JUDITH A. RESNIK ELEMENTARY SCHOOL ADDITION

FEASIBILITY STUDY

Prepared for Montgomery County Public Schools

By: Proffitt and Associates Architects

October 2013

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Judith A. Resnik Elementary School
Addition

7301 Hadley Farms Drive
Gaithersburg, Maryland 20879

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I. INTRODUCTION

INTRODUCTION

A feasibility study for an addition at Judith A. Resnik Elementary School was conducted for Montgomery County Public Schools (MCPS) by the architectural firm of Proffitt & Associates Architects. Judith A. Resnik Elementary School is located at 7301 Hadley Farms Drive, Gaithersburg, MD 20879. The work was performed under the direction of the MCPS Department of Facilities Management's Division of Construction.

FEASIBILITY STUDY PARTICIPANTS

The Feasibility Study Participants reviewed, revised, and approved the design concepts for the Judith A. Resnik Elementary School addition project. The meetings occurred on March 21, 2012, April 12, 2012, April 25, 2012, May 10, 2012, and May 24, 2012. The proposed design options are a result of the Participants' recommendations, suggestions, and guidance during the feasibility study process.

Listing of Participants:

Dr. Roy Settles Jr.	Principal	Judith A. Resnik Elementary School
Kelly Donovan	Sr. Architectural Designer	Proffitt And Associates Architects
Charles Hynson	Community	Judith A. Resnik Elementary School
Karen Hynson	Community	Judith A. Resnik Elementary School
Lisa Johns	Parent	Judith A. Resnik Elementary School
Karen Kosian	Community	Judith A. Resnik Elementary School
Ray Marhamati	Project Manager	Division of Construction, MCPS
Kori Purdum Matheis	Architect	Proffitt And Associates Architects
Julie Morris	Facilities Planner	Division of Long-range Planning, MCPS
Christine Novick	Staff	Judith A. Resnik Elementary School
Joe Pospisil	Planning Specialist	MC-DOT Division of Traffic Engineering
Michael Proffitt	Principal	Proffitt And Associates Architects
Martha Sekerak	Staff	Judith A. Resnik Elementary School
Michael Shpur	Architect	Division of Construction, MCPS
Juan Vasquez	Building Services Manager	Judith A. Resnik Elementary School

II. EXECUTIVE SUMMARY

PURPOSE

The purpose of this feasibility study is to explore addition options that meet the Educational Specification requirements for Judith A. Resnik Elementary School. Furthermore, this study provides specific recommendations to Montgomery County Public Schools (MCPS) for implementation. The scope includes a classroom addition and minor interior renovations to accommodate a program capacity of 728 students for Options 1, 2, and 3 or 640 students for Option 4, with a core capacity for 740 students.

BACKGROUND INFORMATION

Judith A. Resnik Elementary School is located at 7301 Hadley Farms Drive, Gaithersburg, MD 20879. The original school building constructed on this site was built in 1991. There have been no additions or major renovations to the building since that time. In 2004, student drop-off and parking lot upgrades were performed as part of the Safe Access program. Presently, the school capacity is 477 students with a core capacity of 740 students. The enrollment for the 2013-2014 school year is 611 students in grades prekindergarten through grade 5. Five relocatable classrooms located to the northwest of the building help provide adequate classroom space for the current enrollment. The existing school structure is 78,547 gross square feet. The existing school utilizes approximately 12.8 acres of a 29.77 acre parcel. The remainder of the parcel is occupied by the Hadley Farms Alternative Middle School, the Bright Eyes Childcare Center, and wooded areas.

II. EXECUTIVE SUMMARY (Continued)

OVERVIEW

The Judith A. Resnik Elementary School facility is situated on a 29.77 acre parcel at 7301 Hadley Farms Drive, Gaithersburg, MD 20879. The school shares the parcel with the Hadley Farms Alternative Middle School and the Bright Eyes Childcare Center. The site is zoned R-90 and is bounded on the north, west, and south (across Hadley Farms Drive) by detached single family homes, and on the east (across Woodfield Road, MD-124) by lower density, detached single family homes in a Special Protection Area.

Vehicular access is currently divided amongst four separate driveways off Hadley Farms Drive. The eastern two serve as the one-way entrance and exit to the student drop-off loop and to the main parking lot, as it is encompassed on three sides by the student drop-off loop. The remaining two driveways act as the entrance and exit for the bus-loop. However, the bus-loop exit is also shared as an entrance and exit for the Childcare facility, located on school property to the northwest of the school building. This driveway also provides access to the loading/delivery area for the main school. The Alternative Middle School is located down the hill to the west of the Elementary School and has its own separate vehicular access from Hadley Farms Drive.

The drop-off loops' elevations are approximately at the same level as finished floor on the south side of the building. Existing grades slope up steeply to the east of the building toward Woodfield Road. The existing play areas are located to the north of the building and are basically level with building finished floor. Grades drop off to the west of the building away from the kindergarten wing exit.

Judith A. Resnik Elementary School is a one story steel framed structure. The existing building is non-combustible construction. The exterior walls are predominantly masonry cavity wall construction using 6" CMU, a 2" air space, and 4" face masonry veneer. The veneer is mostly face brick with some glazed scored concrete masonry unit accents. Interior walls are typically concrete masonry units laid in a stacked bond, except at the administration area, where metal stud partitions with painted gypsum board are used.

Among all addition options presented to the Feasibility Study Participants, four options were chosen. All options meet the programmatic requirements for the building and site. Costs estimates were established for each option and are presented later in this section of the report.

II. EXECUTIVE SUMMARY (Continued)

COMMON SITE DESIGN ELEMENTS FOR EACH OPTION

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- The existing loading/service and Childcare facility access drive will be re-routed and a new retaining wall constructed in order to accommodate construction of the new kindergarten classroom addition.
- The existing kindergarten play area to the front of the building will be maintained for convenience and miscellaneous use, but additional hard and soft surface kindergarten play areas will be provided to the rear of the gymnasium for recess use.
- New pre-kindergarten play areas will be provided adjacent to the pre-kindergarten classrooms.
- Due to the rear additions, all existing play areas behind the building will be relocated. New hard surface play for basketball and general use will be provided to the north of the rear additions. New soft surface play with new playground equipment will also be provided adjacent to the hard surface play area.
- The existing softball and soccer fields, along with the walking trail that encircles their perimeter, will be shifted slightly to the north to make way for the new play areas. Some re-grading will be required to ensure better drainage for the softball fields.
- All site features will be ADA accessible. New ADA curb ramps will be provided along the existing bus and drop-off loops.
- The amount of significant and/or specimen trees that need to be cut down as a result of the additions will be limited.
- Space has been reserved on the site for placement of relocatable classrooms if required in the future.
- All necessary quantity and quality control of storm water will be provided for all options per code requirements. Environmental Site Design measures will be implemented to the maximum extent practicable, and then structural measures will be used to supplement as required.

II. EXECUTIVE SUMMARY (Continued)

COMMON BUILDING DESIGN ELEMENTS FOR EACH OPTION

- All options include one-story additions to the existing school. The existing building is one-story. In options 1 through 3, this addition completes the maximum size of the building. The site is large enough to accommodate a single story building of approximately 103,000 SF.
- A new security vestibule will be created at the main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area.
- Natural light will be provided in every classroom space.
- The additions will be steel framed with masonry cavity exterior walls using 8" CMU with brick veneer to match the existing to the greatest extent possible. Interior walls will be constructed predominantly of 8" CMU.
- The new additions will receive a tray style vegetated roofing system over a built-up asphalt roof covering.
- New exterior doors will be painted insulated hollow metal in painted hollow metal frames. New exterior windows will be prefinished aluminum with thermal breaks and 1" insulating glazing.
- All newly constructed and renovated areas of the facility will be ADA accessible. Corridors will be either 10' or 12' wide, depending on whether they are primary or secondary circulation. Handrails and resting benches will be provided in the corridors to facilitate travel for students with mobility challenges.
- Minor repairs will be made to existing caulking, painting, etc. around the building exterior in order to extend the service life of the existing materials. (See the Structural Recommendations in Appendix C for a listing of items to be completed.)
- The new addition will be fully sprinkled.
- A new code compliant Fire Alarm System will be provided to replace the existing non-code compliant system throughout the existing building and will also extend to serve the additions.
- All addition and renovation areas will receive a new security system designed per MCPS standards.
- All new and renovated areas will be designed to comply with the Leadership in Energy and Environmental Design (LEED) checklist to the greatest extent possible.

II. EXECUTIVE SUMMARY (Continued)

EXISTING SITE PLAN

LEGEND

- Existing Building / Relocatable
- Paving / Parking
- Sidewalk
- Soft Surface Play
- Hard Surface Play
- Grass / Vegetation
- Athletic Fields

SCALE: 1" = 250'-0"

125' 0' 125' 250'

PLAN NORTH

II. EXECUTIVE SUMMARY (Continued)

EXISTING FLOOR PLAN

LEGEND

- Media / Computer
- Classroom
- Support
- All Purpose / Stage / Food Service
- Kindergarten
- Specials
- Gymnasium
- Administration
- Corridor

SCALE: 1" = 80'-0"

40' 0' 40' 80'

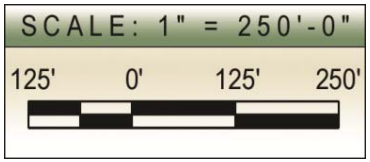
PLAN NORTH

FIRST FLOOR

II. EXECUTIVE SUMMARY (Continued)

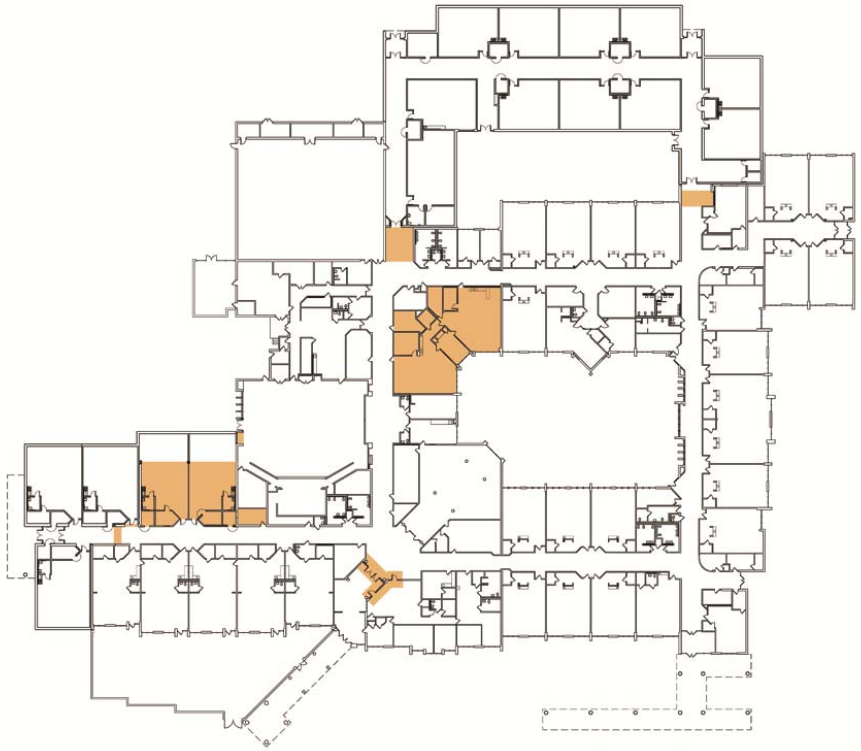
OPTION 1

Option 1 creates additional teaching space by constructing a one story addition to the north of the existing building. Expansion of the existing art and music classrooms will enable them to be re-purposed for kindergarten use. A kindergarten classroom and two pre-kindergarten collaboration classrooms will also be added to the west of the renovated art and music rooms. All of the site and building elements from the Educational Specifications are included in this option.



Option 1 – Total Cost $10,860,000

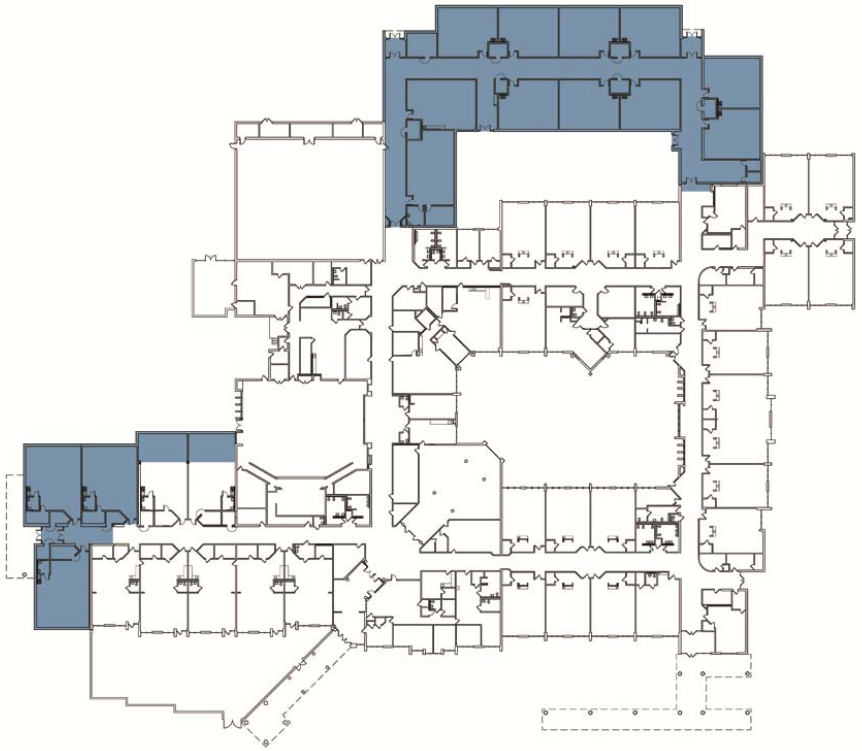
II. EXECUTIVE SUMMARY (Continued)



OPTION 1: RENOVATIONS

FIRST FLOOR = 5,245 SF

PLAN NORTH



OPTION 1: ADDITIONS

FIRST FLOOR = 24,665 SF

SCALE: 1" = 120'-0"

60' 0' 60' 120'

OPTION 1

AREA OF EXISTING BUILDING = **78,547 GSF**

AREA OF DEMOLITION = **0 GSF**

AREA OF ADDITION = **24,665 GSF**

TOTAL BUILDING WITH ADDITION = 103,212 GSF

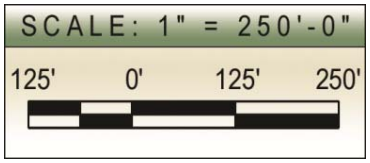
NET ASSIGNABLE SF IN ADDITION = **15,658 NSF**

EFFICIENCY OF ADDITION = **63%**

II. EXECUTIVE SUMMARY (Continued)

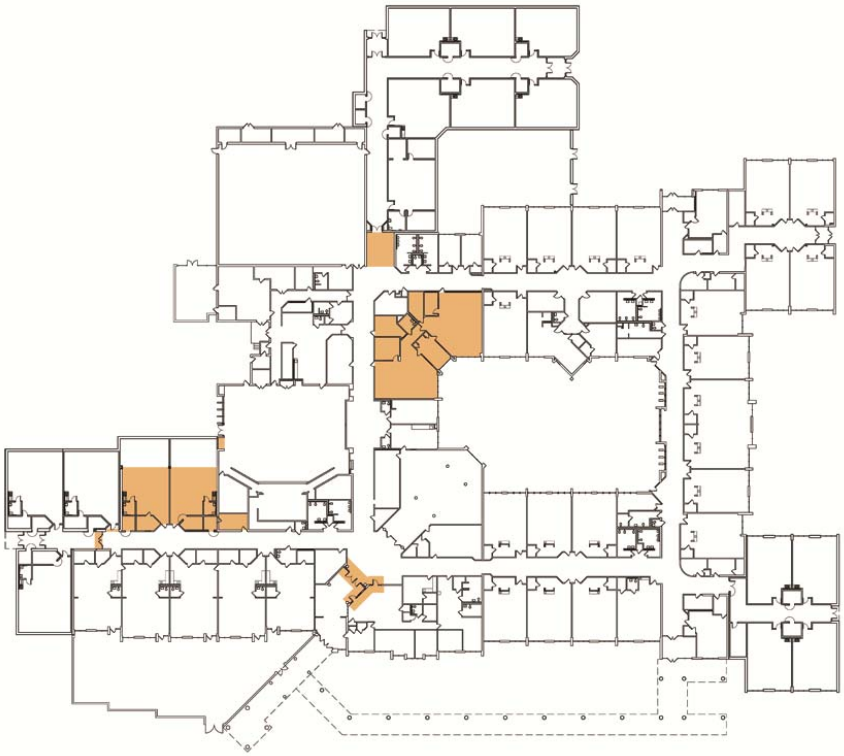
OPTION 2

Option 2 creates additional teaching space by constructing one story additions to the north and east of the existing building. Expansion of the existing art and music classrooms will enable them to be re-purposed for kindergarten use. A kindergarten classroom and two pre-kindergarten collaboration classrooms will also be added to the west of the renovated art and music rooms. All of the site and building elements from the Educational Specifications are included in this option.



