

Board Order of Conditions and Responses to Board of Aldermen Questions

**Prepared by
the Newton North Design Team**

Wednesday, August 23, 2006

Board Order Conditions

1. The building and site improvements for the new Newton North High School shall be constructed consistent with the Site Plan L1.0, which plan has been revised to show Option 5B, and the "Site Plan Approval Set," prepared by Gund Partnership, dated May 4, 2006, and on file with the City Clerk, which "Site Plan Approval Set" shall be amended and supplemented as necessary to reflect the approved Option 5B Site Plan L1.0. The approved Site Plan and "Site Plan Approval Set" consists of the following plans:

- a. EX-1, Existing Conditions Plan;
- b. C-1, Utility Plan;
- c. L1.0, Site Plan, showing Option 5B and dated August 10, 2006;
- d. L2.0, Grading Plan;
- e. L3.0, Landscape Plan;
- f. A2.20, Plan Basement Level;
- g. A2.21, Plan First Level South;
- h. A2.22, Plan First Level North;
- i. A2.23, Plan Second Level South;
- j. A2.24, Plan Second Level North;
- k. A2.26, Plan Third Level North;
- l. A2.27, Plan Fourth Level South;
- m. A3.11, Building Elevations; and
- n. A3.21, Site Sections.

The building floorplans and elevations are subject to modification as the plans are developed during the Design Development and Construction Document phases of the Project. Pursuant to §5-54(c) of The Revised Ordinances of Newton, 2001, the Design Review Committee shall make periodic reviews of the Project's plans as it moves through the various design phases.

General Questions about the Site Plan

The building of a new Newton North High School is an exciting and challenging prospect for the Newton community. Due to the dynamic programmatic offerings at the current school and the School Committee's desire to offer virtually the same academic and athletic program, the design team has been charged with designing a modern, sustainable building on a confined site. Throughout the entire process, and in conjunction with a clause within the RFP itself, the design team has been responsive to the City's insistence on maximizing natural light and creating an effective ventilation system. Due in large part to these specific inadequacies at the old school, Gund has designed a building that includes operable windows in each and every classroom to provide the natural light and a cross ventilation system that meets the City's stated goal.

The design before Your Honorable Board was created only after 45 meetings with high school administrators, faculty and students to review program space, size, location, function, access, adjacency to shared programs, services and control. The design team has attended or held an additional 130 meetings with various stakeholders, including four community meetings and 11 formal meetings with the Design Review Committee, since it came on board 11 months ago.

Building Layout and Massing

The site plan responds to the approved program by the School Committee and contains features that will be of tremendous benefit to future users of the building, and its neighbors. The building is designed to provide natural light and operable windows in each and every classroom. Classrooms have been designed to meet state SBA regulations on classroom size. The building is properly organized by activity, with theater and arts in the north wing, athletics in the south wing, and the academic core making up the central portion of the building. Large assembly areas throughout the building have been separated from classroom locations to avoid noise and foot traffic distractions. Along with tech/voc, the theater, Plowshares, and the athletic facilities are all located on the first floor to increase accessibility for the general public. Classrooms are distributed on all four floors, with science labs located on the top floor for better ventilation. For ease of use and security purposes, the main office is located adjacent to the main entrance on the first floor. The cafeteria overlooks the vast open green spaces on the western portion of the site, with a small outdoor garden courtyard along the eastern exterior wall.

The innovative building layout includes “bent” floor plates rather than straight right angles, providing a compact, efficient footprint at no additional cost. The efficient use of double loaded classroom floor plates lessens the massing that would normally result from a building of its size, and creates an appealing undulating façade to visitors and passersby. The building is to be nestled into a green grassy slope, purposefully and effectively lowering the building’s massing. At both the athletic and auditorium ends, the building “steps down” to address the existing residential neighborhood at Hull Street and Elm Road.

