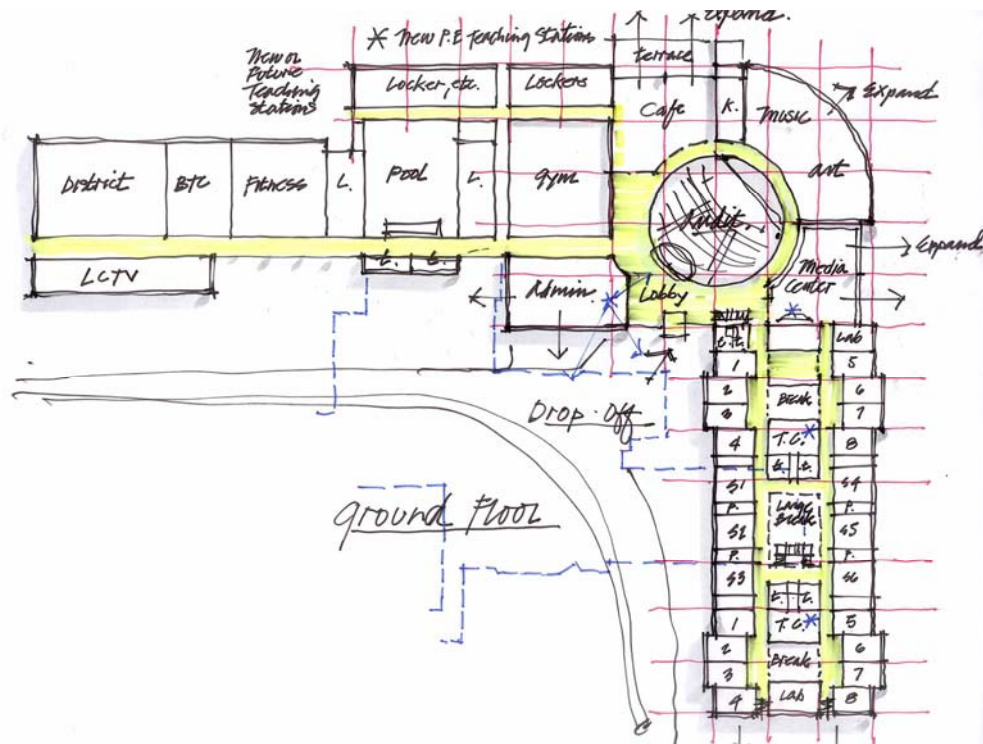


1 Executive Summary

This Schematic Design booklet includes all information relevant to the development of the Schematic Design, its process and results, as it has unfolded with the collaborative bodies including the MSBA, the Longmeadow High School Building Committee and Community and the Design Team. We will summarize this work herein.

The Process

After the MSBA vote of 18 November 2009, OMR, JLA and our Client continued to work with the MSBA and the Board of Directors in order to provide a facility that meets the needs of all interested parties. By way of design discussions, emails, phone calls and meetings, we believe that the parties developed a revised conceptual design strategy that creatively encompasses 21st century planning and design with a model that will evolve from a departmental layout to an interdisciplinary educational plan with minimal to no disruption to the school and its inhabitants. By early January 2010, OMR was given the green light to further this concept for submission to the MSBA for their March 2010 Board Meeting. This concept is shown below.



During and since that time of “re-conceptualization”, the OMR design team has been working weekly with the Client and the User Groups to develop the design into a functional, efficient and exciting place to continue one’s educational journey. Additional consultants joined the team and met our stride in an efficient manner. Development of the concept design with the full consultant team has provided for a quality solution.

The Rationale

This project has been proposed to the MSBA to improve the educational space and deficiencies of the Longmeadow High School and to plan for 21st century educational objectives. As shown in our Feasibility Study report, the existing building has surpassed its useful life span from the systems, structural, mechanical, electrical, plumbing, fire protection and technology, to the size, quantity and quality of the spaces.

