

Massachusetts School Building Authority

School District Wilmington

District Contact Joanne Benton TEL: (978) 694-6000

Name of School Wilmington High

Submission Date 7/31/2008

Note

Dear Dick,

Thank you for all your assistance. I am putting in the mail today the documents that are required. When you received them, please let me know if they meet the MSBA specifications as stated above. Again, thank you for your help.

Best,
Joanne Benton
Superintendent of Schools
Wilmington

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 the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse.
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.

Potential Project Scope: Major Project

Is this SOI the District Priority SOI? YES

The MSBA ID for the District Priority SOI: 2009 Wilmington High

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

- The Wilmington Public Schools is committed to ensuring that all facilities, programs, and equipment support the educational needs of students, staff and the community. As our buildings age, we face the growing challenge of maintaining school facilities at a level that enables our teachers to meet the needs of 21st century learners.

Is this part of a larger facilities plan? YES

If "YES", please provide the following:

Facilities Plan Date: 3/31/2008

Planning Firm: Dore & Whittier

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:

While the school buildings have served Wilmington students and residents in the past, the "master plan" approach includes a look to the future use of the buildings as they relate to changes in building and energy codes, educational programs, space use and technology in education. The buildings have been maintained well, but due to the age of the buildings, capital improvements are needed to extend the life of building systems. . The school committee approved a new Strategic Plan for the schools in 2006. One of the priorities in the plan was preparing a Wilmington School Facilities Master Plan. In May 2007, the Town of Wilmington hired the architectural firm of Dore and Whittier Architect, Inc. to evaluate the current physical condition and educational function of the school buildings, review enrollment projects, identify problems and provide possible options and solutions. The purpose of the Master Planning Study was to provide an independent architectural and engineering assessment of the seven buildings (excluding the middle school). Dore & Whittier recommended that we focus our attention on either renovating or new construction of the high school based the following reasons: • Meet the 2006-2007 Strategic Plan recommendation • High School appears to have greatest program needs: • Building is 15% smaller than MSBA Standards • Classrooms are 19% smaller than MSBA Standards • Science Classrooms are 15% smaller than MSBA Standards • Library/Media Center is 7,5% smaller than MSBA Standards • Auditorium is 41% smaller than MSBA Standards • A High School project benefits ALL Wilmington students, • Elementary School programmatic issues are not as significant as the High School • A High School project will meet any accreditation concerns. • 'MSBA only approves one project per district at a time • 'Students can move from a newer Middle School to a new and/or renovated High School.

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 22 students per teacher.

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 19 students per teacher.

Is there overcrowding at the school facility? YES

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

- Substandard SPED classrooms
- Library is considerably undersized
- Lack of space for a language lab
- Need for more classrooms
- Auditorium is undersized.
- Science rooms are inadequate and undersized.

General Description

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.:

The Wilmington High School serves grades nine through twelve (9-12) with a current enrollment of approximately 998 students. The building was originally constructed in 1950 with several additions and renovation projects in 1954, 1958, 1986, 1990 and 2002. The building is approximately 154,000 SF and sits on a lot that is approximately 18 acres. This building has had a number of additions and renovations over the years, with limited scope applied to

older portions of the building. As such, portions of the building have been upgraded and are in good condition, while other areas are in need of improvements. Central issues with this building are:

1. Heating, Ventilation and Electrical Upgrades to bring older portions up to today's standards, including Cafeteria, computer rooms, band rooms, older classrooms, art room.
2. A significant number of roof leaks-need a roof upgrade over much of the existing roof (with the exception of roofs less than 15 years old).
3. Handicap accessibility upgrades
4. Life Safety Improvements (fire rated doors and partitions, sprinkler (only limited area currently), etc)
5. Exterior wall repairs (leaks through walls)
6. Review use of space needs (undersized program space)
7. Hazardous materials are present (pipe insulation, plaster ceilings, floor tile)
8. Technology infrastructure needs upgrade
9. Challenge to renovate due to phasing considerations

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

The original building and the various additions have reinforced concrete foundation walls and strip footings. The ground floor of the building has concrete slab on grade floors. There is a large crack on the Southwest corner of the auditorium; the crack appears on both the Church and State Street sides of the building.