The Neighbors

Respectful of the surrounding neighborhoods the school is surrounded with lush green playing fields, providing a pleasant view of open space rather than a close up of a large building mass for nearly every abutter. The building’s placement on the site allows for pedestrian and vehicular access from all points, and parking has been strategically distributed around the site to allow easy access not only during normal school activities, but after-hours athletic and theater events as well. Multiple parent drop off spots have been placed around the site to facilitate access from points north, south, east and west. Seven walking pathways lead not only from the drop off spots but from all corners of the site allowing easy pedestrian access.

Environment and Sustainability

The building has been designed to enhance its sustainability and to maximize environmental compatibility. To lessen the impact on the City’s drainage system, the athletic fields are to be irrigated by the water collected from the roof drains of the school, and an underground water retention system is located underneath the all-purpose playing field. Natural light and ventilation will make the school less dependent upon mechanized energy throughout the school building. The design affords the use of solar and wind as alternative energy sources, and will use a reliable mechanical system with a long shelf life. The design team’s integrated high performance building approach has informed the building and site solution from the outset. The team has developed a list of criteria that encompasses both LEED and MA-CHPS standards as indicated in the sustainability report. Meetings with the High Performance Building Coalition and the Mass High Technology Council have taken place and feedback incorporated into the building design. When completed, the new Newton North will be LEED certified.

In summary, the building design and site plan achieves the goal set out by the school committee and ushered along meticulously by the City's Design Review Committee. The design before Your Honorable Board encompasses the academic and athletic program that fortifies Newton's educational excellence, while meeting the requirements of natural light and sufficient ventilation. This design presents to the City an educational and community facility that will be a source of pride for many decades into the future.

Costs and the Presented Site Plan

The presented site plan is the result of 175 meetings, 26 different designs, and several hundred hours soliciting and incorporating community and stakeholder input. As a result, many of the program areas have been changed, redesigned or relocated, resulting in considerable cost savings. For example, removing the tennis courts from the roof resulted in a cost saving of \$416,000. Additional examples include relocating the theatre from the south wing to north wing, moving the library to the second floor, moving Tiger's Loft to the first floor, moving the athletic wing further north to avoid excavation costs, eliminating the large glass sloping roof above the cafeteria, abandoning the underground parking garage concept, and eliminating the stacking of athletic facilities.

The design team has undergone a careful review of the program with the users and the School Department to verify that everything in the program is needed and responsibly sized. They have identified and reconfigured spaces that can now accommodate multiple purposes, i.e. the configuration of the cafeteria being modified to support conference functions.

Future cost savings may be realized as life cycle cost analysis continues to be used to select important systems – most notably the HVAC systems. In addition, site options have been analyzed for comparative costs to verify that selected features provide good value, and, where possible, the building has been designed around a rational column grid predicated on the classroom module to simplify construction.

The design of this building was driven by form following function. With operable windows and natural light as non-negotiables, Gund designed the school to meet the requirements of the School Committee approved program. With this design, Gund has fit a 399,140 square foot program into an efficient structure that takes into consideration the site, the surrounding neighborhood and the outdoor athletic program.

The project cost estimate has been, and will continue to be, monitored and regularly updated to verify cost compliance with the budget. Throughout the design selection process, cost estimates have been prepared for each of the various site options including new building options, hybrid and renovations (see cost comparison dated January '06). Additional cost savings will be explored throughout the life of this project and especially during the design development and construction phases.

Building Alternatives

The design team has been asked by Your Honorable Board a variety of detailed questions in regard to further analysis of option 5c, locating the building somewhere else on the site, the configuration of the athletic fields, whether we could add a fifth story to the building, and whether any portion of the existing building could be salvaged. It is important to recognize that most of these matters have previously been addressed by the design team during the deliberations of the Design Review Committee, the notes of which can be made available. Nevertheless, the architect's answers to these questions follow.

Option 5c, a copy of which has been provided this evening, has been studied by the design team and was rejected by the three Board Committees. The building entry option does not work from an external traffic and internal circulation perspective, because of the lack of dispersal around the site. In addition, locating two entries close together exacerbates congestion, makes access to the athletic complex problematic, and creates a hazardous traffic situation on Walnut Street.

