Massachusetts School Building Authority

School District Dudley-Charlton Reg

District Contact Sean Gilrein TEL: (508) 943-6888

Name of School Shepherd Hill Reg High

Submission Date 1/21/2011

Note

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

1. é 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. é Elimination of existing severe overcrowding.
3. é Prevention of the loss of accreditation.
4. é Prevention of severe overcrowding expected to result from increased enrollments.
5. þ 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. é Short term enrollment growth.
7. þ 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. é Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

Potential Project Scope: Renovation/ Addition

Is this SOI the District Priority SOI? YES

The MSBA ID for the District Priority SOI: 2011 Shepherd Hill Reg High

District Goal for School: Please explain the educational goals of any potential project at this school

The Dudley-Charlton Regional School District is committed to providing every student with a comprehensive, student-centered and developmentally appropriate instructional program that prepares them for success in the 21st century. The core values, beliefs and learning expectations of Shepherd Hill Regional High School affirm a commitment to excellence and a dedication to developing all students to their full potential. The goal of the school, along with parents, community and supporting agencies, is to provide motivation, quality instruction, guidance, a safe environment and skills for success in today's ever-changing world. By promoting a sense of "Pride and Unity", Shepherd Hill Regional High School strives to enable students to become productive citizens in a free society and to instill in them a desire for life-long learning. In an effort to fulfill these goals, it is essential that the school building meet today's standards of teaching and learning. The current building was constructed in 1973; and despite consistent maintenance and capital improvement projects, after 37 years of use as both an educational and a community facility, it needs a major upgrade in order to continue to provide students with a safe environment in which to acquire the knowledge, skills and values needed for success in a diverse and global society of the 21st century. Renovation and an addition would extend the capacity of the building to serve the communities of Dudley and Charlton for the next 50+ years. Major components of the project would include the following: (1) Update aging mechanical structures installed in the original construction to insure a safe environment conducive to teaching and learning. (2) Update classrooms and provide for additional classrooms that allow

for instructional methodologies of 21st century learning including collaboration, problem solving and modern technologies. (3) Provide for modernized science learning facilities that meet classroom size requirements and allow for appropriate hands-on experimentation with adequate safety measures in place. (4) Provide modern foreign language learning facilities that would individualize instruction in listening, speaking, reading and writing in the target language and enhance the opportunities for developing proficiency for all students including those who progress to the advanced placement level. Curriculum could be expanded to include the two-year foreign language graduation requirement recommended by the MassCore curriculum. (5) Provide redesigned learning areas for engineering and robotics instruction allowing for expansion of the curriculum to provide relevant 21st century skills. (6) Provide students and community members with modern athletic and physical education facilities by making long overdue improvements to fields, track and locker rooms. Additional practice fields would allow for the expansion of athletic offerings to students and increase accessibility to community teams. Replacement of bleachers would address a safety concern that increases each year. Modernized athletic facilities would mirror those at other more recently constructed/renovated facilities at nearby schools and decrease the number of students who utilize school choice options to avail themselves of these athletic opportunities. (7) Update the heating, cooling and ventilation systems to enable them to deliver superior air quality and comfort while minimizing energy consumption and resulting in improvements to the teaching and learning environment. (8) Upgrade electrical distribution and communication, technology and data infrastructures to allow for the use of modern technologies in the classroom. (9) Provide for adequate conference rooms, especially in the administrative and guidance areas, that insure confidentiality. (10) Provide for adequate space to develop programs for students who are at a high risk for dropout including vocational opportunities. (11) Provide for adequate space for special education services and additional space to develop programs including those with pre-vocational and life skills content that allow for students to remain in the district and decrease out-of-district placement for services. (10) Provide for adequate facilities for the performing arts classes including practice facilities for instrumental and vocal ensembles. (11) Increase energy efficiencies in the building and explore the addition of alternate energy sources such as solar panels, wind mills, etc. (12) Replace copper pipes and wedges that are prone to leaks. (13) Replace and modernize kitchen facilities to provide for the nutritional needs of students. Much of the kitchen equipment is original to the building and has exceeded its life span. (14) Update the fire suppression system to meet 21st century safety measures. (15) Replace deteriorating boiler/furnace stack.

District's Proposed Schedule: What is the District's proposed schedule to achieve the goal(s) stated above?

It is the intention of the Dudley-Charlton Regional School District, once the project has been voted into the capital pipeline to secure the necessary funding and subsequent votes of our commitee to move the project to the schematic design. Based upon the decision and recommendation of the MSBA, the district would then pursue the provisions of Massachusetts General Laws, Chapter 71 Section 16 (d) for regional school districts, as well as the explicit requirements of the district agreement.