Age of EXTERIOR WALLS (In Years): 54

Year of Last Repair or Replacement: 2002

Description of Last Repair or Replacement:

Exterior walls of the original building are a tan brick with concrete masonry unit (CMU) backup. CMU is exposed on the interior and painted in most areas. Majority of brick appears to be in good condition. Some repointing is needed in the brickwork as well as the stone masonry at entrances on the West side. Joints at window-sills as well as construction and control joints in many cases need pointing and or sealing. There are several areas of brick replacement, which appear to be a combination of blocked up openings and repair work . Other issues include:

- rain leaders on the East side of the building that are in need of repair or replacement
- a number of leaks through the exterior wall of the 2nd story classroom wing were reported
- localized areas on the exterior walls where, due to the absence of control joints and subsequent thermal movement there is damage to the exterior brick. This is particularly evident at the classroom wing facing Adams Street where the veneer appears to be pulling away from back-up masonry. The constant thermal expansion creates voids behind the brick leaving problems from water and subsequent freeze/thaw. The horizontal mortar joint at the veneer and concrete wall has also failed along the south wall elevation
- localized cracking on some of the exterior veneer, again, due to the absence of control joints.

Age of ROOF(In Years): 17

Year of Last Repair or Replacement: 2002

Description of Last Repair or Replacement:

The original building has a tar and gravel roof which is in good condition for its age, This portion of the roof has central drains many of the drain covers in this area are in poor condition and should be replaced. Moving South along Church St. and then West along Adams St. the roofs are ballasted membrane which are in fair condition, In this portion of the roof, the ballast was severely shifted and piled. These areas also have central drains, which generally were in good condition. The roof of the original gymnasium has a ballasted membrane. The edge condition has a 90 degree turn up the short parapet and the ballast puts a lot of pressure on this inside corner, causing most of the membrane to pull away from the wall. School staff reported leaks in the new gymnasium, in the coach's room, in the cafeteria, in the wood shop, at the stage, at the 2-story classroom wing and several other areas throughout the school. The 2nd floor classroom wing appears to have a concrete roof deck.

The adhered membrane system, used on the newer portions of the building and areas which have been reroofed, does not appear to be wearing well at all. The seams appear to be weak and in the case of pitched areas, the additional wear on the system is causing failure. A new roof was installed over the main section of the building in 2002. Also, a new roof and decking was installed over the auditorium in 2007

Age of WINDOWS(In Years): 18

Year of Last Repair or Replacement: 1990

Description of Last Repair or Replacement:

The windows were replaced in 1990, They have aluminum frames, double pane glass and most have operable awning sashes, There are also glass block areas in the auditorium and the original gymnasium (which has been converted into two levels of classrooms), There are many broken blocks, particularly on the rear of the building where the glass block faces the baseball field,. Aside from the maintenance and repair noted in the walls section above, the windows are in very good condition, The glass blocks should be addressed but due to the intricate patterning may be difficult to find,

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems, and any known problems or existing conditions.:

The existing steam heating system is supplied by two steam boilers. One boiler is a Smith model LO-GLO 4500 Mills Boiler that was installed in 1990. Each boiler contains 16 sections. Each boiler has a burner manufactured by Industrial Combustion model DEG-84S. Fuel system is number 2 fuel oil with two (2) 10,000 gallons double wall below grade tanks. The existing schedule 40 steel steam piping runs in existing crawl space and extends up to existing unit ventilators where it terminates. All steam piping is wrapped with insulation. Combustion air is provided to the exterior by sheet metal ductwork. The condensate pumps associated with the heating system are failing and in need of constant repair.

Heat is supplied by unit ventilators on exterior window walls with returns in each classroom. These unit ventilators are outdated. There are problems with the old traps in the unit ventilators. The cafeteria has wall mounted radiators on the exterior walls. There is an air system feeding the cafeteria that consists of supply outlets located above the hung ceiling. In the same area as the supply outlet in the ceiling is an egg crate grill at the ceiling. These locations do not match up due to the requirements of the ceiling grid.

All controls to the heating system are pneumatic.

There are 12 A/C roof top units which feed various portions of the building

Age of BOILERS(In Years): 17

Year of Last Repair or Replacement: 2007

Description of Last Repair or Replacement:

The existing steam heating system is supplied by two steam boilers. One boiler is a Smith model LO-GLO 4500 Mills Boiler that was installed in 1990. Each boiler contains 16 sections. Each boiler has a burner manufactured by Industrial Combustion model DEG-84S. Fuel system is number 2 fuel oil with two (2) 10,000 gallons double wall below grade tanks. The existing schedule 40 steel steam piping runs in existing crawl space and extends up to existing unit ventilators where it terminates. All steam piping is wrapped with insulation. Combustion air is provided to the exterior by sheet metal ductwork. The condensate pumps associated with the heating system are failing and in need of constant repair.

