ARCHITECTURE
ENGINEERING
PLANNING
INTERIORS

SMMA Symmes Maini & McKee Associates

MEMORANDUM

To:	Joseph McDonough, P.E. – Town of Wellesley Facilities Directors	Date:	10/05/2012
From:	Anthony Iacovino, AIA	Project No.:	12005
Project:	Wellesley Public Schools Conditions Assessment & Feasibility Study		
Re:	Executive Summary		
Distribution:	L. Finnegan - SMMA		

SMMA was retained to review all of the elementary schools and the middle school for the Town of Wellesley School Department and assemble the gathered information into a database for the Facilities Maintenance Department. This study did not include a educational programming component but rather a review of the enrollment projection with the capacity of the existing schools. The database is designed to be a tool to track conditions, organize and prioritize maintenance and improvements, and facilitate capital improvements over time. SMMA also developed cost projections included separately.

The database is designed to be scalable to include other town buildings but is currently restricted to the public school buildings including the new high school and the field house. It is divided into three main categories: a BCR, or Building Condition Review for each building, an SCR, or Space Condition Review for each of the rooms and identified spaces including site areas at each building, and a set of recommendations that are prioritized by several criteria to assess need and urgency for improvements.

BCR – Building Condition Review

Each building has a summary page that lists basic building information about date of original construction, dates of major additions and alterations, size, values, and basic building code classifications. Following the summary page is a list of overall building conditions divided into building-wide system categories. These categories include:

- Structural condition
- Service life
- Code Compliance
- Environmental Compliance
- Energy Compliance
- Hazardous Materials Compliance
- Safety
- Accessibility
- Service Access
- Site Access
- Maintainability
- Connectivity
- Support Space
- Community Space
- Restrooms
- Site Condition.

Each of these categories has specific comments by discipline and a three-level quality assessment of Good, Adequate, or Poor.

SCR – Space Condition Review
Included with each building is a floor plan and a set of new room numbers where no consistent room numbering existed, and a database record for each space in the building. The space designation also includes site areas such as entrance drive, parking lots and play areas. Each space has condition assessments for the following categories: Functional Adequacy, Accessibility, Room Finishes, Acoustics and Sound Control, Climate Control, Lighting, Electrical systems, Information Technology, Support Facilities, Site Efficiency, and Physical Condition. Each of these categories also has a three-level evaluation and follows the MSBA's format for summary of spaces to easily use this data for MSBA projects in the future.

Prioritization Factors

The conditions and recommendations also include a range of factors to help prioritize the urgency, importance and special opportunities for repairs and improvements as follows:

Urgency (*listed from most urgent to least urgent*):

A. Safety – This will include Fire Alarm, Sprinklers, Egress paths and exits and CO contamination.
B. Health – This will include Imminent IAQ concerns, Temperature/heat issues, Imminent health Hazards
C. Maintenance (repairs) – All items which require repairs including but not limited to General Construction, Exterior Envelope, Roof, Plumbing, HVAC, Electrical and Technology.
D. Infrastructure (replacement) - All items which require replacement including but not limited to General Construction, Exterior Envelope, Roof, Plumbing, HVAC, Electrical and Technology.
E. Non Priority projects – any item which does not fall into one of the categories above.

Importance:

A. Essential – Must have to continue a program or system
B. Highly Desirable – Would enhance a program or system, a measurable impact
C. Desirable – Would result in an improvement to a program or system, has a benefit but could be combined with another larger project or a grant funded project.

Special Opportunity:

A. Grants/Programs – such as the MSBA Green repairs projects or MLP grants
B. Packaged Projects - such as grouping all the roofing projects together or paving projects etc.
C. Other - could include unexpected acquisitions of property or land (such as 900 Worcester St.)

The database is a powerful tool that will allow the facilities department to extract information for any room in any building that meet a given set of criteria. For example the database could be queried to find all of the spaces with inadequate climate control and then filtered to show only those that were in buildings with no capital improvements in the last two fiscal years. Information in the database can be parsed in any number of ways to extract customized report information.

Cost Projections

Monetized improvements will be assembled and unitized to allow for better projections of fiscal improvement costs for capital planning purposes. Database queries will be able to extract and assemble limited costs of areas to be improved. A separate listing of typical square foot costs for asbestos tile abatement, or new suspended ceiling or more energy efficient window glazing, as examples, will be provided with an escalation factor built in for projected fiscal planning. Costs in the database can be adjusted over time to reflect market costs. Construction cost reports will include modifiers to account for larger scale projects and escalation. Contingency and soft costs can be based on percentage of subtotal of construction costs.

Estimated total project costs are also presented in the attached document, in which costs are shown on a building basis, and itemized by major building systems, such as mechanical, electrical, site, etc.

Modular Classrooms

The costs for renovation of each building typically includes costs for replacement of obsolete modular classrooms with permanent construction. The likely construction scenario would temporarily relocate the existing modulars to clear a portion of the site for the permanent construction, providing power for light and heat in the interim. The attached cost estimates show these costs

We are reviewing October 2012 enrollment numbers and projections issued to us by the town to further refine recommendations for enrollment capacities and any expansions moving forward.

Project Packaging

Construction costs can be reduced by assembling packages of similar work for multiple buildings in to one bid package. The construction work will likely be phased, but combining multiple phases and locations will provide beneficial economies of scale. Massachusetts General Laws define thresholds of work as follows:

- $0 - $10,000 – Solicit of 3 written quotes
- $10,000-$25,000 – Solicit of written responses through the public notification process
- $25,000-$100,000 – Solicit competitively sealed bids advertised through the Central Register
- $100,000 and above – Solicit competitively sealed bids after contractor pre-qualification

Code Upgrades

Other than ordinary repairs and the criteria noted below, additions and/or renovations that change the use of the facility are required to fully comply with life safety, energy code (780 CMR) and accessibility regulations (521 CMR).

780 CMR – 3405 Repairs states that: Buildings and structures, and parts thereof, shall be repaired in compliance with this section and Section 3401.2. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section 3401.2, ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

521 CMR - 3.3 Existing Buildings states that: All additions to, reconstruction, remodeling, and alterations or repairs of existing public buildings or facilities, which require a building permit or which are so defined by a state or local inspector, shall be governed by all applicable subsections in 521 CMR 3.00: JURISDICTION.
3.3.1: If the work being performed amounts to less than 30% of the *full and fair cash value* of the *building* and

a) If the work costs less than $100,000, the only the work being performed is required to comply with 521 CMR or
b) If the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an *accessible* public *entrance* and an *accessible* toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

There are some exceptions to this rule which should be reviewed once the cost and the projects have been determined.

There is also a “work performed over time” clause in 521 CMR 3.5 which mandates that when work performed on a *building* is divided into separated phases, projects or building permits, the total cost of such work in any 36 month period shall be added together in applying the 521 CMR 3.3 Existing Building requirements.

Incentives

Although the MSBA’s Green Repair Program is now closed for applications, the Accelerated Repair Program provides funding primarily for roofs, windows, boilers and other major systems subject to approval by the MSBA based on need and the Statement of Interest (SOI). The filing period for 2012 is closed but MSBA will presumably announce the deadlines for the next fiscal year in the coming months.

Images

The database includes images to show current site plans, floor plans, and photographs of the buildings including specific conditions for improvement. Photographs can be updated as work is completed or documented as work complete to create an archive of past work.

The following pages represent a preliminary executive summary of the condition and recommendations for each building in its current state, divided into Site, Structure, Architecture, Mechanical, Electrical, Plumbing and Technology. The content of each summary was derived from the database and condensed here for a written report, but much more detail is contained in the database itself.

General Recommendations

There will be ongoing upgrade projects that can be packaged for multiple buildings to provide improvements to key systems, such as high efficiency window replacements, unit ventilator replacements, and plumbing and fire protection upgrades. The packaging of the contracts will depend on many factors including priority/urgency, similarities in scope of work, complexity/size, design effort and available resources – all of which will require comprehensive planning and engagement of all stakeholders.

The elementary schools are in varying conditions with modular classrooms at most locations that are not performing efficiently but are still needed for space. Existing modular classrooms are recommended for replacement with permanent construction in support of the current and projected enrollments. A comprehensive renovation of the Middle School to complete the work that was significantly truncated several years ago is a beneficial long term plan for the town.

The database is intended as a tool to help quantify and prioritize these projects so they can be adequately funded and planned-for.

Massachusetts General Law requires an Owner's Project Manager (OPM) for construction projects expected to cost $1.5 million or more. The Town should evaluate the most appropriate time to engage an OPM to assist in the planning for major, multi-year construction projects.

