

**BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM**

TITLE: Running Brook Elementary School Addition **DATE:** December 3, 2012
Schematic Design

PRESENTER(S): Bruce Gist, Director, School Construction
Tony Machowski, Vice President, SMG Architects

OVERVIEW:

The attached schematic design brochure describes the addition to Running Brook Elementary School. Running Brook Elementary School opened in 1970 with an open classroom design for Grades K-5. The school is a single story building with masonry exterior wall construction.

Running Brook Elementary School underwent renovations in 1984 to enclose the open classroom design with individual classrooms and provide a single-story addition which included a gym and two classrooms. A systemic modernization of the interior spaces of Running Brook Elementary School was completed in 2006.

The student population is predicted to increase each year for the foreseeable future. Running Brook Elementary School specifically serves the Town Center of Columbia so it is important that Running Brook Elementary School prepare to meet the demands of higher student population as Columbia continues to grow. With this in mind, the design and planning committee agreed on a two-story classroom addition to the school with a cafetorium expansion that will increase the classroom capacity by 100 seats and will also improve the utility of the existing academic support spaces.

RECOMMENDATION/FUTURE DIRECTION:

It is recommended that the schematic design report for Running Brook Elementary School be approved as submitted.

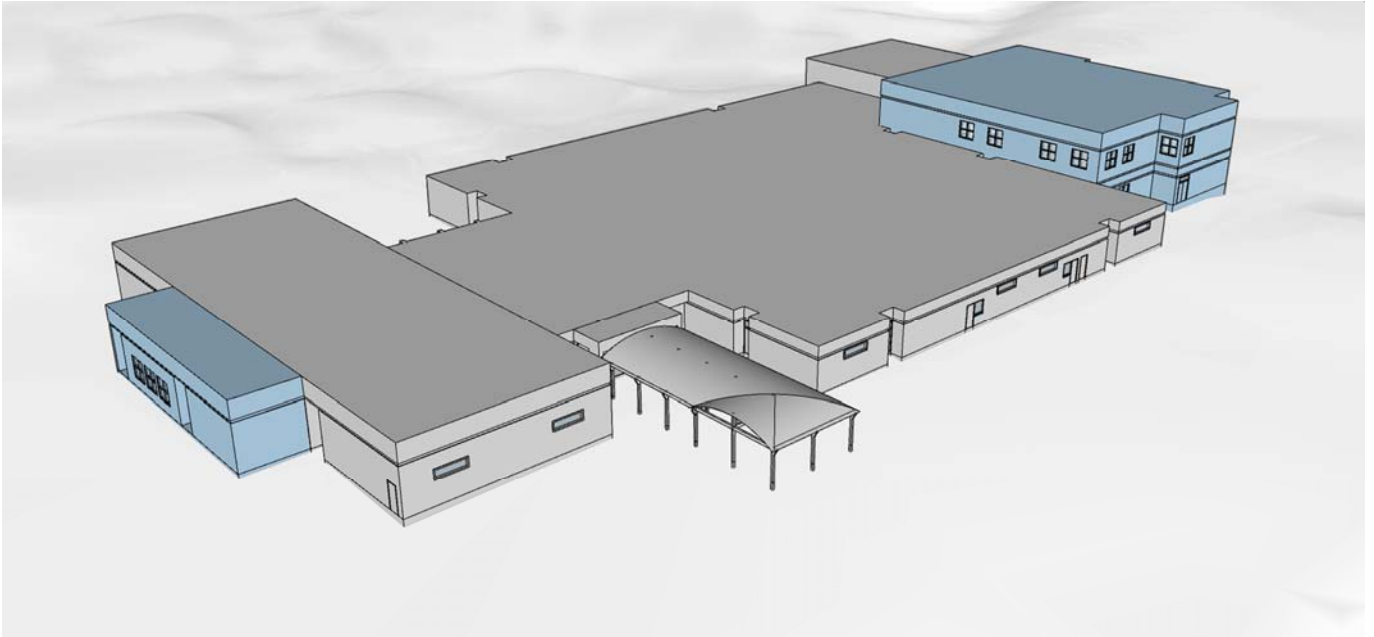
**Submitted
by:**

Bruce Gist
Director, School Construction

Ken Roey, Executive Director,
Facilities Planning and Mgmt.