Age of HVAC SYSTEM (In Years): 17

Year of Last Repair or Replacement: 2007

Description of Last Repair or Replacement:

One boiler, condensate pumps and associated tanks were replaced in Summer 2007

Age of ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM(In Years): 22

Year of Last Repair or Replacement: 2006

Description of Last Repair or Replacement:

The electrical service to the facility is a 1600 Ampere 480/277VAC 3 Phase service. The main utility transformer is located outside the structure within a few feet of operable windows at the front entry of the facility. The main electrical equipment consists of molded case overcurrent protective devices (OCPD), These devices are original. There is no indication that these devices have been tested since the original installation. The main electric room does not have a fire rating. Lighting upgrades should be considered to conserve energy and provide comfortable lighting level conducive to education. The basement areas including the main electric room and crawl spaces are incandescent fixtures. These sources should be changed to more efficient longer life sources. Several locations had exposed fluorescent tubes for lighting. Especially in areas of food preparation these tubes should be fitted with protective sleeves.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc.:

Flooring types vary throughout the building. Entry areas are Vinyl Composition Tile. Majority of areas throughout high school have plaster ceilings. Many ceiling tiles have water stains from past or current roof leaks. Furnishings and equipment vary throughout the building. Some areas of the building have new furnishings installed, through an on-going annual upgrade of furniture, while other areas have original casework and equipment that are in need of replacement. Motorized bleachers, installed in 1986, have recently been repaired. Plastic laminate counters at locker room sinks have peeled away and are damaged. Gym has wood sports flooring that appears to be in good condition. Kitchen has quarry tile. Interior walls throughout are primarily concrete masonry units, with structural glazed facing tile used as a wainscot in corridors and high traffic areas, Some corridors in the older section have plaster above SGFT.

Interior doors are wood doors with natural finish, except corridor doors and specialty doors are hollow metal. Interior doors and hardware appeared to be in fair condition, depending on their age and location. Some high use areas have door hardware in need of replacement. Some doors in the 1954 wing are original. Ceilings vary but suspended acoustical ceiling tiles are used throughout the building. Although much of the classroom lighting is fluorescent, these lights are typically T12 or bi-pin 8' fluorescents with magnetic ballasts.

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.:

The mission of WHS is to provide a learner-centered education that promotes academic, personal, and social growth and achievement for all students. We will support students' development of responsibility to self, school, and community to prepare them for successful and fulfilling futures. Our school, with the cooperation of families and the community, will ensure a learning environment that includes a challenging, quality, standards-based curriculum; varied technological tools; current

instructional materials and resources; up-to-date facilities; and a climate of safety. We offer a comprehensive program. Wilmington High School students must earn a minimum of 115 credits in order to graduate. Of these 115 credits, 20 credits must be in English, 15 credits must be in Social Sciences with 10 of those being U. S. History, 15 credits must be in Mathematics, and 15 credits must be in Sciences with 10 of those being in a laboratory course. Students must complete 10 credits in Health Dynamics, 5 credits in Computers and 10 credits in the Fine and Applied Arts. Although not a requisite, those students who plan to attend college should complete at least 10 credits in the Foreign Language area. All Wilmington High students must carry 30 credits

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.:

Wilmington High School
Existing Wilmington HS

Average Building SF Per Student 164 SF/student
Total Building Size 158,498 SF
Classroom Space 771 SF
Science Space 1030 SF
Computer Classroom Space 888 SF
Media Center/Library Space 5550 SF

Auditorium Seating (2/3 population) 3960 SF
General CRs 34 at 771 SF average
Science CRs 9 at 1030 SF average

Computer CRs 5 at 888 SF average

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.:

Currently there are 7 labs that can be used to teach lab sciences. The labs are designed to house desks for classroom discussion and an area for experimentation. The lab size for each of the seven labs is extremely undersized and prohibits students from safely running experiments properly due to small, tight space within the lab areas. Due to enrollment and limited number of labs, there are up to 24 students assigned to science labs at a time. Special Education students are disbursed throughout the building. Because of the specialized nature of their classrooms, there is a need to have properly sized rooms with access to computers and electricity. A Life Skills substantially separate classroom had to be housed in the current teacher's cafeteria so that the students could have room to complete the requirements of an extremely different curriculum as well as have access to proper levels of technology. The Library is both undersized and outdated. The ability to host more than one class in the library during any period is hampered by size and inappropriate design. Computer stations have been located in the middle of the Library because of limited electricity and network wiring, also impeding usefulness of the Library space. Teachers share classrooms. We have a 130 member orchestra and a 100 member marching band. Space for rehearsal and storage is in dire need. We are unable to have the members of the orchestra practice all together because of limited space.

