NORTHEAST AREA HIGH SCHOOL STUDY

PREPARED BY:

SAMAH ASSOCIATES
AND
MK CONSULTING ENGINEERS
EXECUTIVE SUMMARY

OVERVIEW
In 2020, Baltimore County Government and Baltimore County Public Schools (BCPS) commissioned a consultant to assess school facility needs and develop a long-range plan that addresses those needs and allocates resources equitably. The resulting Multi-Year Improvement Plan for All Schools (MYIPAS) includes prioritized recommendations for needed capital improvements to each elementary, middle and high school.

High School recommendations were presented to the Baltimore County Board of Education and Baltimore County Council in September of 2020. Based on these recommendations BCPS initiated a study to evaluate options for providing capacity relief to high schools in the northeast planning area. Schools studied included: Kenwood, Loch Raven, Overlea, Parkville, and Perry Hall high schools. Although Loch Raven High School is in the central planning area, it was included in this study as it is immediately adjacent to both Parkville and Perry Hall High Schools.

METHODOLOGY
To meet the goals of this study, Samaha Associates and MK Consulting evaluated five different options that are presented herein.

The team evaluated two new sites for possible construction of a new relief school, two options for providing additions to multiple existing high schools in the area, and one option for building a higher capacity replacement school at an existing high school site. Evaluation of all sites included analyzing site access, topography, soils, wetlands, streams, forests, utilities, easements, and permitting requirements. A test fit of each site was performed to demonstrate how a new high school and required site amenities such as fields, courts, parking, and bus parking could be accommodated on the new sites, and how additions and improved parking/site amenities could be incorporated on the existing sites.

The options were presented to the community for comment and feedback at two public meetings broadcast via BCPS TV studio on YouTube Live, on March 9th, 2022 and April 6th, 2022. The presentations from these two meetings are available for review on Baltimore County Public Schools website (www.BCPS.org).
EXECUTIVE SUMMARY CONTINUED

PROPOSED OPTIONS

Five options were evaluated in this study to alleviate capacity in the northeast planning area. Capacity studies indicate an additional 638 seats are needed in the northeast area for current and projected growth. All options studied are focused on increasing the State Rated Capacity (SRC) by 638 seats.

The five options studied provide:

**OPTION 1:** A new 1,000 SRC high school on a new site located to the west of interstate 695 and Route 1 interchange at Hiss Avenue.

**OPTION 2:** A new 1,000 SRC high school on the site of the existing Belmont Park.

**OPTION 3:** Increases of 638 SRC through classroom additions and core expansion at three high schools; Perry Hall, Overlea, and Kenwood.

**OPTION 4:** Increases of 638 SRC through classroom additions and core expansion two high schools; Loch Raven and Overlea.

**OPTION 5:** A new higher capacity replacement high school on the existing Loch Raven site.

COST

First costs for Options 1 & 2 are the least expensive but would incur the highest operational cost due to less efficient management of smaller capacity schools. Options 3 & 4 are the highest first costs due to expansion of core spaces required to accommodate the added capacity of the classroom additions. Operational cost changes would be negligible in Options 3&4 due to the minor change in individual school capacity. Option 5 falls in the middle range of first cost with operational costs lessened with the replacement of a larger capacity high school.

INFLUENCE FROM COMMUNITY PROCESS

We received several comments and questions from the community during and after the two community meetings held. There were concerns with the future development planned in the northeast area causing even more overcrowding in the future, and more additional capacity being needed for the schools in the near future. There was also a concern with adding additional capacity to Perry Hall as it is already a large school.

The community expressed an interest in a new school construction over additions. There was a comment that a new smaller capacity school could better serve the social, emotional, and mental needs of students. There were a couple comments in regards to looking at commercial buildings or vacant lots as a consideration for a new school, including looking at the land next to CVS on Honeygo. Those options were not explored in this study.
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

EXISTING SITE
- 53.69 ACRE SITE
- Mostly Undeveloped site
- Steep slopes
- Heavily wooded

PROPOSED SITE
- Bus Parking – 30
- Car Parking – 200
- Stadium
- Baseball Field
- Softball Field
- 360’x220’ Practice Field
- Tennis Courts
- Basketball Courts

PROPOSED BUILDING
- 178,000 SF
- Three Story School
- SRC – 1,000
- 178 SF/Student

ANTICIPATED SCHEDULE
- 36 Month Construction

PROS

SITE
- The site accommodates athletic facilities to include a stadium, (1) 90’ baseball field, (1) 60’ softball field, (4) tennis courts, (2) basketball courts, and a multipurpose field.
- Area surrounding site is fully developed so utilities should be available nearby
- Site will drain well to the east and south.