In developing the rationale for saving a portion of the facility, the design team determined that the 1970’s addition is in better condition than the remainder of the building, will require minimal work relative to changing seismic codes, has large, double height spaces that can be easily dividable into other types of educational spaces, has good proximity to the existing fields, and has a separate mechanical system that could be repaired, and remain as a separate system, if desired.

To understand the need for a new addition, the following summarizes our report.

Facility Deficiencies of the existing building include:

- MEP systems have exceeded their useful life span
- Current unit ventilators pose health concerns due to proximity to grade and standing water
- Technology & Security infrastructure is outdated
- Lack of energy efficiency
- Hazardous materials
- Ongoing deferred maintenance
- Gymnasium flooring has exceeded its functional and maintainable life
- Use of the basement as student programmed space is not recommended
- Corridors around the PE spaces are too narrow
- Capacity of auditorium is below MSBA guidelines

Code Deficiencies of the existing building include:

- Structural codes: Seismic, lateral load, snow load, etc.
- Building codes
- MEP codes
- Food service equipment codes
- Life Safety & Sprinklers
- Accessibility: Entrances, millwork, heights, reaches, clearances, hardware, media center sunken reading area, etc.

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- Ramps, Stairs & Elevator(s)
- Locker rooms relative to Title 9 non-compliance

Educational Deficiencies of the existing building include:

- Current arrangement of classrooms does not support interdisciplinary teaching and learning
- Classroom Sizes are below MSBA guidelines
- Science Facilities are outdated
- Administrative Control is lacking due to location of spaces
- Distances and Adjacencies throughout building are not efficient
- Existing courtyards unusable in their current configuration and are hard to maintain
- Open Classroom Space in 1971 wing is underutilized
- Presentation boards are outdated
- Stage size and lack of wing space given the large music program
- Performing Arts classrooms cannot house all members of the band or choir

In addition, the priorities outlined in the Statement of Interest were developed to correct the existing deficiencies and bring the facility to a level where the school district can maintain a healthy and safe educational environment for the students and teachers. At the same time, the intent is to provide programmatic spaces that can accommodate interdisciplinary delivery methods, collaborative teaching instruction and hands-on educational practices -- hallmarks of a 21st century educational program. The Town of Longmeadow submitted a Statement of Interest with the MSBA in July 2007. The priorities outlined in the Statement of Interest include:

- 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.
- Prevention of the loss of accreditation
- Replacement, renovation or the modernization of the heating system to increase energy conservation and decrease energy costs
- Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.

The schematic design facility includes two portions: (1) 184,365 GSF of new construction and (2) 52,000 GSF of renovated space. The renovated portion of the facility will be funded entirely by the Town of Longmeadow.

The newly constructed portion of the facility will meet the MSBA total GSF guidelines of 185,000 for a 1,000 student school. In general, the program for the newly constructed portion meets the MSBA area guidelines as discussed in further detail below:

Core Academic Spaces: The number of classrooms has been reduced from the existing, but has been expanded to accommodate 21st century technology and educational teaching standards and objectives. As there are more teachers than classrooms, each classroom is 850 NSF and teachers will not have their own dedicated classrooms. In order to encourage teacher collaboration and interdisciplinary learning and given that teachers will not have dedicated classrooms, four teacher centers with teacher work areas have been created.

Special Education: The majority of special education students in Longmeadow are included in general purpose classrooms. 18% of the high school population is identified as needing special education, but only 8% of the *district* special education population (or 1-2% of the LHS population) are in programs which require self-contained special education curricula. This translates into only 6-8 students using Special Education Resource rooms at one time. Given these statistics, LHS's special education proposed spaces are fewer than the MSBA Guidelines show.