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: 15 students per teacher.

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 15 students per teacher.

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 YES

If "YES", how many teaching positions were affected? 1

At which schools in the district? Charlton Elementary School

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

One pre-school teacher position was reduced as a result of a 40% reduction in the Title 1 federal grant.

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(i.e 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.

There has been no impact on the delivery of educational services. A slight reduction in enrollment has made reassignment of teachers among grade levels possible.

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

The budget process at Shepherd Hill Regional High School begins with an assessment of student learning needs. Department coordinators consider projected student enrollments, prioritize departmentalized budget requests for textbooks and instructional materials, and submit a budget request to the building prinicpal. The building principal meets with the Superintendent and the Finance Director to review and discuss the operational budget, staffing needs, and capital improvement. A proposed budget is presented to the School Council and the Dudley-Charlton Regional School Committee. Meetings with the Dudley Finance Committee, Charlton Finance Committee, the Superintendent, Finance Director and members of the School Committee are scheduled and the fiscal budget is presented to both towns through public hearings. The School Committee modifies the budget several times, dependent upon each town's financial resources, before voting on a final district budget. Each town's allocation is voted upon by the respective community at annual town meetings. For FY 2011 the District requested the minimum local contributions required by the Education Reform Act of 1993. Assessments were approved unanimously at annual meetings. The district committed substantial reserves, allowing for the retention of employees, improved technology, and continued capital improvement. The community and the district's governing body make every effort, despite challenging economic times, to provide dependable funding for a wide range of school programs and services.

General Description

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).:

Shepherd Hill Regional High School, located on Dudley-Oxford Road in Dudley, has been serving the adjacent communities of Dudley and Charlton since 1973. The high school put an end to double sessions at the old Charlton High School and brought together the Dudley students who, because the town had no high school of its own, were paying tuition to schools in the neighboring towns, one of which was in Connecticut. From 1973-2000, the school was a grade 7-12 facility. Two new middle schools, one in Dudley and one in Charlton, opened their doors in September, 2000 and alleviated severe overcrowding at the school. Shepherd Hill became a 9-12 facility at that time and remains such to this date.

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

192247

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 (maximum of 5000 characters).:

Shepherd Hill Regional High School is located on Dudley-Oxford Road in Dudley, Massachusetts, The school sits on 90 fairly level acres. If enrollment increases, as had been the case prior to the recent economic downturn, an addition to the current facility could be accomplished with a design considered with the original layout of the buildings. This could consist of either a fourth floor addition to the academic building or a connecting addition on the north side of the academic building.

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

The building is of block design with a brick facade and slab foundation.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS ?: YES
Year of Last Major Repair or Replacement: 2003
Description of Last Major Repair or Replacement:
A section of the auditoruium concrete blocked west wall was waterproofed, pointed and caulked.

Has there been a Major Repair or Replacement of the ROOF?: YES
Year of Last Major Repair or Replacement: 1994
Type Of ROOF Membrane
Description of Last Major Repair or Replacement:
Total roof replacement including membrane, drains, insulation and copper facing

Has there been a Major Repair or Replacement of the WINDOWS?: YES
Year of Last Major Repair or Replacement: 2010
Type Of WINDOWS Single Pane
Description of Last Major Repair or Replacement:
12 windows were replaced in 2010 in conjuncrion with the renovation of a former industrial arts area into a district central office space. It is anticipated that the remaining 296 single pane windows will be replaced during the summer of 2011 with the assistance of the MSBA Green Repair Porgram.

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 current building was constructed in 1973 and has been used as an educational and community facility for the past 37 years. Despite an aggressive maintenance plan, age and tiring systems can only be repaired and maintained for so long without

complete replacement and renovation provided. The only cost effective long-term solution to this aging facility and its systems is a complete renovation.

The existing 3 phase electrical distribution system is in need of replacement due to age and condition; it cannot support the requirements of the technology age. There is evidence of aluminum feeders that have failed. GFI plug sockets are not in place next to sink areas as they should be. Federal Pacific circuit breakers and electrical panels are obsolete and difficult to replace. New electrical panels were replaced in both gyms (1998) and the auditoruium (2006).

The heating system is original to the building and relies on two inefficient furnaces which must be manually monitored. New boiler tubes were installed in 2002. The boiler/furnace stack shows considerable deterioration and there are concerns that boiler exhaust does not safely disperse from the building.