BUILDING
- Space on site for future expansion
- Compact footprint maximizes site
- 1,000 capacity school over current need of 638 allowing for growth
- A new school would fully meet the building program and have appropriately sized core spaces

BOUNDARY
- Centrally located site minimizes impact for boundary changes required to utilize capacity of the new school.

COSTS
- New construction allows for greatest efficiency of design and longevity of facilities for capital funds spent.

CONS

SITE
- Access from Hiss Ave is through an established neighborhood and small road network. Other access opportunities would need to be explored further.
- Significant amount of site contains steep slopes, making ADA accessibility a challenge on site. Areas will need to be terraced for grading and require multiple retaining walls.
- Significant amount of stream buffer area.
- Site is heavily wooded.
- Loss of current open space providing outdoor public recreation. Site conversion for school construction will require approval from several agencies.

COST
- A new 1,000 student capacity school will incur greater reoccurring operations cost per student compared to a higher capacity school.
- State funding may only be applicable to the current need for capacity increase and not the increased capacity proposed by the new school.
**EXECUTIVE SUMMARY CONTINUED**

**OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE**

<table>
<thead>
<tr>
<th>EXISTING SITE</th>
<th>PROPOSED BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 47.52 ACRE SITE</td>
<td>• 178,000 SF</td>
</tr>
<tr>
<td>• County Park</td>
<td>• Three Story School</td>
</tr>
<tr>
<td>• Steep slopes</td>
<td>• SRC – 1,000</td>
</tr>
<tr>
<td>• Heavily wooded</td>
<td>• 178 SF/Student</td>
</tr>
<tr>
<td>• Stream buffer divides site</td>
<td></td>
</tr>
<tr>
<td>• Existing power lines to East of site</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROPOSED SITE</th>
<th>ANTICIPATED SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bus Parking – 30</td>
<td>• 36 Month Construction</td>
</tr>
<tr>
<td>• Car Parking – 200</td>
<td></td>
</tr>
<tr>
<td>• Stadium</td>
<td></td>
</tr>
<tr>
<td>• Baseball Field</td>
<td></td>
</tr>
<tr>
<td>• Tennis Courts</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SITE</strong></td>
<td>• The site accommodates athletic facilities to include a stadium, (1) 90’ baseball field, and (4) tennis courts. Typically provided softball fields, basketball courts and multi-purpose fields would not be possible on this site.</td>
</tr>
<tr>
<td>• To access the stadium a bridge will be required</td>
<td></td>
</tr>
<tr>
<td>• Significant amount of site contains steep slopes, making ADA accessibility a challenge on site. Areas will need to be terraced for grading and require multiple retaining walls.</td>
<td></td>
</tr>
<tr>
<td>• Significant amount of stream buffer area which may require some facilities to be remote from the building.</td>
<td></td>
</tr>
<tr>
<td>• Site is heavily wooded</td>
<td></td>
</tr>
<tr>
<td>• Development of a new school would require eliminating an existing community park</td>
<td></td>
</tr>
<tr>
<td>• Landlocked on east side by power transmission right-of-way.</td>
<td></td>
</tr>
<tr>
<td><strong>BUILDING</strong></td>
<td>• No available site area for future expansion</td>
</tr>
<tr>
<td>• Compact footprint maximizes site</td>
<td></td>
</tr>
<tr>
<td>• 1,000 capacity school over current need of 638 allowing for growth</td>
<td></td>
</tr>
<tr>
<td>• A new school would fully meet the building program and have appropriately sized core spaces.</td>
<td></td>
</tr>
<tr>
<td><strong>BOUNDARY</strong></td>
<td>• New construction allows for greatest efficiency of design and longevity for capital funds spent.</td>
</tr>
<tr>
<td>• Minimum impact for boundary changes required to utilize capacity of the new school.</td>
<td></td>
</tr>
<tr>
<td><strong>COSTS</strong></td>
<td>• A new 1,000 student capacity school will incur greater reoccurring operations cost per student compared to a higher capacity school</td>
</tr>
<tr>
<td>• State funding may only be applicable to the current need for capacity increase and not the increased capacity proposed by the new school.</td>
<td></td>
</tr>
</tbody>
</table>

