

## Massachusetts School Building Authority

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### Next Steps to Finalize Submission of your FY 2014 Statement of Interest

Thank you for submitting your FY 2014 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete.** The District is required to print and mail a hard copy of the SOI to the MSBA along with the required supporting documentation, which is described below.

Each SOI has two Certification pages that must be signed by the Superintendent, the School Committee Chair, and the Chief Executive Officer\*. Please make sure that **both** certifications contained in the SOI have been signed and dated by each of the specified parties and that the hardcopy SOI is submitted to the MSBA with **original signatures**.

**SIGNATURES: Each SOI has two (2) Certification pages that must be signed by the District.**

In some Districts, two of the required signatures may be that of the same person. If this is the case, please have that person sign in both locations. Please do not leave any of the signature lines blank or submit photocopied signatures, as your SOI will be incomplete.

*\*Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated as the chief executive office under the provisions of a local charter.*

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

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

**CLOSED SCHOOLS: Districts must** download the report from the "Closed School" tab, which can be found on the District Main page. Please print this report, which then must be signed by the Superintendent, the School Committee Chair, and the Chief Executive Officer. A signed report, with original signatures must be included with the District's hard copy SOI submittal. **If a District submits multiple SOIs, only one copy of the Closed School information is required.**

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

- If a District selects Priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- If a District selects Priority #3, Prevention of a loss of accreditation, the MSBA requires the full accreditation report(s) and any supporting correspondence between the District and the accrediting entity.

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

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

## Massachusetts School Building Authority

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School District   Saugus

District Contact   Michael Tempesta TEL: (781) 231-5000

Name of School   Saugus High

Submission Date   4/10/2014

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### SOI CERTIFICATION

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

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

**Chief Executive Officer \***

Scott Crabtree

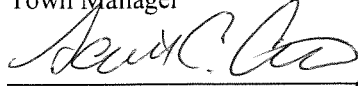
**School Committee Chair**

Wendy Reed

**Superintendent of Schools**

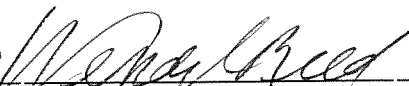
Michael Tempesta

Town Manager



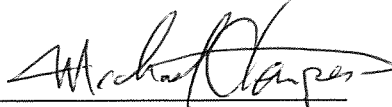
(signature)

Date 4-11-14



(signature)

Date 4-11-14



(signature)

Date 4/11/14

\* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.

## Massachusetts School Building Authority

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School District   Saugus

District Contact   Michael Tempesta TEL: (781) 231-5000

Name of School   Saugus High

Submission Date   4/10/2014

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### Note

Additional documentation including photographs, reports, etc. will be included with the hard copy submission.

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

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

### SOI Vote Requirement

☒ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA.

Potential Project Scope:     Potential New School

Is this SOI the District Priority SOI?     YES

School name of the District Priority SOI:     2014 Saugus High

Is this part of a larger facilities plan?     NO

If "YES", please provide the following:

Facilities Plan Date:

Planning Firm:

**Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:**

**Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 12 students per teacher**

**Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 25 students per teacher**

**Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District?**      NO

**Does the District have related report(s)/document(s) that detail its facilities, student configurations at each facility, and District operational budget information, both current and proposed?**      YES

**If "YES", please provide title, author, and date of report in area below.**

District Improvement Plan 2010-2014 by the District Improvement Plan Committee on June 23, 2011

**Please include a hard copy of these report(s)/document(s) with your hard copy Statement of Interest submittal.**

**Is there overcrowding at the school facility?**      NO

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

**Has the district had any recent teacher layoffs or reductions?**      NO

**If "YES", how many teaching positions were affected?** 0

**At which schools in the district?**

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

**Has the district had any recent staff layoffs or reductions?**      NO

**If "YES", how many staff positions were affected?** 0

**At which schools in the district?**

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

**Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.**

Does not apply

**Please provide a detailed description of your most recent budget approval process including a description of any budget reductions and the impact of those reductions on the district's school facilities, class sizes, and educational program.**

All schools, including the high school, present a needs-based budget annually to the School Committee to improve student achievement, facilities, and student services. The School Committee approves a needs based budget based on meeting goals within our District and School Improvement Plans. The FY2012 budget appropriation to the schools was \$25,710,250. This represented a \$700,000 increase over FY2011. In FY2013 the town had to make reductions due to the reclassification of water and sewer utilities after a forensic audit identified accounting irregularities on the municipal budget. This resulted in over twenty positions being eliminated on the municipal side of government and a \$100,000 cut to the school budget. In spite of this, the Saugus Schools did not have to lay off any teachers because of implementation of a budget freeze, the use of circuit breaker funds, utilization of grant funds, creative programming, the generosity of Parent Teacher Organizations, the business community, sports booster programs, and an increase in co-curricular user fees. In FY14 the school appropriation increased by \$700,000.00. At a subsequent special Town Meeting, an additional \$265,000.00 was appropriated bringing the total to the schools for FY14 \$965,000.00. In spite of increased appropriations in 2 of the last 3 years, the town is seeing a dramatic increase in offsets to its local aid due to an increasing

number of students choosing not to attend Saugus High School. Although the school has established itself as a Level 2 performing school, parents of 8th grade students have long since been aware of the building deficiencies. As the 60 year old building continues to absorb ever increasing amounts of funds to repair, heat and energize space that is excessive with multiple deficient systems, the exodus of students will likely continue and those that remain will not realize the full benefit of any funding increases that must be diverted to operate and maintain this building.

## General Description

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**BRIEF BUILDING HISTORY:** Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

In 1954, exactly sixty years ago, the people of Saugus began the process of constructing a new 113,094 sq. ft. Saugus High School to replace the existing structure that dated back to 1908.

Community planners boasted about new efficiencies. The new 2.2 million dollar brick veneer school would “shave costs by 15%” by constructing a mostly single story “slab on grade” structure utilizing cost efficient “spread footings.”

Planners also touted “provisions made for natural lighting” consisting of large panels of wood framed non-insulated glass windows inserted into non-insulated walls connected by corridors that rely on recessed skylights that have long since provided adequate lighting.

The town owned the expansive 21.74 acre site which allowed for the adoption of design and construction techniques that were being utilized to accommodate the post World War II housing boom.

The building has now exceeded its fifty year projected life by a decade. The structural base, envelope and additions added in 1960 (22,141 sq.ft.) and 1972 (57,965 sq.ft.) have resulted in a sprawling maze-like horizontal edifice totalling 193,200 sq. ft.

The original building was designed off of a main central corridor with two classroom/science wings (the East and West wings), a gymnasium (the Towers gym) and a library on one side and on the other the auditorium, cafeteria, core classrooms and administrative offices. Because new construction must always be horizontal with appropriate “expansion joints,” the lateral footprint of Saugus High School has consumed badly needed field as well as open space. The design and layout are incredibly inefficient, expending excessive amounts of heat and energy to achieve its mission. The time to travel from one end of the building (0.22 miles from “new gym” to WD 29) to the other is excessive as is a 0.11 mile round trip from the A wing to the one functional student bathroom in the C corridor. These sprawling distances and the time needed to travel them, impacts efforts to increase time on learning.

A second phase of construction was done in 1960 and consisted of a number of small additions to the existing school complex. A two-story classroom and link structure was added to the south side of the original classroom wings. This phase of construction also included single story additions for a shop and home economics classroom off the east end of the original shop areas. The last addition to this second phase was a multipurpose room at the west end of the original building.

In 1972, the final set of additions was begun. A large two-story classroom addition was added to the east end the original building’s classroom wing. This phase of construction also included the addition of a new single story gym and locker facility to the north of the multipurpose room. Three other infill additions were also constructed at this time. A small single story library addition located between the original classroom wings, a small single story addition between the shops, and a single story addition to the north of the original cafeteria to enlarge the kitchen and cafeteria areas.

The 1954 design along with the 1960 and 1972 additions are incapable of supporting specialized as well as differentiated learning environments. The totality of all three construction phases, having occurred 17 or more years prior to the enactment of the Americans with Disabilities Act of 1990, are especially harsh and unintentionally punitive to students and adults with physical and sensory handicaps who should be able to access all parts of the building without barriers and obstacles.

Also inherent in the building’s original design and two subsequent additions are 43 entrances which pose security risks that



are unacceptable for a school abutting and easily accessed by off ramps of a major highway, Route 1.

This structure, as well as its mechanical, electrical, ventilation, and fire security system is now well beyond what any reasonable trained observer would characterize as “useful life.” Indeed the 2011 NEASC “Accreditation Report” cited Saugus High School as “outdated, unsafe, and unable to meet the needs of a 21st century learner.”

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

193200

**SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).**

The current 21.74 acre site is accessed by travelling on streets that are residential but is bordered on the West side by Route 1. Its locus is convenient to most parts of Saugus and allows for at least three pedestrian access points and two vehicular access points.

Part of the original construction included a fence that would separate the once sparsely travelled road with the high school grounds. In 2010 Saugus Town Meeting appropriated \$80,000.00 to replace the dilapidated wooden and chain link fence that separated the school from the busy noisy highway. A new 8' composite fence, approximately 1300 feet in length with sound deadening capability, was constructed in its place. One feature of this composite fence system is the ability to remove and relocate it on the existing site or to another location.

The South side borders a retail commercial use. To the East there is a brook and adjacent wetlands. A portion of the Southern end of the property now borders the new Flood Insurance Rate Map (FIRM) developed by the Federal Emergency Management Agency (FEMA) in June 2013 and which will become effective in 2014. Although there is pedestrian access to this end of the building via a narrow footbridge over a brook that connects to Davis Court, it is not possible to have vehicular access of any type without constructing bridge structures in the wetlands area.

To the North lies the main parking lot with 243 parking spaces, a secondary parking lot with 42 parking spaces, two softball fields and practice fields. The sprawling campus style layout of the existing structure along with the two horizontal additions have resulted in inefficient use of the site for sporting events. The fields are in fair condition and other than girl's varsity softball, are only capable of facilitating team practice. All fields are in need of renovation including drainage and irrigation systems. The fields are not level, pockmarked, have rocks close to the surface causing grass to prematurely burn roots.

Acreage that could be used for varsity sports is currently dedicated to horizontal building structure and parking lot space originally designed to accommodate a larger student population.

The current configuration of the building resulting from the 1960 and 1972 additions inhibit emergency vehicle access around the entire building perimeter. These narrow access roads are further limited by building additions that are pronounced protrusions with barely any setback from the pathway of travel. All of this limits public safety vehicles from having timely and safe response to remote areas of the building.

The current structure is not conducive towards future expansion and or renovation as its expansive footprint is problematic now in regards to fire apparatus access. In fact, there is only one side of the structure available for fire apparatus. The turning radius at the Industrial Arts area and also at the southern corner of the WD Wing area does not allow for the Saugus Fire Department's largest apparatus to access the 3 remote sides of the building. The areas that fire apparatus do not have access to include the East Wing, West Wing, the A-Wing, the Multi-purpose Room, and the two-level WD

Wing.

These areas as situated on the current site also prohibit Type-1 fire apparatus (fire engines and aerial ladder trucks) from access. The roadway is also problematic for modern fully equipped fire apparatus that is designed to operate on a paved surface that is 20 feet wide which does not exist nor can exist on this site due to the way the building has been “built out.” NFPA 1 (the fire code) addresses the access road requirement. NFPA 1 requires that a minimum 20-foot-wide road reach within 150 feet (45 m) of all portions of the exterior wall of the first story of a building, measured in an approved route around the exterior and approved by the head of the fire department. Saugus High School does not meet these stringent code requirements as it is currently configured on the site. These limitations coupled with the lack of sprinklers and a modern reliable fire alarm system must be considered when evaluating the overall safety of the building.

Topographically the site is mostly flat and rises to the North where the fields are. Although slight in elevation, this area’s topographical rise has been deemed significant enough to constitute as barrier for persons with disabilities who wish to access the fields from the lower campus. The lowest areas of the site are on the Southerly end near the area designated by FEMA. The 1960 addition, known as the “A” wing has its lower four classrooms below grade and has experienced severe flooding in the recent past.

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

Pearce Memorial Drive, Saugus, MA. This location is bordered by Rte 1 to the West and is between the Essex St and Main St overpasses

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

The Saugus High School building complex is comprised of a number of different structures built at different times and linked together as detailed below. The original school, built in 1954, consists of a cafeteria, auditorium and shop area; classroom wings; and a gymnasium/locker room and administration area. The single story structure is generally founded on spread footings and has a slab on grade first floor, except for the gym, which has a crawl space and the floor is framed with steel girders and wood joists.