Art & Music / Vocations & Technology: Until this school year, the annual percentage of participation in visual arts courses at LHS has been 40% or higher. The need for severe budget cuts in FY10 resulted in the elimination of a valued art teacher and a reduction in the number of offered art electives this year. Consequently, the percentage of participation in visual arts at LHS in FY10 is 30% of the population. LHS would hope to be able to restore the art staffing and elective courses in the future. The percentage of participation in choral and band courses at LHS is 40% of the population. This compares to the 25% participation rate for art and music assumed by the MSBA guidelines. There is a need for classroom space for approximately 80 choral students and 120 band members. When the choral groups combine and are over 80 students, they will practice in the auditorium.

The percentage of participation in vocational courses at LHS (all of which are located off-site) is 3% of the LHS population (28 students). Within this 3%, 16 students spend half of their day away from LHS and 12 spend their full day away. There are several Chapter 74- approved vocational technical education programs in Western Massachusetts, including Westfield Vocational Technical High School in Westfield, Pathfinder Regional Vocational Technical School in Palmer, William J. Dean Vocational Technical High School in Holyoke, and Smith Vocational and Agricultural School in Northampton. However, LHS belongs to the only Educational Collaborative in the state with a Chapter 74- approved vocational technical school. Consequently, the vast majority of LHS's vocational students are enrolled in the Lower Pioneer Valley Educational Collaborative, which is located in West Springfield. One student attends Smith Vocational and Agricultural School and is enrolled in their Agriculture program, which is not available at LPVEC. LHS has extensive Business and Technology course offerings. The percentage of participation in business technology courses at LHS is 40% of the population. These courses provide for interdisciplinary integration between the traditional voc-ed and college preparatory students. There are two business technology/ applied learning classrooms and two business computer

labs included in the program. In addition, supplemental technology spaces have been included in the renovated building.

Health & Physical Education: The main gymnasium contains two larger sized teaching stations in a full main court, two overlapping cross courts, bleachers and a center dividing curtain. There is a four year graduation requirement for PE courses at LHS for 100% of the students. This means that more students take PE than at other public schools, which translates to a need for more and/or bigger teaching stations at the school.

The pool and ancillary physical education spaces in the renovated portion of the facility provide supplemental teaching stations to support the requirements of Longmeadow High School's physical education graduation requirements.

Dining & Food Service: Each semester, LHS students are required to enroll in a minimum of six courses and PE. In order to accommodate this, the scheduling is based on an eight day cycle with six periods per day and double blocks per cycle for science laboratory work. To meet the academic scheduling, the number of dining seatings cannot be evenly divided into three sections but must be divided into two and a half sections.

The School Mission

"The mission of Longmeadow High School is to provide high quality educational opportunities that encourage and assist individual students to develop their educational potential. Success in our mission will be measured by the degree to which students meet the school-wide, department, and course expectations for student learning."

These School-wide Expectations for Student Learning are:

- Read and interpret written and oral information
- Recognize and respect cultural similarities and differences
- Solve problems
- Speak clearly
- Use technology as an effective tool
- Write clearly

The Philosophical Goals of the Project

The general, overriding Project Goals as summarized by the School Building Committee are:

- Involve all stakeholders
- Partnership with MSBA, OPM, Architect
- Maximize MSBA reimbursement
- Maintain NEASC accreditation

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- Provide facilities that are supportive and accessible to the entire Longmeadow Community
- Support the Teaching and Learning Standards and Requirements for the 21st century through a flexible and adaptable building
- Provide facilities that will encourage excellence in all programs
- Provide a sustainable, durable and economical solution for Longmeadow
- Transition from deferred maintenance to proactive maintenance
- Improve internal and external circulation and safety

Comprehensive Goals

- Involve LHS administration, faculty, staff, students, parents and the entire Longmeadow community in the educational visioning and design processes
- Include the Architect and OPM as partners with the school and community
- Provide facilities to support the Educational Vision for the 21st century but avoid educational “fads;” design flexible facilities to adapt to future needs
- Provide facilities that will be sustainable, durable and economical to build, operate and maintain, supportive of and accessible to the entire Longmeadow Community, and a source of community pride
- Transition from deferred maintenance to proactive maintenance in the use of town funds
- Maximize MSBA reimbursement to the benefit of the community
- Maintain NEASC accreditation; provide facilities that will encourage excellence in all programs
- Improve internal circulation
- Improve external circulation and safety