### Access driveway currently built from arterial county road, Walther Blvd.

### Existing fields and parking on site provide level areas for development

### Public utilities surround most of the site.

### Site will drain well to the east and south.

### Compact footprint maximizes site

### 1,000 capacity school over current need of 638 allowing for growth

### A new school would fully meet the building program and have appropriately sized core spaces.

### Minimum impact for boundary changes required to utilize capacity of the new school.

### New construction allows for greatest efficiency of design and longevity for capital funds spent.
EXECUTIVE SUMMARY CONTINUED

OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS

PERRY HALL HIGH SCHOOL

EXISTING SITE
- 46 ACRE SITE
- 272,234 SF
- SRC – 2,110

PROPOSED ADDITION
- 43,076 SF
- 242 Seats
- 10 Classrooms
- 120 Additional Parking Spaces
- Core Space Additions/Renovations: Learning Commons, Cafeteria, Gym

PROPOSED BUILDING
- 315,310 SF
- SRC - 2,352

ANTICIPATED SCHEDULE
- 36 Month Construction (for Perry Hall only, projects in option 3 may run sequentially or concurrently)
- Phased Occupied Construction

OVERLEA HIGH SCHOOL

EXISTING SITE
- 74 ACRE SITE
- 216,083 SF
- SRC – 1,230

PROPOSED ADDITION
- 57,138 SF
- 321 Seats
- 13 Classrooms
- 50 Additional Parking Spaces
- Core Space Additions/Renovations: Learning Commons, Cafeteria, Gym, Auditorium

PROPOSED BUILDING
- 273,221 SF
- SRC - 1,551

ANTICIPATED SCHEDULE
- 24 Month Construction (for Overlea only, projects in option 3 may run sequentially or concurrently)
- Phased Occupied Construction

KENWOOD HIGH SCHOOL

EXISTING SITE
- 53 ACRE SITE
- 292,029 SF
- SRC – 1,918

PROPOSED ADDITION
- 24,865 SF
- 75 Seats
- 3 Classrooms
- 80 Additional Parking Spaces
- Core Space Additions/Renovations: Learning Commons, Kitchen, Gym

PROPOSED BUILDING
- 316,894 SF
- SRC - 1,993

ANTICIPATED SCHEDULE
- 24 Month Construction (for Kenwood only, projects in option 3 may run sequentially or concurrently)
- Phased Occupied Construction
EXECUTIVE SUMMARY CONTINUED

OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE</td>
<td>SITE improvements such as additional parking will be needed to accommodate increased capacity</td>
</tr>
<tr>
<td>• Additional land not required for acquisition.</td>
<td></td>
</tr>
<tr>
<td>BUILDING</td>
<td>BUILDING</td>
</tr>
<tr>
<td>• The additions are spread among three schools improving the distribution of funding across the NE Planning Area.</td>
<td>• Core spaces in existing schools are undersized for new capacity and need to be expanded.</td>
</tr>
<tr>
<td>BOUNDARY</td>
<td>Perry Hall: Gymnasium, Cafeteria, and Learning Commons are undersized</td>
</tr>
<tr>
<td>• Provides relief to Perry Hall, Overlea, and Kenwood High Schools, limiting impact on relocation of students.</td>
<td>Overlea: Gymnasium and Learning Commons are undersized</td>
</tr>
<tr>
<td>COSTS</td>
<td>Kenwood: Gymnasium, Learning Commons and Kitchen are undersized</td>
</tr>
<tr>
<td>• All project costs may be eligible for state funding participation since the scope is limited to current capacity increase needs only.</td>
<td>• Other non-core spaces in the existing schools will require improvements to accommodate the increased capacity and 21st century needs.</td>
</tr>
<tr>
<td></td>
<td>• 638 additional seats meet projected capacity needs but does not allow for future growth</td>
</tr>
<tr>
<td></td>
<td>• Limited space for future expansion</td>
</tr>
<tr>
<td>COSTS</td>
<td>COSTS</td>
</tr>
<tr>
<td>• Construction required on multiple sites increases general conditions costs and reduces economy of scale</td>
<td></td>
</tr>
<tr>
<td>• Additions and Renovations will require occupied phased building construction resulting in increased construction duration and cost</td>
<td></td>
</tr>
<tr>
<td>• Greatest construction cost option since various core and non-core space renovations must be incorporated at the time of additions.</td>
<td></td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY CONTINUED

OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS

**LOCH RAVEN HIGH SCHOOL**

**EXISTING SITE**
- 47 ACRE SITE
- 190,600 SF
- SRC – 1,049

**PROPOSED ADDITION**
- 56,782 SF
- 319 Seats
- 13 Classrooms
- 40 Additional Parking Spaces
- Core Space Additions/ Renovations: Cafeteria, Kitchen, Gym

**PROPOSED BUILDING**
- 247,382 SF
- SRC - 1,368

**ANTICIPATED SCHEDULE**
- 36 Month Construction (for Loch Raven only, projects in option 4 may run sequentially or concurrently)
- Phased Occupied Construction

**OVERLEA HIGH SCHOOL**

**EXISTING SITE**
- 74 ACRE SITE
- 216,083 SF
- SRC – 1,230

**PROPOSED ADDITION**
- 56,782 SF
- 319 Seats
- 13 Classrooms
- 50 Additional Parking Spaces
- Core Space Additions/ Renovations: Learning Commons, Cafeteria, Gym, Auditorium

**PROPOSED BUILDING**
- 272,865 SF
- SRC - 1,549

**ANTICIPATED SCHEDULE**
- 24 Month Construction (for Overlea only, projects in option 4 may run sequentially or concurrently)
- Phased Occupied Construction
# EXECUTIVE SUMMARY CONTINUED

## OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SITE</strong></td>
<td>• Additional land not required for acquisition</td>
</tr>
<tr>
<td><strong>BUILDING</strong></td>
<td>• The additions are spread among two schools improving the distribution of funding across the NE Planning Area.</td>
</tr>
<tr>
<td><strong>BOUNDARY</strong></td>
<td>• Provides relief to Loch Raven and Overlea High Schools, limiting impact on relocation of students.</td>
</tr>
<tr>
<td><strong>COSTS</strong></td>
<td>• All project costs may be eligible for state funding participation since the scope is limited to current capacity increase needs only.</td>
</tr>
<tr>
<td><strong>SITE</strong></td>
<td>• Site improvements such as additional parking will be needed to accommodate increased capacity</td>
</tr>
</tbody>
</table>
| **BUILDING** | • Core spaces in existing schools are undersized for new capacity and need to be expanded.  
  Loch Raven: Gymnasium, Kitchen, and Cafeteria are undersized  
  Overlea: Gymnasium and Learning Commons are undersized  
  • Other non-core spaces in the existing schools will require improvements to accommodate the increased capacity and 21st century needs.  
  • 638 additional seats meet current and projected capacity needs but does not allow for future growth  
  • Limited space for future expansion |
| **COSTS** | • Construction required on multiple sites increases general conditions costs and reduces economy of scale.  
  • Additions and Renovations will require occupied phased building construction resulting in increased construction duration and cost.  
  • Unsuitable soils are present at the location of the proposed addition for Loch Raven which will result in greater costs for construction.  
  • Greatest construction cost option since various core and non-core space renovations must be incorporated at the time of additions. |
**EXECUTIVE SUMMARY CONTINUED**

**OPTION 5 - REPLACEMENT SCHOOL AT LOCH RAVEN SITE**

**EXISTING SITE**
- 47 ACRE SITE
- 190,600 SF
- SRC – 1,049

**PROPOSED SITE**
- Bus Parking – 30
- Car Parking – 330
- Stadium
- Baseball Field
- (2) Softball Fields
- 400’x250’ Practice Field
- Tennis Courts
- Basketball Courts

**PROPOSED BUILDING**
- 300,286 SF
- Four Story School
- SRC – 1,687
- 178 SF/Student
- Construct new school on site and then demolish the existing building