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.:

A new power panel for the computer room at the second floor was installed.

A new fire alarm panel for the building was installed.

A new 1200 amp Main breaker for the building was installed.

A new boiler was installed in September of 2007.

There is an ongoing maintenance program at the high school that includes replacement and refurbishment of furniture and equipment.

The old PVI hot water heater was replaced with a new boiler and storage tank for domestic hot water.

A new gas hot water heater for the kitchen was installed.

A Honeywell security monitoring system was installed.

Only authorized personnel are allowed in the area where the main electrical panel is housed.

Priority 1

Please provide a detailed description of the perceived health and safety problems below. Attach copies of orders or citations from state and/or local building and/or health officials.

Wilmington High School, built in 1950 with renovations/additions in 1954, 1958, 1986, 1990 and 2002, was evaluated by the architectural firm of Dore & Whittier as part of a Master Plan study. The study found the following health and safety issues.

Fire: There is a limited sprinkler system in the cafeteria and locker rooms only. This increases the need for fire rated doors and interior partitions to provide for fire-rated corridors. Doors should be on electromagnetic hold-open devices that are tied to the fire alarm system.

Water: There is a quality of water issue that is resulting from water entering the building with a 6" line that reduces to a 3" line with no Reduced Pressure Zone backflow prevention device on the incoming water service.

Air: There are air and ventilation quality issues in some areas of the building. There is no ventilation in the weight room or the football team room. There is lack of ventilation in the cafeteria, band room, auditorium, and art and kiln rooms. Classrooms have original unit ventilators that are outdated and have problematic traps. These unit ventilators likely do not meet current ASHRAE standards for air exchanges. However previous Indoor Air Quality testing performed indicated no corrective measures warranted.

Hazardous Materials: Based on the years of renovations at the school, it is likely that the building contains lead paint. Plaster ceilings on 1st and 2nd floors, floor tile throughout the building and pipe insulation in the crawl spaces are known to contain asbestos.

Accessibility: There is a lack of handicap accessible seating in the auditorium. The band room has steps risers and locker rooms have steps and are not accessible. Toilet rooms, although modified for accessibility, are not completely handicapped accessible. Not all doors, hardware and clearance are ADA compliant. There is a lack of interior signage with Braille. Visual indicating devices for the fire alarm system are not in specific locations per the ADA requirements.

Infrastructure: Most of the plant equipment is antiquated and is in need of replacement or updating: heating systems, ventilation systems, electrical systems, technology wiring and equipment, water lines and safety equipment are some areas of concern.

Building Envelope: There are a significant number of roof leaks. Due to thermal movement, brick veneer appears to be pulling away from its masonry back-up at the classroom wing facing Adams Street. Constant thermal expansion contributes to problems with water freezing/thawing in voids behind the brick and further damaging the wall system. Localized cracking due to a lack of control joints is also evident.

Priority 1

Please describe the measures the School District has taken to mitigate the problem(s) described above.

1. Major concerns exist relevant to life safety and handicapped access issues for the building. Efforts to correct these issues are, by their nature, hindered as a result of the age and design of the building. Significant and financially prohibitive building renovations would be required to address the issues.
2. Most of the remaining problems are long term and significant capital items that should be addressed as part of an overall plan for the repair, renovation or replacement of the building under the forthcoming MSBA regulations, and the District is finalizing a feasibility study to document current conditions and to outline options to address them.
3. Section V-Review of Options in the Master Planning Study by Dore and Whittier Architects includes a Capital Improvements Plan for the HS to assist in identifying current issues.
4. Some of the items addressed to date related to health and safety include:
 - Replaced Front and Rear overhangs on buildings.
 - A wall in the courtyard was taken down and re-built to combat freezing water damage.
 - The town addresses roof maintenance every summer; however roof upgrades are warranted at locations older than 15 years.
 - A new roof was installed over main section of the building in 2002.
 - New roof and decking over the auditorium.
 - Seats were removed in the Auditorium to make the space more handicap accessible.
 - Installed new power panel for computer room at the 2nd floor.
 - Installed new fire alarm panel for building.
 - Installed new 1200 amp Main breaker for building.
 - A new boiler was installed in September 2007.
 - Replaced old PVI hot water heater with a new boiler and storage tank for domestic hot water.
 - Installed a new gas hot water heater for the kitchen.
 - Honeywell security monitoring system.

