ATTACHMENT 1

OCTOBER 2011

FEASIBILITY STUDY

BETHESDA-CHEVY CHASE MIDDLE SCHOOL #2

Prepared for

Montgomery County Board of Education

By SAMAHA ASSOCIATES, P.C.

SAMAHA

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I. INTRODUCTION

INTRODUCTION

This feasibility study for Bethesda-Chevy Chase Middle School #2 was conducted for Montgomery County Public Schools (MCPS) by the architectural firm of Samaha Associates, P.C. The proposed site studied for the school is located at 3701 Saul Road, Kensington, Maryland 20895 in the Bethesda-Chevy Chase school cluster. Currently the site is Rock Creek Hills Park but was previously the site of Kensington Junior High School until 1979 when the school was demolished. Work was performed under the direction of the MCPS Department of Facilities Management Division of Construction.

FEASIBILITY STUDY PARTICIPANTS

The Feasibility Study participants reviewed and approved the design concepts for Bethesda-Chevy Chase Middle School #2. Meetings occurred on the following dates:

June 8, 2011
June 22, 2011
July 13, 2011
July 28, 2011
August 10, 2011
August 17, 20011
Community Presentation: September 22, 2011

The proposed designs are a result of the recommendations, suggestions and guidance during the feasibility study process.

Membership

Mr. Daniel Vogelman	Principal - Westland Middle School
Ms. Deborah Missal	PTSA - Bethesda-Chevy Chase High School
Mr. Khalid Afzal	Maryland - National Capital Park and Planning Commission
Ms. Lynn Amano	Rosemary Hills Neighbor Association
Mr. Morris Antonelli	Neighbor - Rock Creek Hills
Mr. Mike Baker	
Mr. Paul Beck	Neighbor - Rock Creek Hills
Ms. Sarah Beck	Neighbor - Rock Creek Hills
Ms. Victoria Bell	Neighbor - Rock Creek Hills
Mr. Shawn Benjaminson	Civil Engineer - Adtek
Mr. Chad Bolt	Council Member - Roger Berliner
Mr. Rick Bond	Neighbor - Rock Creek Hills
Mr. George Boritse	

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Ms. Diana Borlase	Neighbor - Rock Creek Hills
Mr. George Borlase	Neighbor - Rock Creek Hills
Mr. Kenneth Caets	Kensington Park Retirement Community
Mr. Hill Carter	Rock Creek Hills Community Association
Ms. Mary Anne Clancy	Neighbor - Rock Creek Hills
Ms. Sarah Coats	Neighbor - Rock Creek Hills
Ms. Mary Cobbett	B-CC - Cluster Coordinator
Ms. Marcia Coe	Neighbor - Rock Creek Hills
Mr. Ben Costa	Assistant Principal - Westland MS
Mr. Dennis Cross	Division of Construction - MCPS
Ms. Elizabeth Cullen	
Ms. Allison Delfin	Neighbor - Rock Creek Hills
Mr. Marty Durbin	Neighbor - Rock Creek Hills
Mr. Randy East	
Mr. Keith Emery	
Ms. Bernadette Engelsted	
Mr. Paul Falkenbury	Architect - Samaha Associates
Mr. Bart Fandors	Neighbor - Rock Creek Hills
Ms. Marcia Feverstein	Neighbor - Rock Creek Hills
Ms. Cathy Fink	Neighbor - Rock Creek Hills
Ms. June Fusner Leyland	Neighbor - Rock Creek Hills
Mr. Gagadin	Parkview
Mrs. Gagadin	Parkview
Ms. Jill Gallagher	Neighbor - Rock Creek Hills
Ms. Sarah Gantz	Press - The Gazette
Mr. Damian Garde	Press - Kensington Patch
Mr. Jon A. Gerson	Neighbor - Rock Creek Hills
Ms. Jean Gries	Montgomery County Department of Transportation
Mr. Ben Gross	Kensington Patch
Ms. Shannon Hamm	Rock Creek Hills Community Association
Mr. Fritz Hirst	
Mr. John Holbrooke	Rock Creek Hills Community Association
Ms. Winnie Holbrooke	Neighbor - Rock Creek Hills
Ms. Diana Holmes	Staff - Westland MS
Ms. Jessica Hughes	Neighbor - Rock Creek Hills
Ms. Lauren Itzkinig	Neighbor - Rock Creek Hills

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Ms. Karen Jacob	Neighbor - Rock Creek Hills
Ms. Joyce Jessell	Division of Construction - MCPS
Mr. David Kaplan	Neighbor - Rock Creek Hills
Ms. Lynne Kayn	Neighbor - Rock Creek Hills
Ms. Stacey Kopnitsky	Assistant Principal - Westland MS
Mr. Ed Kravze	
Mr. David Lake	Neighbor - Rock Creek Hills
Ms. Maren Laughlin	Neighbor - Rock Creek Hills
Mr. Gary Leyland	Neighbor - Rock Creek Hills
Mr. Ron Mancan	
Mr. Jeremy Marco	
Ms. Maria Marzullo	Neighbor - Rock Creek Hills
Ms. Emily Mazzella	
Ms. Amy McCarty	Samaha Associates
Ms. Karie McMickle	PTA – Rock Creek Forest Elementary School
Ms. Marilyn Murphy	Rock Creek Hills Community Association
Mr. Pete Murphy	Rock Creek Hills Community Association
Ms. Teresa Murray	
Ms. Vanesa Murray	
Ms. Kristin O'Keefe	Neighbor - Rock Creek Hills
Mr. Emmett O'Keefe	
Mr. Eric Osberg	Neighbor - Rock Creek Hills
Mr. Philip Padgett	Neighbor - Rock Creek Hills
Ms. Liz Parr	Neighbor - Rock Creek Hills
Dr. Jim Pekar	Neighbor - Rock Creek Hills
Ms. Abby Pensky	Neighbor - Rock Creek Hills
Mr. Joe Pospisil	Montgomery County Department of Transportation
Mr. Mike Riley	Neighbor - Rock Creek Hills
Mr. Jim Ritter	Staff - Westland MS
Mr. Pat Robins	Rock Creek Hills Community Association
Mr. John Robinson	
Mr. Scott Robinson	Neighbor - Rock Creek Hills
Mr. Charlie Saber	Neighbor - Rock Creek Hills
Ms. Deborah Saber	Neighbor - Rock Creek Hills
Mr. John Saber	Neighbor - Rock Creek Hills
Mr. Bart Sanders	Neighbor - Rock Creek Hills

I. INTRODUCTION

Ms. Lynne Schubert	
Ms. Fern Shepard	
Ms. Rosa Shohana	Rosemary Hills Community
Mr. Michael Shpur	Division of Construction - MCPS
Mr. R. Craig Shuman	Director, Division of Construction - MCPS
Mr. Donald Silverstein	Neighbor - Rock Creek Hills
Ms. Ruth Silverstein	Neighbor - Rock Creek Hills
Mr. William Single	Neighbor - Rock Creek Hills
Mr. Tom Sisti	Neighbor - Rock Creek Hills
Ms. Mary Agnes Sisti	Rock Creek Hills Community Association
Mr. Cory Springer	Neighbor - Rock Creek Hills
Mr. Teddy Springer	Neighbor - Rock Creek Hills
Mr. Sam Statland	Neighbor - Rock Creek Hills
Mr. Jon Stedland	Rock Creek Hills Community Association
Mr. Tim Stelzig	Town of Kensington
Ms. Kathleen Stephens	Neighbor - Rock Creek Hills
Mr. W. Stephens	
Ms. Gloria Stewner	Rock Creek Hills Community Association
Ms. Jillian Storms	Maryland State Department of Education
Ms. Deborah Szyfer	Division of Long-range Planning - MCPS
Mr. John Thompson	Town of Kensington
Ms. Patricia Valdez	Neighbor - Rock Creek Hills
Ms. Meredith Valmon	Parent - Rock Creek Forest Elementary School
Ms. Sandra Van Bochove	Neighbor - Rock Creek Hills/ Parent - B-CC HS
Dr. Jon Van Winkle	Neighbor - Rock Creek Hills
Ms. Jane Ward	Parent - Rock Creek Forest Elementary School
Mr. Rick Ward	Parent - Rock Creek Forest Elementary School
Mr. Steve Weigs	Neighbor-Rock Creek Hills

II. EXECUTIVE SUMMARY

PURPOSE

The purpose of this feasibility study is to explore options that satisfy the educational specifications for a new middle school in the Bethesda-Chevy Chase cluster to accommodate growth and help alleviate overcrowding. Furthermore, this study provides specific recommendations to Montgomery County Public Schools (MCPS) for implementation. When completed, the facility will have a capacity of 836 students with core spaces designed for 1,200 students.

HISTORY

The proposed site for the new Bethesda-Chevy Chase Middle School # 2 is located at 3701 Saul Road, Kensington, Maryland 20895. The 13.39 acre site is part of the former Kensington Junior High School site and is currently used as Rock Creek Hills Park. Kensington Junior High School was demolished in 1979. Currently the site includes two soccer fields, an exercise path, a basketball court, two tennis courts, street hockey court, a playground, a gazebo, and parking.

METHODOLOGY

The site has been evaluated by a design team of architects, engineers, and consultants to determine the feasibility of locating a middle school on the Rock Creek Hills Park site that meets the educational specifications, dated April 15, 2011 and summary of space requirements.

The study is based on the following:

- Consensus Workshops with the Feasibility Study participants and MCPS staff
  - There were 7 meetings.
  - There was a consistent attendance from the participating members.
  - There were 113 different attendees.
  - There were 7 different concept option refinements.
- Review of the educational specifications and summary of space requirements provided by MCPS.
- Visual analysis of the existing site by the design team.
- Topographic and boundary survey including a preliminary NRI-FSD (Natural Resources Inventory/Forest Stand Delineation).
- Transportation survey conducted under the local area transportation review and policy area mobility review guidelines.

II. EXECUTIVE SUMMARY

OVERVIEW

The site for the proposed Bethesda–Chevy Chase Middle School #2 is the former Kensington Junior High School site that is currently being used as Rock Creek Hills Park. The northern portion of the existing site is a flat area of land that contains two soccer fields and an exercise path that wraps around the fields. To the south of the fields is a parking lot (60 cars), a basketball court, two tennis courts, a small playground, and a gazebo. From this point there is a steep approximately 20 foot drop to a small parking lot (10 cars) and a street hockey court. The site continues to steeply slope down to a stream outside of the property line. The overall elevation change from the northeast corner to the southwest corner of the site is approximately 65 feet. The site is accessed by two entries off of Saul Road and Haverhill Drive into the parking lots.

Three (3) options are presented within and were designed with input from the Feasibility Study Advisory Participants. All three options meet the instructional programmatic requirements for the middle school. A consensus could not be made on one preferred option, the participating members were split between Options 1 and 2. It was decided that Option 1 and 2 are tied for being the preferred option with option 3 being the least preferred option.

Cost estimates were established for each option, and are presented in the description of options section of this report.

II. EXECUTIVE SUMMARY

COMMON DESIGN ELEMENTS FOR EACH OPTION

COMMON SITE ELEMENTS:

- The playfields are located in the existing location of the park's fields and are modernized to include two softball fields (one skinned), two middle school regulation size soccer fields, and one adult regulation size soccer field overlaid.
- A 20 bus loading area accessed from the junction of Haverhill Drive and Saul Road is provided.
- A designated student drop-off lane accessed from Saul Road is provided at the existing entrance to the park.
- Staff/visitor parking area, accessed from Saul Road, is provided.
- The educational specifications recommend 125 parking spaces for the school. None of the options presented provide the recommended 125 spaces, however at staffing for 836 students the initial parking requirement will be met.
- The service area is located on the northwest corner of the site at the end of the parking area and is accessed from Saul Road.
- Future portable classrooms and a 17 classroom addition are planned to bring the school to its 1,200 student capacity.
- Hard surface play areas with easy access from the gymnasiums and locker rooms are provided, and include four tennis courts, two basketball courts, and a 60 yard sprint track. A walking path around the perimeter of the ballfields is also provided with connectivity to neighborhood paths.
- ADA accessible pedestrian access is provided to and on the site.

