

The MSBA Board of Directors votes to invite a District into the Eligibility Period based on a review of the District's Statement of Interest ("SOI".) The vote initiates a

270-day period for the District to complete certain preliminary requirements that include:

1) A certification of the Districts understanding of the grant program rules by executing an Initial Compliance Certification;
2) Forming a School Building Committee and submitting the membership to the MSBA for acceptance;
3) A summary of the District's existing maintenance practices;
4) Certification of a design enrollment for the proposed project agreed upon with the MSBA (may not be applicable for Repair Assessments depending on the proposed scope of work);
5) Confirmation of community authorization and funding to proceed (see MSBA Vote Requirements); and,
6) Execution of the MSBA's standard Feasibility Study Agreement, which establishes a process for the District to be reimbursed for eligible expenses.

Districts that successfully complete the preliminary requirements to the satisfaction of the MSBA within the 270-day Eligibility Period are eligible to receive an invitation from the MSBA Board of Directors to the Feasibility Study phase. This phase involves the District utilizing MSBA-specific procurement processes and standard Request for Services ("RFS") templates and contracts to procure a team of professionals to work with the District as a proposed project advances through the MSBA grant process as defined in Module 2.

COSTS ASSOCIATED WITH MSBA PROCESS

- Module 1: Eligibility Period – No Cost – Owner Responsibility
- Modules 3 – 5: Feasibility Study / Schematic Design - Recommended appropriation: $1 million
  - OPM fees: FS/SD – high school only $200,000 Approx.
  - A/E fees: FS/SD – high school only $600,000 Approx.
  - Other fees for Hazmat, testing, etc. $200,000 Approx.
- MSBA Modules 6 & 7: Design through Construction Administration:
  - OPM fee: Typically 3.5% of Construction Cost
  - A/E fee: Typically 10% of Construction Cost
  - Testing, contingencies and expenses are the remainder of the associated costs

MSBA REIMBURSEMENT AND TOWN SHARE

The MSBA program is a grant program and as such there are no guarantees of funding. If Sharon High School is successfully selected for a capital project, it is important to note that the MSBA does not reimburse on all costs associated with a capital project.

The MSBA participated in 52.68% of the *eligible* costs associated with your recent Middle School. The reimbursement percentage is adjusted based upon an annual report from the Department of Revenue and is subject to change. It is likely that a future project would fall in that general range.

Ineligible items include but are not limited to: modular swing spaces, legal fees, removal of asbestos floor tile, budgets which exceed the MSBA caps for building cost, site development costs that exceed 8% of building costs, FF&E and Technology Costs that exceed $1,200 per student, etc.

It is not possible to estimate the potential reimbursement value of each option at this conceptual level of development.

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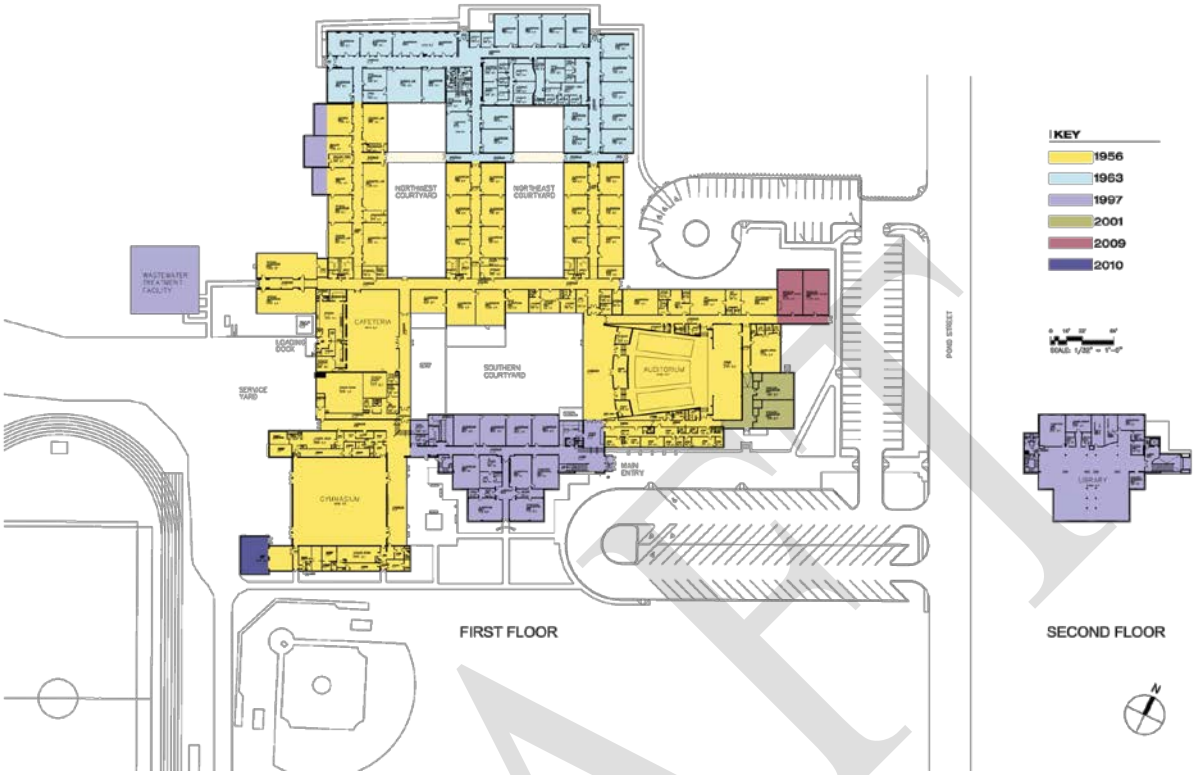