Educational Delivery for the 21st Century

- Provide learning opportunities that are actively connected to the community, region, and world; Include community service learning opportunities as part of the curriculum
- Encourage interdisciplinary learning; Integrate curricula across subject areas
- Promote team teaching and collaboration; allow for common teacher planning time
- Provide for virtual and distance learning experiences
- Provide for project based learning for individuals and small groups
- Encourage independent student learning, especially for higher grades
- Support applied, active, and expressive learning across the entire curriculum and student body
- Integrate technology infrastructure flexibly and transparently

Facilities Planning for the 21st Century

- Plan for departmental organization while allowing for multiple organizational structures and changes over time
- Provide student project centers with appropriate tools and furniture

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- Create collaborative teacher planning centers with appropriate tools and space
- Support interdisciplinary learning and teaching: provide a variety of learning spaces including small group and common areas
- Support independent and differentiated learning for individuals, students and small groups
- Make facilities useful to the community year round
- Make spaces comfortable, safe and inviting for all members of community
- Provide a separate community entrance
- Provide LCTV student learning opportunities
- Library/ Media Center: locate centrally to support collaboration, group activities, student projects and social activities
- Make Administration and Guidance easily accessible and inviting to students and the public and locate within or near core learning spaces
- Create spaces throughout which support informal student gathering: café as social center for all community
- Visually celebrate the Student through strategic display and presentation areas
- Be a Community Center, offering civic, recreational and performing arts opportunities
- Provide a “gatekeeper” at the entry

The building design meets each of these project goals and encourages high performance throughout the student body.

The Program

Given LHS’s unique program and pursuant to MSBA comments, the team worked to develop a building that was acceptable to all stakeholders. Most specifically, we have addressed:

- The core classrooms are completely interchangeable with ease of access to both small group and large group seminar and breakout spaces to provide flexibility for the 21st century teaching styles which are in development at Longmeadow High School.
- The desire for science classrooms on all levels, while being interconnected with the learning communities.
- The media center with direct views to the exterior, while still being central to the academic wing.
- North light to the art wing, while still functioning with south facing views.
- Expansion potential of the physical education facilities via corridors with access to the fields, interconnecting locker facilities and the existing PE facilities.
- The noisy spaces of music and cafeteria set away from the quiet of academia while still being close to the main lobby of the school.
- Special Education is scattered throughout the facility.

- Teachers' work spaces are both central and visible to the students for ease of access and relationship building, while still maintaining a level of privacy for their work.

Section 2 describes the program in more depth.

Features of the Design

In its Educational Facilities Master Plan submitted to the MSBA on February 29, 2008, the district outlined (in section C, Organizational Structure of Longmeadow Public Schools, 3d) the following:

Challenges in achieving the program, service, and structure:

The high school facility itself provides challenges to optimal achievement of the educational program. The footprint and envelope of Longmeadow High School (LHS) is simply not up to the task of educating the students of today for the world in which they must make their livelihoods and live their lives.

It lacks proper indoor air quality, appropriate lighting, fresh air ventilation, reliable thermal comfort, and/or balanced acoustics. The building plan is such that it either impedes or makes impossible interdisciplinary delivery methods and collaborative teaching instruction. It is void of interconnected teaching spaces, flexible teaching areas that can accommodate the current and future demands of a 21st century curriculum and program.

Strategies that would enhance the learning experiences of students include a reorganization of classroom spaces to allow for more flexible teaching arrangements; improved technology infrastructure and space for technology enhancements in each learning area; improved facility environment (air quality, lighting, ventilation, acoustics); green school improvements that would not only provide a better environment but would also provide a positive model for student learning; an improved building layout that would facilitate smaller learning communities; modifications to layout and building plan that would accommodate students with disabilities.