Review of these recommendations by the town's School Building Committee (SBC) and the Permanent Building Committee (PBC) are essential to balance the program and pedagogical needs of the School Committee with the town resources being managed by the PBC.

The following pages describe each school building in more detail with a summary of specific recommendations.

PAWS - Preschool at Wellesley

CIVIL: The overall site functions as intended, though there are some safety and accessibility issues. Handicap spaces exceed code requirements for slope. No site lighting beyond the building entrance is provided, and specifically in the parking lot which has steeper than ideal slopes. Site features in good condition except for areas of fencing behind building, which is a safety concern due to adjacent drop-off. Parking lot is also in fair condition due to block and fatigue cracking, and should be considered for re-paving in the next five years. Drainage improvements for the parking lot should also be considered as the current single catch basin is not adequate and has been known to pond during significant storm events.

STRUCTURAL: The building is good structural condition. It is a prefabricated-steel structure on a cast-in-place concrete foundation.

ARCHITECTURAL: The building is in very good condition with good accessibility and reasonably efficient exterior enclosure. The roof is black adding to cooling costs in summer. Some ceilings have been damaged by small point-of-use water heaters failing above hard ceilings in sink alcoves. Insufficient storage space for custodial equipment and supplies requires use of Fiske Storage instead.

TECHNOLOGY: The existing telecommunications infrastructure is functional, however additional cable infrastructure will be required to support future wireless access equipment. Power upgrades in the telecommunications equipment room will be required to support network electronic equipment upgrades. The existing air cooling system is loud and impacts surrounding user occupied spaces.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems are in good and operational condition. Lighting levels are adequate and lighting controls are appropriate for pre-school space use. Exterior lighting system consists of building-mounted lights only. There is no lighting at parking lot. There is no emergency generator. Existing security system is minimal. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The building is served by several gas-fired DX unitary rooftop units that are in generally good condition. Each rooftop unit is configured with distribution ductwork to provide heating, ventilation and air conditioning to the zone served and control is provided by standalone wall-mounted thermostats. It was reported that there are air quality complaints in the school, which may be related to the use of the mediocre-quality rooftop units that serve the building, since it can be difficult to calibrate the amount of ventilation air to the building. The controls are a standalone electronic programmable type.

PLUMBING: Hot water to the building toilet rooms and janitor's closet is supplied by a 40-gallon electric water heater installed in 2005. The system does not appear to be recirculated. The classrooms are served by point-of use electric water heaters in the ceiling which have a history of catastrophic failure. Users note slow central system hot water supply delivery in the kitchen and to the toilet rooms.

The building sprinkler system is code compliant and pressure readings are excellent.

Katherine Bates School

CIVIL: The overall site functions as intended. There are some minor accessibility deficiencies relating to the basketball court behind the school, slopes for some of the egress landings, walkways, and handicap parking spaces, the elevated courtyard on the north side of the school, and the general need for additional curb ramps. Overall safety is adequate, except that deteriorating stanchion pockets where rails connect to concrete ramp and stair wall caps. Circulation during pick-up times creates congestion at the Elmwood Road/Westgate Road intersection due to insufficient queue length on Elmwood Road and parked cars on Westgate Road. No dedicated loading area provided. Site features in overall good condition with some paved parking lots and drive aisle in fair condition due to mild to moderate fatigue cracking.

STRUCTURAL: The building is in good structural condition. It is a steel structure with cast-in-place concrete foundation. There are a few exposed steel pipe-columns near the entrance where the paint is chipping and the steel is rusting.

ARCHITECTURAL: Built in 1953 and including a significant addition in 2004, the Bates School is in generally good condition. Some exterior work at the 1953 wing would improve the efficiency of exterior doors and windows and limit water intrusion at the classroom doors to the outside.

TECHNOLOGY: The existing telecommunications infrastructure is adequate, however additional cable infrastructure will be required to support future wireless access equipment. Power upgrades in the telecommunications equipment room will be required to support network electronic equipment upgrades. Upgrades to air cooling systems should be considered in both of the telecommunications equipment rooms to adequately protect future network electronic equipment.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded. In general, they are in good and operational condition, but some electrical upgrades are needed to bring electrical systems up to current codes. Lighting levels are adequate and lighting controls are appropriate for school space use. Exterior lighting system consisting of building-mounted lights, site pole-mounted lights and bollards is in good operational condition. There is no emergency generator at the site. Existing security system is minimal. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: A renovation project in 2004 upgraded the boiler plant with two HB Smith low pressure steam boilers. The system is in good condition though aspects of some of the equipment are showing wear, which is likely due to the original distribution system. The classrooms are served by steam unit ventilators with supplemental perimeter radiation and a common exhaust system. The common spaces are served by heating and ventilating units. The control system is a Metasys DDC system that requires some updating.

PLUMBING: The existing building water service entrance is antiquated. The building bypass is not metered nor is domestic cold water pressure through the bypass regulated. The entire school is served by a single 125-gallon water heater. Hot water delivery and energy efficiency would benefit from simple system improvements. The building's main master mixing valve shows signs of degradation from aggressive system water.

Fiske School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. No sight lighting is provided beyond the building mounted lights, most critically in the large parking lot northwest of the school. One play area has no curb or barrier to protect from vehicular traffic. Hydrant coverage for the school is not adequate. The number of handicap accessible parking spaces is not adequate for the school, and the existing space does not meet code requirements, nor does the curb ramp at the main entrance. Multiple building egress points are not accessible, and walkway access to and from the large parking lot northwest of the school contains significantly steep slopes. Bus loop is adequate, though it is not segregated from vehicular traffic in parking lot. Circulation becomes congested during pick-up times as queuing extends beyond the dedicated queuing area and even beyond the Hastings Street/Sheridan Road intersection. Though still functioning, a majority of the paved parking and access drives are in fair condition, with some portions in poor condition (particularly the front parking loop), and repaving should be considered in the next few years. Drainage improvements for the northwest parking lot should also be considered as the current single catch basin is not adequate and has been known to pond during significant storm events.

STRUCTURAL: The building is in good structural condition. The majority of the building is a cast-in-place concrete structure. There are a few exposed steel pipe columns where the paint is chipping and the steel is rusting. There are minor cracks in some of the CMU walls. There is some minor rusting on the some steel lintels above windows.

ARCHITECTURAL: A solid example of postwar modern school, the main deficiencies are the unchanged parts of the school. Most glazing is single-paned and thermally inefficient and even the newer thermal glazing is not very efficient. Roof, Boilers and Sprinkler system were renovated in 2008. Many components are at the end of their service life. Stairs rails and guards do not comply with accessibility or building code standards. Accessibility between upper and lower levels is poor. Only access to roof level is by spiral stair. Classroom sinks are inaccessible as are all but two toilets. Several egress doors lead out to at least one step. Loading dock is only accessible to upper levels by stairs. The lack of elevator access requires all trash to be rolled out of upper level doors and rolled around to the dumpsters at the lower level lot. Some spaces are inadequate for the programmed uses such as cafeteria, art, and storage rooms converted to small group instruction.

TECHNOLOGY: The existing telecommunications infrastructure is adequate, however additional cable infrastructure will be required to support future wireless access equipment. Power upgrades in the telecommunications equipment room will be required to support network electronic equipment upgrades. Air cooling systems should be considered in the telecommunications equipment room to adequately protect future network electronic equipment.

ELECTRICAL: Existing lighting and fire alarm systems were recently upgraded. In general, they are in good and operational condition. Lighting levels are mostly adequate, but lighting controls are not appropriate for school space use. Exit signs are not illuminated type, and shall be upgraded to meet Code. The recent power distribution system upgrades were limited to installation of the new exterior transformer and replacement of the main distribution panel, while the remaining panels, electrical equipment, feeders, branch wiring and other electrical system components are old and in poor condition. Panels, feeders and branch wring circuits that are older than thirty years shall be replaced. Exterior lighting system is limited to building-mounted lights only and it’s in poor condition. There is no emergency generator at the site. Existing security system is minimal. Consideration should be given to

adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The school is served by a steam heating system with unit ventilators, rooftop exhaust and finned tube radiation in the classrooms. The boiler plant was upgraded in 2009 with two new Cleaver Brooks gas-fired steam boilers. The control system a pneumatic system that is generally old and in poor condition, except for upgrades made for the boiler system controls. The modular classrooms are served by dedicated, unitary rooftop heating and cooling units, which recently had economizers added to them.

PLUMBING: Toilet fixtures in the original portion of the building with the exception of Cafeteria toilets do not meet modern consumption standards nor ADA requirements. The classrooms are served by point-of use electric water heaters in the ceiling which show signs of previous catastrophic failure. Hot water to the building is provided by a single 75 gallon water heater. Storage temperature at the heater is too low at 110F. Service to the building is below necessary code-required temperature levels.