Option 2 – Total Cost $10,590,000

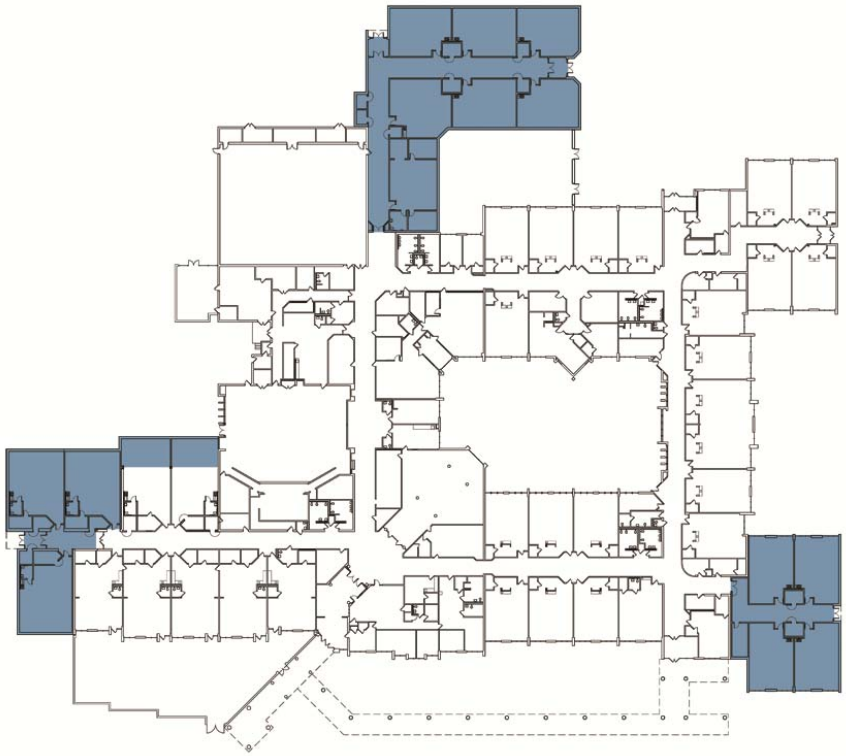
II. EXECUTIVE SUMMARY (Continued)



OPTION 2: RENOVATIONS

FIRST FLOOR = 5,245 SF

PLAN NORTH



OPTION 2: ADDITIONS

FIRST FLOOR = 23,922 SF

SCALE: 1" = 120'-0"

60' 0' 60' 120'

OPTION 2

AREA OF EXISTING BUILDING = **78,547 GSF**

AREA OF DEMOLITION = **0 GSF**

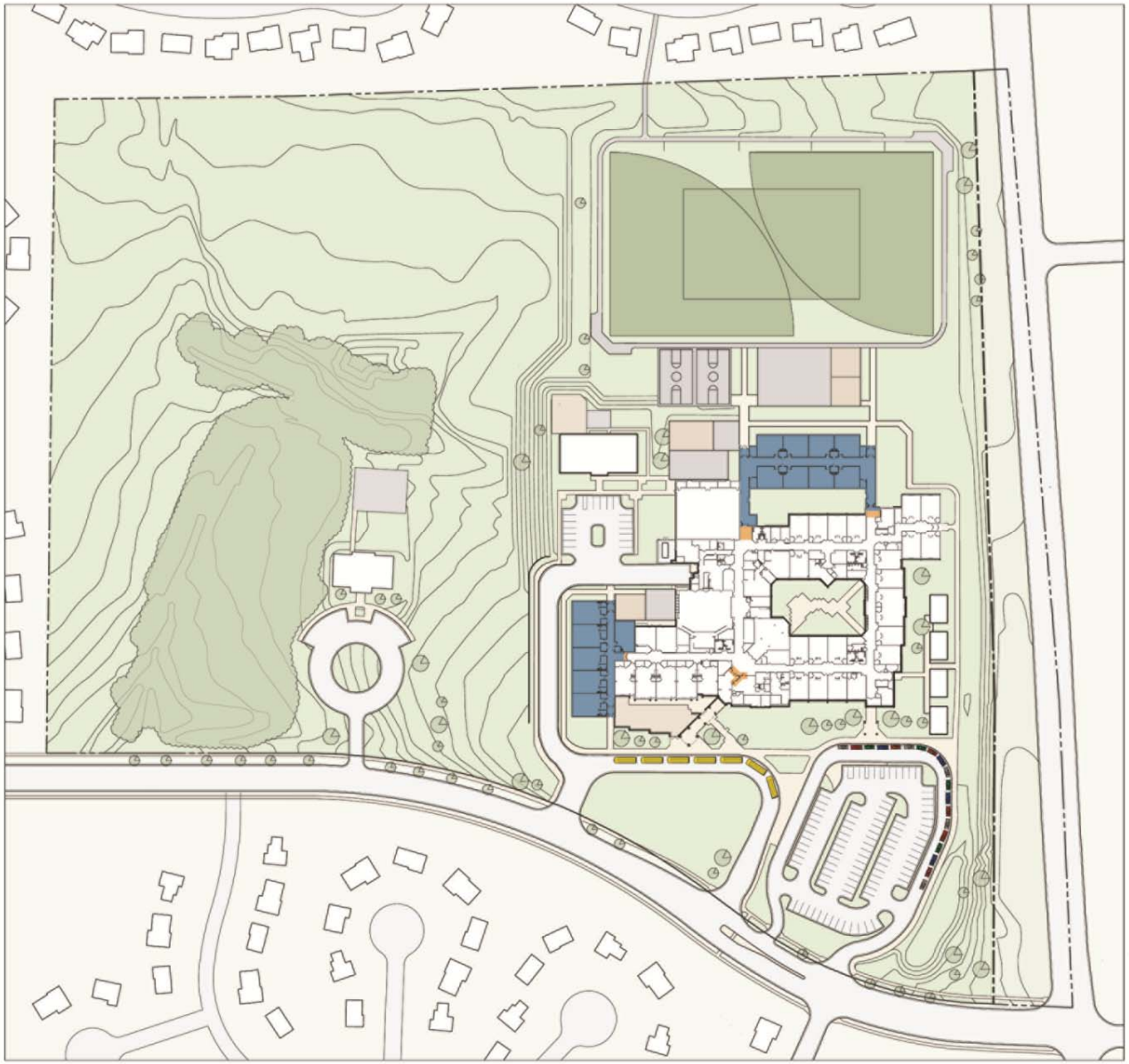
AREA OF ADDITION = **23,922 GSF**

TOTAL BUILDING WITH ADDITION = 102,469 GSF

NET ASSIGNABLE SF IN ADDITION = **15,709 NSF**

EFFICIENCY OF ADDITION = **66%**

II. EXECUTIVE SUMMARY (Continued)

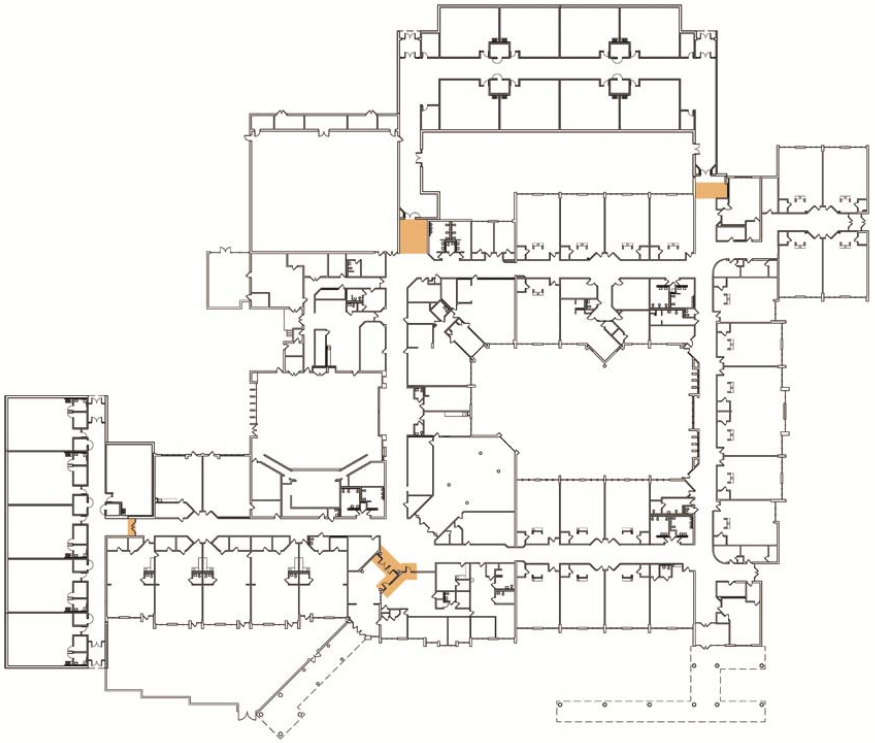


OPTION 3

Option 3 creates additional teaching space by constructing a one story addition to the north of the existing building. A second one story addition containing a dual purpose room, three kindergarten classrooms, and two pre-kindergarten collaboration classrooms will be added to the west of the existing kindergarten wing. All of the site and building elements from the Educational Specifications are included in this option.

Option 3 – Total Cost $9,118,000

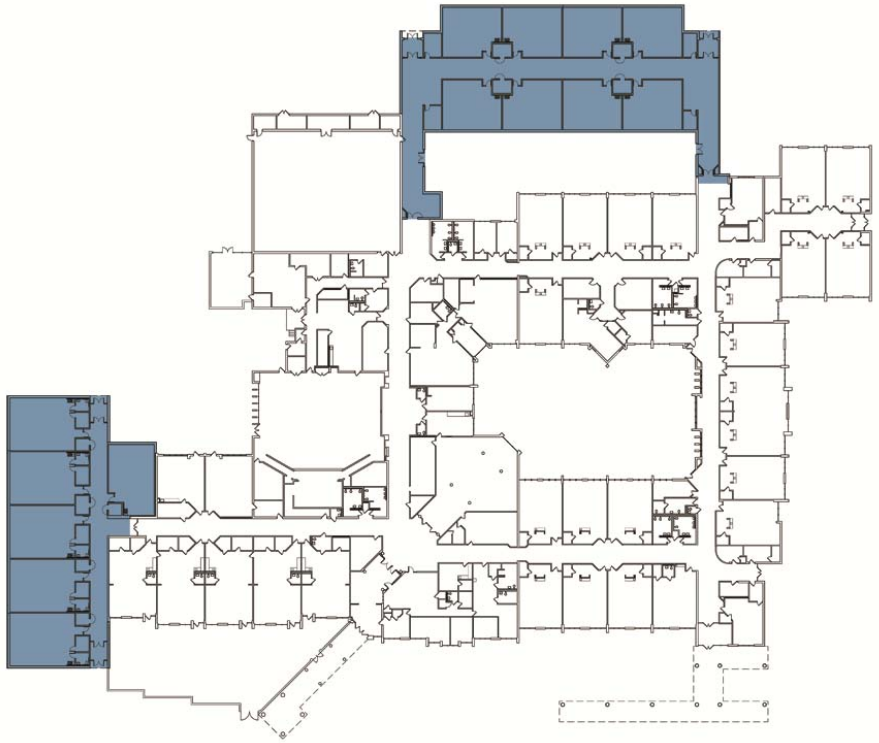
II. EXECUTIVE SUMMARY (Continued)



OPTION 3: RENOVATIONS

FIRST FLOOR = 200 SF

PLAN NORTH



OPTION 3: ADDITIONS

FIRST FLOOR = 24,912 SF

SCALE: 1" = 120'-0"

60' 0' 60' 120'

OPTION 3

AREA OF EXISTING BUILDING = **78,547 GSF**

AREA OF DEMOLITION = **0 GSF**

AREA OF ADDITION = **24,912 GSF**

TOTAL BUILDING WITH ADDITION = 103,459 GSF

NET ASSIGNABLE SF IN ADDITION = **15,292 NSF**

EFFICIENCY OF ADDITION = **61%**

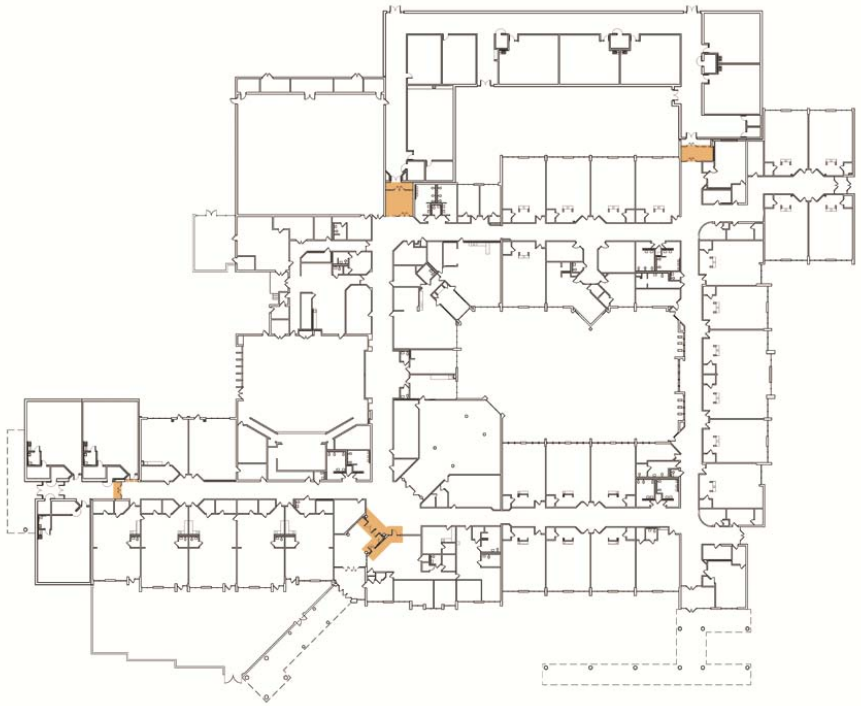
II. EXECUTIVE SUMMARY (Continued)

OPTION 4

Option 4 creates additional teaching space by constructing a one story addition to the north of the existing building comprised of five standard classrooms and a dual purpose room. Three kindergarten classrooms will also be added to the west of the building, adjacent to the existing kindergarten classrooms. This option can be constructed with minimal to no renovation of the existing building. All of the site and building elements from the Option 4 Educational Specifications are included in this option.

Option 4 – Total Cost $6,875,000

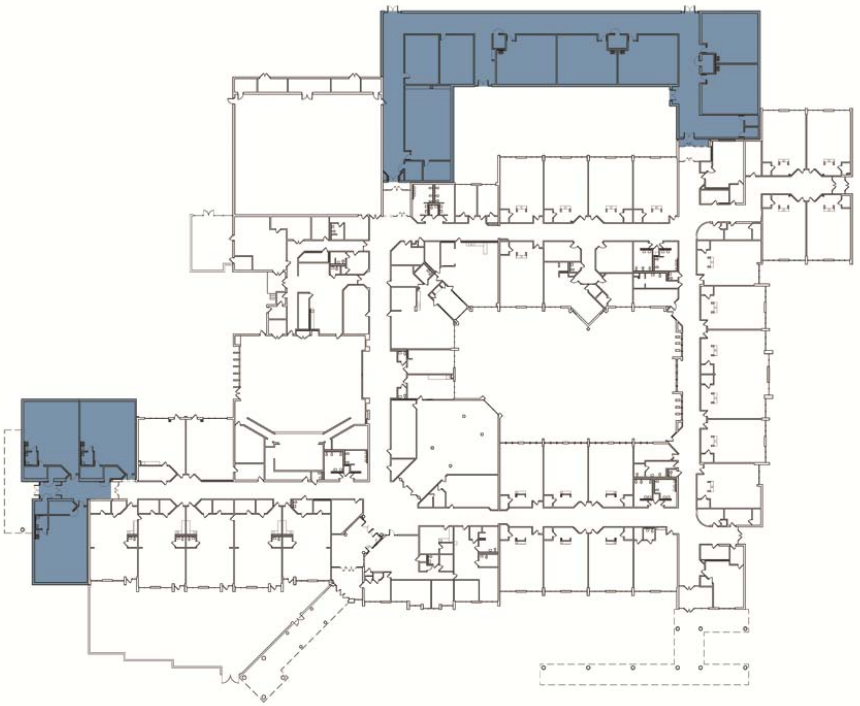
II. EXECUTIVE SUMMARY (Continued)



OPTION 4: RENOVATIONS

FIRST FLOOR = 200 SF

PLAN NORTH



OPTION 4: ADDITIONS

FIRST FLOOR = 18,735 SF

SCALE: 1" = 120'-0"

60' 0' 60' 120'

OPTION 4

AREA OF EXISTING BUILDING = **78,547 GSF**

AREA OF DEMOLITION = **0 GSF**

AREA OF ADDITION = **18,735 GSF**

TOTAL BUILDING WITH ADDITION = 97,282 GSF

NET ASSIGNABLE SF IN ADDITION = **11,302 NSF**

EFFICIENCY OF ADDITION = **60%**

II. EXECUTIVE SUMMARY (Continued)

ADVANTAGES & DISADVANTAGES COMPARISON CHART

OPTION #1 (PREFERRED) 	**ADVANTAGES**	▪ Creation of a separate kindergarten cluster is good for supervision and teaming ▪ Square footage for relocated art and music rooms are increased from the existing conditions and brought up to current Ed Spec requirements ▪ The northern addition nine classroom cluster is good for teacher teaming ▪ Music moving into new space not directly adjacent to any classrooms is better acoustically and provides improved adjacencies ▪ Looped corridor is provided at the northern addition ▪ Additions are not required at the front of the building or adjacent to Woodfield Road ▪ Relocation of art and music and placement of new OT/PT and dual purpose puts all specials in close proximity and along one main corridor
	DISADVANTAGES	▪ Disruption to existing building during construction and requirement for additional relocatables due to renovations and repurposing ▪ Relocating art and music into existing spaces poses challenges (will require new plumbing, HVAC for sinks and kiln, acoustical treatment, etc.)