**ANTICIPATED SCHEDULE**
- 30 Month Construction

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SITE</strong></td>
<td>Some unsuitable soils have been identified on site but may be avoided by locating the new school accordingly.</td>
</tr>
<tr>
<td>Additional land not required for acquisition</td>
<td><strong>BUILDING</strong></td>
</tr>
<tr>
<td>Once complete, the site will be accessible from one arterial and one collector road for advantageous traffic patterns</td>
<td>This capital improvement is in the central planning area. Redistricting would need to occur beyond adjacent schools to maximize capacity relief to northeast high schools.</td>
</tr>
<tr>
<td>Some play fields and the stadium may remain existing</td>
<td><strong>COSTS</strong></td>
</tr>
<tr>
<td>Utilities may be extended from the those serving the existing school</td>
<td>State funding may only be applicable to the current need for capacity increase and not the increased capacity proposed by the new school.</td>
</tr>
<tr>
<td>Existing separate access from Cromwell Bridge Road will ease occupied site construction.</td>
<td><strong>BOUNDARY</strong></td>
</tr>
<tr>
<td><strong>BUILDING</strong></td>
<td></td>
</tr>
<tr>
<td>A replacement Loch Raven High School would fully meet the current program and have appropriately sized core spaces</td>
<td>Loch Raven is immediately adjacent to both Parkville and Perry Hall High Schools providing an opportunity for capacity relief to both schools.</td>
</tr>
<tr>
<td>Existing Loch Raven High School can operate during construction without occupied phased building construction</td>
<td>New school could provide capacity relief for the Central Region of the county in the future</td>
</tr>
<tr>
<td>A four-Story replacement high school would fit the Loch Raven site and limit the developmental footprint.</td>
<td><strong>COSTS</strong></td>
</tr>
<tr>
<td>Site area exists for future expansion beyond 638 seats.</td>
<td>Greatest economy of scale option for construction</td>
</tr>
<tr>
<td><strong>COSTS</strong></td>
<td>A replacement Loch Raven School would eliminate the future need and capital expense of modernizing the existing unrenovated school</td>
</tr>
<tr>
<td>State funding may only be applicable to the current need for capacity increase and not the increased capacity proposed by the new school.</td>
<td></td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY CONTINUED

CONCLUSION AND RECOMMENDATION
Baltimore County Public Schools retained the Samaha Associates team to evaluate options and make an independent recommendation based on research, a test fit of each option, detailed analysis, community input and feasibility.

It is our recommendation to proceed with **Option 5**, the replacement of the existing Loch Raven High School, with a new larger capacity replacement high school. The replacement school option provides several key advantages when compared to the other new school and addition options.

SITE
Since the site already accommodates an existing high school, there will be no land acquisition costs and no other existing community amenities or green space will be lost in the development of the replacement school as would be the case at the Hiss Ave and Belmont Park sites. The existing network of roadways serving the site at Loch Raven High School allows a replacement school construction while the existing school remains fully operational. Not only does the adjacency benefit the replacement concept from cost savings through extension of existing utilities in lieu of new services, but some site amenities including play fields and the stadium may remain as existing facilities in lieu of incurring the costs of constructing new features. Unlike the new school sites, the replacement school option accommodates the full athletic field program and avoids the costly development of steep slopes, wooded sites, and working around existing stream buffers. Beyond fully meeting the current site requirements, the Loch Raven site would also accommodate future expansion if another capacity increase in the future is necessary.

BUILDING
The replacement Loch Raven High School can fully meet the building program requirements with appropriately sized core spaces. Given the replacement school will be all new construction, all supporting spaces will be fully compliant with the latest educational specification requirements without compromise or bearing the cost of renovation. A new four-story high school will replace the four-story high school while limiting the developmental footprint.

COMMUNITY
The community voiced comments both that they preferred allocating funding to new construction over capacity increases through additions and they did not want to increase the capacity further at already large high schools such as Perry Hall or Kenwood high schools. The recommended Option 5 replaces a small (1,049 SRC) school with a medium sized (1,687 SRC) school. The community is already accustomed to a high school located on site and the advantageous traffic patterns serving the existing school site should accommodate the increase in capacity. At the other new school sites, smaller residential road networks may become overloaded and increasing capacity at already large high schools may further burden existing neighborhoods. The new school could also provide capacity relief for the central planning area in the future.
EXECUTIVE SUMMARY CONTINUED

COST
New construction will provide the greatest longevity to capital construction dollars spent and will not be subjected to expenses related to renovating less ideal existing conditions. The proposed medium-sized replacement school provides the greatest economy of scale compared to constructing small high schools on undeveloped sites or additions requiring significant core expansions and renovations at multiple high school sites. Perhaps the largest cost savings within Option 5 is that the larger replacement school eliminates the future need and capital expense of modernizing the existing unrenovated Loch Raven High School. Ultimately, the replacement school option also provides the lowest cost per student capacity added of the options studied.

