

GROTON PUBLIC SCHOOLS GROTON, CONNECTICUT



EDUCATIONAL SPECIFICATIONS for a NEW CONSOLIDATED MIDDLE SCHOOL GRADES 6 – 8

Developed July, 2014

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Mission Statement

The mission of the Groton Public Schools is in partnership with parents and community to enable all learners to achieve their highest potential by fostering excellence through a challenging program of study and a safe environment. Our schools will promote the pursuit of lifelong learning, responsible citizenship, and informed decision-making in a culturally diverse world.

INTRODUCTION AND PROJECT OVERVIEW

These educational specifications propose that the Groton Public Schools construct a new, consolidated middle school for grades 6-8, preferably adjacent to the high school in order to create greater potential for resource sharing and for program enhancement in both schools. The proposed school construction plan is the result of work done by several groups over a three year period. In December of 2011, a set of educational specifications was developed by a Vision Committee charged by the Board of Education with determining the needs of the Groton education system, grades 6-8, as part of the next stage of a larger construction project that was being implemented by the town. The charge of the committee was to develop educational specifications for grades 6-8 to foster 21st Century teaching and learning. Committee membership consisted of educators with expertise in middle school education, in addition to parents, administrators, and members of the Board of Education.

On December 12, 2011, the Groton Board of Education unanimously approved the Vision Committee Report which included the educational specifications for the construction project. The Town of Groton held a referendum on May 2, 2012; the project was rejected by the voters.

In January 2013, a School Facilities Task Force was appointed by the Mayor of the Town of Groton, and the Task Force began work to revise a construction proposal for possible reconsideration at a future referendum. (The Task Force members are listed in Appendix C.) The Task Force considered options for school renovation, as well as construction of a new facility and its site selection.

In January 2014, the Groton Board of Education hired Dr. Michael Graner to serve as Superintendent of Schools and requested that he work with the School Facilities Task Force to finalize a plan and to develop educational specifications for the proposed project. Dr. Graner convened a Stakeholder Group in May 2014 to study previous school district initiatives, actions, and issues associated with school desegregation and the future organization for the public schools. In particular, the school district studied population and demographic trends in 2011-2012 and took action to implement a redistricting plan in the fall of 2013 to ensure racially balanced elementary schools. In the summer of 2014, the Connecticut State Department of Education found that Groton Public Schools continues to exceed the State racial balance guidelines at the elementary level and is now required to resubmit a plan of remedy. The overwhelming recommendation of the Stakeholder Group is to retain the current grade level organization of the school district. The declining enrollment and the need for substantial school renovations in older elementary schools, however, prompted the committee to recommend the consolidation of its two middle schools as a foundation and first phase of a longer term solution to maintain racial balance. The District believes that school redistricting has had short-term success in the past and will most likely achieve only short-term results in the future unless bold and progressive action is taken now. Bringing all middle school students together in a single school provides the flexibility to enhance the learning of all students in the school as a whole as well as in individual classrooms that reflect the diversity of the community.

The construction of a consolidated middle school will enable the district to convert the current middle school facilities into pre-kindergarten through grade 5 elementary schools that are larger in capacity and capable of absorbing students from within the school district, and possibly, students from neighboring towns as well. Two older elementary schools, one of which has been the subject of racial imbalance, will close, and all students will be reassigned either to one of the reconstituted middle-to-elementary schools or to other elementary schools in the district. Subsequent action for a long-term racial balance plan is still under development, but one option being considered is a controlled choice process for new school registrants that will strive to ensure that all Groton elementary schools are racially balanced and will provide diverse learning environments for all students.

The new consolidated middle school will accommodate 938 students, as projected in the upcoming peak enrollment year. The school will be organized with four teaching teams at each grade level that have the capacity to instruct about 80-100 students. The theoretical capacity of the building is about 1,200 students.

Because educational programs directly affect space requirements, consideration to these provisions is essential. The space specifications for this school project will exceed the allowable square footage delineated in the Space Standards Worksheet. The Superintendent of schools will seek a waiver of these space standards to enable the project to be constructed as specified with full construction grant reimbursement. Groton is experiencing increasing loss of students to neighboring magnet schools. The program features specified in the new consolidated Groton Middle School will put it on a more equitable footing to compete for student interest and enrollment. All specified space is required to achieve this opportunity for a more level playing field in that area school districts are competing for the same students.

The education specifications that follow were developed by a group consisting of the following people:

Dr. Michael H. Graner, Superintendent of Schools
Mr. Michael Lovetere, Interim Assistant Superintendent
Dr. Thomas Jokubaitis, Consultant
Mr. Michael Zuba, Consultant
Mr. Wes Greenleaf, Former Director of Maintenance
Mr. Sam Kilpatrick, Director of Maintenance

EXECUTIVE SUMMARY

The goal of this document is to clarify the educational specifications for facilities that reflect educational programs which address sound strategies for the middle school learner. A deliberate emphasis was placed on the need to propose structures that facilitate 21st Century learning. The designs presented in this document consider present practice, current research, and future needs. They describe schools unique to Groton which reflect its beliefs and philosophies. As stated in the *Groton Core Beliefs*, “Students should have access to resources and facilities that support optimal learning.” The information presented herein validates, and gives coherence to, our best ideas about education.

Research shows that architecture affects learning; therefore, the proposed design of our schools enhances and brings to life the educational programs for our students and community. Indeed, improving physical learning environments can improve student achievement. The school structure must take into account the ever-advancing technological world, with sensitivity to the development of the whole child, including growth in academic, emotional, social-behavioral, and physical health domains. The middle school proposal facilitates interaction among students, faculty, and staff, and fosters a sense of belonging. Students will be able to fulfill their learning potential through the accommodation of virtually any type of subject matter and through multiple forms of instruction.

The design will create environments that promote the pursuit of academic excellence in an information-based technological society. The proposed architecture will allow indoor and outdoor learning spaces, to be inherently flexible to meet the current variety of needs as well as the changing demands of a dynamic learning environment. Flexible learning spaces will allow increased collaborative work and more opportunities to develop skills in communication, leadership, teamwork, and innovation. Schools will be designed to make maximum use of environmentally friendly technologies, and wherever practical, systems will be accessible for learning opportunities.

PURPOSE OF EDUCATIONAL SPECIFICATIONS

Educational specifications are the cornerstone of successful school building programs and must provide a comprehensive overview of the program of instruction to be housed, the activities to be encouraged, and the facilities necessary to carry out the goals and objectives of the school system.

The Connecticut State Department of Education defines educational specifications as, “a description of the general nature and purposes of the proposed school building project, including the applicant’s long-range educational plan and relationship of the proposed project to such plan; enrollment data and proposed project capacity; the nature and organization of the educational program; support facilities; space needs; specialized equipment; environmental controls; and site needs.”

The specific purposes of educational specifications as part of the construction grant approval process are for:

1. The educational agency to justify the need for the proposed school building project
2. The educational agency to describe the academic activities that a proposed school building project is to support and the types of spaces that will best accommodate program requirements
3. The Department of Administrative Services to determine the nature, scope, feasibility and funding level for the proposed school building project

LONG RANGE PLANS

Groton Public Schools is experiencing enrollment decline and demographic changes in its student population. According to the latest demographic study, the number of students will peak during the 2017-18 school year. In the summer of 2014, the State Department of Education cited Groton for racial imbalance in one of its elementary schools. This challenge follows even in light of the recent (2012) redistricting of elementary schools to avoid such a circumstance. While a comprehensive and long-term plan to maintain racially balanced schools is still being developed, the Board of Education directed the Superintendent to create educational specifications based on the following:

- Construct a new, consolidated middle school adjacent to the high school to the extent practical and feasible
- Re-purpose the current middle schools as larger elementary schools for grades pre-kindergarten through grade 5
- Close the three elementary schools in need of substantial renovations (Claude Chester, Pleasant Valley, and S.B. Butler Schools)
- Redistrict the elementary student population to ensure racially and economically diverse schools
- Develop long-term plans to maintain racially balance elementary schools (controlled choice enrollments and school assignments may be considered)

The new middle school is the foundation for a long-term solution to the District's enrollment and racial balance challenges. It constitutes the first phase in a long-term solution and must be accomplished before subsequent action steps. All middle school students in Groton will attend the same school. Issues associated with racial balance will then reside exclusively at the elementary school level.