OPTION #2 	**ADVANTAGES**	▪ Creation of a separate kindergarten cluster is good for supervision and teaming ▪ Square footage for relocated art and music rooms are increased from the existing conditions and brought up to current Ed Spec requirements ▪ Music moving into new space not directly adjacent to any classrooms is better acoustically and provides improved adjacencies ▪ Does not require existing relocatable classrooms to move in order to start construction
	DISADVANTAGES	▪ Disruption to existing building during construction and requirement for additional relocatables due to renovations and repurposing ▪ Three separate additions cause more site disturbance and potentially more phasing ▪ Relocating art and music into existing spaces poses challenges (will require new plumbing, HVAC for sinks and kiln, acoustical treatment, etc.) ▪ Eastern addition adjacent to Woodfield Road causes some concerns regarding noise, safety, and fire department access ▪ Dead end corridor at northern addition is awkward

II. EXECUTIVE SUMMARY (Continued)

ADVANTAGES & DISADVANTAGES COMPARISON CHART (Continued)

OPTION #3 	**ADVANTAGES**	▪ Dual purpose is immediately adjacent to art and music ▪ Looped corridor is provided at the northern addition ▪ Additions are not required at the front of the building or adjacent to Woodfield Road ▪ Less disruptive within the existing building, since there is no major renovation or repurposing work within existing spaces
	DISADVANTAGES	▪ Kindergarten addition arrangement is not as convenient for teaching teams ▪ Specials (art, music, and dual purpose) remaining in kindergarten corridor causes traffic and noise disturbance ▪ Existing art and music are undersized and their square footage is not increased ▪ Northern addition contains more single loaded corridor than other options

OPTION #4 	**ADVANTAGES**	▪ Minimal to no disruption to the existing building during construction ▪ No class displacement requiring additional relocatables during construction ▪ The kindergarten classrooms will be clustered together ▪ Looped corridor is provided at the northern addition ▪ Additions are not required at the front of the building or adjacent to Woodfield Road
	DISADVANTAGES	▪ Dual Purpose room will not be located near Art and Music rooms ▪ Specials (art and music) remaining in kindergarten corridor causes traffic and noise disturbance ▪ Existing art and music are undersized and their square footage is not increased ▪ Northern addition contains more single loaded corridor than other options

II. EXECUTIVE SUMMARY (Continued)

SUMMARY TABLE AND COST COMPARISON OF OPTIONS

Square Footage:

	Option 1 (Preferred)	Option 2	Option 3	Option 4
Existing	78,547	78,547	78,547	78,547
New Construction	24,665	23,922	24,912	18,735
Modernization	0	0	0	0
Renovation	5,245	5,245	200	200
Demolition (Total)	0	0	0	0
Existing to Remain	78,547	78,547	78,547	78,547
Total Gross Square Feet	**103,212**	**102.469**	**103,459**	**97,282**
Total Construction Cost	**$10,860,000**	**$10,590,000**	**$9,118,000**	**$6,875,000**

PDF Feasibility Study Cost Outline (000's) – Preferred Option 1

Construction Cost Estimate	$8,820
Planning Cost	$1,032
Contingency and Related Costs	$1,008
TOTAL	**$10,860**

The cost estimate in this feasibility study is based on current construction market conditions for both building and site. The estimates will be revised to reflect market conditions and prevailing construction costs when the project is included in the Capital Improvements Program Request for architectural and construction funding.

II. EXECUTIVE SUMMARY (Continued)

OPTIONS FOR STUDENT RELOCATION DURING CONSTRUCTION

Students will not need to be relocated off-site during construction, however if Options 1 or 2 are constructed then the renovation work within the existing building in the existing art and music rooms, the existing OT/PT, and general classroom suite would likely require two additional relocatable classrooms to be placed on-site during the construction period.

CONCLUSIONS AND RECOMMENDATIONS

Proffitt & Associates Architects recommends the following course of action to meet the program requirements for addition to Judith A. Resnik Elementary School. The recommendations are consistent with MCPS standards, meet the program requirements, and address the interests and concerns of the Principal, school staff, the PTA, 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 Option 1, as described in Section V, and its associated site improvements be implemented.

III. SCOPE, METHODOLOGY, AND GOALS

SCOPE AND INTENT

The scope of the feasibility study is to develop options to provide additional classrooms and support spaces to Judith A. Resnik Elementary School. The new addition will provide spaces that comply with current specifications for educational programming, instructional philosophy, and current energy, ADA, and life safety codes. When completed, the scope includes a classroom addition to accommodate a program capacity of 728 students for Options 1, 2, and 3 or 640 students for Option 4, with a core capacity for 740 students.

The intent of this feasibility study is to explore options for the addition that meet the educational requirements of its student enrollment, satisfy the staff and community concerns, and provide a cost effective, energy efficient, and safe facility to meet the future needs of the school.

The scope of work includes a survey of the physical plant and evaluation of the existing mechanical, electrical, and plumbing systems. The A/E design team analyzed the educational specifications and developed three site and building concepts addressing the renovation and addition criteria. The Feasibility Study Participants reviewed the progression of these concepts throughout the entire process. Their comments and suggestions were discussed, refined, and incorporated at each step during the process. The final concepts are presented as four options in this report. Option 1 was the preferred option by the Feasibility Study Participants.

METHODOLOGY

The existing school has been evaluated by a design team of architects and engineers to determine the scope of work required to provide an addition to the school to comply with the Educational Specification requirements dated March 24, 2011 and updated June 18, 2013

The study is based on the following:

- Consensus Workshops with the Feasibility Study Participants and MCPS Staff
  - There were five meetings
  - There was consistent attendance from the core participants
  - There were 15 different attendees
  - There were 18 versions of 6 core options considered
- Analysis of the existing physical plant
- Review of the existing construction documents provided by MCPS
- Review of the Educational Specifications and Summary of Space Requirements provided by MCPS
- Research conducted by the design team

III. SCOPE, METHODOLOGY, AND GOALS (Continued)

GENERAL GOALS

The initial Feasibility Study worksession meeting was held on March 21, 2012. At that meeting, members of the community, PTA, and school staff brainstormed goals for the project. The following project mission statement for the Judith A. Resnik Elementary School Addition was developed:

The goals for the addition to Judith A. Resnik Elementary School are:

- A school without relocatable classrooms.
- A safe and child-friendly school that is flexible enough to accommodate a variety of teaching methods and class sizes.
- A school that fully utilizes technology.
- A well planned site that provides for future growth.
- An environmentally sensitive school that is comfortable, naturally lit, and energy efficient.
- The building should teach the students and teachers to be good stewards of our environment.
- Conforming to Leadership in Energy and Environmental Design (LEED) checklist to the greatest extent possible.

SITE GOALS

The site improvements to be incorporated are to:

- Improve drainage of existing softball fields.
- Provide ADA access to all areas of the site.
- Provide site amenities to meet the Educational Program.
- Identify site area for future relocatable classrooms if required.

BUILDING GOALS

The addition shall:

- Introduce controllable natural daylight into the majority of new or renovated teaching spaces.
- Provide the safest environment possible for the students and staff. Provide passive security through properly located supervisory areas.
- Provide ADA access to all parts of the building.
- Have clear, easily supervised, circulation paths for intuitive and simple way-finding.
- Include specialized design elements to facilitate use by students with physical challenges.
- Have enough space to accommodate the educational program requirements.

IV. EXISTING CONDITIONS

The Judith A. Resnik Elementary School facility is situated on a 29.77 acre parcel at 7301 Hadley Farms Drive, Gaithersburg, MD 20879. The school shares the parcel with the Hadley Farms Alternative Middle School and the Bright Eyes Childcare Center. The site is zoned R-90 and is bounded on the north, west, and south (across Hadley Farms Drive) by detached single family homes, and on the east (across Woodfield Road, MD-124) by lower density, detached single family homes in a Special Protection Area

Vehicular access is currently divided amongst 4 separate driveways off of Hadley Farms Drive. The eastern two serve as the one-way entrance and exit to the student drop-off loop. These driveways also offer access to the main parking lot as it is encompassed on three sides by the student drop-off loop. The remaining two driveways act as the entrance and exit for the one-way bus-loop. However, the exit is also shared as an entrance and exit for the childcare facility, which is located on school property to the northwest of the school. This driveway also provides access to the loading/delivery area for the main school. The Alternative Middle School is located down the hill to the west of the Elementary School and has its own separate vehicular access from Hadley Farms Drive.

The vehicular access points provide access to the site approximately level with finished floor on the south side of the building. Existing grades slope up steeply to the east of the building toward Woodfield Road. The existing play areas are located to the north of the building and are basically level with building finished floor. Grades drop off to the west of the building away from the kindergarten wing exit.

Judith A. Resnik Elementary School is a one story, slab on grade, steel framed structure consisting of steel columns and beams supporting steel bar joists topped with metal deck. The existing building is non-combustible construction. The exterior walls are predominantly masonry cavity wall construction using 6” CMU, a 2” air space, and 4” face masonry veneer. The veneer is mostly face brick with some glazed concrete masonry unit accents. Interior walls are typically concrete masonry units laid in a stacked bond, except at the administration area, where metal stud partitions with painted gypsum board are used. The school is designed to accommodate students with physical disabilities and orthopedic handicaps and is therefore designed with wider corridors and larger classrooms than most typical elementary schools in order to assist with mobility and allow space for equipment such as wheelchairs, walkers, etc.

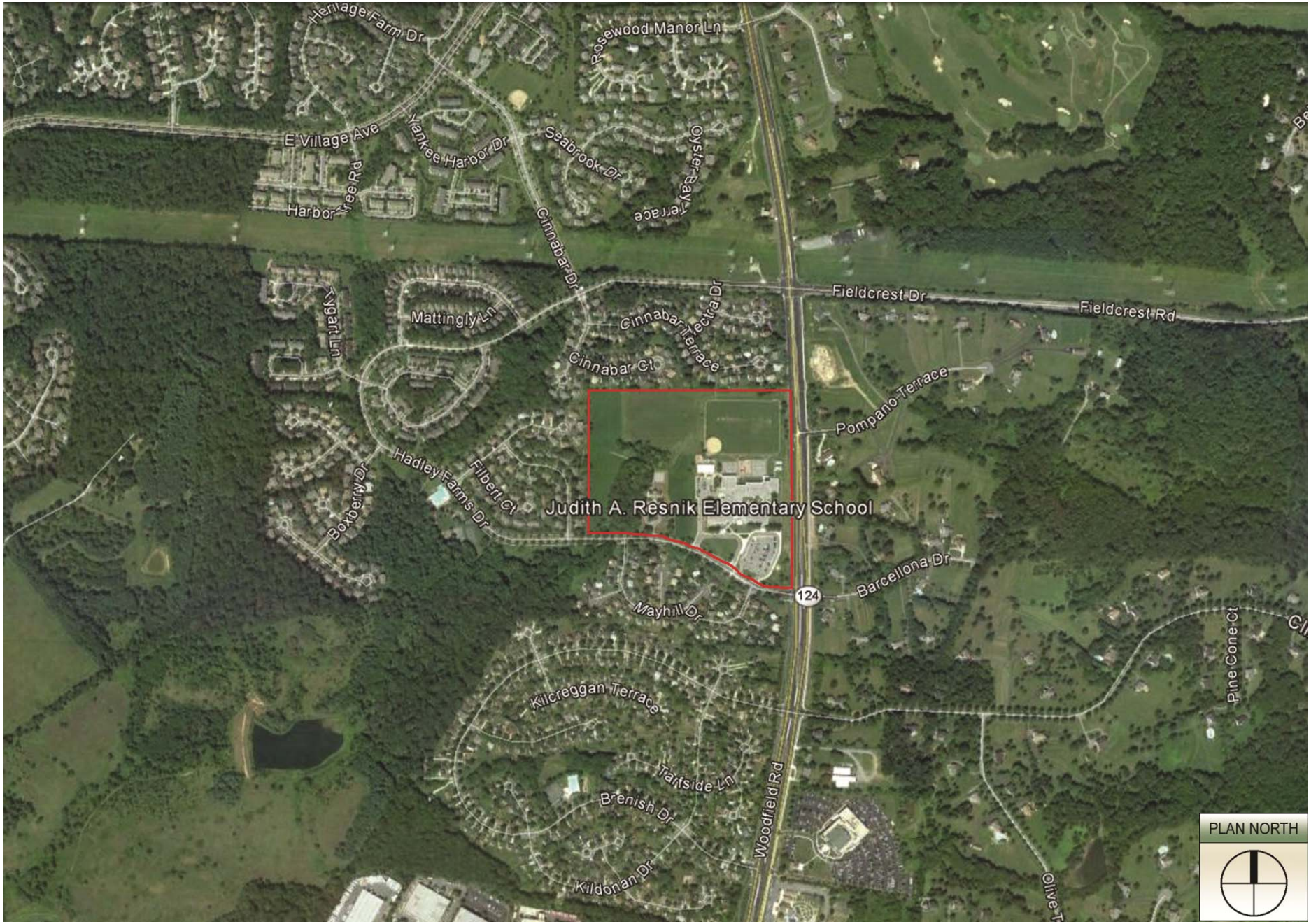
The present building is air conditioned and heated by a two-pipe chilled/hot water system, consisting of unit ventilators for classrooms and fan coil units for small offices. The Administration area, multi-purpose room, kitchen, resource, lobby, existing areas B & C and Media Center are served via rooftop units (cooling only) and heating is provided by hydronic duct mounted coils. The gymnasium is heated and ventilated by a hot water horizontal air handler fully ducted system. Domestic hot water is provided by a gas-fired water heater located in the Boiler Room. The existing building is fully sprinklered.

The facility was constructed in 1991 and does not contain any features of historical significance.

Refer to Appendix C for complete existing conditions narratives.

IV. EXISTING CONDITIONS (Continued)

VICINITY MAP



IV. EXISTING CONDITIONS (Continued)

EXISTING SITE PLAN

LEGEND

- Existing Building / Relocatable
- Paving / Parking
- Sidewalk
- Soft Surface Play
- Hard Surface Play
- Grass / Vegetation
- Athletic Fields

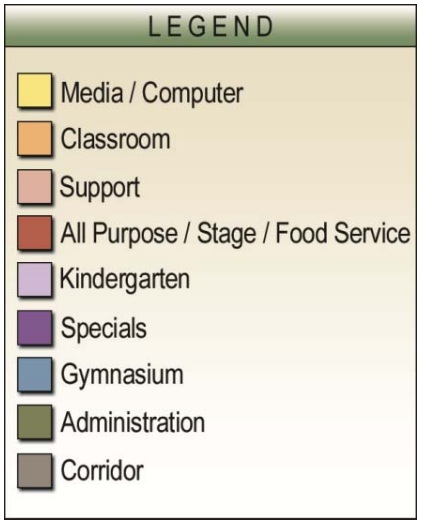
SCALE: 1" = 250'-0"

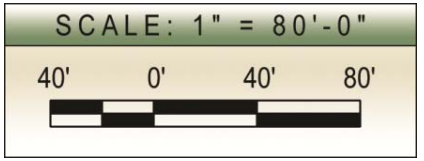
125' 0' 125' 250'

PLAN NORTH

IV. EXISTING CONDITIONS (Continued)

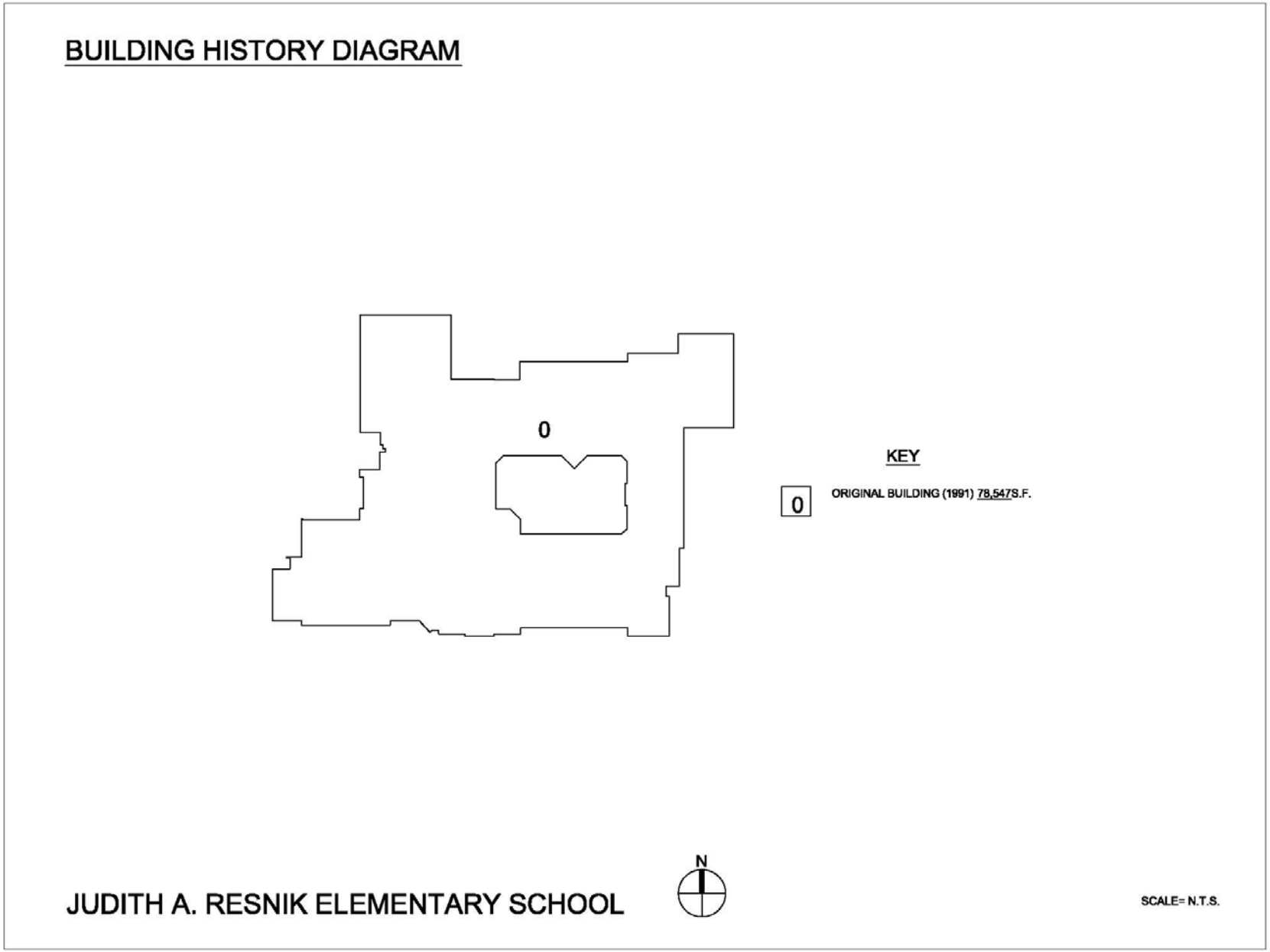
EXISTING FLOOR PLAN





FIRST FLOOR

IV. EXISTING CONDITIONS (Continued) HISTORY PLAN



V. DESCRIPTION OF OPTIONS

GENERAL

Four Options have been developed in response to the MCPS Educational Specifications for Judith A. Resnik Elementary School. Each addresses the addition to the school in a different manner in order to meet the physical and instructional project requirements. All of the site and building elements from the Educational Specifications are included in all options.