The ventilation and air conditioning is inadequate and contributes to uneven temperatures throughout the school. Adjusting the thermostats to compensate for under-heated areas results in other areas being overheated. This results in significant energy inefficiency and a less than comfortable learning and teaching environment. Pneumatic thermostats are used throughout the building; many of these lines have failed. The pneumatic system along with univent components is inefficient and replacement parts are not available.

Copper piping is original with lead joints and a growing number of leaks occurring behind the cinder block walls; wedge shutoffs are impractical and inadequate.

The technology infrastructure and outdated wiring are inadequate to meet the needs of a 21st century education. Fiber optic cabling and a wireless network are lacking.

Has there been a Major Repair or Replacement of the BOILERS?: YES
Year of Last Major Repair or Replacement: 2002
Description of Last Major Repair or Replacement:
Repair/retubing of both boilers

Has there been a Major Repair or Replacement of the HVAC SYSTEM ?: NO
Year of Last Major Repair or Replacement: 1973
Description of Last Major Repair or Replacement:
Original to building

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:
Electrical services and distribution system are original to the building.

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).:

Non-structural block interior with tile floor on concrete slab; all classrooms, library and cafeteria have 2X4 drop ceilings; connecting corridors and locker rooms are concrete slabs mesh cement with crawl space; lighting is 32 watt, 2 bulb fluorescent.

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.:

Shepherd Hill offers a comprehensive array of curricular offerings. The curriculum is organized into nine deparments with thirteen content areas consisting of English, mathematics, science, social studies, foreign languages (French, Latin, Mandarin and Spanish), business/technology education, visual and performing arts, physical education/health/family and consumer science, and special education. Graduation requirements include four credits in English, three credits in social studies, three

credits in math (four credits beginning with the class of 2013), three credits in science and three-quarters credit in physical education.

Shepherd Hill Regional High School was constructed in 1973 to meet the educational goals and requirements of that time. The building was designed for teachers working in individual classrooms and teaching subject matter in an isolated fashion primarily by lecture and reading. High schools of the 21st century should be characterized by student collaboration, project-based learning, interdisciplinary projects, differentiated instruction, and teachers working in teams to deliver an interconnected curriculum in a coordinated manner using modern technology. In addition, special education instruction and services are far different today than they were in 1973 and space must be provided for English Language Learner programs and programs for students who are at-risk of dropping out of school and not graduating. The current building does not meet the 21st century standards for teaching and learning.

In the academic wing, all classrooms are used constantly throughout the day and space is not available for additional/new educational programs including those recommended by the MassCore graduation requirements (i.e. two credits in a foreign language and one credit in the arts), vocational instruction, increased special education opportunities, and expansion of the curriculum to provide relevant 21st century skills. Inadequate science labs, lack of a foreign language lab to promote proficiency and facilitate Advanced Placement testing, inadequate performing and visual arts facilities, inadequate physical education and wellness instructional areas, and lack of classrooms for robotics and expanded engineering instruction negatively impact our ability to prepare our students for the future.

The outdated wiring and inadequate technological infrastructure impedes the efforts to integrate technology effectively as a tool for teaching and learning in all subject areas. Classrooms were built before computers, LCD projectors and other technological media devices were invented. This seriously impacts the curriculum and limits the acquisition of skills necessary for success in the 21st century.

The inability to provide adequate space for programs for students with specific learning disabilities will result in additional out of district placements that will not only be more costly for the district but will also not provide these students with the opportunity to receive an education in the least restrictive environment, which is expected under both state and federal regulation.

Adequate space is needed to develop programs for students who are at a high risk for dropout including vocational opportunities. The increased selectivity of vocational schools limits the availability of vocational programs for this population.

Modern athletic and physical education facilities including locker room updates are long overdue. Natural grass fields with poor drainage limit field availability. Artificial turf would provide safety and durability. There are no field toilet facilities and portable toilets must be used. The track does not conform to standard track specifications and no indoor track facilities exist. Additional practice fields would allow for the expansion of athletic offerings to students and increase accessibility to community teams. Replacement of bleachers would address a safety concern that increases each year. Modernized athletic facilities would mirror those at other more recently constructed/renovated facilities at nearby schools and decrease the number of students who utilize school choice options to avail themselves of these athletic opportunities.