The second phase of the long-term plan is to retrofit both of the current middle schools as Pre-kindergarten through grade five elementary schools.

The third phase of the long-term plan is the closing of Claude Chester, Pleasant Valley, and S.B. Butler Schools with the redefining of all elementary school attendance zones. This action will create attendance patterns that could more easily and accurately predict longer-term racial balance at the elementary school level. Further, the net loss of two buildings to the school district inventory will produce immediate and long-term savings, while one middle school may, over time, result in greater efficiencies and lower operating costs.

CAPACITY – ENROLLMENT DATA

In February 2014, Mike Zuba of Milone & McBroom presented a comprehension study of enrollment for the Groton Public Schools (appended). This report forecasts district and school enrollments through 2023. The projected middle school enrollments for a consolidated middle school are as follows:

YEAR	WEST SIDE	CUTLER	NEW SCHOOL
2014-15	494	445	940
2015-16	476	440	917
2016-17	516	415	931
2017-18	524	414	938
2018-19	530	399	928
2019-20	514	410	924
2020-21	506	382	888
2021-22	505	373	878
2022-23	487	373	860

The peak enrollment year for this project is 2017-18. The capacity for the new middle school during that year is as follows:

Grade	Enrollment	Number of Classes	Average Class Size	Theoretical Capacity
Six	336	16	21.0	400
Seven	306	16	19.1	400
Eight	296	16	18.5	400
TOTALS:	938	48	19.5	1,200

The functional capacity of the school is 1056 students (22 students per class X 48 classes). This number assumes a district policy that targets class size maximums at or around 22 students per class. The theoretical capacity depicts the maximum number of students who could reasonably be accommodated in each class at twenty-five per class.

CATEGORY PRIORITY

This is a Category One Project in accordance with the requirements of Section 10-283 (a-6) of the Regulations of Connecticut State Agencies, which states that Category One Projects are primarily required to:

“Create new facilities or alter existing facilities to provide for mandatory instructional programs pursuant to Title 10 of the general Statutes, including, but not limited to special education; the arts; career education; consumer education; health and safety; language arts, including reading, writing, grammar, speaking, spelling, and library media centers; mathematics; physical education; science, including laboratories; and at the secondary level one or more foreign languages and vocational education including shops; or for physical education facilities in compliance with Title IX of the US Elementary and Secondary Education Act of 1972 where such programs or such compliance cannot be provided within existing facilities.”

EDUCATIONAL SPECIFICATIONS COMMON TO ALL SCHOOLS

Common educational specifications applicable and essential to all middle schools: The facility designs for all three levels should accommodate projected enrollments through the year 2025, taking into account increases in student population and future needs. The designs support the concept that smaller learning communities within the fuller learning community enhance interactions among learners, increase a feeling of belonging, and emphasize the importance of individuality. The school will be physically organized in grade level clusters that facilitate teams of four academic core subject teachers [language arts, mathematics, science, and social studies] working with the same group of 80-100 students. There will be four teams per grade level. Support services spaces will be provided within each grade level cluster for ease of access by students and for the facilitation of teacher collaboration.

Facility Design Guiding Principles

1. Accommodations for both current and future projected enrollments
2. Smaller learning communities within the full school community
3. Student driven, interactive, project-oriented learning experiences
4. Adaptable space for dynamic and changing educational philosophies and programs
5. Spaces for multiple functions
6. Spaces for meetings of various sizes distributed throughout the facility
7. Support for contemporary and emerging technologies
8. Support for 21st Century learning
9. Atmosphere to provide a welcoming sense of comfort for students, staff, and community
10. Free flowing, safe, easy movement
11. Maximum exposure to natural light and airflow
12. Durable, high quality, age-appropriate furnishings to support the educational program
13. Acoustical treatment designed to minimize transmission of sound
14. Durable, easily maintained finishes
15. Appropriate energy efficient technologies
16. Central Heating, ventilation, and cooling (HVAC)
17. Community access and use to minimize disruption to educational activities
18. Emergency Shelter, if necessary
19. Outdoor spaces as an extension of the educational, athletic, and community program
20. Diverse educational philosophies such as alternative education models and magnet school models

School Safety and Security

The committees deemed security a vital factor. As documented in the Groton Public Schools Strategic Plan, a safe learning environment is one of the district's key goals. Our children must have a sense of physical and emotional well-being, which in turn, will enhance student achievement. Therefore, interior and exterior surveillance cameras will be placed throughout the buildings. Electronic door locks will control access to the entire school. In particular, front doors will be designed to control entry to the school. For security purposes, one entry door will lead directly to the main office. The designs of the buildings will ensure a secured

vestibule as well as clear views of all areas, incorporating the inclusion of glass to provide maximum visibility for the monitoring of traffic. To maintain security, an addressable intrusion alarm system is essential. Areas designated for community use will be provided with accessible parking and convenient entry doors. Designated community use areas will include athletic facilities, auditoriums, media centers, and cafeteria. Storage space will be provided for community-based programs.

The school design will conform to the school safety standards as recommended by the School Safety Infrastructure Council, as charged by Public Act 13-3, Section 80(b), or its subsequent revisions. These standards include, but are not limited to, (1) entry ways to school buildings and classrooms, (2) cameras throughout the school building and at all entrances and exits, including closed-circuit television monitoring, (3) penetration resistant vestibules, and (4) other infrastructure devices and services as they become industry standards. A risk assessment of the potential school site will enable school district leadership, its building committee, and architects to determine an “all hazards” threshold level response to potential threats in order to plan the most effective mitigation for attaining the desired level of protection. Critical compliance areas to be considered in school construction and site development are:

1. School site perimeter
2. Parking areas and vehicular and pedestrian routes
3. Recreation areas (playgrounds, athletic areas, multi-purpose fields)
4. Communication systems
5. School building exterior
6. School building interior
7. Roofs
8. Critical assets/utilities
9. Other areas as may be indicated by the proposed school location, its site, design features

Community Use

All schools will serve as town centers that can support community-based programs, activities, and events for the citizens of Groton. The designs will identify specific activity zones to be isolated for after-school activities and for community use, as well as for security and maintenance.

The contemporary public school facility serves the educational interests of its students as a primary function, while it embraces the needs of its community for an increasing range of activities that enhance the quality of life its citizens. Therefore, areas of the building need to be accessible after school hours for activities ranging from scouts to sports activities to adult education enrichment classes as well as for gatherings of people for meetings, entertainment, or recreation. The philosophy of the Groton Board of Education is based on the premise that school buildings belong to the community. They should, therefore, be made available to the public to the fullest extent practical, while maintaining as their primary foremost consideration, their function as learning places for children.

Areas most in demand for community use are:

- Gymnasiums
- Auditorium
- Library-Media Center
- Cafeteria
- Computer Labs
- Outdoor athletic facilities

The building design will accommodate public access, including handicapped citizens, to all public places, including lavatories, telephones, water fountains, and seating. The design, however, will respect the need for security of core school facilities and public areas. Visitors during the school day, therefore, will be directed to a single point of entry to the building.

Areas of the building will accommodate the display of student art works and academic projects and will provide space for visiting lecturers and artists in formal and informal settings that promote interaction among audiences.

EDUCATION PROGRAM

The new middle school will incorporate programs and services currently provided at West Side and Cutler Middle Schools, albeit in learning environments more reflective of contemporary approaches to teaching and learning and the use of technology as an integral component of the educational process.

All grade levels will be organized with four-teacher teams [mathematics, science, language arts, and social studies], with twelve teachers for each discipline, for a total of forty-eight core subject teachers. Grade level teams will be clustered in the same part of the building, preferably in pods where “between” classroom space will also be used for gatherings of classes.