COMMON DESIGN ELEMENTS FOR EACH OPTION

SITE

- The existing loading/service and Childcare facility access drive will be re-routed and a new retaining wall constructed in order to accommodate construction of the new kindergarten classroom addition.
- The existing incoming waterline will need to be upgraded and shifted to the west due to the kindergarten addition configuration.
- The existing kindergarten play area to the front of the building will be maintained for convenience and miscellaneous use, but additional hard and soft surface kindergarten play areas will be provided to the rear of the gymnasium for recess use.
- New pre-kindergarten play areas will be provided adjacent to the pre-kindergarten classrooms.
- Due to the rear additions, all existing play areas behind the building will be relocated. New hard surface play areas for basketball and general use will be provided to the north of the rear additions. New soft surface play with new playground equipment will also be provided adjacent to the hard surface play area.
- The existing softball fields and soccer field, along with the walking trail that encircles their perimeter, will be shifted to the north slightly to make way for the new play areas. Some re-grading will be required to ensure better drainage for the softball fields.
- All site features will be ADA accessible. New ADA curb ramps will be provided along the bus and drop-off loops..
- The amount of significant and/or specimen trees that need to be cut down as a result of the additions will be limited.
- All necessary quantity and quality control of storm water will be provided for all options per code requirements. Environmental Site Design measures will be implemented to the maximum extent practicable, and then structural measures will be used to supplement as required.
- Once the addition is occupied, removal of all relocatable classrooms and restoration of the site as needed are included as part of the project scope.
- Space has been reserved on the site for placement of relocatable classrooms if required in the future.

V. DESCRIPTION OF OPTIONS (Continued)

COMMON DESIGN ELEMENTS FOR EACH OPTION (Continued)

ARCHITECTURAL

CONSTRUCTION OF THE ADDITION

- All options include one-story additions to the existing school. The additions will be phased so that the school can remain occupied during construction.
- All additions will be reinforced slab on grade construction. The foundation system is anticipated to consist of continuous strip footings at the exterior walls with spread footings and concrete piers as required at column locations. The structures will be steel frame construction using predominantly steel “W” shape columns. Additions designed to contain four or more classrooms will need to be separated from the existing building with two hour rated fire wall construction.
- The additions will receive steel joist roofing systems sloped at ¼” minimum per foot, topped with metal deck, rigid insulation, and built-up asphalt roofing. An extensive vegetated roofing system using sedum plantings in trays will be installed on top of the roofing system.
- Exterior walls will be masonry cavity type constructed of 8” CMU backup, 4” air space with 2 ½” rigid insulation, and 4” face masonry veneer.
- Exterior veneer materials will complement the existing materials, including use of two colors of face brick and use of some 8” scored glazed face concrete masonry units for horizontal banding about halfway between the top of the exterior windows and parapet. Cast stone sills will likely be used for windows in lieu of special shaped soldier course brick as at the existing structure due to long term maintenance concerns.
- Thermally broken aluminum windows with 1” insulated glazing will be used to provide an abundance of natural daylight, and most units will be operable to allow for natural ventilation. Exterior doors and frames will be painted insulated hollow metal.
- Interior finishes will be similar to those found in the existing school. New interior walls will primarily consist of 8” concrete masonry units, painted with low-VOC coatings. New restrooms will receive a ceramic tile wainscot on the wet walls to a height of approximately 5’-0” AFF.
- New flooring will consist of vinyl composition tile at corridors. Entry vestibules will receive rubber flooring. Corridors and vestibules will receive a quarry tile or glazed masonry unit wall base. The classrooms will receive vinyl composition tile flooring and rubber wall base, with area rugs provided in the kindergarten classrooms. New restrooms will have ceramic tile flooring and base.
- Ceilings throughout will primarily be 2’x4’ classroom standard acoustical tile in prefinished steel grid, with some painted gypsum board bulkheads.
- New interior doors will be prefinished solid flush wood in painted hollow metal frames. All classroom doors shall have vision lights and/or sidelights to allow for increased supervision and visibility between the corridors and classrooms.
- Corridors will be a minimum of 10’ wide and will have handrails at both sides and occasional alcoves with built-in benches to provide areas for students to rest when traveling from room to room. Alcoves will be provided inside or outside all teaching area doorways for equipment storage.

V. DESCRIPTION OF OPTIONS (Continued)

COMMON DESIGN ELEMENTS FOR EACH OPTION (Continued)

ARCHITECTURAL (Continued)

EXISTING BUILDING RENOVATIONS

- A new security vestibule will be created at the main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area.
- Minor repairs will be made to existing caulking, painting, etc. around the building exterior in order to extend the service life of the existing materials. See the Structural Recommendations in Appendix C for a listing of items to be completed.

GENERAL ARCHITECTURAL NOTES

- If any hazardous materials are found to exist, they will be abated from the existing building during the demolition and/or renovation process.
- All new and renovated areas will be designed to comply with the Leadership in Energy and Environmental Design (LEED) checklist to the greatest extent possible.

MECHANICAL

RECOMMENDATIONS

- New additions shall be provided with separate split-type air conditioning units with hydronic heating located in small mechanical rooms between the new addition classrooms. Condensing units for split A/C units shall be located on the roof above the mechanical rooms.
- Due to age, non-compliance with current energy standards, and lack of capacity it is recommended that the existing 22 year old central plant mechanical equipment be replaced with new equipment to serve the entire building as outlined below.
- New high efficiency hot water boilers shall replace the existing scotch marine type boiler with capacities to serve both the existing heating systems and the new added heating loads for the new additions.
- New split type air cooled chiller shall replace the existing aged self-contained air cooled chiller. New split type air cooled chiller shall be installed at the current location with indoor evaporator section installed in existing boiler room. The advantage of the new air cooled chiller over the existing chiller is that the chilled water system does not have to be drained during winters.
- New ultra-high efficiency dual temperature pumps shall replace the existing pumps with capacity to compensate for the new additions.
- New additions shall be provided with a 100% outside air energy recovery unit mounted on the roof of the new addition and shall be ducted to all new classrooms and corridors.

V. DESCRIPTION OF OPTIONS (Continued)

COMMON DESIGN ELEMENTS FOR EACH OPTION (Continued)

MECHANICAL (Continued)

RECOMMENDATIONS (Continued)

- Each classroom shall be provided with a vertical floor mounted split air conditioning unit with hydronic heating supply and return air ducted as per MCPS requirements. New hot water heating pipes shall be extended to all units.
- The existing Computer Lab will receive a new split system unit in order to resolve overheating issues.

NOTES

- New pipes shall be extended from boilers to new air handling units in mechanical rooms between new addition classrooms. Existing piping throughout the existing building shall be utilized and connected to new terminal equipment as necessary for renovated areas.
- New ventilation ductwork shall be installed in ceiling spaces above the corridor ceilings in the addition.
- New electronic controls will be included for all new mechanical equipment. Existing pneumatic controls will remain for the existing building systems.
- At the Schematic Design Phase the preferred DX-cooling and hydronic heating systems may be re-evaluated and modified based on the Energy Analysis and Life Cycle Cost Estimates.
- A sprinkler system will be provided throughout the additions.

ELECTRICAL

GENERAL

- The electrical system design for all options is similar. The existing electrical service is adequate to serve the proposed additions.
- According to utility demand records, the maximum demand (summer) for the school is 283.0 KW assuming an 80% power factor, the maximum ampacity draw on the switchboard is approximately 445 Amperes. The existing electrical service to the building is adequate and can be extended to support the planned additions. Modifications will be made to the switchboard to accommodate the new additions and small electrical closets will be provided in each option to house new panels as required.

LIGHTING

- An energy efficient lighting system will be provided throughout the addition and modified areas. Classroom lighting will be MCPS standard pendant mounted direct/indirect 2 lamp fluorescent fixtures. Offices and corridors will be provided with standard lens 2x4 2 lamp fluorescent fixtures, with corridor fixtures spaced at 14 feet on center. Building exterior wall packs will be 100% cut-off with 150 Watts high pressure sodium lamps.

V. DESCRIPTION OF OPTIONS (Continued)

COMMON DESIGN ELEMENTS FOR EACH OPTION (Continued)

ELECTRICAL (Continued)

EMERGENCY SYSTEM

- The existing indoor propane emergency generator appears to have capacity to serve the emergency lighting in the proposed addition but not enough capacity to serve the new mechanical ventilation units. It is recommended that the existing generator be replaced with a new 70kW natural gas model with capacity to serve all existing and new loads, to be located outdoors adjacent to the new air cooled chiller.

FIRE ALARM SYSTEM

- The existing fire alarm system is original to the existing building and does not comply with current codes. Notification devices consist of visual devices and pull stations. The voice evacuation works with school P.A. system. The school is lacking the visual devices currently required by ADA and other aspects of the system fail to meet the current NFPA criteria for fire alarm system in the school. It is recommended that a new Fire Alarm System be provided throughout the existing building and new additions.

INTERCOMMUNICATIONS AND SOUND SYSTEMS

- The existing Public Address System consists of a Bogen Multicom 2000 System, which has five (5) spaces to add a switch bank section. This would probably be adequate to serve the new additions, but the equipment does not meet current MCPS standards. The system also serves the fire alarm voice evacuation, which does not comply with current codes. It is recommended that the system be upgraded with a new Rauland Telecenter P.A. System to serve the entire building.
- New intercom devices including call switches and speakers located in all teaching areas of the additions shall be provided.

TELEPHONE AND NETWORK SYSTEMS

- Raceways and provisions for voice, data, and video cabling will be provided to accommodate program functions and room configurations. All video head-end distribution equipment will be located in the main telecommunication room. Provisions for interactive white boards will be included. Telecommunications closets will be located in the additions in order to limit the length of cabling to each data outlet.

SECURITY SYSTEM

- The new addition security system shall meet current Montgomery County Public Schools standards. Provisions for a CCTV system with monitor and digital cameras throughout the additions will be provided. Coverage will include the new exterior of the building. Provisions for an access control system will be provided for new exterior doors as required. Intrusion detection will include motion sensors and door contacts.

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 1 – DESCRIPTION

Option 1 consists of two one-story additions, one to the west of the existing kindergarten wing and one to the north of the existing building. The kindergarten addition includes construction of one new kindergarten classroom and two pre-kindergarten collaboration classrooms, as well as re-purposing the existing adjacent music and art classrooms for re-use as kindergarten rooms. The existing music and art room exterior walls will be demolished to allow for a small northern expansion necessary to bring the spaces up to the square footage required for a kindergarten program. In the existing music and art spaces, the existing kiln and hood will be removed. All other interior finishes and specialties will be removed and replaced with new materials. The northern addition is designed to tie into two existing exits at the north of the building in order to create a corridor loop and new courtyard. This addition contains a dual purpose room, nine general classrooms, and an OT/PT suite, which includes a classroom, alcove, storage area, office, and restroom.

The music and art classrooms will be relocated to the core of the existing building, taking over a suite of spaces currently used for OT/PT and a general classroom. This location was selected because the existing spaces are large enough to house the new functions without modifications to the building structure. In addition, the new music location is directly across from the existing instrumental music room and all-purpose room, which provides improved adjacency for music functions. Specialized acoustical design will be required when the space is converted for use as a music room, possibly including installation of new acoustical wall and ceiling treatments. The existing alcove and restroom located off of the existing OT/PT space will be converted for use as music storage. This will require demolition of the existing plumbing fixtures in the restroom and addition of a length of wall with a new door and frame to separate the existing alcove from the main classroom space. The existing storage rooms adjacent to the new art room will be renovated for art storage and also to house a kiln. A new ventilation system and hood will also be required for the kiln area. All renovated spaces will receive new interior finishes, along with new ceiling tile and lighting. New casework specific to art and music functions and storage units will also be provided.

A new security vestibule will be created at the existing main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area. The existing doors and frame with borrowed lites between the main corridor and main office will be removed and replaced with a new single door and frame with borrowed lites. A new door and frame will be added at the north wall of the main office to allow visitors to exit out into the main hall beyond the new security doors after checking in. Existing finishes will need to be patched where this renovation work occurs.

This option requires re-routing of the existing shared school loading/service and Childcare facility access drive in order to accommodate the kindergarten addition. The driveway will retain its basic alignment, but will shift to the west to make room for the new kindergarten spaces. A canopy will be provided at the new doors out the west side of the kindergarten wing to provide protection from the weather. A good deal of fill will be required to accommodate the kindergarten addition and access drive. A retaining wall will be required along the western edge of the new driveway due to the drop in grade as the site slopes down to the Alternative Middle school.

All of the existing relocatable classrooms located to the northeast of the building will need to be relocated prior to beginning construction of the north addition. Upon completion of the additions, all relocatables will be removed from the site and the site restored to its existing condition. As the capacity of the school grows, this option will allow for four relocatables to be added to the east of the existing building.

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 1 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

- Creation of a separate kindergarten cluster is good for supervision and teaming
- Square footage for relocated art and music rooms are increased from the existing conditions and brought up to current Ed Spec requirements
- The northern addition nine classroom cluster is good for teacher teaming
- Music moving into new space not directly adjacent to any classrooms is better acoustically and provides improved adjacencies
- Looped corridor is provided at the northern addition
- Additions are not required at the front of the building or adjacent to Woodfield Road
- Relocation of art and music and placement of new OT/PT and dual purpose puts all specials in close proximity and along one main corridor

DISADVANTAGES

- Disruption to existing building during construction and requirement for additional relocatables due to renovations and repurposing
- Relocating art and music into existing spaces poses challenges (will require new plumbing, HVAC for sinks and kiln, acoustical treatment, etc.)

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 1 SITE PLAN

LEGEND

- Existing Building / Relocatable
- Paving / Parking
- Sidewalk
- Soft Surface Play
- Hard Surface Play
- Grass / Vegetation
- Athletic Fields
- Proposed Renovations
- Proposed Additions

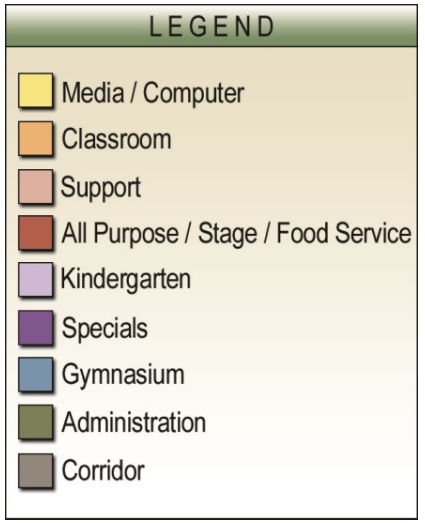
SCALE: 1" = 250'-0"

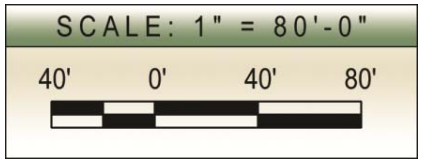
125' 0' 125' 250'

PLAN NORTH

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 1 FLOOR PLAN





FIRST FLOOR

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 2 – DESCRIPTION

Option 2 consists of three one-story additions, one to the west of the existing kindergarten wing, one to the north of the existing building, and one to the east of the existing building. The kindergarten addition includes construction of one new kindergarten classroom and two pre-kindergarten collaboration classrooms, as well as re-purposing the existing adjacent music and art classrooms for re-use as kindergarten rooms. The existing music and art room exterior walls will be demolished to allow for a small northern expansion necessary to bring the spaces up to the square footage required for a kindergarten program. In the existing music and art spaces, the existing kiln and hood will be removed. All other interior finishes and specialties will be removed and replaced with new materials. The northern addition is designed to tie into an existing exit adjacent to the gymnasium at the north of the building and will house a dual purpose room, five general classrooms, and an OT/PT suite, which includes a classroom, alcove, storage area, office, and restroom. The eastern addition is located in an area previously identified for a masterplanned expansion and will include four additional general classrooms.

The music and art classrooms will be relocated to the core of the existing building, taking over a suite of spaces currently used for OT/PT and a general classroom. This location was selected because the existing spaces are large enough to house the new functions without modifications to the building structure. In addition, the new music location is directly across from the existing instrumental music room and all-purpose room, which provides improved adjacency for music functions. Specialized acoustical design will be required when the space is converted for use as a music room, possibly including installation of new acoustical wall and ceiling treatments. The existing alcove and restroom located off of the existing OT/PT space will be converted for use as music storage. This will require demolition of the existing plumbing fixtures in the restroom and addition of a length of wall with a new door and frame to separate the existing alcove from the main classroom space. The existing storage rooms adjacent to the new art room will be renovated for art storage and also to house a kiln. A new ventilation system and hood will also be required for the kiln area. All renovated spaces will receive new interior finishes, along with new ceiling tile and lighting. New casework specific to art and music functions and storage units will also be provided.

A new security vestibule will be created at the existing main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area. The existing doors and frame with borrowed lites between the main corridor and main office will be removed and replaced with a new single door and frame with borrowed lites. A new door and frame will be added at the north wall of the main office to allow visitors to exit out into the main hall beyond the new security doors after checking in. Existing finishes will need to be patched where this renovation work occurs.

This option requires re-routing of the existing shared school loading/service and Childcare facility access drive in order to accommodate the kindergarten addition. The driveway will retain its basic alignment, but will shift to the west to make room for the new kindergarten spaces. A canopy will be provided at the new doors out the west side of the kindergarten wing to provide protection from the weather. A good deal of fill will be required to accommodate the kindergarten addition and access drive. A retaining wall will be required along the western edge of the new driveway due to the drop in grade as the site slopes down to the Alternative Middle school.

All of the existing relocatable classrooms located to the northeast of the building will need to be relocated prior to beginning construction of the north addition. Upon completion of the additions, all relocatables will be removed from the site and the site restored to its existing condition.

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 2 – DESCRIPTION (Continued)

As the capacity of the school grows, this option will allow for four relocatables to be added in the same location that they are currently placed.