**Approval/
Concurrence:**

Raymond H. Brown
Deputy Superintendent of
Operations



Additions to
Running Brook Elementary School
Howard County Public School System

Schematic Design Report – December 3, 2012

Schematic Design Report

Additions to Running Brook Elementary School

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY:

| | |
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| Director School Construction | Bruce Gist |

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Planning Advisory Committee

Planning Committee

| | |
|-----------------------|--|
| Gloria Mikolajczyk | MSDE, School Facilities, Architect Supervisor |
| Troy Todd | Running Brook Elementary School, Principal |
| Ken Roey | HCPSS, Executive Director, Facilities Planning & Management |
| Bruce Gist | HCPSS, Director, School Construction |
| Dan Keiser | HCPSS, Program Manager, School Construction |
| Scott Washington | HCPSS, Manager of Design and Preconstruction Services, School Construction |
| Ron Miller | HCPSS, Manager of Safety, Environment and Risk Management |
| Betsy Zentz | HCPSS, Interagency Specialist |
| Heather Dyer | Running Brook Elementary School, Math Support Teacher |
| Elizabeth Factor | Running Brook Elementary School, Fifth Grade Para-Educator |
| Carol Gallay | Running Brook Elementary School, Alternative Education Teacher |
| Kathleen Harkness | Running Brook Elementary School, Kindergarten Team Leader |
| Roslyn Jackson | Running Brook Elementary School, Custodial Staff |
| Kristina John-Gabriel | Running Brook Elementary School, STEM/Technology Teacher |
| Lynn Miskovic | Running Brook Elementary School, Fifth Grade Teacher |
| Bradley Scobie | Running Brook Elementary School, Fifth Grade Team Leader |

Architects

| | |
|---------------------------|----------------------------|
| Anthony Machowski, AIA | Principal in Charge |
| Mark Sawyer, AIA | Project Architect, Leed AP |
| Zachary Secor, Assoc. AIA | Assistant Project Manager |

Construction Manager

| | | |
|----------------|-----------------|---------------------------|
| Jan Sadowski | Vice President | Dustin Construction, Inc. |
| Kelly Cummings | Chief Estimator | Dustin Construction, Inc. |

Design Team

| | | |
|--------------------------------|--------------------------------|-------------------|
| ARCHITECT | SMG Architects | Baltimore, MD |
| CIVIL ENGINEER | Fisher, Collins & Carter, Inc. | Ellicott City, MD |
| STRUCTURAL ENGINEER | Columbia Engineering, Inc. | Columbia, MD |
| MECHANICAL/ELECTRICAL ENGINEER | Gipe Associates, Inc. | Towson, MD |
| FIRE PROTECTION ENGINEER | EBL Engineers, LLC | Baltimore, MD |



Project Description

Running Brook ES opened in 1970 with an open classroom design for Grades K-5. The school is a single story building with 4-2-4 masonry exterior wall construction. The building is Type IIB construction (Noncombustible / Unprotected). The building is primarily classified as an Educational Facility (E). The building also has a secondary classification of Assembly A-2 and A-3 due to the dual function of the cafeteria as a dining area (with a stage) and the gymnasium. An assembly classification of A-2 is used for spaces which are designed for an assembly for the purposes of food and drink consumption which do not contain fixed seating. The assembly classification of A-3 is used for spaces which are designed for an assembly for the purposes of recreation or amusement and events other than dining which also do not contain fixed seating. The assembly classification A-3 would also include the gymnasium which does not contain spectator seating. The assembly classification is used to determine the occupant load of the space and the amount of required exit doors for the space.

Running Brook ES underwent renovations in 1984 to enclose the open classroom design with individual classrooms and provide a single-story addition which included a gym and two classrooms. A systemic modernization of the interior spaces of Running Brook ES was completed in 2006.

Running Brook ES has also significantly grown in population since the school opened in 1970. The total student population for Grades Pre-K through 5 for the 2012 school year is 489. Below is the breakdown of student population for each class.

| Grade | Pre-K | K | 1 | 2 | 3 | 4 | 5 | |
|---------|-------|----|----|----|----|----|----|--------------------|
| Female: | 18 | 39 | 40 | 32 | 30 | 31 | 27 | |
| Male: | 14 | 39 | 46 | 40 | 39 | 39 | 55 | |
| Total: | 32 | 78 | 86 | 72 | 69 | 70 | 82 | 489 Total Students |

The student population is predicted to increase each year for the foreseeable future. Running Brook ES specifically serves the Town Center of Columbia so it is important that Running Brook ES prepare to meet the demands of higher student population as Columbia continues to grow. With this in mind the design and planning committee agreed on a two-story classroom addition to the school.