Option 2, dated March 2, 2006, located the building along Elm Road. The site plan was rejected by the Design Review Committee primarily because there was no way to prevent co-mingling of pedestrian and vehicular traffic, nor could bus drop-offs be adequately separated from parent drop-offs. These conditions were rife with safety hazards and congestion. In addition, it was determined that the massing of the building would be harmful to the neighbors along Elm Road, including towering shadows that would be cast upon several homes. Furthermore, the Design Review Committee considered the unfortunate massing of the building as it would appear from vehicles traveling south on Walnut Street, and the inability to rotate the football field to eliminate solar glare. Lastly, to meet the athletic program requirements with the building along Elm Road, the athletic components would have to be stacked.

Stacking the athletic facilities is a costly proposition, requiring the construct of weight bearing beams and columns to fortify the roof, along with adding costly elevators and staircases. While the stacking the athletic facilities may allow for a slight pulling back of the building from Elm Road and Hull Street, as one Board member points out, however it would not enhance the pedestrian access from Lowell Avenue due to the layout and dimension requirements for the playing fields.

Adding a fifth story to the existing design has been rejected by the School Committee and is not recommended by the design team. Another story would separate program spaces, and increase the time necessary for students to move between floors as they change classes.

The design team does not recommend retaining a portion of the current building to house any programmatic activity. Regardless of the activity, a costly renovation of the existing building would be required to meet modern building and safety codes. In addition, the current plan calls for parking and athletic fields on the current building's footprint. Therefore, to retain portions of the building would come at the expense of either parking, athletic facilities, or both.

Access and Parking Alternatives

The design team has spent a great deal of time and effort to create a plan that accommodates pedestrian and vehicular access, provides roughly the same number of parking spaces as the current site, all while keeping its focus on protecting the safety of users and visitors to the school. The requirements of the athletic program and the existing traffic patterns eliminate some possibilities that some Board members have proposed, however, each suggestion has been given careful thought and review.

The current design disperses the onsite parking at three different locations around the site as recommended by the Traffic Study. Reducing congestion at one particular parking area enhances convenience and safety.

Similar to dispersing the parking, the design provides seven drop-off locations throughout the site, enabling parents to drop students off at the most convenient location among two ends of the Lowell Avenue parking lot, the Walnut Street entrance, the Elm Road entrance, the Elm Road parking lot, and two locations along Hull Street. The farthest potential walk from a drop-off point to the school's entrance is 1,200 feet, which is 300 feet shorter than the walk from the "Third parking lot" to the Elm Road entrance at the current school. In addition, the drop-off traffic is segregated from the buses, all of which have exclusive access to Elm Road from Lowell Avenue for staging and dropping-off.

Locating one entrance adjacent to the theater and one between the academic core and athletic wing enhances safety and convenience, and enhances pedestrian and vehicular circulation. Visitors to the building will select drop-off points, parking locations, walking paths, and building entrance depending on their destination. With entrances that are 550 feet apart from one another, congestion will be avoided as not everyone will be trying to access the building from one end. In addition, the design lends itself to efficient parking and access for after-hours theater and athletic events, enables school authorities to easily seal portions of the building while keeping other portions open, and provides a logical and welcoming central greeting point for visitors unfamiliar with the building.

It is the opinion of the City's traffic engineer that reducing the number of entrances to the school or consolidating parking lots will not ease the traffic flow. In fact, the expectation would be that the traffic congestion will increase at the fewer remaining entrances/intersections, since the same number of vehicles need to access the school at fewer entry points. Suggestions that would add internal roadways or pathways would reduce the amount of green space and/or conflict with the internal flow of pedestrians on the site and negatively impacting the full utilization of the site for athletic fields.

The suggestion to eliminate the Walnut Street entrance altogether and open Elm Road up to more than just buses would create a conflict between automobiles and bus drop-off areas and is not recommended.

The design team was asked to provide the benefits of moving the entrance further north 100 feet from Trowbridge Ave, as option 5b does. To provide a balanced answer for your consideration, the advantages and disadvantages are presented below.