Priority 1

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 most obvious impact of priority one lies within the Science Department. Currently there are 7 labs that can be used to teach lab sciences. The labs are designed to house desks for classroom discussion and an area for experimentation. Each room possesses similar problems including lack of proper ventilation for chemical experiments, bench tops that are no longer capable of repelling chemical spill due to usual wear and sinks that do not drain properly and faucets that need to be replaced. There are also issues with cabinets and drawers that are missing doors or that can not be closed properly due to wear. The lab size for each of the seven labs is extremely undersized and prohibits students from safely running experiments properly due to small, tight space within the lab areas. Due to enrollment and limited number of labs, there are up to 24 students assigned to science labs at a time.

Special Education students are disbursed throughout the building. Because of the specialized nature of their classrooms, there is a need to have properly sized rooms with access to computers and electricity. Electrical outlets are extremely limited to enable the use of specialized equipment required by student's Educational Plans. A Life Skills substantially separate classroom had to be housed in the current teacher's cafeteria so that the students could have room to complete the requirements of an extremely different curriculum as well as have access to proper levels of technology. Retrofitting the room for proper curriculum delivery will require at least expenditures in excess of \$10,000.00.

The Library is both undersized and outdated. The ability to host more than one class (20-24 students) in the library during any period is hampered by size and inappropriate design. Storage for multimedia materials is limited because the storage room had to be converted to a location to host the In-School Suspension. There is no space specifically dedicated to teachers, including research or class preparation. Computer stations have been located in the middle of the Library because of limited electricity and network wiring, also impeding usefulness of the Library space. Annually, termites come up through the walls, eat through the plaster and fly into the Library. This is a problem that has not been able to be remedied due to the design of the Library not including a cellar space below.

Teachers who do not have their own permanent classroom do not have a place to store personal items, prepare for classes or research information related to curriculum, instruction and assessment. They are forced to either work at home or to find a space to use that may not be occupied, sometimes outside of their department.

Storage is limited in all classrooms and locked storage is at a premium. Many of the bathrooms have been converted to storage areas for books and custodial work rooms. Storage in the Gym area is at a premium. Many of the items necessary for the classes in the Gym are jammed into one storage area and are difficult to access when needed.

The Weight Room is both too small and lacks any ventilation whatsoever. The size of the weight room limits use to 6 to 8 students at a time and students must leave the door open to have fresh air. In the same vein, the Wrestling Room is also extremely small and has limited proper ventilation. It is often more than 85 degrees in the room.

Throughout the facility there are roof leaks. Classrooms along the courtyard area of the building experience water leaks from the windows due to movement of windows and the brick façade moving away from the building. The Art Suite must have the ceiling panels replaced many times throughout the year due to water damage. In the same area of the building, there are difficulties annually with the rooftop ventilation system as well as the vent system for the kiln rooms and photography labs.

We have a 130 member orchestra and a 100 member marching band. Space for rehearsal and storage is in dire need. We are unable to have the members of the orchestra practice all together because of limited space. Also, the stage area is in disrepair from years of leaking roofs. The floor has been warped by water and in some areas removed rather than repaired.

Please also provide the following:

Name of Firm that performed the Study/Report:

Dore & Whittier

Date of Study/Report: 3/31/2008**Synopsis of Study/Report:**

The purpose of this Master Plan was to organize and prioritize the needs of the Town of Wilmington with regards to educational facilities, The town's 3,779 students are currently housed in six elementary schools, a middle school, and a high school. They are: the Boutwell Early Childhood Center and Wildwood Early Childhood Center (Pre-K to K), Shawsheen Elementary School and Woburn Street Elementary School (1-3), North Intermediate School and West Intermediate School (4-5), Wilmington Middle School (6-8), and Wilmington High School (9-12),

A series of options were developed for each school ranging from capital improvements to addition and renovation projects to new construction,

Based on the study and the following reasons, Dore and Whittier Architects, Inc, recommended Wilmington High School project as Phase 1 of any proposed school construction in Wilmington:

- Meet the 2006-2007 Strategic Plan recommendation
- High School appears to have greatest program needs
- Building is 15% smaller than MSBA Standards
- Classrooms are 19% smaller than MSBA Standards
- Science Classrooms are 15% smaller than MSBA Standards
- Library/Media Center is 7.5% smaller than MSBA Standards
- Auditorium is 41% smaller than MSBA Standards

'A High School project benefits ALL Wilmington students,

'Students can move from a newer Middle School to a new and/or renovated High School.

Is the perceived Health and Safety problem related to asbestos?: NO

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.:

Plaster ceilings on the 1st and 2nd floors, floor tile throughout the building and pipe insulation in the crawl spaces are known to contain asbestos.