Kitchen facilities need to be modernized to provide for the nutritional needs of students. Much of the kitchen equipment is original to the building, is not energy efficient, and has exceeded its life span. The cafeteria is not configured to meet current wellness models for school food programs. The traditional serving line layout needs to be redesigned to provide a “food court” system that provides healthy meal choices for students and serves as a key component to the school wellness program.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description 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 77 room core educational space has been reduced over the years to accommodate computer rooms, special education

needs and a newly expanded superintendent's office. Currently 68 rooms are available. The number and size of current classrooms is inadequate. The average core classroom contains between 590 and 775 sq. ft. (today's standard calls for 950 sq. ft.). There are no extra spaces for additional/new educational programs.

Science labs do not meet current educational requirements, in size, accessibility, location and lab layout. The science curriculum is compromised due to limitations on the number and type of labs that can be run. Storage in the science area is inadequate, water and electrical systems lack 21st century safety measures and ventilation is poor. Science laboratories contain between 900-1,055 sq. ft. (today's standard calls for 1,200 sq. ft.) Three of the nine science labs were repaired/updated to address natural gas emergency shut off concerns, equipment deficiencies and lab table replacements in 1998. Two chemistry labs were updated with new lab tables in August, 2010. One additional chemistry lab still needs to be updated with new lab tables and it is hoped that this can occur in the near future.

The John F. Canavan Library and media center provides a variety of print and non-print materials that support the curriculum and enrich recreational reading activities. Internet access and computers are also available and were updated in 2009. The library was refurbished with new rugs, blinds, books and software as a gift from Commerce Insurance Co. in 1995; but 16 years later, is in need of an additional update including furniture that is original to the 1973 building. Upgraded lighting and electronic cataloguing were completed in 2004. An additional upgrade of the cataloguing system occurred in 2010.

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).:

The current enrollment has leveled due to the current economic downturn. Currently five teachers share classrooms with other teachers. During the 37 year history of the school, several spaces have been converted from their intended use into classroom space. The following have been converted into classrooms: a reading lab, a math lab, a foreign language lab, 2 teacher preparation rooms, three family and consumer science rooms, 2 lecture halls. Several storage areas have been converted into special education service areas for speech therapy, OT, PT and conference rooms. In addition, several industrial arts and storage areas have been converted into office spaces for the district central office.

An improved economy will generate additional housing construction and result in an increased enrollment at the high school creating a situation of overcrowding.

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 if any override or debt exclusion votes were necessary (maximum of 5000 characters).:

The Dudley-Charlton Regional School District prides itself on maintaining school buildings and insuring that students have a safe learning environment. Day to day building maintenance is provided by a full time staff coordinated by the director of maintenance. There are three shifts with a staggering schedule that allows the building to be monitored twenty-four hours a day during the regular school week. Mechanical, electrical, plumbing, and carpentry are done in house if feasible. Major repairs are secured by bid when needed. Capital improvement occurs on a regular basis dependent upon financial availability with a priority given to safety concerns. Recent capital repair investments include: repaving the driveway and a portion of the parking lot, renovation of industrial arts classrooms and storage areas into a district central office, renovation of two chemistry labs, repainting of third floor lockers. In 2008 the gym was renovated to address a number of safety and ADA issues that included flooring, bleachers, backboards and rims. Intercom/paging repairs and upgrades took place in 2008. Auditorium lighting and panel board were replaced in 2007. In addition, all lighting in the cafeteria, school library, media center and gym were also replaced in 2007; a 15,000 gallon undergound fuel storage tank was replaced in 2006; the walk-in freezer and refrigerator were replaced in 2006; the air exchange enhancement monitor in the gymnasium was replaced in 2004 with partial energy grant funding; two exhaust fans were installed in the ktchen in 2003; retubing of both boilers took place in 2002; a 1,200 gallon PVI hot water tank with four stainless steel indirect hot water tanks were replaced in 2002; the outdoor tennis

and basketball courts were renovated and fencing on the courts and fields were replaced in 2005; three science labs were upgraded in 1998 and a total roof replacement amounting to $900,000 debt exclusion was undertaken in 1994.

The lack of efficiency and age of the various building systems impede the delivery of a 21st century education and have an increasing impact on financial resources. In addition, safety concerns in science labs, fire suppression system, lifting tiles in the practice gym and main corridors, aging bleachers and locker room facilities, lack of handicapped seating in the auditorium, inefficient and aging student lockers contribute to a less than conducive environment for teaching and learning. Increased occupant comfort combined with an improved physical environment would promote a better atmosphere for teaching and learning and provide students with the skills necessary for success in the 21st century.

Priority 5

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 current building was constructed in 1973 and has been used as an educational and community facility for the past 37 years. Despite an aggressive maintenance plan, age and tiring systems can only be repaired and maintained for so long without complete replacement and renovation provided. The only cost effective long-term solution to this aging facility and its systems is a complete renovation.