The fire protection system installed in 2008 is code compliant.

Hardy School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. No sight lighting is provided beyond the building mounted lights and adjacent street lights. Rails surrounding lower level boiler room egress are not adequate for child safety. Additional fire hydrant coverage should be considered for some northern portions of the school. Quantity of handicap parking spaces is inadequate. Multiple building egress points are not accessible from the site, including all of the modulars, and some walkways do not fully comply with slope requirements. No dedicated loading facility exists, and dumpster locations are not at grade with adjacent egress. Parent queueing during pick-up times sometimes extends beyond Hardy Road and onto Weston Road. Due to traffic volume on Weston Road, congestion was observed at Hardy Road / Weston Road intersection during drop-off and pick-up times. Walkway network around the school could be improved. Cracked and spalling concrete ramp and exterior stairs are significantly deteriorated. The parking lot and portions of the walkway network are in fair/poor condition due to moderate to severe fatigue cracking, and repaving in those areas should be considered in the next few years.

STRUCTURAL: The building is in adequate structural condition. Portions are framed with cast in place concrete beams and slab, and other areas are framed with wood joist and wood roof trusses. There are some cracks in some CMU walls. The original wood floors have a noticeable deflection, but not too dramatic. There may be wood rot in the attic near roof leaks (some wood rafters showed signs of water stains. Modular Classrooms are well past their useful service life. T-111 siding is worn and enclosure of the crawlspace has been a regular problem. HVAC system for these classrooms is inadequate.

ARCHITECTURAL: The second oldest school in the town built in 1925 has several additions including modular classrooms well past their intended service life. Although all of the classrooms are in good general condition, the basic building infrastructure is poor in several areas. The building has an elevator serving both levels, but the accessible entrances are neither energy efficient nor located to enhance building security. The building is largely uninsulated and employs inefficient and noisy unit ventilators. The building has asbestos in pipe insulation (in non-public crawl spaces) and mastic adhering floor and ceiling tiles. Although clad in brick, the modular classrooms have the usual issues with crawlspace integrity and generally weak quality of enclosure.

TECHNOLOGY: There is only one data closet requiring cable lengths that exceed the 100 meter industry standard. The Wide Area Network is not reliable dropping Food Service and INet access. Local network connectivity is adequate. The building requires additional cabling to support full wireless access connectivity. Network equipment rooms require power upgrades to support future equipment upgrades.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded, but not throughout the entire building. In general, electrical systems are in fair and operational condition, but the older electrical equipment needs some upgrades, especially at the lower level. Panels, feeders and branch wring circuits that are older than thirty years shall be replaced. Lighting controls are not consistent in similar educational spaces and are not appropriate for some school spaces. Exit signs shall be upgraded to meet Code. Exterior lighting consisting of building-mounted lights is not time-controlled, only via a photocell. There is no lighting at the parking lot. There is no emergency generator at site.

SECURITY SYSTEM: There is one CCTV camera at the main entrance and an Aiphone video intercom unit. There is no door access control or intrusion detection system except for key pad. Consideration

should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The building is heated with a steam system and the classrooms are served with steam unit ventilators with rooftop exhaust and finned tube radiation for heating. The control system is pneumatic and is in poor condition. The boiler plant was renovated recently and there are two Weil-McLain gas-fired steam boilers installed to support the school that are in very good condition. The control system is a mix of old pneumatic controls that are in poor condition and serve the occupied zones and newer DDC controls, which were installed with the boiler upgrade.

PLUMBING: Building piping is in very poor condition and uninsulated. Existing toilet fixtures are antiquated, high-flow type. A single 75-gallon water heater installed in 2005 supplies the entire building directly. Storage temperature at the water heater and supply temperature to the building are inadequate or do not meet code. The school experienced a major, age-related break in the cast-iron waste piping in 2012. There is no mixing valve apparent nor does the building hot water appear to be circulated. Hot water supply delay at the furthest fixture is significant. Building service is not bypassed.

No fire protection system installed for the wood framed school but it is strongly recommended.

Hunnewell School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. Additional fire hydrant coverage should be considered for portions of the school greater than 200' from the closest hydrant. No loading dock or dedicated loading facility provided, and trash/recycling dumpsters are not easily accessible from school. Some walkways exceed code requirements for slope, and some building egress points are not accessible due to stepped landings. Circulation within the site is minimal. All bus and parent loading and unloading takes place along Cameron Street, which is less than ideal due to safety reasons. Cameron Street is restricted to one-way traffic during these times. On-site parking is not adequate for the school's daily needs and is a major problem in this area. Hardscape surfaces and site features in overall good condition, with some isolated areas in fair to poor condition. Isolated repairs or repaving in these isolated areas should be considered in the next few years.

STRUCTURAL: There is a concrete column in the boiler room that is in urgent need of repair. The base is severely deteriorated, with multiple steel reinforcing bars exposed. Otherwise, the building is in fair structural condition. Portions of the building/additions are framed with structural steel, wood roof trusses, and cast- in- place concrete foundations. There are minor some cracks in some of the CMU walls. The condition of the wood rafters near roof leaks should be monitored if the roof looks have not been addressed.

ARCHITECTURAL: The 1938 building has had two major additions. The modular classroom addition in 1995 is now past its service life. The exterior enclosure is minimally insulated and the windows are mostly single-paned. The building has asbestos. According to the latest AHERA report, the asbestos in the classrooms has been removed, but there is still material to be removed in the attic. The toilets and drinking fixtures in the building are minimally accessible. Although well-maintained, the classrooms have outdated light fixtures and ventilation units. The school has reported persistent roof leaks in the Cafetoreum related to the dormers, and also problems with the gutters.

TECHNOLOGY: Network connectivity is adequate. Fiber optic cables connects equipment rooms. The building requires additional cabling to support full wireless access connectivity. Network equipment rooms require power upgrades to support future equipment upgrades.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded, although not throughout the entire building. In general, electrical systems are in good and operational condition. Lighting system controls need some upgrading Exterior lighting is limited to building-mounted lights only. There is no lighting at the parking lot. There is no emergency generator at site. There is no CCTV, door access control or intrusion detection system except for key pad. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The building is heated with a steam system and the classrooms are served with steam unit ventilators with rooftop exhaust and finned tube radiation for heating, all of which appear to be original to the building and in poor condition. The control system is pneumatic and is in poor condition. The boiler plant was upgraded in 2004 and there are two HB Smith gas-fired steam boilers installed to support the school that are in very good condition.

PLUMBING: Fixtures are antiquated, high-flow type. Building hot water is supplied directly from a single 75-gallon water heater to an undersized and unrecirculated piping system. Storage temperature has

been set to 105 F or less at the request of the School nurse. Some modular classrooms are served by small storage point-of-use Ariston electric water heaters. Piping and hangers under building show signs of significant deterioration as does the building gas piping. Boiler blowdown, storm water and condensate (i.e., clearwater waste) appear to be intermingled at the sump pit.

Schofield School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. Only one (1) fire hydrant is within close proximity of the school, and supplementing with additional hydrant(s) should be considered. No guardrail or barrier exists on the north side of the main access drive from Cedar Street to protect pedestrians or vehicles from the adjacent steep downslope. Some accessible routes/spaces do not fully comply with code requirements, and route from handicap parking spaces should be improved. Access to trash and recycling dumpsters is limited by parked cars. No dedicated loading facility exists. Bus loop is not wide enough to enable buses to pass by one another, and dedicated parent queuing area is not sufficient as queuing sometimes extends onto Cedar Street. Parking area south of the building is very congested, and additional space for parking would benefit the school. Additional signage could also improve circulation. Overall condition of hardscape areas (except the bituminous play area) is fair/poor due to some areas of dense fatigue cracking, developing potholes, uneven patchwork and broken curb sections. Major drainage improvements were made behind the 1993 wing in 2011.

STRUCTURAL: The building is in good structural condition. It is primarily framed with wood and steel beams on the cast-in-place concrete foundation. There is some paint chipping and rusting of the steel columns that are at the exterior of the building. This occurs at some locations between the windows and the exposed columns behind the gymnasium.

ARCHITECTURAL: Architecturally interesting school with very good daylighting, most of the classrooms are in fairly good condition. Largely uninsulated with inefficient glazing, the exterior doors from classrooms are sheltered and tight. Some IAQ issues have been recently addressed for the newer wing built in 1993 that is partially set into the hillside behind the school. Mostly accessible despite a sunken library, the stage is only accessible by a non-compliant stair climber. The boiler room intake areaway drain is regularly clogged with leaves, but a shed enclosure is proposed for 2013.