COMMON BUILDING ELEMENTS:

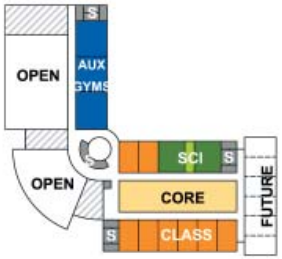
- The building is divided into two zones: one for activities (including the cafeteria, music suite, gymnasiums, and instructional media center) and one for academics. The activity areas can be separated from the academic areas for after school hours use.
- The music suite is located near the stage.
- The administration suite is located on the southwest side of the building facing the student drop-off and staff parking areas adjacent to the main entrance.
- The main entrance is easily identifiable.
- The instructional media center is centrally located.
- The cafeteria is located on the west side of the building on the lower level.
- The classrooms are organized in grade level pods; one grade per floor level.
- The science laboratories are organized by grade and as a department.
- The building will be Leadership in Energy and Environmental Design (LEED) "silver" certified or better.
- All new infrastructure and systems will meet current MCPS standards, including Heating, Ventilation, and Air Conditioning (HVAC), fire safety/fire protection, plumbing, lighting, power, data and communication systems.
- The new facility will comply with all required codes including Americans with Disabilities Act (ADA), American National Standards Institute (ANSI), and Code of Maryland Regulations (COMAR).

II. EXECUTIVE SUMMARY

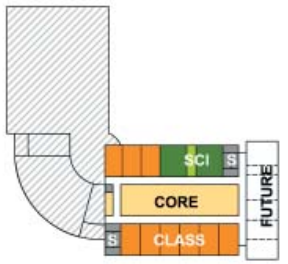
OPTION 1:

Option 1 is a new four-story L-shaped building that takes advantage of the sloping site to reduce the mass of the building, and create a compact footprint. Entrances are provided to the building on two levels. Bus loading is on the north side of the building while the student drop-off and staff parking is on the south. The educational specifications for the facility are satisfied in this option.

SITEWORK COSTS: $ 6,671,000
BUILDING COSTS: $33,354,000
TOTAL: $40,025,000



THIRD FLOOR



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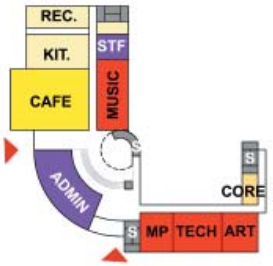

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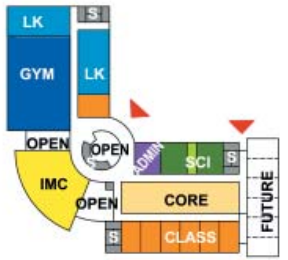


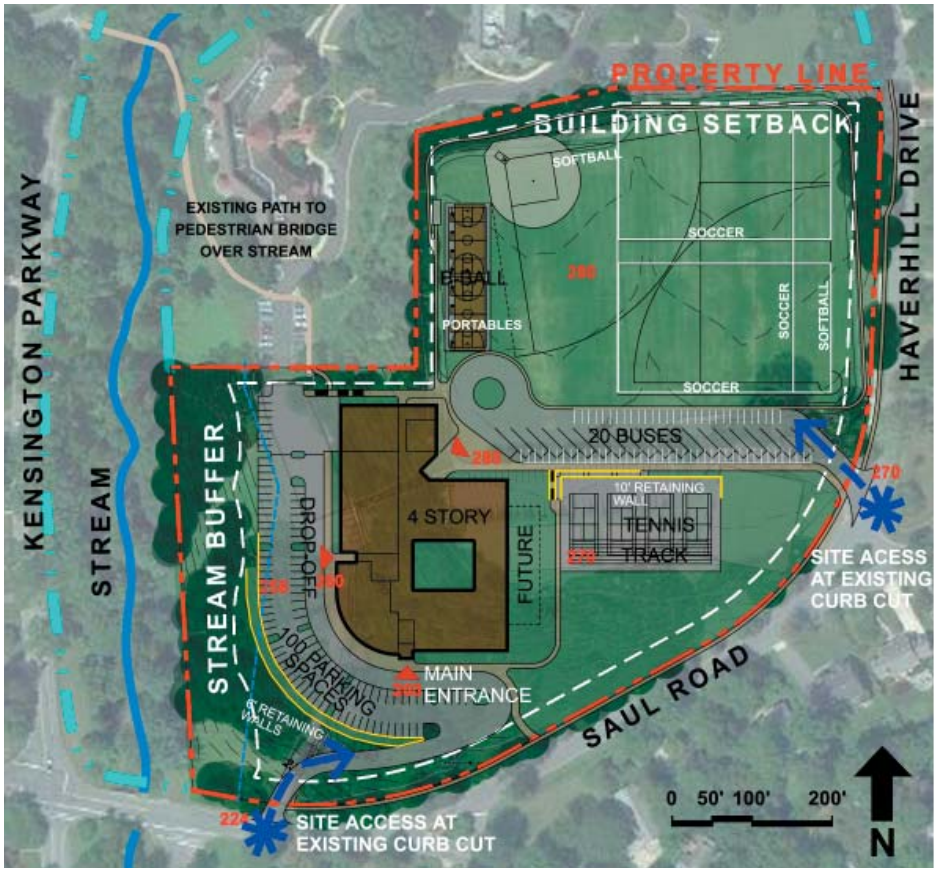
SECOND FLOOR

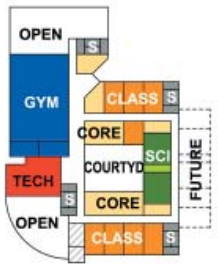
II. EXECUTIVE SUMMARY

OPTION 2:

Option 2 is a new four-story building organized around a courtyard that takes advantage of the sloping site to reduce the mass of the building, and create a compact footprint. The courtyard provides natural light to the surrounding teaching spaces and the north-south main street. Bus loading is on the north side of the building while the student drop-off and staff parking is on the south. The educational specifications for the facility are satisfied in this option.

SITEWORK COSTS: $ 6,584,000
BUILDING COSTS: $32,918,000
TOTAL: $39,502,000





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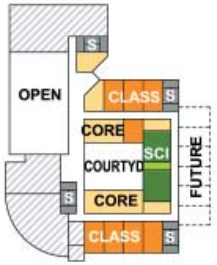
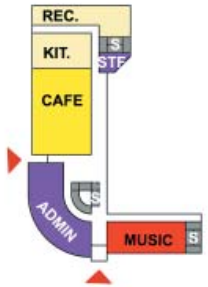


FOURTH FLOOR



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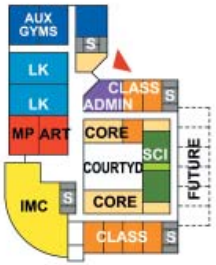


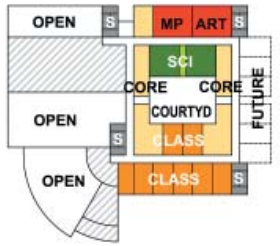
SECOND FLOOR

II. EXECUTIVE SUMMARY

OPTION 3:

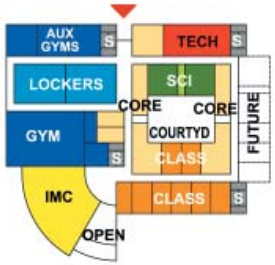
Option 3 is a new three-story building organized around a courtyard that takes advantage of the sloping site to reduce the mass of the building. The courtyard provides natural light to the surrounding teaching spaces. Bus loading, student drop-off, and parking are all located to the south of the building. The educational specifications for the facility are satisfied in this option.

SITEWORK COSTS: $ 6,758,000
BUILDING COSTS: $33,790,000
TOTAL: $40,548,000



THIRD FLOOR

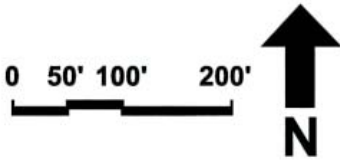
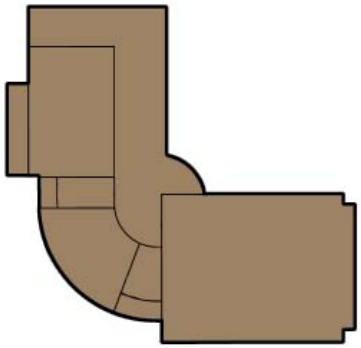
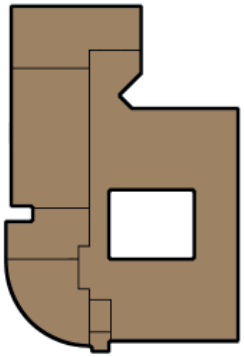
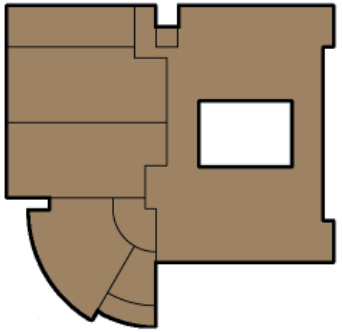
FIRST FLOOR



SECOND FLOOR

II. EXECUTIVE SUMMARY

GRAPHIC ANALYSIS

	OPTION 1	OPTION 2	OPTION 3
				
Total Gross Square Feet	153,000	151,000	155,000
Net Assignable Square Feet	94,186	94,186	94,186
Building Efficiency	61.56%	62.37%	60.77%

ECONOMIC ANALYSIS

The following chart summarizes the construction costs.

	OPTION 1	OPTION 2	OPTION 3
Construction Costs	$ 40,025,000	$ 39,502,000	$ 40,548,000
Planning Costs	$ 2,729,000	$ 2,698,000	$ 2,760,000
Contingency and Related Costs	$ 2,807,000	$ 2,786,000	$ 2,828,000
Furniture and Equipment	$ 1,500,000	$ 1,500,000	$ 1,500,000
Total Cost	$ 47,061,000	$ 46,486,000	$ 47,636,000

II. EXECUTIVE SUMMARY

CONCLUSIONS AND RECOMMENDATIONS

The following course of action is recommended to meet the program requirements for the new Bethesda-Chevy Chase Middle School #2. The recommendations are consistent with MCPS standards, meet program requirements and address the interests and many concerns of the school staff and the community as represented by the Feasibility Study participants.

In accordance with the opinions of the Feasibility Study participants and MCPS staff, it is recommended that either Option 1 or 2, as described in Section V, and its associated site improvements be implemented.

III. SCOPE, METHODOLOGY, AND GOALS

SCOPE AND INTENT

Enrollment increases and the planned reassignment of Grade 6 students from Chevy Chase and North Chevy Chase elementary schools to the middle school level will increase the total Bethesda-Chevy Chase Cluster middle school projected enrollment to approximately 1,500 students, exceeding the current capacity of Westland Middle School. To reduce the overcrowding at Westland Middle School, the Board of Education identified a site for a new middle school to serve students in the Bethesda-Chevy Chase Cluster, through a site selection process. Montgomery County Public Schools (MCPS) conducted a feasibility study of this site to determine the scope and costs for building a new middle school to meet the enrollment increases in the Bethesda-Chevy Chase cluster.

The new school will meet current specifications relative to educational programs, instructional philosophy, program space allocations, and current energy, ADA, and life safety codes. When completed, the facility will have a capacity of 836 students, with core spaces designed for 1,200 students. This feasibility study explored options for a new middle school to meet the educational needs of its student enrollment, while addressing staff and community concerns. The study also provides a cost effective, energy efficient, and safe facility to meet the future needs of the school community.

The architecture, engineering, and design team analyzed the educational specifications and developed seven site and building concepts that addressed the goals and objectives as described below. The Feasibility Study participants reviewed the progression of these concepts throughout the entire process. Comments and suggestions were discussed, refined, and incorporated after each meeting. The final concepts are presented as options in this report. Option 1 and 2 are the preferred options of the study.

METHODOLOGY

The site has been evaluated by a design team of architects, engineers, and consultants to determine the feasibility of locating a middle school on the Rock Creek Hills Park site to meet the educational specifications, dated April 15, 2011 and the summary of space requirements.

The study is based on the following:

- Consensus workshops with the Feasibility Study participants and MCPS staff
  - There were 7 meetings.
  - There was a consistent attendance from the participating members.
  - There were 113 different attendees.
  - There were 7 different feasibility study option refinements.
- Review of the educational specifications and summary of space requirements provided by MCPS.
- Visual analysis of the existing site by the design team.
- Topographic and boundary survey including a preliminary NRI-FSD (Natural Resources Inventory/Forest Stand Delineation).
- Transportation survey conducted under the local area transportation review and policy area mobility review guidelines (LATR/PAMR)

III. SCOPE, METHODOLOGY, AND GOALS

GENERAL GOALS

Throughout the process, several recurring themes established a set of goals and objectives, which the new school concepts address. These goals and objectives are delineated below.

SITE GOALS AND OBJECTIVES

The new school site shall:

- Limit additional traffic into the neighborhood, on Saul Road and Haverhill Drive.
- Minimize possible congestion in the neighborhood during morning arrival and afternoon dismissal.
- Preserve as many existing trees as possible.
- Create a buffer between the school and adjacent neighbors.
- Create a safe passage for student walkers.
- Separate bus loading, student drop-off, and staff parking areas.
- Provide handicap access from off-site to the main entrance and from the building to the hard surface play areas and fields.
- Provide as many of the site program elements as possible.