Included in the design are the following features that address both identified deficiencies and educational goals:

- The building is essentially made up of three parts: comprising the core facilities, the academic wing and the renovation of the 1971 wing.
- An entry lobby that acts as a Main Street to Longmeadow High School, is visually open to the activity of the main core facilities: the Cafeteria hub

and the Information Commons/ Media Center. Both spaces are integral to the emotional and educational development of the students, while being diverse in how they build on one's own capabilities for learning, interaction and building personal relationships. The Main Street is also the entry to the academic wing, at the junction of the glass enclosed Media Center. This wing has its own street of diverse and multi-functional 21st century designed activity spaces for small group, large group and classroom instruction. Project based Applied Learning Centers provide for hands on working spaces for group projects. And many classrooms have double doors between the rooms to allow for more interdisciplinary learning. Radiating off of the Main Street are the music, art and athletics areas which complete the community feeling of Longmeadow High School.

- The academic wing, which can be organized by department or by interdisciplinary clusters, is easily interchangeable. Clusters can be configured around the pods with their larger breakout spaces, with the central science spaces dividable between the interdisciplinary clusters. Teachers' centers also allow for flexibility to be interdisciplinary at any time. There will be six student computers per classroom and additional computers in computer labs on each floor.
- Unlike the current LHS building, all areas are easy to maneuver through, and easily unite the students throughout the school day.
- In addition to lockable doors at the entry to the academic wing and at junctions off the lobby for locking down parts of the building for night time and community use, security via cameras, motion detectors and card readers will be installed. There is also ease of supervision in these corridors unlike in the original facility.
- The community use spaces: Auditorium, Gymnasium and Media Center are right off the main lobby, visible to the front door and the Administration area for supervision. The cafeteria will be useful for gathering, set-up and intermission activities for these after school events. And the music and art areas, programs with high participation at LHS, easily access these spaces. Display space will stretch along the outer volume of the Auditorium within the lobby space.
- The large open spaces of art will be filled with northern clerestory light and southern views. A terrace opens up for outside classroom instruction. Prep areas are connected to the rooms through open gallery areas off of the main corridor.
- Music also has large open spaces with high glazing to accommodate multiple levels of portable risers and acoustical paneling on the walls. Storage, offices and other support spaces are located to naturally add to the acoustical separation. Practice rooms and dressing rooms also have

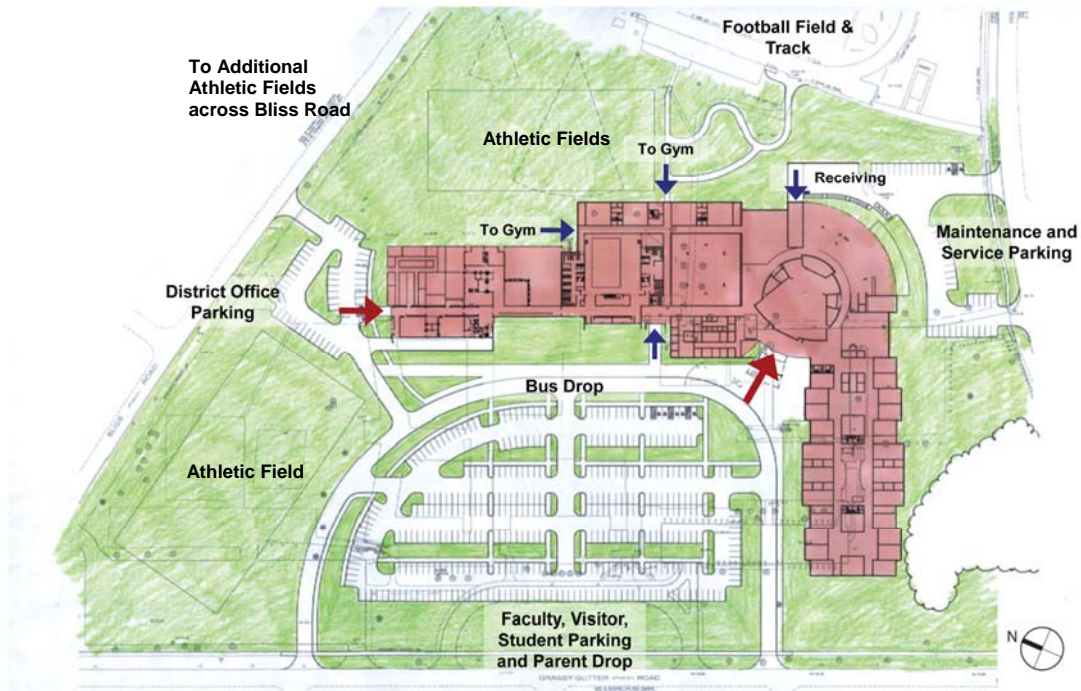
easy access to stage and classroom functions. A fly tower and orchestra pit with manual cover will be useful to both the drama and music departments in the 667 seat handicapped accessible auditorium.