TECHNOLOGY: Network connectivity is adequate. Fiber optic cables connects equipment rooms. The building requires additional cabling to support full wireless access connectivity. Poor sound system quality in Gym. Cafeteria has a projection screen but no local sound. Network equipment rooms require power upgrades to support future equipment upgrades. The Main Distribution Frame is located in the basement where dust and poor ventilation are on-going problems. There is no power in the demarcation room.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems show some recent upgrades, however, not throughout the entire building. Electrical systems in newer building additions are mostly in good and operational condition, while electrical systems in original school building areas are outdated and inadequate - lighting system here is not of the energy-efficient concept, quantity of power outlets in many spaces is insufficient, and exit signs shall be upgraded to meet Code. Panels, feeders and branch wring circuits that are older than thirty years shall be replaced. Fire alarm system needs some upgrades too. Exterior lighting is limited to building-mounted lights and mostly is in poor condition. There is no lighting at the parking lot. There is no emergency generator at site. Security system . There is a CCTV camera and video intercom at the main entrance. A video intercom phone was recently added to the main entrance connected to the secretary's desk in the front office. No other door access control or intrusion detection systems are provided except for key pad. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The school is heated by hot water heating plant comprised of one conventional cast iron boiler and one high-efficiency, condensing-type boiler with a primary-secondary pumping system to provide variable volume flow to the building loads. The classrooms are heated and ventilated through unit ventilators, fin tube radiation and a common exhaust system. The unit ventilators are past their useful service life and should be replaced with more efficient units. Current standards may require two units to replace the old ventilators to assure adequate fresh air and lower fan speeds for acoustic control. Common spaces are served by heating and ventilating units, fin tube radiation and cabinet unit heaters. The control system is, except for the boilers and hot water pumps, pneumatic and in poor condition. The modular classrooms are served by independent rooftop units, one per classroom and economizers were recently added..

PLUMBING: The building water service taps off a 6" Fire line inside the building. The building bypass is unmetered and pressure to the building not reduced. The water entrance gates valves appear antiquated. The building is served by a recirculated domestic hot water system fed directly from a single 75-gallon water heater installed in 2005. Water heater storage temperature and temperature to the building is unknown. A main mixing valve was not observed. Local point-of-use small undercounter electric water heaters serve the modular classrooms. Duplex sewage ejectors serving the entire building appear to pump both sanitary and clearwater waste.

Automatic sprinkler system installed in 2006 for new modulars and in the 2004 addition. The older portion of the building is not protected.

Sprague School

CIVIL: Overall site functions as intended, though some safety and circulation deficiencies were observed. Concrete ramp wall caps and granite steps at Oak Street entrance are cracked and breaking apart at stanchion pockets, creating potential tripping or fall hazards. Additional fire hydrant coverage for east and southeast quadrant of building should be considered. Pedestrian access is good, except that the southeast corner of the parking lot lacks sidewalk and curb cut to promote safe passage across access road. No loading dock provided, and service route to trash and recycling dumpsters passes between to play areas south of the building. Significant congestion throughout the site is created during drop-off and pick-up times due to poor circulation patterns and the high volume of traffic and lack of sufficient queuing area. When vehicles queue beyond the designated queuing lane and into the access road, two-way traffic becomes impaired or even restricted at times. Bus loop is adequate for school's needs. Site surfaces and features in overall good condition.

STRUCTURAL: The school is in good structural condition. The original building is framed with wood trusses/joists supported by masonry walls. The addition is framed with structural steel on a concrete foundation. There are signs of water infiltration in the attic via the clock tower. Moisture was detected and stains were noted on wood in the attic. There is significant deflection of wood floors in the original portion of the school. There is a considerable amount cracking in the new floor tiles of the addition. Many floor tiles have been cut at locations of the cracking. This is surprising for a recent addition. There may be shrinkage cracks in the concrete below the tiles. At the time of observation the floor appeared to be level and did not seem to show signs of settlement.

ARCHITECTURAL: Recently renovated and a very handsome school, Sprague combines a quite successful renovation with an architecturally compatible addition set in a sophisticated landscape. The paving at the original entrance has prematurely failed around the handrails and steps. The slate roof on the 1924 original building was reviewed by Russo Barr Inc. in January 2012 and a full replacement was recommended. The Replacement of the slate roof, flashing, gutters and ice and water barriers have been scheduled for 2014.

TECHNOLOGY: Clock and PA systems are new and in working order. Network connectivity is adequate. Fiber optic cables connects equipment rooms. The building requires additional cabling to support full wireless access connectivity. Poor sound system quality in Gym. Network equipment rooms require power upgrades to support future equipment upgrades. Air cooling units in the telecommunications equipment rooms are not functioning leading to potential network electronic equipment damage.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded, they are in good and operational condition. Lighting levels are adequate and lighting controls are appropriate for school space use. Exterior lighting system consisting of building-mounted lights and site pole-mounted lights is in good operational condition. There is no emergency generator at the site. Existing security system . There are no CCTV, door access control or intrusion detection systems are provided except for key pad. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The school is served by a hot water heating plant that was upgraded in 2002 with two new gas-fired HB Smith hot water boilers with three Taco centrifugal pumps. The hot water system is configured with a propylene glycol solution for freeze protection. Cooling is provided through the use two York water-cooled screw chillers with a BAC open cooling tower. The chilled water plant capacity is approximately 260 Tons. The classrooms are heated, cooled and ventilated through unit ventilators and

common exhaust systems with supplemental fin tube radiation. Indoor air handling units provide service to the common areas of the school, including the auditorium and gymnasium. The control system is a Johnson Metasys DDC system.

PLUMBING: The building was renovated in 2001. Both plumbing and fire protection systems appear to be in excellent condition. Fixtures are low-flow and accessible as required. Hot water for the building is supplied from a single 100-gallon water heater through a recirculated hot water system. Existing drawings document a 140F water heater storage temperature and a main mixing valve supply of 120F.

Upham School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. Parking lot and overflow parking lots are insufficiently lit, as existing pole mounted site lights are inoperable. Multiple walkways exceed code requirements for slope, as well as the handicap accessible parking spaces and the route from the spaces to the front entrance. Route from handicap parking spaces is not protected or isolated from traffic using the front bus loop. A majority of the bituminous play areas have steeper than recommended slopes and do not meet accessible code requirements. No loading dock or dedicated loading facility provided. Parking lot is inadequate for staff needs. Parent queueing area does not appear sufficient, and overall circulation patterns for vehicles and pedestrians are less than ideal. Drainage along north face of building is not adequate and has created interior moisture issues. Hardscape surfaces and site features in overall fair to poor condition. Repaving of some areas is should be considered in the next few years.

STRUCTURAL: The building is in fair structural condition. It is framed with steel joist supported by masonry walls. There are some minor cracks in some of the CMU corridor walls and the brick walls in the gymnasium.

ARCHITECTURAL: Although small and added to twice, many of the original finishes in the school are long past their useful service life. Classrooms are well maintained but have original surface mounted fluorescent fixtures, stained and broken ceiling tile, and noisy, inefficient thru-wall fancoil units. Daylight is good but window are shaded by the original metal blinds. Some exterior doors are poorly sealed and reveal large gaps with daylight. Walls are uninsulated and most windows are single-paned. MODS are well past their lifetime. Vandalism issue as the rear roof is accessible from ground. Pipe insulation above main corridor is suspected to have asbestos according to the most recent AHERA report and should be abated within a few years. Some wiring has asbestos jacketed insulation.

TECHNOLOGY: There is only one network closet in the building that is shared with an office. The building requires additional cabling to support full wireless access connectivity. The local sound system is new. Network equipment room will require power upgrades to support future equipment upgrades

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded, however, not throughout the entire building. In general, electrical systems are in fair and operational condition, but upgrades are required. Except for the newer energy-efficient lighting system in Multi-purpose/Gym room, the lighting system is outdated and not of the energy-efficient concept. Exit signs shall be upgraded to meet Code. Quantity of power outlets in many spaces is insufficient. Panels, feeders and branch wring circuits that are older than thirty years shall be replaced. Fire alarm system needs some upgrades too. Exterior lighting is limited to building-mounted lights, in poor condition. There is no lighting at the parking lot. There is no emergency generator at site. There are no CCTV, door access control or intrusion detection systems are provided except for key pad. Consideration should be given to adding card access control, CCTV system and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The school is heated by hot water heating plant comprised of one conventional cast iron boiler and one high-efficiency, condensing-type boiler with a primary-secondary pumping system for distribution to the building loads. The classrooms are heated and ventilated through unit ventilators, fin tube radiation and a common exhaust system. Common spaces are served by heating and ventilating units, fin tube radiation and cabinet unit heaters. The control system is, except for the boilers and hot water pumps, pneumatic and in poor condition.