- The heating system is original to the building and relies on two inefficient furnaces which must be manually monitored.
- The boiler/furnace stack shows considerable deterioration and there are concerns that boiler exhaust does not safely disperse from the building.
- The ventilation and air conditioning is inadequate and contributes to uneven temperatures throughout the school. Adjusting the thermostats to compensate for under-heated areas results in other areas being overheated. This results in significant energy inefficiency and a less than comfortable learning and teaching environment.
- Pneumatic thermostats are used throughout the building; many of these lines have failed. The pneumatic system along with univent components is inefficient and replacement parts are not available.
- Copper piping is original with lead joints and a growing number of leaks occurring behind the cinder block walls; wedge shutoffs are impractical and inadequate.
- The building is constructed with an uninsulated block design and partially insulated flat roof.
- There is known asbestos in the building which is encapsulated and monitored under an appropriately posted asbestos management plan.
- The school has the original single glazed, thermally inefficient, drafty windows throughout the building. However, it is anticipated that these will be replaced during the summer of 2011 under the MSBA Green Repair Program.
- A number of the exterior doors do not properly latch or in some cases, do not open easily raising serious safety concerns regarding undetected entry or delayed emergency exiting from the building. A number of doors must be chained from the inside for security in off hours and pose a safety concern. The inadequate doors contribute to energy inefficiency.
- A vestibule at the main entrance would prevent drafts, increase comfort in the nearby classrooms and decrease energy expenditure.
- The existing electrical distribution system is in need of replacement due to age and condition; it cannot support the requirements of the technology age. There is evidence of aluminum feeders that have failed. GFI plug sockets are lacking next to sink areas. Federal Pacific electrical panels are obsolete.
- The existing emergency power/egress lighting system requires substantial upgrades to meet present life safety requirements for egress lighting.
- The roof is 16 years old and does not allow for the exploration of alternate energy sources such as solar panels. Available renewable energy grants require roofs to be less than 10 years old.
- Much of the kitchen equipment is original to the building and has exceeded its life span. An update will result in more energy efficient equipment and a lower operating cost while better meeting the nutritional needs of students.
- The technology infrastructure and outdated wiring are inadequate to meet the needs of a 21st century education. Fiber optic cabling and a wireless network are lacking.
- The single elevator which services the academic building in nearing its expected life. It has no emergency phone and no audible floor signals

Priority 5

Please describe the measures the School District has already taken to mitigate the problem/issues described in Question 1 above.

As part of the Massachusetts Department of Energy Resources' (DOER) Energy Audit Program (EAP), Energy Engineering & Design, Inc. (EE&D) performed an energy audit at Shepherd Hill Regional High School in April of 2009. Recommendations included the replacement of single pane windows. Recent measures taken to reduce energy consumption include the following:

1. T-5 lights installed in both gyms with sensors for energy savings.
2. T-8 bulbs installed with new ballasts in every light throughout the building.
3. Energy efficient LED exit lights were recently installed
4. Floor to ceiling curtain installed between main gym and practice gym.
5. Exterior doors installed at the main entrance.
6. New boiler tubes installed in both boilers.
7. Light sensors installed in every room.
8. New compressor has been installed for the air conditioner.
9. New air handler in the superintendent's area.
10. Replaced 1000 ft. of return hot water pipe.
11. New electric panel for both gyms.
12. New electric panel and energy efficient lighting installed in the auditorium.

In addition, a kitchen walk-in freezer and refrigerator were replaced in 2006; 15,000 gallon underground fuel storage tank was replaced in 2006; air exchange monitor in the gymnasium was replaced in 2004 (partially funded by an energy grant); 1,200 gallon PVI hot water tank with four stainless steel indirect hot water tanks were replaced in 2002 and a total roof replacement and insulation took place in 1994.

Shepherd Hill Regional High School expects to replace 296 drafty windows during the summer of 2011 with partial funding under the MSBA Green Repair Program.

Priority 5

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.

The lack of efficiency of the various building systems, in particular uncomfortable conditions relative to inadequate heating and ventilation, affect teacher and student comfort; and as a result, negatively impact overall student performance. As maintenance and operational costs of the building systems continue to climb, there is an adverse effect on the school budget. Funds that could be available for implementation of enhanced educational programs must be used to maintain the aging and inadequate building systems. A lack of energy efficiency also decreases funding available for educational programs and curricular needs.