Although this type of construction proved economical in 1954, it does not allow for vertical renovation and/or expansion. Subsequent horizontal expansions in 1960 and 1972 have resulted in a sprawling inefficient facility. An energy use analysis performed by SMAA in April 2014 predicts energy cost savings of 40% - 50% if a new, properly sized high school is constructed. SMAA informs us that “the majority of the inefficiencies are attributed to the high energy use in heating, 1.35 therms/SF vs. 0.5 therms/SF average. This is due to the dated and little insulated building enclosure and inefficient HVAC system. We estimated that the school runs at low outside air exchange rates to mitigate the enclosure inefficiencies. One would assume any attempt to improve air quality with the current systems, or even with new efficient HVAC system, will still yield high energy use.” (Attachment K)

The windows are all single glazed awnings and plexiglass infill panels. The original 1954 building has all painted wood frames, but the majority in the additions are metal. This type of window system is not desirable based on the wear on the plexiglass and the poor insulation value of the glazing. All are in poor shape and should be replaced. Original glazing putty may include PCBs and require abatement. The wood frames in the multi-purpose room has experienced extensive damage and rot causing interior wall and floor damage. The majority of the exterior doors are hollow metal and are in poor condition. One door at the Burn’s gym shows extensive abuse and should be replaced.

The roof structure is primarily steel beams and girders with gypsum plank supported on steel columns. The gym roof is a curved tied arch of structural steel with gypsum plank. The structure is mulled with masonry walls, which serve as the lateral support for the steel frame. The exterior veneer is exposed masonry.

The second phase of construction that was done in 1960 consisted of a number of small additions to the original school complex. A two-story classroom and link structure, known as the 'A' wing, was added to the south side of the original classroom wings. This addition has spread footings, a slab on-grade first floor that is actually lower than the surrounding grounds, and open web steel joists with concrete on steel form deck for the second floor and open web joists and steel roof deck at the roof. The frame is supported on steel columns with masonry infill walls and a masonry veneer at the exterior. This phase of construction also included single story additions for a shop and home economics classroom on off the east end of the original shop areas. Again, foundations consist of spread footings with slab-on-grade first floors. The roofs are framed with steel beams with precast concrete planks, supported on steel columns and masonry walls. The last addition to this phase was a multipurpose room at the west end of the original building. This area has open web steel joist and steel roof deck roof framing bearing on masonry walls. The foundation and first floor are similar to the other additions.

In 1972, the final set of additions were started. A large two-story classroom addition was added to the east end of the original building's classroom wing. The construction for this area is spread footings and slab-on grade at the first floor, steel beams and open web steel joists with concrete slabs at the second floor and steel beams and steel joists with steel roof deck at the roof. The steel frame is supported on steel columns with masonry infill walls and has a masonry veneer. This phase of construction also included the addition of a new single story gym and locker facility to the north of the multipurpose room. Construction is similar to the classroom addition. Three other infill additions were also constructed at this time. A small single story library addition located between the original classroom wings, a small single story addition between the shops, and a single story addition to the north of the original cafeteria to enlarge the kitchen and cafeteria areas. Construction for these areas is similar to the above, except that the cafeteria/kitchen addition has a steel and concrete framed floor with a crawl space underneath.

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

**Year of Last Major Repair or Replacement: 0**

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

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

**Year of Last Major Repair or Replacement: 1991**

**Type Of ROOF:** Rubber membrane.

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

The rubber membrane roofs are a combination of flat, vaulted, and pitched surfaces. The last re-roofing took place in 1991. At that time some skylights were replaced and many were roofed over. With a minimum life expectancy of ten years, Tappe stated in 2002 that the current roof would probably need replacement by 2008 at the outset. Now six years beyond 2008, evidence of roof deterioration is commonplace often manifesting in leaks in the library, East Wing and A Wing. The existing insulation under the rubber roof is compressed and diverting water the wrong way. The school will need a new roof.

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

**Year of Last Major Repair or Replacement: 0**

**Type Of WINDOWS:** The original 1954 building has single pane windows with painted wood frames. The 1960 and 1972 additions are metal framed. None are insulated. All are poor. There has been no major repair or replacement of windows at the facility.

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

**MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).**

The Mechanical and Electrical System consists of the original main switchboard located in the main electrical room. The service rating is at 1600 amp, 120-208 volt 3 phase, 4 wire manufactured by General Electric. It has a main switch section with two distribution sections that feed 19 sub-panels throughout the building along with pumps and HVAC equipment in the boiler room. Panels are located in the corridors. Federal Pacific Company (no longer in business) manufactured the parts for the 1972 wing addition. The power company is National Grid. The existing lighting and power panels are circuit breaker type and are rated at 120-208 volt 3 phase, 4 wire. Expansion of circuit breakers is limited and existing panels

are in poor condition. There is concern for the limitation on electrical outage to support expanded technologies in the building.

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

**Year of Last Major Repair or Replacement: 2003**

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

Steam oil fired boilers were replaced with natural gas boilers and fuel delivery system upgraded for natural gas.

However, abandoned oil tanks remain within the building along with outside underground storage tanks that have also been properly filled and abandoned.

**Has there been a Major Repair or Replacement of the HVAC SYSTEM ? NO**

**Year of Last Major Repair or Replacement: 0**

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

**Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? NO**

**Year of Last Major Repair or Replacement: 0**

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

**HEATING FUEL: Which of the heating fuel types below does your building primarily rely on for heating?**

Natural Gas

**BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).**

The building interior includes flooring systems, finishes, ceiling, and lighting. The floors are finished with vinyl asbestos tile and vinyl composition tiles. Most of the main corridors have been tiled over to "encapsulate" asbestos bearing tiles beneath. The tiles in the remaining areas of the building including the 'A' wing are original and worn through in spots. In the industrial areas the floor is painted concrete and in fair condition. Administrative offices are carpeted or VCT. A new carpet has been installed in the library and administrative office. The auditorium stage and original Towers gym flooring has been either replaced or refurbished in 2010.

All core classrooms have ACT or plaster and are acceptable, and in fair to acceptable condition depending on building location. The original gym was recommended for replacement of acoustic ceiling panels and was started in 2010 and partially completed at that time. Ceiling tiles in corridors are in poor condition, missing, or broken. This was addressed in 2010 by the Town maintenance department with replacement in areas as needed. There are some areas with glue laminate beams (library) that are original to the building.

The interior lighting system is the original 1954 installation with a retrofit of the fixtures in late 1990's that included 32 watt T-8 lamps and electronic ballasts. The existing lighting in the 1972 addition has 34 watt T-12 lamps and energy saving magnetic ballasts. Incandescent lamps are still used in the boiler room and mechanical areas. All exit lighting in the original 1954 building has been updated but the exit lighting in the 1972 addition area remains lit by fluorescent lamps. The gymnasium area is lit by HID high bay fixtures and incandescent fixtures (for emergency).

There is an emergency generator that powers lights and some designated circuits are tied to it. Exhaust systems, boilers, heating equipment nor the cafeteria are tied to any emergency power. These limitations prevent Saugus High School from ever being utilized as an emergency shelter site. There is an emergency lighting system powered by a generator in older sections of the building. The 1972 addition areas of the WD Wing and the Burns gym use rechargeable batteries for emergency lighting.

The fire protection at the Saugus High School is in need of a complete updating to a Class A fire alarm system and full

coverage sprinkler system. The fire alarm system dates back to the original construction and in turn the parts are difficult to obtain when needed. The fire alarm devices that need total replacement are; the fire alarm panel (which is run through antiquated fuses); a complete wiring upgrade (new smoke detectors cannot be installed on existing wiring); also hard wired coverage for all areas needed to be protected via the fire code and the plumbing code. Although currently working, the fire alarm system cannot be tied into any new system. It cannot be upgraded from a heat detector system to a heat and smoke detector system. A sprinkler system will be needed to upgrade to a Class A fire protection system.

The auditorium stage venting is currently malfunctioning. Fire safety, related to antiquated electrical controls and overhead stage lights, have been noted as concerns.

Both gyms have issues with flooring, ceiling tiles, lighting, athletic equipment, bleachers, heat and ventilation units and condensation pumps.

The cafeteria and teacher's cafeteria is in need of complete renovation including modernization of lighting, ceiling tiles, flooring, and kitchen line equipment.

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

The established curriculum at Saugus High School reflects an established program of studies that is comprehensive and meets the requirements for MassCore. The expectation of the MA DESE Race to the Top initiative under college and career readiness is that not less than 85% of high school graduates attending post-secondary schools must complete MassCore. In order to maintain a high level of integrity for the schools program of studies, particular to the sciences, all instructional settings must be functional at the highest standards.

The science lab classrooms for biology, chemistry, and physics at Saugus High School do not support learning expectations or equity in delivery of instruction for all students. All of the science labs are prohibitive in support of the science curriculum due to a lack of adequate electricity, gas supply, sinks, instructional space and equipment, and storage of chemicals and supplies. MA Education Reform (2010) has placed a greater emphasis on student performance in the sciences and Saugus is concerned that its science labs are not conducive to a high standard of learning. Staff are operating in a 1954 classroom setting with equipment that is either broken or obsolete, and in some cases non-existent. Not all program components can be delivered effectively or equitably due to these severe physical limitations.

Due to ADA issues, students with disabilities cannot access many areas of the building. The guidance suite is inadequate and cannot house all the counselors and there are no student work spaces to research college/career opportunities. There is a lack of technology in classrooms due to constraints of providing additional power.

The size and space in the hallways creates overcrowded situations during class changes, particularly if students have their locker doors open. The lockers are too numerous and too small for the current student population. The equipment is outdated and unable to be fixed at any reasonable cost.

The athletic program is seriously compromised due to the poor condition of the limited field space as well as the inability to create new field space as a result of the building's horizontal build out. But for a few team sports, all varsity games must be played off site resulting in cost increases for transportation to games. The fields are not ADA compliant and are poorly lit as is the parking lot that serves them.

**CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, and a description of the media center/library (maximum of 5000 characters).**

The core educational spaces within the facility are reflective of the 1954 original structure or the 1960 and 1972 additions.

The average square footage of the classrooms are as follows:

Non - Science - 751 sf

Science - 981 sf

Overall Avg. - 838 sf

There are approximately 66 classrooms in the building available for instruction. Nine of those classrooms are committed to science labs and are dispersed throughout the building. All classrooms and science labs are undersized when compared to current MSBA standards.

Four of the undersized science labs located in the East wing, 950 square feet each were destroyed by fire in 1963 and renovated in that year. The remaining 5 Science Labs located in the WD wing are composed of 3, circa 1972 science classrooms and 2 converted business education classrooms, ranging between 930 square feet and 1140 square feet. The later two science classrooms were deemed usable due to the presence of a sink. Science instruction and safety are limited by the inadequate number of fume hoods, the lack of functional gas jets, compressed air, adequate electrical, data connections and water. Students have limited access to individual or group lab stations. None of the current science lab spaces meets ADA accessibility requirements. Four of the 9 science classrooms minimum safety requirements are being met with portable eyewash stations. Safety showers are present and functional in seven of the nine science classrooms. Equipment and chemical storage facilities are undersized by current MSBA guidelines. There is no specialized chemical waste drain system for the science classrooms. Used chemicals are stored in containers and collected periodically. Some gas cocks had been removed due to vandalism. In one classroom, the gas is shut off by the teacher at a main valve. Vandalism of sinks in some science classrooms has resulted in the removal of the faucets while the sinks remain.

The electricity is characterized by the 2002 Tappe Existing Conditions report as inadequate to support technologies. In 2011 the Library-Media Center was converted to a Learning Commons, transitioning it into the virtual / technology age. The library, learning commons consists of the original 3000 square foot library and an 1350 square foot addition to the space in 1972. The space is undersized by 21st century standards. Some of the stacks in the learning commons are not ADA/CMR 521 compliant. The library commons was renovated during 2011 to meet 21st century learning which includes video conferencing, electronic research, Smart Board, electronic referencing, and ebooks, as well as standard library references/books. Although every effort has been made to modernize the existing space, the building's aging structure, including recent roof leaks which prohibited student access to the entire area, has presented many physical challenges to sustain the school's efforts to modernize.

The desire to bring into the curriculum an applied science, technology and engineering program helps to further illustrate the inability of this building to meet modern educational needs. Although much space is dedicated to vocational programs no longer offered, that space as it is configured and designed is not conducive to applied authentic learning that is associated with a combination classroom/lab. Specifically these original "shop areas" have very small classroom spaces, large office and tool crib spaces, and fixed mechanical and power equipment. Thus while there is plenty of "square feet," that footage is impractical, and less than optimal, for the type of classroom necessary to support the type of technology and engineering program we seek to offer.

**CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).**

Capacity and utilization of the high school facility is primarily a result of adaptation from the original 1954 building designed for 1200 students and the 1960 addition to accommodate enrollment up to 1500 students. These original designs were focused on meeting the needs of a mid 20th Century curriculum for students in grades 10, 11, and 12 where large study halls were common and special education was non-existent.