SUMMARY
The unique confluence of conditions across all five options have led our team to clearly recommend Option 5 for the replacement of Loch Raven High School. The replacement facility option meets all educational requirements for the high school program building and site, provides new construction to a vocal community who prefers this approach, does not increase already large capacity high schools, is readily constructible, and provides the greatest economy for the dedicated capital funds. It is for these reasons we believe Option 5 provides the clearly optimal solution when all options are considered.
Below is a map of the Northeast planning area of Baltimore County Public Schools highlighted in orange. This map shows the location of the new proposed sites and existing high school sites in the area. The Red markers indicate the location of the two proposed new high school sites. The Blue markers indicate the location of the existing high schools in the planning area.
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

EXISTING SITE CONDITIONS

SITE OVERVIEW
A mostly undeveloped site, this property borders the existing Double Rock Park to the southwest, and has one County road access on the north off of the end of Hiss Avenue. On the east end of the property that drops in elevation for the north and west end, lies an existing County park maintenance yard with a parking area, equipment compound and building. There is access to this maintenance yard through a small lane directly from Rt 1. There is also a substantial size branch of the Stemmers Run. A shopping center lies just south of this property, on the opposite side of Stemmers Run. The site is comprised of 3 parcels totaling 53.69 acres.

SOILS
The soil at the Hiss site is mainly composed of silt loam. Roughly 35% of the soil is acceptable for development, the remaining 65% is not suitable due to stream buffer areas and steep slopes, with roughly 20 to 25% of the area containing slopes greater than 15%.

TOPOGRAPHY
Topography of this site is over 50% wooded, containing some relatively flat area that contains community gardens on the north end, and a small park maintenance yard with an access drive to Rt 1 on the east end. This north end with open fields is the highest elevation of the site, the site mainly drains south and east toward Rt 1. Steep slopes are encountered on the southern and eastern end of the site, as the terrain drops toward the stream.

WETLANDS, STREAMS, AND WATER BOUNDARIES
As the site drains to the south and east, A significant branch of the Stemmers Run is encountered along the southern and eastern boundaries. Mapping indicates a potential for riverine wetlands in these stream areas. Stream buffer areas consume a significant portion of the southern The access road from Rt 1 to the maintenance yard on the east end crosses this stream. The current bridge at the crossing appears to be within the 100 yr floodplain and likely has an insufficient hydraulic opening.

FOREST
This site is greater than 50% forested.

UTILITIES
With an intensely developed area along Rt 1 to the east, and the community of Parkville to the west, public utilities should not be a concern at this site.

ACCESS, CIRCULATION, AND PARKING
The site has one access to a county road on the north, and one access to the State Rt 1 to the south. The County road serves a fully developed neighborhood, and high school traffic would certainly be felt in the community during the morning and evening school hours. The state road access on the south off of Rt 1 currently serving the park maintenance yard intersects Rt 1 in an area that is a divided highway. This is necessary due to the proximity to the 695 access ramps to and from Rt 1. It is unlikely the SHA would allow a traffic signal at this intersection, as there is currently a signal just 150 ft south of the park access road that serves a shopping center. Within the current road system, and without utilizing signal controlled access to the shopping center, traffic would only be allowed in from southbound Rt1. Exiting traffic would only be allowed to turn south (right) onto southbound Rt 1.
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

EXISTING SITE CONDITIONS CONTINUED

EASEMENTS AND PERMITTING
Permitting concerns include the substantial amount of stream buffer along the southern portion of the property, approximately 25% of the entire site, and the access road improvements crossing this area that will be necessary for any access to Rt 1. Local open space land is still to be confirmed.

ADDITIONAL SITE ELEMENTS
After eliminating the environmentally sensitive stream buffer areas along with the steep slope regions, it will net roughly 32 acres of this site as developable.