Suspected asbestos materials were also observed in the following areas:

Interior ACM in Boiler Units, carpet mastic, fire doors, smooth plaster walls and ceilings, window caulking – old units (interior/exterior), pipe insulation behind walls/ceilings, wall mastic/waterproofing at perimeter walls, textured coating on block walls, sheetrock, joint compound, 12" x 12" spline ceiling tile, interior door window glazing (wood doors), cove base and mastic, transite fume hoods, ceramic tile grout, infill/mastic under gym floor, paper under wood flooring at Stage, flex connector in ductwork, exterior door caulking, exterior vent caulking, and exterior panels over windows

Is the perceived Health and Safety problem related to an electrical condition?: NO

If "YES", please describe the electrical condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:

Most of the electrical equipment is antiquated. The electric service to the facility is a 1600 Ampere 480/277VAC 3 Phase service. The main electrical equipment consists of molded as overcurrent protective devices. These devices are original. The main electric room does not have a fire rating. The facility has two elevators, neither of which has elevator recall provisions.

Is the perceived Health and Safety problem related to a structural condition?: NO

If "YES", please describe the structural condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:

Some minor distress is evident at the south wall of the academic wing and other localized areas of exterior brick veneer. The absence of control joints as severely distorted the veneer brick.

Is the perceived Health and Safety problem related to the building envelope?: NO

If "YES", please describe the building envelope condition, any imminent threat, and the mitigation efforts that the

district has undertaken to date.:

There is a large crack in the foundation on the southwest corner of the auditorium. Due to thermal movement, brick veneer appears to be pulling away from its masonry back-up. Constant thermal expansion contributes to problems with water freezing/thawing in voids behind the brick damaging the wall system.

Is the perceived Health and Safety problem related to the roof?: NO

If "YES", please describe the roof condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:

Numerous roof leaks are evident, such as in the gymnasium, wood shop, at the stage, at the 2-story classroom wing, and several other areas throughout the school.

Is the perceived Health and Safety problem related to accessibility?: NO

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.:

The following items were found to be in non-compliance or not accessible to the disabled: Door knobs for many rooms throughout the school, stairs at the locker rooms, door width at some corridor doors and some rooms (too narrow), and adequate space at the latch side is not provided for handicap accessibility, space adjacent to doors to classrooms and a number of other rooms, bathrooms are not fully compliant, band room has stepped risers, lack of interior signage with Braille, visual indicating devices for the fire alarm system are not in specific locations per the ADA requirements, lack of low counters at administrative space, interior ramps appear to be too steep to meet current guidelines, lack of handicap seating in the Auditorium, and elevator installed in 1986 may need to be upgraded to meet current handicap code requirements.

Priority 3

Please provide a detailed description of the "facility-related" issues that are threatening accreditation.

The following is a list of items that are threatening accreditation in 2010:

1. Substandard science labs
2. Substandard SPED classrooms
3. Library is considerably undersized
4. Lack of space for a language lab
5. Need for more classrooms

Priority 3

Please describe the measures the School District has taken to mitigate the problem(s) described above.

As an attempt to find more classroom space, the district has taken over other rooms for classroom use. For example in the 2008-2009 school year, the district is taking over a teacher's café to use as a Life Skills classroom, despite the fact that it is not an ideal classroom configuration and is smaller than the other classroom spaces. Other changes that have been made to accommodate students and programs include:

1. All kitchen cooking equipment was removed from the Teachers kitchen and converted into a computer classroom.
2. Also the Print Shop, Electronics Shop, and SPED offices were converted into 5 classrooms.
3. The SPED offices were moved to the Wildwood School (2001-2002).
4. The old Auto shop was renovated into 3 classrooms total: 2 computer and one standard classroom. The custodian's office was also converted into a classroom.

Priority 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 numbered statements below refer to the standards of accreditation under Community Resources for Learning (Support Standard 7)

3. The school site and plant shall support and enhance all aspects of the educational program and the support services for student learning.

Currently there is not adequate space to house our programs. Many teachers share rooms and have no place to prepare for classes when their room is occupied by another person. Science labs are limited in both space and equipment. Classes in excess of 22 students become a safety issue when performing experiments and/or labs.

Special Education Programs such as Life Skills have been located in the teacher dining area, limiting the ability of staff to eat in a place other than an open classroom. The Gym area has limited space for workout area including a closet that is used for a cardio area and a weight room that is poorly vented and sized for the number of students we have involved in the Athletic programs.

We have a 130 member orchestra and a 100 member marching band. Space for rehearsal and storage is in dire need. We are unable to have to orchestra practice all together because of limited space. Also, the stage area is in disrepair from years of leaking roofs. The floor has been warped and in some areas removed rather than repaired.