A seven (net) classroom addition is proposed for the eastern end of the school. Seven additional classrooms increase capacity by 175 students. This accommodates the current student growth projection of 100 students as well as the reassignment of the smallest existing classrooms with square footage less than the 660sf recommended by the HCPSS 2009 Renovation Guidelines. For example, currently one general classroom (5th Grade), one gifted and talented classroom, general music, and occupational therapy are housed in portable trailers on the site. The proposed addition will allow for the housing of these programs inside the school building, along with the reassignment of other programs, such as English for speakers of other languages (ESOL) in more size appropriate locations.

The proposed addition will include four general classrooms on the first floor with storage, and boys and girls toilets; and five general classrooms on the second floor with storage, and boys and girls toilets. The existing one-story classroom addition is to be demolished for a net addition number of seven classrooms. The two-story addition will add approximately 15,276 sf to the existing floor plan and contain an elevator for accessible access to each floor and to the school playfields. One existing portable classroom for music and the existing playground will need to be relocated to construct the proposed addition. One existing oak tree will need to be removed. New appropriate landscaping will be provided.

(Project Description continued)

With the increase in classrooms, the design team and the planning committee also recommended the following addition to the core space:

Cafetorium expansion - Increased school capacity requires increased luncheon seating. A cafetorium expansion of 1100 s.f. will allocate an additional 700 sf for seating, or four 14-student tables for an additional 56 students per seating. The remaining 440 s.f. will be allocated to general storage.

The two additions are located as shown on the attached site plan and floor plan. Each addition will be designed to be structurally independent to satisfy building code seismic requirements. Existing building walls and structural elements will be reused where possible. As previously mentioned, the existing building walls will be demolished at the existing two-classroom addition and the small storage areas adjacent to the existing gymnasium.

New partitions will be concrete block. Finishes include: vinyl tile flooring in corridors, wet areas, and utilitarian spaces with vinyl tile in teaching spaces and carpet in offices. Ceilings will be metal grid and acoustical panels. Hollow metal doorframes will be provided with solid core wood doors. New plastic laminate casework with plastic laminate countertops will be provided in all spaces.

The new HVAC and plumbing systems will be independent of the existing systems. New rooftop air handling units will be located at each addition and tied into the building energy management system. The existing plumbing systems and fire sprinkler system will be extended. Similar to the mechanical systems, all electrical systems will be extensions of the existing systems.

Project Facts

| | |
|--|--------------------|
| Existing Building Square Footage | 47,044 GSF |
| Demolition of Existing Building for Addition | - 2,247 GSF |
| <u>Area of New Additions</u> | <u>+16,382 GSF</u> |
| New Total Building Square Footage | 61,179 GSF |

Project Schedule

DESIGN PERIOD

| | |
|--|------------------|
| Planning Committee Meetings Completed | November 9, 2012 |
| Board of Education SD Presentation for review & approval | December 3, 2012 |
| Board of Education DD/CD Presentation for review & approval | March 12, 2013 |

BID PERIOD

| | |
|----------------------|----------------|
| Project out for Bids | April 25, 2013 |
| Bids Received | May 16, 2013 |

CONSTRUCTION PERIOD

| | |
|----------------------------------|-----------------|
| Construction start | August 9, 2013 |
| Construction completion (1 year) | August 15, 2014 |