It was reported to the community in July, 1953 by school officials that "the business education department will include two typing rooms, a stenography laboratory, a business education laboratory, machine room and a general practice room."

These rooms have long since been converted to core classrooms but their varied sizes, design and storage space has

inherent limitations to scheduling staff who have larger class size loads. One room in the original “C” wing was “partitioned” with an accordion style wall that does not prevent sounds from travelling between the two rooms.

The original “homemaking suite” was designed to facilitate a “clothing lab,” “foods laboratory,” and “home-making area.” These rooms have since been converted to an area for art and special education classroom space.

Industrial Arts was also a centerpiece of the “new” 1954 building with attention given to a new “woodworking shop, general shop, and graphic arts laboratory.” It was reported that “the shops will be designed to teach various trades, including automotive repairing.” It should be noted that since 1964 Saugus has been one of twelve communities which comprise membership of the Northeast Regional Vocational School District. Saugus students seeking a vocational education comprise the third largest student population at that facility. The aforementioned spaces at Saugus High School are now used as home for the town’s building maintenance department, a limited adult education program for furniture repair and refinishing, an alternative behavioral program and one student classroom utilized for woodworking technology.

Three classrooms in the 1972 addition have been converted to serve as the community public access studio known as SCTV. This remote part of the building, accessible by its own entrance, offers educational experiences for students that are utilized several times per week by the video production and journalism classes at Saugus High School.

Four original classrooms in the original East and West Wing and two classrooms in the 1972 addition have been converted to computer labs. One of the classrooms converted to a computer lab in the East wing has since been converted to an interactive foreign language lab. A classroom in the A wing has been converted to a curriculum office.

Since the current enrollment is approximately 738, the lack of mixed use small and/or flexible size rooms means that oversized classrooms are utilized for the instruction of small groups of students. The Saugus Public Schools are committed to providing a continuum of learning for all students and seek to expand the range of services, support systems, and technologies to facilitate that goal.

We seek to effectively integrate and mainstream special education services as well as specialized programs such as ELL, autistic programming, and behavioral programs within core learning areas rather than having these dispersed throughout the building. These programs and services also need to take place in properly designed spaces to meet individual instructional needs. We lack defined space for OT, PT, and other support services. We lack dedicated private office space for specialized service providers such as psychological counseling and testing. Whether it be our small group instruction within academic disciplines and life skills programming that lacks necessary, complete spacing and facilities, the layout and design of SHS inhibits the district’s ability to achieve its stated goal of “providing a learning environment that incorporates the best curriculum and technologies so each student may achieve their individual success.”

The district is currently planning a new program for students ages 18-22 which we would like to house in the building. We do not have the appropriate space for this program at this time. We lack the opportunity to develop collaborative partnerships with regional agencies that would result in less out of district placements.

A feasibility study is needed to explore more effective and efficient use of overall space inside as well as outside of the building, look at opportunities for consolidation, and determine whether the solution should be a renovation or a replacement of all parts of the building.

**MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district’s current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).**

The 2011 NEASC Accreditation Final Report cited numerous building deficiencies, especially in the areas of access for the disabled and the science labs. In 2011, the Town addressed some of the areas identified in the NEASC report. Specifically in the A wing, a new elevator was installed along with a handicapped ramp towards the South entrance to that

wing. In spite of this, the approach to the “A” wing for persons with disabilities must take place from the East and cannot take place from the West.

Maintenance and capital repair is limited as the Town commits annually approximately \$600,000 for building maintenance for the entire Town. Most of the Town’s effort is preventive maintenance with completion of projects as necessary and when required. Saugus High School is the headquarters for the town’s building maintenance staff, which includes a plumber, an electrician and two craftsmen. This staff uses School Dude software to receive reports and monitor repairs. The building’s custodial staff performs seasonal, routine cleaning and maintenance of surfaces and mechanical systems throughout the year. Due to the high incidence of need at this aging structure, much of the Town’s maintenance time and resources are directed to SHS.

In 2003 the Town replaced all 4 boilers at a cost of \$600,000. Saugus voters approved a debt exclusion so that this cost would not come from the town’s levy. At the time the boilers were replaced the building was converted to gas from oil and the boiler room compressor was replaced. Although abandoned oil tanks were properly secured according to environmental regulations, they remain underground as well as in an enclosed room in the boiler room. The School Committee submitted a SOI in 2006 for multiple school projects which did not receive action.

Over the past five years Town Meeting authorized borrowing:

- \$80,000.00 to replace the fence along Route 1 that separated the school ground from the highway.
- \$96,000 to address some of the worst ADA compliance issues
- \$72,000 to repair/replace some univents in the building

The school system has addressed capital projects listed in their plan through use of rental revolving accounts and other alternative funding. In 2010, the school system utilized approximately \$125,000 from those sources to address such items as refurbishing the surfaces and systems in the the main high school gym and the auditorium including some electrical improvements, flooring repair and refinishing, and equipment upgrades.

In 2010 MA DESE Level 3 audit indicated that “many of the school system’s buildings date from the middle of the last century and are in need of renovation or replacement.” That report acknowledged that the limited budget Saugus had available for capital repairs was inadequate at that time to fund the types of repairs necessary.

The Town Meeting appropriated \$37,000 in January 2014 to fund the development of a five year capital improvement program. All school buildings and town facilities will be included. Initial data collected on Saugus High School is consistent with the deficiencies previously identified.

The capital needs at Saugus High School include nearly every major mechanical, electrical, life protection, access and energy related systems. Considering that this 60 year old building has exceeded its useful life, capital renovation would not be cost efficient nor cost effective. The public has expressed, as articulated by their representatives in Town Meeting, to seek a new high school rather than spend dollars on a sub-standard unsafe building. Saugus Town Meeting voted unanimously to support, as did the Saugus electorate, by a vote of 2,994 - 1,854, to overwhelmingly support the 2011, 18.9 million partnership with MSBA to repair the Belmonte Middle School, a project that has been successfully completed.

During the early part of 2012 the Superintendent of Schools pursued the MSBA Science Lab Initiative to authorize a feasibility study for new high school science labs. This resulted in a request made to the the Saugus Town Meeting on July 16, 2012. Given the choice of investing millions of dollars only for new science classrooms in a building that had numerous systemic deficiencies that had already been reported to Town Meeting by a special investigation committee created by Town Meeting, including deficiencies affecting the safety and well being of occupants as described that evening by the Saugus Fire Chief, Town Meeting voted 36-1 to request that the the Superintendent of Schools file a “statement of interest” for a new Saugus High School.



Town Meeting made this difficult decision because it did not agree with the acknowledgement made on the Science Lab Application that suggested the building was not a threat to the health and safety of the occupants.

**Priority 1**

***Question 1: Please provide a detailed description of the perceived health and safety problem(s) below. Attach copies of orders or citations from state and/or local building and/or health officials.***

Saugus High High was built 60 years ago in 1954 with a projected life of 50 years. It has had two additions in 1960 and in 1972. Mechanical, electrical, HV, envelope, roof, and structural systems and most critical building systems within Saugus High School are past their useful life. In some cases, several systems or elements within the building can be repaired and/ or replaced. However, several deficiencies create health and safety concerns for the students and staff. Some of these deficiencies have had impacts to the School's accreditation, as is indicated in the NEASC Report. (Attachment A)

The areas of health and safety concern are as follows:

- Fire Protection and Security
- Building Security
- ADA Compliance
- Hazardous materials including asbestos and lead
- Systems including electrical, roof, mechanical, envelope and structure

**Fire Protection and Security**

The building has no fire protection sprinkler system. The fire alarm detection system is original to the building, is a zoned system that is no longer made. It lacks the capabilities needed for protecting and integrating with today's building systems (e.g. shutting down mechanical systems). (Attachment A) It often gives off false alarms, 200 reported over the last 5 years. Repair parts for this system are impossible to find and the fire department has determined on several occasions that the entire system should be replaced. The system lacks smoke detectors, Carbon Monoxide detectors and visual alerts to meet current code requirements. The majority of the fire detection is done is accomplished heat detectors. Few are newer devices and many are the metal dome type, original to the building. There is no elevator recall system in place for either elevator system in the facility (the system cannot support recall).

There are no fire hose cabinets at the stage in the auditorium as is required by codes. The stage fire curtain is activated by a fusible link; fire alarm heat or smoke detectors are not part of deploying the fire curtain.

Smoke doors in corridors and fire doors at stairs are held open by floor stoppers or wood wedges only, and will not release automatically in the event of an alarm. Cross-corridor doors have wired glass, no longer allowed as safety glazing under current code. Doors are non-latching, and do not have a label confirming fire rating. Most exit doors throughout the building have "loopable" panic/crash bars, which do not meet current code requirements for exit devices. Several locations exist within the building where the travel distance to an accessible exit exceeds the maximum distance allowed by current code. (Attachment A)

The largest apparatus of the Saugus Fire Departments cannot access three sides of the building. The areas that fire apparatus do not have access to include the East, West, 2 level WD, and A-Wings, and the Multi-purpose Room.. These areas as situated on the current site also prohibit fire engines and aerial ladder trucks from access due to the design and space limitation of the perimeter roadway which was narrowed when previous additions were added.

**Building Security**

The sprawling nature of the Saugus High campus coupled with 43 dispersed entry and exit points, is a logistical nightmare to monitor or secure by staff or by police. The perimeter of the building is inaccessible to motorized police surveillance and daily inspections. The police department has noted the large amount of unmonitorable areas (dead spaces) surrounding the school.

The Saugus Police Chief has shared his concerns because of the sprawling nature of the building and non-uniform layout. He feels an interior search of the building in the event of an emergency situation would be a monumental task that would take an extremely long time. In the event of an emergency situation, such as a school lock down, it would take a large number of personnel to secure the outside. Daily/routine site checks of this property are very difficult because of the exterior outline. A thorough check of the property is time consuming and difficult to accomplish.

In the event of an emergency evacuation from any point of the rear of the building there would be very limited space to safely stage and account for students and faculty.

The current Saugus High School building and how it is situated on the property poses difficulties for law enforcement in terms of safety and security for daily/routine activities as well as forecasting responses to an emergency event.

There is only one working camera focused on the front entry way and the locking door is the primary entry point for all students staff and visitors. It lacks a security vestibule and a recording system. The hallways, common areas, and the other 42 doors have no security cameras or alarms. The few alarms present at Saugus High School are intended for non-occupied theft prevention and are not designed as an intruder alarm. Insufficient security and ambient lighting is also a concern in many corridors and in most if not all of the exterior of the school.

### **ADA Compliance**

None of the 43 doors are handicap accessible, due to either the lack of ramps or automated handicapped entrance systems. Science labs, door hardware, nurse's suite, auditorium, gymnasium, bathrooms, and hallway slopes are all non-compliant. Elevator sizes do not meet current accessibility standards, too small for a gurney. ADA compliance is one of the reasons why NEASC has placed SHS on warning status.(Attachment E)

The sprawling nature of the building is illustrated by the nearly ¼ mile distance between the upper WD Wing and the Burns Gym. This poses an undue hardship on persons with disabilities. The major areas that need to be addressed based on the current 521 CMR Mass Architectural Access Codes were highlighted in March 2014 by a Certified Access Monitor for the Mass Office on Disability. Based on the results, in his opinion, the cost to address these major accessibility issues alone would be excessive and would indicate that a new facility would be considered. (Attachment C)

### **Hazardous Materials**

There is friable, non friable and suspected asbestos in 132 locations and spaces throughout the building. (Attachment D) Tile is worn through to the concrete at some of the cross corridor doors and is cracked/broken at many of the door frames in the corridor walls and at exterior door thresholds. Areas where the original VAT flooring remains are in poor condition, with many broken, cracked, or missing tiles exposing the mastic below. Basic maintenance and repairs require extreme protocols to protect health and safety.

Lead is present in soldered joints throughout the domestic water supply systems and paint throughout the building. In the event gymnasium, mechanically fastened sections of white EPDM roofing have been applied over portions of the original ceiling to help mask damage. This installation is non-code compliant according to the fire department and has been discontinued but sections which were installed previously have not been removed and the material represents a health and safety concern.

There is a lack of chemical waste system to secure chemicals in the science labs.

### **Building Structure and Envelope**

Exterior walls are not seismically reinforced to conform to current codes. The chimney is badly cracked and in need of reinforcement. Efflorescence (white staining) is present at the exterior brick walls in many locations, indicating moisture within the walls. The windows are original to the building and the additions. They are not insulated nor energy code compliant. An infestation of termites has taken place in the East Wing which has become manifested in rooms E-13, E-15, and E-16. They have also been present in the "A" Wing and the "W" wing. Woodwork, and in one room, a bookcase, has been destroyed as a result. One teacher has had to remove students on several occasions when the termites suddenly emerge from their feasting to become airborne. This situation necessitates ongoing intervention by a certified pest control company costing the district thousands of dollars for pest control.