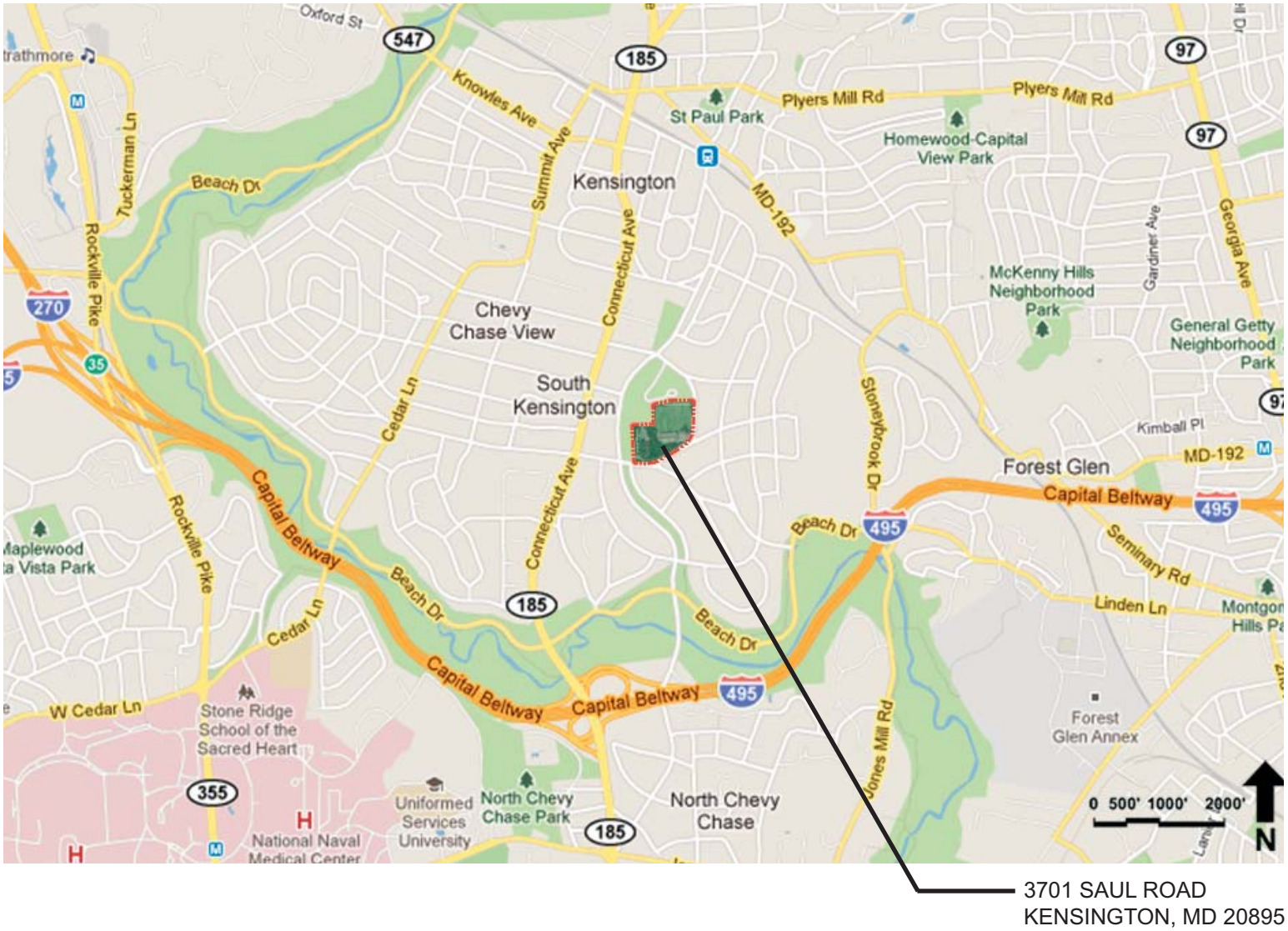
BUILDING GOALS AND OBJECTIVES

The new school building shall:

- Present an easily identified main entrance.
- Zone the building into activity and academic spaces to allow use of activity spaces after school hours.
- Support the grade level organization.
- Design science as a department within each grade level.
- Locate the administrative suite adjacent to the student drop-off and visitor parking.
- Provide easily supervised corridors, entrances/exits, and open areas.
- Provide natural light throughout the building.

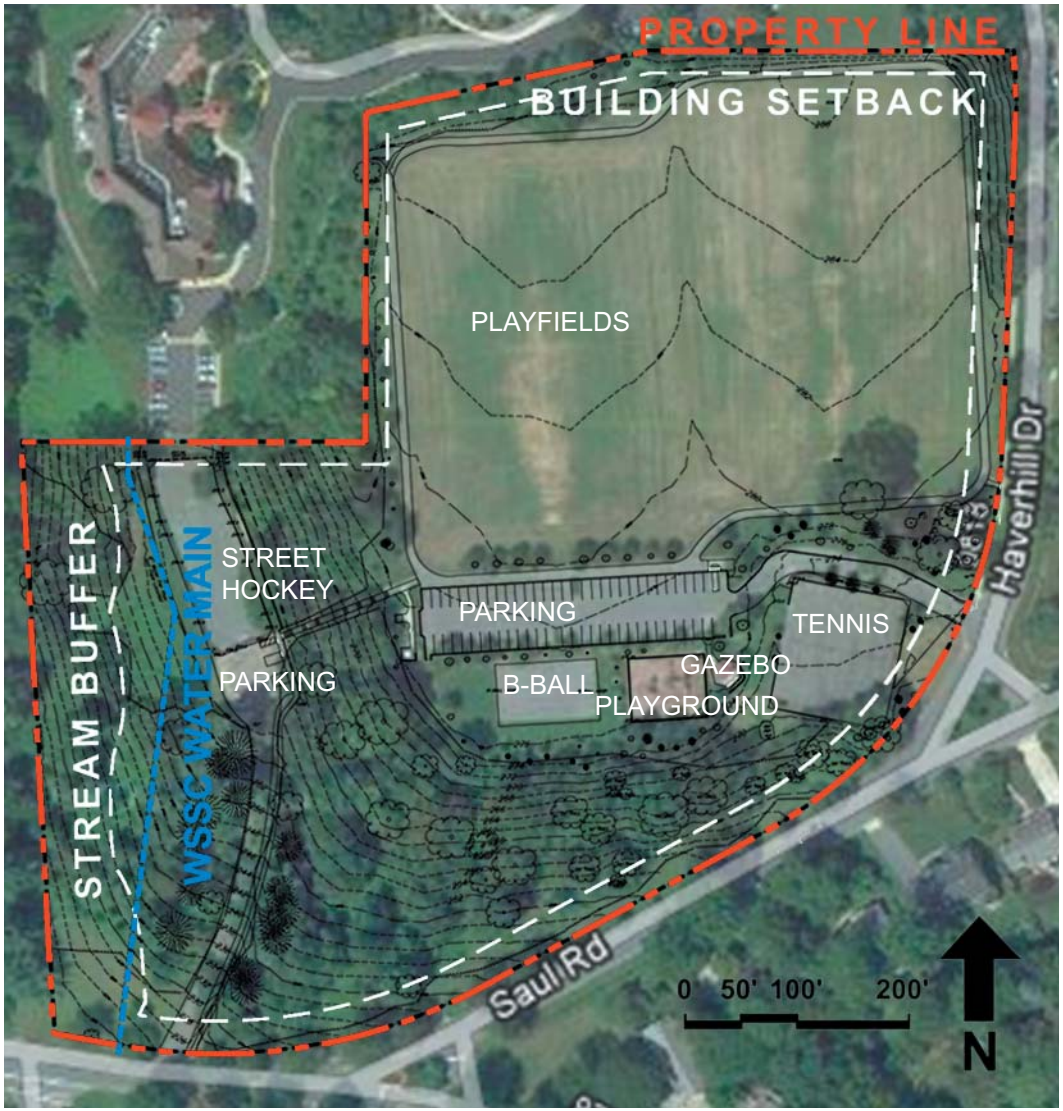
IV. EXISTING CONDITIONS

VICINITY MAP



IV. EXISTING CONDITIONS

EXISTING SITE PLAN



EXISTING CONDITIONS SUMMARY

The site for the proposed Bethesda-Chevy Chase Middle School #2 is currently used as Rock Creek Hills Park. The northern portion of the existing site is a flat area of land that contains two soccer fields and an exercise path that wraps around the fields. To the south of the fields is a parking lot (60 cars), a basketball court, two tennis courts, a small playground, and a gazebo. From this point there is a steep approximately 20 foot drop to a small parking lot (10 cars) and a street hockey court. The site continues to steeply slope down to a stream outside of the property line. The overall elevation change from the northeast corner to the southwest corner of the site is approximately 65 feet. The site is accessed by two entries off of Saul Road into the parking lots.

V. DESCRIPTION OF OPTIONS

GENERAL

Three final options were developed in response to the MCPS educational specifications for Bethesda-Chevy Chase Middle School #2. Each option addresses the physical and instructional organization of the school in unique ways.

Option 1 explores a four-story, L-shaped structure that is set into the sloping site.

Option 2 explores a four-story courtyard structure that is set into the sloping site.

Option 3 explores a three-story courtyard structure that is set into the sloping site.

COMMON SITE DESIGN ELEMENTS FOR EACH OPTION

COMMON SITE ELEMENTS:

- The playfields are located in the existing location of the park's fields and are modernized to include two softball fields (one skinned), two middle school regulation size soccer fields, and one adult regulation size soccer field overlaid.
- A 20 bus loading area accessed from the junction of Haverhill Drive and Saul Road is provided.
- A designated student drop-off lane accessed from Saul Road is provided at the existing entrance to the park.
- Staff/visitor parking area, accessed from Saul Road, is provided.
- The educational specifications recommend 125 parking spaces for the school. None of the options presented provide the recommended 125 spaces, however at staffing for 836 students the initial parking requirement will be met.
- The service area is located on the northwest corner of the site at the end of the parking area and is accessed from Saul Road.
- Future portable classrooms and a 17 classroom addition are planned to bring the school to its 1,200 student capacity.
- Hard surface play areas with easy access from the gymnasiums and locker rooms are provided, and include four tennis courts, two basketball courts, and a 60 yard sprint track. A walking path around the perimeter of the ballfields is also provided with connectivity to neighborhood paths.
- ADA accessible pedestrian access is provided to and on the site.

V. DESCRIPTION OF OPTIONS

COMMON BUILDING ELEMENTS:

- The building is divided into two zones: one for activities (including the cafeteria, music suite, gymnasiums, and instructional media center) and one for academics. The activity areas can be separated from the academic areas for after school hours use.
- The music suite is located near the stage.
- The administration suite is located on the southwest side of the building facing the student drop-off and staff parking areas adjacent to the main entrance.
- The main entrance is easily identifiable.
- The instructional media center is centrally located.
- The cafeteria is located on the west side of the building on the lower level.
- The classrooms are organized in grade level pods; one grade per floor level.
- The science laboratories are organized by grade and as a department.
- The building will be Leadership in Energy and Environmental Design (LEED) “silver” certified or better.
- All new infrastructure and systems will meet current MCPS standards, including Heating, Ventilation, and Air Conditioning (HVAC), fire safety/fire protection, plumbing, lighting, power, data and communication systems.
- The new facility will comply with all required codes including Americans with Disabilities Act (ADA), American National Standards Institute (ANSI), and Code of Maryland Regulations (COMAR).

DRAINAGE AND STORMWATER MANAGEMENT:

With the exception of one stormwater vault, the existing site is currently draining all runoff untreated to the public stormdrain systems surrounding the property and ultimately into the adjacent stream. Site improvements will be required to include Environmental Site Design (ESD) to the maximum extent practicable in order to treat all areas inside the limits of disturbance. After all ESD efforts are exhausted, if the site does not reach a hydrologic state of “woods in good condition,” then structural practices may be permitted as determined by the Montgomery County Department of Permitting Services.

Potential ESD stormwater management practices for the site may include both micro-scale practices and alternative surfaces. Micro-scale facilities could include bio-swales and micro-bioretention facilities in areas where open space is available. Alternative surfaces would include a vegetative roof on any structure as well as permeable pavement.

V. DESCRIPTION OF OPTIONS

MECHANICAL SYSTEMS:

HYDRONIC HEAT PUMP SYSTEM:

Heating and cooling for the school would be provided by a 2-pipe geothermal water source heat pump (HHP) system. An HHP system would be used to heat and cool each space. Heat pump units would be located in small mechanical closets to facilitate maintenance. A geothermal field located under the athletic playing fields and consisting of 400 to 450 wells would be provided as a heat sink for the geothermal heat pumps. The code required outdoor air ventilation would be provided by utilizing roof mounted Energy Recovery Water Source Heat pumps. These would be provided with supplemental gas fired duct furnaces for emergency heat in the event of a power outage. The HVAC design shall be compliant with the latest IMC code.

PLUMBING:

Plumbing fixtures will comply with ADA requirements and will be based on occupancy mix and population. Storm sewer, sanitary sewer, and domestic water systems will be provided in accordance with the latest WSSC Plumbing Code and Regulations.

An 8” combined water/fire service with an outside below-grade water meter is required to serve the new facility.

A new gas service is required to serve the kitchen equipment, the natural gas fired emergency generator, and the emergency gas fired furnaces on the Energy Recovery Units.

The plumbing design shall be compliant with the latest IPC code.

SPRINKLER SYSTEM:

Each option will be fully sprinklered.

ENERGY MANAGEMENT STATEMENT:

A primary design factor will be conservation of energy. The importance and consideration placed on energy conservation will be reflected in the configuration and orientation of the building, the selection of materials, and the mechanical and electrical systems utilized. The modernized building will be compliant with LEED (Leadership in Energy and Environmental Design) for Schools and the HVAC and lighting design exceeds ASHRAE 90.1 2004 energy requirements and the International Mechanical Energy Conservation Code.

V. DESCRIPTION OF OPTIONS

ELECTRICAL SYSTEMS:

POWER SYSTEM:

Required electrical systems include lighting, power, public address system, fire alarm, emergency generator, separate dedicated power for computer outlets, and rough-in for telephone/data/video and security systems. These systems will be designed to comply with MCPS standards. A 277V/480V- 3 phase- 4 wire- 4,000 amp electrical service is required for the new school.

EMERGENCY POWER SYSTEM:

A 130 KW natural gas fired emergency generator will be required to power all life safety, fire alarm, and other equipment such as Internet Technology (IT), kitchen freezers, and the Energy Recovery Units (ERU) emergency gas heating.

IT SYSTEM:

The new school will be equipped with state-of the-art Voice over Internet Protocol (VoIP) network systems. The network system designs will include outlet boxes, conduits, surface raceways, conduit sleeves, and properly-sized wire closets for the installation of the VoIP network systems.

For video distribution, a 1,000 MHz, bidirectional, broadband distribution system with 0.625-inch-trunk cable and RG-6 drop cable system will be provided. The system allows full cable spectrum throughout the building with five dedicated channels (three (3) for inhouse video, and two (2) for two-way video) for internal school broadcasts.

FIRE ALARM:

A new code compliant fire alarm system will be required.

BUILDING SECURITY:

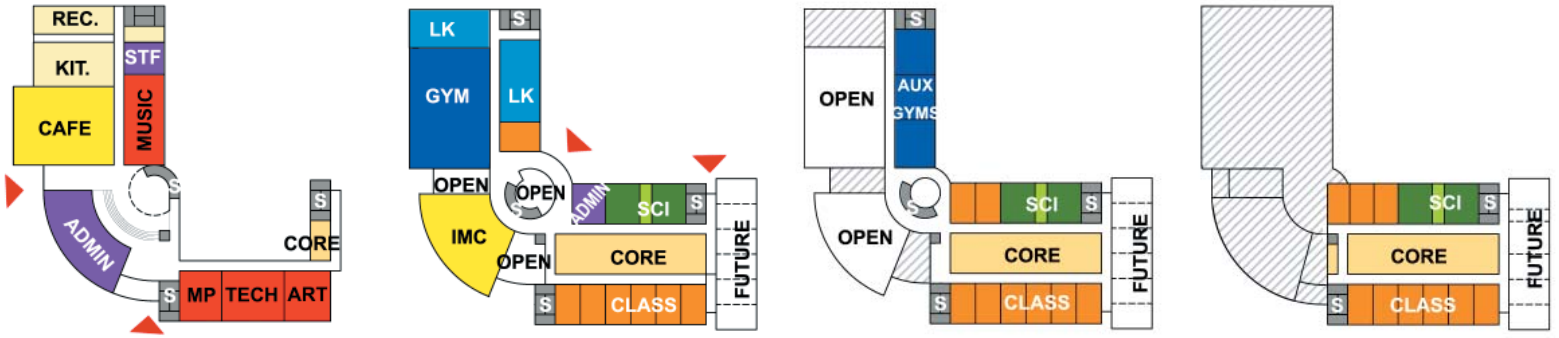
A motion sensor alarm system along with contact sensors at all exterior doors monitored by the MCPS Department of Safety and Security office will be provided. High-risk areas, including the computer laboratory, the administrative suite, and the instructional media center will have a zoned security system. Cameras and controlled entry access devices will be provided as required by MCPS standards.

V. DESCRIPTION OF OPTIONS

OPTION 1 - DESCRIPTION

Option 1 is a new four-story L-shaped building that takes advantage of the sloping site to reduce the mass of the building, and create a compact footprint. The L-shape divides the building into two distinct wings; one for activities and the other one for academics. Centrally located between the two wings is the main entrance, administration suite, and media center. Access is provided on two levels, with the main entrance on the lowest level and the activity entrance on the second level. The main entrance is adjacent to the administration suite, with direct access to the student drop-off and staff/visitor parking areas. All car traffic will enter the site from the south off Saul Road. The activities entrance to the north of the building is located adjacent to the bus loading area, which also serves as the entrance for after school use of the gymnasium and instructional media center. Buses enter the site at the junction of Haverhill Drive and Saul Road. The car and bus entrances both utilize the existing curb cuts off Saul Road. The academic wing of the school is arranged in a three-story grade level pod. Classrooms are arranged on the perimeter of the wing to allow natural light into the spaces, with an open center area for lockers, support spaces, and computer laboratories. Retaining walls are required in various locations due to the slope of the site. There is a two-tiered retaining wall along the south edge of the staff parking and a retaining wall between the courts and fields.

OPTION 1 - PLANS



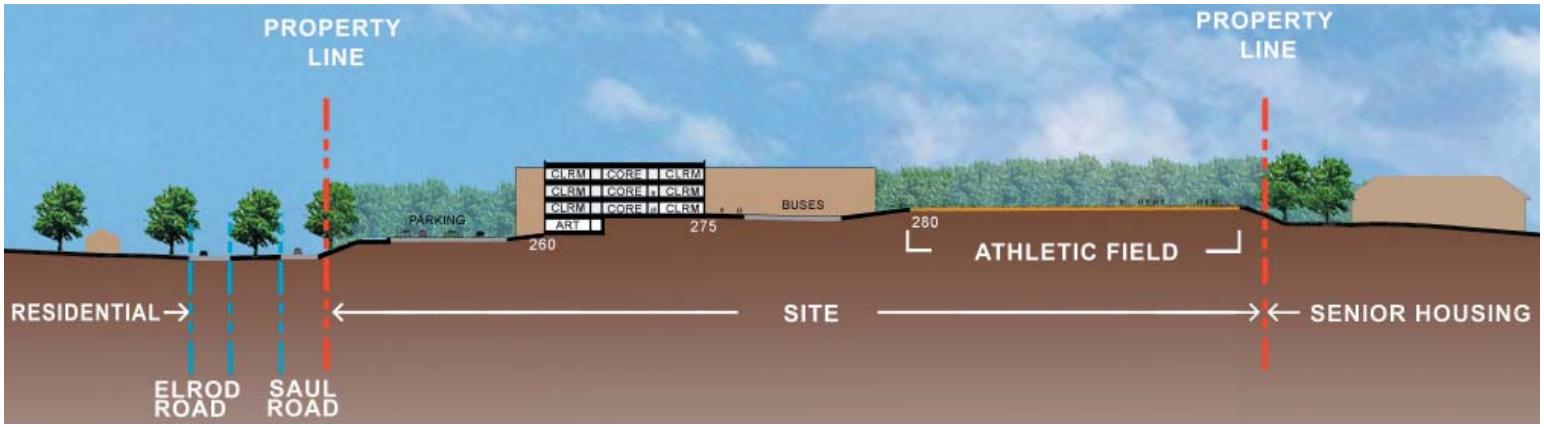
FIRST FLOOR SECOND FLOOR THIRD FLOOR FOURTH FLOOR

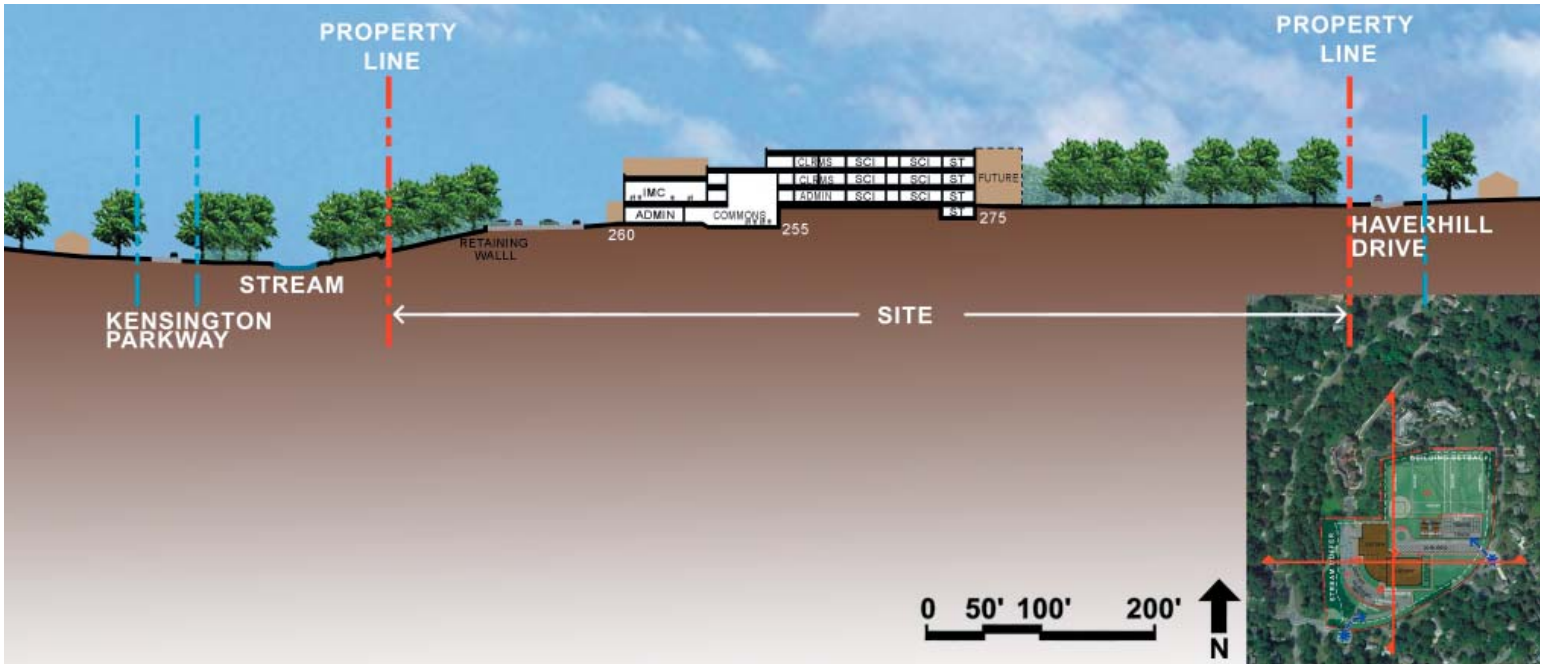
V. DESCRIPTION OF OPTIONS

OPTION 1 - 3D VIEWS AND SITE PLAN

V. DESCRIPTION OF OPTIONS

OPTION 1 - SECTIONS





V. DESCRIPTION OF OPTIONS

OPTION 1 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES:

+ Bus entry located at triangle intersection of Saul Road and Haverhill Drive, so it is not located directly in front of any houses.
+ Grade levels are organized by floor, one grade per floor (Grade 6, Grade 7, and Grade 8).
+ Activity spaces are separated from academic spaces.
+ The main entrance is easily identifiable.
+ Care taken to separate parent cars from buses and all vehicles from pedestrians on the school site.
+ The car and bus site access both utilize the existing curb cuts off Saul Road.
+ Four-story building preserves more green space.
+ Administration is located at both entrances; main entrance and the activity entrance.
+ Layout of softball and soccer fields is efficient.
+ Corridors surrounding core spaces enhances circulation within the building.
+ Staff/visitor parking is maximized as compared to the other options.
+ Car queuing space at the student drop-off is maximized as compared to the other options.
+ Playfields and courts are adjacent to each other for ease of monitoring students.