Advantages:

- a) Thirty-six more parking spots would be provided at the athletic facility than is provided by 5a. The larger parking lot at Elm Road would be reduced to allow for a total of 60 parking spots near the athletic complex.
- b) The entrance provides an increase in sight distances traveling north on Walnut Street to the entrance.
- c) There would be a greater buffer of green space between the entrance and the private residence located directly south of the Trowbridge Ave entrance.

Disadvantages:

- a) Traffic will not be controlled at Trowbridge Ave so that queues may back up and block exiting traffic from Trowbridge.
- b) Pedestrians/students will have to walk further from the south to cross the street and may then attempt more "J-walking".
- c) The further the entrance moves toward Elm Rd, the less time/distance there is for exiting traffic to transition onto Walnut St with the high volume of thru-traffic southbound already on Walnut St.

The Use of Land

This design provides an extremely efficient layout for the academic and athletic program requirements. Every square foot of the 28 acres is being used for landscape buffing, playing fields, parking or building. This design reduces by 1.3 acres the non-permeable surfaces, from 13.1 acres on the existing site to 11.8 acres, including the building footprint of 199,999 square feet.

The orientation of the fields along Lowell Avenue provides one baseball diamond with a removable outfield fence, one softball diamond, and an overlay soccer field in the combined outfields. During softball and baseball seasons, both fields can safely be used due to the fence, and the softball batter would only look into the sun during early morning (8:00 am – 9:00 am) play. Reorienting the softball diamond would come at the cost of placing the softball infield (pitching rubber, base anchors, and gravel surface irregularities) within the layout of the overlaying soccer field.

The depressed multi-purpose synthetic field is a cost saver. The dirt taken from excavating the field will be used to elevate the building, eliminating the cost of purchasing and transporting of dirt from elsewhere. By elevating the building on the site, we ensure the building sheds rainwater. Pedestrian access to the building across fields will be controlled by fences and gates. Raising the multi-purpose field would not enhance pedestrian access to the building, as the pedestrian walkway is around the perimeter to avoid having to climb bleacher seating.

The roof will be used primarily for mechanical systems and day-lighting the gymnasium and cafeteria. In addition, solar and wind energy may be located on the roof. The current design meets the program requirements for storage space. A basement can be built for approximately \$150 per square foot.

Questions Beyond Site Plan Approval

Quality and Cost Control, and Oversight

Ultimately, Mayor Cohen and the Owner (Nick Parnell) set the standards for the project's cost and quality. The nature of the role of Project Manager is for them to be the eyes, ears, and advisors to the City, constantly looking out for the best interests of the City. They employ the clerk of the works and onsite construction site manager, who will be on the construction site each and every day to ensure the schedule is kept, the work is of the highest quality, and the materials being ordered and utilized are most cost effective for their purpose. The Owner's Project Manager, Turner Construction, enforces the City's standards on a daily basis, with the design team, assuring construction workers receive clear direction and a consistent message.

Weekly meetings are held with City officials and the design team to review design issues, and the architect is reminded daily to eliminate costly details, provide easy-to-maintain finishes, materials and equipment, while providing a high quality, functional public high school. These meetings ensure the latest information and updates are shared, while enhancing teamwork.

Construction Manager at Risk

The Construction Manager at Risk (CMR) is a process that provides substantial benefits to the City on this project, including negotiating a Guaranteed Maximum Price (GMP). In addition, the CMR selection committee can select the CM based on the firm's reputation and record of accomplishment, rather than being forced to choose the lowest bidder. The CMR will provide weekly cost management updates and provide the City with advice on purchases of materials that have volatile pricing histories (i.e. steel and energy). Bringing on a CMR during the design development phase enables them to give input into site logistics and phasing, help us avoid unbuildable details, limit inconsistencies in plans and specifications, and allows them to participate in the pre-qualifying of subcontractors. All of these advantages will help ensure that our project manager will better oversee the project cost and schedule; ultimately ensuring the project comes in as promised.