PLUMBING: Fixtures are antiquated, high-flow type. Original building hot water is supplied directly from a single 48-gallon water heater installed in 2010 with no main mixing valve. Storage temperature could not be confirmed. Hot water temperatures throughout the modulars served by point-of-use electric storage water heaters are excessive as observed.

No fire protection system has been installed.

Wellesley Middle School

CIVIL: Overall site functions as intended, though some safety, accessibility, and circulation deficiencies were observed. Brick wall at Donizetti Street entrance appears unsafe for pedestrians leaning or sitting on. The route from the Calvin Road parking lot is not accessible, as pavement is uneven and very steep. Multiple building egress locations are not accessible due to stepped landings. Loading dock and trash/recycling dumpster are provided, however location is shared with a parking lot. On-site parking appears barely adequate for the school's daily needs. Parked cars were observed in the north and northwest service areas, which creates congestion for intended uses. Bus queuing areas are sufficient, however, the Donizetti loop is not segregated from parking or from parent loading/unloading operations. Circulation is blocked in D'Auria drive during bus drop-off and pick-up times, which creates a safety hazard in the event of an emergency. During drop-off times, queuing from the Donizetti/Linden Street intersection extends all the way back to the Donizetti bus/parking loop. Overall vehicular circulation is poor during peak times, and pedestrian circulation is adequate. Hardscape surfaces and site features in overall fair to poor condition. Repaving of some areas is should be considered in the next few years.

STRUCTURAL: The majority of the building structure is cast-in-place concrete and in fair condition. Cracks were noted in some the CMU walls in Gymnasium. It was also noted that some metal clips have been installed at the top of some CMU walls, likely to brace them in the out of plane direction.

ARCHITECTURAL: Originally building in 1959 was substantially expanded in the 1970's with a concrete structure and precast concrete exterior. Most of the building is uninsulated and the windows are predominantly single-paned and inefficient. The classrooms are well-maintained and nearly all rooms have upgraded ceilings, lighting and interactive marker boards. The auditorium is large and well proportioned, but the seat upholstery is well past its useful service. The stage is awkwardly accessed with a wheelchair lift, and the lighting is outdated. The gymnasium is functional but worn. Exterior brick and flashing is in fair condition, and the roof membrane is an older black membrane.

TECHNOLOGY: Network connectivity is adequate. Fiber optic cables connect equipment rooms. The building requires additional cabling to support full wireless access connectivity. The Auditorium sound system is new but requires re-cabling to remove wires from egress path for safety. Network equipment rooms require power upgrades to support future equipment upgrades. IDFs have inadequate air conditioning. Consideration should be given to improving air cooling in these spaces.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems were recently upgraded, they are in good and operational condition. Lighting levels are adequate and lighting controls are appropriate for school space use. Exterior lighting system consisting of building-mounted lights and site pole-mounted lights is in good operational condition. There is a 125KW emergency generator used primarily to support the existing school emergency egress lighting system. Existing security system. There are four CCTV cameras in the IT office area. There is no door access control or intrusion detection system except for key pad. Consideration should be given to adding card access control, expanding the CCTV system coverage and upgrading the intrusion detection system to include motion detection.

MECHANICAL: The school is served by a steam heating plant that includes three Burnham dual-fuel (gas and oil) fired boilers that were manufactured in 2005. The steam system serves the majority of the building heating load directly, feeding a number of air handling units. There are two steam-to-hot-water heat exchangers with associated hot water pumps that serve smaller portions of the school. The controls to all the heating system components were upgraded with the heating system around 2005.

The classrooms are served by unit ventilators, fin tube radiation and common exhaust systems for their heating and ventilating needs. Common spaces are provided with heating and cooling through central air handling units that are mostly configured with DX type cooling. The administration area, however, is provided with cooling through a small air cooled chiller. The control system is a Johnson DDC system that is in good condition.

PLUMBING: The building plumbing and fire protection systems were upgraded in 2005. Building fixtures were replaced at that time with low-flow and handicapped accessible units as necessary. Hot water for the North Wing of the Middle School is produced by an 80-gallon electric water installed in 2003 (Confirm Ground and First only?). The main building is served by and 85-gallon gas-fired water heater installed in 2007. Temperature out to the building at the main mixing valve was 124F. A new acid waste system piping system was installed at the time of the renovation. Lab waste is neutralized at local lime chip tanks. Users report odors at the tanks which are untrapped between the lab sink and chip tank. Kitchen grease trap is reported to be subject to overflowing. Food Prep sinks were not wasted indirectly. The gas range did not appear to be interlocked with the exhaust fan. No main solenoid valve was observed on the gas system. Hot water to the dish washer and pot sink were not up to temperature.

Fire protection system appears to be code-compliant. Operation of Kitchen exhaust fan and makeup air units should be confirmed to meet local AHJ requirements.

Wellesley High School

CIVIL: The site for the new high school raises all of the ground floor space above the flood plain. Paving is designed to minimize runoff through areas of porous paving, bio swales and retention/infiltration structures. Landscaping is selected to be drought-tolerant and indigenous for this area.

STRUCTURAL: The new high school features slab on grade foundations below the academic wings and pile-supported structured slabs below the athletic and admin wing. The steel frame composite slab construction meets or exceeds all current seismic requirements.

ARCHITECTURAL: The high school was opened in February 2012 and will be monitored closely during the first year to assure the high performance of the building is being realized. It is insulated beyond the requirements of the current building code and is fully code compliant in all other aspects.

TECHNOLOGY: The building has the latest technology for Smartboards and Wi-Fi coverage throughout the building. The building has a Building Management System (BMS) to optimize usage and a Data Acquisition System (DAS) to make this information available to the users.

ELECTRICAL: The high school features high efficiency lighting, daylight controls to further optimize electrical usage, LED site lighting, and a 47KW photovoltaic array.

MECHANICAL: The new high school features a high efficiency hot water heating plant with condensing boilers and primary-only, variable speed pumping; a high efficiency chilled water plant featuring an evaporatively cooled chiller and primary-only, variable speed pumping; a geothermal system to support the year-round heating and cooling needs of selected spaces; and energy recovery units in spaces with substantial ventilation requirements to reduce heating and cooling energy. The Library and Auditorium feature displacement ventilation to optimize the delivery of fresh air to the occupants, to reduce noise and minimize energy consumption. All the systems are controlled through the use of a state-of-the-art digital control system that facilitates the on-going operation and maintenance of the building HVAC systems.

PLUMBING: The building features water saving fixtures throughout, including low-flow toilets and water saving faucets. The building's rainwater harvesting system diverts all of the roof runoff except the green roof to a 100,000 gallon underground rainwater harvesting tank. This water is filtered and circulated through the building for toilet flushing when available.

Field House

CIVIL: Overall site functions as intended, although some safety and circulation deficiencies were observed. No fire hydrants are located within 200' of the building. Site lighting is not provided at the parking/circulation loop. Accessibility is adequate. Route to trash and recycling dumpsters is limited by locked swing gates. Vehicular circulation in the access road becomes congested and sometimes even restricted during drop-off and pick-up times. Hardscape surfaces and site features in overall good condition.

STRUCTURAL: The structure appears to be framed with wood trusses on CMU load bearing walls. There are several minor cracks in the perimeter walls, but the structure is in adequate condition.

ARCHITECTURAL: An ad hoc utility building, this facility does not confirm to the energy code for walls and doors, and does not meet the accessibility code for the bathroom and shower. It lacks windows for security reasons, but the interior spaces would benefit from some natural light from skylights or some glazing in the roll-up doors.

TECHNOLOGY: None – internet access is required.

ELECTRICAL: Existing electrical systems including power distribution, lighting and fire alarm systems are in good and operational condition. Lighting levels are adequate for space use. There is no exterior lighting system. There is no emergency generator at the site. Existing security system

MECHANICAL: The Field House is provided with heat from individual gas-fired unit heaters, each individually vented through the roof. The bathroom is provided with an exhaust fan that is controlled through the light switch.

PLUMBING: The Field House is used for vehicle parking and maintenance. There are no floor drains. The parking bays wash out by gravity to a site catch basin. Field House sinks drain to an interior drywell. A service sink is served by an ejector and vents directly to the interior space. Hot water is provided by a single 40-gallon gas-fired water heater. No backflow protection is installed on the ¾" building water service entrance. There is no emergency shower or eyewash for the vehicle maintenance area.

The building is not served by a fire protection system.