OPTION 2 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

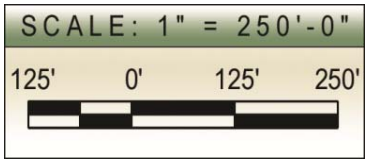
- Creation of a separate kindergarten cluster is good for supervision and teaming
- Square footage for relocated art and music rooms are increased from the existing conditions and brought up to current Ed Spec requirements
- Music moving into new space not directly adjacent to any classrooms is better acoustically and provides improved adjacencies
- Does not require existing relocatable classrooms to move in order to start construction

DISADVANTAGES

- Disruption to existing building during construction and requirement for additional relocatables due to renovations and repurposing
- Three separate additions cause more site disturbance and potentially more phasing
- Relocating art and music into existing spaces poses challenges (will require new plumbing, HVAC for sinks and kiln, acoustical treatment, etc.)
- Eastern addition adjacent to Woodfield Road causes some concerns regarding noise, safety, and fire department access
- Dead end corridor at northern addition is awkward

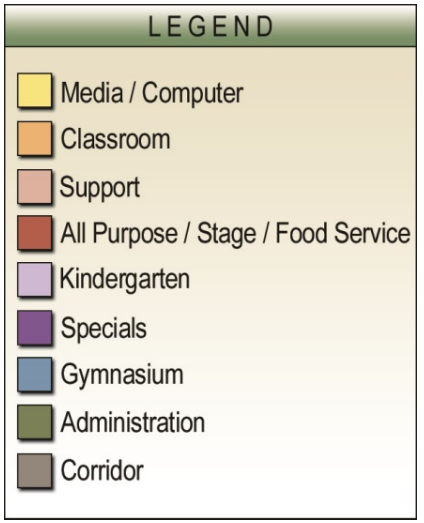
V. DESCRIPTION OF OPTIONS (Continued)

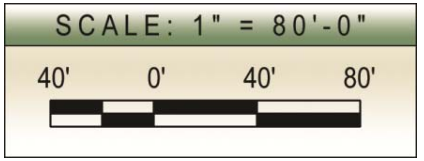
OPTION 2 SITE PLAN



V. DESCRIPTION OF OPTIONS (Continued)

OPTION 2 FLOOR PLAN





FIRST FLOOR

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 3 – DESCRIPTION

Option 3 consists of two one-story additions, one to the west of the existing kindergarten wing and one to the north of the existing building. The kindergarten addition includes construction of three new kindergarten classrooms, two pre-kindergarten collaboration classrooms, and a new dual purpose room. The northern addition is designed to tie into two existing exits at the north of the building in order to create a corridor loop and new courtyard. This addition contains eight general classrooms.

Educational areas within the existing building will remain undisturbed, with no classroom spaces being re-purposed or renovated.

A new security vestibule will be created at the existing main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area. The existing doors and frame with borrowed lites between the main corridor and main office will be removed and replaced with a new single door and frame with borrowed lites. A new door and frame will be added at the north wall of the main office to allow visitors to exit out into the main hall beyond the new security doors after checking in. Existing finishes will need to be patched where this renovation work occurs.

This option requires re-routing of the existing shared school loading/service and Childcare facility access drive in order to accommodate the kindergarten addition. The driveway will retain its basic alignment, but will shift to the west to make room for the new kindergarten spaces. The shift will be larger in this option than in the other two schemes due to the kindergarten addition footprint. A good deal of fill will be required to accommodate the kindergarten addition and access drive. A retaining wall will be required along the western edge of the new driveway due to the drop in grade as the site slopes down to the Alternative Middle school.

The proposed kindergarten addition location may require the existing incoming primary electrical service to be shifted to the west to avoid the new addition footings.

All of the existing relocatable classrooms located to the northeast of the building will need to be relocated prior to beginning construction of the north addition. Upon completion of the additions, all relocatables will be removed from the site and the site restored to its existing condition.

As the capacity of the school grows, this option will allow for four relocatables to be added to the east of the existing building.

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 3 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

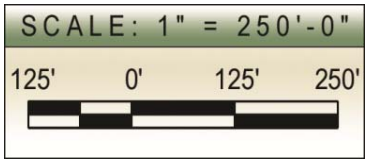
- Dual purpose is immediately adjacent to art and music
- Looped corridor is provided at the northern addition
- Additions are not required at the front of the building or adjacent to Woodfield Road
- Less disruptive within the existing building, since there is no major renovation or repurposing work within existing spaces

DISADVANTAGES

- Kindergarten addition arrangement is not as convenient for teaching teams
- Specials (art, music, and dual purpose) remaining in kindergarten corridor causes traffic and noise disturbance
- Existing art and music are undersized and their square footage is not increased
- Northern addition contains more single loaded corridor than other options

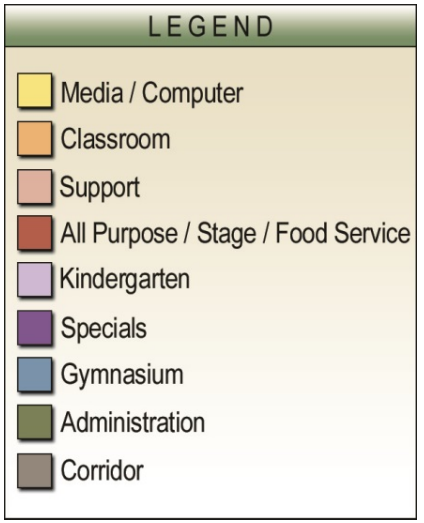
V. DESCRIPTION OF OPTIONS (Continued)

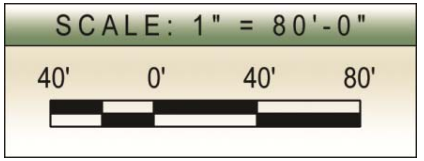
OPTION 3 SITE PLAN



V. DESCRIPTION OF OPTIONS (Continued)

OPTION 3 FLOOR PLAN





FIRST FLOOR

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 4 – DESCRIPTION

Option 4 consists of two one-story additions, one to the west of the existing kindergarten wing and one to the north of the existing building. The kindergarten addition includes construction of three new kindergarten classrooms adjacent to the existing kindergarten classrooms. The northern addition is designed to tie into two existing exits at the north of the building in order to create a corridor loop and new courtyard. This addition contains a dual purpose room and five general classrooms.

Educational areas within the existing building will remain undisturbed, with no classroom spaces being re-purposed or renovated.

A new security vestibule will be created at the existing main entrance by adding a new set of cross corridor doors at the main entry corridor and reconfiguring the doors from the main entry corridor into the main office area. The existing doors and frame with borrowed lites between the main corridor and main office will be removed and replaced with a new single door and frame with borrowed lites. A new door and frame will be added at the north wall of the main office to allow visitors to exit out into the main hall beyond the new security doors after checking in. Existing finishes will need to be patched where this renovation work occurs.

This option requires re-routing of the existing shared school loading/service and Childcare facility access drive in order to accommodate the kindergarten addition. The driveway will retain its basic alignment, but will shift to the west to make room for the new kindergarten spaces. A canopy will be provided at the new doors out the west side of the kindergarten wing to provide protection from the weather. A good deal of fill will be required to accommodate the kindergarten addition and access drive. A retaining wall will be required along the western edge of the new driveway due to the drop in grade as the site slopes down to the Alternative Middle school.

All of the existing relocatable classrooms located to the northeast of the building will need to be relocated prior to beginning construction of the north addition. Upon completion of the additions, all relocatables will be removed from the site and the site restored to its existing condition.

As the capacity of the school grows, this option will allow for four relocatables to be added to the east of the existing building.

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 4 - ADVANTAGES AND DISADVANTAGES

ADVANTAGES

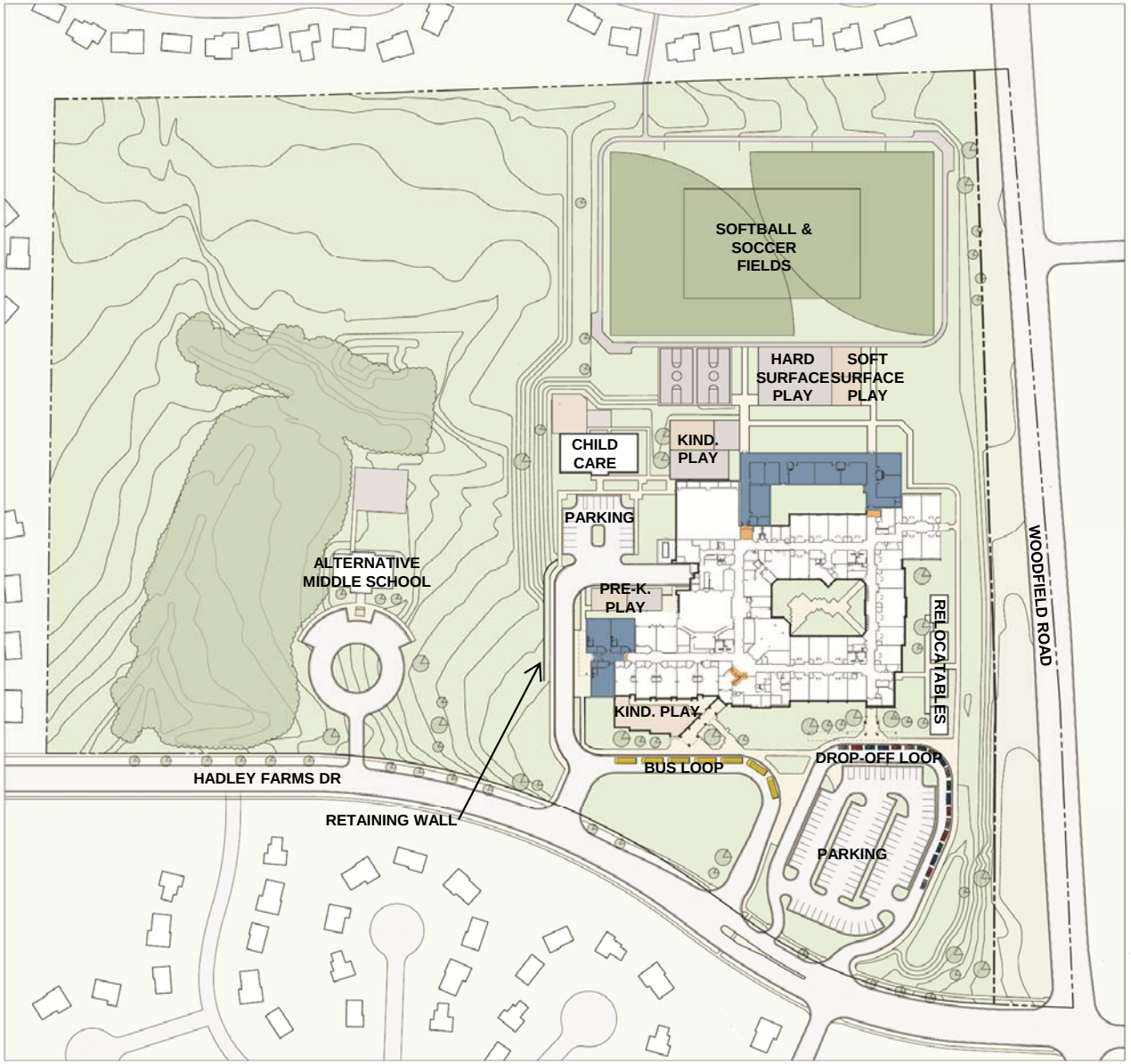
- Minimal to no disruption to the existing building during construction
- No class displacement requiring additional relocatables during construction
- The kindergarten classrooms will be clustered together
- Looped corridor is provided at the northern addition
- Additions are not required at the front of the building or adjacent to Woodfield Road

DISADVANTAGES

- Dual Purpose room will not be located near Art and Music rooms
- Specials (art and music) remaining in kindergarten corridor causes traffic and noise disturbance
- Existing art and music are undersized and their square footage is not increased
- Northern addition contains more single loaded corridor than other options

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 4 SITE PLAN



LEGEND

- Existing Building / Relocatable
- Paving / Parking
- Sidewalk
- Soft Surface Play
- Hard Surface Play
- Grass / Vegetation
- Athletic Fields
- Proposed Renovations
- Proposed Additions

SCALE: 1" = 250'-0"

125' 0' 125' 250'

PLAN NORTH

V. DESCRIPTION OF OPTIONS (Continued)

OPTION 4 FLOOR PLAN

LEGEND

- Media / Computer
- Classroom
- Support
- All Purpose / Stage / Food Service
- Kindergarten
- Specials
- Gymnasium
- Administration
- Corridor

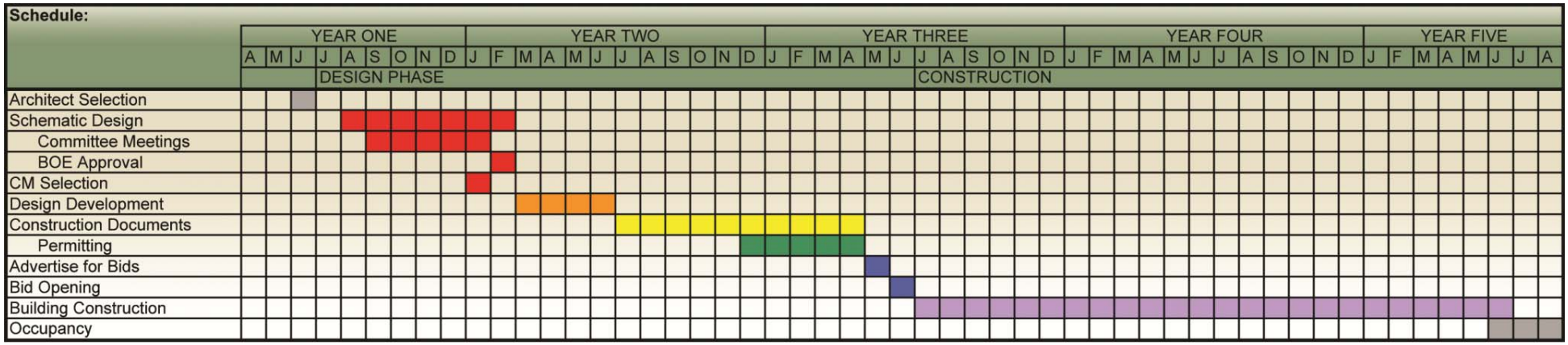
SCALE: 1" = 80'-0"

40' 0' 40' 80'

PLAN NORTH

FIRST FLOOR

VI. PROJECT IMPLEMENTATION SCHEDULE



VII. APPENDICES

LISTING OF APPENDICES:

A. Space Allocation Summary **A1**

B. Educational Specifications **B1**

C. Existing Conditions Survey & Code Analysis **C1**

D. Existing Photos **D1**

APPENDIX A – SPACE ALLOCATION SUMMARY – OPTIONS 1, 2, AND 3

When this project is complete, the following spaces are to be provided:

Capacity after the addition will be 728.

NEW SPACES IN ADDITION	# NEEDED	DESCRIPTION	NET SQ. FT.	TOTAL NET SQ. FT.
Classrooms				
PreKindergarten Collaboration	2	Includes 250 s.f. of storage	1300	**2600**
Kindergarten	3	Includes 250 s.f. of storage	1300	**3900**
Standard Grades 1-5	8	Includes 150 s.f. of storage	900	**7200**
Support Rooms				
Art*	1	Includes 250 s.f. of storage. Currently occupies room 38. Consider reusing room 33.	1100	**0**
Music*	1	Includes 250 s.f. of storage. Currently occupies room 39. Consider reusing room 35	1050	**0**
Dual Purpose Room	1	Locate near Art & Music	1000	**1000**
Therapy/ Support Room*	1	Currently occupies room 35. Only if room 35 is repurposed for music.	1444	**0**
TOTAL	**13**			**14700**

* These rooms are not part of the scope of the project; however may be repurposed and rebuilt as part of the addition if it makes sense to do so.

APPENDIX A – SPACE ALLOCATION SUMMARY – OPTION 4

When this project is complete, the following spaces are to be provided:

Capacity after the addition will be 640.

NEW SPACES IN ADDITION	# NEEDED	DESCRIPTION	NET SQ. FT.	TOTAL NET SQ. FT.
Classrooms				
Kindergarten	3	Includes 250 s.f. of storage	1300	**3900**
Standard Grades 1-5	5	Includes 150 s.f. of storage	900	**4500**
Support Rooms				
Dual Purpose Room	1		1000	**1000**
TOTAL	**9**			**9400**

APPENDIX B – EDUCATIONAL SPECIFICATIONS

INTRODUCTION

- This document describes the facilities that are needed for the Judith A. Resnik Elementary School Addition educational program. The descriptions provide the architect with important guidelines and will be used by staff representatives when reviewing drawings for the facility.
- The program capacity for this school will be 728 for Options 1, 2, and 3 or 640 for Option 4, with a master-planned (core) capacity for 740.
- The educational specifications are divided into three sections.
  - The first section, the space summary, lists the type of spaces and square footage required when the project is complete.
  - The second section describes the general design, location, and specific requirements for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
  - The third section identifies any additional program requirements for the school that were identified by the Facility Advisory participants.
- The architect should show the location for relocatable classrooms, should they be required in the future. These units should be sited in a location where it will not cause conflict with the constructability of a future addition. The necessary utility connections, i.e. electrical power, fire alarm, public address, and data should be provided near the future location of relocatable classrooms.
- The architect will provide a space summary comparison between the programmed space requirements and the proposed after each phase of the project including but not limited to the feasibility study, schematic design, design development, and final design phase.
- 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.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

GENERAL PLANNING CONSIDERATIONS

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

- The architect is expected to be compliant 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 main lobby area needs to convey a feeling of warmth and welcome. The inclusion of a lighted showcase in which children's work can be displayed is recommended.
- The design of the building and grounds must provide for a secure environment for students and staff. Isolated areas should be minimized and natural surveillance encouraged by eliminating visual barriers.
- For security purposes, all doors into classrooms, conference rooms, offices etc. must have a sidelight window with shades.
- Water coolers should be provided throughout the school.
- 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.
- Core spaces such as the cafeteria, gymnasiums, and instructional media center should be easily accessible for community use and secure from the rest of the building after school hours.
- 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.
- Building code requirements call for less than fifty percent of interior corridor space to be used for displaying flammable materials. Display areas can be provided by a 5’ x 5’ bulletin board per classroom or an equivalent amount of space in a larger area. Please refer to the Division of Construction for specific standards.
- Students should have ADA compliant access to the play areas from the multipurpose room. Play areas are to be protected from any vehicular traffic. Unobstructed supervision of play areas from one central area is desirable.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

GENERAL PLANNING CONSIDERATIONS (continued)

- The school is to be air conditioned except for the gymnasium and kitchen. Careful placement of glass is required to avoid excess heat gain in occupied areas.
- 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.
- 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.
- Adult restrooms should be provided in accordance with the latest code requirements. Adult restrooms in elementary schools will be unisex.
- 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 instructional, resource, or office spaces that students may occupy should be designed with either a sidelight or glass panel in the door and must be able to be supervised from the corridor or an adjacent space. Doors should be provided between classrooms whenever possible, however, expensive folding walls should be carefully considered as they are rarely utilized.
- 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.
- 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.
- 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.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

DESCRIPTION OF FACILITIES

Please refer to the summary of spaces in the front of this document 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 permitted.