The City has already received RFQ applications from six firms. Once three of these firms have been short-listed, the RFP process will begin. Of the \$1,076,250 request in Board Order 230-06(A), \$450,000 enables the Project Manager to perform their duties through the preconstruction phase. The remaining \$626,250 will go to compensate the CMR for services rendered through the preconstruction phase, and until the construction documents are 60% complete. It is then that a GMP is negotiated. The \$626,250 is derived from the industry standard of roughly ½ of 1% of the estimated construction costs. The CMR preconstruction services fee is an estimate, with the actual cost to be determined by the bidding CM firms. The design team is confident that the \$626,250 figure is a conservative estimate, with the possibility of bids coming in lower.

The CMR construction method was only recently authorized by the Commonwealth in the Fall of 2004, during the middle of a moratorium on public school construction authorized by the Department of Education / School Building Assistance Program. As a result there are few projects utilizing this method of procurement. The Salem High School project has been approved for CMR, however, the scope of that project is quite different from Newton North High School as it is an occupied, phased renovation of 233,000sf of a 428,000sf building with no new construction. Nantucket is using CMR on a \$25 million Airport project. We are told that they are very pleased with what the CMR has brought to the table. Nantucket has not yet begun construction, but they have found their CMR to be valuable in dealing with the architect on cost and scheduling.

Pre-Construction Services provided by the CM are part of the RFP proposal process, which includes a technical submission and a price submission where sealed bids will be submitted for:

1. CM Pre-Construction Services fee, including appropriate detail.
2. Construction Services fee, with explanation of basis. Construction Services fee is generally expressed as a percentage of Construction Cost.
3. An estimated cost of General Conditions, with appropriate detailed backup. General Conditions are not directly related to the cost of construction but have a direct relation to the length or duration of construction as they include cost of temporary power and utilities, trailers, storage facilities, temporary protection, fencing, etc.

CM firms will be given a combined ranking based upon price submission and technical submission, and a contract will be negotiated with the top ranked firm.

Questions About Design Review

The Design Review Committee will continue to meet with Gund on many of the important technical and detailed equipment and materials options as the floor plans are refined to meet the program of the school. Specifically, the **type of materials** used on floors wall and ceilings will be looked at for finish, durability, and cost. **Elevation studies** with regards to the use of materials and window openings will be evaluated for both natural sunlight, ventilation and energy efficiencies. **Mechanical and electrical systems** will be evaluated for their appropriateness, use and sustainability. Options for the building's mechanical systems will be presented to determine the best system to match the specific spaces they will heat, cool and ventilate. The DRC will also look at the **steel structural system** proposed for its appropriateness. **Design work for the grounds** will continue for the civil engineer and the landscape architect who will refine their documents and investigate ways in which their initial designs can be implemented. During this phase the **life cycle costs** as well as **sustainability** of all elements needed to build the high school will be studied in concert with scheduling and cost of the project.

Newton North High School Program

9-Jan-06

Gund Partnership/Dore & Whittier Architects, Inc.