- The gymnasium has a main performance court and two overlapping practice courts with a center curtain to allow for enough teaching stations to accommodate the school's 4 year requirement for all students. Bleachers for 800 are located on both sides of the main court for optimal viewing. Access from 3 sides of the gymnasium will allow entry into both teaching stations from the prime points. The locker facilities, dividable into Grades 9/10 and 11/12 for both boys and girls, have supervision from PE offices centered between each grouping. There is easy access to the fields and to the gym and school corridor. Team rooms will be carved out of the renovated pool locker rooms. A trainer's room, with whirlpool and ice machine also has easy access from the fields and the gymnasium. The renovated facility, with its high ceilings, includes the pool, a health classroom, weight room and fitness/dance/wrestling space with associated mat and equipment storage. The spaces in the 1971 wing will be able to be independently locked off for afterhours community use.
- Special education spaces are dispersed throughout the academic wing.
- The guidance area has been improved to include appropriate spaces for counseling students, for providing career planning and informational resources, and for coordination of staffing resources to address the social and emotional needs of students (guidance staff, social workers, school resource officer, substance abuse counseling, etc.).
- Sustainability is a key feature in this building. Natural daylighting flowing throughout the school, improved air quality and direct views to the outside from all student instructional areas, will all aid in the psychological and emotional aspects of the inhabitants. Natural light not only extends into each classroom via light shelves, and is screened from direct sun and glare via sunshades, but also pushes through the roof via monitors and clerestories: at the small group and large group seminar spaces which indirectly fills the teacher centers with light through double height openings off of the corridors; In the lobby at the outer perimeter of the auditorium, adding natural visual stimulation to these walls; at the perimeter of the gymnasium lighting both the corridors and the inside of the gym; and above the art and music spaces. Daylight harvesting and temperature and lighting controls will be used throughout. These features aim to help with the emotional well being of the students, while also providing improved energy efficiency within the building.
- The 1971 wing, with its athletic facilities, additional technology spaces and the District Offices is important to the school's function. As we have stated previously, this portion of the existing building is the most usable and is in the best shape. It is also important for the District offices to be

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located in the high school, the largest school in the district, to allow for ease of educational management. All work associated with this wing will be solely paid for by the Town.

- Site Development:



- Functional and spatial relationships are outlined in Section 2 of the Manual.
- Features related to the programmatic spaces are shown in Section 6 of the Manual.
- Additional features related to civil, landscape, mechanical, electrical and technology aspects can be found in Sections 7 and 8 of the Manual.
- Sustainable features are outlined in Section 9 of the Manual.
- Features related to Cost and Schedule are developed in Sections 10 through 15 of the Manual.

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