Ceiling heights vary throughout the building and in some locations are low (7'-2" in corridor connection between the original 1953 and 1972 addition), and space above ceilings is minimal, with ceilings tight to structure in many locations. The ceiling in the main gymnasium is exposed fibrous insulation panels where the exposed surface of the panels has been damaged/torn exposing the fibrous insulation, allowing the particulates to become airborne. Tripping hazards are created by exterior curbs and interior stair nosings that have exceeded useful life, are broken or irregular.

### **Building Systems, Electrical and Roof**

#### **Electrical:**

The power is undersized for the needs of the school. Electrical panels are throughout the corridors with unlocked doors. Extension cords exist in the majority of classrooms that have, on average, three receptacles. Extension cords are used in the auditorium on and near the stage as original receptacles no longer function.

Parts are unavailable for original panels. There are coaxial cables and data wiring secured to the wall surface in the corridors which get tapped at each classroom to support the wall mounted TV monitors. The classroom has many exposed cat 5 cables and coaxial cables to support the technology equipment within (e.g. smart boards, PCs and laptops). Circuit breakers often trip due to the increased loads associated with technology. Many of the interior lighting manual controls have been removed and replaced with blank cover plates. The corridor panel circuit breakers are being used as light switches, in lieu of the standard manual toggle switches. Circuit breakers are not design to function as light switches. (Attachment A)

The standby power system is not configured as a life safety system. A full system replacement is required. The current system is inadequate and may present safety problems. (Attachment A)

Existing lighting in the original 1954 building consists of fixtures that were retrofitted in the mid 1990s with 32 watt T-8 lamps and electronic ballasts. The existing lighting in the 1972 addition still has 34 watt T-12 lamps and energy saving magnetic ballasts. The existing lighting system contributes substantial glare onto computer screens present in classrooms. Most of the building's outlets are not Ground Fault Interrupter (GFI) circuit breakers. This is a concern where ground level corridors become wet during rain events or during floor stripping and cleaning maintenance procedures.

The auditorium lighting control system is original to the facility, is available to be operated by anyone and is often being utilized by untrained non-technical staff. The interface system is inappropriate for operation by unqualified persons and a full system replacement is required. The current system is unable to support the facility safely, effectively or efficiently. The system capacity and configuration is inadequate for supporting the school academic programs, technology needs and mechanical systems. (Attachment A)

A "lack of adequate electrical power to support the science labs" as well as a "lack of security and lighting in the parking lots" were two of the thirteen reasons NEASC elected to place the school on probation. Both are safety issues.

The building's normal and emergency lighting system requires substantial upgrading. Parking lots and pedestrian paths are not sufficiently illuminated.

**Roof:**

The roof, replaced in 1991, is well beyond its useful life. (Attachments A + B) Water pooling is increasingly common as the roof deteriorates further with age. Algae, mold and mildew are suspected in ceiling areas stained from repaired roof leaks.

**HV System:**

The HV system, other than the boilers and compressor, is original to the building. Uneven heating conditions, broken ventilation systems and lack of air exchange capability in the expansive corridors pose health and safety concerns. The automatic temperature control panel is extremely antiquated and appears to be original to the building. This accounts for the uneven distribution of heat in the classrooms causing staff to shut univents or open windows during cold days.

There are a number of Heating and Ventilating only (H&V) air handlers spread throughout the building. These are generally in poor condition and many have been abandoned due to the lack of replacement parts. All are original equipment. The 12700 cfm unit that served the cafeteria was abandoned ten years ago. The only ventilation in the cafeteria is a 6300 cfm exhaust fan and a natural draft floor vent along one wall. The kitchen exhaust fans have no make-up air, or transfer grills to the Cafeteria. The two 11000 cfm units in the auditorium have been abandoned.

As was identified in the 2001 Tappe report, "corridors are not provided with any means of supply or exhaust ventilation. This is non-compliant and should be improved upon." Air quality problems are created by malfunctioning heating, ventilating equipment and frozen dampers throughout the building.

In several areas of the building, including locker rooms and the auditorium stage, original fin tube radiators are missing covers and could pose a danger.

Gas piping to 4 of the 9 science labs has been permanently decommissioned due to leaking valves and aging delivery systems. None of the science lab sinks are connected to a local dilution or neutralization device or drain into a central acid waste system, nor are constructed using acid resistant components.

Several of the 60 year old original steam pipes have burst over the last couple of years, usually at fittings, joints or elbows. These breaks result in disruption of daily programs and additional maintenance costs. Fortunately no injuries to students or staff have yet resulted from these failures, but the concern is always present. Delays in the detection of these problems have lead to mold on several occasions. The exterior "A" wing corridor between the "E" and "W" wings is cold because the convectors were abandoned, due to the pipes failing in the tunnel below.

As identified in the Tappé Report, today many showers in the Gymnasium locker rooms continue to be inoperative.

Other than a few window air conditioning units, the building has no air conditioning and many parts of the building are barely usable in later spring and summer months.

**Priority 1**

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

**Fire Protection and Security:** The town has had an alarm company repair the existing fire alarm panel. Several battery operated CO monitors have been installed near the boiler room. Fire extinguishers are inspected and serviced each year.

**Building Security:** The building principal is currently advocating for enhanced camera security. It should be noted that due to the footprint of the building it would not be possible to provide the access for fire and police on the entire perimeter. The supervision of hallways and front entrances by high school staff on duty and minor repairs to doors and other safety equipment as needed, serve as the high school's safety system. A camera system that did exist in the cafeteria when a bank branch was housed there is no longer functioning and has been disabled.

**ADA Compliance:** Some ADA compliance related improvements took place in the late 1990s in the auditorium and in the C&W bathrooms. In 2011-2012 an elevator was built in the A-Wing to allow for handicap access to this split level wing, however this addition fails to meet the required, dual point egress from the wing. In 2013, in response to NEASC placing the school on warning status, the town installed an exterior ramp to that wing. However, numerous non-compliance issues remain (Attachment C) Two doors have been added, one in the learning common to provide access to our courtyard and another in the A-Wing connecting hallway that serves as the building's second handicapped exit.

**Hazardous materials including asbestos and lead:**

Due to the expansive corridor lengths, exhibiting 60 years of wear, the building maintenance department has focused its limited resources on covering VAT tiles in many of the corridors with VCT tile. Remaining tiled classroom and corridors have the original (VAT) tile flooring with repairs made as necessary. Specific maintenance protocols, as recommended by the 2012 AHERA report, (Attachment D) are closely followed by building maintenance and custodial staff.

Water quality is tested by the DPW department with continual monitoring for the presence of lead.

**Systems including electrical, roof, mechanical, envelope and structure:**

Electrical repairs are made as necessary, however due to the nature of the limited electrical service and the availability of replacement parts, system upgrade is not feasible. The transformer feeding the building is located outside the building and was replaced due to failure in 2009. In 2011 the high voltage feeder cables that feed the transformer faulted and they had to be replaced.

The existing ceiling structures and current power distribution system makes upgrading the existing electrical or lighting systems extremely challenging.

Roof repairs are a high priority for the building maintenance personnel. Repair patches are ongoing along with inspections and redirecting pooled water where possible, however many roof drains are improperly positioned and need to be relocated to improve roof drainage.

Original boilers were replaced in 2003 and the building was converted from oil to natural gas. The natural gas service was increased to meet the boiler load. All other systems, including the majority of the HV delivery system, electrical service and distribution systems and the plumbing distribution system, are 42 to 60 years old and beyond their useful life.

Steam leaks are repaired immediately when found. Univent motors in the classrooms have been replaced and all are cleaned and serviced each summer. The pneumatic controls throughout the building are in fair condition and are no longer serviceable. The compressor and air dryer were new in 2009±. Duplex pumps in the main classroom wings have been recently replaced but the

receivers are original. At that time the tubing was blown down but, in several areas, water, oil or dirt obstructs effective operation.

The building maintenance department performed extensive repairs and rebuilding of the badly rotted and decomposed window walls in the multi-purpose room. They also replaced window walls in the A Wing corridor and are continually replacing ceiling tiles that are damaged as a result of roof leaks or vandalism due to the low ceiling height. Sagging ceiling suspension systems and bowed ceiling tiles also have potential as health and safety threats.

Several other small renovations to the building, including a floor resurfacing ("go-over") project in 2008 and the Towers Gymnasium Floor and the gym infrastructure including new scoreboard floor resurfacing and relining for the first time in 2012. Original Gymnasium bleachers have been reinforced with steel but should be replaced.

The majority of the repairs and additions to all aforementioned infrastructure systems have been conducted as needed. Individual systemic upgrades are cost prohibitive as all systems are beyond their useful life.

SMMA found that that, "while the District and its Facilities Maintenance staff have made great efforts to maintain the building, working to implement repairs quickly and adhering to regularly scheduled upkeep tasks, the building and its systems are well beyond their useful life. Despite best efforts we understand and observed that the District's ability to address the identified deficiencies of a building of this age and condition far exceed any reasonable and typical operational budgets." (Attachment A)

**Priority 1**

***Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.***

The obvious concern related to instruction is focused on safety and security. Excessive false fire alarms have had an impact on time on learning. Extensive travel distances, nearly ¼ mile in one case, affect time on learning.

Uneven heating, the presence of termites, sub grade classrooms prone to flooding, the presence of friable and nonfriable asbestos, steam pipes prone to leaks, excessive energy consumption and on going roof leaks that necessitate immediate attention are taking a toll on the community budget, staff morale and student learning.

In a time where our district, state, and school are focused on initiatives including; student achievement, new teacher evaluations, common core curriculum, differentiated instruction, high stakes testing, accountability, new scheduling options, technology, and updating policies, lack of security and a building that has exceeded its life expectancy by a decade is a problem that is severely limiting the successful attainment of these goals by the current staff and students that are genuinely concerned about the health and safety risks posed by Saugus High School's existing structure.

**Please also provide the following:**

In the space below, please tell us about the report from an independent source that is not under the direct control of the school district or the city/town, stating that the facility is structurally unsound or jeopardizes the health and safety of the students. The entirety of this report should be submitted in hard copy along with the hard copy of the district's SOL.

Please note that the MSBA will accept an official report from a city or town department/employee, if the person preparing the report is a licensed building inspector, architect, or engineer. For example, a report from the district, city, or town maintenance or janitorial department would not meet this requirement.

**Name of Firm that performed the Study/Report (maximum of 50 characters):**

Symmes Maini &amp; McKee Associates

**Date of Study/Report:**      3/3/2014**Synopsis of Study/Report (maximum of 1500 characters):**

The Town of Saugus engaged SMMA to review and update, where appropriate, the findings of Tappe Associates (Attachment B) who conducted an extensive Facility Study in 2001 along with other building related documentation generated since then.

The Saugus High School Facilities Assessment Report evaluated site attributes, structure, exterior envelope including roof, interior finishes, plumbing system, heating and ventilation systems, electrical systems, and provisions for accessibility.

SMAA's assessment consisted of three principle tasks: review of the existing conditions documents and previous reports, conducted site visits to the building, and documented findings of their review and visits. It was cited that Saugus High School fails to meet many of the standards set by MSBA, the Town of Saugus, or State and Federal building codes and handicap accessibility requirements.

The SMAA assessment found that Saugus High School's building systems and elements are all beyond their useful life



warranting a significant renovation or replacement of the building. SMAA found that in some cases, several systems or elements within the building can be repaired and / or replaced. However, several deficiencies, as identified below, create health and safety concerns for the students and staff. Some of these deficiencies have had impacts to the School's accreditation, as is indicated in the NEASC Report.(Attachment E)

**Is the perceived Health and Safety problem related to asbestos?:** YES

**If "YES", please describe the location in the facility, if it is currently friable, and the mitigation efforts that the district has undertaken to date (maximum of 2000 characters):**

On October 25, 2012 the Town of Saugus received its 3-Year AHERA Reinspection performed by RPF Environmental of Amesbury, MA for all of its school buildings, including Saugus High School. (Attachment D) That report re-confirmed the presence of asbestos throughout the building after examining 132 locations, defined spaces or building materials that contain asbestos and the current condition of that asbestos using a scale developed by the EPA.

Friable asbestos exists in the Auditorium, Auditorium Foyer, 1st and 2nd Floor WD Wing, East and West Wing Classrooms, C-Wing Corridor and Custodian Storage, A-02, Multi-Purpose Room, Rear Kitchen Entrance, Kitchen Storage, Tower Gym Storage, Locker Rooms, Fan Room, Custodian Rooms (2), Hall in Shop Area, Wood Shop, Auto Shop, Band / Music Room, Crawlspace and exists in a variety of materials such as plaster, transite, pipe fitting insulation, patching compound, caulking materials, duct insulation.