4. The physical plant and facilities shall meet all applicable federal and state laws and shall be in compliance with local fire, health, and safety regulations.

There may be issues related to handicap accessibility both in and out of the facility. Currently, there is not a handicapped bathroom located at the front of the building. Door sizes and wheelchair accessibility on classrooms have been a problem in the past. Water leaks are persistent in many areas of the facility. Sewer type smells are consistently reported by teachers.

5. Equipment shall be adequate, properly maintained, catalogued, and replaced when appropriate.

Much of the furniture is in disrepair. Teacher desks and chairs have been scrounged from local businesses when available. Science lab storage is limited and in many cases not working properly. The equipment necessary to run state-of-the-art labs is not available to our students. Teachers struggle to complete experiments because of lack of useful equipment and materials.

In other areas, including SPED and Health and PE, we are limited by available equipment. Teachers are not able to have a full class or students use equipment because the numbers do not meet the needs of our students. For example, when working on cardio in PE class, teachers have 3 pieces of cardio equipment available to use for classes with at least 20 students. The weight room is also extremely limited to a space for 6-8 students at once. Again, this is an issue with class sizes of more than 20.

6. A planned and adequately funded program of building and site management shall ensure the appropriate maintenance, repair, and cleanliness of the school plant.

Although many of the areas are addressed, they are limited by the large number of projects around the Town. Each summer,

Priority 5

Please provide a detailed description of the energy conservation measures that are needed and include an estimation of resultant energy savings as compared to the historic consumption.

major renovations and in most areas replacement. Diversified Technology Consultants, working with Dore & Whittier Architects, Inc, studied the existing high school's systems. The following summarizes their findings:

1. Replace main heating plant, including main distribution piping, condensate pumping systems and associated valves.
2. Replace pneumatic controls with DDC control system.
3. Replace existing unit ventilators.
4. Replace steam piping insulation.
5. Revise ventilation system for the cafeteria to match up supply outlets to ceiling grills.
6. Replace steam traps in steam system and institute a steam trap management program.

There is little doubt that the current HVAC system represents potential significant comfort, health and financial implications. The system needs to be updated/replaced.

It should also be noted that the high school is lacking a full fire suppression system.

Priority 5

Please describe the measures the School District has already taken to reduce energy consumption.

The following items have been addressed to date:

1. Replaced old PVI hot water heater with a new boiler and storage tank for domestic hot water.
2. Installed a new gas hot water heater for the kitchen.
3. Honeywell security monitoring system.
4. Installed new power panel for computer room 2nd floor outside art room.
5. Installed new fire alarm panel for building.
6. Installed new 1200 amp Main breaker for building

Priority 5

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.

Several major issues are well known: inefficient control of the system which results in increased energy costs, inability to keep heating zones balanced throughout the building which causes parts of the building to be either too hot or too cold, concerns about moving fresh air within standards expected for today's school environments, and inability to maintain current heating and ventilation units due to age. The district maintenance staff remains constantly in a catch-up mode always attempting to fix it rather than replace or maintain it.

Exposure to indoor pollutants and inadequate management of indoor temperature and relative humidity can affect student, teacher, and staff health and performance.

- Poor indoor air quality (IAQ) has caused illnesses requiring school absences and has caused acute health symptoms in our high school librarian.

With the technological revolution that we are experiencing in our world, we are also experiencing an educational revolution in the way we instruct our students. Our classrooms were all built before computers, LCD projectors, and other technological media devices had even been invented. The Wilmington High School needs more than two electrical outlets per classroom. In order to increase the number of electrical outlets per classroom, we would also need to add additional circuits and sub- electrical panels. As part of the electrical upgrade, new lighting circuits and new lighting fixtures should be installed at the same time.

Our electricity bill overall has risen by 35% this year and 38% at the high school. This takes away from funds that should have been earmarked for textbooks.