A significant feature of the middle school program is the commitment to the performing and to the fine arts, with opportunities for one and two-dimensional art projects and for music opportunities in band, chorus, and orchestra. A performance stage is highly desirable in that it also serves as an instructional area for drama, band, and orchestra. With its inclusion, school will have ample settings for student art projects as well as for music and theater performances. Classrooms supporting these activities will be strategically placed for access and for minimizing disruption to classes.

The unified arts program will continue to cycle students through a variety of subjects including integrated project-based STEM activities, music, art, health, and computer education while World language opportunities in Spanish, French, and other languages will be available for all students.

Learning support services will be available in each grade level cluster for English Language Learners, Response to Intervention (RTI), tutorials, and resource room settings.

The school will also continue to provide an inclusive setting for special needs students with behavioral disorders as well as for students on the Asperger spectrum. Occupational and physical therapy, speech and language therapies, and counseling approaches will be maintained to ensure a comprehensive array of services for students requiring specialized approaches for their learning.

Physical education and health will provide opportunities for personal fitness and nutrition awareness. A multi-sport field and a walking-jogging trail around the perimeter of the athletic complex will accommodate team-sports and other outdoor activities.

SPACE SPECIFICATIONS

Classroom Attributes

Physical and curricular implications for classrooms include factors common to building. All spaces will be climate-controlled to accommodate the changing seasonal temperatures of the New England environment and to allow all year use. The maximum use of natural light will be sought. Environmentally friendly but durable construction materials will be used. Furniture will be mobile, enabling individual, small group, and whole class instruction. Access to technology and equipment to accommodate students' diverse learning styles will be provided.

Students will have opportunities to collaborate directly with classmates, and remotely with others, through interactive technology. Wireless connectivity with sufficient broadband width to support one-to-one computing will be accessible throughout the school. Classrooms will be strategically located to accommodate the needs of individual disciplines in conjunction with other required services. Voice, video, and data access will be incorporated to enable students to learn technological skills essential in today's world, as well as in the world of the future. Telephones capable of internal and external communication will facilitate efficiency, ensure safety, and allow for collaboration and teamwork among staff members as well as with parents and the overall school community.

All classrooms will have counter space with storage above and below; bulletin boards, white boards, or IDEA painted walls; and current technologies. Room darkening shades and a lockable coat closet or teacher wardrobe will be provided. Each room will have appropriate classroom equipment and an American flag. Teachers will have access to a four drawer lockable file cabinet.

Four science laboratory classrooms per grade level will be equipped with all of the above features in addition to:

- Room ventilation fume hoods
- Handicapped accessible work stations
- Reconfigurable tables with chairs
- Fire blanket and extinguisher
- Safety glasses cabinet
- Eye wash drench station
- Emergency shower

Science prep rooms will have:

- Appropriate ventilation
- Chemical resistant counters and floor tiles
- Flammable materials storage cabinet; chemical storage cabinet
- Fire blanket
- Counter space with wall sink and chemical resistant plumbing
- Storage space for equipment and materials
- Eye wash station
- Fire extinguisher

Library/Media Center

The media center serves as the hub of the school in all of the designs. It will, therefore, be located in proximity to instructional areas and will be technologically and electronically equipped. Ample space will be provided for shelving, equipment, and storage. Acoustical treatments and appropriate lighting levels for daytime and nighttime uses will be included. A professional development area adjacent to the media center will provide staff with ease of access to resources to keep current of educational trends and to provide space for training, for seminars for small group presentation. The media center will be accessible for community use after school hours.

Main Office/Principal's Office

The principal's, or main office, located at the school's entry, serves as its center for communications, security, and attendance procedures. For security purposes, one entry door will lead directly to the main office. The office will be large enough to accommodate seating for a minimum of eight people, since the principal often meets with parents, students, small teams of teachers or other staff members, as well as with community groups. The general administrative office will present a comfortable and inviting reception area, signifying that visitors are welcomed and valued. There also will be ample space for secretarial workstations and for office equipment. Telephones with internal and external capabilities with a sufficient number of lines to handle the volume of phone calls will be installed.

Kitchen

A full service kitchen, sufficient for school and community use, will be equipped with an accessible loading dock.

Custodial

The custodial office, connected to a general storage/receiving area with a loading dock isolated from students, will be equipped with a phone, computer, washbasin, shower, toilet, and deep service sinks with floor basin. Satellite custodial closets will be located throughout the school.

Corridors

Corridors and stairwells throughout the school will have sufficient length, width, and depth to accommodate two-way circulation and general movement; additionally, they will have directional signage for ease of traffic flow and for safety. A floor plan graphic will be located on a wall near the entrance to the school. Lighting and acoustical treatments will be appropriate to specific uses. Adequate electrical outlets for technology-related educational and maintenance purposes will be installed. A combination of secured and open display areas for student work and aesthetically pleasing wall décor will enhance the environment.

Outdoor Accessible Storage

One double-door storage room for playground and sports equipment, as well as one adequately sized maintenance area will provide storage.

Technology Infrastructure

Since technology continues to assume a greater role in professional and personal lives, schools need to seek to serve the community through the middle of the 21st century. In order to support an adequate telecommunications infrastructure, the building will have a centralized, server room to accommodate all aspects of the technology infrastructure, including voice, video, and data capability for all classrooms, administrative, support, and common areas.

The general guidelines for the technology infrastructure of the new middle school will conform to the “Guidelines for Infrastructure in Connecticut Schools,” as published by the Connecticut state Department of Education, December 1995, or its most recent revision. The specific technology requirements prepared by architects or engineers will be reviewed by School Building Committees and their technical advisors to ensure that the most advanced and flexible system is installed. The infrastructure will facilitate both wired and wireless connectivity to the LAN, WAN, and Internet, with sufficient broadband width to support wireless one-to-one computing for students and for all school employees.

Design

The data design for this school will include specific recommendations for:

- Wiring closet locations
- Location and quantity of drops for classrooms
- Backbone requirements for wired and wireless computer workstations
- Wiring closet electronics specifications at current industry standards
- Testing requirements to ensure that all systems and connectivity function
- Power requirements with a separate, independent power source with surge protection
- Documentation requirements
- Whole building access to the wireless system
- Sufficient broadband width to support one-to-one computing

Internet Connection

The building will have routers and DSU capable of connecting to an Internet Service Provider in varying speeds and dedicated Internet connections.

Standards

The system will conform to all current industry standards.

Applications

An integrated technology system (SMART Technologies) will be installed to support administration, teaching, and learning activities. The system will provide the following:

- Video time display, instant messaging, all call and retrieval systems
- Digital time displays, electronic clock, and bell system

- Classroom and office telephone/intercom
- Vandal alarm and video security system in strategic parts of the building and outdoor areas; annunciator panels to report security breaches and fire alarms
- Public address system
- Connections to the public voice system in strategic parts of the building , voice messaging and room-to-room calling
- Electronic mail, bulletin board, and conferencing
- Facsimile capability
- Wired and wireless LAN, WAN and Internet connectivity
- Remote collaboration capabilities with other schools, universities, and businesses expert in specialized fields

Video Distribution

The video system will access media from a variety of sources including:

- Local origination, CATV, ITFS, microwave signal antenna; Decoder, satellite dish, DVD/VCR, laserdisc, CD-ROM, video file server, classroom, or school programming

In addition:

- Each teacher will control technology devices from the classroom.
- The system will be safeguarded.
- All instructional and administrative areas will support live video program generation
- The video component of the network will be capable of supporting multiple channels.
- Classrooms will have the ability to access multiple channels, independent from each other.
- Broadcast capability will be available from various areas of the school.

Installation

The wiring installation will meet or exceed the recommended minimum standards established by the Connecticut state Department of Education as specified in its publication, “Guidelines for Technology Infrastructure,” 1995 or its most recent update.

- All wiring will be placed above ceilings or behind walls, and permanent installation should be affixed to appropriate support
- Wire runs will be supported at intervals that do not permit visible sags, using cable trays
- All penetrations of firewalls will be properly and completely sealed with non-flammable material
- Safe distances will be maintained from sources of electromagnetic interference

Technology Equipment and Services

Goals of the Technology Program:

- A. Technology will enable students to
 - 1. Determine and apply the appropriate technology to their learning across curriculum areas.
 - 2. Have equal access to technology.
 - 3. Participate in ever expanding learning communities.

- B. Technology will enhance:
 - 1. Interactive communication among schools, community, educational partners, and homes, creating more opportunities to advance learning
 - 2. Expansion of data management to inform decision-making
 - 3. Organizational efficiency through the acquisition of up-to-date resources and training

Description of Technology Equipment Needs for a New Groton Middle School

1. All regular classrooms will be equipped with sufficient mobile computing devices to enable one-to-one computing, SMART Technologies, interactive white boards with HD capability, and a [networked] printer located in classrooms or a shared space. These computing devices will have access to a LAN and to the Internet. Several hard-wire drops will be strategically located in each classroom to support a teacher workstation connected to the LAN and WAN with access to appropriate software to manage routine classroom functions as well as computer-assisted and/or computer-managed instruction programs. All classrooms teachers will have laptop computers for school and home use.

2. Resource rooms and other specialized instructional space will be equipped with suitably sized Smart Board white boards connected to the school LAN and WAN. Teacher workstations will also be provided in all specialized instructional areas.

3. The Library-Media Center will serve as the hub of the computer network. Two thirty-station computer labs with three/four network laser printers will be located within, or juxtaposed to, the media center. A head-end for video broadcasting will be located in an area of the media center where public gatherings/meetings take place. The media center will be equipped with an electronic card catalog system and a bar code scanning circulation system. The Library office/work area will be equipped with one teacher workstation and other basic communication devices. A state of the art media distribution system will be installed, preferably in the media center. Secure storage and charging stations will also be installed.

A wiring room/computer management space will be located in the vicinity of the media center. This area will contain computer workstations for managing the networks as well as sufficient space for equipment storage and work benches for routine computer repairs. Centralized wiring closets will be strategically located for security and operational effectiveness.

4. Within their classrooms, teachers will manage media presentations integrated within the voice, data, and video network. A TV monitor for the clock and bell system and school announcements will be provided in each classroom.
5. Administrative areas will be equipped with computers, telephones, facsimile machines, and printers, and high volume and high quality copier systems.
6. All special instructional areas will be connected to the network. Special services personnel will have computer workstations located in their offices or work areas.
7. The gymnasium and cafeteria will have cabling for video and data drops, large portable video presentation projector, monitor, and twenty-foot screens.
8. Art, music, and physical education areas or offices will be equipped with computer workstations and ceiling mounted presentation screens. Music rooms will have access to recording equipment.
9. Electronic bulletin boards will be located at the main entrance, in the cafeteria, and in the gymnasium.
10. A separate, dedicated electrical wiring system and independent power source with appropriate surge protection for operating the technology infrastructure and its equipment will be installed to ensure an adequate supply of power to operate the system without disruption.
11. Regular classroom and specific spaces will have the capability of virtual collaboration with other schools or educational partners, for whole class, small group, or individual instruction.
12. The Director of Special Services will be consulted regarding assistive technologies required to meet the needs of students and teachers.

PROPOSED SPECIFICATIONS FOR MIDDLE SCHOOL FACILITIES

In alignment with the Groton Public Schools Mission Statement, the goal of this document is to clarify specifications for facilities that support the middle school learner. Evidence from medical science and psychology studies show that middle school students change dramatically in all aspects during this very critical period in their lives. The design of this middle school fosters a sense of belonging, enabling students to fulfill their learning potential intellectually, emotionally, physically, and socially. This design allows teaming, instruction through exploration, and authentic interdisciplinary learning.

The proposed facilities will also strengthen the school/community relationship by serving as community centers.

A. Classroom Attributes: LA, Social Studies, Math, World Languages, Special Education

1. Appropriate size for the support of a variety of instructional methods and equipment
2. Variety of floor finishes
3. Flexible, multiple-use learning spaces with adjustable spacing and movable equipment to afford opportunities to learn and to collaborate
4. Easy access to locker areas not to interfere with the teaching/learning process
5. Storage areas for teachers and students
6. Climate control
7. Communication and technology capabilities with access to floor outlets
8. Telephones capable of internal and external communications
9. Public address system
10. Project work areas
11. Classrooms to include:
 - a. Adjustable height tables, bench tops, and workstations easily configured for a variety of classroom activities and uses
 - b. Stackable chairs
 - c. Interactive whiteboards
 - d. Dry eraser boards (White boards or IDEA Paint)
 - e. Desktop computers
 - f. Secured and unsecured storage
 - g. Sink with hot and cold water
 - h. Window coverings
 - i. Multi-level bulletin and display boards
 - j. Cork tack strips
 - k. Ceiling strips with attaching hooks for hanging student work to be reviewed by Fire Marshal
 - l. Adjustable lighting areas determined by activities

B. Science Classrooms

A science classroom is a unique place for hands-on learning, where students can participate in experiments within a laboratory setting. Physical attributes identified for the classroom in addition to the following will provide:

1. Teacher demonstration areas with electrical outlets with access to gas and water
2. Student stations with electrical outlets
3. Deep sinks for experimentation and washing glassware
4. Electrical outlets at work stations
5. Chemical and moisture-resistant bench tops, tabletops, cabinetry, and floor system
6. Low benches near exterior windows for horticulture studies
7. Ample counter and bench space
8. Vented chemical storage cabinet
9. Chemical fume hood or fume extraction system with waste sink
10. Cabinet for safety glasses storage with ultraviolet sanitizing light
11. Direct access to storage room
12. Built-in cold storage
13. Safety furnishings (eyewash station and emergency shower)
14. Department storage area for materials, lab equipment, and chemicals
15. Dishwasher in science storage/prep area
16. One lab for each team
17. Flexible space to adapt to future technology

C. Special Education: Self-Contained

Special Education classrooms are places where all students with disabilities can learn to their fullest potential. An alternative education program is housed within the mainstream environment for students who need a more restrictive setting due to their disabilities. The facility requirements listed below will ensure optimal learning.

1. Areas of service for speech and language, occupational and physical therapy, hearing and visually impaired, English for Speakers of Other Languages, and assessment and/or evaluations
2. Acoustical privacy
3. Large air-conditioned, carpeted classroom, with kitchen area and bathroom
4. Time-out facility area in each learning skills classroom
5. School psychologist area
6. Secured file and record storage areas
7. Proximity to office
8. Centrally located evaluation/assessment room with one-way glass for screening and evaluation
9. Secured file and record storage areas
10. Alternative education classroom
11. Appropriate safety mechanisms for specialized programs

D. Faculty Office, Workroom, Meeting Room

These faculty facilities will provide an area for small group meetings, privacy for communication purposes, and storage for typical office equipment with:

1. Communication and technology capabilities
 - a. Voice mail
 - b. Telephone capable for internal, external, and long distance
2. Storage Area
3. Faculty work areas at each grade level with copy machines and space to assemble documents
4. Access to computers
5. Meeting room with capacity for 8-10
6. Direct access to private restrooms
7. Furnishings
 - a. Easily reconfigurable tables and chairs for meetings
 - c. Secured and unsecured secured file cabinets
 - d. Storage cabinets

E. Thematic Corridors

1. Width accommodating two-way circulation
2. Distinct pedestrian walkways by locker areas
3. Full-length lockers with recessed combination locks
4. Finishes to reduce noise levels
5. Appropriate lighting levels
6. Directional signage
Secured, as well as open, display areas
7. Open stairwells
8. Wall Decoration
9. Security cameras
10. Individually secured hallways

F. Music Classrooms

A learning environment with appropriate acoustical design and climate control will provide soundproofing and protection of instruments and sheet music. Various spaces will accommodate instrumental, vocal, and choral groups scheduled simultaneously. Built-in risers will allow the elimination of transport. Easy access to loading areas/outdoors as well as double entry doors will facilitate the movement of equipment. Attributes identified to meet classroom needs:

1. Band space for 125-150 students
2. Vocal space for 125-150 students
3. String space for 100-125 students
4. Instrumental space for band and string small lesson groups ensemble rooms
5. Two Choral rooms with retractable, built-in risers

6. Easy access to the stage from the music rooms
7. Appropriate acoustical design for vocal and instrumental music
8. Sound-proofing
9. Double entry doors for choral and instrumental rehearsal rooms
10. Humidity controlled for protection of instruments and sheet music storage and sink to wash a full size tuba
11. Audio and video recording capabilities compatible with updated electronic devices
12. Sheet music storage space:
13. Secured instrument storage
14. Amplification and speaker systems
15. Portable risers
16. Direct access to outdoors and/or leading area and performance auditorium

G. Visual Arts – (should reflect a studio atmosphere)

A large room with appropriate storage will house equipment and supplies. Two large sink areas will accommodate projects, hygiene requirements, and maintenance of equipment. Computers will enhance instruction in graphics and design.

Attributes identified for classroom in addition:

1. Location at center of school with direct access to outside and adjacent specialty classrooms
2. Teacher demonstration area
3. Areas for full class critiques
4. Appropriate storage space including upper and lower cabinets, cubbies, bookcases, specialty casework for portfolio storage, and dry rack area
5. Maximized display spaces
6. Multiple stacked/moveable display boards
7. Adjustable spot track lighting
8. Computer stations
9. Water to art rooms with a minimum of two large sink areas with deep sinks and floor drains
10. Non-slip and water resistant flooring
11. Kiln/Ceramic room to include:
 - a. Kilns and clay storage
 - b. Ceramics work adjacent to kiln room
 - c. Two to three kilns
 - d. Appropriate exhaust and ventilation systems
 - e. Spray booth for glazing
12. Art Storage:
 - a. Separate room with correct size and type of storage furniture and shelving
 - b. Should accommodate of 4' x 8' sheets of plywood
13. Art office:
 - a. Adjacent to work area with clear line of sight to all areas
 - b. Accommodates up to three staff
14. Interactive whiteboard and dry erase white board

H. Technology Education Suite

A technology suite, electronically and technologically equipped, will include the following spaces: video production facility, computer lab, school-wide broadcasting studio, and computer support.

Computer Lab/Rooms Capabilities

1. Adjacent to media center
2. Teacher workstation
3. Internal access to media center
4. Visual link to production facility and broadcast studio
5. Twenty-five work stations
6. Projection device and screen
7. Connection to school network
8. Glass wall for visual link to media center and adjacent technology suite
9. Independent access to corridors
10. Space designed to support computers and other devices
11. Acoustical treatments
12. Ability to vary lighting levels
13. Appropriate flooring
14. Video editing station
15. Built in smart boards
16. Built in lockable storage
17. Secure file cabinets

School-Wide Broadcasting System

1. Two SVHS video cameras with tripods
2. Studio lighting
3. Microphones
4. Furniture to accommodate flexible groupings
5. Interactive whiteboard and dry erase white board

I. Media Center

1. Proximity to all instructional areas
2. Warm, inviting room with lights, windows, and skylights that create a positive environment for students
3. Multiple rooms for small groups use that necessitate glass or other architectural designs for soundproofing and monitoring
4. Controlled, direct outside access allowing for community use
5. Variety of floor finishes throughout, dependent upon usage
6. Access to lockable storage space for equipment storage
7. Expanded workroom for cataloging, processing, and repair,
8. Clear vision lines into media center
9. Counters and tables in workroom
10. Secured and accessible office with clear lines of vision into the media center

11. Voice, video, and data access and internal and external telephone access for media center office
12. Shelving and cabinetry for media center office
13. Secured and unsecured storage cabinets
14. Large circulation area
15. Publishing area for faculty and students
16. Separate instructional space within the media center
17. Controlled, independent lighting
18. Communication and Technology:
 - a. Telephones capable of internal and external access in office and workroom
 - b. Ability to connect microphones to public address system
 - c. Online resources
 - d. Computer projection capabilities and COW
 - e. Monitoring system for internet access
 - f. Additional outlets for charging stations
19. Security system for books, resources, and materials
20. Video production area with connectivity to the school telecommunications system for daily announcements and special productions

J. Staff Professional Library-Learning Area

1. Interactive whiteboard and dry eraser whiteboard with projection capabilities
2. Seminar/training seating arrangement for small groups
3. Flexible furniture easily reconfigured for a variety of staff development activities
4. Reference material storage
5. Professional material display systems
6. Storage areas, secured and unsecured

K. Physical Education Complex

The fitness and well-being of students is a priority. Additionally, mental acuity is enhanced by physical fitness. This suite has spaces allowing for one large gym for regularly scheduled classes and a small gym for use by teams or by adaptive Physical Education. The office area will employ current technology for communication purposes.

Gymnasium, Physical Education, Locker Rooms

1. One large gymnasium with a divider; one auxiliary gym; one fitness/exercise room for equipped for specialty classes
2. Drop in volleyball systems
3. Direct access to outdoors
4. Doors allowing access from outdoors equipped with keyless locks
5. Public telephones
6. Strategic access to restrooms
7. Separate, secured storage areas for school and community use
8. Access to storage spaces through double doors
9. Lighting levels for daytime and nighttime use
10. Direct access to locker rooms
11. Locker rooms with individual showers and toilets

12. Double doors at all entries and exits with removable mullions
13. Office area
 - a. Centrally located near gymnasium
 - b. Space for four to six faculty members
 - c. Storage areas
 - d. Direct access to restroom with shower and sink with hot and cold water
14. Acoustical treatments throughout
15. Public address system speakers from school in gymnasium, locker rooms, and staff offices/areas
16. Public address system
17. Furnishings
 - a. Water fountains
 - b. Free-floating wood gymnasium floor
 - c. Aerobic exercise equipment
 - d. Circuit weight lifting equipment
 - e. Free weight lifting equipment
 - f. Retractable bleachers with mechanical assistance
 - g. Lockers in locker room to accommodate sports bags and winter clothing
 - h. Climbing wall preferably located in the auxiliary gym

L. Cafeteria

The cafeteria is located next to the gym and away from the academic areas to permit use during after school and non-academic events. The configuration of space facilitates the ease of circulation for serving, eating, and waste recycling. A platform stage will be located between the cafeteria and gym, which have movable walls that allow presentations in either the gym or cafeteria. In addition, this area serve as an added instructional space for music and drama. The cafeteria will be organized along a “food court” concept with a variety of options for student lunches to expedite traffic flow through the serving area. The seating area of the cafeteria will be designed to promote an ambiance of comfort and appeal.

1. Ease of serving, dining, and waste recycling
2. Multiple serving lines with a minimum of two hot lunch lines and two a la carte lines
3. Appropriate acoustic treatments for this space
4. Total capacity for student dining not to exceed 300
5. Controlled access allowing for community use
6. Access to restrooms
7. Access to outdoor areas with naturalized outdoor seating
8. Variety of floor finishes
9. Access to storage space
10. Access to drinking water
11. Well-ventilated with local temperature control in both kitchen and dining area
12. Lighting levels for daytime and nighttime use
13. Furnishings:
 - a. Round tables for cafeteria seating
 - b. Cubicles for student storage
 - c. Water fountains

14. Communication and technology:
 - a. Ability to connect to video network
 - b. Public address speakers
 - c. Ability to connect microphone to public address system
 - d. Computer station in kitchen connected to network
 - e. Telephone in kitchen capable of internal and external communication
 - f. Access to projector, screen and computer workstation
15. Accessible to teams without disturbing other instructional areas

M. Auditorium

An auditorium will accommodate a capacity of 500. Acoustical design and independent climate control will regulate sound and heat factors. The stage area will be used as an instructional space for band and orchestra.

1. Padded seating capacity for 500
2. Outside access including large double doors at rear for stage equipment
3. Large open space with carpeted in front of stage
4. Riser access to stage
5. Electrically operated stage curtains,
6. Secured storage spaces to include: closets, prop room with large sink, and dressing rooms
7. Sound system for auditorium
8. Access to restrooms for general public and back stage restrooms for performers
9. Acoustical design,
10. Auditorium lighting system
11. Lighting and sound booth
12. Video recording capabilities
13. Close proximity to music rehearsal and classrooms

N. Administrative Suite

Main Office/Principal's Office

Attributes identified for administrative office:

1. Central location with other office space distributed throughout the building to provide student and staff services
2. Main office to function as the center of school communications
3. Waiting and reception area to accommodate 12 people and designed within visual contact with secretarial areas
4. Secured file and records storage area with records safe
5. Mailroom, servicing up to 80 staff members, accessible without passing through administrative office area
6. Copy center accessible without passing through administrative office area
7. Work center large enough to handle a variety of clerical tasks
8. Space for 2 secretarial workstations
9. Secured and unsecured storage areas
10. Direct access to restrooms

11. Principal's office with adjacent conference room accommodating 10-12
12. Two assistant principal offices
13. Kiosk area for parent use of computers to access school information

Assistant Principal's office suite:

1. Easily accessible by normal traffic pattern to encourage frequent student visits
2. Full view of adjacent corridors
3. Reception area to accommodate 6-8 people, within visual contact of the secretarial area
4. One secretarial workstation with view of reception area
5. Work area for copy machine and space to assemble documents
6. Secured file storage area
7. Two separate means of access: one to reception area and the other to corridor
8. Access to conference area with whiteboards, seating, and tack walls and space to accommodate 10-12 people
9. Convenient access to restrooms

O. Pupil Services Offices

Pupil Services offices will be located adjacent to the main office. Space will be allocated for a full complement of mental health staff and volunteer/mentor coordinators.

1. Guidance offices, located adjacent to the main office, with access to corridor
2. Office spaces to accommodate 10 people
3. Access to the computer network
4. Reception area for guidance secretary with seating for 6 people
5. Acoustical privacy
6. Display racks for guidance information
7. Access to conference area with overhead and computer projection capabilities
8. Area for student secured records

P. Health Services Area/School Based Health and Dental Center

This center will allow space for appropriate staffing, cots, and waiting/treatment areas as well as standard health room equipment. Examination rooms, lavatories, and storage areas will be shared between the health Clinic and nurses' office. Computers and phones with internal and external capabilities will be provided. In addition, the health services area will include space for the continuation of a grant funded school-based health center and dental care facility. The Health Center will have separate entrances and reception areas. All persons outside the school community will be required to enter the building through the "single point of entry" and will gain access to the Health Clinic once they have been authorized. This will be carefully designed to ensure school security.

1. Outside entrance
2. Adjacent to administrative office
3. Space to accommodate 10-12 students, divided between cot and waiting/treatment areas
4. Acoustical privacy for hearing screen and confidential interviews

5. Tile floor surfaces
6. Waiting/treatment area to include sink, and adequate counter and storage space
7. Double locking medication storage cabinet in separate alcove
8. Direct access to private restrooms with shower, light, and exhaust fan
9. Localized lighting control in cot area
10. Entrances to cot areas visible from health office, but equipped with privacy screens
11. Information display system
12. Five work stations with computers with access to school network
13. Clinic capabilities for health monitoring
14. Medical waste disposal system
15. Examination rooms, one conference room, and one full service dental office

Q. In-School Suspension Room

This room and concept will provide an alternative to students' out-of-school suspensions. Students' behavior and work can be directly monitored by staff to ensure that the suspensions are completed appropriately.

1. Space to serve up to 12 students separated by dividers
2. Storage area
3. Climate control
4. Telephone capable of internal and external communication
5. Technology access
6. Dry eraser board

R. Custodial

1. Office and work/storage area accessible to each other and near loading dock
2. Office with washbasin and toilet facilities
3. Closets with deep sinks placed appropriately throughout the building
4. Work/storage area with floor drain and 2 deep service sinks
5. Computer access to school network
6. Personal storage lockers

SYSTEMS CONSIDERATIONS

Internal Communications and Security

- **Communications System - Telephone – Intercom- Public Address System:** Each classroom in the school should be equipped with an integrated communication system that allows for receiving emergency and routine announcements, making local area calls and communicating with the main office, accessing voice mail service inside and outside the building, and directing emergency assistance calls to one or more designated areas. Offices and other specific designated areas in the building should be equipped with the same integrated system as listed above with the additional services that: allow local and long distance calls, the ability to switch calls to specific telephones after hours with voice mail services, and back-up emergency power for telephone, voice mail, and intercom services. The system should include adequate service for future expansion of telephones throughout the building. The intercom system should also provide for exterior building speakers. The building should have approved radio coverage for first responders within the building, in compliance with Federal Communications Commission rules for communication coordinated with the band frequencies of first responders. Radio frequency access control devices should be considered at primary points of entry that permit rapid entry by emergency responders.
- **Clock and bell system:** Each room should be equipped with a time display showing both hours and minutes. The display shall originate from a central electronic clock module that shall also control chime or tone system circuits and other time-based functions. The system should be capable of being corrected or re-programmed from the master clock module.
- **Fire alarm and vandal alarm system:** The school should be equipped with a fully code compliant smoke detection, alarm and sprinkler system. All equipment should be state of the art. Remote annunciator panels showing location of the source of the alarm shall be located near the administrative area and front door of the school and the custodial office. Upon activation of an alarm, an evacuation signal shall be transmitted to a central station monitoring service. The alarm shall signal until manually reset. Sprinkler heads should be carefully located and positioned to prohibit tampering. Alarms should be easily heard throughout the building, outside the building and visual alarms should be provided as per code. All required fire extinguishers should be placed into recessed cabinets with the doors on audible local alarms.

To protect the building when it is unoccupied, each room shall be equipped to electronically monitor the normal “closed door” status. Interruption of the “closed door” status shall automatically initiate a silent alarm to the local police or other security agency. High value areas shall be equipped with additional sensing devices to detect the presence of an intruder.

Building Systems

- **Code compliance:** All construction associated with the new Groton Middle School shall be in compliance with local and state building, health and handicapped codes and safety/security regulations.

- Custodial storage: Custodial storage should be strategically located for convenience and efficiency of work.
- HVAC System: The heating, ventilating and air conditioning system (HVAC) shall be thoroughly studied so the most reliable, flexible and energy efficient system is provided. An alternate energy efficient source of hot water for domestic use shall be provided for summer operation so major boilers may be shut down during non-heating seasons.

The HVAC system will be controlled by a computerized energy system located in the custodial office with access from outside the school. The building will contain “zones” for managing temperature control for day and evening functions.

Connection to external emergency power sources should be provided to keep vital building components and areas functioning in an emergency.

The HVAC system should have the following characteristics:

- Should be able to provide uniform temperature in all areas of the teaching space.
 - Should eliminate drafts and cold areas.
 - Should provide superior ventilation in all rooms and bathrooms.
 - Should eliminate noise in the classroom from the systems.
 - Should be able to provide for varying degrees of humidity control.
 - Should provide unquestioned reliability.
 - Should be energy efficient.
 - Should ensure air quality standards; filtering air borne allergens to the extent current technology allows.
- Windows: Window frames and sash should be of a material that is maintenance free. The provision of glazing in the classroom is both an educational and psychological enhancement because it provides visual relief and outdoor observation opportunities. The provision of windows or glazing does, however, enable heat loss or gain and presents a vulnerable point in security. Design features should minimize these effects. The provision of solar block glazing is desirable and should be considered in each room.
 - Handicapped access: The building shall be in full compliance with state and federal handicapped codes and regulations. An elevator (if required) must be strategically located to ensure its suitability to meet current code requirements.
 - Plumbing: The school should meet all code requirements for the number of toilet fixtures, sinks and drinking fountains. Lavatories should be strategically located. All fixtures should be of the heaviest duty, vandal resistant design and include automatic source for water closets, urinals and sinks in the student bathrooms. Adequate clean outs shall be provided and all restrooms must have floor drains. Piping should run in accessible pipe chases. Valves should be ball valves. Toilet partitions should be constructed of solid plastic with color all the way through the product, vandal resistant and equipped with heavy-duty hardware. Fixtures should be wall hung. The building should be divided into sections with isolation drain valves in each section.

- Electrical distribution: The school should meet all code requirements for electrical service. Each normally occupied space shall be furnished with numerous electrical convenience outlets located throughout the space for maximum flexibility of room layout and eliminating a need for use of extension cords. Power in each classroom should come from two sources, one for exclusive use of the technology infrastructure and the other for general use. Each electrical panel should have 25% free space to add future circuits. Emergency lighting should be on individual wall packs. All three phase motors should have phase protection. All exit signs should be L.E.D. type with cast housings and Lexan lenses.

If the school is to be used as an emergency shelter, a source of emergency power should be considered so all utilities, the building cafeteria and gymnasium can function in an emergency.

- Exterior building structure: All windows should be high “e” insulated windows with screens. The exterior of the building (new construction) should be brick or pre-cast material to suit the ambiance of the setting of the school.
- Interior building products: Interior walls in the corridors should be brick, glazed block, epoxy paint or a suitable substitute material of high durability and ease of maintenance. Student lockers should be adequately sized to secure coats, book bags and other small items and be constructed of a heavy-duty material with heavy-duty hardware. Window covering should be a durable blind product capable of reducing the amount of light in classrooms when video demonstrations are conducted. Carpet, where used, should be of the highest quality, durable and void of any odors. It is recommended that heat sealed tiling be used for floor covering due to its ease of maintenance and support of air quality standards. Doormats or run-outs should be installed at all entranceways.
- Energy conservation: The school building plans should be reviewed by the Connecticut Light and Power Company and should comply in so far as possible with their energy rebate program, to the extent this incentive is currently available. LEED standards should be applied to the school design as deemed appropriate and practical.
- Hardware: All hardware in the school should be heavy duty. Keying should be mastered with restricted key blanks. The key system (magnetic cards or fobs) shall automatically disallow entrance with regular keys after a specific time of day, when only the master key will operate the doors.

All panic devices should be rim type with removable mullions rather than vertical rod type. All doors such as stairwell doors and corridor smoke doors should be held open with magnetic devices connected to the fire alarm system.

- Security System: An integrated security system should be designed to control and monitor visitor access to the building during school hours. The system should have direct connections to police, fire, and other security responders. The system should provide for visual verification of persons requesting access to the school building through the main office or a security office/kiosk; general parking and other areas of the school site should be considered for visual monitoring as recommended by architects and/or security specialists.

SITE CONSIDERATIONS

External

The outdoor facilities for the Groton Middle School complex should provide for the following considerations:

1. Separate access to the building for bus transportation and parent vehicular traffic
2. Visitor and general parking for approximately 300 cars
3. Separate faculty and staff parking area for approximately 100 cars
4. Shade and ornamental trees with low maintenance ground cover and other low height plant material
5. New roads and driveways to accommodate parking areas, bus queue, and separate parent drop-off areas
6. Site lighting, utilities, storm drainage and snow plowing considerations, grading and landscaping in all construction areas
7. Fenced, attractive, sturdy school and cafeteria refuse pick-up areas with locking gates large enough to allow dumpster style trucks to enter (and with an area to accommodate bins recycling and for waste food
8. Outside, removable faucets at intervals to allow for window washing and maintenance of plantings
9. Well-lighted Parking areas and walkways to the parking areas
10. An artificial turf athletic field suitable for outdoor physical education activities along with soccer, lacrosse, and a multi-use field with a walking/jogging trail around the perimeter of the field
11. School name in at least two outside locations, visible from both student and general public access roads and driveways

Internal

The following considerations should be made in the design of the interior features of new and altered portions of the building:

1. All electrical switches in hallways throughout the building to be key-type
2. Access to building operations [mechanical] systems to be restricted to designated users and these areas to be equipped with intruder detection systems integrated with the school security devices (annunciator panel)
3. Ceiling materials to be attractive, durable and noise reducing, as well as removable for utility access
4. All exit doors to be monitored through the administrative offices for controlling access to the building. Annunciator panels to alert office personnel to a breach of security
5. A security system design to control and monitor visitor access to the school
A buzzer and video observation system controlled from the office and/or a security kiosk to control entrance to a main entrance vestibule where additional security clearance would be required for access to the school lobby. All materials used in this area to be bullet and blast resistant and designed in a manner as to thwart intrusion

6. Wire trays located above all spaces be large enough and have the capacity to handle additional wiring and cabling for future use
7. Drinking fountains to be handicapped accessible and not traffic restrictive
8. Recessed lighted display cases with lockable doors and adjustable shelving to be strategically located
9. Student lockers to be appropriately sized and located for the convenience of students in their grade level cluster
10. Classroom doors not to be recessed and, optimally, to swing 180 degrees
11. Each door to have a magnetic release for emergency evacuation or intrusion situations as well as a penetration resistant vision panel. Doors to be lockable from both sides, tamper resistant, and allow for quick release from the interior with one motion
12. Handicapped elevator service to be available with key type restricted operation should the building design require more than one level
13. Stairways/ ramps to be planned so students can move quickly from one classroom to another. All space under stairwells to be enclosed
14. All hallway bulletin and tack boards to be code compliant
15. Grade level color schemes by cluster to be different and distinguishable
16. All hallway windows to be code compliant
17. Signs for each room to be handicapped coded and set into a space to prevent removal, except by maintenance personnel
18. Exit signs to be code compliant and areas of refuge to be located strategically in selected stair areas

Environment

1. Acoustics: All classroom and hallway space to be constructed to minimize noise that would interfere with the teaching and learning process. Attention to be given identified areas for special acoustical treatment
2. Air quality: The building to be fully air-conditioned with adequate controls to shut down or reduce service when rooms will be unoccupied for significant periods of time. Increased attention to be given to minimize dust and air borne particles that may affect allergic reactions
3. Well-controlled heat, cooling and humidity systems to accommodate large technology infrastructure and operating system
4. Flooring: Each room's flooring to be specific to the its use. Tile to be of high quality and easily replaced (roll tile with heat seal seams preferred). Carpeting, where installed, to be of high density, mold resistant fabric that is easily repaired
5. Hallways: Hallways to be acoustically treated to lessen traffic noise. Lighting in hallways to be recessed
6. Hallway surfaces to be bright and finished with an epoxy (or similarly durable) glaze for ease of maintenance
7. Aesthetics: The interior design and color scheme of the building to be inviting and comfortable to immerse persons entering the building in a warm atmosphere that celebrates student learning through color, sound, and creative displays of student work and achievements

Outdoor Areas for Learning, Athletics, and Support

Learning, athletics and support spaces allow for multiple fields and play areas to be utilized by students and community members. Storage areas are essential to safely house school and Parks and Recreation equipment. Parking areas and traffic flow patterns need to accommodate large volumes of traffic.

1. Multiple field and play areas to support the physical education program, interscholastic sports, intramurals, outdoor education, and play
2. Gym accessible to playing field
3. Access to secured storage for outdoor activities and school sponsored athletics
4. Separate secure storage for school and Parks and Recreation equipment
5. Direct access to field for outdoor activities and school sponsored athletics
6. Electrical outlets and water to each outdoor learning area designed for easy supervision and safety
7. Water fountains
8. Landscaping to include shade trees and student garden areas
9. Separate traffic flow for busses and individual drop-off and pick-up
10. Handicap accessible drop-off, pick-up and parking at front entrance
11. Well-lit parking, roads, and driveway areas
12. Adequate parking for staff and visitors
13. Cost effective irrigation for fields
14. Outdoor learning area for classes to meet for special projects or activities requiring more space than classrooms or other interior learning spaces provide

APPENDIX A

Space Specification Summary

Anticipated Number of Students (Peak Year 2017-18 @ 938 students; average class = 19.5):¹

Grade 6 = 336 (average class size = 21.0)

Grade 7 = 306 (average class size = 19.1)

Grade 8 = 296 (average class size = 18.5)

Four teams of four teachers (Social Studies, Language Arts, Mathematics, and Science) at each grade level.