The assessment of the condition of friable and nonfriable materials range from damaged 5% to fair 19% to good 64%. In 12% of the assessed locations or defined spaces the material is known or suspected to be present but is not accessible for evaluation. Within the 64% of instances rated to be in "good condition" 20% are deemed friable with "potential for damage."

Although not friable, the claim of "good" is made for many of the floor tiles and mastic throughout the building. However, maintenance and monitoring protocols must be continually observed as damage and wear continues to accelerate in this aging building.

Damaged pipe insulation, consisting of friable asbestos, was specifically noted in the Towers Gym and locker rooms.

**Is the perceived Health and Safety problem related to an electrical condition?:** YES

**If "YES", please describe the electrical condition, any imminent threat, and the mitigation efforts that the district has undertaken to date (maximum of 2000 characters):**

The undersized electrical system is original and at least 20 years beyond its useful life. There are branch panels located throughout the facility with many of them in corridors and locations accessible by the student population due to broken or unlocked doors. Most panels are discontinued and replacement parts unavailable. In some areas circuit breakers are being used as light switches.

The fire alarm detection system is a fused, zoned system and is no longer manufactured. It lacks the capabilities needed for protecting and integrating with today's building systems.

Extension cords and plug strips are used consistently in classrooms and elsewhere. In the auditorium, extension cords are being used to bring power to non-stage areas. Control platform cords are taped to the floor, running along the side of the egress ramp. Original outlets no longer function. The auditorium stage lighting system, original to the building, is unable to support the facility safely, effectively or efficiently.

Emergency lighting inverter units power selected fixtures throughout the facility and normally remain off until needed during a loss of power event. The maintenance staff is not certain if they function; therefore the emergency lighting function in the areas supported by the inverters is solely based on the support of the standby power system.

The exterior area doors do not have egress lighting. The standby power system is not configured as a life safety system. The current system is inadequate and presents safety problems.

The current emergency generator system is unable to support the entire facility safely, effectively or efficiently. This leads to areas of the building which are left uncovered in an emergency and others that rely on battery backup lighting systems. The system capacity and configuration is inadequate for supporting the necessary school standby, life safety and mechanical system loads.

**Is the perceived Health and Safety problem related to a structural condition?:** YES

**If "YES", please describe the structural condition, any imminent threat, and the mitigation efforts that the district has undertaken to date (maximum of 2000 characters):**

Throughout the building complex, exterior walls are brick on block construction and are not seismically reinforced to conform to current codes. Exterior brick veneer walls lack proper control/expansion joints, as evident by cracking at corners of the building. The brick movement (cracking at the corners) is also evident in the concrete foundation walls below.

In December of 2009 the chimney structure was determined to be severely cracked, particularly at the top 20 feet where it was recommended that a reinforcing system be installed. Mortar joints were determined to be defective the entire length, but most severe on the north-west face.

Unreinforced stack bond Concrete Masonry Unit (CMU) interior walls exist throughout the structure. Although they serve as the lateral force resisting system for the building, in their current configuration, the walls do not provide much resisting capacity.

Cracking observed in the CMU walls does not affect the integrity of the structure and is assumed to be caused by temperature changes or shrinkage. Cracking and crumbling of bricks exist at several corners of the exterior block wall.

Cracking of the walls exists in a few areas of the 1960 Multi-Purpose Room. Settlement cracking exists in the CMU above door opening At the auditorium, condensation from the boiler room underneath the stage platform and water leakage from the roof has caused severe damage to the stage platform. A significant amount of flooring at the stage has been replaced. The curtain and lighting system is beyond their useful life. The existing lighting suspension framings require further analysis to ensure that they can support its current, increased, load.

**Is the perceived Health and Safety problem related to the building envelope?:** YES

**If "YES", please describe the building envelope condition, any imminent threat, and the mitigation efforts that the district has undertaken to date (maximum of 2000 characters):**

Walls are not insulated and do not meet current energy code requirements. Cracks in the exterior brick walls are subject to continued freeze/thaw cycles that will continue to compromise the exterior wall over time. The lack of waterproofing, vapor/air-infiltration barrier or insulation in walls, and windows continues to cost the district valuable resources.

Windows in the original 1954 building, and 1960 and 1972 additions, are original to the respective dates of construction and are beyond their useful life. Perimeter sealant at all window units is in disrepair. The windows in the original 1954 building are primarily wood assemblies, with non-thermally broken frames and single-paned glazing. These assemblies are in poor condition and exhibit signs of dry-rot/decay due to water infiltration. Some of the wood frames are no longer able to support the glazing and are actually supported by the (non-glass) glazing pane below. If the lower pane were glass, it would likely break due to the added stress. Some of the wood window panes have been boarded over with plywood. Paint is peeling, and is not only unsightly but is likely to contain lead.

The windows in the 1960 and 1972 additions are primarily metal with non-thermally broken frames and single-paned glazing. The glazing at many of the windows throughout the building has been replaced with "Lexan." Many of these panes are no longer transparent. The metal windows are in fair condition and, due to a lack of thermal break, the adjacent finishes show signs of water damage due to condensation.

Below grade classrooms of the 1960 "A" Wing addition have previously experienced severe flooding. Metal window frames are now badly corroded and exhibit white powdery substance of an unknown nature. Outside pumps and hoses must be kept in place.

The majority of the 43 exterior doors are hollow metal and are in fair to poor condition.

**Is the perceived Health and Safety problem related to the roof?:**      YES

**If "YES", please describe the roof condition, any imminent threat, and the mitigation efforts that the district has undertaken to date (maximum of 2000 characters):**

Mitigation efforts included the installation of a rubber membrane roof in 1991. Roof repairs are continual occurrences as the roof thins and stretches with time.

With growing frequency there are standing water "pools" on the roof, causing slits on or near roof buttons. Roof patches are used to deal with damage associated with these pooled water areas. Long standing water pools or "ponding," now occurring with greater frequency and longer duration, are a source of concern for maintenance staff for several reasons.

First, ponding water creates hydrostatic pressure that forces water into even the tiniest pinhole imperfections. In fact, water staining is evident in many ceiling areas of the building raising the possibility of mold contamination or other growth in areas above the ceiling. Ponding areas accelerate deterioration of the roofing membrane, thus attracting dirt, mud and algae that when mixed with bird feces can create harmful fungal material that could affect the air quality in the building. This also quickly destroys any reflective properties of roof coatings.

Skylights, many of which have been roofed over, and mechanical equipment curbs are in fair condition, with some past and present leaks evident. Some of the original skylights were replaced with plastic dome type skylights during the 1991 re-roofing project. Some of the original skylights with wire glazing remain and are in poor condition. Soffits and exterior trim are original wood or metal. Much of the exterior wood shows extensive peeling of paint, likely lead paint, and some water damage.

In the event gymnasium, mechanically fastened sections of white EPDM roofing have been applied over portions of the original ceiling to help mask damage. This installation is non-code compliant according to the fire department. This repair method was discontinued. Sections which were installed previously have not been removed and the material represents a health and safety concern.

**Is the perceived Health and Safety problem related to accessibility?:**      YES

**If "YES", please describe the areas that lack accessibility and the mitigation efforts that the district has undertaken to date. In addition, please submit to the MSBA copies of any federally-required ADA Self-Evaluation Plan and Transition Plan (maximum of 2000 characters):**

In April 2011, Saugus High School underwent an NEASC evaluation. That evaluation summarized key deficiencies in building accessibility. In 2013 the Superintendent reported to MSBA that SHS does not meet ADA requirements. "There is a lack of ADA accessible entrance doors and no handicap accessible restrooms in the nurse's office." The facility as a whole has been deemed to have either non-existent, outdated, or inadequate dressings rooms and lighting technology for the drama department, locker rooms and playing fields, data and electrical service throughout the building, conference space for guidance and administration, and generally outdated, non-ADA compliant furnishings in all classrooms.

The Town responded to the NEASC report by installing an elevator in the "A" wing and installing an exterior ramp. These were funded by the building maintenance budget and a borrowing article authorized by Town Meeting.

In March, 2014 Saugus High School was again evaluated for ADA accessibility by a Certified Access Monitor for the Massachusetts Office on Disability. His report (Attachment C), done in conjunction with the Independent Living Center of the North Shore and Cape Ann, Inc., provides detailed evidence, including pictures, and documents the extent of the deficiencies and related code violations in the following areas:

- Accessible Parking and Accessible Route to the Main Entrance
- The Main Entrance to the school has stairs and is not accessible
- ? - Accessible Entrance - noncompliance
- ? Doorways (hall doors and entrance to classroom doors)
- Auditorium
- Bathrooms
- Interior Ramps, grade, handrails
- Lockers
- ? - Library
- ? - Locker Rooms
- Gym, including bleachers and lack of assistive listening
- Nurse's office
- Office at the main entrance including counter
- Room C09
- Water Fountains
- Room signage
- Lab rooms
- Elevator
- Cafeteria

**Priority 3**

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

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The major areas of concern stated in the 2011 NEASC report (Attachment E), and subsequently leading to a letter of warning issued by NEASC in 2013 include; current condition, and safety of our science labs, failure to meet ADA requirements, and general concerns regarding the facilities as a whole. The science labs, some dating back to the early 60's have been determined to be undersized and outdated, lacking adequate services including electrical power, safety showers, eyewash stations, drainage, fume hoods, and appropriate fire safety equipment. The outdated labs prohibit the students of Saugus from receiving a comprehensive, 21st century science lab experience.

The school, as identified by the NEASC report, does not meet ADA requirements. There are no ADA accessible entrance doors due to either lack of ramps or automated openers. The nurse's office is currently not handicapped accessible and when a student requires a handicapped accessible restroom, the nurse must utilize the only ADA student accessible bathroom in the building located nearby. The physical space in the nurse's office has been adapted to accommodate a student with extensive medical needs who requires the services of a private nurse, and as a result, there is insufficient storage space for records and supplies.

The facility as a whole has been deemed to have either non-existent, outdated, or inadequate dressings rooms and lighting technology for the drama department, locker rooms and playing fields, data and electrical service throughout the building, resulting in safety concerns, conference space for guidance and administration, and generally outdated, non-ADA compliant furnishings in all classroom.

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

The school department, working in conjunction with the Town of Saugus has funded and installed an elevator in the A wing and a second ramp exit from the A wing connector attempting to make all areas of the building accessible to all students and staff. These installations, have improved access, but still fall short of providing fully accessible emergency egress from the building.

New lab tables were purchased for 2 of the 9 science lab/classrooms, but have provided no ADA compliance assistance in those rooms. Five portable eyewash stations have been placed in science labs, and a steel door has been installed on the chemical supply room, in response to the NEASC findings. Three chromebook carts have been purchased, offering teachers the option to use chromebooks for virtual labs. These are currently being utilized by staff and students to provide a virtual lab experiences in lieu of the actual lab setting.

Town Meeting has appropriated \$37,000 to fund the creation of a comprehensive capital plan for the town including all school buildings. The school department has requested funds to deal with other deficiencies cited by the NEASC report for the short term and has embarked on a comprehensive strategy to resolve all issues related to the building as described below.

In early January 2014, the Saugus School Committee directed the superintendent to file a new statement of interest making Saugus High School the district priority. Additionally, the School Committee requested that the Board of Selectmen, Town Manager, Town Meeting Members, State Representative and school administrators work collaboratively on preparation of the SOI.

A schedule of weekly evening meetings was developed to bring these partners together to discuss, develop and review documents related to the Statement of Interest. A smaller writing team was established to primarily author the document during morning work sessions and report back to the larger committee.

During this time, the Town Manager authorized the hiring of Symmes, Maini & McKee Associates to conduct a High School Facilities Assessment (Attachment A) including an energy assessment (Attachment K). The Town also retained the services of a certified access coordinator affiliated with the Massachusetts Commission on Disability to conduct a specific ADA analysis of Saugus High School in response to concerns raised by NEASC. (Attachment E) We have also had an energy site visit conducted by National Grid that produced a comprehensive report on potential energy savings. (Attachment G) The Saugus Police and Fire Departments have also conducted specific site analysis related to building security.

All of the Joint Meetings of the School Committee and the Board of Selectmen have been televised on local access cable where these documents have been read and discussed. We have also heard from three staff members from SMAA on four separate occasions, all broadcast and rebroadcast on local cable.

On Saturday March 29<sup>th</sup> a public Open House was conducted to educate the public about the building deficiencies. Local weekly and daily newspapers have covered our work.

In May 2014, at the Saugus Annual Town Meeting, the issue will be brought to the Town Meeting floor by the joint members of the SOI committee as well as the public. Town Meeting Members will be asked to adopt a resolution to confirm a 2012 vote by a previous Town Meeting to support the construction of a New Saugus High School. At that time Town Meeting will be asked to vote to confirm their willingness to be called into a special session, as may be required, to authorize funding for a feasibility study upon invitation by the MSBA to do so.