Please also provide the following:

Age of Roof (Years): 17

Were any major repairs or renovations of the roof undertaken in the past?: YES

If "YES", please provide the year of the last major repair/renovation of the roof: 2007

Age of Windows (Years): 18

Were any major repairs or renovations of the windows undertaken in the past?: YES

If "YES", please provide the year of the last major repair/renovation of the windows: 1990

Age of Doors (Years): 54

Were any major repairs or renovations of the doors undertaken in the past?: YES

If "YES", please provide the year of the last major repair/renovation of the doors: 1990

Age of HVAC (Years): 17

Were any major repairs or renovations of the HVAC undertaken in the past?: YES

If "YES", please provide the year of the last major repair/renovation of the HVAC: 2007

Age of Boilers (Years): 17

Were any major repairs or renovations of the boilers undertaken in the past?: YES

If "YES", please provide the year of the last major repair/renovation of the boilers: 2007

Age of Electrical System (Years): 22

Were any major repairs or renovations the electrical system undertaken in the past?: YES
If "YES", please provide the year of the last major repair/renovation of the electrical system: 2006
Age of Lighting System (Years): 22

Were any major repairs or renovations of the lighting system undertaken in the past?: YES
If "YES", please provide the year of the last major repair/renovation of the lighting system: 2006

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:

Dore & Whittier

Please also provide the date of the inspection:: 3/31/2008

Please describe how addressing the system will extend the useful life of the facility that is the subject of this SOI:

Upgrading the system would improve quality of life at the high school and provide for a stimulating educational setting for our students and staff.

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.

The Wilmington High School is undersized for the number of students it serves. Due to a lack of space, the school is unable to offer Language labs for the students. Also, 140 students are currently signed up for band in the 2008-2009 school year but the facility does not have enough space to accommodate these students. Guidance is not distributed throughout the school.

Based on MSBA design standards, the school has identified inadequate space in the following areas:

1. Building is 15% smaller than MSBA standards
2. Classrooms are 19% smaller than MSBA Standards
3. Science classrooms are 15% smaller than MSBA Standards
4. Library/Media Center is 7.5% smaller than MSBA Standards
5. Auditorium is 41% smaller than MSBA Standards.
6. Special Education Space is 40% of the high school needs.

Wilmington High School	Existing Wilmington HS	MSBA Standards
Average Building SF Per Student	164 SF/student	185 SF/student
Total Building Size	158,498 SF	185,000 SF
Classroom Space	771 SF	950 SF
Science Space	1030 SF	1200 SF + Prep Area
Computer Classroom Space	888 SF	1000 SF
Media Center/Library Space	5550 SF	6000 SF
Auditorium Seating (2/3 population)	3960 SF	6700 SF

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.

To help address space needs the school has done the following:

1. Removed the Print Shop and Electronics Shop and moved SPED offices to the Wildwood School (2001/2002) in order to create 5 classroom spaces
2. Will convert the teacher's café into a Life Skills Classroom
3. All kitchen cooking equipment was removed from the Teachers kitchen and converted into a computer classroom.
4. After the new Library was built in 1986, the old library was converted into two classrooms which were then converted into Computer Labs.
5. The old Auto shop was converted into 3 classrooms total: 2 computer and one general classroom.
6. •The custodian's office was converted into a classroom.

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.

There are a number of examples of how Priority 7 prevents the delivery of the educational program. The Science labs are limited in size and scope. Safety becomes an issue when teachers must run a lab. Storage areas, bench tops, ventilation systems and sinks and faucets are inadequate or in disrepair.

There is currently not a space large enough to house our 130 member orchestra. We will have to divide the orchestra in two and utilize the Cafeteria and Auditorium space to hold classes/practices. The Band (100 members) has inadequate space and inadequate storage. Many items are stored off site or in other areas of the school. It is difficult to rehearse when 100 students have their instruments due to the limited size of the space available. Classes adjacent to the Band during rehearsal must be moved because of the noise.

The stage and Auditorium are in disrepair. The Auditorium is so small that no more than 2 classes can meet at one time. Lighting is poor and ventilation is inadequate. The stage has been damaged beyond repair by water damage throughout the years, presenting a dangerous situation for students during musicals.

The Special Education Life Skills program had to be moved into the Teacher's Cafeteria because the previous room was leaking so badly and had no outside windows or proper ventilation. The Alternative Program (TAP) is located in an isolated section of the building, possibly in violation of federal law.

The Library is both undersized and outdated. The ability to host more than one class (20-24 students) in the Library during any period is hampered by size and inappropriate design. Storage for multimedia materials is limited because the storage room had to be converted to a location to host the In-School Suspension. There is no space specifically dedicated to teachers, including research or class preparation. Computer stations have been located in the middle of the Library because of limited electricity and network wiring, also impeding usefulness of the Library space. Annually, termites come up through the walls, eat through the plaster and fly into the Library. This is a problem that has not been able to be remedied due to the design of the Library not including a cellar space below.

Vote

Vote of Municipal Governing Body YES: 5 NO: 0 Date: 6/23/2008

Vote of School Committee YES: 5 NO: 0 Date: 6/23/2008

Vote of Regional School Committee YES: NO: Date: