

# **Bethesda-Chevy Chase Middle School #2**

# **Educational Specifications Feasibility Study**

April 15, 2011



Montgomery County Public Schools  
Rockville, Maryland 20850

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## Bethesda-Chevy Chase Middle School #2

### Square Foot Summary

When this project is complete, the following spaces are to be provided:  
 The school will be designed with an initial capacity of 944 and core capacity of 1200.

Updated 4/15/2011

<b>Facility</b>	<b>#</b>	<b>Net Sq. Ft.</b>	<b>Total Net Sq. Ft.</b>
<b><u>English/Foreign Language/Math/Social Studies</u></b>			
Classroom	<b>20</b>	900	<b>18000</b>
Computer Laboratory	<b>3</b>	950	<b>2850</b>
<b><u>Science</u></b>			
Laboratory	<b>8</b>	1300	<b>10400</b>
Prep/Project/Storage	4	250	<b>1000</b>
Chemical Storage	1	250	<b>250</b>
<b><u>Other Instructional Support Areas</u></b>			
Team Resource Center/Workroom	9	300	<b>2700</b>
Interdisciplinary Textbook Storage	3	150	<b>450</b>
Departmental Textbook Storage	3	150	<b>450</b>
Foreign Language Textbook Storage	1	150	<b>150</b>
Instructional Data Assistant Room	1	400	<b>400</b>
Developmental Reading	1	600	<b>600</b>
<b><u>ESOL Classrooms</u></b>			
ESOL Classrooms	<b>2</b>	600	<b>1200</b>
<b><u>Special and Alternative Education</u></b>			
Special Education Classrooms	<b>2</b>	900	<b>1800</b>
Special Education Team Room	1	300	<b>300</b>
Resource Room	1	800	<b>800</b>
Speech & Language Therapy Support Room	1	250	<b>250</b>
Occupational Therapy/Physical Therapy	1	250	<b>250</b>
<b><u>Music Suite</u></b>			
Instrumental Music Room	<b>1</b>	1900	<b>1900</b>
General Music/Choral Room	<b>1</b>	1000	<b>1000</b>
General/Choral Storage	1	250	<b>250</b>
Music Office	1	150	<b>150</b>
Practice Rooms	2	64	<b>128</b>

<b>Facility</b>	<b>#</b>	<b>Net Sq. Ft.</b>	<b>Total Net Sq. Ft.</b>
<b><u>Multipurpose Technology Laboratory</u></b>			
Multipurpose Technology Laboratory	1	1600	1600
Computer Technology Laboratory	1	900	900
Preparation/Storage Room	1	400	400
<b><u>Multipurpose Laboratory</u></b>			
Multipurpose Laboratory	1	1600	1600
Storage	1	300	300
<b><u>Visual Arts Suite</u></b>			
Art Room	1	1300	1300
Storage	1	350	350
Kiln Room	1	150	150
<b><u>Physical Education</u></b>			
Gymnasium (Equals 2 teaching stations)	1	6800	6800
Auxiliary Gym (Dance)	1	1600	1600
Auxiliary Gym (Fitness/Weight Room)	1	1600	1600
Auxiliary Gym (Wrestling)	1	1600	1600
Health Classroom	1	900	900
Locker Rooms	2	1650	3300
Storage Rooms	2	100	200
Toilet Rooms	2	150	300
Shower/Drying Rooms	2	250	500
Laundry Room	1	150	150
Offices	2	300	600
General Storage	2	650	1300
Outdoor Storage	1	200	200
ICB Storage	1	100	100
<b><u>Computer Support</u></b>			
Storage Room/Office Area	1	150	150
Telecommunication Equipment Closet	1	250	250
Telecommunication Closet	5	80	400
<b><u>Instructional Media Center</u></b>			
Reading Room	1	3200	3200
Listening Viewing Project Area	2	200	400
Direct Instructional Area	1	300	300
Workroom/Materials Prep. Room	1	450	450
Office	1	200	200
Technology Information Access Center	1	500	500
Storage, Media General	1	600	600
Storage (Upper Floor)	1	200	200
<b>Multimedia Production Room</b>	1	950	950

<b>Facility</b>	<b>#</b>	<b>Net Sq. Ft.</b>	<b>Total Net Sq. Ft.</b>
<b><u>Student Activities</u></b>			
School Store	1	200	<b>200</b>
Student Government Storage Closet	1	100	<b>100</b>
<b><u>Administration Suite</u></b>			
General Office	1	700	<b>700</b>
Principal's Office	1	250	<b>250</b>
Assistant Principal's Office	3	150	<b>450</b>
Student Support Specialist Office	1	150	<b>150</b>
Administrative Secretary's Office	1	150	<b>150</b>
Workroom/Storage/Toilet Area	1	500	<b>500</b>
Storage	1	100	<b>100</b>
Conference Room	1	300	<b>300</b>
Copier Workroom	1	200	<b>200</b>
In-School Suspension Room	1	400	<b>400</b>
Financial Secretary's Office	1	150	<b>150</b>
Staff Development Office	1	200	<b>200</b>
Security Office	1	150	<b>150</b>
<b><u>Guidance Suite</u></b>			
Counselor's Office	5	150	<b>750</b>
Waiting Room	1	250	<b>250</b>
Conference Room	1	300	<b>300</b>
Records Room	1	125	<b>125</b>
<b><u>Health Suite</u></b>			
Waiting Room	1	100	<b>100</b>
Treatment/Medication Area	1	125	<b>125</b>
Office/Health Assessment Room	1	100	<b>100</b>
Health Assessment/Isolation Room	1	100	<b>100</b>
Rest Area	2	100	<b>200</b>
Toilet Room	2	50	<b>100</b>
Storage	1	40	<b>40</b>
<b><u>Staff Facilities</u></b>			
Staff Lounge	1	1150	<b>1150</b>
<b><u>Student Dining</u></b>			
Student Dining	1	6000	<b>6000</b>
Stage	1	1500	<b>1500</b>
Storage	1	300	<b>300</b>
Chair Storage	1	400	<b>400</b>

<b>Facility</b>	<b>#</b>	<b>Net Sq. Ft.</b>	<b>Total Net Sq. Ft.</b>
<b><u>Kitchen Area</u></b>			
Food Preparation	1	900	<b>900</b>
Dry Food Storage	1	350	<b>350</b>
Refrigerator	1	125	<b>125</b>
Freezer	1	225	<b>225</b>
Service Area (4 service lines)	1	950	<b>950</b>
Office	1	100	<b>100</b>
Locker/Toilet Room	1	120	<b>120</b>
Loading Platform	1	125	<b>125</b>
Receiving Area	1	100	<b>100</b>
Chemical Storage Room	1	48	<b>48</b>
<b><u>Building Service Facilities</u></b>			
Building Services Office	1	150	<b>150</b>
Locker/Shower Area	1	250	<b>250</b>
Plant Equipment Operator Office	1	75	<b>75</b>
Compactor/Trash Room	1	250	<b>250</b>
Recycling Room	1	250	<b>250</b>
Receiving and Storage Area	1	800	<b>800</b>
General Storage Rooms	2	250	<b>500</b>
Building Services Outdoor Storage	1	250	<b>250</b>
<b>Total Teaching Stations and Net. Sq. Ft.</b>	<b>46</b>		<b>99486</b>
<b><u>The following spaces should be master-planned as a future addition.</u></b>			
Classrooms	<b>12</b>	900	10,800
<b>Total Master Planned Addition</b>			<b>10,800</b>

## Introduction

- This document describes the facilities that are needed for the Bethesda-Chevy Chase Middle School #2 educational program. The descriptions provide the architect with useful guidelines and are used by staff representatives when reviewing drawings and specifications for the facility.
- The program capacity for this school will be 944 with a master-planned (core) capacity for 1200. The school needs a 12-classroom master-planned addition to bring the program school up to its master-planned capacity. The architect should show the location for the future classroom addition.
- The educational specifications are divided into three sections.
  - The first section, the space summary, lists the type of spaces and square footage required when the project is complete.
  - The second section describes the general design, location, and specific requirements for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
  - The third section identifies any additional program requirements for the school that were identified by the Facility Advisory Committee (FACE).
- The architect should show the location for relocatable classrooms, should they be required in the future. These units should be sited in a location where it will not cause conflict with the constructability of a future addition. The necessary utility connections, i.e. electrical power, fire alarm, public address, and data should be provided near the future location of relocatable classrooms.
- The architect will provide a space summary comparison between the programmed space requirements and the proposed after each phase of the project including but not limited to the feasibility study, schematic design, design development, and final design phase.
- This project is to provide the facilities to meet the educational standards for a Grades 6–8 middle school program. Middle school organization assumes teams of about 125-150 students per team. The middle school philosophy of teams of teachers and students should foster an atmosphere of cohesiveness by grade level. The design of the building should make it possible for sixth, seventh, and eighth graders, to be separated from each other for their academic classes. Flexibility of design should be provided to accommodate changing educational programs.
- For all new schools and modernizations, the project will be designed for LEED Silver certification by the United States Green Building Council (USBGC) under the LEED for Schools guidelines. If this project is a classroom addition, the certification requirement applies only if the addition doubles the existing building footprint. If this project is a building renovation, the certification requirement applies only if the renovation alters more than fifty percent of the existing building gross floor area.