DISADVANTAGES:

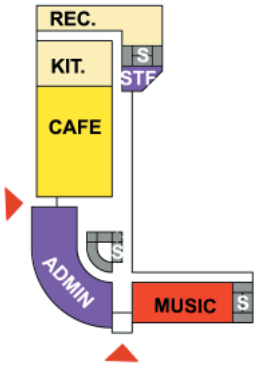
- Administration suite is on the lowest level, not as centralized as desired.
- The main entrance is located at the beginning of the student drop off area, possibly creating traffic congestion if cars do not pull forward.
- The community asserts that there is a safety concern with buses, parents, and pedestrians entering the site at Saul Road.
- Retaining walls at the staff parking lot face the street.
- Fourth story requires more expensive construction - protected structure.
- Future re-locatable classrooms would be located north of the bus area, where students have to go around the bus loop to get to the portables.
- No courtyard.
- No natural light in the music suite.

V. DESCRIPTION OF OPTIONS

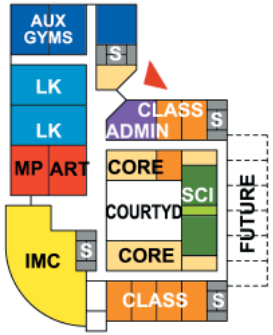
OPTION 2 - DESCRIPTION

Option 2 is a new four-story building organized around a courtyard that takes advantage of the sloping site to reduce the mass of the building, and create a compact footprint. The building is divided into two distinct wings; one for activities and the other one for academics, linked together by a “main street” concept. The linear west wing houses the activities spaces, while the east wing houses the academic spaces arranged around a courtyard. Located at the southwest corner of the building, the main entry is easily identifiable upon entering the site. Access is provided on two levels, with the main entrance on the lowest level and the activity entrance on the second level. The main entrance is adjacent to the administration suite, with direct access to the student drop-off and staff/visitor parking areas. All car traffic will enter the site from the south off of Saul Road. The activities entrance to the north of the building is located adjacent to the bus loading area, which also serves as the entrance for after school use of the gymnasium and instructional media center. Buses enter the site at the junction of Haverhill Drive and Saul Road. The car and bus entrances both utilize the existing curb cuts off Saul Road. The academic wing of the school is arranged in a three-story grade level pod. Classrooms are arranged around the perimeter of the building and the science laboratories, computer laboratories, lockers, and support space are arranged around the courtyard which allows natural light into all spaces. Retaining walls are required in various locations due to the sloping site. There is a two-tiered retaining wall along the edge of the staff parking and a retaining wall between the tennis courts and the bus loading area.

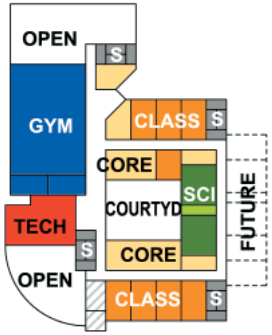
OPTION 2 - PLANS



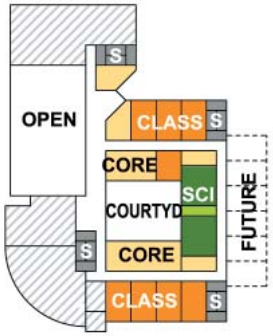
FIRST FLOOR



SECOND FLOOR



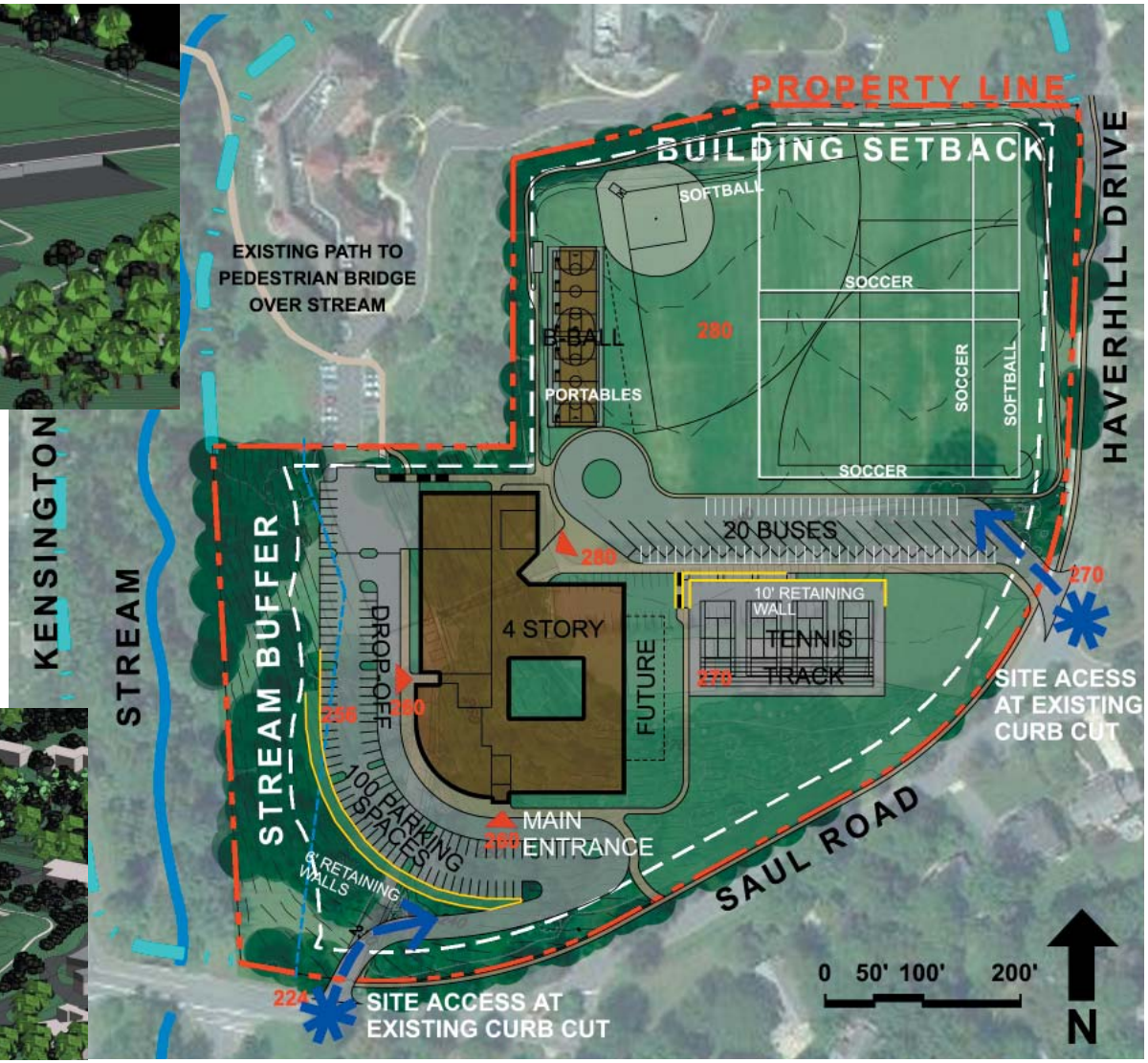
THIRD FLOOR



FOURTH FLOOR

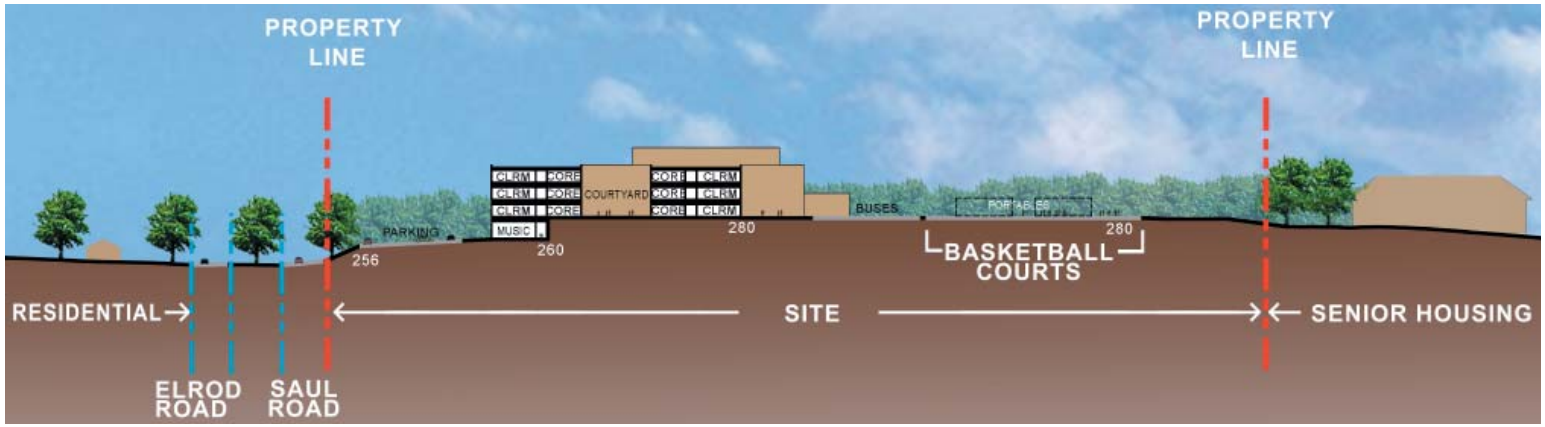
V. DESCRIPTION OF OPTIONS

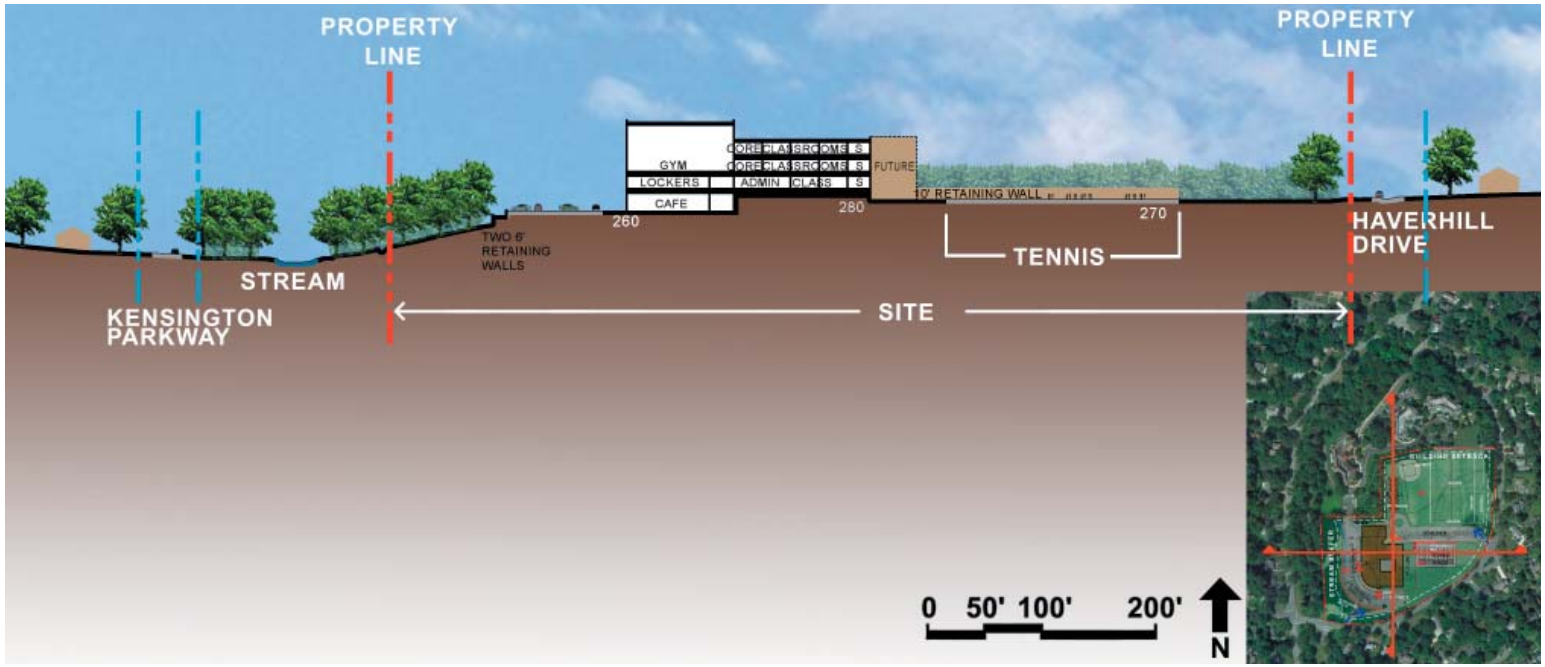
OPTION 2 - 3D VIEWS AND SITE PLAN



V. DESCRIPTION OF OPTIONS

OPTION 2 - SECTIONS





V. DESCRIPTION OF OPTIONS

OPTION 2 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES:

+ Bus entry located at triangle intersection of Saul Road and Haverhill Drive, so it is not located directly in front of any houses.
+ Grade levels are organized by floor, one grade per floor (Grade 6, Grade 7, and Grade 8).
+ Activity spaces are separated from academic spaces.
+ The main entrance is easily identifiable.
+ Care taken to separate parent cars from buses and all vehicles from pedestrians on the school site.
+ The car and bus site access both utilize the existing curb cuts off Saul Road.
+ Four-story building preserves more green space.
+ Administration is located at both entrances; main entrance and the activity entrance.
+ Courtyard enhances circulation within school building.
+ Courtyard provides natural light to all spaces including core spaces.
+ Smallest building footprint.