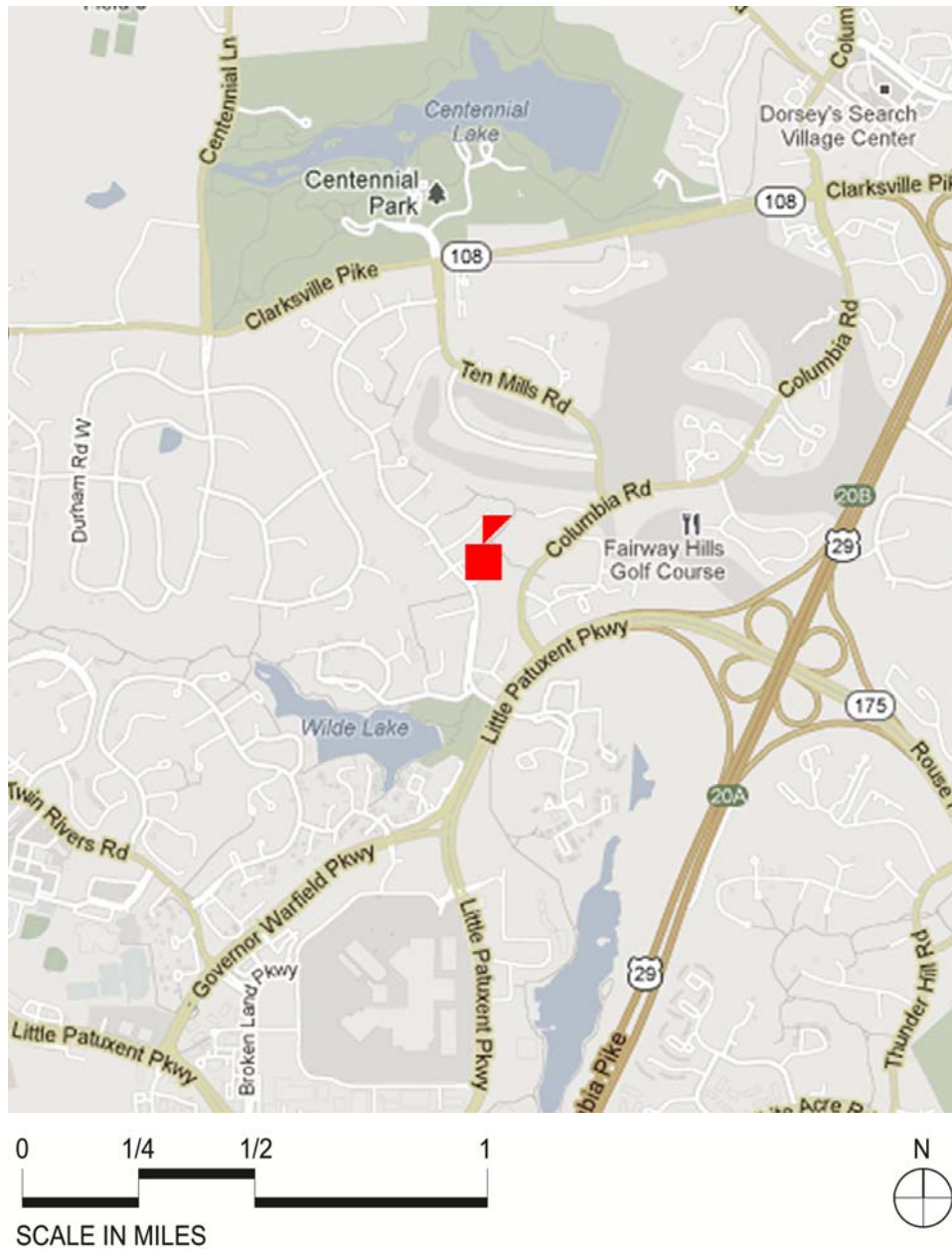
The Planning Process

The schematic design of the additions was developed through several walk-arounds with Scott Washington of the Howard County Public School System and Troy Todd, Principal of Running Brook ES as well as meetings with the planning committee on November 2 and 9. Committee members included representatives from the Maryland State Department of Education, The Howard County Public School System, Running Brook ES, Dustin Construction and SMG Architects. The meetings were well attended and the committee efficiently evaluated several options and arrived at consensus.

The following agenda items were discussed during these meetings:

- Project overview – An addition to add a minimum of 100 seats to keep pace with enrollment growth to be ready to occupy for the 2014/2015 school year.
- A 2006 systemic renovation at Running Brook ES upgraded existing school MEP infrastructure which continues to function as designed and will not be addressed by this project. New systems will be added for the addition.
- Summary of the decision process for determining the addition location in the southeast corner of the existing school as well the rationale for selecting a two-story format.
- Building code seismic requirements for additions which suggested that the most efficient addition configuration could be realized by demolishing two one story classrooms and the one story storage/office space contiguous to the existing gym.
- Key features of the addition to include classrooms, dedicated storage areas, group toilets, a staff toilet and custodial space on each floor. Circulation is accommodated by two stairs and an elevator.
- The value of ‘commons’ space was compared to larger classrooms. Classrooms were set at 800 sf and a modest common space was provided at the classroom entrance area on each floor.
- The need for an expanded cafeteria and associated storage space to accommodate increased capacity for both dining and assembly.
- Preliminary discussion of logistic planning requirements for the school during the construction phase such as playfield access, exiting, auxiliary classroom space, etc.
- Review of an alternative scheme which would relocate kindergarten and Pre-K to the addition. This scheme was not selected.
- Security and safety issues which must be addressed in the design of the addition.
- Design and construction schedule parameters were established along with an appreciation of the necessary aggressive nature of the schedule.