Prekindergarten / Kindergarten Classroom

- If the school has a Head Start program, the classroom should be designed as a prekindergarten/kindergarten classroom.
- Each room should allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach.
- An area should be designated for placement of a 12’ by 15’ area rug over the finished floor.
- A 100 square foot walk-in storage closet and 150 square feet of general storage (casework throughout the classroom) is needed.
- When possible there should be interconnecting interior doors between all kindergarten and pre-kindergarten rooms.
- All prekindergarten rooms should have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building.
- The prekindergarten classrooms require a separate and fenced outdoor play area that must be adjacent to the classroom. If the school does not have a prekindergarten program than the outdoor play area should be master planned so that it can be added on at a later time. The prekindergarten play area should include a 40’x40’ paved play area and a 40’x40’ mulched area.
- The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS Division of Construction (DOC). Computer/technology wiring must be in accordance with MSDE/MCPS standards.
- Every classroom must have computer outlets for five student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution Systems*.
- The main teaching wall layout should be in accordance to DOC construction standards.
- A sink with a drinking fountain must be provided, with cabinets above and below.
- The built in student wardrobe area must provide 24 individual compartments to store students’ belongings. The architect is to refer to the DOC construction standards for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.
- A total of 20 feet of tack board and 10 feet of magnetic whiteboard should be installed at eye-level height for small children, with tack stripping along walls for display of student work.
- Each room must have a toilet room that is accessible from within the room and easily accessible from outside. The toilet room will contain a standard height toilet, a sink with child-height mirror, and soap and towel dispensers that are accessible to small children. The light switch should automatically turn on the vent fan.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Prekindergarten / Kindergarten Classroom (continued)

- Each classroom should be equipped with window blinds per the MCPS design guidelines.
- Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.
- All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- A full-length mirror should be installed.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Standard Classroom

- Each room must have an open classroom area with moveable furniture.
- 150 square feet of casework storage is needed in the classroom.
- The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS Division of Construction (DOC). Computer/technology wiring must be in accordance with DOC/MSDE/OSTA standards.
- Every classroom must have computer outlets for 5 student workstations and 1 teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.
- Approximately 30 to 35 linear feet of magnetic white board and 20 to 24 linear feet of tackboard, both with tack strips and map rails above the boards, should be installed in each classroom. White boards should be located so as to reduce glare. Tack strip is needed on all available walls. The architect should refer to the DOC construction standards for the main teaching wall layout.
- Thirty built-in individual compartments in the wardrobe area for storing student personal property are required. The architect should refer to the DOC construction standards for a typical cubby design for grades K-1 and grades 2-5. Lockers in the hallway may be used in place of the classroom cubbies.
- If lockers are designed for storing individual student property, the architect should design the facility with 700 lockers if the core capacity is 640 and 815 lockers if the core capacity is 740.
- All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- A storage area is needed to hold at least two science kits (approximate 27" x 17" x 12" each) and one math kit in each classroom.
- General storage space must be built in and must accommodate 24- by 36-inch paper and a 4-drawer file cabinet. Each classroom must include 48 linear feet of built-in adjustable shelving.
- A small lockable teacher's wardrobe must be provided, as per DOC construction standards.
- Designated shelf space, not near a window, for an aquarium/terrarium with nearby electrical outlet, is desirable.
- Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.
- 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.
- Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.
- Shelving or cabinetry should be provided in every teaching station for the VCR and television. A school may choose to place the television and VCR on a cart. Appropriate CCTV receptacles and a duplex outlet should be provided nearby for the operation of the TV and VCR. Placement of the TV should be to maximize student viewing and not to be unduly influenced by exterior or interior extraneous light.
- A school may consider reducing the size of each classroom to create small break-out rooms in the school. The number and design of these breakout rooms may be determined by school and MCPS staff.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Art Room

A new Art Room will be required only if room 38 is repurposed and expanded for kindergarten.

The art room is to provide space for teaching and creating art, displaying student work and educational aids, and storing supplies and materials. The room should be designed as follows:

- The art room must not be carpeted.
- Both art and music rooms must be located near student restrooms.
- For technology accessibility purposes, the art room is to be considered as a regular classroom with appropriate data, CCTV, modem, and electrical outlets.
- The design of all work, display, and storage areas should create an environment that is functional and easy to clean.
- Lighting should be both natural and artificial and conducive to close work.
- A door to the outside is desirable.
- Space and electrical outlets for two kilns should be in the farthest corner of the storeroom with proper ventilation.
- Eight duplex electrical outlets are to be provided (where feasible quadruplex outlets may be utilized).

The window wall should have the following:

- Windows that permit views of the surrounding landscape.
- Blinds to permit room darkening.
- Shelves under windows 15” deep.
- Tack board or tack strips above windows if space permits.

The teaching wall should have the following:

- Two 3-foot wide by 7-foot tall, 18" deep, shelf sections for storage of unfinished work.
- Eight-foot long by 4-foot tall whiteboard between two 8-foot sections of 6-foot tall white/tack board with 2-foot tall tack board above the white board. Tack and white boards should be mounted 2 to 4 inches above low shelving.
- Fourteen-inch deep, 24 inch high, shelving under the center of the 16-foot long tack board and white board.
- Wall mounted projection screen with electrical outlet underneath.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Art Room (continued)

The wall near the entrance should have the following:

Three sinks should be provided. Faucets should be accessible to students and positioned to prevent splashes onto floor.

- One teacher sink (36" high)
- One sink located on a peninsula (30"-32" high). Peninsula is to be no longer than 3 feet.
- One ADA accessible sink (30"-32").

Sinks and sink area should also include:

- Removable plaster traps
- Closed cabinets below and above
- Conveniently located towel dispensers
- At least 9 feet of counter space (includes 1 ½ feet of counter space on both sides of the sinks)
- Hot and cold water faucets with bubbler
- A 5- to 7-foot open space is needed for drying rack(s) along one wall.
- Approximately 30 smock hooks in 3 feet of staggered tiers, beginning 2 feet from the floor, spaced 4 inches apart, up to 48 inches high. (Optional in rooms where one end of MCPS-built drying rack(s) that measure 44 inches wide and 24 inches deep is accessible, since hooks can be installed on pegboard ends.)

The wall opposite or adjacent to the teaching station should have the following:

- One 6-foot tall, 12-foot long tack board with 24-inch tall, 14-inch deep shelving units below.
- Two or three 7-foot tall, 18-inch deep, 36-inch wide shelf sections near kiln area for storage of ceramic work

Kiln Area

- The kiln area should be located at the far end of the storeroom and should accommodate two kilns.
- Two kiln exhaust hoods and fans (local switch) must be installed. Positive ventilation (using negative pressure) is needed to assure removal of fumes.
- Kilns should be 30 inches wide, 30 inches deep and 36 inches tall. Allow an additional 6 inches in depth for opening of the kiln lid.
- Electrical characteristics for the kiln are 208 volt, 30 amps, single phase, and 7200 watts. Provide 2-50 amp 250-volt outlet NEMA configuration 6-50R. Provide outlet(s) on wall behind kiln(s).
- Kilns may be located in the far end of the storeroom with built-in hood above and metal shelving 12 inches to 18 inches deep on walls adjacent to the kiln area. See notes above for additional kiln information.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Art Room (continued)

Art Storeroom

- The storeroom must have a 6-foot wide, 30-inch tall, and 34-inch deep worktable immediately inside the entrance to the storeroom with built-in adjustable shelves below and 14-inch deep wall hung shelving 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).
- One or two 6-foot tall 20-inch wide paper storage shelf section(s), 24 inches deep with shelves 8 inches on center to accommodate 18" x 24" paper.
- Seven-foot tall open shelving, 18 inches deep, should be provided along remaining walls where space permits. Twelve to fourteen inch deep sections are acceptable for some sections where 18-inch deep shelves won't fit.
- Storeroom door is to be lockable, and 2 coat hooks are to be mounted behind the door.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Music Room

A new Music Room will be required only if room 39 is repurposed and expanded for kindergarten.

If classroom 35 is repurposed for use as the music classroom it will require soundproofing.

- The music room should have a clear circular area of at least 20 feet in diameter and access to the music storage room.
- A 150-square foot secure closet area to store instruments, equipment, choral music, and instructional charts is necessary with access from the music room.
- Variable-sized shelving must allow for storage of books, records, and small instruments.
- The music room needs a child height sink with a work area and drinking fountain.
- Window blinds and a wall-mounted retractable projection screen are required.
- Approximately 20 feet of white board and 4 feet of tack board must be provided. Continuous tack strips are needed around the room.
- Specific storage and shelving specifications are available through Montgomery County Public School's Division of Construction.
- Eight duplex electrical outlets are to be provided (where feasible, quadruplex outlets may be utilized).
- This room must be acoustically treated.
- Doors into the music room and stage platform must be wide enough to accommodate the passage of a piano.

Dual Purpose Room

- This room should be designed to accommodate both art and music activities in the school but with less detail than the regular art and music rooms.
- This room should ideally be located near the art and music rooms and the multipurpose room.
- Some acoustical treatment should be provided in the room.
- One sink for student use should be provided along with some countertop area.
- No kiln area is needed and less shelving than described in the art room is to be provided.
- The exact details of the design should be discussed with the school staff and community.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Occupational Therapy / Physical Therapy (OT / PT) Suite for the Physical Disabilities Program

If Room 35 needs to be repurposed and the OT/PT room built new as part of the addition project, it must be built with at least the square footage and amenities that the current space offers.

- This room must be centrally located in the building to minimize travel distance. This room should be located near the multipurpose room, gym, and play areas.
- It is important to have an alcove for equipment near the doorway.
- The square footage may be split into separate areas for Occupational therapy and Physical therapy.
- This room needs to have telephone access for contacting outside medical providers.
- This room is designed to serve 25-30 students.
- This room must have whiteboards and tack boards mounted two feet off the floor. No shelving or cabinets should be placed below the boards.
- Open and closed lockable storage, open shelving, and a lockable teacher wardrobe are required.
- An in-classroom accessible bathroom with a changing table and a door to the corridor and an in-classroom sink with counter space are required. The sink must be wheelchair accessible and should not have cabinets underneath.
- Space for three teacher desks, lockable file cabinets, and assorted sized furniture with adjustable legs should be provided.
- The room should be wired for access for at least three computer workstations for student use, two of which should be accessible for students in wheelchairs.
- The room requires adequate width and mounting capacity for a ceiling-mounted hook for a swing and adequate open floor space for therapy sessions.
- The room requires a lockable storage closet with sufficient area to house large gross motor equipment (minimum of 250 square feet) such as standers, gait trainers, stairs, etc. Ideally the closet should also have access from the corridor.
- It is desirable to have the doors swing inward to 180 degrees to allow room for maneuvering.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Site Requirements

The items described below are for a school that meets the preferred site size of 12 usable acres. At schools with smaller sites, the architect is to work with MCPS staff, including the Physical Education Curriculum Coordinator, Safety Director, and school staff to determine layout of the play areas. The outdoor physical educational instructional space should not be compromised for playground equipment.

Physical Education Instructional Site Requirements

- The site should be designed to provide a clear view of all play areas and to facilitate supervision from one location.
- Protective fencing may need to be provided near heavily wooded areas, busy streets, steep hills, parking lots and turnaround areas.
- Metal drains/grates should not be located in the playing fields and paved play.
- Paved areas and fields must be as level as possible. Water should not collect on paved areas
- The items described below are for a school with a site meeting the 12-acre requirement. At schools with smaller sites, the architect is to work with MCPS staff, including the Physical Education Curriculum Coordinator, Safety Director, and school staff to determine layout of the play areas. The outdoor physical educational instructional space should not be compromised for playground equipment.

Softball Fields

- Two softball fields should be provided with the following design requirements:
- 250' radius, with a soccer field superimposed should be provided if possible. See below for the soccer field dimensions.
- The site size will determine the number and dimension of the softball fields.
- Softball fields should have metal benches protected by fencing for each team's use.
- The fencing and benches should not interfere with soccer field usage.
- The softball backstops (2) shall be in diagonal corners of the field or in corners on the same side. See diagram in Architect's Guide provided by Division of Construction.
- Softball infields are not skinned for elementary schools. However, one field may be skinned if it does not significantly impact the soccer playing area.

Soccer

- The site size will determine the size of the soccer fields. The elementary school size soccer field is 150'x240' however the minimum size field should be 105' x 180'.
- No permanent goals or temporary goals should be installed on the soccer fields.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Site Requirements (continued)

Paved Play Areas

- Two paved areas, 80' x 100' should be provided if the site permits. On small sites, one paved play area
- If located adjacent to one another, a grassy strip of at least 20' should be between the two paved areas.
- One area should have four basketball goals with appropriate striping (see diagram in Architect's Guide available from the Division of Construction).
- A second area, designated for primary use, shall be striped according to drawings provided in the Architect's Guide available from the Division of Construction.

Kindergarten Paved Play Area

- A third paved area, at least 40'x 60' but preferably 80' x 100', is needed for the Kindergarten students.
- This area needs to be located adjacent to the Kindergarten playground (mulched) area and close to the other paved play areas.
- This area requires a fence around it or adequate separation from the other paved play areas.
- The area will be striped according to drawings provided in the Architect's Guide available from the Division of Construction.

Playground Equipment Areas (mulched areas)

- One or two areas shall be provided near the playing fields and large paved play area for playground equipment. Each area should be approximately 40'x40'. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- The area shall be level, bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for these areas.
- An underground drainage system must be provided.
- The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Site Requirements (continued)

Kindergarten Play Area (mulched area)

- A mulched kindergarten play area of 40' x 60' should be located adjacent to the kindergarten paved play area described in the physical education section for playground equipment. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- The area shall be level bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for this area.
- Protective fencing should enclose the area.
- An underground drainage system must be provided.
- The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

Prekindergarten Play Area

- If the school has a prekindergarten, Head Start, or Preschool Education Program, then a separate and fenced outdoor play is required.
- This area must be adjacent to the classrooms with access directly from the classrooms.
- If the school does not have a prekindergarten program than the outdoor play area should be master planned so that it can be added on at a later time.
- The prekindergarten play area should include a 40’x40’ paved play area and a 40’x40’ mulched area. The architect will consult with the MCPS staff on the design of the playground equipment.

Site Requirements

The following information is provided for reference purposes. If the proposed addition impacts one of the site requirements, the architect is to restore the site element using the following the specifications.

- The site should be designed to provide a clear view of all play areas and to facilitate supervision from one location.
- At schools with class-size reduction, 100 parking spaces should be provided.
- Protective fencing may need to be provided near heavily wooded areas, busy streets, steep hills, parking lots and turnaround areas.
- Metal drains/grates should not be located in the playing fields, paved play areas and mulched playground equipment areas.
- Paved areas and fields must be as level as possible. Water should not collect on paved areas or in mulched areas.
- Playground equipment areas should not be located at the bottom of hills unless a provision is made to channel water away from the equipment areas.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Site Requirements (continued)

Driveway Service Drive

- The driveway must be 24' wide, 50' radius for turnaround, for buses, with a separate entrance and exit or turnaround is required.
- Bus traffic should be separated from car traffic at all times, when possible. Bus loading zones should be able to accommodate the entire student body.
- All driveways must be arranged so that children do not cross them to get to the play areas. Access to the Head Start and future day care areas must be considered.
- Pedestrian access to the school facilities should be designed to make the best use of community rights-of-way and should not require students to cross in loading-zone areas.
- The design must follow ADAAG 4.1.2(5)c, which stipulates that when a passenger loading zone is provided, a portion of it shall comply with ADAAG 4.6.6. At a minimum, the established car loop for passenger drop off should not interfere with the accessible parking spaces.
- Driveway aprons are to be perpendicular to the centerline of the street; and if there is an intersecting street on the opposite side from the proposed driveways, the driveway apron is to line up with the intersecting street.
- The grade of the driveways shall not exceed eight percent and should provide for a minimum centerline radius of 50 feet to provide adequate turning space for buses.
- A service drive 15' wide with an adequate turnaround is required to service the kitchen, boiler room, and general delivery area.
- Where necessary, oil filler pipes, with adequate overflow pipes, are to be easily accessible for a tractor-trailer.

Landscaping

- Planting should include screen planting and other planting needed for erosion control.
- Existing plant stock, if on site, is to be evaluated for use and protected accordingly.
- Landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.
- Planting areas along 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.
- Provision for outdoor watering must be included.
- The landscaping plan should include areas for outdoors environmental education programs.
- Areas should be identified where plowed snow could easily be piled.

APPENDIX B – EDUCATIONAL SPECIFICATIONS

Additional Program Requirements for Resnik Elementary

- This facility is viewed as part of the Physical Disabilities program, not simply housing it. Instructional needs drive the space needs.
- The design team should review how the arrival and drop off of orthopedically handicapped (OH) students are accommodated to meet current accessibility requirements.
- The addition must be single-story because of concerns about emergency evacuations for the OH population.
- The architect should assess the feasibility of creating a security vestibule at the main entrance.
- All areas of the building are to be accessible for persons with disabilities including site amenities such as play areas and ball fields.
- Universal design features including double wide corridors, hand rails, automatic door openers, motion detectors, benches, and all other accessible features must continue into the addition.
- It is important to keep the Kindergarten team together. Prekindergarten rooms should ideally be located with Kindergarten rooms.
- The Art and Music rooms may move to rooms 35 and 33 or be built new in the addition and rooms 38 and 39 should be repurposed as Kindergarten classrooms.
- If Art and Music move to rooms 35 and 33, a replacement classroom and a replacement OT/PT space are needed.
- An accessible student restroom with space and an electrical outlet for a movable changing table is desirable in the addition. The restroom should be located near a new OT/PT room.
- In all new classrooms some cubby hooks should be lower so that they can be accessed by students with limited ability to reach up.
- An alcove is to be provided for wheelchair and equipment near doorways but out of the traffic flow. This space can be located inside or outside of the classroom doorway.
- Doors are to have enough glass to provide clear visibility from wheelchairs.
- All entries are to have no thresholds to promote independent navigation by physically challenged students.
- Paved maneuvering space should be provided for wheelchairs at swing open doors, with a one-foot clearance on either side of the door.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS

SITE ANALYSIS

GENERAL SITE INFORMATION

The Judith Resnik Elementary School facility shares a 29.77 Acre lot, Parcel P390, at 7301 Hadley Farms Drive, Gaithersburg, Maryland within Election District 01 with the Hadley Farms Alternative Middle School and the Bright Eyes Childcare Center. The property is found on ADC Map book grid 5048-F1 and has a tax account number of 02149254. The site is zoned R-90 and is bounded on the north, west and south by detached single family homes, and on the east, across Woodfield Road (MD-124), by lower density, detached single family homes in a Special Protection Area.