The outdated wiring and inadequate technological infrastructure impedes the efforts to integrate technology effectively as a tool for teaching and learning in all subject areas. This seriously impacts the curriculum and limits the acquisition of skills necessary for success in the 21st century.

Please also provide the following:

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

If "YES", please provide the name of the individual and his/her professional affiliation:

Massachusetts Department of Energy Resources Energy Audit Program

Please also provide the date of the inspection:: 4/1/2009

Priority 7

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.

Shepherd Hill Regional High School was constructed in 1973 to meet the educational goals and requirements of that time. The building was designed for teachers working in individual classrooms and teaching subject matter in an isolated fashion primarily by lecture and reading. High schools of the 21st century should be characterized by student collaboration, project-based learning, interdisciplinary projects, differentiated instruction, and teachers working in teams to deliver an interconnected curriculum in a coordinated manner using modern technology. In addition, special education instruction and services are far different today than they were in 1973 and space must be provided for English Language Learner programs and programs for students who are at-risk of dropping out of school and not graduating. The current building does not meet the 21st century standards for teaching and learning.

- The number and size of current classrooms is inadequate. The building was constructed with 77 regular education classrooms. As a result of reconfiguration for special education needs, computer labs, etc., regular education classrooms have been reduced to 68. The average core classroom contains between 590-775 sq. ft. Today's standards call for 950 sq. ft. Science laboratories contain between 900-1,055 sq. ft., while today's standards call for 1,200 sq. ft. All Classrooms are used constantly throughout the day. There are no extra spaces for additional/new educational programs including those recommended by the MassCore graduation requirements, vocational instruction, increased special education opportunities, and expansion of the curriculum to provide relevant 21st century skills. Currently, five teachers do not have their own classrooms and move about the building sharing classrooms.
- The technology infrastructure and outdated wiring are inadequate to meet the needs of a 21st century education. Fiber optic cabling and a wireless network are lacking. Current electrical circuiting will not support additional technologies.
- Additional computer labs are needed to meet the needs of 21st century teaching and learning.
- Science labs do not meet current educational requirements, in size, accessibility, location and lab layout. The science curriculum is compromised due to limitations on the number and type of labs that can be run.
- Storage in the science area is inadequate, water and electrical systems lack 21st century safety measures and ventilation is poor.
- Foreign Language instruction is compromised by the lack of a modern language lab learning facility that would individualize instruction in listening, speaking, reading and writing in the target language and enhance the opportunities for developing proficiency for all students including those who progress to the advanced placement level. Additional classroom space is needed to expand offerings to implement the two-year foreign language graduation requirement recommended by the MassCore curriculum.
- Learning areas need to be redesigned to provide for engineering and robotics instruction allowing for expansion of the curriculum to provide relevant 21st century skills.
- The current physical education program does not align with the state curriculum frameworks. There are space constraints that prohibit wellness programs/activities and class instruction. The physical education program consists of sports related activities. Today's frameworks are built around wellness. Additional areas for multi-purpose use such as dance and wrestling do not exist.
- Athletic and physical education facilities need to be modernized by making long overdue improvements to fields, track and locker rooms. The track does not conform to standard track specifications and no indoor track facilities exist. Additional practice fields would allow for the expansion of athletic offerings to students and increase accessibility to community teams. Replacement of bleachers would address a safety concern that increases each year. Modernized athletic facilities would mirror those at other more recently constructed/renovated facilities at nearby schools and decrease the number of students who utilize school choice options to avail themselves of these athletic opportunities.
- Natural grass fields with poor drainage limit field availability. Artificial turf would provide safety and durability. There are no field toilet facilities and portable toilets must be used.
- Adequate conference rooms, especially in the administrative and guidance areas, are not available and impede the ability to meet with parents and students in a confidential manner.