Over the next few months public officials will continue to share and articulate the deficiencies and shortcoming of the Saugus High School facilities. Saugus voters were the only voters in the history of Massachusetts to support a one time special purpose operating cost exclusion, via special legislation proposed by Town Meeting, specifically to pay down 1 million dollars in snow and ice costs. Saugus voters also overwhelmingly supported the debt exclusion for the Belmonte Middle School repair project done in partnership with the MSBA.

We therefore hope for a positive response from MSBA so that we may share our positive message with the citizens of Saugus who historically have supported clear proposals that are reasoned and fact rich.

**Priority 3**

***Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem(s) identified.***

First and foremost, the high school is unable to provide a "guaranteed viable curriculum" in the sciences to all students in biology, chemistry, and physics due to inadequate learning space and capabilities in its labs.

Curriculum and instruction is driven by curriculum maps as aligned with the Massachusetts curriculum frameworks. Students are now annually tested through MCAS in grades 9 and 10, requiring districts to keep pace in the science curriculum as a proviso for graduation. The curriculum has been altered in most science labs, preventing the full science lab experience for all students. There are not enough sinks, science lab tables, working gas outlets, nor electricity capacity to provide equitable educational opportunity. Lab equipment is obsolete and incapacitated in some instances.

A 21st century lab environment requires an infusion of modern technologies, science equipment, instructional/lab combination and safety provisions to maximize learning in the lab sciences. Due to insufficient learning lab environments, students are limited in the hands-on learning experience and teachers are unable to deliver the curriculum as outlined, as well as meet new curriculum initiatives.

In 2011, the high school included in its program of studies an Academy for the Advanced Program of Studies in STEM with increased emphasis on advanced sciences leading to a certificate of completion upon graduation and student testing in not less than seven Advanced Placement subjects. As a participant in the state's "Race to the Top" initiative Pre-AP Project, Saugus is obligated to embrace a hands-on, investigative learning that our labs can't facilitate. Teachers have been trained in the strategies and methodologies, but are compromised by the facilities.

Learning expectations exist for all students under the state standards to measure mastery of the framework. Students can't be expected to meet those standards, or perform at an advanced level, in a learning environment where teachers are unable, due to facility conditions, to deliver curricula as it is expected to be provided. This necessitates improved lab science facilities. The outdated electrical system presents ever growing challenges to our ability to implement technology to all areas of the curriculum.

Lack of ADA approved facilities throughout the building results in limited access to facilities and programs for all students. It is our mission and desire to include all students in every aspect of school programs and curriculum. NEASC recognizes that this building prevents us from achieving that mission and desire.

**Please also provide the following:**

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

New England Association of Schools and Colleges

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

3

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

4/16/2013

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



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

4/3/2011

**Please provide the date of the follow-up accreditation visit.:**      4/4/2021

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

NO

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

YES

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

**Are facility-related issues related to SPED? If yes, please describe in detail in Question 1 below:**      NO

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

YES

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

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

The building was cited for being Non ADA Compliant to current standards.

**Priority 5**

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

The following systems at Saugus High School need replacement:

- Fire Protection and suppression systems
- Security system
- Electrical distribution, lighting and emergency generator systems
- Heating and ventilation distributions system and controls
- Roofing system
- Windows
- Systems related to barrier free access for persons with disabilities
- Walkways, curbing and athletic fields

### **DEFICIENCIES IN SYSTEMS**

#### **Fire Protection and suppression systems - deficiencies**

Saugus High School does not have a sprinkler or fire protected structural system.

The maximum allowed size for school building of Type IIB construction with no sprinklers is 25,375 square feet. The maximum allowed size for school building with sprinklers is 39,875 square feet with rated separation walls required for code compliance.

Due to the size of Saugus High School, fire code compliance would also necessitate fire proofing structural members. Corridor doors are non-latching, and do not have a label confirming fire rating.

The fire alarm detection system is a zoned system manufactured by Flex-Alarm and no longer made. Recently it had been causing numerous false alarms. It lacks the capabilities needed for protecting and integrating with today's building systems (e.g. shutting down mechanical systems). It was noted in the 2002 Tappé Report that the Fire Alarm Control Panel should be replaced with an addressable type system.

The majority of the fire detection is done with heat detectors; few are newer devices. However, many are the metal dome type, original to the building. There is no elevator recall system in place for either elevator system in the facility (the system cannot support recall). The stage fire curtain is activated by a fusible link; fire alarm heat or smoke detectors are not part of deploying the fire curtain. The heights of the manual pull station do not meet ADA height requirements nor does the layout of these devices satisfy code required coverage.

Diminished fire extinguisher locations and a lack of fire hose in locations such as the auditorium stage are also non-code. Previous repairs to the Towers Gym ceiling have been deemed to be non-code compliant by the Saugus Fire Department.

Even if all of the above issues were resolved, fire apparatus would still not be able to access three sides of the building due to the 1960 and 1972 additions.

### **Security system - deficiencies**

Only one of the 43 doors is monitored by a closed circuit camera which does not have recording capabilities. NEASC has cited the school for a lack of security and lighting in the parking lots.

In addition to the one door monitored by school staff or by a CCTV system at the front entry door at the central office of the building there is a camera at the exterior rear of the old shop bay. The staff has full view of the front entry from the central office. The 40+ remaining exit/entry doors to the building, the loading dock and the parking areas, have no CCTV monitoring.

The exterior areas of adjacent egress doors do not have egress lighting coverage, which is a safety concern during an emergency mass egress event.

The Saugus Police Chief and his department has determined that the Saugus High School building and how it is situated on the property poses difficulties for law enforcement in terms of safety and security for daily/routine activities as well as forecasting responses to an emergency event. This is primarily due to the sprawling nature of the structure coupled with two additions that extended the horizontal footprint. The building's close proximity and easy access to Route One further underscores the need to resolve security deficiencies at this location.

### **Electrical distribution, lighting and emergency generator systems - deficiencies**

The electrical service and distribution system is original to the date of construction and is nearly 60 years old and beyond its useful life. The main electrical service is rated for 1600 Amp at 120/208V 3ph.4W. This is undersized service for modern school electrical needs. The electrical service is provided by National Grid via an exterior pad mounted 500 kVA oil filled transformer located adjacent to the loading dock.

As was identified in the Electrical facilities Assessment section of the 2002 Tappé Report, "the condition of the equipment is poor, but in working order and reaching the end of its life expectancy." Conditions have further deteriorated since. The 2011 NEASC Report further underscored the concerns regarding the electrical system; a "lack of adequate electrical power to support the science labs" as well as a "lack of security and lighting in the parking lots" were two of the thirteen reasons NEASC elected to place the school on probation in a follow up letter to the Superintendent.

The original Federal Pacific switchboard has been back fed by the GE switchboard installed in the late 60's or early 70's. The power distribution is provided from (19) branch panels wired back to one of these main and sub-main switchboards. The panels are located throughout the facility with many of them in corridors and locations accessed by the student population. The doors of each panel are not locked or have broken locks. Students have broken the ones that have been locked, so the remaining functioning ones have been left unlocked to avoid breakage. Most panels are manufactured by Federal Pacific Company and no longer available. The typical useful life expectancy of electrical systems is 20 years; therefore all the electrical systems are at least 20 years beyond their expected useful life.

There are emergency lighting system inverters located at several locations throughout the facility. These inverter units power selected fixtures throughout the facility and normally remain off until needed during a loss of power event. The maintenance staff is not certain if they function; therefore the emergency lighting function in the areas supported by the inverters is solely based on the support of the standby power system.

All the existing exit signs have been replaced with LED units that have internal integral battery backup. The exterior areas

adjacent egress doors do not have egress lighting. The standby power system is not configured as a life safety system. The current system is inadequate and may present safety problems.

The auditorium stage lighting control system is original to the facility, is available to be operated by anyone and is often being utilized by untrained non-technical staff. The interface system is inappropriate for operation by unqualified persons and a full system replacement is required. The current system is unable to support the facility safely, effectively or efficiently. The lighting throughout the building needs to be upgraded as many of the systems and or bulbs are no longer made in North America.

The system capacity and configuration is inadequate for supporting the school academic programs, technology needs and mechanical systems as evidenced by the numerous extension cords required to power modern equipment in the auditorium and throughout the building. There are coaxial cables secured to the wall surface in the corridors which get taped at each classroom to support the wall mounted TV monitors. The classroom has many exposed data cables and coaxial cables to support the technology equipment within (e.g. smart boards, PCs and laptops).

The Emergency Generator system is set up as a standby power system and is not configured as a life safety power system. The capacity of this system is well below what is needed to support the standby and life safety loads for the building. The system capacity and configuration is inadequate for supporting mechanical system loads.

Occupancy sensors need to be outfitted with a secondary contact (preferably with dual technology sensors) which would allow the automation to be augmented and reduce the building heating load based upon occupancy. Addressing this deficiency could save up to 20% on lighting costs. (Attachment G)

### **Heating and ventilation distributions system and controls - deficiencies**

The cost to heat the over-sized building (the heating bill for SHS was \$450,000 in FY13 which is 40% - 50% more than what it should be) could better be used toward direct services to our students.

Other than the boilers that were replaced in 2003, all other elements of the HVAC equipment remain original and are in need of replacement. Although the boilers were replaced they need to have stage control and isolation valves which would reduce the losses from shut off boilers thus extending boiler life and reducing boiler room heat loss by as much as 15%. There is a 30 year old Johnson system that allows very basic controls in the boiler room. There is no front end, no graphics, to further control or regulate the boilers and adjust to meet demands. (Attachment G)

The steam distribution system is original, making the oldest portions over sixty years old and the newest over forty years old. In recent years, there have been numerous leaks, primarily at elbows and fittings, the condition of the entire piping system is near the end of its useful life.

The pumps in each building wing have been recently replaced but the receivers are original. The condensate is pumped back to a boiler feed tank in the boiler room. A continuous cloud of steam escapes from the discharge pipe of the blowdown tank, suggesting the isolation valves from the boilers and the cold water tempering valve are not functioning. Insulation on the condensate piping is often absent. The un-insulated 3-inch DCW main running through the boiler room has condensate dripping off it over its entire span. (Attachment A)

There are a number of Heating and Ventilating only (H&V) air handlers spread throughout the building. These are generally in poor condition and many have been abandoned due to the lack of replacement parts. All are original equipment. The 12700 cfm unit that served the cafeteria was abandoned ten years ago. The only ventilation in the cafeteria is a 6300 cfm exhaust fan and a natural draft floor vent along one wall. The kitchen exhaust fans have no make-up air, or transfer grills to the Cafeteria. The two 11000 cfm units in the auditorium have also been abandoned.

The primary terminal equipment in the classrooms are the original (40+ to 60+ year old) unit ventilators (1000 to 1500 CFM models). These have outlived their normal life expectancy. In many classrooms, there is an exhaust shaft with a pull chain damper

that functioned as a gravity air relief. Other areas, such as the “newest” WD wing, have a central exhaust. Dampers are frozen open admitting outside air continuously. Fans being noisy and, depending on where the classroom is relative to the boiler room, the spaces are typically too hot or too cold.

The exterior corridor between two wings is cold because the convectors were abandoned, due to the pipes failing in the tunnel below.

The pneumatic controls are in fair working condition. The compressor and air dryer were new in 2009±. At that time the tubing was blown down but, in several areas, water, oil or dirt obstructs effective operation. Corridors are not provided with any means of supply or exhaust ventilation.

The Heat Timers need to be upgraded to pressure control and Zone Valve control. This would allow for the shutting off of the steam plant for short periods of time when the outdoor air allows for it. This could result in savings as high as 30% of the HV energy.

Pump and fan motors are not energy efficient. Where this building is steam heat there are not many pumps other than condensate pumps. Many of the fans and motors in this facility are older standard efficient motors. These motors are no longer manufactured in the US and all new motors are as much as 25% more efficient than the traditional motors.

The gyms lack destratification fans to prevent the heat in the high ceilings from staying up high. The destratification fans allow the hot air to be brought down to the level of the occupants it also allows for a reduction in the volume of air being fed into the space by controlling it with Carbon Dioxide sensors. This would assure better air quality without over ventilating a space. (Attachment G)

A major deficiency related to the heating system is the presence of friable asbestos on delivery pipes. Asbestos in the building is inspected on a regular schedule every 6 months. The floor tiles in the main corridors have been tiled over to “encapsulate” asbestos bearing tiles beneath. The tiles in some other areas including the wing are original and worn through in spots.