ARCHITECTURE
ENGINEERING
PLANNING
INTERIORS

SMMA Symmes Maini & McKee Associates

MEMORANDUM

To:	Joseph McDonough, P.E. – Town of Wellesley Facilities Directors	Date:	10/11/2012
From:	Anthony Iacovino, AIA	Project No.:	12005
Project:	Wellesley Public Schools Conditions Assessment & Feasibility Study		
Re:	Cost Estimate Summary		
Distribution:	L. Finnegan - SMMA		

The attached cost estimates were prepared by SMMA and Daedalus Project Inc. to quantify the costs associated with the various recommendations in the facilities assessment prepared by SMMA from February to October of 2012. These costs are intended as a companion to the database and the cost data will be included in the database turned over to the town. The costs are divided into three main categories of Summary costs for all buildings, Escalation costs for all buildings, and individual Building Summary costs for each school.

Summary Costs

The main summary sheet lists the gross square footage for each building, the aggregate construction cost from the recommendations, and any cost related to replacement of modular classrooms to create a total construction cost. Soft costs are included to cover Owner's Project Manager costs, design fees, Construction and Owner contingencies, miscellaneous equipment and furnishings, moving and testing costs. The last column indicates the average project cost per square foot based on each building's size.

Escalation

The escalation sheet lists the project cost totals for each building based on 2013 dollar costs. Current market forces point to 3.5% inflation in construction costs, and this chart shows the relative value of these project over time assuming this rate compounded over the indicated periods. This rate was provided by Daedalus based on their best predictions of the current market.

Building Summary Costs

The recommendation for each building in the database yielded a list of recommended improvements in a range of categories. Daedalus provided estimates for each of the item categories and compiled an estimate for each building. Each summary page groups these costs into several work categories for types of improvements as indicated for each line item. The purpose of this grouping was to develop a list of common work that could be combined across buildings to create a larger aggregate scope of work to command better bids in the market place.

Each of these categories is broken down into cost per square foot by category. Additional specific costs like hazardous material abatement or remobilization of modular classrooms are included as appropriate to each building. Although the estimate is based on the recommendation to replace the modular classrooms with permanent construction, the condition of these building elements varies and the priorities of one school over another are not reflected. These costs cover temporary relocation and service of the existing modulars to provide temporary space during construction.

All of the costs indicated assume a multi-phased construction approach where work would be isolated to a small area of a given building at a time and phased to minimize the disruption of the operations by maximizing work during summers. This is a more expensive approach than single phase construction that would be permitted if the school were to be vacant for the duration of a full renovation.

The summary costs indicated in these tables are intended to provide a conservative estimation and order of magnitude for the work listed currently in the database of recommendations. The input of Wellesley's Permanent Building Committee, School Board, and Facilities Department are required to prioritize and ultimately budget for any future renovation projects. The database of existing conditions and these estimates are intended as tools to facilitate those decisions.

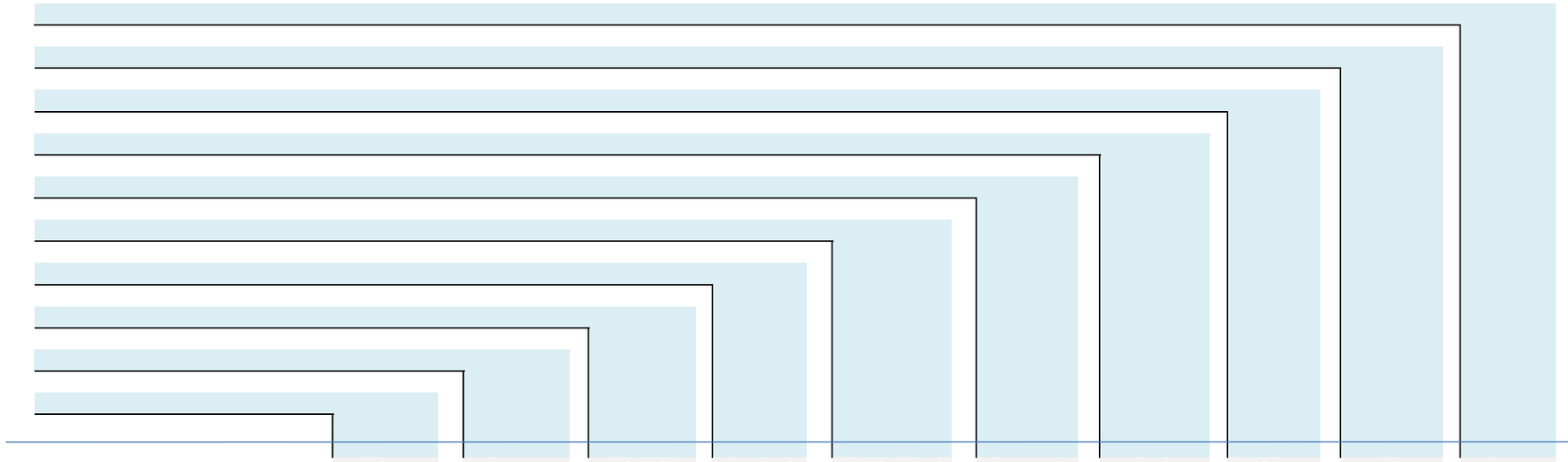
Wellesely Public School Facility Assessment Database
Summary Costs
SMMA PNUM: 12005

Building	GSF	Construction Cost	Modular's	Total Construction Costs	Soft Costs	Total Project Costs	Project Cost per Square Foot
Bates	52,657 SF	$2,523,638	$0	**$2,523,638**	$832,801	**$3,356,439**	**$64/SF**
Fiske	70,665 SF	$7,529,230	$700,000	**$8,229,230**	$2,715,646	**$10,944,876**	**$155/SF**
Field House	5,674 SF	$253,658		**$253,658**	$83,707	**$337,365**	**$59/SF**
Hardy	45,909 SF	$7,614,902	$875,000	**$8,489,902**	$2,801,668	**$11,291,570**	**$246/SF**
Hunnewell	44,943 SF	$5,264,676	$500,000	**$5,764,676**	$1,902,343	**$7,667,019**	**$171/SF**
Middle School	232,590 SF	$24,450,882	$0	**$24,450,882**	$8,068,791	**$32,519,673**	**$140/SF**
Preschool	8,895 SF	$174,907	$0	**$174,907**	$57,719	**$232,626**	**$26/SF**
Schofield	43,563 SF	$4,960,883	$875,000	**$5,835,883**	$1,925,841	**$7,761,724**	**$178/SF**
Sprague	68,188 SF	$3,313,244	$0	**$3,313,244**	$1,093,371	**$4,406,615**	**$65/SF**
Upham	36,481 SF	$4,789,052	$500,000	**$5,289,052**	$1,745,387	**$7,034,439**	**$193/SF**
Total	**609,565 SF**	**$60,875,072**	**$3,450,000**	**$64,325,072**	**$21,227,274**	**$85,552,346**	**$140/SF**

Comments:
1. All cost data is based on construction market pricing for September 2012
2. All Pricing assumes Chapter 149 Public Bid procurement
3. Cost data does not include second shift or premium time work.
4. Estimated costs do not include swing space or replacement of existing modular classrooms
5. Soft Costs include OPM and Designer Fees, Construction and Owner Contingencies, Misc. Furniture Fixtures and Equipment (FF&E), Moving and Testing
6. Modular costs include temporary on-site relocation and support during construction of permanent replacements
7. Multi-phase construction assumes restricted access to the portions of the building being renovated with work hours constrained to 7AM to 3:30PM without overtime premium work.

Wellesely Public School Database Assessment
Construction Escallation
SMMA PNUM: 12005

Building	GSF	Estimated Combined Project Costs Project Cost	Escallation - 1 Year Multi-Phased Projects 2013 3.50%
Bates	52,657 SF	$3,356,439	$3,473,914
Fiske	70,665 SF	$10,944,876	$11,327,947
Field House	5,674 SF	$337,365	$349,173
Hardy	45,909 SF	$11,291,570	$11,686,775
Hunnewell	44,943 SF	$7,667,019	$7,935,365
Middle School	232,590 SF	$32,519,673	$33,657,862
Preschool	8,895 SF	$232,626	$240,768
Schofield	43,563 SF	$7,761,724	$8,033,385
Sprague	68,188 SF	$4,406,615	$4,560,846
Upham	36,481 SF	$7,034,439	$7,280,645
Total	**609,565 SF**	**$85,552,346**	**$88,546,678**



Comments:
Multi-phase consturction assumes restricted access to the portions of the building being renovated with work hours constrained to 7AM tp 3:30PM without overtime premium work.