- Additional office space is needed to accommodate a school resource officer and a school adjustment counselor.
- Adequate space is needed to develop programs for students who are at a high risk for dropout including vocational opportunities. The increased selectivity of vocational schools limits the availability of vocational programs for this population.
- Adequate space is not available for special education services such as speech, physical and occupational therapy. Storage areas and curtain-partitioned areas are being used for these services.
- Additional space is needed to develop special education programs including those with pre-vocational and life skills content that allow for students to remain in the district and decrease out-of-district placement for services. Post-graduate programs could be implemented.
- Adequate facilities for the performing arts classes including practice facilities for instrumental and vocal ensembles, changing rooms near the stage, and space for set construction and storage. No traditional classrooms to teach non-instrumental classes, such as music theory, composition and music appreciation are available. The band room is too small, acoustics are poor and the location disturbs other classrooms and district offices. Inadequate space exists for strings or percussion instruction.
- Visual arts classrooms need updates including replacement of furnishings, more modern and energy efficient equipment and additional space for new curricular offerings allowing for the implementation of the one credit in arts suggested by the MassCore graduation requirements.
- Updates are needed to the library/media center to provide a modern facility for student and community use.
- Kitchen facilities need to be modernized to provide for the nutritional needs of students. Much of the kitchen equipment is original to the building, is not energy efficient, and has exceeded its life span. The cafeteria is not configured to meet current wellness models for school food programs. The traditional serving line layout needs to be redesigned to provide a "food court" system that provides healthy meal choices for students and serves as a key component to the school wellness program.
- The fire suppression system needs to be updated to meet 21st century safety measures. There are no smoke detectors, only fire detectors in the building with only 6 fire zones in the nearly 200,000 square foot building. Sprinkler heads are located in only a very limited area of the building. The vast majority of the building including the entire academic wing is not equipped with a Fire Protection Sprinkler System.
- The auditorium needs an upgrade in acoustics, sound system and seating. It does not meet ADA seating requirements.
- Floor tiles show wear and are lifting in a number of the high traffic areas in the building which include the practice gym, several stairways and landings, and parts of the main corridors.
- Student lockers are original to the building and need to be replaced despite efforts to prolong their usability by painting/electroplating.
- All chalkboards should be replaced with white boards. Lack of funding has allowed for only a limited number of replacements. Smartboards should be available to provide for 21st century instructional strategies.

Priority 7

Please describe the measures the School District has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

Many of the issues that constrain the educational program are due to the limitations of the physical structure, inadequate technology infrastructure, and an aging facility. The administration, faculty and staff have been creative in overcoming these challenges wherever possible and an aggressive maintenance plan has been in place throughout the 37 years of the building. Two new middle schools, one in Dudley and one in Charlton, opened their doors in September, 2000 and alleviated severe overcrowding at the school. Shepherd Hill became a 9-12 facility at that time and remains such to this date.

- Over the years, several spaces have been converted from their intended use into classroom space. The following have been converted into classrooms: a reading lab, a math lab, a foreign language lab, 2 teacher preparation rooms, three family and consumer science rooms, 2 lecture halls. Several storage areas have been converted into special education service areas for speech therapy, OT, PT and conference rooms. In addition, several industrial arts and storage areas have been converted into office spaces for the district central office.

- Total roof replacement and insulation (1994)
- Three first floor science labs upgraded to address natural gas emergency shutoff concerns and equipment deficiencies (1998)
- Lecture halls have been renovated for a computer lab and a science classroom.
- Modifications have been made to a cardiovascular/weight room.
- Substantial expenditure to repair the outdoor tennis and basketball courts as well as fencing on the east and south ends of the courts/fields (2000)
- Retube both boilers (2002)
- Replace 1,200 gallon PVI hot water tank with four stainless steel indirect hot water tanks (2002)
- Two exhaust fans installed in kitchen (2003)
- ADA upgrades resulting in partial compliance (2004)
- Replacement of air exchange enhancement monitor in the gymnasium partially funded by energy grant (2004)
- Storage area in the library/media center has been renovated into a conference area as a result of a class gift (2005)
- Replacement of walk-in freezer and refrigerator in the kitchen (2006)
- Replacement of a 15,000 gallon underground fuel storage tanks (2006)
- Auditorium lighting and panel boards were replaced (2007)
- All lighting in the cafeteria, school library, media center and gym were replaced (2007)
- Gym renovation to address a number of safety and ADA issues and included flooring, bleachers, backboards and rims (2008)
- Intercom/paging repairs and upgrades (2008)
- Additional storage facility constructed
- Track was resurfaced and recalibrated with metric measure (2009)
- Renovation of industrial arts classrooms and storage areas as a visual/performing arts MAC lab and district central office space (2009/10)
- Three portable computer labs (one for each floor of the academic wing) each with 16 computers have been purchased (2010)
- Three third floor science labs received updated lab furniture (2010)
- Repaving of the driveway and a portion of the parking lot (2010)
- Repainting/electroplating third floor student lockers (2010)

Priority 7

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.