## General Planning Considerations

In the general planning of this building and development of the site, special consideration should be given to the following comments and instructions:

- The architect is expected to become thoroughly familiar with all national, state and local fire safety, life safety, and health code regulations and to follow applicable rules of the State Interagency Committee on School Construction.
- The building is to be accessible to the disabled within the meaning of the latest edition of the Americans with Disabilities Act and to conform to all the latest requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board. (The regulation can be found at <http://www.access-board.gov/adaag/html/adaag.htm>). In addition to the ADAAG, the *Maryland Accessibility Code* (COMAR.05.02.02) revised in 2002 also is required for public schools. (The regulation can be found at <http://mdcodes.umbc.edu/dhcd2/Title05.pdf>)
- The facility is to reflect an appealing visual, acoustic, and thermal environment and is to be properly furnished and equipped. Well-chosen colors and textures are to be used. Lighting must meet current standards and provide adequate levels.
- High quality materials are to be used in the construction. The architect should refer to the MCPS Design Guidelines.
- The first impression of a building is important. The main entrance to the school should have a clear and inviting identity, and the entrance area should be designed and landscaped to emphasize its importance. A covered walkway from the bus loading area to the front door is desirable. The design of the entry foyer needs to convey a feeling of warmth and welcome.
- An electronic message board and built-in CCTV monitor should be incorporated into the wall design of the administrative office.
- The inclusion of lighted showcases to display student work should be provided in the corridors of the main entrance, art, multipurpose laboratories, gymnasium, and in each grade level area. They should be recessed into the wall with access from within a room and have an electric outlet.
- Every teaching station, support space, and core area must be wired for computer, CCTV, and telephone, along with adequate electrical supply in compliance with Maryland State design guidelines for Technology in Schools and the MCPS Office of the Chief Technology Office (OCTO) guidelines. Facilities must be adaptable to accommodate rapid development in high technology and its equipment since educational program and organization in this field are dynamic. Space and power supply must be flexible to meet these changing needs.
- Core spaces such as the cafeteria, gymnasiums, instructional media center, and communications center, should be easily accessible for community use and secure from the rest of the building after school hours.

- An MCPS designed alarm system will provide security for this facility. The architect will provide for this system in consultation with the Division of Construction staff. For maximum instructional flexibility, large special instruction areas such as those provided for general music and multipurpose laboratories should be designed to allow easy conversion of some or all of the space for other kinds of instruction in the future.
- Some windows must be operable in each space in the building. Transmission of radiation through windows into various portions of the plant is to be considered in relation to heating and ventilating and in relation to planning the building for air conditioning. All instructional spaces should have windows, preferably exterior windows. If the design does not permit exterior windows, windows onto corridors should be provided.
- Core spaces such as the cafeteria, gymnasiums, and instructional media center should be easily accessible for community use and secure from the rest of the building after school hours.
- Zoning the plant for heating and air conditioning should be related to after-hours use of various areas such as offices, gymnasium, multipurpose room, and the instructional media center. Appropriate location of parking, corridor barriers, and toilet rooms is necessary for after-hours use. Some classrooms nearby the multipurpose room should be zoned for after hour use as well.
- For security purposes, all doors into classrooms, conference rooms, offices etc. must have a sidelight window with shades.
- The architect should refer to MSDE's 2006 *Classroom Acoustic Guidelines* to address the acoustical qualities for classrooms. In addition, the architect should refer to *American National Standard, Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools* (ANSI S12.60-2002) for additional information.
- Noise and distracting sounds are to be minimized. In areas such as the multipurpose room and classrooms, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.
- Bathrooms should be located throughout the building. Bathrooms should be central to the classrooms, with some provided for each grade level area. Student bathrooms also must be located near the cafeteria and main gym.
- Adult bathrooms must be provided on all levels convenient to instructional areas and must conform to the latest code requirements.
- The architect must design all athletic/physical education facilities to reflect equitable facilities for boys and girls based on Title IX requirements.
- The room numbering system should be logical and understandable.
- Blinds capable of darkening to be used in instructional areas, including seminar and conference type spaces, with complete darkening in all science rooms should be provided.

## General Planning Considerations

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- The location of whiteboards and tackboards should relate to classroom seating and windows. The location of bulletin boards and showcases should relate to team groupings and administrative areas.
- The number of lockers in the corridor should be equal to the core capacity plus 10% of the core capacity.
- Landscaping is to be included. Planting is to include screen planting and that needed for erosion control. Plantings for sidewalks, and wooded and flowered areas, are to be situated to enable the physical education program to be carried on without undue disturbance to the classrooms. Other landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included. Note: Landscaping must be minimal, tasteful and allow for easy maintenance.
- Spaces that serve no real educational function, such as corridors, should be limited while at the same time assuring an easy to supervise and smooth flow of pupil traffic to and from the instructional media center, multipurpose room, gymnasium, specialized centers, and support rooms.
- Carpeting should be limited to the principal's office, assistant principal's office and conference room in the administration suite and the main reading room of the instructional media center.
- All student occupied spaces must be able to be supervised from the corridor or an adjacent space.
- The shape of the classroom and the design of built in features and storage areas should provide optimum net usable floor area. Elongated rooms and features that protrude into floor area, limiting flexibility, are to be discouraged. Rectangular shaped classrooms are preferred.
- The classrooms should be designed to accommodate various size groups. Each classroom should be readily adaptable for group work, various presentation formats, and should have maximum connectivity to outside resources.
- Metal adjustable shelving is to be provided in all building storage closets.
- All plan reviews will be coordinated through the Division of Construction.
- Special consideration must be given to energy conservation including total life-cycle costs. The current Maryland State Department of General Service (DGS) requirements will be applied as design criteria. Life-cycle cost accounting in accordance with DGS criteria is required.

## **Technology Framework**

The latest technology should be integrated into every aspect of building. The architect should consult with the Office of Chief Technology Officer (OCTO) and the Division of Construction (DOC) for the latest technology requirements. The architect must at a minimum plan for the following elements.

- Through the use of local area and wide area computer and video networks, students should have access to each other, to schools throughout the county with similar capabilities, and to universities and government institutions throughout the world.
- Each classroom is to have a dedicated 20 amp electrical circuit serving five electrical outlets for computers located 3' apart along the back or side wall.
- Computer network outlets (CNOs) consisting of a flush mounted standard electrical box with 1 1/2" conduit to the ceiling space overhead should be located in all classrooms, offices, and other work locations according to the following general rules:
  - one CNO on the teaching wall of the classroom under the location for a Promethean Board and adjacent to an electrical outlet
  - a second CNO should be located in the back side of each classroom adjacent to the five computer electrical outlets connected to the dedicated circuit
  - one CNO per office, resource room, planning room, etc. adjacent to telephone outlet
  - Multiple CNOs in media center at circulation desk, reference areas, etc.
  - one CNO at each science lab workstation
  - All other areas such as the stage, bookstore, dining room, etc., where computers might be used.
- The number and location of telecommunication closets required to support the building-wide computer network is dependent on the size and geometry of the building. The layout of the telecommunication closets will be determined during the design phase of the project.

## **Description of Facilities**

The following is an approach to the design of new and modernized schools. Please refer to the summary of spaces for the square foot requirements for each space described below. Square foot allocations should be considered the standard to be followed, although minor deviations are allowed.

### **Standard Classrooms**

- Classrooms should be arranged to support the grade level team organization for middle schools. Each grade's area of the building also will have two or three science laboratories and various instructional support spaces.
- Each classroom should be designed as follows:
  - A lockable teacher's closet, as per DOC construction standards, is to be provided for general supply storage, personal storage, and wardrobe.
  - Book storage should be located along the window wall with half of the cabinets equipped with hinged, lockable doors. A minimum of 60 linear feet should be provided for book storage. The tops of these cabinets will serve as counter space, which should be at work-top height. The counter space at the back of the room should be designed with knee-holes for use for computers and printers, and have electric outlets above the counters.
  - Each classroom should have between 28 and 40 feet of whiteboard and about 20 feet of tackboard. Main teaching layout will be designed in accordance with DOC construction standards and will include a Promethean Board.
  - Map rails and tack rails are to be placed above all whiteboards. Hooks suitable for hanging drawing instruments are to be placed beneath the whiteboards in each academic classroom.
  - One flag holder attachment is to be placed on all map rails with four to six map holders. Two-inch cork tack rails should be placed in available space in all teaching spaces and in all corridors.
  - Each classroom should be equipped with two-inch blinds.

**Computer Laboratory**

- One computer laboratory should be designed in each grade level area of the building.
- Each computer laboratory is to accommodate 32 student workstations.
- File server and printers are to be located near teacher's desk or in office.
- Electrical service to the computer labs should be isolated from circuits that power air conditioning, heavy duty electric motors, kilns for art classes, and, in general, any device or devices that draw heavily on electric current.
- In order to maximize after hours use, the computer complex is to have a self contained air conditioning system.
- The computer laboratories are to have whiteboard and tack board.
- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- The architect should consult with the OCTO/DOC for the latest technology requirements.

## **Science Laboratories**

<b>Spatial Needs</b>
Laboratory
Preparation/Project/Storage Room
Chemical Storage

- Science laboratories should be designed in pairs, within team areas, with preparation/project and storage rooms adjacent, preferably between pairs of labs.
- If the science labs are on separate floors of the building, they should be located near an elevator.
- The teaching wall should be on one of the long walls of the laboratory.
- The architect also should refer to the MSDE document, *Science Facilities Design Guidelines*, 1994 when designing the science laboratories.
- These rooms serve as a lecture/laboratory space and should be equipped with the basic equipment as listed below.
- Each science lab should have two exits.
- Seven island style worktables with hot and cold water, electricity, and gas are to be provided.
- One mobile bench (dry sink type) should be located under windows in each lab to facilitate work with plants.
- A 3'x5' demonstration table should be located at the front of the room. This demonstration table should be equipped with a stone sink, hot and cold running water, gas, and electricity.
- 24' of whiteboard and adequate tackboard are required. Wiring for a promethean board should be provided in the center of the whiteboard.
- Two 4' project cabinets and two 4' storage cabinets, all lockable, are to be located in each room.
- All rooms are to be capable of complete darkening.
- Each lab should have a fume hood and adequate ventilation.
- Each room should be wired for tie-in to the school computer network at each lab station.
- There should be a master cutoff switch for gas, water, and electric in each room. The master cutoff switch should be strategically located so that it is not overly accessible to students, and should not be located near the exit door of the classroom. The cut-offs should operate electrically (as panic buttons) with a visible light indicator for gas and electric.

- A safety station must be installed, with shower, eyewash, and drain.
- In accordance with ADA guidelines, at least one science lab station in each laboratory should be made accessible to individuals with disabilities.
- Cabinetry for storage of laboratory equipment and microscopes should be provided in all of the labs.
- A sanitizing goggle cabinet should be provided for all labs.
- A teacher's wardrobe should be provided.
- A location should be identified for a file cabinet.
- Locks with a common key are to be provided on drawers in special areas and the teacher demonstration table.
- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- Two pull-down electrical outlet fixtures should be provided in each lab: one in the center, one in the rear.

### **Preparation/Project/Storage Rooms**

- These rooms are to facilitate the preparation of student projects and short-term storage of projects, as well as to provide general storage.
- Each room is to contain adjustable locked storage and counter facilities, electrical hookup and space for a refrigerator.
- Easy accessibility to the science rooms is important and is a required for visual control of the rooms from adjacent rooms.

### **Chemical Storage Room**

- This storage room should be located adjacent to the 7th and 8th grade science labs and must meet code requirements for chemical storage including:
  - This room must have a 24-hour, 365 day per year exhaust system vented directly to the outside in compliance with the latest applicable codes.
  - It should include non-corrosive wooden shelving with lips, flammable cabinet and acid cabinet.

- These rooms should contain sinks equipped with hot and cold running water and a floor drain and workbenches equipped with electrical and gas outlets.
- Space and utilities should be provided in each prep room for a dishwasher.
- Emergency shut-off and telephone should be located in the chemical storage and prep room only.

## **Instructional Support Rooms**

<b>Spatial Needs</b>
Team Workroom
Interdisciplinary Textbook Storage Room
Departmental Textbook Storage Room
Foreign Language Textbook Storage Room
Instructional Data Assistant Room
Developmental Reading Room
ESOL Classrooms

### **Team Workroom**

- Two team resource center/workrooms are to be provided for each grade level, providing space in each for teacher desks or a large conference table.
- These rooms should be located next to each other and have an interconnecting door and a 4' x 6' window with blinds between one another.
- A telephone will be located in these rooms.
- Storage and open/closed bookshelves to store teaching supplies and instructional materials should be provided.
- A work counter with sink and electric outlets is needed.
- Three feet of tackboard and four feet of whiteboard are required.
- Wiring for four computers in each team room is required.

### **Interdisciplinary Textbook Storage Room**

- An interdisciplinary textbook storage room is to be provided for each grade level and is to be easily accessible from the classrooms and the team workroom and should have adjustable built-in shelving.
- These rooms must have adequate HVAC and lighting for flexible use by staff as office space.
- Secure storage for computers should be provided within this space and should include adequate electric power for recharging battery powered laptop computers.

**Departmental Textbook Storage Room**

- Three departmental textbook storage areas are to be provided with the same requirements as the interdisciplinary textbook storage rooms.

**Foreign Language Textbook Storage Room**

- A foreign language textbook storage room must be centrally located near the 7<sup>th</sup> and 8<sup>th</sup> grades for foreign language materials.
- It needs to have adequate HVAC for flexible use as office space for staff.

**Instructional Data Assistant Room**

- The room needs to be centrally located, is required for an aide who conducts assessments and updates individual student records.
- Secure storage for school wide records and materials should be included.
- The room should be wired for a computer with printer.
- This room needs a telephone.
- A tackboard should be installed.

**Developmental Reading Room**

- The developmental reading room should be centrally located.
- This room is required to facilitate instruction in reading composition study skills.
- Space for small group work in reading also is conducted in this room.
- Twelve feet of whiteboard and twelve feet of tackboard should be provided.

**ESOL Classrooms**

- The ESOL classrooms should be located in the academic areas of the building and be designed with the same requirements as a regular classroom.

**Special Education Facilities**

<b>Spatial Needs</b>
Special Education Classrooms
Team Workroom
Resource Room
Speech & Language Room
Occupational Therapy/Physical Therapy Room
Storage (textbooks and instructional materials)
File Space (Secured)

**Special Education Classrooms**

- The special education classrooms should be located in the academic areas of the building and be designed with the same requirements as regular classrooms.

**Team Workroom**

- The team workroom should be designed exactly like the team rooms in the regular education areas but should be located adjacent to the support suite.

**Resource Room**

- The special education resource room needs open shelving, counter space, and closed storage.
- The room is to be sufficiently wired to accommodate AV equipment, computers, and have tack and whiteboard.
- It should be located in association with the academic classrooms.

**Speech Language Room**

- This room requires a whiteboard, tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe.
- Room for a teacher's desk, lockable file cabinet, and table to work with small groups of students is required.
- The speech/language room should be wired for access to one computer workstation each.

## Special Education Facilities

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- The speech room must be located on the first floor and be acoustically treated.
- The speech room needs a 4' x 4' mirror mounted to the wall.
- The speech room requires a sink with counter space.

### Occupational Therapy/Physical Therapy (OT/PT) Room

- Each room must have whiteboard that is mounted two feet off the floor.
- A tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe are required.
- A sink with counter space is required in the OT/PT room.
- Room for a teacher's desk, lockable file cabinet, and assorted sized furniture with adjustable legs should be provided.
- The OT/PT rooms should be wired for access to one computer workstation each.
- The OT/PT requires a ceiling mounted hook for a swing.

The OT/PT room requires lockable storage with sufficient area to house large gross motor equipment (minimum of 35 square feet) such as therapy balls, scooter boards, walkers, balance beams, ramps, etc.

## **Music Suite**

<b>Spatial Needs</b>
Instrumental Music Room with approximately 400 sq. ft of perimeter storage)
General/Choral Music Room
General/Choral Storage Room
Music Office

- The music area should be at the same level as the stage, if possible, to facilitate the movement of equipment from the music rooms to the stage.
- Each room is to be acoustically isolated from the rest of the school and the general/choral and instrumental areas separated by an acoustical barrier or wall with a Sound Transmission Classification (STC) of 50 or more.
- Listening is an important skill related to music education, and thus the need for quiet ventilation. Therefore, noise criterion (NC) levels of lighting and ventilating systems must not exceed NC 25 for the large rehearsal rooms and NC 30 for the practice rooms
- Both music rooms must have access to all computer technology including the LAN, and be equipped for a multimedia station.
- A water fountain should be located in the music suite.

## **Instrumental Music**

- The instrumental music room must have a level floor.
- The specified 1,900 square feet is a minimum requirement and must not be reduced to accommodate other design needs.
- 400 square feet of the instrumental music room should accommodate Wenger type cages for instrument storage around the perimeter walls of the room. The room depth may be varied if it will provide better acoustics.
- Acoustical treatment and carpeting is needed so that the room is sound engineered for a band with maximum size of 80 members and a decibel level in the safe range, keeping in mind that the typical band produces decibels in the 100-120 range.
- A 16-foot ceiling is necessary to obtain proper volume.

- No supporting pillars or fabric folding doors are to be used in the room.
- An outside entrance should be near, but not in, the music suite if possible.
- Approximately 80 square feet should be devoted to an acoustically treated room located in the rear and side area that can double as two practice rooms and for percussion storage. A four-foot door and security lock should be provided so that heavy equipment may be rolled out for rehearsals and rolled back into the room for night storage.
- Whiteboard and tackboard must be provided.
- Bookcases and a music folder cabinet should be included on one side of the room. The band music folder cabinet should be horizontally slotted with 150 slots to hold 14" x 12" folders with facilities for numbering each compartment.
- Two microphones should be hung from retractable ceiling mounted fixtures for use with recording equipment.
- A sink is needed for cleaning instruments.

### **General/Choral Music Room**

- The general/choral music room is to have a ceiling of approximately 16 feet.
- The dimensions should be approximately 38' x 27'.
- The entrance should be a double entry door.
- The room is to seat approximately 80 students and be on one level. The room should be designed to accommodate two separate teaching areas—one for choral music and the other for Computer Assisted General Music Program (electronic keyboards).
- The room should have a whiteboard along the front (long axis) of the room, large tackboards on either side of the room with bookcases beneath on one side, and blackout blinds and wall screen.
- Heavy-duty ceiling tiles should be used to assure maximum loss in sound transmission. Acoustical treatment is to provide a sound transmission loss of at least 50 decibels and a reverberation time of between 1.2 and 1.6 seconds.
- Adequate ventilation is needed.
- A music folder cabinet, horizontally slotted, with locking doors, with at least 100 horizontal compartments (15 inches high, 2 inches wide), and with facilities for numbering each compartment is required.

**General/Choral Storage Room**

- The general/choral storage room should be adjacent to and have access from both the general/choral room and the instrumental music room.
- Cabinetry must be adequate to store 20 electronic keyboards and 33 guitars in spaces 6 inches high, 40 inches deep, and 16 inches wide. The cabinets should be carpeted to protect the instruments from scratching.
- The room should be arranged so that a portion of it may be used as a practice room with a piano, as a storage area for choral music file cabinets, and for storage for drums, etc.
- Maximum-security doors with upgraded locks -are to be provided.
- A four-foot door is required.

**Music Office**

- The music office must be located between the instrumental and the general/choral room.
- A telephone is to be provided.
- Cabinetry is to be provided for storage.

## **Visual Arts Suite**

<b>Spatial Needs</b>
Art Room
Storage/Office
Kiln Room

- The visual arts suite should be designed with outside doors to an art courtyard from the teaching station and with the storage/office and kiln room adjacent to the classroom.

### **Art Room**

- The room is to have adequate natural and artificial lighting and views as well as access to the outdoors.
- Cabinetry and wall colors should be mostly neutral.
- The design of the room must allow for placement of the art tables with adequate space between them for good circulation.
- Entrance doors must clear 36 inches.
- A lighted display case should be located in the hall outside the art rooms.
- An 8' wide x 8' tall tackboard with open space below for drying racks should be provided.
- Tackboards should be provided on the walls, as much as possible.
- A 4-6' wide bank of cubbies (height may vary) to accommodate 32 students' backpacks and notebooks should be provided.
- Three large stainless steel sink (18" x 40" x 14") should be provided in the room. Each sink will have solid waste traps, two drains, two lever-controlled hot and cold faucets, adequate counter space for storage, approximately 3' or either side, and wall cabinets above (if sinks are not on an island). One sink needs to be ADA accessible and equipped with a bubbler.
- The wall behind the teaching station should include an 8' wide x 6' tall whiteboard with a 2' tall tack strip above. Additional tackboard should be provided to ceiling and on the sides as space permits.

- Each classroom should be equipped with a retractable projection screen (7' x 7'). The projection screen should not be mounted near any emergency lighting tracks. All areas of the screen should be illuminated and readable when the lights are dimmed.
- Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- Open space should be provided near the sink for potters' wheel or computer carts.
- Ample electrical outlets, approximately every 4' should be provided.
- Open and closed shelves are to be provided for storage of art projects, flammable materials, and reference books.
- Open space is to be provided in the art room for three banks of blueprint cabinets and two drying racks (NIC).
- Blackout facilities are to be included on windows.

### **Storeroom/Office**

- This room should be designed with windows to the art room.
- Space should be provided for a teacher's desk, telephone, computer and electrical outlets.
- As much open shelving as possible should be provided in this room.
- Space should be provided for teachers' files.
- Immediately inside the entrance to the storeroom, a worktable 6-feet wide, 30 inches tall, 34 inches deep should be provided with built-in adjustable shelves below and 14-inch deep wall hung shelves above. This table will accommodate a 30-inch square paper cutter and storage of large art reproductions and papers below, in 3 banks of shelving units 8 inches on center, 20-inches wide (inside width).
- The storeroom door should be lockable, and 2 coat hooks are to be mounted behind the door.

### **Kiln Room**

- The kiln room should be designed as follows:
- Equipped with space and utilities for 2 kilns (to be included) and an exhaust fan hood.
- 18" deep tall metal shelving.

- A spray booth with exhaust.
- A small worktable with shelves above and below.

## **Multipurpose Technology**

<b>Spatial Needs</b>
Multipurpose Technology Laboratory
Computer Technology Laboratory
Preparation/Storage Room

- Sufficient lighting to create shadow less work surfaces.
- Ample electrical service and receptacles to accommodate computers, machines, and portable electric tools. Sufficient service shall be provided to accommodate flexibility within the studio with tabletop machinery and overhead pull-down receptacles, providing for machines and portable electric hand tools.
- If floor receptacles are provided, they shall be flush.
- Hallway walls should include interior glass for viewing into the laboratory.
- Windows starting 36" from the floor should be provided between all of the rooms in this suite.

## **Multipurpose Technology Laboratory**

- Electrical and data outlets should be provided on the teaching wall for a Promethean Board.
- Adequate ventilation system to remove airborne dust is required.
- Floor covering shall be non-slip tile.
- Three emergency control switches. One switch in the lab, one just outside the lab and the third located in the teacher's office with a key to restore power.
- The room requires whiteboard and tack board.
- This laboratory requires a wash-up sink.
- Shelving should be provided around the perimeter of the room for student project storage. The shelving can be located below workbenches and overhead if there are no tools being used in that area.
- Small tabletop machinery shall be installed along the perimeter of the laboratory. The height of these counters should be 24".

**Computer Technology Laboratory**

- This room should be located adjacent to the Multipurpose Technology Laboratory.
- This room should be designed with same requirements a standard computer laboratory.

**Preparation/Storage Room**

- The preparation room should be located next to the Multipurpose Technology Laboratory.
- The door and wall should have windows into the Multipurpose Technology Laboratory to allow for supervision by the staff.
- One side of the room should be designed have a counter with wall and base cabinets.
- Storage area will be equipped with steel shelves and cabinets capable of storing a variety of instructional materials, supplies, special tools, equipment, and student projects.
- A small lumber rack is necessary for storage of lengths of lumber and metal.

## **Multipurpose Laboratory**

<b>Spatial Needs</b>
Multipurpose Laboratory
Storage

- This space will be designed for flexible use by art, family and consumer science, and other elective courses.
- The design should include full computer access so that the space could be used as a computer laboratory.
- The teaching wall should be designed according to DOC standards.
- Perimeter counters should be provided along one or two walls of the laboratory with wall and base cabinets.
- Adequate electrical service and receptacles to accommodate computers, small and large appliances, and other electric machines are essential.
- Access from the laboratory to the storage room is needed.
- A kitchen area should have three kitchen units, (to be placed along one or two adjoining walls) each containing the following:
  - Eight feet of countertop space including a stainless steel sink;
  - Lockable base and wall storage with hinged doors, with a minimum amount of drawer space (2 drawers per kitchen);
  - Wall oven;
  - Ample electrical outlets along the counter to be used for small appliances and induction type stoves;
  - Hot and cold water;
  - One of the kitchens should be ADA accessible;
  - One safety eyewash station should be provided in the lab; and
  - Space for two residential refrigerators, accessible to the kitchens should be provided.

**Storage**

- The storage room should have the following:
  - Lockable door with access to the teaching station;
  - The room is to be equipped with metal shelving secured to the perimeter walls;
  - Space and electrical and plumbing requirements should be designed for A heavy-duty washer and wall-vented dryer;
  - Perimeter counters should be adjacent to the washer/dryer and be a minimum of 24” deep;
  - Space for one residential refrigerator and one residential freezer; and
  - A sink.

## **Physical Education**

<b>Spatial Needs</b>
Gymnasium (equals 2 teaching stations)
Auxiliary Gymnasium (Dance/Wrestling)
Auxiliary Gymnasium (Fitness/Weight Room)
Health Classroom
Locker Rooms
Storage Rooms
Toilet Rooms
Shower/Drying Towel Rooms
Laundry Room
Offices
Common Planning Area
General Storage
Outdoor Storage
ICB Storage
Outside Storage Shed (See Site Requirements)

- Major entrance doors to the gymnasiums and locker rooms should be double doors with no center posts. Non-glazed doors throughout the entire area are preferred.
- Doors should be 48" wide.
- Storage closets should have no center posts and should be able to be held open to allow for easy movement of equipment.
- If design allows, operable windows in the gymnasium should be provided.

### **Gymnasium**

- The gymnasium is to have a wooden floor.
- The gymnasium requires fiberglass electrically operated folding bleachers to seat one-third of the maximum projected enrollment along one long side, leaving an area of 65 by 100 feet when folded.
- A 27-foot clear ceiling is required.
- An electrically operated folding partition with pass-through door is to be installed with convenient controls. The folding wall should fold to the bleacher side.

- Fixed equipment will include the following:
  - Climbing ropes (2 with knots, 2 without knots)
  - High bar with floor plates
  - Insertion type (SENOH only) floor plates for volleyball and badminton game standards and gymnastic equipment Sports Imports (Senoh) red aluminum combination uprights that work for both volleyball and badminton, therefore only requiring one size of poles and one size of sleeves.
  - Wooden rings with hoist and safety straps
  - Floor plates for uneven bars
  - Scoreboard
  - A clock with cage at each end of the gymnasium
  - Archery net with hoist on non-bleacher side
  - Six basketball baskets, with safety straps. Four should be cross-court. The two end baskets should have rectangular glass backboards and hydraulic rims. All baskets should be motorized and adjustable with key. There should be no doors under the basketball goals.
  - Wall safety padding must be mounted under each basket.
  - Provisions for reducing glare should be considered.
  - Shielded metal halide lighting should be provided.
  - Acoustics should be addressed.
  - It is particularly important that ventilation function equally and quietly on both sides of the folding partition.
  - All switches, fire alarms, etc. should be located in corners, covered with wire boxes, and be duplicated on each side of the folding partition.
  - Each wall of the gymnasium should have four sets of electrical outlets.
  - Painting and creative artistic wall graphics should be provided.
  - The gymnasium should be equipped with acoustical deck, computer and cable hookups and sound system.

- A location should be identified for a Promethean Board including the appropriate power and wiring.
- A recessed water fountain should be provided outside each end of the gymnasium or integrated into an alcove within the gymnasium.
- A lobby with phone booth, display case, bulletin board, and small storage closet should be provided adjacent to the gymnasium.
- Security doors should be provided to close off other parts of the building from the gymnasium/lobby areas.
- If the gym opens to the outside, a step-down entrance with concrete landing is needed.
- Emergency lights should be at least 12 feet from the floor.
- MCPS staff will provide gymnasium court markings.
- Plug-in service for score table controls shall be provided in the floor and need to be flush. Controls must be accessible when bleachers are in the open position.
- Attention should be given to the design of lighting fixtures so that they will not be damaged by indoor ball sports.

### **Auxiliary Gymnasiums**

- The auxiliary gymnasiums should be located adjacent to the gymnasium area and the lockers rooms and have sixteen-foot ceilings.
- The two auxiliary gymnasiums should be located next to each other.
- Direct access to the corridor is desired.
- Projections, posts, or other hazards are to be avoided.
- These gymnasiums must have a ventilation system.
- The minimum width of the auxiliary gymnasiums should be 34 feet.
- Electric outlets should be located on all four walls.
- Both auxiliary gyms must include a small recessed lockable closet with shelving.
- A small 6' x 4' tack board and whiteboard are to be installed in each auxiliary gymnasium.

- Acoustical panels, tackboard, bulletin board, auxiliary stereo sound system, computer and cable hookups and clocks with cages should be included in the two auxiliary gymnasiums.
- Operable windows are to be installed with grates.
- Wall graphics are to be specified by MCPS staff.
- Exterior doors are to be keyed for reentry.
- Light switches are to be keyed.

### **Dance/Wrestling Room**

- Suspended wood floors are to be installed in the dance studio.
- The room will need to accommodate wrestling mat storage or hoist.
- One wall must be mirrored with a barre provided with an eyebolt 6'2" high, dividing the space in half long-way.

### **Fitness/Weight Room**

- The second auxiliary gym should have a rubberized, resilient floor for weight training.
- The ceiling height should be 16'.
- 6'x12' mirror should be mounted on one wall of the weight room.
- A climbing wall should be installed along the other long wall of this room.
- Pull-up chin-up bars and pegboard (6'x3') should be in this room.

### **General Storage Room**

- The general storage room should be located in the gymnasium and needs to have the same ceiling height as the gymnasium. The general storage also needs to be easily accessible from the auxiliary gymnasiums.
- Mats, gymnastic equipment, and other physical education materials and equipment need to be accommodated.
- A small intramural athletic coordinator storage closet is needed near the gym (separate key).

- Two doors, each four feet wide and seven feet high with no thresholds or center mullions and heavy-duty hardware are required for the interior storage rooms.
- An outside storage area requires double doors that need to be seven feet high.
- All storage areas should include shelves, bins, pegs, and pulley system for storing goals.

### **ICB Storage**

- This storage room is for use by community groups and should be in or near the main gymnasium.
- It should include shelving on one wall as well as space for badminton and volleyball uprights.
- This room needs to be keyed separately.

### **Locker Rooms**

- The locker rooms need to meet the following requirements:
- Interior double door entrances with maze to block vision into space must be designed.
- The locker rooms need an outside exit for use by physical education classes. This exit door must be keyed for re-entry by classes.
- A "step-down" with concrete landing should be planned.
- Some shelves should be provided near the entrance to the locker room for student books.
- Male and female locker rooms should be adjacent and located on the same floor so that the Physical Education Offices can have a connecting door and common connected planning room.
- Locker space should handle a total of 1,440 lockers evenly divided between male and female locker rooms. All lockers are to have padlocks and be 3 tiered 12" x 12" x 24". Locker rows should be situated for maximum supervision from the PE office area and be no higher than six feet.
- Several lockers with key-entry are needed for ADA accommodations.
- The locker rooms are to be well ventilated and include a deodorizer system.
- Clocks, tackboard, PA, and a water cooler must be provided in each locker room.

- Benches used for dressing purposes are to be secured to the floor with a single bench between locker rows.
- Full-length mirrors are to be provided on the ends of each locker bank with convenient electrical outlets.
- The locker room should reflect school colors.
- Storage within the locker area is to be near the office and should accommodate various physical education supplies, equipment, and furnishings. Shelving with bins and hooks will be specified later. Shelving must have lip to keep balls from falling.
- A hose bib should be located in each locker area. Appropriate drainage of the locker area is required.
- The floor surface must be a non-skid surface but smooth enough for thorough cleaning. CVT/rough surface tile is preferred.
- Toilet rooms are to be located in each locker area and are to contain lavatories, water closets, and/or urinals.
- Mirrors are to be installed over sinks.
- If they are to serve community needs after school hours, the rest of the locker area must be gated off. Light switches are to be keyed.

### **Shower/Drying/Towel Room**

- The shower area should be well ventilated and free from hazardous projections.
- Each shower room is to have three individual showers and one handicapped accessible shower, with modesty panels, a nonskid floor surface and recessed soap dishes.
- A central lockable cut-off valve for the showers must be provided in each locker room.
- The drying room, with nearby towel storage, should be located between the shower room and locker room and have wall hooks and a nonskid floor surface, preferably tile.

### **Laundry Room**

- A laundry area with floor drain for a commercial washer and dryer and laundry tub should be included with shelving for towel storage.

### **Offices**

- The offices need to be centrally located with access to both male and female students, have windows with blinds for effective supervision of the appropriate locker room and have VCT floors.
- Each office requires a separate shower, toilet, sink, mirror with shelf over sink that is large enough to use as changing areas for the physical education staff.
- Six full-length lockers and a full-length mirror also should be provided.
- Storage is required for the offices.
- The offices need to be air-conditioned.
- The offices require all technology access, telephone, 4 tackboards, 2" wood or tack (5 feet high around perimeter of the room) strip and a clock.
- Each office is to be separated from the other office by a common planning room with access to both the common planning area and to the hallway to the gymnasium.

### **Common Planning Room**

- The common planning room requires access from both PE offices and the hallway.
- This space needs to be designed with locking kitchen type casework, cabinets and counters, clock, phone, technology capabilities, built-in bookshelves, tackboard, and whiteboard.
- The space should be large enough to allow for a small conference table with six to eight chairs.

### **Health Classroom**

- The health classroom should be designed with the same specifications as all academic classrooms.
- This classroom needs to be located in close proximity to the physical education suite since the health and physical education teacher may be the same person and may have to supervise the locker room.

## Computer Support

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### **Computer Support**

<b>Spatial Needs</b>
Storage Room/Office Area
Telecommunication Equipment Closets
Telecommunication Closets

- A secure storage room/office area is provided for storage of software and instructional materials. The combination storage room/office area is to be located near one of the computer laboratories and to be wired for building-wide network access. This room may house multiple file servers.

## **Instructional Media Center (IMC)**

<b>Spatial Needs</b>
Reading Room
Listening Viewing Project Area (2)
Direct Instructional Area
Workroom/Materials Preparation
Office
Technology Information Access Center (on-line)
Storage, Media General (main floor)
Storage (upper/other floor)

- The Information Media Center (IMC) is the information hub of the school. Every classroom and office should have access to the electronic information capabilities of the IMC through on-line computer access. The MSDE document, *Facilities Guidelines for Library Media Programs*, 1998 may be used as a reference for the design of the instructional media center.
- A complete media service area is to include:
  - Study and Research Area—space for information desk, catalogs, online stations, study and research tables, reference materials, professional library materials, basic collections, and stacks;
  - Informal Reading Area—space for books and periodicals that encourage literacy, lifelong learning, and reading for pleasure, and browsing and independent reading area;
  - Instructional Area—space for formal seating for small, large group, and whole class instruction, “teaching wall” with appropriate instructional technology, and display space;
  - Production and Group Project Area—space for functional work and meetings for individuals, teams, and classes as well as facilities for media production; and
  - Administrative Area—space for circulation desk, office area including space for collaborative planning and processing of library media materials, communications distribution room, audiovisual equipment storage, and storage space for supplies and materials.
- It is essential that these areas be flexible and adaptable to new technological developments. The IMC should be designed with the following:
  - The IMC is to be planned as an integral feature of the school, centrally located within the instructional center of the school. It must be easily accessible from the outside and should be

located on the main or first floor of the building.

- Toilet rooms are to be located nearby, but not adjacent to the media center.
- Good security for each area of the media center is essential.
- There should be easy access to the elevator.
- Sight lines are an important feature in the design of the media center. Staff should have visual supervision of the entire media center including the entrance from the IMC office.
- If possible, the media center should not be located below high noise level activities such as music or technology education.
- An area should be available in the media center to turn down the lights for use of projection equipment.
- Entrance and egress from the media center should be through a security gate system designed to be an integral part of the resource room structure so that no student may depart without passing through the security gates.
- Aesthetically pleasing low barriers need to be provided on both sides of the security system gate and it must be accessible to persons with disabilities.

### **Administrative Area**

- The circulation desk needs to be near the entrance but not so close that it interferes with the security system.
- Aesthetically pleasing low barriers need to be provided on both sides of the security system entrance. The circulation desk should be designed to incorporate these features:
  - at least two workstations capable of supporting the automated circulation systems;
  - a book/materials return slot and chute with a movable book return truck built in;
  - shelving units with sliding doors;
  - a storage area for book return carts;
  - built-in file cabinets drawers;
  - supplies drawers;
  - a writing area unit;
  - an area for a laser printer and supplies.

- The front height of the circulation desk should not exceed 39".
- The workroom and media production areas are to be located directly in back of the circulation desk but separated by a wall with windows and a door.
- The office areas should be close to the circulation desk and provide for visual contact with the general reading resource area and the security system.
- The office is set aside for use by media center staff for administrative duties, teacher conferences, and office routines. It is to be located adjacent to the preparation area and the reading (resource) area and is to contain a three shelf storage unit, six feet in length, with a counter top above the shelving unit. Space is needed for a desk and a computer workstation. A lockable storage cabinet should be provided.

### **Informal Reading Area**

- The reading room provides for the circulation desk, displays, area for the reading and browsing of newspapers, magazines, fiction, and nonfiction materials.
- Lighting should be over the stack aisles and aligned for easy reading of books and titles.
- Shelving and shelves must be wooden with 1200 linear feet for print material and 220 linear feet for nonpoint material.
- At least one additional unobstructed CCTV receptacle (44" above finished floor) with electrical outlet must be provided.
- Comfortable seating should be provided for students to read.
- A small informal reading area near the current magazines should be provided.

### **Instructional Area**

- A special configuration for directed instruction and independent workstations to house 15 computers and applicable networked printers should be provided.
- Two projection screens should be installed in the ceiling of the main reading room for group presentations including traditional and technologically delivered instruction. Rear screen projection may be substituted for an automated screen in one area.
- A CCTV receptacle, computer networking (LAN) access and whiteboard with tack strips above it should be provide in the area that will be used for classroom type instruction.

- Zone lighting with independent switches should be provided so that audiovisual equipment may be used in the instructional area without affecting the circulation and book stack areas.

### **Study and Research Area**

- In addition to the usual electrical outlets on perimeter walls under bookshelves, there should be at least two double outlet plugs in the floor or in columns or "towers" of the main reading room area to provide flexibility in placement of the computers that will serve as the catalog system.
- Space should be allocated for at least four computer workstations and a networked printer to access the catalog system.
- Five computer workstations are needed for directed instruction in the use of on-line systems and data retrieval. It should provide visual access to screening LCD displays or rear screen projection. All workstations in the configuration should be capable of viewing the display.
- Two small group work areas that will allow for students to be visually supervised, but work independently on multimedia/telecommunication projects. This area may be closed off and made without interfering with the security system.
- The on-line information retrieval area (a designated section of the Reading Room) is to be used to conduct on-line computer searches of the DIALOG system and other databases and for instruction in the use of this retrieval method.

### **Production and Group Project Area**

- The workroom media production area provides for the preparation of several types of instructional materials, such as transparencies, slides, and charts.
- It is to contain a sink, cabinet, and ample worktops for student and teacher use.
- This area also provides for ordering, receiving, and processing of all materials and equipment.
- Shelving, cabinets and counter spaces are required.
- One unit of the cabinet should be able to contain large prints and supplies. Counter space should be designed for two workstations for file servers and one additional workstation for administrative functions.
- Entrance from the corridor and the IMC is needed.
- A lockable teacher wardrobe should be provided.
- At least one three-foot section of base cabinets should not have overhead wall cabinets.

- Tackboard should be placed above the countertop.
- Counter space with electric outlets above the countertop for repair work should be included.

### **Storage**

- Storage is to be adjacent to the workroom and preparation room and is to be furnished with shelving and cabinetry appropriate for storing various instructional materials and equipment, including recorders, record players, projectors, and other electronic learning aids.
- An exit to the corridor near the elevator is needed.
- Storage on the upper/other floor is to have upgraded lighting and ventilation for future possible expansion to become a 2nd workroom.

### **Multimedia Production Room**

- This room should be located adjacent to the Media Center and will be used for staged video recording and other multimedia activities.
- One wall should be designed to accommodate six editing stations.
- A chromakey green screen should be installed on one of the walls for video and photography use.
- This room does not require any special lighting for video production.

**Student Activities Facilities**

<b>Spatial Needs</b>
School Store
Student Government Storage Closet

- These rooms need direct access to a corridor and are to be near the cafeteria and/or gymnasium.
- Flow of student traffic to and from the area is an important consideration.

**Administration Suite**

<b>Spatial Needs</b>
General Office
Principal's Office
Assistant Principal's Office
Workroom/Storage/Toilet Area
Storage
Conference Room
Copier Workroom
In-school Suspension Room
Financial Secretary Office
Staff Development Office
Security Office
Public Address Closet
Head End Room

**General Office**

- The administrative suite must be located with good access from the main entrance of the school and visual oversight of the main entrance and bus drop-off area.
- The suite must be a natural first stop for visitors to the school and must, therefore, have direct corridor access. A security vestibule must be designed so that all visitors must enter the general office to check in before entering the school.
- Spaces need to be arranged for student and visitor flow and for efficient use by office staff.
- The attendance secretary should have a window to the corridor.
- The general office is to have easy access to toilet rooms, phone room, and coat closet.

**Principal's and Assistant Principals' Offices**

- The principal's and assistant principals' offices are to relate effectively with each other as well as to the general office.
- The principal's office is to have a private and public.
- An area (alcove) is to be designated just outside the principal's office for the principal's secretary; 50 square feet may be deducted from the principal's office for this purpose if required.

- A waiting area for students should be designed next to the assistant principals' offices.

### **Workroom**

- The workroom contains cabinetry with sink, shelving, and workspace, including electrical outlets suitable for preparing various releases and for copying and other types of paper work.
- A sink cabinet and space for full size refrigerator and dishwasher are to be located in this room.
- Staff mailboxes are to be readily accessible but not visible from the main entrance and are to contain 100 boxes at least 12 inches wide plus five additional boxes that are somewhat larger.
- The workroom is to have a space and outlet for a small copier machine.
- Offices, workroom, storage, and toilet rooms are to serve the general office employees.
- The storage room is to relate well with the workroom and need not be directly accessible to the corridor. It should include a small built-in safe or vault.
- A coat closet, phone room and men's and women's toilet rooms for administrative office staff and visitors should be included.

### **Conference Room**

- The conference room is to be located in relationship to the principal's and assistant principals' offices and be directly accessible to the corridor.
- The conference room is to have a whiteboard installed.

### **Copier Workroom**

- The copier workroom is for staff use and convenient for teacher use.
- It should not be located in the media center.
- This room requires storage cabinets, shelving, and lockable cabinets for paper, ink, and fuser oil.
- Proper ventilation is required in this room.

**In-school Suspension Room**

- The in-school suspension room should be located adjacent to the main office suite.
- The head end room is required to accommodate future computer needs.

**Financial Assistant's Office**

- This office should be located in the administrative suite.
- The office needs space for a desk and file cabinet, and requires tackboard and wiring for a computer.

**Staff Development Office**

- The staff development office should be centrally located and in or near the administrative suite.
- This office needs a space for a desk, file cabinet, and round table with chairs.
- The office also needs whiteboard, tackboard, closet, and video, voice and data outlets.

## **Guidance Suite**

<b>Spatial Needs</b>
Counselor's Office
Waiting Area
Conference Room
Records Room

- The guidance suite should be separate from the administration suite, but easily accessible from the main entrance.
- Counselor's offices should be provided at the rate of one per every 250 students.
- The suite consists of a waiting area with space for the secretary, seating for visitors, storage for office supplies and a coat closet, the conference room, the records room and counselors' offices.
- These spaces must have window walls, doors with windows, and be designed so that students can find them easily and feel free to drop in between classes.
- Mini blinds must be provided for times when privacy is required.
- Each office should be planned for the counselor's desk with computer, phone, file cabinets, and a small round table with four chairs for small group counseling.
- The conference room is to be accessible from the waiting area and corridor.
- The waiting area must be wired for the secretary's desk and not be designed as part of the corridor/hallway to the main office.

### **Records Room**

- The records room is to accommodate shelving, files, and other record cabinets for use by both administrative and guidance personnel.
- It must, therefore, relate to both areas, yet be designed to afford security of private records and files.
- It should be located in the guidance suite.

## **Health Services Suite**

<b>Spatial Needs</b>
Waiting Area
Treatment/Medication Area
Office/Health Assessment Room
Health Assessment/Isolation Room
Rest Areas
Toilet Rooms
Storage Room

- The Health Services Suites should be in complete compliance with COMAR 13A.05.05.10A.
- The architect should refer to MSDE document, *School Health Services*, June 2002 for specific utility information.
- The health suite must meet accessibility requirements of the ADA, and at a minimum, include spaces for waiting, examination and treatment, storage, resting, a separate room for private consultation and for use as the school health services professional's office, a toilet room, and lockable cabinets for storing health records and medications.
- The health suite is to be located near the administrative area, preferably adjoining, with direct access to a main corridor for emergency access and egress.
- A bulletin board is to be installed just outside of the door to the health suite.
- A designated school health services professional must be involved in the planning of the health services suite.
- The suite should be designed to provide easy visual supervision of all the spaces by the health services professional.
- The health services suite must have a window into the general office so that office staff may monitor the room when health staff is unavailable.
- The health room must also have a door to the corridor.
- Ventilation is important throughout the health suite.
- A window to the outside, if possible, is preferred.
- The countertops should be seamless to aid in maintaining sanitary conditions.

- The floor finish should be an easily cleaned non-absorbent material. Carpet should not be used in any areas of the health suite.
- A non-porous ceiling material should be used. Vinyl-coated ceiling tile or painted drywall is an acceptable choice.
- If any of the areas are enclosed then glazed walls areas should be provided.
- The health suite requires wall and base cabinets, lockable file cabinets, for storing health records. A portion of these cabinets must be lockable to store medications, medical supplies, and equipment.
- Student traffic is to be kept close to the door, with cross traffic minimized, and good supervision of the room from within as well as from the general office area is to be provided.
- Two doors to the suite are required to move students through waiting and treatment areas during a mass procedure. One door is normally kept closed.

### **Waiting Area**

- The waiting area is to have space for up to ten chairs.
- A small tackboard should be provided in the waiting area to display health care and other information of importance to students and staff.
- A pamphlet rack, and a 24-inch x 48-inch table, should be provided.
- Two telephone jacks are to be installed in the waiting area.

### **Treatment/Medication Area**

- This area should be adjacent to the waiting area and toilet room to facilitate the efficient flow of students.
- This area should have a kitchen type sink with cabinets above and below (including a locked medicine cabinet), a 36-inch high countertop, and a small residential style refrigerator/freezer to store medical supplies and foods.
- The freezer should have an icemaker.
- The treatment area also requires a computer.
- This area also needs a scale, floor lamp, and an area for two chairs

### **Office/Health Assessment Room**

- The room requires one computer, fax machine, and electronic connection and physical proximity to a copy machine.
- The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- A small sink, with cup, towel, and soap dispensers should be provided.

### **Health Assessment/Isolation Room**

- The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- A small sink, with cup, towel, and soap dispensers should be provided.

### **Rest Area**

- This area should not be fully contained rooms but rather areas that can provide privacy for each cot with a draw curtain on a ceiling track.
- The rest area needs space for four cots, and one bedside cabinet.
- Separate areas for male and female students should be provided in the rest area.
- In the rest area, supplementary power ventilation capable of 20 changes per hour is to be provided, with control by means of a separate switch within the health suite.

### **Toilet Rooms**

- Two separate ADA toilets should be provided.
- Toilet rooms should be accessed without having to go through another functional space in the health suite such as a rest area.
- Ideally, students should be able to enter the health suite solely to use the toilet room without disrupting other activities.

**Storage Room**

- The storage area is to have space sufficient for a four drawer locked file cabinet, a wardrobe for coats, and a wheelchair, and a space for forms and supplies.
- A minimum of 12 linear feet of wall and base cabinets should be provided.

## **Staff Room**

<b>Spatial Needs</b>
Staff Room

- The staff room provides teachers with a place to rest, plan, study, and think together.
- The staff lounge should contain a compact built-in kitchen with six linear feet of counter space for a microwave and sink and a space for a refrigerator (NIC).
- This space is to be carpeted.
- Toilet rooms associated with the staff room are to be provided for both men and women and should be located in corridor just outside of staff room.
- A phone booth is required.
- Acoustical treatment is important.
- This area should have exterior windows and door to outside staff patio if design allows.
- Computer access should be provided.

## **Food Services Facility**

### **Cafeteria**

<b>Spatial Needs</b>
Student Dining Area
Stage
Storage
Chair Storage

### **Student Dining**

- The student dining area should be capable of seating one third of the student body at cafeteria tables or one-half in rows of chairs.
- Acoustics, ventilation, and color are important considerations in the cafeteria.
- A public address system should be built-in.
- An electronic signboard should be included in the dining area.
- Tackboard is to be placed near the entrance.
- Care is to be exercised in the location of windows in relationship to the location of tables and chairs.
- Trash from the dining area must not flow through the kitchen.
- Student toilet rooms must be located near the cafeteria and have good sound absorption.
- Outside access from the cafeteria to a paved area should be considered in the design of the student dining area.
- There must be a water fountain in the cafeteria.
- A listening assistance device for the hearing impaired should be included in the cafeteria.
- Security gates are to deny access to other parts of the building from the cafeteria/stage/lobby areas.
- An outside entrance to the cafeteria for easy access in the evening and an outside eating area with permanent trash cans (preferably a courtyard) are desirable.
- Consideration should be given to the use of electronic menu boards.

### **Stage**

- The stage should include closed storage for a piano and some storage for costumes and flats if possible.
- The stage and backstage areas must be accessible to individuals with disabilities and be accessible from corridors and the cafeteria.
- The stage space must have adequate exhaust ventilation and lighting for alternate uses.
- The stage should be equipped with stage curtains and a stage sound and lighting system.
- Battons for professional stage lighting (which will be purchased in the future) are to be installed. MCPS will provide these details.
- A whiteboard, tackboard, and screen should be included along the back wall.
- A movable wall should be designed to close off the proscenium if budget allows.
- A large screen electrically operated should be designed behind the stage curtain and wall for use for assemblies.

### **Chair Storage**

- Storage for 1,200 chairs on racks and for stage equipment needs to be provided
- 48" doors are required on the interior storage rooms.

**Kitchen**

<b>Spatial Needs</b>
Food Preparation
Dry Food Storage
Refrigerator
Freezer
Serving Area
Office
Locker/Toilet Room
Loading Platform
Receiving Area
Chemical Storage Room

- The kitchen is to have direct access from the loading dock, with a walk-in freezer and walk-in refrigerator.
- Walls and ceilings are to be light in color, smooth, impervious to moisture, easy to wash, and easy to keep in good repair.
- Floors are to be nonresilient, slip resistant, and easy to mop. Quarry tile is preferred.
- Kitchen should be linked to the security monitoring system and school intercom.
- A wall clock at serving line should be provided and should be linked to master control.
- When designing the kitchen and related spaces, special consideration should be made to temperature and humidity control and traffic.
- Control railings may be portable.

**Serving Area**

- The serving area shall consist of four food serving areas that may vary from school to school.
- Serving lines should be secured when not in use.
- Supervision is an important consideration in the serving area.
- Unobstructed sight lines are necessary for one staff member to effectively supervise students.
- Control of serving lines should be designed to facilitate rapid serving of food.

- A dedicated circuit for cash registers is required with under floor conduit for intercommunication links.
- Temperature and humidity control and efficient traffic movement throughout are required.
- Natural ventilation should be provided.
- Also of importance are the following:
  - Meeting current health and sanitation codes
  - Providing louvered shelving in the storage rooms
  - Designing trash storage completely separate from kitchen and dock areas
  - Locating the loading and receiving area, with sheltered dock and with access to the storage and preparation areas, separate from other school receiving
  - Considering the relationship and traffic movement within the dining area of the serving line to the remainder of the kitchen area
- Providing acoustical treatment to preparation and serving areas
- Receiving door must be 48" wide, self-closing, with peephole, and doorbell to manager's office.
- All windows must have screens.

### **Preparation Area**

- Space needs to be provided for cook, baker, and beverage/salad/sandwich prep areas.
- Trough-type drains at steamers, hand sinks in each prep area with soap and towel dispensers, and automatic wash filtered hood are required.
- Consideration of the utility distribution system is needed.
- Filtered hood with automatic wash above fryers and fire protection system are required.

**Dry Food Storage Area**

- This area must be located adjacent to the prep area and receiving area.
- Door opening must be a minimum of 3'8".
- This area must be air conditioned at all times.
- Mobile shelving and dunnage and key lock for security must be provided.
- This space must be free of roof access ladders or electrical panels.

**Chemical Storage Room**

- This area must be key-locked for security.

**Cooler/Freezer Storage**

- This area should have a common wall, located adjacent to the prep and receiving areas.
- Insulated slab and thickest quarry tile floor is preferred with a minimum of 20 foot candle lighting.
- Roof mount compressors, polymer mobile shelving and dunnage, and sound alarm for temperature monitoring should be included.

## **Building Service Facilities**

<b>Spatial needs</b>
Building Service Office
Locker/Shower area
Plant Equipment Operator Office
Compactor/Trash Room
Recycling Room
General Storage & Receiving Area
General Storage
Building Service Outdoor Storage
Building Service Closets

### **Building Service Office**

- The entire building services area should be located adjacent to the general receiving area.
- The office should be designed as a general office that can accommodate two staff members with two desks and appropriate wiring for computers, phones, etc.

### **Locker/Shower Area**

- A locker area must be located near the receiving area.
- 10-12 full-size lockers should be provided in the locker area.
- The locker area should be designed with an enclosed toilet room and shower room for building service staff use.

### **Plant Equipment Operator Office**

- This office needs to be adjacent to the boiler room.
- The office needs to accommodate a desk and appropriate data wiring for computer and phone.

### **Compactor/Can Wash/Trash Room**

- This room needs to be completely separate from the kitchen spaces with no common walls.
- Trash trucks must have access to this room.

- The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.
- Hot and cold water should be available for flushing and cleaning.
- The room should be designed to be pest free and well ventilated.
- Floors should be sloped so that wash down stays within the room and goes down the drain.
- The compactors need to be installed with enough clearance away from the wall to permit staff to access the equipment from all sides.
- A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- The room should be designed with a ramp to allow trashcans to be rolled to the dock.

### **Recycling Room**

- The recycling room should be located next to the trash room. This room will be used for the sorting of recycled items.
- Space for a recycling dumpster for cardboard is needed outside of the recycling room (approximately 8'x8').
- This room needs to be completely separate from the kitchen spaces with no common walls.
- Trash trucks must have access to this room.
- The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.
- Hot and cold water should be available for flushing and cleaning.
- The room should be designed to be pest free and well ventilated.
- Floors should be sloped so that wash down stays within the room and goes down the drain.
- A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- Ramp should allow trashcans to be rolled to the dock.

### **General Storage and Receiving Area**

- The receiving area should be enclosed, floor to ceiling, with a chain link fence.
- Flexible shelving is required but should not occupy more than one third of the area.
- This area must be secured.
- Good lighting and easy access to materials being stored are required.
- Electrical outlets, upgraded lighting and ventilation must be provided in this area.

### **General Storage**

- Flexible shelving to accommodate books, teaching aids, large size (24" x 36") paper, and other instructional supplies is required.
- Good lighting and easy access to materials being stored are required.
- Electrical outlets, upgraded lighting and ventilation must be provided in all large storage rooms for future flexibility.

### **Building Service Outdoor Storage Room**

- Outdoor storage is to be near the service area and is to be suitable for heavy mowing, snow removal, and other outdoor equipment.
- The dimensions of the outdoor storage area must be able to accommodate two tractors side by side. (approximately 9' long by 7.5' wide) and other equipment.
- A rolling garage style door and a regular door must be provided.
- A ramped and paved driveway is required for the tractor so that it can access the sidewalk and driveways of the school during snow removal.
- Electrical service and lighting inside must be provided. Access to the light switches must be available at both entrances.
- Proper ventilation for storage of gasoline is required.

**Building Service Closets**

- At a minimum, there should be a building service closet for each 19,000 gross square of the facility. In addition, there should be a building service closet on each floor and each wing of the facility.
- The closets should be a minimum of 25 sq. ft.
- The building service closet must accommodate a minimum of one utility cart.
- The closet requires shelving for cleaning supplies.
- The closet requires a floor mop sink with hot and cold running water and a floor drain.
- A mop/broom holder is required.

## **Site Requirements**

- The architect should consider the architecture of the neighborhood in designing the building.
- The design should retain as many trees as possible in order to buffer the school and the playing fields.
- Pedestrian access must be provided from the surrounding neighborhoods.
- An unimproved area on-site should be designated to serve as an environmental study area in the future.
- A covered area for students in the bus loading area must be provided.
- Bike racks should be provided near the building.
- 20 useable acres (more than 20 acres may be needed due to terrain or for environmental protection requirements)

## **Driveway**

- A separate entrance and exit or turnaround for buses with stacking for up to 20 buses at a time with a 24-foot minimum width and 50-foot minimum radius from the centerline of the roadway is required to maneuver a bus adequately.
- A student drop-off area also should be included.
- Driveway aprons should be perpendicular to the centerline of the street; and if there is an intersecting street on the opposite side from the proposed driveways, then the driveway apron should line up with the intersecting street, if possible.
- The grade of the driveways should not exceed eight percent.
- Care for safety of students must be exercised in developing the driveways including use of safety rails in the bus loading area.
- Parking spaces for 125 cars are to be provided. At least half of the parking area should be readily accessible to the gymnasium. Outdoor lighting for all parking areas and entrances must be adequate for safety and crowd control.
- An area for staff and parents to drop off heavy items from their car with easy access into the school must be developed.

### **Service Drive**

- The service drive is required for the kitchen, boiler room, shops, and general delivery areas.
- 5' minimum width, with adequate turnaround is required.
- The service drive must be designed so that students do not need to cross the service drive to get to the play fields.
- If oil heat is provided, the oil filler pipes should be easily accessible for tractor trailer with adequate overflow pipes.

### **Playing Fields**

- One 400' x 400' playing field is required for general use.
- One 300' x 300' playing field with two sets of soccer goals should be installed

### **Softball Fields**

- Four softball fields are required.
- 250' minimum radius with backstops are required—one with hood, benches, and safety fences.
- The baseline of the main field should be skinned and infield mix added.

### **Track And Field Area**

- A long jump pit should be constructed.
- A short, 60-yard, 6-lane track for short distances and hurdle practice should be designed for track and field instruction. This track should be connected to a walking asphalt path around the perimeter of the fields.
- Several permanent trashcans should be provided in this area.

### **Basketball Courts**

- Three courts fenced with six gooseneck posts with heavy-duty basketball backboards with goals should be installed.

- A three-level chinning bar should be placed near the black top area.

**Paved Play Area**

- One paved play area, 55' x 110', with all-weather surface play area should be provided near the cafeteria and separate from the other PE areas.

**Tennis Courts**

- Six tennis courts are required each with all-weather surfacing and nylon nets. Metal nets should not be installed at the middle school.
- One electrical outlet on the outside of the fence of on one court is required.
- Several benches and outside trashcans should be permanently installed.
- A common "rebound" wall contiguous with the tennis courts should be provided.

**Storage Shed**

- A 12' x 16' storage shed should be provided at the far end of the site.
- No electric or water is needed.
- It must be designed with double steel doors with heavy-duty hardware and shelves on one wall.

## **Additional Requirements**