DISADVANTAGES:

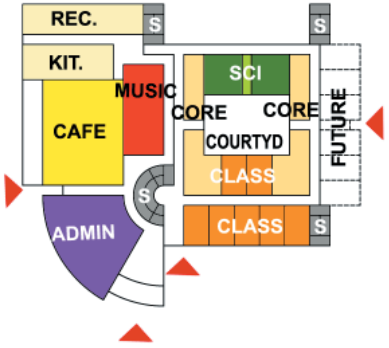
- Administration suite is on the lowest level, not as centralized as desired.
- The main entrance is located at the beginning of the student drop off area, possibly creating traffic congestion if cars do not pull forward.
- The community asserts that there is a safety concern with buses, parents, and pedestrians entering the site at Saul Road.
- Retaining walls at the staff parking lot face the street.
- Music suite below classrooms requires extra sound isolation.
- Layout of softball and soccer fields not as efficient as option 1.
- Fourth story requires more expensive construction - protected structure.

V. DESCRIPTION OF OPTIONS

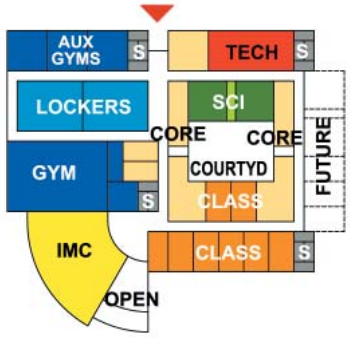
OPTION 3 - DESCRIPTION

Option 3 is a new three-story building organized around a courtyard that takes advantage of the sloping site to reduce the mass of the building. The building is divided into two distinct wings; one for activities and the other one for academics, linked together by a “main street” concept. The west wing houses the activities spaces, while the east wing houses the academic spaces which are arranged around a courtyard. Located at the southwest corner of the building is the main entrance, administration suite, and media center. All access into the school occurs in one general location at a split level main entrance, with car riders accessing the lower level and bus riders accessing the upper level. The main entrance is adjacent to the administration suite, with direct access to the student drop-off and staff/visitor parking areas. All car traffic will enter the site from the south off of Saul Road. The activities entrance located off the bus loading area, serves as the entrance for after school use of the activities spaces. Buses enter the site at the junction of Haverhill Drive and Saul Road. The car and bus entrances both utilize the existing curb cuts off Saul Road. The academic wing of the school is arranged in a three-story grade level pod. Classrooms, computer laboratories, lockers and support spaces are arranged around the perimeter of the building and courtyard to allow natural light into all spaces. Retaining walls are required in various locations due to the sloping site. There is a two-tiered retaining wall along the edge of the staff parking and a retaining wall between the courts and field area.