School Committee Approved Program

SPACE	TOTAL NUMBER	AREA EACH	TOTAL AREA	TOTAL DEPT.	NOTES
BASIC ED. SPACE:					
Core Classrooms					
Eng, Math, History, SS & WL	58	780	45240		To accommodate projected enrollment, 23 student average class size, includes courtroom
Expanded for Wellness use	2	850	1700		Larger to hold casework for storage of wellness equipment
				46940	
Science					
Labs	12	1200	14400		
Chemistry Labs	4	1300	5200		
Prep/Storage	8	250	2000		1 per 2 Labs
Greenhouse/Storage incl Chem.	1	800	800	22400	Not off classroom
Business					
Business Computer Lab	1	900	900	900	
Career & Technical Education					
Child Studies					
Pre-School Lab	1	1700	1700		Observation room, toilet, office
Culinary Arts					
Culinary Arts Kitchen	1	2400	2400		Includes Kit, Pot Wash, Freezer, Cooler, Dry Stor, Utility, Storage
Tiger's Loft	1	1600	1600		100 Seats, with serving area, could be designed as flex classroom
Automotive Technology					
Automotive Tech Shop	1	4000	4000		4 Lifts, Alignment, Engine Bay, Welding, Tires, Storage
Carpentry					
Carpentry Shop	1	3500	3500		Storage
Electrical					
Electrical Shop	1	2250	2250		Storage
Drafting					
Drafting/CADD	1	1200	1200		Storage
Graphic Arts/Graphic Design					
Graphic Arts/Printing Shop	1	2500	2500		Storage
Graphic Arts/incl. Computer Lab	1	1200	1200		Print, Image Assembly, Screen Scrub, Computer, Copy, Storage
Faulkner Copy Center	1	300	300		Share w/ Core Classrooms
Family and Consumer Sci					
Cooking Lab	1	1400	1400		Near Health, Food Storage, Washer/Dryer
Fashion Design	1	1000	1000		Flex Project Room, Fabrics, near Art, Theater,
Technology/Engineering					
Information Technology(A+/N+)	1	TBD	TBD		
Robotics Lab	1	TBD	TBD		
Technology Lab	1	TBD	TBD		
Unassigned CTE Space	1	2500	2500	28050	
Art					
Studios, 2D & 3D	3	1200	3600		
Photography Studio	1	900	900		
Darkroom	1	900	900		
Art Storage	3	200	600		Central to 3 studios
Kiln Room	1	200	200	6200	
Music					
Classroom/Rehearsal Space	1	900	900		Share w/ Theater
Electronic Music Lab	1	450	450		
Band/Orchestra	1	2100	2100		60 students
Choral	1	1500	1500		60 students
Ensemble	1	160	160		
Large Ensemble Room	1	200	200		
Practice	2	80	160		
Instrument Storage	1	250	250		
Music Library	1	250	250	5970	

Newton North High School Program

9-Jan-06

Gund Partnership/Dore & Whittier Architects, Inc.

School Committee Approved Program

SPACE	TOTAL NUMBER	AREA EACH	TOTAL AREA	TOTAL DEPT.	NOTES
Special Education					
Director Office	1	150	150		
Asst Dir	1	150	150		
Secretary/Reception/Files	1	200	200		
Conference Rm	1	200	200		
Psychologist	2	200	400		
Interns	2	100	200		
Testing	1	100	100		
Speech Therapy	3	150	450	1850	
Pilot program					
Classrooms	4	600	2400		
Director Office	1	200	200		
In House Suspension Room	1	100	100		
Interns	2	200	400		
Break Room	1	500	500		
Teacher Workstations	4	50	200		Locate teacher workstations near Pilot CRs
Counselor Offices	3	150	450	4250	
Links					
Classroom	2	600	1200		
Director	1	200	200	1400	
Network					
Classrooms	2	600	1200	1200	
Integrated Program					
Classrooms	3	600	1800		
Teacher Workstations	3	50	150		Locate teacher workstations near Integrated CRs
Social Worker	1	150	150		
Conference Room	1	150	150		
Storage	1	100	100	2350	
Connections					
Classroom	2	800	1600		1 classroom w/ kitchenette
OT/PT	1	800	800		
Toilet w/ Shower/Change table	1	100	100		
Facilitator Offices	3	200	600		
Storage	1	150	150	3250	
Learning Centers					
Classroom	4	500	2000		
Teacher Workstations	9	50	450	2450	With regular ed teacher workstations
Remedial					
Academic Support Centers	1	800	800	800	
Bilingual					
ELL Classroom	3	400	1200	1200	