ZONING

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

Main Building –
Street setback (Hadley Farms Drive) – 30’
Corner Lot Street (Woodfield Road) - 15'
Side setback– 8’
Sum of Both Sides - 25'
Rear setback – 25’

Maximum Site Building Coverage – 35 %

The zoning ordinance will also require any site improvements to adhere to the landscaping, screening, and lighting requirements set forth in the code.

Judith A. Resnik Elementary School – Aerial

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

ADJOINING STREETS

The site is bounded along its eastern property line by the 120-foot Woodfield Road (MD-124) right-of-way. Woodfield Road is a six-lane divided highway with signalized intersections and pedestrian circulation paths along both sides. This heavily traveled street is separated from the school property with a 4-foot chain link fence and a steep hillside which combine to minimize the presence of the thoroughfare. Along the southern boundary of the site, lies the 60-foot Hadley Farms Drive right-of-way. This street is a two-way, two-lane street with a center left turn lane and sidewalks and street trees along both sides. Although the pavement along this right-of-way is in need of repair, crosswalks and handicap ramps appear to be in compliance with 2004 ADA guidelines.

SITE ACCESS, PARKING AND CIRCULATION

ON-SITE PEDESTRIAN AND VEHICULAR ACCESS

Vehicular access is currently divided amongst 4 separate driveways off of Hadley Farms Drive. The eastern two serve as the one-way entrance and exit to the student drop-off loop. These driveways also offer access to the main parking lot as it is encompassed on three sides by the student drop-off loop. The remaining two driveways act as the entrance and exit for the one-way bus-loop. However, the exit is also shared as an entrance and exit for the childcare facility, which is located on school property to the northwest of the school. This driveway also provides access to the loading/delivery area for the main school.

The major issue with site circulation is the layout and vicinity of the driveways in proximity to one another. The first three driveways are located within 250-feet from one another, and it is not easily discernible for a first-time visitor which is the proper driveway to use. Secondly, vehicular conflicts between buses and visitors to the childcare facility are likely frequent as they must share a driveway. If possible, access to the childcare facility should be separated from the main use areas of the school.

Pedestrian access from the Hadley Farms Drive right-of-way is afforded by the sidewalks which flank the two outermost driveways, along with a centrally located sidewalk located between the bus-loop and student drop-off. The site also offers some level of community connectivity by an asphalt path which connects the neighborhood to the north with the play fields located in the rear of the school.

DRIVEWAY ENTRANCES

The easternmost of the driveways is a 28-foot asphalt, one-way driveway, which serves as the main access for the student drop-off loop and the main parking lot. The adjacent driveway, approximately 80-feet to the west, is a 16-foot, one-way, asphalt driveway, which serves as the exit to the main parking lot and student drop-off loop. Approximately 40-feet to the west, lies the 35-foot, one-way bus-loop entrance. Lastly, 250-feet to the west lies the 35-foot, two-way bus-loop exit and the entrance/exit to the childcare facility. All driveway paving appears to be in fair condition, with only minor cracking. All crosswalks and handicap curb ramps appear to be recently installed and compliant with current ADA guidelines.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

SITE ACCESS, PARKING AND CIRCULATION (Continued)

BUS LOOP

The school's bus-loop consists of a 24-foot one-way drive aisle along the southwestern side of the facility. With approximately 385-linear feet of queuing space it appears that the length of the bus-loop is more than adequate for the five routes currently serving the school. The only concern with the bus loop layout is that its width is not always adequate to allow enough room for buses to pass one another. This sometimes causes back-up of buses during pick-up time. As part of the addition project, the bus loop should be widened if possible. The bus-loop is also demarcated with painted curbs and signage as a fire-lane.

Overall, the pavement and associated sidewalks in and around the bus-loop appear to be in fair condition. ADA access is provided with a curb ramp, although it appears to be outdated and non-compliant with current standards. Additionally, the sidewalk widths following the bus-loop are only 8-feet which does not meet current MCPS design guidelines (12-feet wide).

STUDENT DROP-OFF LOOP

The student drop-off loop consists of a 20-foot, one-way loop that circles and provides access to the main parking lot. The area immediately in front of the school does slightly widen out to 24-feet wide; however, the majority of the loop is too narrow. The queuing space provided is approximately 520-feet in length and could accommodate approximately 26 vehicles. 8-foot sidewalks also run the entire perimeter of the drop-off loop and provide access into the building. The drop-off and parking area exit configuration does not allow a left turn out onto Hadley Farms Drive, requiring traffic to make a right turn only. Since most cars leaving the site want to go left, this means people either have to perform a full loop through the neighborhood to the west, make a u-turn in Hadley Farms Drive, or occasionally try to make an illegal left turn out.

In terms of ADA accessibility, there are two handicap curb ramps from the loop to the buildings' main entrances; however, they appear to be out of date and likely not compliant with current ADA guidelines. Additionally, there is currently no ADA passenger loading zone provided in the student drop-off loop.

Overall, the pavement and associated sidewalks in and around the drop-off loop appear to be in fair condition. The issue of greatest concern with the drop-off loop is that its length and capacity are not great enough to avoid back-up of vehicles out onto Hadley Farms Drive during pick-up time. Often, traffic backs up all the way out to the intersection with Woodfield Road, causing delays and congestion. Additional shortcomings occur in the form of ADA compliance (lack of a passenger loading zone), and the narrow width of the drive aisle.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

SITE ACCESS, PARKING AND CIRCULATION (Continued)

ON-SITE PARKING

The main parking area consists of 93 standard parking spaces and 6 handicap parking spaces. The main parking lot offers an adequate ratio of handicap parking spaces, which all appear to be up to current ADA guidelines. While it is typically not advised to have more handicap spaces than are required by ADA, the fact that this school is designed to provide full inclusion for OT/PT students justifies the provision of additional ADA spaces.

Additionally, the childcare facility has its own parking lot on the western side of the main school building which offers 17 standard parking spaces and 2 handicap parking spaces.

As both parking lots exceed the minimum ADA requirements for reserved handicap spaces, the noted deficiencies revolve mostly around functionality. For instance, the main parking lot is accessed by the student drop-off loop which circles the parking lot entirely. In order to access a parked vehicle from the school, one would have to cross traffic in the student drop-off loop. Secondly, the exit of the parking lot/drop-off loop is only 16-feet in width. If a car were to break down in this location, traffic from the school would not be able to bypass the broken down car to leave the site.

ON-SITE LOADING

The loading area is located on the western side of the building and is accessed from the western driveway/bus-loop exit. The loading area is approximately 28-feet wide and 90-feet in length. Heavy-duty concrete is utilized for the majority of the paving. The space provides two areas for deliveries, both of which utilize an elevated dock. The pavement in this area appeared to be in decent condition; however, ADA access into the building is non-existent. It should be noted that this loading area is currently utilized as a fire lane. In fact, one of the two Fire Department Connections (FDC) is located in this area.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

SITE ACCESS, PARKING AND CIRCULATION (Continued)

SIDEWALKS

Although not entirely compliant with ADA standards, the site provides a thorough system for pedestrian circulation around the site. Concrete sidewalks link the facility to the Hadley Farms Drive right-of-way which flank the outermost driveways along with an additional sidewalk that runs between the bus-loop and student drop-off loop. Around the rear of the facility, a series of sidewalks is provided around the entire perimeter, linking the building to the rear play areas. Concrete pathways provide access from the adjacent childcare center to the rear play areas as well. Lastly, an asphalt path is provided for recreational purposes around the rear play fields.

In general, the concrete sidewalks along the front and west side of the school are in fair shape, although it is evident which sidewalks were added with the most recent improvements and which are original. The asphalt paths in the rear and on the east have more extensive cracking and could benefit from resealing. In terms of ADA compliance, there are no large grade differences that immediately suggest non-compliance with the exception of a compliant access to the baseball field. Landings associated with curb ramps and egress were noticed to be absent and will need to be addressed as part of the site renovation process.

FIRE ACCESS

Currently, the student drop-off, bus loop and loading areas are all delineated by signage and striping as on-site fire lanes. These drive aisles all meet the dimensional requirements for a fire lane, with the exception of the last portion of the student drop-off exit. This area does not comply with the minimum 20-foot width requirement. Fire hose building coverage is accomplished in the current layout; however, if building additions are added, not to mention vehicular circulation reconfiguration, fire access to the rear of the building may be required with other improvements. There is an on-site fire hydrant located directly in front of the buildings' main entrance off of the bus-loop and another to the north side of the service/loading drive. The re are two Fire Department Connections (FDC), one located to the east of the main entry and one in the loading dock area of the building.

PLAY AREAS AND FIELDS

The main paved play areas and soft surface play area are located to the north of the existing structure. They are in fair condition, but are beginning to show signs of age. The existing asphalt is beginning to deteriorate and surfacing at the soft surface areas could use replacement. The existing kindergarten play area to the south of the kindergarten wing is also showing age and its play equipment is outdated. The softball and soccer fields are adequately sized for an elementary school use and are in good condition, short of a drainage issue with the skinned softball field located closest to the school building.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

SITE TOPOGRAPHY

The site generally slopes from the east at the boundary of Woodfield Road (MD-124) to the southwestern corner of the site, where a small stream picks up surface runoff, pipes it beneath Hadley Farms Drive and carries it to a regional pond (Green Farm I) to the southwest. The main school building and childcare facility sit atop a small hill, which sharply drops off in elevation to the west, where the alternative middle school is located. The lowest elevations on the property are found in the southwestern corner of the site, whereas the highest elevations are seen along the eastern boundary. The steepest slopes on the property are found along the eastern boundary and along the central portion of the site, between the elementary and middle schools.

SITE SOILS

Per the Soil Survey of Montgomery County, Maryland the predominant soils on the site are in the Gaila, Glenelg, Glenville and Baile series. However, the soils around the elementary school are mostly of the Glenelg, and Glenville series. According to the USDA, the depth to bedrock in these soils is generally greater than 5-feet. However, this estimated depth is based upon virgin soils. Because the site was 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. In terms of hydrology, the Glenelg soils found around the majority of the site are characteristically known to provide good drainage and allow adequate infiltration. These soils have a hydrologic soil group classification of 'B', and typical groundwater depths in excess of five-feet. However, the areas to the northwest of the school where Glenville soils are present, are known to drain much less effectively and groundwater elevations are typically found closer to the surface. Although site specific borings and infiltration tests may show otherwise, it can be anticipated that most areas of the site are suitable for infiltration based ESD practices, with the exception of the areas to the northwest of the existing building.

VEGETATION

Although there are multiple, attractive shade trees located around the parking lot and school building, there is just one small area west of the middle school, which appears to be classified as forest under M-NCPPC definitions (actual classification will need to be determined by a Natural Rescores Inventory/Forest stand Delineation). Furthermore, this forest acts as a stream buffer, which likely precludes any impacts to this area. Fortunately, most of the trees surrounding the existing building are not considered significant and would not generate much resistance from M-NCPPC to remove, should building improvements require it. It is likely that this project will be exempt from forest conservation, should impacts to the aforementioned stream buffer be avoided.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

STORM DRAINAGE AND STORMWATER MANAGEMENT

Currently, the stormwater from the site is directed into two directions. Runoff from the main parking lot and bus-loop is piped to the public stormdrain in the Hadley Farms Drive right-of-way. Runoff from the rear play areas, loading area and childcare center parking lot is piped across the site, behind the middle school to an outfall near an area classified as wetlands. During site upgrades in 2004, on-site treatment for some of the main parking lot was provided in a surface sand filter located in the southeastern corner of the site. Additionally, a regional pond, "Green Farm I" located in a neighborhood to the southwest, provides the site with quantitative treatment.

Since existing impervious areas do not constitute 40% of the site area, construction work will not be classified as a “Redevelopment” project. Given this status, it is anticipated that 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 and if the disturbed area has still not been able to 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 include both micro-scale practices and alternative surfaces. Micro-scale facilities could include the utilization of bio-swales and micro-bioretention facilities in pockets of unused open space. Alternative surfaces could include a vegetative roof on any building addition as well as permeable pavements. Permeable pavements could be utilized in new parking spaces, sidewalks or any paved surfaces that would not need to meet heavy loading requirements or are not located in areas where significant fill is required.

FLOOD PLAINS, STREAM VALLEY BUFFERS AND NON-TIDAL WETLANDS

Initial investigations reveal that the site is located outside of a floodplain in a zone “X” on FEMA Flood Insurance Rate Map number 24031C0195D. However, documented freshwater wetlands are noted to exist on the site by the U.S. Fish and Wildlife Mapping service. This area is located immediately to the north and west of the existing middle school building and the wetlands and any associated buffers should be avoided when locating any proposed improvements. Additionally, the stream, an unnamed tributary of the Cabin Branch, running along the western side of the existing middle school will also have buffer requirements that prospective improvements will need to avoid.

GEOTECHNICAL ASSESSMENT

MCPS elected not to include a geotechnical assessment in the scope of services for this feasibility study, therefore geotechnical information is not available at this time. It is recommended that a full geotechnical assessment be conducted very early on in the schematic design process.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

SITE ANALYSIS (Continued)

UTILITIES

WATER AND SEWER

The existing building is served by an eight-inch sanitary sewer line, which runs from the loading dock on the western side of the building out to the southwestern corner of the site, following the stream. WSSC records indicate that this on-site line is a main line and likely has an associated right-of-way. This 8-inch main was built in 1968 under contract number 683325A. It is assumed that the sanitary sewer service is sufficiently meeting the current needs of the building and should also meet the needs of any prospective improvements.

The existing facility is served by an 8" lateral off the existing 10-inch water main, WSSC contract number 835844A, in the Hadley Farms Drive right-of-way which was built in 1983. It is assumed that the existing water service is of sufficient capacity to meet the needs of the prospective improvements for domestic water, but may require upgrade for sprinkler system extension and relocation in plan to the west due to the proposed kindergarten addition configurations. According to WSSC, the site is in a 685A pressure zone with a High Hydraulic Gradient (HHG) of approximately 700 and a Low Hydraulic Gradient of approximately 639. On that basis, per WSSC prescribed calculations, the water pressure at the existing connection to the water main in Hadley Farms Drive is approximated to be between 26 p.s.i. and 64 p.s.i. The exact pressures and flows should be confirmed via field testing at the time of design.

GAS, ELECTRIC AND TELEPHONE

The existing gas and electric connections are likely made with the main service lines in the Hadley Farms Drive right-of-way. Electric service comes to the building via underground lines from the transformer located in the loading dock area. There are no overhead lines or utility poles on the site, with the exception of the area along the eastern boundary. The main telephone and cable services come into the hub rooms from the east side of the site, along the Woodfield Road right-of-way. The telephone line for the childcare center also comes in from the east side of the site along Woodfield Road and parallels the northern wall of the existing elementary school. It may need to be relocated when the northern additions are constructed.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

ARCHITECTURAL ANALYSIS

GENERAL SPATIAL ANALYSIS

The school is single story arranged in a looped corridor fashion with a large central courtyard. The main entrance is located just west of the center of the structure along its southern elevation. An angled canopy with pitched roof feature at its southernmost end extends from the main entry doors to the bus loop curb, however it does not run parallel with the bus loop curb and therefore does not provide weather protection for much of the curbline. The administrative suite sits to the east of the main entry corridor. The main office is not located directly on the exterior wall, therefore it is difficult to visually supervise the entry doors from the office and an effective security vestibule is not provided. A CCTV camera provides some visibility of the main entrance doors, however it is desirable to provide a new security vestibule as part of the addition scope.

To the west of the main entry corridor is the kindergarten wing, which also houses the existing art and music rooms. Directly north of the administration area to the east side of the main entry corridor is the media center, which looks out onto the southern side of the courtyard. Running along the west side of the main entry corridor north of the kindergarten wing are the all-purpose room, platform, kitchen, instrumental music room, main mechanical and electrical rooms, loading dock, and gymnasium. The existing OT/PT suite sits to the north of the media center, along the east side of the main entry corridor.

Other general classrooms and support spaces are located around a looped corridor that branches off from the main entry corridor between the administration area and media center and again to the north of the OT/PT suite. There are four groupings of student restrooms, one in each quadrant of the school. Each group of student restrooms also has a unisex staff restroom adjacent to it. Every kindergarten classroom has its own unisex restroom within the classroom, as does the OT/PT suite.

CODE ANALYSIS OVERVIEW

The facility was designed to comply with BOCA 1987 and NFPA 1988 codes, along with ANSI 117.1 Accessibility Code, 1986 version. Construction classification was 2C, non-combustible, unprotected. The building is fully sprinklered. Use Group Classification is Type “E”, Educational. The structure is divided into two fire areas using a two-hour rated wall and full structural separation between column lines O and O.1. The existing structure appears to comply with current height and area limitations assuming that it is still considered as two separate fire areas, separated by a two hour fire wall. Additions of fewer than four classrooms can probably be accommodated without requiring additional fire separation, but additions housing four or more classrooms will require a two hour fire wall separation from the existing structure.