The design of the additions illustrated in this report reflects the input resolved from a thorough process of committee review, input, discussion and resolution. While the committee was responsive to the demands of schedule and budget, the safety, welfare and educational experience of the students remained the paramount influence. To assist in determining a well-planned approach to cost efficiency in this early planning stage, Dustin Construction was an enthusiastic participant.

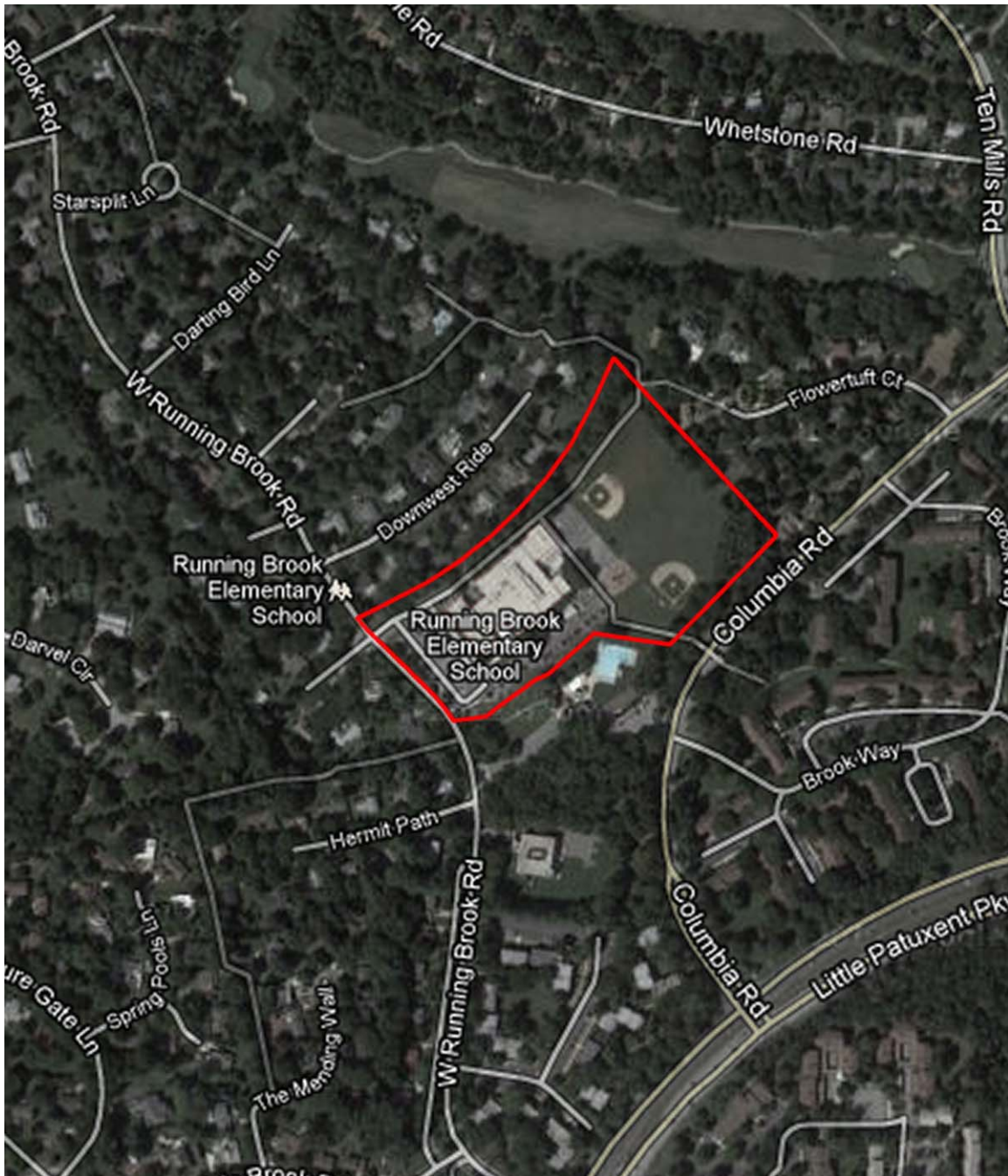


Vicinity Map

The existing Running Brook Elementary School is located on West Running Brook Road in Columbia, Maryland approximately one quarter mile north west of Little Patuxent Parkway.