Newton North High School Program					Gund Partnership/Dore & Whittier Architects, Inc.
9-Jan-06					
School Committee Approved Program					
SPACE	TOTAL NUMBER	AREA EACH	TOTAL AREA	TOTAL DEPT.	NOTES
Physical Education/Athletics					
Small Gym (wood floor)	2	6000	12000		2 teaching stations
Small Gym Storage	1	400	400		
Large Gym (synthetic/rubber)	4	6277	25108		Includes 4 lane, 11 lap/mile track
Large Gym Storage	1	1000	1000		
Pool	1	6750	6750		
Pool Seating	1	500	500		200 Seats, separate
Pool Storage	1	400	400		
Dance/Wrestling	1	2800	2800		wood floor; folding wall to divide into wrestling studio
Mat Storage	1	200	200		
Weight Room	1	1200	1200	50358	
Collaborative					
EDCO Tutorial	5	185	925		
EDCO Office	1	380	380	1305	
Library/Media Center					
Reading Room	1	9500	9500		12.5% X 1900 X 40SF
Office	1	300	300		3 librarians
Processing	1	400	400		
Storage	1	600	600		
Professional Library	1	200	200		Alcove off Reading Room
Conf./Study Rooms	2	200	400		
Library Conference Room	1	200	200		
Library Restroom	1	50	50	11650	Unisex, staff use
Other Basic Educational Space					
Film Lecture Hall	1	1500	1500		100 seats
Full Size Computer Labs	3	900	2700		
TV Production	1	1000	1000		
TV Production Control Room	1	200	200		
TV Production Storage	1	150	150		
Language Laboratory	1	1100	1100		
Publications	1	800	800		
Computer Support	1	400	400		
On-Campus Office	1	150	150		
Network Manager	1	150	150		
Human Rights Office	1	150	150		
Work Study	1	150	150	8450	
MISC EDUCATIONAL SPACE:					
Cafeteria					
Seating Area	1	9250	9250		Subdivide 2500SF into Meeting Spaces, Conf Rooms, rest Commons
Kitchen/Storage/Lockers	1	2255	2255		
Servery/Foodcourt	1	1500	1500		
Chair Storage	1	600	600	13605	
Auditorium					
Seating	1	7000	7000		650 Seats
Stage	1	2600	2600		40' opening, 20' wings, 30' deep
Orchestra Pit	1	800	800		Area not depressed, 40+- players; Add'l Seating
Scene Design	1	1000	1000		Locate near Career-Tech, use labs
Dressing Rooms	2	300	600		
Costume Storage	1	600	600		
Theater Storage	1	1000	1000		
Actor Toilets	2	100	200		
Ticket Booth/School Store	1	100	100		
Control Room	1	200	200		
Concession	1	200	200		serve Athletics as well
Little Theater	1	2000	2000	16300	200 Seats

Newton North High School Program					Gund Partnership/Dore & Whittier Architects, Inc.
9-Jan-06					
School Committee Approved Program					
SPACE	TOTAL NUMBER	AREA EACH	TOTAL AREA	TOTAL DEPT.	NOTES
Health Suite (Nurse)	1	960	960	960	
Guidance					
General Office	1	375	375		Sec/Reception, central
Guidance Director Office	1	185	185		Central
Conference Room	1	200	200		Share w/ others
Guidance Records Room	1	800	800		
College Career Center	1	950	950		
Guidance Counselor Office	12	200	2400		
Metco Office	1	150	150		In building
Prevention/Intervention Office	1	150	150	5210	In building
Main Office					
Conference	1	600	600		
Admin Reception	1	500	500		
Admin Storage	1	150	150		
Executive Secretary's Office	1	100	100		
Principal's Office	1	200	200		
Bursar's Office	1	150	150		
Assistant Principal's Office	1	150	150		
Workroom/Mail/Copy/ Storage	1	250	250		
Break Room	1	200	200		
Toilet Rooms	2	50	100	2400	
Teacher Work Spaces					
Teacher Workstations	150	50	7500		Eng, math, SS, WL, sci, business, art PE, music;all but SPED
Dept Heads	5	150	750		English, mathematics, science, History &SS, WL
Conference Rooms	6	200	1200		English, mathematics, science, History &SS, WL; one shared by rest
Secretary/Storage	5	300	1500		
Teaching Assistant Hotels	2	400	800	11750	two locations in building
House Activities					
Housemaster	4	150	600		
Secretary/Reception/Records	4	360	1440		copy area
Conference Room	4	200	800		
Toilet Rooms	8	50	400	3240	
Student Areas					
Main Street	1	5000	5000	5000	Also serves as lobbies for public spaces
Teacher Areas					
Café International/Lounge	1	1100	1100	1100	With Kitchenette, near Cafeteria
Phys Ed/ Athletics Lockers/Showers					
Boys Lockers	1	2500	2500		
Girl's Lockers	1	2500	2500		
Showers	2	1000	2000		
Training Room	1	900	900		
Coaches Offices	1	600	600		Unisex, 20 staff
Coaches Toilet/Showers	2	200	400		
Officials' Room	1	150	150		Share w/ Pool
Athletic Director's Office	1	150	150		
Athletic Secretary's	1	200	200		
Athletic Director Conference	1	250	250		
Laundry	1	200	200		
Equipment Storage (PE)	1	1000	1000		
Equipment Storage (Athletics)	1	1500	1500	12350	
Team Rooms					
Boys	2	750	1500		Share Showers w/ PE/Athletic Lockers
Girls	2	750	1500	3000	