Escallation is based on 2012 dollars for latest industry levels
Escallation is compounded yearly to reflect inflation.
Escallation rate provided by Daedalus Projects Inc. based on current market inflation

			Upham	Sprague	Schofield	Preschool	Middle School	Hunnewell	Hardy	Field House	Fiske	Bates	Total
2014	Escallation - 2 Year	**3.62%**	$7,544,386	$4,726,063	$8,324,394	$249,490	$34,877,118	$8,222,823	$12,110,128	$361,822	$11,738,301	$3,599,756	**$91,754,281**
2015	Escallation - 3 Years	**3.75%**	$7,827,247	$4,903,256	$8,636,500	$258,844	$36,184,761	$8,531,121	$12,564,172	$375,387	$12,178,404	$3,734,722	**$95,194,413**
2016	Escallation - 4 Years	**3.88%**	$8,120,713	$5,087,094	$8,960,307	$268,549	$37,541,432	$8,850,977	$13,035,238	$389,462	$12,635,007	$3,874,747	**$98,763,525**
2017	Escallation - 5 Years	**4.02%**	$8,425,181	$5,277,823	$9,296,254	$278,618	$38,948,968	$9,182,825	$13,523,967	$404,064	$13,108,730	$4,020,022	**$102,466,454**
2018	Escallation - 6 Years	**4.16%**	$8,741,066	$5,475,704	$9,644,798	$289,064	$40,409,277	$9,527,116	$14,031,019	$419,213	$13,600,214	$4,170,745	**$106,308,216**
2019	Escallation - 7 Years	**4.30%**	$9,068,793	$5,681,004	$10,006,409	$299,902	$41,924,337	$9,884,315	$14,557,083	$434,931	$14,110,125	$4,327,118	**$110,294,016**
2020	Escallation - 8 Years	**4.45%**	$9,408,809	$5,894,001	$10,381,578	$311,146	$43,496,201	$10,254,906	$15,102,870	$451,238	$14,639,155	$4,489,354	**$114,429,256**
2021	Escallation - 9 Years	**4.61%**	$9,761,572	$6,114,984	$10,770,813	$322,812	$45,126,998	$10,639,392	$15,669,120	$468,156	$15,188,018	$4,657,673	**$118,719,538**
2022	Escallation - 10 Years	**4.77%**	$10,127,561	$6,344,253	$11,174,642	$334,915	$46,818,939	$11,038,294	$16,256,600	$485,708	$15,757,461	$4,832,302	**$123,170,675**
2023	Escallation - 11 Years	**4.94%**	$10,507,273	$6,582,117	$11,593,611	$347,472	$48,574,316	$11,452,151	$16,866,107	$503,919	$16,348,253	$5,013,479	**$127,788,697**
2024	Escallation - 12 Years	**5.11%**	$10,901,220	$6,828,899	$12,028,289	$360,499	$50,395,507	$11,881,525	$17,498,465	$522,812	$16,961,197	$5,201,449	**$132,579,863**
2025	Escallation - 13 Years	**5.29%**	$11,309,939	$7,084,934	$12,479,264	$374,015	$52,284,979	$12,326,998	$18,154,533	$542,414	$17,597,121	$5,396,466	**$137,550,663**
2026	Escallation - 14 Years	**5.47%**	$11,733,981	$7,350,569	$12,947,148	$388,038	$54,245,293	$12,789,172	$18,835,199	$562,751	$18,256,887	$5,598,795	**$142,707,833**
2027	Escallation - 15 Years	**5.67%**	$12,173,921	$7,626,163	$13,432,574	$402,587	$56,279,105	$13,268,675	$19,541,385	$583,850	$18,941,390	$5,808,710	**$148,058,360**

Bates Elementary School
Town of Wellesley

GSF: 52,657 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$341,085	$112,558	$18,857	**$519,751**	**$9.87**
2	Bathroom Renovation	$63,800	$21,054	$3,527	**$94,568**	**$1.80**
3	Electrical Lighting and Fire Alarm	$651,884	$215,122	$36,041	**$903,046**	**$17.15**
4	Windows and Doors	$151,860	$50,114	$8,396	**$235,614**	**$4.47**
5	Site Improvements	$301,500	$99,495	$16,669	**$459,430**	**$8.72**
6	Fire Protection (Sprinklers)	$7,200	$2,376	$398	**$9,974**	**$0.19**
7	Interior Finishes	$0	$0	$0	**$0**	**$0.00**
8	Other Work	$214,460	$70,772	$11,857	**$297,089**	**$5.64**
Sub Total		**$1,731,789**	**$571,490**	**$95,745**	**$2,519,471**	**$48**
Abatement Costs						
	Hardous Material Removal	$0	$0	$0	**$0**	**$0.00**
Sub Total		**$1,731,789**	**$571,490**	**$95,745**	**$2,519,471**	**$48**
Other Costs Related to Modular Classrooms		$0	$0	$0	**$0**	**$0.00**
NSF: 3,025 SF						
Total		**$1,731,789**	**$571,490**	**$95,745**	**$2,519,471**	**$48**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning

Fiske Elementary School
Town of Wellesley

GSF: 70,665 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$852,281	$281,253	$47,120	**$1,298,719**	**$18.38**
2	Bathroom Renovation	$182,000	$60,060	$10,062	**$269,771**	**$3.82**
3	Electrical Lighting and Fire Alarm	$1,448,302	$477,940	$80,072	**$2,006,313**	**$28.39**
4	Windows and Doors	$706,565	$233,166	$39,064	**$1,096,250**	**$15.51**
5	Site Improvements	$1,014,013	$334,624	$56,062	**$1,545,168**	**$21.87**
6	Fire Protection (Sprinklers)	$397,491	$131,172	$21,976	**$550,639**	**$7.79**
7	Interior Finishes	$1,964,855	$648,402	$108,631	**$2,721,888**	**$38.52**
8	Other Work	$720,183	$237,660	$39,817	**$997,660**	**$14.12**
Sub Total		**$7,285,689**	**$2,404,277**	**$402,802**	**$10,486,408**	**$148**
Abatement Costs						
	Hazardous Material Removal	$441,665	$145,749	$24,418	**$611,833**	**$8.66**
Sub Total		**$7,727,354**	**$2,550,027**	**$427,221**	**$11,098,241**	**$157**
Other Costs Related to (2) Modular Classrooms		$700,000	$231,000	$38,701	**$969,701**	**$13.72**
NSF: 1,907 SF						
Total		**$8,427,354**	**$2,781,027**	**$465,921**	**$12,067,941**	**$171**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning
Modular costs include Mobilization, Relocation and Demobilization for temporary use during construction
Site costs include new Hydrant but piping cannot be estimated without further survey information.

Hardy Elementary School
Town of Wellesley

GSF: 45,909 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$791,619	$261,234	$43,766	**$1,206,281**	**$26.28**
2	Bathroom Renovation	$410,750	$135,548	$22,709	**$608,837**	**$13.26**
3	Electrical Lighting and Fire Alarm	$1,099,856	$362,952	$60,808	**$1,523,616**	**$33.19**
4	Windows and Doors	$635,500	$209,715	$35,135	**$985,991**	**$21.48**
5	Site Improvements	$865,000	$285,450	$47,823	**$1,318,100**	**$28.71**
6	Fire Protection (Sprinklers)	$293,931	$96,997	$16,251	**$407,179**	**$8.87**
7	Interior Finishes	$981,314	$323,834	$54,254	**$1,359,402**	**$29.61**
8	Other Work	$2,471,167	$815,485	$136,623	**$3,423,275**	**$74.57**
Sub Total		**$7,549,137**	**$2,491,215**	**$417,368**	$10,832,681	$236
Abatement Costs						
	Hazardous Material Removal	$286,930	$94,687	$15,863	**$397,481**	**$8.66**
Sub Total		**$7,836,067**	**$2,585,902**	**$433,231**	$11,230,162	$245
Other Costs Related to (4) Modular Classrooms		$875,000	$288,750	$48,376	**$1,212,126**	**$26.40**
NSF: 3,339 SF						
Total		**$8,711,067**	**$2,874,652**	**$481,607**	$12,442,288	$271

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning
Modular costs include Mobilization, Relocation and Demobilization for temporary use during construction
Site costs include new Hydrant but piping cannot be estimated without further survey information.