### **Roofing system- deficiencies**

The roof was replaced in 1991 with a rubber membrane system and is due for replacement by any reasonable standard. The roof drains were left in their original locations, and some are no longer at low points. This has resulted in standing water in many locations which in turn have caused continual leaks. Skylights and mechanical equipment curbs appear to be in fair condition, with some leaks evident. Water damage is evident through staining in many ceiling areas of the building. The area above these ceilings should be investigated further to determine if there is mold contamination or other growth.

Many of the original skylights have been roofed over and left in place. Some of the existing skylights had been replaced with newer plastic dome type skylights. Some of the original skylights with wire glazing remain and are in poor condition. Soffits are original wood or metal. Many of the wood soffits show extensive peeling of paint and some water damage.

At the Auditorium water leakage from the roof and condensation from the boiler room underneath the stage platform has caused severe damage to the stage platform resulting in a significant amount of flooring at the stage having to be replaced.

### **Windows- deficiencies**

Windows in the original 1954 building, and 1960 and 1972 additions, are original to the respective dates of construction. The windows in the original 1954 building are primarily wood assemblies, with non-thermally broken frames and single-paned glazing. These assemblies are in poor condition and presently exhibit signs of dry-rot/decay due to water infiltration. Some of the wood frames are no longer able to support the glazing and are actually supported by the (non-glass) glazing pane below. Some of the wood window panes have been boarded over with plywood. Perimeter sealant at all window units is in disrepair.

The windows in the 1960 and 1972 additions are primarily metal with non-thermally broken frames and single-paned glazing. The glazing at all of the windows throughout the building has been replaced with "Lexan" type plastic glazing. Many of the panes have discolored to the point where they are no longer transparent. The metal windows are in fair condition and, due to a lack of thermal break, the adjacent finishes show signs of water damage and corrosion due to condensation. Some metal frames in the lower "A" wing have a white flaky growth now appearing.

There is inefficient lighting throughout both the building and grounds. Skylights were installed at the original construction to bring in natural light, but when damaged, some have been covered over and others are hazy which has created uneven lighting. There is no insulation. Original single pane windows do not provide protection from New England weather conditions and on a windy day, the wind blows through, especially in the A-Wing which has a corridor on both ends of windows that have been replaced with "Lexan" type plastic glazing.

As was noted in the Exterior Walls section of the 2002 Tappé Report and re-confirmed by SMAA, all windows continue to be in poor shape, have become progressively worse over the last 12 years. Since 2007 the school has been dealing with termite infestation in the East Wing, A Wing and West Wing.

These factors, along with a lack of insulation at exterior walls and beneath the ground floor slab in most locations, lack of vestibule airlocks, absence of a continuous air barrier and insulating windows/glazing make the building non-compliant with the current energy code.

#### **Systems related to barrier free access for persons with disabilities- deficiencies**

One of the most pervasive deficiencies existing throughout this maze-like structure are the multitude of barriers to person with disabilities resulting in limits on safety, inclusion, and independence.

Most doors throughout the building have round knob handles, which do not meet current MAAB/ADA accessibility requirements. Most exit doors throughout the building have "loopable" panic/crash bars, which do not meet current code requirements for exit devices. Most entries and entry door hardware do not comply with ADA accessibility requirements. Most of the toilet rooms are original and not handicapped accessible, including the bathroom in the nurse's office, as well as the entire nurse's office, as cited by the NEASC report.

Signage throughout the building is minimal, leaving many rooms unidentified and non-conforming with MAAB/ADA requirements. Corridor way-finding signage is also minimal and confusing to visitors unfamiliar with the building.

Accessible routes from designated handicapped parking spaces are not provided. There are over 40 exterior building entrances and nearly all are not ADA/MAAB compliant. None have automated opening for wheelchair users. Many of the site stairs do not have proper handrails. The auditorium, balcony and projection booth are not accessible

Railing openings at stairs and ramps do not comply with the, 4-inch sphere, code requirements. Guardrails are 6-inch short of the 42-inch high guardrail code requirement. Stairs in the 1972 addition provide a handrail at one side only and the size of handrail is non-compliant. Ramps are not provided with the required MAAB/ADA compliant handrails at both walls. Some ramps do not have handrails at either wall. At other locations, there are lockers in the wall at the ramp. Intermediate landings and ramps do not provide proper clearances at doors.

While an elevator provides access to the second floor, there is not a continuous accessible route in the building that allows for access to all levels without going outside. Elevator sizes do not meet current accessibility standards, too small for a gurney.

#### **Walkways, curbing and athletic fields – deficiencies**

Tripping hazards exists throughout the many exterior approaches to the building due to exterior curbs and walks which are beyond their useful life, broken or irregular.

The fields at the school are primarily limited to practice use due to their deteriorated conditions. As was noted in the 2002 Tappé Building Assessment Report, students continue to be forced to go off site for almost all varsity games.

The proximity of the playing fields and the school to Route 1 presents health concerns regarding noise and air pollution. A low sound wall within the Route 1 right-of-way provides minimal protection, when compared to taller modern sound mitigating walls.

Site drainage is also not designed to current standards and runoff discharges from site have limited to no treatment.

While it may be possible to repair or renovate a particular system, professional opinions obtained from outside qualified trained building professionals in 2002 and 2014 provide clear, convincing and unequivocal evidence and judgment that all of the aforementioned systems that currently exist are well beyond their useful life and need renovation or replacement. The district has been advised by its most recent outside qualified building professional, SMAA, that the collective cost of repair/renovation of said systems would likely exceed the cost point where a new building would be more feasible.

Furthermore, resolution of all of the aforementioned systems and deficiencies would not resolve the site specific issues previously described relating the oversized nature of the building that will continue to consume excessive amounts of energy, maintain unwarranted internal travel distances, and prevent the 22 acre site from being better utilized for field space and access for persons with disabilities.

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**Priority 5**

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

**Fire Protection and suppression systems – measures / mitigations**

Because parts for this system are no longer made only temporary repairs are possible.

**Security system – measures / mitigations**

The building principal has asked for a capital project that would add security to the building for FY2015. School staff are assigned to monitor many of the entrance/exits to the school during the school day. Anyone entering the building must be “buzzed in” by office staff.

**Electrical distribution, lighting and emergency generator systems – measures / mitigations**

The transformer feeding the building is located outside the building and was replaced due to failure in 2009. In 2011 the high voltage feeder cables that feed the transformer faulted and they had to be replaced. The existing ceiling structures and current power distribution system makes upgrading the existing electrical or lighting systems extremely challenging. Electrical repairs are done on an “as needed” basis, but are done quickly as the town electrician is housed in the building.

**Heating and ventilation distributions system and controls– measures / mitigations**

Original boilers were replaced in 2003 and the building was converted from oil to natural gas. The natural gas service was increased to meet the boiler load. Steam leaks are repaired immediately when found.

Univent motors in the classrooms have been replaced and all are cleaned and serviced each summer. The pneumatic controls are no longer serviceable. The compressor and air dryer were new in 2009± but continually runs due to leaks in the system.

**Roofing system– measures / mitigations**

Roof repairs are a high priority for the building maintenance personnel. Repair patches are ongoing along with inspections and redirecting pooled water where possible, however many roof drains are improperly positioned and need to be relocated to improve roof drainage.

**Windows– measures / mitigations**

The glazing at all of the windows, when broken, throughout the building has been replaced with “Lexan.” Many of these panes are no longer transparent.

**Systems related to barrier free access for persons with disabilities– measures / mitigations**

In the late 1990’s the main student bathrooms were renovated and a handicap ramp was installed in the auditorium to allow access to the stage. In 2011-2012 an elevator was built in the A-Wing to allow for handicap access to this split level wing, however this addition fails to meet the required, dual point egress from the wing. In 2013, in response to NEASC placing the school on warning status, the town installed an exterior ramp to that wing.



**Walkways, curbing and athletic fields– measures / mitigations**

Repairs / patches are performed to the worst areas. The granite curbing is original to the building and would be difficult to replace.

Our goal is to have an ADA compliant building that utilizes up to date renewable energy and energy efficient design, features and fixtures.

**Priority 5**

***Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.***

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The 2011 NEASC report indicated that only 6% of the staff agrees that the physical plant and site support the delivery of high quality programs and services.

In particular, the science department is severely limited by the physical plant.

There is not enough electrical power to adequately support the school's science labs. The majority of the labs have safety issues: some labs lack safety showers, eye wash stations, fume hoods, appropriate fire extinguishers, standing lab stations, and adequate electrical upgrades. The fine arts department has adequate space but could use a backstage dressing room, and the lighting "technology" in the auditorium is from the 1950's. Classrooms have a wide array, a "hodge podge," of furniture, much of it old, outdated, and uncomfortable while many window blinds are unusable. The locker rooms, though clean, are dingy and are missing tiles. Most original showers are not functioning and asbestos has been identified in the locker rooms.

The outdoor field adjacent to the high school is used for football, lacrosse, and baseball and softball, mostly for practice, and a variety of sports. Activities can be played simultaneously because there is enough space, but the fields are in poor condition. The layout of the parking lot is adequate for those attending sporting events at the school, but there is no security or lighting for nighttime events.

The physical plant does not adequately support or provide suitable alternative space for all school programs. The building has no air conditioning other than in offices and computer labs and is thus rendered unusable during hot stretches during the summer. While there is a handicapped ramp at the auditorium entrance, none of the doors in the building are automated to open for wheelchairs.

The school plant is an impediment to the district's goal of consistently providing high quality educational programming.

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**Priority 5**

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

It is difficult to envision a scenario by which all of the deficient systems identified would be addressed in a cost effective manner when compared to constructing a new building. However, we recognize that only a feasibility study can make that determination. As such, the most immediate impact on the educational program will be experienced in the science curriculum and the ability of the school to provide and operate classroom technology.

Further improvements will be realized in those fine arts that utilize the auditorium. The district's desire to provide a full range of special education services "in house" will be enhanced by having access to appropriately designed and ventilated spaces.

Better regulation of classroom temperature will have a positive impact on the learning environment. Teachers and students will no longer have to face frequent disruptions dealing with temperature issues.

New unit ventilators will not be noisy and thus there will be less disruption to teaching and learning in the classroom.

Perhaps the greatest positive impact on the educational program will occur by allowing dollars now used for capital expenditures, maintenance/repairs of antiquated systems, and inefficient wasteful energy systems to be re-directed to teaching and learning programs and materials.

Our main goal is quite simple; **to be given an opportunity to partner with the MSBA for the expressed purpose of replacement or renovation of the high school facility.** Saugus High School is a sixty-year old building whose limitations impact our ability to provide an educational learning environment compatible with the requisites of a 21st century education. This is due to antiquated, inadequate and worn out mechanical systems and infrastructure. The NEASC Accreditation Report and the report of SMMA cite that the high school is "outdated, unsafe, and unable to meet the needs of a 21st century learner". (See Priorities 1 & 3)

It cannot be any clearer that Saugus needs a properly sized, safer, code compliant facility to achieve its goals and mission.

**Please also provide the following:**

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

YES

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

Symmes Maini & McKee Associates

SMMA provided the following staff to conduct the visual inspections:

- Architect
- Civil/Site engineer

- Structural engineer
- Mechanical engineer
- Electrical engineer

**The date of the inspection::**      3/13/2014

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

The most recent inspection of Saugus High School, completed on March 13, 2014, confirms many of the conclusions described in the 2002 Tappe feasibility study and the NEASC Accreditation report in 2012. Saugus High School is in dire need of having all major systems replaced: HVAC, plumbing, electrical, phone/data communications, fire prevention, emergency lighting/power, windows, doors, insulation, roof, and accessibility.

All major systems are original to construction dating back to 1954 and the additions in the early 1960s and 1972. As a result, the building can no longer operate efficiently or safely given the necessary requirements of the 21st century educational program. The building needs to be brought up to current safety and code regulations. Both Tappe and SMAA confirmed the only acceptable option is full replacement of systems that are decades beyond their life expectancy and effectiveness.

Multiple deficiencies create health and safety concerns for the students and staff. Some of these deficiencies have had impacts to the School's accreditation, as is indicated in the NEASC Report.

SMMA's confirms that the following is a representative list of conditions negatively affecting the health and safety of the school children:

- Lack of full 360' fire access around the exterior of the building.
- Large number of exterior doors, 43, to be secured.
- Absence of code compliant railings and guardrails in occupied areas.
- Lack of sprinkler or fire protected structural system.
- Excessive travel distances to a means of egress.
- Tripping hazards created by exterior curbs and walks and interior stair nosings which are beyond their useful life, broken or irregular, and the numerous extension cords required to power modern equipment from an antiquated electrical power distribution system.
- Lack of an emergency generator configured for life safety requirements.
- Absence of a lateral force resisting structural system.
- Air quality problems created by malfunctioning heating, ventilating equipment and frozen dampers, all of which is beyond its useful life.
- Lack of any chemical waste system or security for the gas cocks in the science suites.
- Contamination, in addition to that identified in the AHERA (Asbestos Hazardous Emergency Response Act) report, presented by the vinyl asbestos tile that has worn through to the concrete in some corridors.