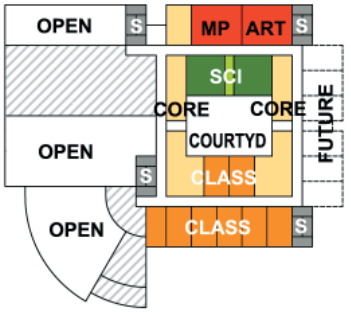
OPTION 3 - PLANS



FIRST FLOOR



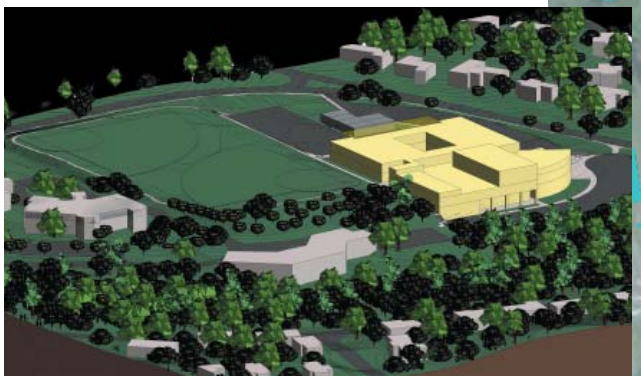
SECOND FLOOR

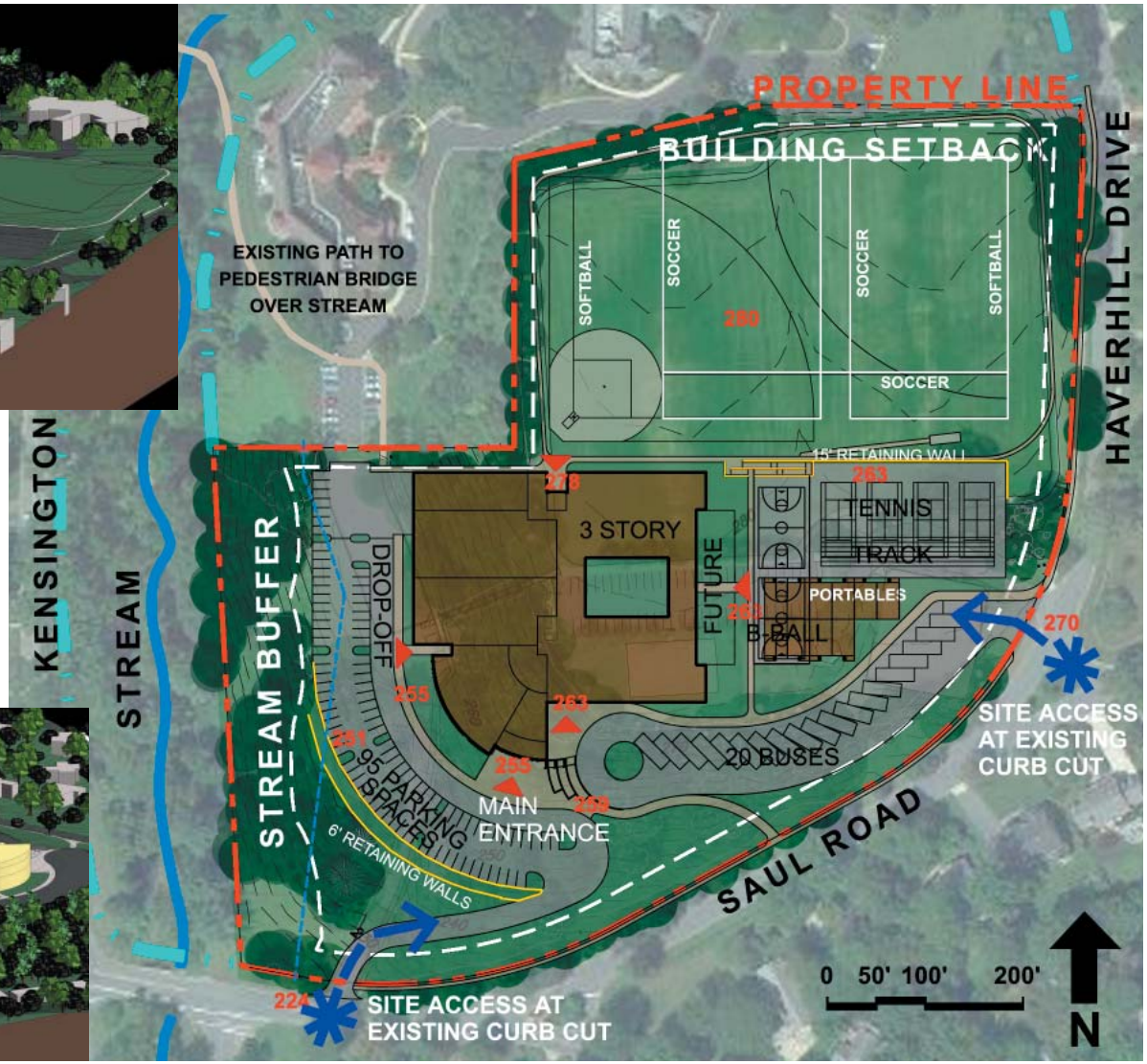


THIRD FLOOR

V. DESCRIPTION OF OPTIONS

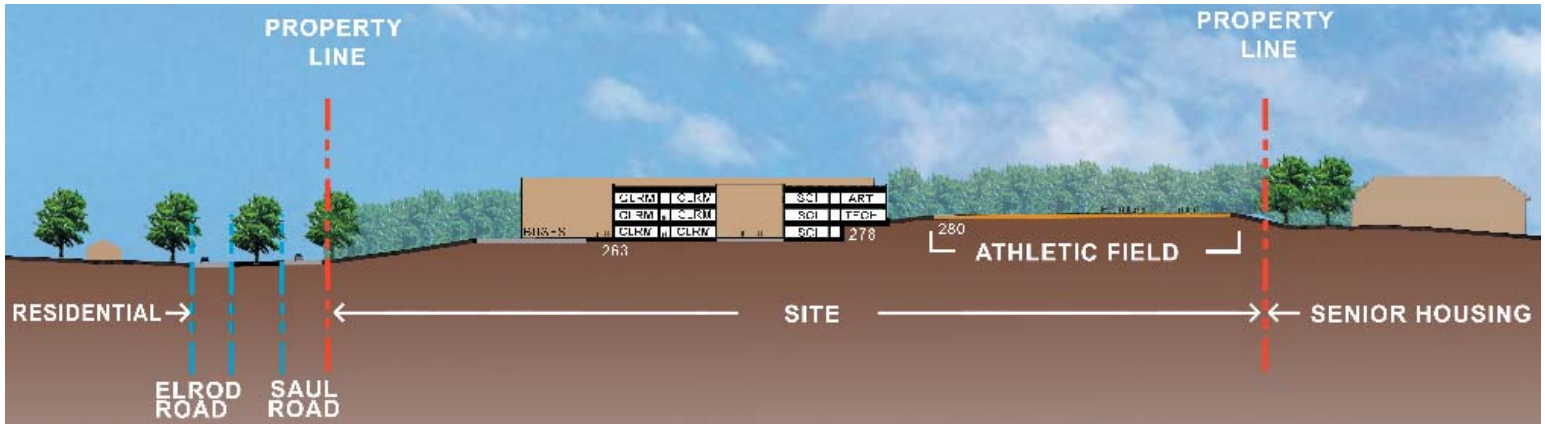
OPTION 3 - 3D VIEWS AND SITE PLAN

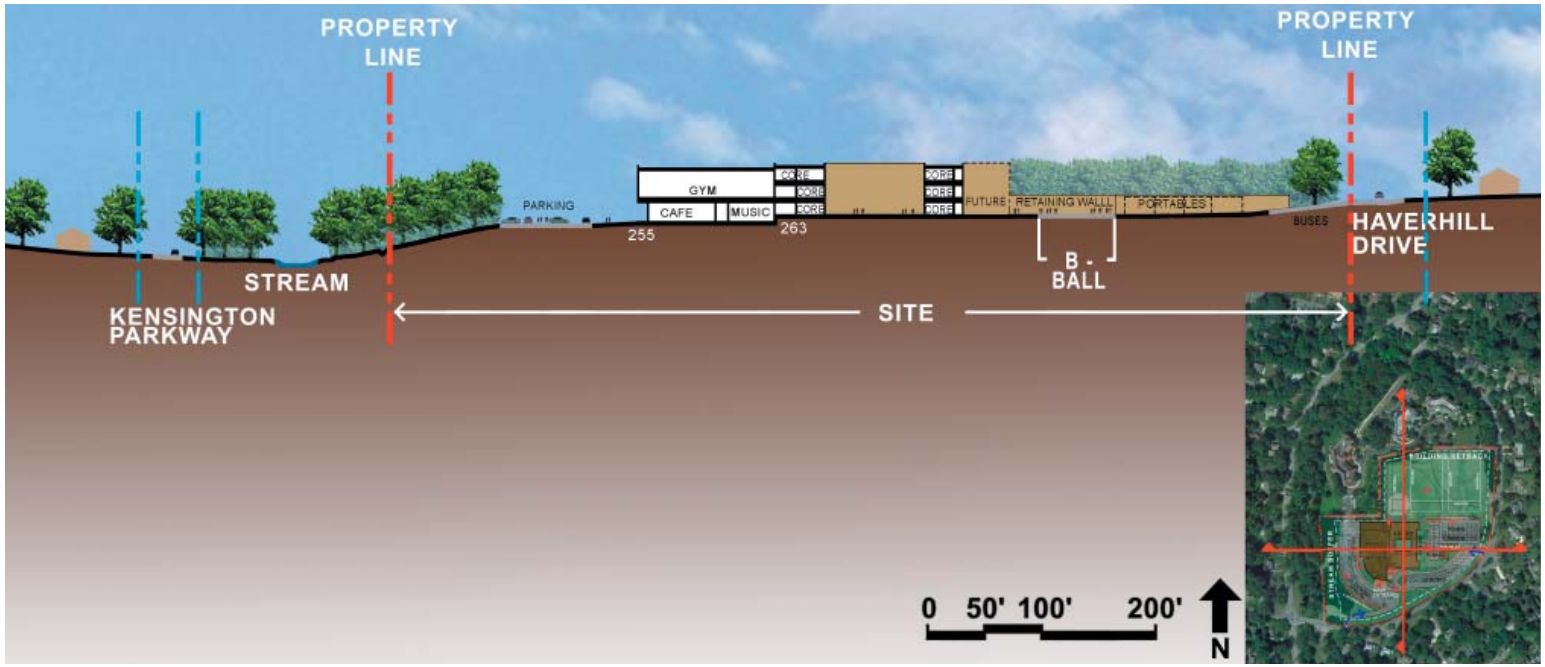




V. DESCRIPTION OF OPTIONS

OPTION 3 - SECTIONS





V. DESCRIPTION OF OPTIONS

OPTION 3 - ADVANTAGES AND DISADVANTAGES

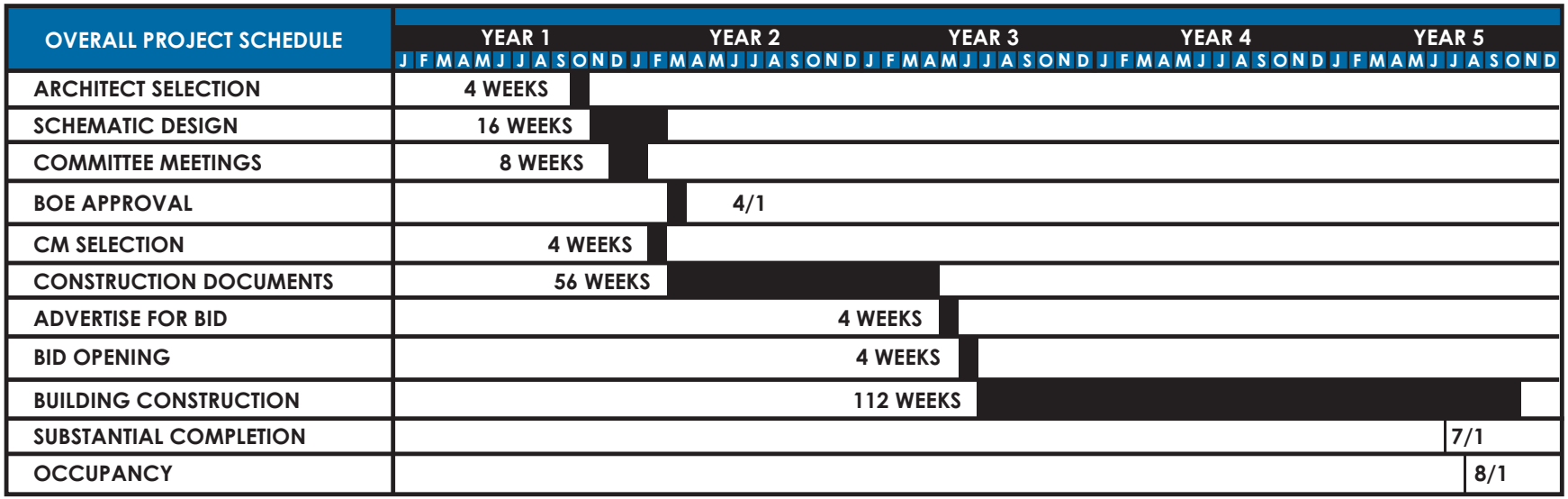
ADVANTAGES:

+ Bus entry located at triangle intersection of Saul Road and Haverhill Drive, so it is not located directly in front of any houses.
+ Grade levels are organized by floor, one grade per floor (Grade 6, Grade 7, and Grade 8).
+ Activity spaces are separated from academic spaces.
+ The main entrance is easily identifiable.
+ Care taken to separate parent cars from buses and all vehicles from pedestrians on the school site.
+ The car and bus site access both utilize the existing curb cuts off Saul Road.
+ Layout of softball and soccer fields is efficient.
+ Playfields and courts are adjacent to each other for ease of monitoring students.
+ Courtyard enhances circulation within school building.
+ Courtyard provides natural light to all spaces including core spaces.
+ All students enter the building at one location.
+ Administration can monitor the single entrance.
+ School is only three stories which may reduce travel time for students and staff.
+ Future re-locatable classrooms would be located close to the building.
+ Less massive building facing the streets and the ball fields.

DISADVANTAGES:

- Administration suite is on the lowest level, not as centralized as desired.
- The main entrance is located at the beginning of the student drop off area, possibly creating traffic congestion if cars do not pull forward.
- The community asserts that there is a safety concern with buses, parents, and pedestrians entering the site at Saul Road.
- Retaining walls at the staff parking lot face the street.
- Sharp turns and steep grades for the buses leaving the bus area.
- Bus loop runs parallel to Saul Road reducing buffer space that could provide landscape screening.
- Building has the largest footprint because it is three stories.

VI. PROPOSED PROJECT IMPLEMENTATION SCHEDULE



VII. APPENDICES

APPENDIX A: SPACE ALLOCATION SUMMARY

APPENDIX B: EDUCATIONAL SPECIFICATIONS

APPENDIX C: EXISTING CONDITIONS SURVEY

APPENDIX D: EXISTING PHOTOS

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

The school will be designed with an initial capacity of 836 and core capacity of 1200.
When this project is complete, the following spaces are to provided:

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
ENGLISH/FOREIGN LANGUAGE/MATH/SOCIAL STUDIES			
Classroom	**17**	900	15300
Computer Laboratory	**3**	950	2850
SCIENCE			
Laboratory	**6**	1300	7800
Prep/Project/Storage	3	250	750
Chemical Storage	1	250	250
OTHER INSTRUCTIONAL SUPPORT AREAS			
Team Resource Center/Workroom	9	300	2700
Interdisciplinary Textbook Storage	3	150	450
Departmental Textbook Storage	3	150	450
Foreign Language Textbook Storage	1	150	150
Instructional Data Assistant Room	1	400	400
Developmental Reading	**1**	600	600
ESOL CLASSROOMS			
ESOL Classrooms	**2**	600	1200
SPECIAL AND ALTERNATIVE EDUCATION			
Special Education Classrooms	**2**	900	1800
Special Education Team Room	1	300	300
Resource Room	1	800	800
Speech & Language Therapy Support Room	1	250	250
Occupational Therapy/Physical Therapy	1	250	250

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
MUSIC SUITE			
Instrumental Music Room	**1**	1900	1900
General Music/Choral Room	**1**	1000	1000
General/Choral Storage	1	250	250
Music Office	1	150	150
Practice Rooms	2	64	128
MULTIPURPOSE TECHNOLOGY LABORATORY			
Multipurpose Technology Laboratory	**1**	1600	1600
Computer Technology Laboratory	1	900	900
Preparation/Storage Room	1	400	400
MULTIPURPOSE LABORATORY			
Multipurpose Laboratory	**1**	1600	1600
Storage	1	300	300
VISUAL ARTS SUITE			
Art Room	**1**	1300	1300
Storage	1	350	350
Kiln Room	1	150	150

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
PHYSICAL EDUCATION			
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
COMPUTER SUPPORT			
Storage Room/Office Area	1	150	150
Telecommunication Equipment Closet	1	250	250
Telecommunication Closet	5	80	400
STUDENT ACTIVITIES			
School Store	1	200	200
Student Government Storage Closet	1	100	100

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
INSTRUCTIONAL MEDIA CENTER			
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
Multimedia Production Room	1	950	950
ADMINISTRATION SUITE			
General Office	1	700	700
Principal's Office	1	250	250
Assistant Principal's Office	3	150	450
Student Support Specialist Office	1	150	150
Administrative Secretary's Office	1	150	150
Workroom/Storage/Toilet Area	1	500	500
Storage	1	100	100
Conference Room	1	300	300
Copier Workroom	1	200	200
In-School Suspension Room	1	400	400
Financial Secretary's Office	1	150	150
Staff Development Office	1	200	200
Security Office	1	150	150

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
GUIDANCE SUITE			
Counselor's Office	5	150	750
Waiting Room	1	250	250
Conference Room	1	300	300
Records Room	1	125	125
HEALTH SUITE			
Waiting Room	1	100	100
Treatment/Medication Area	1	125	125
Office/Health Assessment Room	1	100	100
Health Assessment/Isolation Room	1	100	100
Rest Area	2	100	200
Toilet Room	2	50	100
Storage	1	40	40
STAFF FACILITIES			
Staff Lounge	1	1150	1150
STUDENT DINING			
Student Dining	1	6000	6000
Stage	1	1500	1500
Storage	1	300	300
Chair Storage	1	400	400

VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
KITCHEN AREA			
Food Preparation	1	900	900
Dry Food Storage	1	350	350
Refrigerator	1	125	125
Freezer	1	225	225
Service Area (4 service lines)	1	950	950
Office	1	100	100
Locker/Toilet Room	1	120	120
Loading Platform	1	125	125
Receiving Area	1	100	100
Chemical Storage Room	1	48	48
BUILDING SERVICE FACILITIES			
Building Services Office	1	150	150
Locker/Shower Area	1	250	250
Plant Equipment Operator Office	1	75	75
Compactor/Trash Room	1	250	250
Recycling Room	1	250	250
Receiving and Storage Area	1	800	800
General Storage Rooms	2	250	500
Building Services Outdoor Storage	1	250	250
TOTAL TEACHING STATIONS AND NET SQ. FT.	**41**		**94,186**

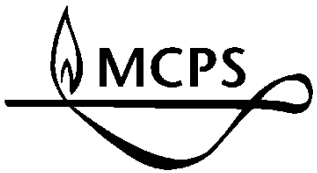
VII. APPENDIX A: SPACE ALLOCATION SUMMARY

FACILITY	#	NET SQ. FT.	TOTAL NET SQ. FT.
The following spaces should be master-planned as a future addition.			
Classrooms	**15**	900	13500
Laboratory	**2**	1300	2600
Prep/Project Storage	1	250	250
TOTAL MASTER PLANNED ADDITION	**17**		**16,350**

Bethesda-Chevy Chase Middle School #2

Educational Specifications

Feasibility Study
April 15, 2011



Montgomery County Public Schools
Rockville, Maryland 20850

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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- **INTRODUCTION** B3
- **GENERAL PLANNING CONSIDERATIONS** B4-B6
  - Technology Framework B7
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  - Standard Classrooms B8
  - Computer Laboratory B9
  - Science Laboratories B9-11
  - Instructional Support Rooms B12-13
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VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 836 with a master-planned (core) capacity for 1200. The school needs a 17 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 guidelines for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
    - The third section identifies any additional program guidelines for the school that were identified by the Facility Advisory Participants.
- The architect should show the location for re-locatable 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 re-locatable 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.

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GENERAL PLANNING CONDITIONS

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 Sate 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.

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- 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.

- 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.

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- 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.
- 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.

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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.

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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 kneeholes 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.

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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

Spatial Needs
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.

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- 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.

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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 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

INSTRUCTIONAL SUPPORT ROOMS

Spatial Needs
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.

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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 7th and 8th 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

SPECIAL EDUCATION FACILITIES

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.
- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

MUSIC SUITE

Spatial Needs
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.
- A 16 foot ceiling is necessary to obtain proper volume.
- 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.
- No supporting pillars or fabric folding doors are to be used in the room.

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- 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.

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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

Spatial Needs
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.

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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.

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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.

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MULTIPURPOSE TECHNOLOGY

Spatial Needs
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”.

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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

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

PHYSICAL EDUCATION

Spatial Needs
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 Guidelines)

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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 bar 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

COMPUTER SUPPORT

Spatial Needs
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)

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 shelve 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 non print 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 provided 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 online 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 chroma key 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

Spatial Needs
Student Store
Student Government Storage

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

ADMINISTRATION SUITE

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

GUIDANCE SUITE

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

HEALTH SERVICES SUITE

Spatial Needs
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 heath 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

STAFF ROOM

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

FOOD SERVICES FACILITY

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

KITCHEN

Spatial Needs
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 non-resilient, 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

BUILDING SERVICE FACILITIES

Spatial Needs
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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 trash cans 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 trash cans to be rolled to the dock.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 GUIDELINES

- 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.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

- 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 trash cans should be provided in this area.