Hunnewell Elementary School
Town of Wellesley

GSF: 44,943 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$807,769	$266,564	$44,659	**$1,230,891**	**$27.39**
2	Bathroom Renovation	$504,375	$166,444	$27,885	**$747,613**	**$16.63**
3	Electrical Lighting and Fire Alarm	$1,050,333	$346,610	$58,070	**$1,455,013**	**$32.37**
4	Windows and Doors	$346,990	$114,507	$19,184	**$538,363**	**$11.98**
5	Site Improvements	$329,750	$108,818	$18,231	**$502,478**	**$11.18**
6	Fire Protection (Sprinklers)	$0	$0	$0	**$0**	**$0.00**
7	Interior Finishes	$990,461	$326,852	$54,759	**$1,372,073**	**$30.53**
8	Other Work	$368,001	$121,440	$20,346	**$509,787**	**$11.34**
Sub Total		**$4,397,680**	**$1,451,234**	**$243,134**	**$6,356,218**	**$141**
Abatement Costs						
	Hazardous Material Removal	$280,895	$92,695	$15,530	**$389,120**	**$8.66**
Sub Total		**$4,678,575**	**$1,543,930**	**$258,663**	**$6,745,338**	**$150**
	Roof Repairs	$112,000	$36,960	$6,192	**$155,152**	**$3.45**
	Other Costs Related to (2) Modular Classrooms	$500,000	$165,000	$27,643	**$692,643**	**$15.41**
	NSF: 1,822 SF					
Total		**$5,290,575**	**$1,745,890**	**$292,499**	**$7,593,133**	**$169**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning
Modular costs include Mobilization, Relocation and Demobilization for temporary use during construction

Middle School
Town of Wellesley

GSF: 232,590 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$2,691,413	$888,166	$148,800	**$4,101,216**	**$17.63**
2	Bathroom Renovation	$799,125	$263,711	$44,181	**$1,184,509**	**$5.09**
3	Electrical Lighting and Fire Alarm	$5,883,275	$1,941,481	$325,267	**$8,150,023**	**$35.04**
4	Windows and Doors	$2,656,565	$876,666	$146,873	**$4,121,717**	**$17.72**
5	Site Improvements	$1,304,063	$430,341	$72,097	**$1,987,151**	**$8.54**
6	Fire Protection (Sprinklers)	$0	$0	$0	**$0**	**$0.00**
7	Interior Finishes	$5,154,429	$1,700,962	$284,972	**$7,140,362**	**$30.70**
8	Other Work	$6,966,299	$2,298,879	$385,144	**$9,650,322**	**$41.49**
Sub Total		**$25,455,168**	**$8,400,205**	**$1,407,335**	**$36,335,300**	**$156**
Abatement Costs						
	Hazardous Material Removal	$1,453,690	$479,718	$80,370	**$2,013,777**	**$8.66**
Sub Total		**$26,908,857**	**$8,879,923**	**$1,487,705**	**$38,349,077**	**$165**
	Plaza Waterproofing at Donizetti Entrance	$240,000	$79,200	$13,269	**$332,469**	**$1.43**
	Other Costs Related to Modular Classrooms	$0	$0	$0	**$0**	**$0.00**
Total		**$27,148,857**	**$8,959,123**	**$1,500,973**	**$38,681,545**	**$166**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning

Preschool (PAWS)
Town of Wellesley

GSF: 8,895 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$58,750	$19,388	$3,248	**$89,524**	**$10.06**
2	Bathroom Renovation	$0	$0	$0	**$0**	**$0.00**
3	Electrical Lighting and Fire Alarm	$35,914	$11,851	$1,986	**$49,751**	**$5.59**
4	Windows and Doors	$0	$0	$0	**$0**	**$0.00**
5	Site Improvements	$41,638	$13,740	$2,302	**$63,448**	**$7.13**
6	Fire Protection (Sprinklers)	$0	$0	$0	**$0**	**$0.00**
7	Interior Finishes	$127,928	$42,216	$7,073	**$177,217**	**$19.92**
8	Other Work	$0	$0	$0	**$0**	**$0.00**
Sub Total		**$264,229**	**$87,196**	**$14,608**	**$379,940**	**$43**
Abatement Costs						
	Hardous Material Removal	$0	$0	$0	**$0**	**$0.00**
Sub Total		**$264,229**	**$87,196**	**$14,608**	**$379,940**	**$43**
	Other Costs Related to Modular Classrooms	$0	$0	$0	**$0**	**$0.00**
Total		**$264,229**	**$87,196**	**$14,608**	**$379,940**	**$43**

Notes
Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning

Schofield Elementary School
Town of Wellesley

GSF: 43,563 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$1,055,769	$348,404	$58,370	**$1,608,797**	**$36.93**
2	Bathroom Renovation	$277,060	$91,430	$15,318	**$410,674**	**$9.43**
3	Electrical Lighting and Fire Alarm	$1,045,935	$345,158	$57,826	**$1,448,920**	**$33.26**
4	Windows and Doors	$387,200	$127,776	$21,407	**$600,748**	**$13.79**
5	Site Improvements	$469,250	$154,853	$25,943	**$715,050**	**$16.41**
6	Fire Protection (Sprinklers)	$219,144	$72,317	$12,116	**$303,577**	**$6.97**
7	Interior Finishes	$931,159	$307,283	$51,481	**$1,289,922**	**$29.61**
8	Other Work	$288,794	$95,302	$15,966	**$400,063**	**$9.18**
Sub Total		**$4,674,310**	**$1,542,522**	**$258,428**	**$6,777,751**	**$156**
Abatement Costs						
	Hardous Material Removal	$272,270	$89,849	$15,053	**$377,172**	**$8.66**
Sub Total		**$4,946,580**	**$1,632,371**	**$273,481**	**$7,154,923**	**$164**
Other Costs Related to (4) Modular Classrooms		$875,000	$288,750	$48,376	**$1,212,126**	**$27.82**
NSF: 3,600 SF						
Total		**$5,821,580**	**$1,921,121**	**$321,856**	**$8,367,049**	**$192**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning
Modular costs include Mobilization, Relocation and Demobilization for temporary use during construction
Site costs include new Hydrant but piping cannot be estimated without further survey information.

Sprague Elementary School
Town of Wellesley

GSF: 68,188 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$87,500	$28,875	$4,838	**$133,334**	**$1.96**
2	Bathroom Renovation	$7,188	$2,372	$397	**$10,654**	**$0.16**
3	Electrical Lighting and Fire Alarm	$420,628	$138,807	$23,255	**$582,691**	**$8.55**
4	Windows and Doors	$0	$0	$0	**$0**	**$0.00**
5	Site Improvements	$233,875	$77,179	$12,930	**$356,382**	**$5.23**
6	Fire Protection (Sprinklers)	$0	$0	$0	**$0**	**$0.00**
7	Interior Finishes	$468,790	$154,701	$25,918	**$649,408**	**$9.52**
8	Other Work	$980,200	$323,466	$54,192	**$1,357,858**	**$19.91**
Sub Total		**$2,198,181**	**$725,400**	**$121,530**	**$3,090,327**	**$45**
Abatement Costs						
	Hardous Material Removal	$0	$0	$0	**$0**	**$0.00**
Sub Total		**$2,198,181**	**$725,400**	**$121,530**	**$3,090,327**	**$45**
	Other Costs Related to Modular Classrooms	$0	$0	$0	**$0**	**$0.00**
Total		**$2,198,181**	**$725,400**	**$121,530**	**$3,090,327**	**$45**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning

Upham Elementary School
Town of Wellesley

GSF: 36,481 SF

	Description	Construction Costs	33% Soft Costs	4.16% 2018 Escallation	SubTotal	Cost/SF
1	Mechanical Upgrades	$888,513	$293,209	$49,123	**$1,353,929**	**$37.11**
2	Bathroom Renovation	$203,000	$66,990	$11,223	**$300,898**	**$8.25**
3	Electrical Lighting and Fire Alarm	$985,405	$325,184	$54,480	**$1,365,068**	**$37.42**
4	Windows and Doors	$270,940	$89,410	$14,979	**$420,368**	**$11.52**
5	Site Improvements	$605,125	$199,691	$33,455	**$922,099**	**$25.28**
6	Fire Protection (Sprinklers)	$250,807	$82,766	$13,866	**$347,439**	**$9.52**
7	Interior Finishes	$307,405	$101,444	$16,995	**$425,844**	**$11.67**
8	Other Work	$3,000	$990	$166	**$4,156**	**$0.11**
Sub Total		**$3,514,193**	**$1,159,684**	**$194,288**	**$5,139,802**	**$141**
Abatement Costs						
	Hardous Material Removal	$228,008	$75,243	$12,606	**$315,857**	**$8.66**
Sub Total		**$3,742,202**	**$1,234,927**	**$206,894**	**$5,455,659**	**$150**
Other Costs Related to Modular Classrooms		$500,000	$165,000	$27,643	**$692,643**	**$18.99**
NSF: 1,980 SF						
Total		**$4,242,202**	**$1,399,927**	**$234,538**	**$6,148,302**	**$169**

Notes

Mechanical Upgrades included Heating and Ventilation but not general Air Conditioning
Modular costs include Mobilization, Relocation and Demobilization for temporary use during construction
Site costs include new Hydrant but piping cannot be estimated without further survey information.