SPACE	NUMBER OF ROOMS/SQUARE FOOTAGE	TOTAL SQUARE FOOTAGE REQUIREMENTS
Grade Six-Eight: General Classrooms Science classroom Science Prep/Storage	36 @ 800 12 @ 1,000 3 @ 400	28,800 12,000 1,200 42,000
Art: 2-Dimensional 3-Dimensional Storage Office	1 @ 1,000 1 @ 1,200 1 @ 500 1 @ 200	 2,900
Music: General Music/Chorus Band Orchestra Office & Storage Practice rooms	1 @ 1,600 1 @ 1,600 1 @ 1,600 1 @ 400 2 @ 150	 5,500
Physical Education & Health: Classroom (Health) Gymnasium w/bleachers Auxiliary Gym Exercise/Fitness Room Climbing Wall Offices Storage Locker Changing Room w/showers [2 stalls]	2 @ 800 1 @ 5,000 1 @ 1,800 1 @ 1,000 (In Auxiliary Gym) 1 @ 400 1 @ 800 2 @ 900	1,600 5,000 1,800 1,000 400 800 1,800 12,400
Unified Arts: Technology Storage	2 @ 1,000 1 @ 200	2,000 200 2,200
World Languages: Basic classrooms	5 @ 800	4,000 4,000
Auditorium/Theater: Stage Seating Scenery Prep/Storage	1,800 12,000 (approx. 500 students) 1,000	 14,800

¹ Note: The functional capacity of the school would be 1,200 students @ 25 students per class.

Learning Center/Support Services:			
English Language Learners	2 @ 200		400
Special Services Education Tutorial (RTI)	5@ 800 w/movable wall divider		4,000
	3 @ 200		600
Conference Rooms	3 @ 200 (one for each grade)		600
In-school Suspension	1 @ 400		400
Occupational/Physical Therapy	1 @ 500		500
IBS Classroom w/ bathroom & Sensory Time Out room	1 @ 1,000		1,000
	1 @ 150		150
ABS Classroom w/ bathroom	1 @ 1,000		1,000
			8,650
Pupil Services/Guidance:			
Counselor Offices	5 @ 150		750
Conference Rooms	1 @ 200 & 1 @ 300		500
Social Work, Psychologist Offices	3 @ 150		450
Records storage	1 @ 200		200
Reception Area/Secretary office	1 @ 400		400
Speech & Hearing	2 @ 150		300
			2,600
Administrative Office Complex:			
Offices	2 @ 250; 1 @ 300		800
Conference Rooms	2 @ 200		400
Reception	1 @ 300		300
Storage	1 @ 250		250
Equipment/ Workroom	1 @ 200		200
Computer Kiosk for parent (flex office)	1 @ 150		150
			2,100
Health Clinic & Offices:			
Reception Area	2 @ 100		200
Offices	5 @ 100		500
Examination Room	2 @ 100		200
Medicine storage	1 @ 50		50
Records Storage	1 @ 100		100
Cot/privacy space	6 @ 80		480
Lavatories	2 @ 80		160
Shower Room	1 @ 150		150
			1,840
Library Media Center:			
Stacks & Reading/Study Areas	3,500		3,500
Computer Lab/ Classroom	2 @ 800		1,600
TV Production Area	1 @400		400
Offices	1 @ 200		200
Workroom	1 @ 400		400
Media Distribution/ Technician	1 @ 200		200
Meeting Rooms	4 @ 200		800
Storage & Supplies	1 @ 150		150
			7,250
Custodial:			
Offices	3 @ 75		225
Workroom	1 @ 300		300
Supplies & Equipment Closets	6 @ 100 (two per floor)		600
Receiving/ Storage	1@ 1,000		1,000
			2,125

Food Services:		
Cafeteria	6,000	
Kitchen & Servery	1,800	
Storage; cold, dry, freezer	1,000	
Office & Lavatory	220	
Washer & Drier	100	
		9,120
Other Spaces:		
Faculty & Staff Dining	800	800
Faculty Workrooms	3 @ 300 (one per grade level)	900
Storage for Instructional Materials & Equipment	3 @ 200 (one per grade level)	600
Volunteer Workroom and Lounge	1 @ 150	150
Outdoor Areas:		
Baseball	2.3-2.6 Acres	
Softball	0.8-1.4 Acres	
Soccer (Youth)	1.7-2.1 Acres	
Artificial surface Multi-sport field	No set dimensions - locate around perimeter of field area	Not applicable to square footage calculation.
Walking/Jogging Trail		
Outdoor Learning	1 @ 400 (Area for outdoor teaching)	Not applicable to square footage calculation.
Security:		
SRO/Security Office	1 @ 100	
Video Surveillance Room	1 @ 100	
Admittance Kiosk (Vestibule)	1 @ 50	250
	<i>Space Specifications S. F. =</i>	120,185
	<i>Circulation Space @ 50% =</i>	60,093
	TOTAL PROJECT SPACE =	180,278

Rough estimate of space standards and allowable square footage for the construction grant:

Grade	Number of Students ²	S. F. Per Student	Total S. F.
Six	336	148	49,728
Seven	306	170	52,020
Eight	296	170	50,320
		TOTAL:	152,068 S. F.

The listed program space exceeds the SDE allowable square footage for the construction grant by about 19,150 S.F.

Note the following office dimensions/capacity:

1. 100 - 120 S.F. = 1 workstation and one-two guest chairs
2. 150 S.F. = 1 workstation; 4 chairs or a table w/ 3 chairs
3. 180 S.F. = 1 workstation; table a five chairs
4. 200 S.F. = 1 workstation; table and six chairs
5. 250 S.F. = 1 workstation; table and seven chairs + storage cabinets and counter space

² S.F. determined by the SDE space standards calculation formula.

APPENDIX B

School Facilities Task Force

Andrea Ackerman	Board of Education
Jean Claude Ambroise	RTM
Robert Beaulieu Jr.	Teacher
Holly Bresnahan	Citizen at Large
Karen Bryer	School Administrator
Christine Cabral	Citizen at Large (City)
Jane Dauphinais	Town Council
Joe de la Cruz	Town Council
Enrico DeMatto	Permanent School

Building Committee:

Marc Denno	Citizen at Large
Kevin Fiftal	Citizen at Large
Wes Greenleaf	Citizen at Large
Jon Heller	Citizen at Large
Craig Koehler	Citizen at Large
Dan O'Donnell	Citizen at Large
Kevin Trejo	Citizen at Large
Kim Shepardson Watson	Board of Education
Hal Zod	Planning Commission

Ex Officio Members:

Heather Bond Somers	Town Council (for Mayor)
Rita Volkmann	Board of Education

Staff:

Mark Oefinger	Town Manager
Gary Schneider	Director of Public Works
Mike Murphy	Director of OPDS
Mike Graner	Superintendent
Bill Robarge	Director of Buildings and Grounds
Nicki Bresnyan	Executive Assistant

Facilitators:

Mike Zuba	Milone & MacBroom
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APPENDIX C

Stakeholder Group

Andrea Ackerman	Board of Education
Gary Baker	Parent
Robert Beaulieu	Teacher
Holly Bresnahan	Parent
Karen Bryer	Central Office Staff
Miranda Chapman	Military Liaison
Enrico DeMatto	Community Member
Elizabeth Gianacoplos	Board of Education
Jamie Giordano	Principal
Michael Graner	Superintendent
Wesley Greenleaf	Community Member
Jonathan Heller	School Facilities Task Force Member
Tom Jokubaitis	Consultant
Mary Kelly	Board of Education
Clint Kennedy	Community Member
Ernie Koschmieder	Food Service Director
David Laffargue	Teacher
Sean McKenna	Assistant Superintendent
Val Nelson	Principal
Mark Oefinger	Town Manager
Bill Robarge	Director of Building and Grounds
Brenda S.	Groton Parent Council
Joey Schick	Board of Education
John Scott	RTM Member
Kim Shepardson Watson	Board of Education
Archie Swindell	RTM Member
Rita Volkmann	Board of Education
Mike Zuba	Consultant