The site was originally developed for the school in 1969 and is 9 acres.

Public water, sewer, and natural gas serve the site.



Aerial Site Photo

Proposed Site Plan

Key features of the proposed site changes are listed below and identified by circled numbers on the following page.

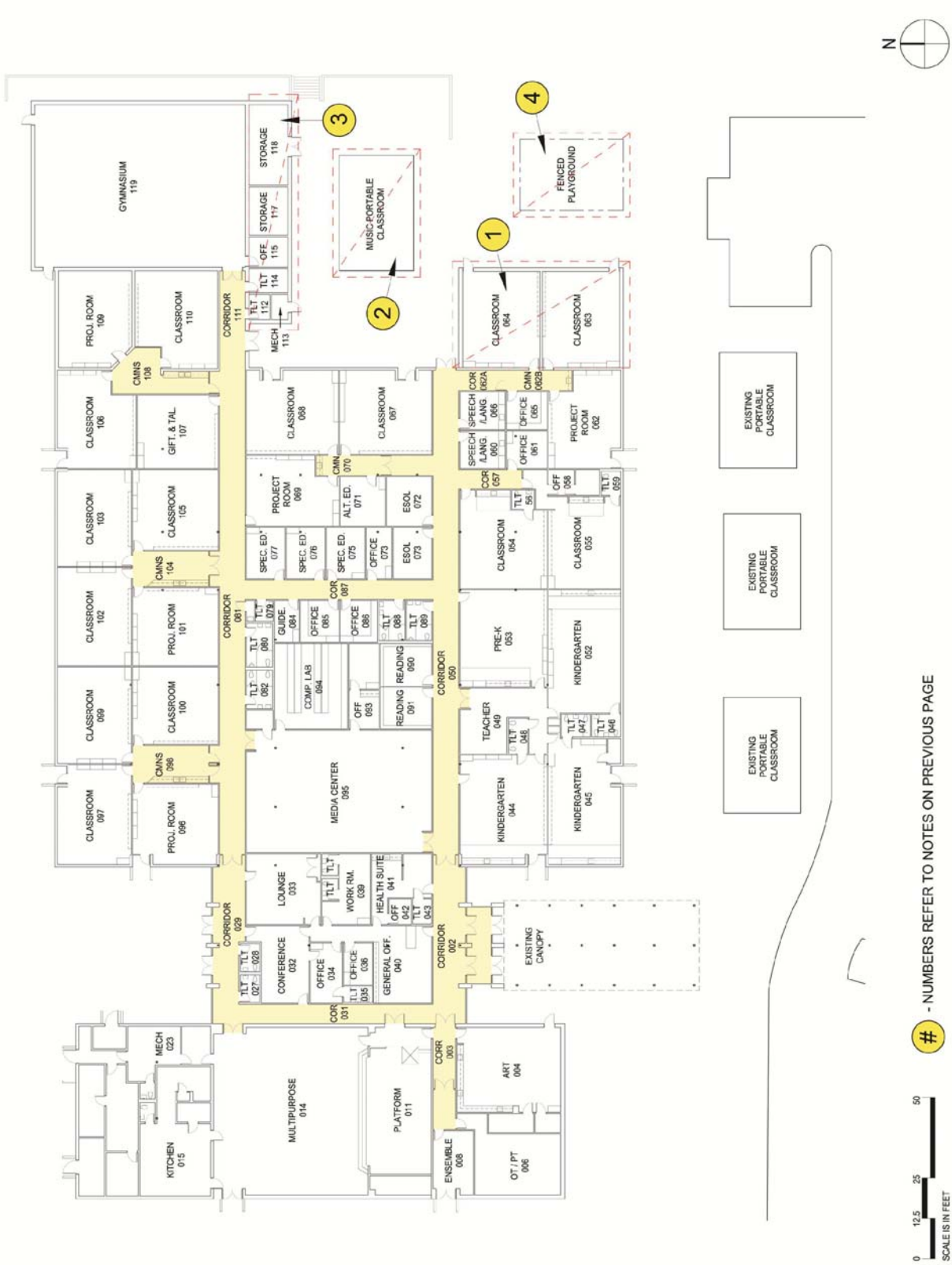
1. Expansion of the existing cafetorium and storage. This expansion has been carefully sized to accommodate the growth from the addition to the school, while minimizing site impact.
2. New two-story, nine classroom addition. The addition has been carefully sized and located to provide additional instructional space, provide additional storage space, and provide additional toilet facilities while minimizing site impact.
3. New fenced playground located adjacent to the existing mulch play area to replace the fenced play area removed by the classroom addition.
4. New concrete sidewalk to connect addition exit to existing macadam walk.
5. Expansion of macadam surface to reach addition exit.