The quantity of existing plumbing fixtures provided is adequate to serve the projected maximum student capacity per WSSC Plumbing Code requirements, but falls short of MCPS Guidelines. MCPS should determine whether the addition of fixtures is desired as part of the addition scope. Staff restrooms are adequate to serve the projected capacities. Six additional drinking fountains will be required in order to meet current plumbing code requirements.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

ARCHITECTURAL ANALYSIS (Continued)

BUILDING ENVELOPE

The existing building is non-combustible construction. The exterior walls are predominantly masonry cavity wall construction using 6" CMU, a 2" air space, and 4" face masonry veneer. 1 ½" of rigid insulation is installed in the air space, providing an estimated continuous R-value of approximately R-7.5. The veneer is mostly face brick with some glazed concrete masonry unit accents. Two colors of face brick are utilized, one a medium red tone and another a buff tone. Special shaped brick soldier courses are used at window sills. Some of the taller areas of the building, such as the all-purpose room and gymnasium have prefinished aluminum siding panels for exterior cladding above the typical parapet elevation in lieu of face masonry veneer.

The majority of the facility has a low-slope roofing system consisting of what appears to be two layers of 1 ½" rigid insulation over sloping steel joists and metal deck. If installed per the original construction drawings, the insulation has an R-value of approximately R-18. A built-up asphalt roof covering is installed over the insulation. Coping covers appear to be prefinished aluminum. There are several pitched mansard type roofs located above the low-slope roof system. There is a large gabled translucent insulated fiberglass skylight above the media center and there are several smaller unit skylights scattered throughout the remainder of the building. The roofing system is original to the structure and is beginning to show some signs of age. There are areas of the building, especially around skylights and other flashing joints, where the roof has been found to leak. A full roofing investigation should be undertaken and replacement and/or repair should be considered.

Exterior windows are double glazed prefinished aluminum, with many operable units. They appear to be in good overall condition. Exterior doors and frames are painted hollow metal.

INTERIOR

Interior walls are typically concrete masonry units laid in a stacked bond, except at the administration area, where metal stud partitions with painted gypsum board are used. The school is designed to accommodate students with physical disabilities and orthopedic handicaps, therefore is designed with wider corridors and larger classrooms than most typical elementary schools in order to assist with mobility and allow space for equipment such as wheelchairs, walkers, etc. Corridors have handrails along both sides and feature enlarged areas with built-in benches for students to utilize as rest areas during travel. There do not appear to be any major ADA violations within the building that need to be addressed.

Ceilings are generally 2'x4' acoustical tile with a mix of recessed and surface mounted fluorescent lighting fixtures. The corridors and all-purpose room are floored in terrazzo (Fritz) tile, and classrooms are mostly vinyl tile with some carpet area rugs. Restrooms have ceramic tile flooring. Vinyl or rubber wall base is used throughout most of the existing classroom spaces, however a few classroom areas and all corridors have a glazed CMU base. Ceramic tile base is used where ceramic tile flooring exists. Interior doors are solid core wood in painted hollow metal frames. With the exception of some minor cracking along column line locations, the existing finishes are fairly attractive and appear to be in good condition. At this time, in general, new finishes will be provided only in areas disturbed by proposed addition or renovation construction.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

STRUCTURAL ANALYSIS

BUILDING STRUCTURE

The facility was built in 1991. The Structural design engineer was Abel \ Johnson, P.A. The building is a one story , slab on grade, steel framed structure consisting of steel columns and beams supporting steel bar joists. The exterior walls have continuous strip footings, as do some interior walls. Columns have pad footings and piers. The slab on grade was designed to be 5” thick with a 10 mil vapor barrier and 6” of gravel fill beneath.

The roof system consists of 1.5" deep galvanized type B roof deck. The building has approximately 78,500 gross square feet. Long span joists with standard 1.5" deep roof deck were observed in the gymnasium and all-purpose room. Large span beams were used at the exterior walls to create recessed areas for window openings. The masonry exterior walls above these recesses are supported by wide hung plates.

The two front entrance canopies consist of large steel columns supporting beams and a pitched roof feature at the end The canopy columns are a mix of 18" and 24" diameter. At several locations rain leaders run through the columns.

STRUCTURAL OBSERVATIONS AND RECOMMENDATIONS

- The condition of the exterior brick work is excellent. No cracks were observed in any of the brick which includes around the gymnasium and all-purpose room. One reason for the good condition of the brick work (no cracking) is the location of control joints. One very small crack in one brick pier was observed along back side of the building adjacent to the temporary buildings. This crack is insignificant and should only be caulked to prevent water penetration and possible additional cracking. At this same wall poor drainage was observed against the wall. Re grading of this area would be prudent.
- Major drainage problems were observed along the front of the building where a built up mulched area does not allow the water to run away from the facility. At this location there is a concrete slab that butts up against the facility. It is recommended that better drainage be made to allow the water to escape. Also the joint between the concrete slab and wall should be caulked to prevent water infiltration.
- Observations of the front entrance canopy were made. The overall condition looked good. Some rusting was observed at the base of the columns. It should be noted that two of the columns have rain downspouts inside them. They should be checked to determine that good drainage is occurring through the pipes. Some rusting was observed at the base of the columns. It is recommended that the rust be removed and the columns be painted. Also the joint between the concrete slab and column must be caulked to prevent water infiltration and possible deterioration of the column below the slab.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

STRUCTURAL ANALYSIS (Continued)

STRUCTURAL OBSERVATIONS AND RECOMMENDATIONS (Continued)

- At almost all locations the exterior wall steel hung plates have minor rusting. At the present time the rusting is not severe. It is recommended that the outside edges be painted with a rust inhibitor paint. There appears to be weep holes at the hung plates above the flashing. If this is the case possible caulking between steel and flashing might also prevent further rusting.
- The mechanical screen wall located along the side of the building surrounding the cooling tower was reviewed. The wall looks good, but the slab inside the wall has deflected. It is recommended that weep holes be drilled through the wall to allow the water to escape. The joint between the slab and wall should be caulked solid. Backer rods will be needed at this condition because of the wide gap.
- The kindergarten play area was observed. The screen wall looked good, no problems in the walls structural integrity were visible. It is recommended that the joint between the concrete slab and exterior wall be sealed.
- At the loading dock some of the brick veneer at the steps has slightly pulled away. It is recommended that this joint be sealed to prevent water infiltration and further delamination.
- At the mansard pitched standing seam roof facing Woodfield Road some moderate rusting and staining was observed . According to the original construction documents, the roof was supposed to be aluminum, but appears to be painted steel. Further investigation concerning this roof should be made. From the observations made inside the classrooms of this area no major water damage was observed and the structural elements appeared to be stable, however further investigation of the water membrane between the flat roof and pitched roof should be made.
- Along the front entrance lobby and corridor there are several cracks in the terrazzo floor tile system. These cracks have telegraphed from the slab on grade below. This type of cracking is normal and is not a structural concern, but more of an aesthetic concern.
- No water damage was observed in the skylight at the media center. The exposed media center walls looked good and no cracking was observed.
- Several of the kindergarten classrooms were visually reviewed. No structural problems were observed. There was a small crack in a non structural masonry pier that appears to cover a roof drain pipe. This minor crack only has to be caulked. Some minor ceiling water stains were observed. The assume that there are minor roof leaks considering the age of the roof throughout the building.
- Several general classrooms were visually reviewed. No cracking in the masonry walls was observed. Some random slab cracking at isolated cases was observed. This is normal for this type of construction. We also observed at random locations water stains in the ceiling in the ceiling which is an indication of roof leaks.
- While making observations in the court yard it was noticed that at the wood trellis several top members have rotated. It is recommended that some blocking be placed to straighten out these members.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

MECHANICAL SYSTEMS

HVAC DESCRIPTION – EXISTING BUILDING

- The existing building is one story. The HVAC system consists of Classroom 2-pipe chilled/hot water unit ventilators and fan coil units for offices.
- Administration, multi-purpose room, kitchen, resource, lobby, existing areas B & C and Media Center are served via rooftop units (cooling only) and heating is provided by hydronic duct mounted coils.
- The gymnasium has been provided with heating and ventilating air handling unit with hydronic heating coil
- Computer Room is conditioned via a single 2-pipe dual temperature unit ventilator.
- All classrooms are served via 2-pipe chilled/hot water unit ventilators and fan coil units for small offices. Outside air is provided via wall louvers behind the unit ventilators.
- Kitchen is air conditioned via a rooftop cooling only unit with duct mounted hydronic heating coil.
- Corridors, toilet and storage rooms are presently heated by hot water cabinet and unit heaters.
- Mechanical system controls are pneumatic.
- Domestic hot water is provided by a gas-fired water heater located in the Boiler Room.
- The building is fully sprinklered.

COOLING AND HEATING EQUIPMENT IS AS FOLLOWS::

1. Two (2) Boilers by Kewanee Gas Fired are in fair working condition and serve the existing school heating systems.
   Boiler Model #M-135-KG (22 years old)
   Boiler Serial #96-403
   Boiler Capacities: Input = 1,350,000 BTU/Hr.
   Additional added loads for the new addition and the future expansions shall not be provided by existing boilers. See recommendations.
2. One (1) Trane Air Cooled Chiller, in fair working condition
   Model CGACD151EHNMM633GNPT (22 years old)
   Serial #L90J03032
   Additional cooling load shall not be added to existing air cooled chiller. See recommendations.
3. Two (2) Chilled/Hot (Dual Temperature) Water Pumps
   Chilled/hot water pumps (C/HWP-1 and C/HWP-2) with 20 HP pump motor, 404 GPM water flow at 110 feet of head serving existing building cooling and heating systems.
   Additional chilled or hot water flow by existing pumps for new equipment will not be recommended. Note: One pump serves as stand-by.

ELECTRICAL SYSTEMS

ELECTRICAL SERVICE

At the present time, the existing utility service is fed underground from a pad mounted transformer located adjacent to the cooling tower enclosure to the northwest of the loading dock area. The main primary electrical service comes from Hadley Farms Drive and runs underneath the western side of the childcare access and service drive over to the transformer pad. The existing electrical service comes underground from the transformer into the main electrical room. The main service consists of a Westinghouse G.O. power line C switchboard rated at 2500 Amp 277/480V 3-Phase, 4-wire.

APPENDIX C – EXISTING CONDITIONS SURVEY & CODE ANALYSIS (Continued)

ELECTRICAL SYSTEMS (Continued)

ELECTRICAL SERVICE (CONTINUED)

The switchboard has a 2500 Amp bolted pressure switch. The distribution section consists of the following:

- 3P-700 Amp Identified as Serving Transformer "T1"
- 3P-400 Amp Identified as Serving Panel "BR"
- 3P-225 Amp Identified as Serving Panel "HB"
- 3P-225 Amp Identified as Serving Panel "HD"
- 3P-100 Amp Spare
- There are Four (4) Spaces in the Switchboard
- 3P-400 Amp Identified as Serving Chiller
- 3P-225 Amp Identified as Serving Panel "HA"
- 3P-225 Amp Identified as Serving Panel "HC"
- 3P-100 Amp Identified as Serving Panel "OL"
- 3P-100 Amp Identified as Serving Relocatables

According to utility demand records, the maximum demand (summer) for the school is 283.0 KW assuming an 80% power factor, the maximum ampacity draw on the switchboard is approximately 445 Amperes.

PUBLIC ADDRESS SYSTEM

The existing Public Address System consists of a Bogen Multicom- 2000 System- which has five (5) spaces to add a switch bank section. The system also serves the fire alarm voice evacuation. This system is outdated per Montgomery County Public Schools' standards.

EMERGENCY SYSTEM

A Westinghouse 3P + S/N 60 Amp fused disconnect switch is tapped to the bus ahead of the main to serve emergency load via 60 Amp 600V 3-Phase 4-wire general automatic transfer switch. The emergency system is backed up by a 30.0 KW Generac propane generator. The existing emergency service was installed with the original building construction in 1991.

FIRE ALARM SYSTEM

The existing fire alarm system consists of a Simplex 4002 Control Panel with 16 zones, a fire alarm communicator, portable NAC, and voice evacuation panel that communicates with the school's main P.A. system. The system was installed approximately 21 years ago as part of the original building construction and is located in the main electrical room. Notification devices consist of visual devices and pull station. The voice evacuation works with school P.A. system. The school is lacking the visual devices required by ADA and other aspects of the system fail to meet the current NFPA criteria for fire alarm system in the school.

SECURITY SYSTEM

The school has a security system throughout. Keypads are used to arm and disarm the system. Wall mounted keypads are located in the main office. Motion detectors in corridors are used to activate the system. It could not be determined if all classrooms have motion detectors.

DATA WIRING SYSTEM AND CABLE TV

A Cat. 5 wiring system has been installed throughout the school. This system provides connectivity for the computer room, media center, offices and classrooms. The hub equipment is located in the closet space beside the media center. The school has CATV outlets in every classroom, multi-purpose room and other rooms. Main CATV service is located in main telecommunication room.

APPENDIX D – EXISTING PHOTOS

EXISTING STUDENT DROP-OFF ENTRANCE

EXISTING STUDENT DROP-OFF EXIT

EXISTING STUDENT DROP-OFF AND PARKING

EXISTING STUDENT DROP-OFF AND ENTRY

APPENDIX D – EXISTING PHOTOS

EXISTING BUS LOOP ENTRANCE

EXISTING BUS LOOP AND CHILD CARE/SERVICE DRIVE EXIT

EXISTING BUS LOOP- WEST FROM MAIN ENTRANCE

EXISTING BUS LOOP- EAST FROM MAIN ENTRANCE

APPENDIX D – EXISTING PHOTOS

EXISTING CHILD CARE/SERVICE DRIVE

VIEW TO EXISTING ALTERNATIVE SCHOOL

EXISTING CHILD CARE PARKING AND ENTRY

EXISTING SERVICE/LOADING AREA

APPENDIX D – EXISTING PHOTOS

EXISTING LOADING DOCK

EXISTING ALL-PURPOSE ROOM ENTRY AND COURTYARD

EXISTING CHILD CARE

EXISTING ALL-PURPOSE ROOM/ART COURTYARD

APPENDIX D – EXISTING PHOTOS

MAIN ENTRY CANOPY

EXISTING MAIN ENTRY DOORS

EXISTING DROP-OFF CANOPY

EXISTING DROP-OFF ENTRANCE

APPENDIX D – EXISTING PHOTOS

POTENTIAL KINDERGARTEN ADDITION TIE-IN

POTENTIAL EAST ADDITION TIE-IN

POTENTIAL REAR ADDITION WEST TIE-IN

POTENTIAL REAR ADDITION GYMNASIUM TIE-IN

APPENDIX D – EXISTING PHOTOS

VIEW ALONG WOODFIELD ROAD TO NORTH

EXISTING NORTH PLAY AREA

EXISTING RELOCATABLES

EXISTING NORTH PLAY AREA

APPENDIX D – EXISTING PHOTOS

EXISTING GYMNASIUM HARD SURFACE PLAY

EXISTING KINDERGARTEN PLAY

EXISTING NORTH PLAY FIELDS

EXISTING SOFTBALL FIELD

APPENDIX D – EXISTING PHOTOS

EXISTING MAIN ENTRANCE CORRIDOR - WEST

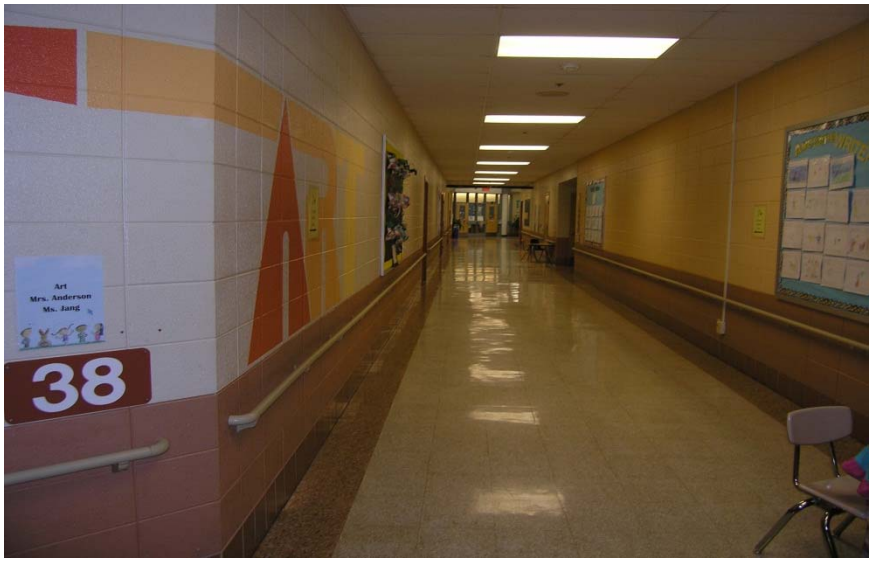
EXISTING MAIN ENTRANCE CORRIDOR - EAST

EXISTING MAIN OFFICE ENTRY

EXISTING MAIN ENTRANCE VESTIBULE

APPENDIX D – EXISTING PHOTOS

EXISTING KINDERGARTEN CLASSROOM



EXISTING CORRIDOR

EXISTING MEDIA CENTER

EXISTING ALL PURPOSE ROOM

APPENDIX D – EXISTING PHOTOS

EXISTING OT/PT ROOM

EXISTING OT/PT ROOM

EXISTING CLASSROOM

EXISTING CLASSROOM

APPENDIX D – EXISTING PHOTOS

EXISTING ART CLASSROOM

EXISTING ART CLASSROOM

EXISTING MUSIC CLASSROOM

EXISTING MUSIC CLASSROOM

APPENDIX D – EXISTING PHOTOS

EXISTING COURTYARD AERIAL

EXISTING ENTRY AND MEDIA ROOF

EXISTING COURTYARD

EXISTING STAFF LOUNGE ROOF FEATURE

APPENDIX D – EXISTING PHOTOS

ROOF TRANSITION AT GYM

TYPICAL SKYLIGHT

ROOF VIEW

TYPICAL ROOF DRAIN

APPENDIX D – EXISTING PHOTOS

EXISTING GENERATOR

EXISTING ELECTRICAL SERVICE

EXISTING WATER HEATER AND COMPRESSOR

EXISTING BOILERS

APPENDIX D – EXISTING PHOTOS

EXISTING ELECTRICAL ROOM

EXISTING ROOFTOP UNIT

EXISTING CHILLER ENCLOSURE

EXISTING CHILLER