Shepherd Hill Regional High School was constructed in 1973 to meet the educational goals and requirements of that time. The building was designed for teachers working in individual classrooms and teaching subject matter in an isolated fashion primarily by lecture and reading. High schools of the 21st century should be characterized by student collaboration, project-based learning, interdisciplinary projects, differentiated instruction, and teachers working in teams to deliver an interconnected curriculum in a coordinated manner using modern technology. In addition, special education instruction and services are far different today than they were in 1973 and space must be provided for English Language Learner programs and programs for students who are at-risk of dropping out of school and not graduating. The current building does not meet the 21st century standards for teaching and learning.

In the academic wing, all classrooms are used constantly throughout the day and space is not available for additional/new educational programs including those recommended by the MassCore graduation requirements (i.e., two credits in a foreign language and one credit in the arts), vocational instruction, increased special education opportunities, and expansion of the curriculum to provide relevant 21st century skills. Inadequate science labs, lack of a foreign language lab to promote proficiency and facilitate Advanced Placement testing, inadequate performing and visual arts facilities, inadequate physical education and wellness instructional areas, and lack of classrooms for robotics and expanded engineering instruction negatively impact our ability to prepare our students for the future.

The outdated wiring and inadequate technological infrastructure impedes the efforts to integrate technology effectively as a tool for teaching and learning in all subject areas. Classrooms were built before computers, LCD projectors and other technological media devices were invented. This seriously impacts the curriculum and limits the acquisition of skills necessary for success in the 21st century.

The inability to provide adequate space for programs for students with specific learning disabilities will result in additional out of district placements that will not only be more costly for the district but will also not provide these students with the opportunity to receive an education in the least restrictive environment, which is expected under both state and federal regulation.

Adequate space is needed to develop programs for students who are at a high risk for dropout including vocational opportunities. The increased selectivity of vocational schools limits the availability of vocational programs for this population.

Modern athletic and physical education facilities including locker room updates are long overdue. Natural grass fields with poor drainage limit field availability. Artificial turf would provide safety and durability. There are no field toilet facilities and portable toilets must be used. The track does not conform to standard track specifications and no indoor track facilities exist. Additional practice fields would allow for the expansion of athletic offerings to students and increase accessibility to community teams. Replacement of bleachers would address a safety concern that increases each year. Modernized athletic facilities would mirror those at other more recently constructed/renovated facilities at nearby schools and decrease the number of students who utilize school choice options to avail themselves of these athletic opportunities.

Kitchen facilities need to be modernized to provide for the nutritional needs of students. Much of the kitchen equipment is original to the building, is not energy efficient, and has exceeded its life span. The cafeteria is not configured to meet current wellness models for school food programs. The traditional serving line layout needs to be redesigned to provide a “food court” system that provides healthy meal choices for students and serves as a key component to the school wellness program.

The lack of efficiency and age of the various building systems impede the delivery of a 21st century education and have an

increasing impact on financial resources. In addition, safety concerns in science labs, the fire suppression system, lifting tiles in the practice gym and main corridors, aging bleachers and locker room facilities, lack of handicapped seating in the auditorium, inefficient and aging student lockers contribute to a less than conducive environment for teaching and learning. Increased occupant comfort combined with an improved physical environment would promote a better atmosphere for teaching and leaning and provide students with the skills necessary for success in the 21st century.

Vote

Vote of Municipal Governing Body YES: NO: Date:

Vote of School Committee YES: NO: Date:

Vote of Regional School Committee YES: 7 NO: 0 Date: 12/8/2010

Form of Vote

The following form of vote should be used by both the City Council/Board of Aldermen, Board of Selectmen/equivalent governing body AND the School Committee in voting to approve this Statement of Interest.

If a regional school district, the regional school district should use the following form of vote.

Resolved: Having convened in an open meeting on _____, the

_____ *[City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body, School Committee]* of _____*[City/Town/School District]*, 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 _____*[Name of City/Town/District]* may be invited to apply to the Massachusetts School Building Authority in the future

_____

_____

_____

_____

_____

_____*[Insert a description of the priority(s) checked off on the Statement of Interest and a brief description of the deficiency described therein for each priority];* and hereby further specifically acknowledges that by submitting this Statement of Interest, 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 _____ *[Name of City/Town/District]* to filing an application for funding with the Massachusetts School Building Authority.

Closed Schools

Question 1: Has the District sold, closed, or otherwise removed from service a school in the last 10 years?

NO

Question 2: Does the District have any plans to sell, close, or otherwise remove from service a school in the next 10 years?

NO

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.

LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR (E.g., Mayor, Town Manager, Board of Selectmen)

Chief Executive Officer	**School Committee Chair**	**Superintendent of Schools**
(print name)	(print name)	(print name)
(signature)	(signature)	(signature)
Date	Date	Date