Existing Floor Plan

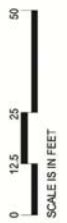
Key features of the existing floor plan changes are listed below and identified by circled numbers on the following page.

1. Demolition of two existing classrooms to make room for the classroom addition. The classrooms were later additions to the school, and can be demolished without disrupting the adjacent school spaces.
2. Existing portable music classroom will be relocated on the site.
3. Demolition of the one-story space adjacent to the gym to make room for the classroom addition.
4. Demolition of the fenced playground to make room for the classroom addition.

Existing Floor Plan



- NUMBERS REFER TO NOTES ON PREVIOUS PAGE



Proposed Floor Plan

Key features of the proposed floor plan are listed below and identified by circled numbers on the following page.

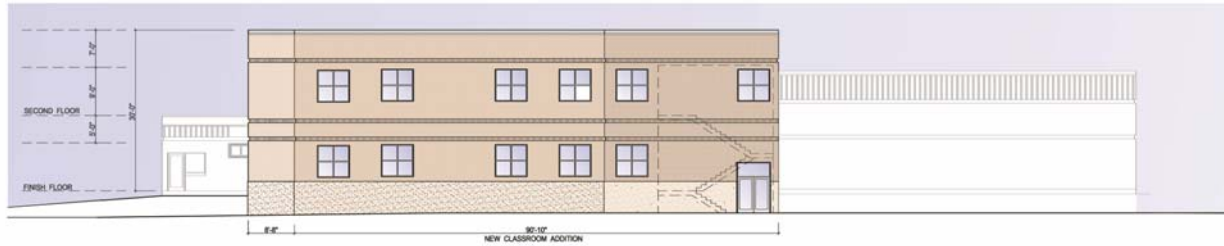
1. The first floor of the two-story classroom addition to the east end of the school will be tied into the existing school corridor circulation and complete an interior continuous circulation loop. This allows for reduced travel distances between all portions of the school and provides maximum flexibility in assigning specific classrooms to the appropriate grade level.
2. The cafetorium expansion will include new doors to the exterior as well as windows to the front of the school.
3. As part of the cafetorium expansion, 700 s.f. will be allocated to additional seating and 440 s.f. of area will be allocated for general storage.
4. New student restrooms on each floor will incorporate the most recent HCPSS Educational Specification Guideline and will be fully ADA accessible.
5. Staff restrooms are to be provided on each floor and will be fully ADA accessible.

Each classroom is approximately 800 s.f. (one classroom is 755 s.f.) and are provided with the following:

6. Wood and plastic laminate cabinetwork including six linear feet of wall base and sink cabinets, two tall cabinets including a lockable wardrobe cabinet for the teacher.
7. Standard cubbie units.
8. Storage areas of approximately 115 s.f. are provided for each classroom.
9. One interior window unit is included in each classroom between the room and the corridor at the entry door.
10. Each classroom with an exterior wall will have two windows.
11. An elevator is provided to each floor for ADA accessibility to each classroom as well as to the play fields to the rear of the school.
12. Required fire stairs are to be provided for egress and exiting requirements as well as convenience to each floor and the playfields.
13. Increased storage and office area is provided for the physical education and gymnasium component.

Proposed Elevations

The appearance of the additions will closely match the style of the existing school. The brick detailing found on the existing school will be continued in the additions. Windows will be located in each classroom to provide natural daylight. Windows will also be located in the cafeteria expansion to provide natural daylight to the cafeteria and provide a pleasing road-front image to the school.