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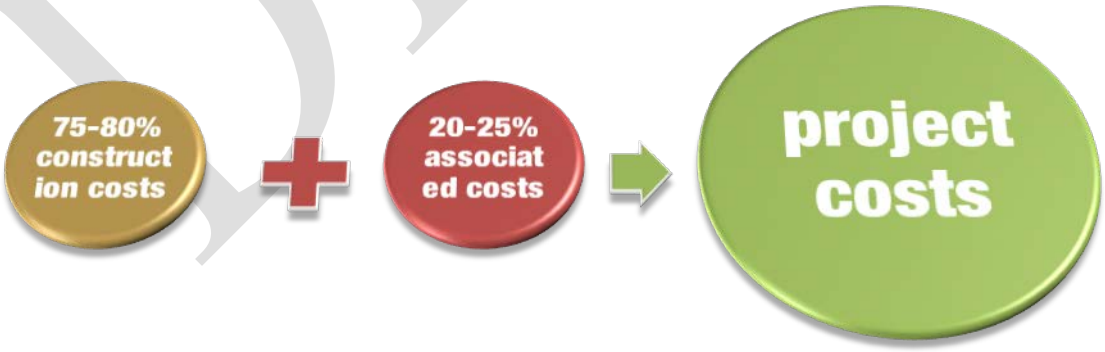

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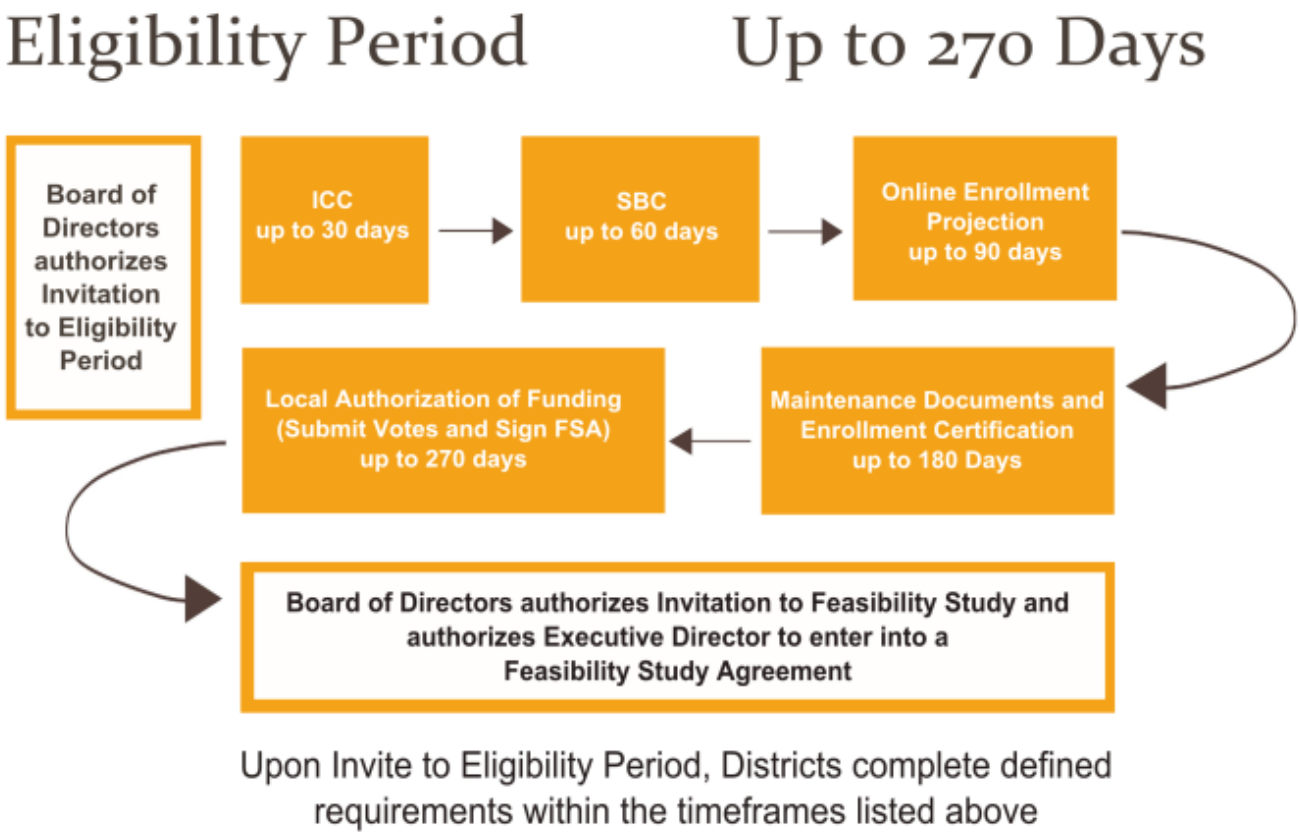