Potential health and safety conditions to be further investigated:

- Verify the presence of mold at the many water stained ceilings and frequently the flooded lower level.
- Investigate the possible structural failure of sagging ceiling suspension systems and bowed ceiling tiles.

**Priority 7**

***Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.***

The current infrastructure of our high school is not in line with a 21<sup>st</sup> century instructional model. The classrooms are undersized and lack both the necessary electrical capacity and the data service to be fully effective classrooms. We have, as a district invested in the technology necessary to provide our staff and students with the tools necessary to deal with the new curriculum and pedagogy but we are unable to use all of these tools with the existing electrical system. The physical size of our classrooms, including our science labs, is less than is recommended by MSBA to provide the more student-centered classrooms that will allow our students to reach their full potential as stated in our academic learning expectations. (Attachment H) Both the electrical and data concerns are heightened in anticipation to the upcoming PARCC exams. As a school we will not likely be able to handle the data needs necessary for mass on-line testing, once implemented.

Because of the age of the high school, it has been extremely difficult to upgrade the high school science labs to meet current curriculum needs. To reiterate the citation from the 2011 NEASC Accreditation report; “the science labs are outdated, unsafe, and unable to meet the needs of the 21<sup>st</sup> century learner. The science labs are not fully or properly equipped for biology, chemistry, and physics.” Teachers are unable to meet curriculum requirements in the lab sciences as evidenced by the following: (1) lack of working gas in all labs and/or exposed pipes to Bunsen Burners, (2) insufficient sinks and tables for instruction, (3) limited storage for equipment and chemicals, (4) insufficient technologies, lighting, and electricity, and (5) inadequate safety/chemical wash. More importantly, the classroom structure is not conducive to effective learning in the science lab arena. The MA DESE endorses Mass Core as the high school program of studies. This includes three years of lab science for all students to graduate. Although Saugus High School meets this requirement for all students, it is without fidelity.

Besides the limitations on the science curriculum due to the insufficient labs, the same issues affect most of our fine arts and wellness programs. Our auditorium presents safety and facility related concerns. The auditorium has numerous electrical deficiencies, fire safety deficiencies, and HVAC deficiencies. It also lacks adequate backstage facilities for storage and changing rooms. The mezzanine area has been closed to public access due to ADA as well as general safety concerns.

The classrooms and space available for our art, music, and computer classroom limit the programs that can be offered and the effectiveness of the instruction. Electrical limitations are issues for our pottery program and our technology engineering space is modeled base on a 1950s classroom not a 21<sup>st</sup> century layout. Our lack of updated athletic facilities inhibit the ability to deliver modern, comprehensive wellness and athletic co-curricular activities. The facilities severely limit our ability to follow our aligned curriculum thus we are not fully able to provide a 21<sup>st</sup> century learning experience for our students.

Since the current enrollment is approximately 738, the lack of mixed use small and/or flexible size rooms means that oversized classrooms are utilized for the instruction of small groups of students. The Saugus Public Schools are committed to providing a continuum of learning for all students and seek to expand the range of services, support systems, and technologies to facilitate that goal. We seek to effectively integrate and mainstream special education services as well as specialized programs such as ELL, autistic programming, and behavioral programs within core learning areas rather than having these dispersed throughout the building. These programs and services also need to take place in properly designed spaces to meet individual instructional needs. We lack defined space for OT, PT, and other support services.

We lack dedicated private office space for specialized service providers such as psychological counseling and testing. Whether it be our small group instruction within academic disciplines and life skills programming that lacks necessary, complete spacing and facilities, the layout and design of SHS inhibits the district’s ability to achieve its stated goal of “providing a learning environment that incorporates the best curriculum and technologies so each student may achieve their individual success.”

The district is currently planning a new program for students ages 18-22 which we would like to house in the building. We do not have the appropriate space for this program at this time. We lack the opportunity to develop collaborative partnerships with regional agencies that would result in less out of district placements.

The building is significantly oversized for the current population, built in 1954, and expanded horizontally in 1960 and 1972 to accommodate 1500 students. In spite of its size the building lacks adequate space for science instruction and labs. Its size also inhibits the connection of teachers, programs, and technology. The building lacks adequate, appropriately designed special education program space, which hinders our ability to meet the needs of all students

**Priority 7**

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

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As stated in the 2011 NEASC report "...the high school building cannot serve the town well in terms of building longevity and use or serve the students well in terms of meeting educational needs." The district and Town have worked in concert to mitigate some of these problems. However, as with any aged building, limitations exist as to what and how much can be done. There has been some electrical improvements and updates, installation of new panels and breakers, the addition of interactive whiteboards to all academic classrooms, removal of apparatus that are safety concerns, some installation of safety eyewashes, and placement of new furniture in some classrooms, centralized chemical storage, and additional lighting. The gymnasium and the auditorium have seen recent updates to the performing surfaces. The data delivery capabilities of the school remain insufficient. Although each room is serviced by a data port, the wireless capabilities of the school remain spotty and not globally available. There exists a number of district-wide and town facility issues that has resulted in the current development of townwide 5 year capital improvement plan (CIP). In spite of this, we remain challenged as to how to address each of the multitude of deficient systems identified at Saugus High School, effecting our education program.

**Priority 7**

***Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.***

The mission of The Saugus Public Schools is to educate, challenge, and empower students to be life-long learners and to achieve excellence with integrity in the 21<sup>st</sup> century as productive, caring, and contributing members of society. (Attachment F)

Our goal is to provide our students with the safest, most up to date learning environment. Our goal is to have our school fully accredited by NEASC. Our goal is to have a more energy efficient, safe, secure school, capable of meeting the educational needs of all of our current students, and retain/attract back to the Saugus Public Schools those students who have fled the district, due largely in part to the failing facility. Our goal is to improve our comparably high exodus rate, reduce the school's dropout rate, increase the graduation rate and continue to prepare students for college and career readiness.

In 2011 the Saugus Public Schools completed a three-month process that resulted in a comprehensive District Improvement Plan. (Attachment I) The high school council and administration rely on this document to create a specific school improvement plan that informs all teaching and learning practices at Saugus High School. There are four areas of this plan that are significantly hindered as a result of the limitations of the school building. Those hindered areas are:

1. Instruction delivery aligned to the common core standards.
2. Making appropriate use of instructional resources, including technology.
3. Providing year-round, high-quality professional development, and lastly.
4. Preparing all students for college and career readiness

Integral to achieving what is stated in the SPS mission statement is the need for a safe, efficient and modern school building that will afford all Saugus High School students the opportunity to realize their full potential. Although Saugus High School was designed for 1,500 students, the current enrollment is 738 students, making the building over-sized. This fact, along with the lack of insulation, results in excessive energy costs by as much as 50% (Attachment K) as well as security concerns. The building's mid-twentieth century design does not meet our students' current twenty-first century learning goals. The building lacks adequate:

- Science facilities
- Special Education program facilities
- Ability to support modern technology
- Provisions for the disabled to have equal access to building areas and programs



- Building systems that are operational and/or cost effective (HVAC, Electrical, Plumbing, Communication, Security, Fire Detection and Suppression)
- Confidential Conferencing and Counseling Spaces

The district is spending an excessive amount of its resources on capital improvements, maintenance, repairs and energy costs on our outdated facility. These funds would be better used to support student achievement as outlined in the SHS School Improvement Plan.

The high school is unable to provide a “guaranteed viable curriculum” in the sciences to all students in biology, chemistry, and physics due to inadequate learning space and capabilities in its labs. Curriculum and instruction is driven by curriculum maps as aligned with the Massachusetts curriculum frameworks. Students are now annually tested through MCAS in grades 9 and 10, requiring districts to keep pace in the science curriculum as a proviso for graduation. The curriculum has been altered in most science labs, preventing the full science lab experience for all students. There are not enough sinks, science lab tables, working gas outlets, nor electricity capacity to provide equitable educational opportunity. Lab equipment is obsolete and incapacitated in some instances.

A 21<sup>st</sup> century lab environment requires an infusion of modern technologies, science equipment, instructional/lab combination and safety provisions to maximize learning in the lab sciences. Due to insufficient learning lab environments, students are limited in the hands-on learning experience and teachers are unable to deliver the curriculum as outlined, as well as meet new curriculum initiatives.

In 2011, the high school included in its program of studies an Academy for the Advanced Program of Studies in STEM with increased emphasis on advanced sciences leading to a certificate of completion upon graduation and student testing in not less than seven Advanced Placement subjects. As a participant in the state’s “Race to the Top” initiative Pre-AP Project, Saugus is obligated to embrace a hands-on, investigative learning that our labs can’t facilitate. Teachers have been trained in the strategies and methodologies, but are compromised by the facilities.

In the area of special education, Saugus High School is looking to vertically align with programs that are offered at our elementary and middle school. To do so would require a learning environment as well as classroom space that is ADA compliant and suitable for programming. Such programs include a program working with autistic students as well as a program working with 18-22 year old special education students.

Curriculum in the areas of fine arts and wellness are hampered by the facilities. Our wellness program consists of both physical education as well as health and wellness curriculum. Our undersized weight room/fitness center does not allow for the curriculum that is learned in our wellness classrooms to be modeled and practiced in this area. It is vastly undersized and with asbestos in the walls and floors, expansion is prohibited. The fine arts department has issues with the auditorium stage lighting and the audio system. Both require update but the lighting cage on the stage is a hazard and is original to the building.

Learning expectations exist for all students under the state standards to measure mastery of the framework. Students can’t be expected to meet those standards, or perform at an advanced level, in a learning environment where teachers are unable to deliver curricula as it is expected to be provided. This necessitates improved lab science facilities.

It has been mentioned in other priorities both false fire alarms, roughly 200 in the last couple of years, has had an impact on instructional time. In fact, during a recent MCAS administration a false alarm occurred and forced students to exit the building and delay the completion of the MCAS testing.

There is little question that the science labs and special education classrooms are the most affected by the limitations of the

building and facilities. However it should not be understated that disciplines are impacted by the outdated building. The classrooms lack space for student centered activities, proper electrical supply, and climate control. Many times classrooms are either too hot or too cold and there is no way to properly control classroom temperature. Specifically there many classroom teachers that are forced to open windows in the winter to cool off their classroom. These environmental concerns do have significant instructional impact on student learning.

In 2013, The New England Association of Schools and Colleges (NEASC) placed Saugus High School on warning status primarily due to the conditions of the sixty-year old building. Saugus is actively addressing those concerns to the greatest extent possible, however the totality of building deficiencies has ultimately rendered these efforts futile.

Our main goal is quite simple; **to be given an opportunity to partner with the MSBA for the expressed purpose of replacement or renovation of the high school facility.** Saugus High School is a sixty-year old building whose limitations impact our ability to provide an educational learning environment compatible with the requisites of a 21st century education. This is due to antiquated, inadequate and worn out mechanical systems and infrastructure. The NEASC Accreditation Report and the report of SMMA cite that the high school is "outdated, unsafe, and unable to meet the needs of a 21st century learner". (See Priorities 1 & 3)

It cannot be any clearer that Saugus needs a properly sized, safer, code compliant facility to achieve its goals and mission.

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## REQUIRED FORM OF VOTE TO SUBMIT AN SOI

### REQUIRED VOTES

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

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

### FORM OF VOTE

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

Resolved: Having convened in an open meeting on \_\_\_\_\_, prior to the closing date, the  
 \_\_\_\_\_ *[City Council Board of Aldermen,*  
*Board of Selectmen Equivalent Governing Body School Committee]* of \_\_\_\_\_ *[City Town], in*  
 accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit  
 to the Massachusetts School Building Authority the Statement of Interest dated \_\_\_\_\_ for the  
 \_\_\_\_\_ *[Name of School]* located at  
 \_\_\_\_\_ *[Address]* which  
 describes and explains the following deficiencies and the priority category(s) for which an application  
 may be submitted to the Massachusetts School Building Authority in the future

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ ; *[Insert a description of the priority(s) checked off*

*on the Statement of Interest Form and a brief description of the deficiency described therein for each priority]; and hereby further*

specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

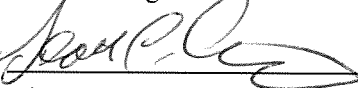
**CERTIFICATIONS**

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

**Chief Executive Officer \***

Scott Crabtree

Town Manager



(signature)

Date 4/10/14

**School Committee Chair**

Wendy Reed



(signature)

Date 4-10-14

**Superintendent of Schools**

Michael Tempesta



(signature)

Date 4/10/14

\* Local Chief Executive Officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.