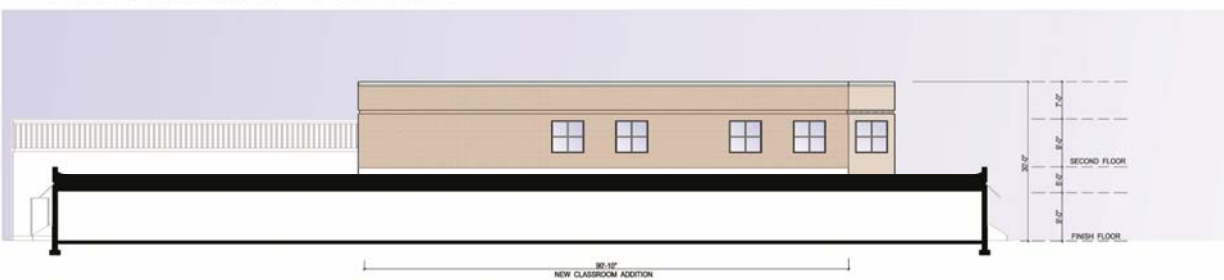
PROPOSED EAST ELEVATION



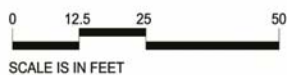
PROPOSED SOUTH ELEVATION



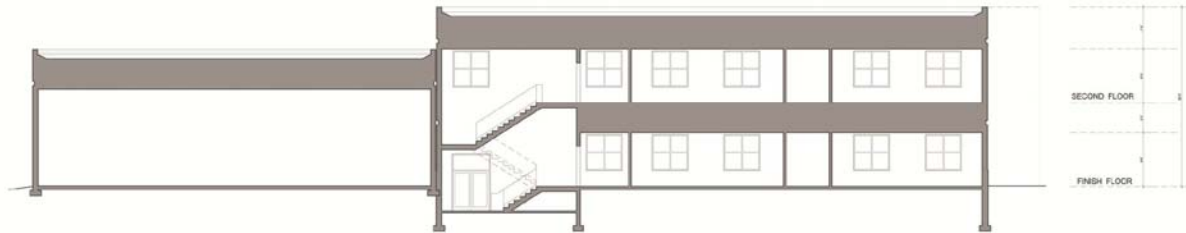
PROPOSED WEST ELEVATION



PROPOSED WEST SECTION / ELEVATION



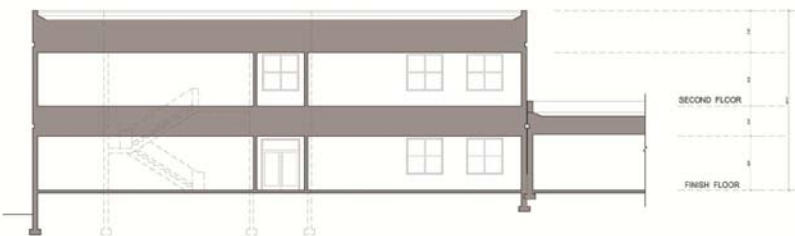
Proposed Sections



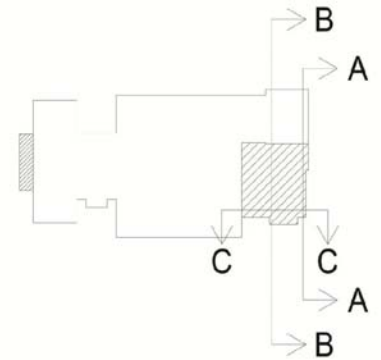
SECTION A-A



SECTION B-B



SECTION C-C



0 6.25 12.5 25
SCALE IS IN FEET

Construction Cost Estimate

Additions to Running Brook Elementary School

| | Schematic Phase |
|--------------------------|----------------------------|
| Site Work | \$465,000 |
| Building | \$4,214,000 |
| Total for Project | \$4,679,000 |

Notes

- The above total cost includes estimates for:
 1. Portable Classrooms: \$200,000
 2. Repair of existing exterior masonry walls: \$500,000
- Construction cost estimate was prepared by the construction manager, Dustin Construction, Inc., and assumes that bids will be received in May 2013.
- Estimate includes a schematic phase cost estimate contingency of +5%.
- Estimate assumes non-wage rate pricing (Add +8% for wage rate.)
- Estimate does not include a project contingency, A/E design fees, CM construction fees, and other related costs.