VII. APPENDIX B: EDUCATIONAL SPECIFICATIONS

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 trash cans 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.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

CIVIL

GENERAL SITE INFORMATION

The future site of Bethesda-Chevy Chase Middle School #2 is situated on a parcel comprised of 583,161 square feet (13.39 Acres) at 3701 Saul Road in Kensington, Maryland within Election District 13. The property is found on ADC Map book grid 5285-H8 & J8 and has a tax account number of 161302877427. The site is zoned R-90 and is bounded on the south by the 60-foot Saul Road right-of-way, on the east by the 60-foot Haverhill Drive right-of-way, on the north and northwest by attached single family properties managed by Montgomery County HOC, and finally along the east by a vacant lot owned by the Maryland-National Capital Park and Planning Commission (M-NCPPC). The site is currently utilized as Rock Creek Hills Park and is maintained by M-NCPPC.

Based on the current Montgomery County Zoning Ordinance, dimensional regulations for the property will include the following:

Street setback – 30'
Side Setback - 8'
Sum of Both Sides - 25'
Rear setback – 25'
Maximum Building Height - 35' (3 stories or 40' if approved by the Planning Board)
Maximum Site Building Coverage – 30%

The zoning ordinance will also require any site improvements to adhere to the landscaping, screening, and lighting requirements associated with parking lots.

Existing Site - Aerial

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

SITE ANALYSIS

Adjoining Streets:

The site is bounded along its southern property boundary by the 60-foot Saul Road right-of-way. Saul Road is a two-lane residential street with a speed limit of 25-mph. Along the eastern boundary lies the 60-foot Haverhill Drive right-of-way. This 25-mph, residential street provides a sidewalk and street trees along its western edge which could provide the future facility with pedestrian access from the surrounding community.

Site Access, Parking and Circulation:

On-Site Pedestrian and Vehicular Access

The existing park has two driveways which offer vehicular access. Pedestrian access is provided by a public sidewalk flanking the western side of Haverhill Drive.

Driveway Entrances

As mentioned, there are two existing vehicular driveways providing access into the site. The southern driveway is located off of Saul Road, and provides access to a small parking lot adjacent to a roller hockey rink. This driveway is asphalt and appears to be in good condition. This driveway is located approximately 75-feet to the east of the Kingston Road intersection across Saul Road. Sight distance issues are apparent when exiting the site, as dense vegetation makes visibility difficult to the west and topography and horizontal curvature make visibility difficult to the east. The eastern driveway enters the site off of Haverhill Drive and provides access to the main parking area, which is centrally located in the site. This driveway is also asphalt and appears to be in good condition. This driveway is located nearly across from the fork in Saul Road. If this driveway were to remain, site distance would have to be verified prior to acceptance by MCDPS.

Main Driveway

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

On-Site Parking

There are two existing parking areas located on-site. The main parking area is located in the central portion of the property. This parking lot contains approximately 60 standard spaces and 3 ADA compliant handicap spaces (1-van). This parking lot appears to be in fair condition and is compliant with current ADA requirements.

The remaining parking lot is located on the western portion of the site and provides access to the roller hockey rink. This parking lot provides four standard spaces with one handicap space. While the correct ratio of handicap spaces is provided, the existing access aisle does not meet the dimensional requirements of a van-accessible parking space. While this parking lot does not have curb and gutter, the existing asphalt appears to be in good condition.

Fire Access

Currently, there is no fire access provided on the site. Furthermore, fire hydrants are located within the surrounding right-of-ways, but do not exist on the property.

On-Site Sidewalks

Sidewalks

The existing site predominantly provides pedestrian access to the various amenities around the park. An existing 4-foot concrete sidewalk parallels the southern access drive and provides access to the roller rink and to the upper facilities through a concrete staircase. The staircase which is not compliant with current ADA requirements, due to handrail deficiencies, connects the two existing parking lots. Additionally, an eight foot asphalt pathway circles the northern athletic fields and provides connections to the residential properties to the north and the right-of-way to the east.

In general, the existing sidewalks are in fair condition with minimal cracking; however, due to excessive gradients, multiple areas throughout the site are not in compliance with current ADA requirements.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

Site Topography

The site predominantly slopes from the northern athletic fields to the southeastern portions of the site, ultimately draining to a stream just west of the property. The areas of greatest topographic relief which include slopes greater than a 3:1 ratio occur to the south and east of the main parking lot. Overall, the site has a great deal of relief and is generally comprised of a large hill-side which plateau's in the northern portion of the site where the athletic fields are located. Depending on the proposed layout, the topographic character of the site could have major impacts on the amount of earthwork required. It is anticipated that the proposed site improvements will need to consider ramps and retaining walls in order to accommodate the facility and provide the necessary site features.

Existing Staircase

Vegetation

Dense vegetation and forests are located throughout the site, primarily in areas with prevalent slopes. Additionally, an existing stream flows adjacent to the site along its western boundary, which virtually precludes improvements to these areas. Although forest classification and the extent of forestation requirements will depend upon an approved Natural Resources Inventory/Forest Stand Delineation, initial calculations suggest a forestation requirement for approximately 5.1 acres. Should the forestation requirements not be met on-site, off-site forestation will be required. It should also be noted that impacts to root zones of specimen trees will require a variance from the County Arborist.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

Main Parking Lot Stormwater Vault

Storm Drainage and Stormwater Management

With the exception of one stormwater vault, the existing site is currently draining all runoff untreated to the public stormdrain systems surrounding the property and ultimately into the adjacent stream. Site improvements will be required to include Environmental Site Design (ESD) to the maximum extent practicable in order to treat all areas inside the limits of disturbance. After all ESD efforts are exhausted, if the site does not reach a hydrologic state of "woods in good condition," then structural practices may be permitted as determined by the Montgomery County Department of Permitting Services.

Potential ESD stormwater management practices for the site may include both micro-scale practices and alternative surfaces. Micro-scale facilities could include bio-swales and micro-bioretention facilities in areas where open space is available. Alternative surfaces would include a vegetative roof on any structure as well as permeable pavement.

Water and Sewer

The proposed facility will likely be served by an 8-inch sewer main in the Saul Road right-of-way, contract #47368, built in 1947. It is assumed that the sanitary sewer service will sufficiently meet the needs of the proposed building.

The proposed facility will utilize an existing 8-inch water main, contract #919100A, built in 1991, which runs through the western portion of the site. As the proposed location of the facility will likely impact the existing main line, relocation and an easement dedication will need to be included in the proposed improvements. It is assumed that the existing main is of sufficient capacity to meet the needs of the prospective improvements.

According to WSSC, the site is in a 495A pressure zone with a High Hydraulic Gradient of approximately 540 and a Low Hydraulic Gradient of approximately 467. Based on a fire flow test conducted by WSSC on August 03, 2011 the static pressure at the fire hydrant (elevation 274) on the adjacent parcel is 100 psi and the residual pressure is 60 psi

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

Gas, Electric and Telephone, Etc.
Power, cable and telephone service connections will likely be made with the main service lines in the Saul Road right-of-way. Proposed improvements should aim to avoid the existing utility poles on the site, primarily in the northwestern areas where the existing hockey rink is located. Additional utility poles are located adjacent to the Saul Road right-of-way across from the Elrod Road intersection.

Site Soils
Per the Soil Survey of Montgomery County, Maryland the predominant soils on the site are in the Glenelg, Brinklow-Blocktown and Cordorus series. According to the USDA, the depth to bedrock is generally greater than 5-feet in these soils with the exception of the Brinklow-Blocktown soils. Nevertheless, it should be noted that these estimated depths are based upon virgin soils. Because the site has been previously disturbed, bedrock could be encountered at shallower depths. It will be necessary to perform site-specific borings to establish the actual depths to bedrock. It should be noted that the Brinklow-Blocktown soils are highly erosive. In terms of hydrology, the majority of soils have a 'B' hydrologic soil group classification and are known for adequate infiltration rates. It can be anticipated that a wide variety of environmental site design (ESD) options will be available for use in dealing with stormwater management.

Flood Plains, Stream Valley Buffers and Non-Tidal Wetlands
Initial investigations reveal that the site is safely located outside of a floodplain in a zone "X" on FEMA Flood Insurance Rate Map number 24031C0365D. Furthermore, according to the U.S. Fish and Wildlife Mapping services there are no wetlands or associated buffers located on or around the site.

VII. APPENDIX C: EXISTING CONDITIONS SURVEY

PERMITTING

The construction of Bethesda-Chevy Chase Middle School will be subject to the following site related County permits:

Montgomery County Department of Permitting Services:
- o Sediment Control and Stormwater Management Permit
- o Permit to Work in Lands Dedicated to Public Use (Public Sidewalks and Entrances)
- o Utility Connection Permit

Maryland-National Capital Park and Planning Commission (M-NCPPC):
- o Mandatory Referral - (The most current procedures and requirements for Mandatory Referral can be found on the (M-NCPPC) web site, and should be verified immediately prior to proceeding with design)
- o Forest Conservation Plan

Washington Suburban Sanitary Commission:
- o WSSC On-Site Water and Sewer Permit
- o WSSC Service Connection Permit
- o WSSC Sediment Control Sticker

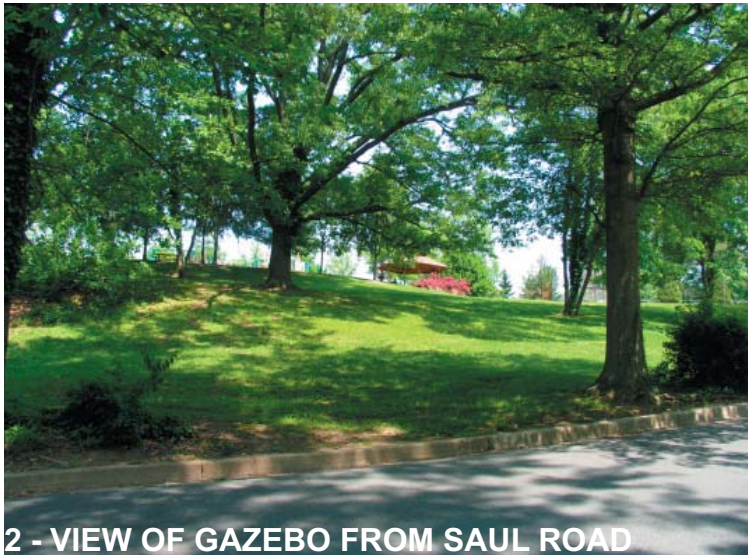
Montgomery County Department Of Public Works and Transportation:
- o Traffic Control Plan Approval for Utility Construction

VII. APPENDIX D: EXISTING PHOTOS

KEY PLAN

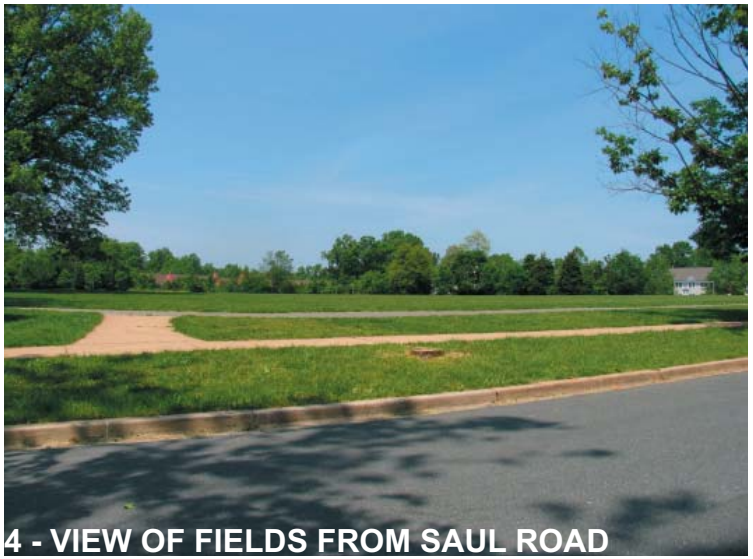
VII. APPENDIX D: EXISTING PHOTOS

1 - SITE ENTRY



2 - VIEW OF GAZEBO FROM SAUL ROAD

3 - MAIN SITE ENTRY



4 - VIEW OF FIELDS FROM SAUL ROAD

VII. APPENDIX D: EXISTING PHOTOS

5 - GAZEBO AND PLAYGROUND

6 - BASKETBALL AND PARKING

7 - SOCCER FIELDS

8 - JOGGING PATH

VII. APPENDIX D: EXISTING PHOTOS

9 - EXISTING STAIRS

10 - PARKING AND STREET HOCKEY

11 - EXISTING TREES

12 - DRIVEWAY

VII. APPENDIX D: EXISTING PHOTOS

13 - KENSINGTON PARKWAY AND SAUL ROAD

14 - BRIDGE OVER STREAM ON SAUL ROAD

15 - TREES OFF KENSINGTON PARKWAY

16 - PEDESTRIAN BRIDGE SITE ACCESS