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- Identifying early whether a District is ready to manage and fund a capital project.
- Determine a District's financial and community readiness to enter the capital pipeline.
- Providing a definitive schedule and identifying needs for planning and budgeting.

The MSBA Board of Directors votes to invite a District into the Eligibility Period based on a review of the District's Statement of Interest ("SOI".) The vote initiates a

270-day period for the District to complete certain preliminary requirements that include:

1) A certification of the Districts understanding of the grant program rules by executing an Initial Compliance Certification;
2) Forming a School Building Committee and submitting the membership to the MSBA for acceptance;
3) A summary of the District's existing maintenance practices;
4) Certification of a design enrollment for the proposed project agreed upon with the MSBA (may not be applicable for Repair Assessments depending on the proposed scope of work);
5) Confirmation of community authorization and funding to proceed (see MSBA Vote Requirements); and,
6) Execution of the MSBA's standard Feasibility Study Agreement, which establishes a process for the District to be reimbursed for eligible expenses.

Districts that successfully complete the preliminary requirements to the satisfaction of the MSBA within the 270-day Eligibility Period are eligible to receive an invitation from the MSBA Board of Directors to the Feasibility Study phase. This phase involves the District utilizing MSBA-specific procurement processes and standard Request for Services ("RFS") templates and contracts to procure a team of professionals to work with the District as a proposed project advances through the MSBA grant process as defined in Module 2.

COSTS ASSOCIATED WITH MSBA PROCESS

- Module 1: Eligibility Period – No Cost – Owner Responsibility
- Modules 3 – 5: Feasibility Study / Schematic Design - Recommended appropriation: $1 million
  - OPM fees: FS/SD – high school only $200,000 Approx.
  - A/E fees: FS/SD – high school only $600,000 Approx.
  - Other fees for Hazmat, testing, etc. $200,000 Approx.
- MSBA Modules 6 & 7: Design through Construction Administration:
  - OPM fee: Typically 3.5% of Construction Cost
  - A/E fee: Typically 10% of Construction Cost
  - Testing, contingencies and expenses are the remainder of the associated costs

MSBA REIMBURSEMENT AND TOWN SHARE

The MSBA program is a grant program and as such there are no guarantees of funding. If Sharon High School is successfully selected for a capital project, it is important to note that the MSBA does not reimburse on all costs associated with a capital project.

The MSBA participated in 52.68% of the *eligible* costs associated with your recent Middle School. The reimbursement percentage is adjusted based upon an annual report from the Department of Revenue and is subject to change. It is likely that a future project would fall in that general range.

Ineligible items include but are not limited to: modular swing spaces, legal fees, removal of asbestos floor tile, budgets which exceed the MSBA caps for building cost, site development costs that exceed 8% of building costs, FF&E and Technology Costs that exceed $1,200 per student, etc.

It is not possible to estimate the potential reimbursement value of each option at this conceptual level of development.

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