Current Field Use at Newton North High School

The following schedule details the current heavy use of all of the outdoor athletic space at Newton North. The fields and tennis courts are used for the Physical Education and Wellness program that serves all of the students at the school, beginning at 7:00 a.m. and continuing throughout the school day. Club and intramural activities take place during X blocks, and the athletic teams use the fields after school.

The NNHS fields are also used for community youth, adult soccer, lacrosse, softball, and baseball programs under the auspices of the Newton Parks and Recreation Department. During the summer, twenty-two camps run consecutively from June 26 until August 24 accommodating more than 1500 Newton children.

Field Usage at Newton North High School

Football Field (Dickinson Stadium)

*Varsity / JV / Freshman football games and practices	Season: Fall
*Boys and girls Outdoor Track	Spring
*PE classes and intramural and club activities	Fall/Spring
*Newton community and youth use	Fall/Spring/Summer
*Summer Camps	Summer

Baseball Field (Ferguson Field)

*Var / JV / Freshman Field Hockey (baseball outfield; center and right)	Fall
*Varsity Baseball	Spring
*Summer Camps	Summer
*Newton community and youth use	Fall/Spring/Summer
*PE classes and intramural and club activities	Fall/Spring
*Freshman football practice (outfield; left field)	Fall

Soccer/Lacrosse Combination Field

*Varsity Boys and Girls Soccer practice and games	Fall
*PE classes and intramural and club activities	Fall/Spring
*Newton community and youth use	Fall/Spring/Summer
*Summer Camps	Summer
*Boys Varsity lacrosse practice and games	Spring

Softball Field Complex (Elm Rd. and Walnut)

*Varsity / JV / Freshman football practice	Fall
*Varsity boys and girls soccer practice	Fall
*Summer Camps	Summer
*Newton community and youth use	Fall/Spring/Summer
*PE classes and intramural and club activities	Fall/Spring
*Varsity softball practice and games	Spring
*Freshman softball practice	Spring
*Track and Field: discus throw	Spring

Tennis courts (10 courts)

*Varsity / JV Boys and Girls Tennis	Spring
*Summer Camps	Summer
*Newton community and youth use	Fall/Spring/Summer
*PE classes and intramural and club activities	Fall/Spring

Sport Programs Programmed Off-Site due to Lack of Field Space

Fall:

JV Boys Soccer	Cold Springs Park
JV Girls Soccer	Cold Springs Park
Boys Cross Country	Cold Springs Park
Girls Cross Country	Cold Springs Park
Freshman Boys Soccer	Warren Jr. High Field
Freshman Girls Soccer	Cabot Park

Spring:

JV Boys Lacrosse	Warren Jr. High Field
Varsity Girls lacrosse	Cold Springs Park
JV Girls Lacrosse	Cold Springs Park
Freshman Girls Lacrosse	Cold Springs Park
JV Softball	Cabot Park
Freshman Softball	Hawthorne Park (games)
JV Baseball	West Newton Common
Freshman Baseball	Lincoln Park
JV B/G Tennis	Cold Springs Park