PROPOSED BUILDING
The proposed high school for the Hiss Avenue site would be a 178,000 SF building, with a state rated capacity of 1,000 students. The size of the school is proposed to provide 178 SF per student. The proposed school would have a compact footprint and be a three story building to maximize site area available for fields and parking.

PROPOSED SITE
The proposed access to the new school would be at the North end of the site off of Hiss Avenue. Parking would be provided for 200 cars for staff and students and 30 buses. A separate drop off would be provided for cars and buses. Site amenities would include a stadium, baseball field, softball field, multipurpose field, four tennis courts, and two basketball courts. In addition to the site amenities we would also need to provide areas for storm water management. The natural slope of the site will drain to the east and south. Since the surrounding area is fully developed utilities are available nearby. There is space on-site for future expansion.
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

The Hiss Avenue site is located to the West of the Interstate 695 and Route 1 interchange. The proposed site is centrally located between the existing Parkville High School and Overlea High School sites.

VICINITY MAP
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

EXISTING SITE
• 53.69 ACRE SITE (32 Acres developable)
• Mostly Undeveloped site
• Steep slopes
• Heavily wooded

EXISTING SITE PLAN
OPTION 1 - NEW SCHOOL AT HISS AVENUE SITE

PROPOSED BUILDING
• 178,000 SF
• Three Story School
• SRC – 1,000
• 178 SF/Student

PROPOSED SITE
• Bus Parking – 30
• Car Parking – 200
• Stadium
• Baseball Field
• Softball Field
• 360’x220’ Practice Field
• Tennis Courts
• Basketball Courts

PROPOSED SITE PLAN
OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE

EXISTING SITE CONDITIONS

SITE OVERVIEW
This site has been developed into a County park containing several ball fields, pavilions, playground, and parking area. The north and south end are bordered by developed housing communities. The west side is bordered by a County road with a retirement community west of that road, while the east side is bordered by an overhead power transmission line and right-of-way. The site is comprised of four parcels totaling 47.52 acres.

SOILS
The soil at the Belmont Park site is mainly composed of sandy loam and gravelly sandy loam. Roughly 70% of the soil is acceptable for development, the remaining 30% is not suitable due to stream buffer areas and steep slopes, with roughly 20 to 25% of the area containing slopes greater than 15%.

TOPOGRAPHY
Topography of this site is over 50% wooded, containing some relatively flat area that contain the ball fields on the north end, with a drive road and parking through the center of the property. The north end with the ball fields is the highest elevation of the site, and the site mainly drains south. Steep slopes are encountered on the southern, western and eastern end of the site along the stream areas, as the terrain drops toward the stream, and encircle more than half of the site in a near “horseshoe” shape.

WETLANDS, STREAMS, AND WATER BOUNDARIES
As the site drains to the south, drainage is carried by a stream on the west side and east side of this site, combining to outfall on the south end and creating the horseshoe stream perimeter. Mapping indicates a potential for riverine wetlands in these stream areas. Stream buffer areas consume a significant portion of the west, south, and east portions of this site.

FOREST
This site is greater than 50% forested.

UTILITIES
The site is surrounded on 3 sides by well developed areas, public utilities should not be a concern at this site. However, the power transmission right-of-way on the east side would likely cause a conflict with any utilities or potential utility easements.

ACCESS, CIRCULATION, AND PARKING
The current access road to the park is on the west end of the site, and comes off of a county road – Walther Blvd. This road appears to have adequate size and capacity to support the function of a public high school. This access to the park is disjointed with the main access to the Oakcrest retirement village. There does not appear to be any other opportunity for road access to this site. A school would have to function with one main driveway to Walther Blvd, in and out of the site.
OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE

EXISTING SITE CONDITIONS CONTINUED

EASEMENTS AND PERMITTING
Permitting concerns include the substantial amount of stream buffer along three sides of the property, approximately 25% of the entire site. Local open space land is still to be confirmed.

ADDITIONAL SITE ELEMENTS
After eliminating the environmentally sensitive stream buffer areas along with the steep slope regions, it will net roughly 26.5 acres of this site as developable.

PROPOSED BUILDING
The proposed high school for the Belmont Park site would be a 178,000 SF building, with a state rated capacity of 1,000 students. The size of the school is proposed to provide 178 SF per student. The proposed school would have a compact footprint and be a three story building to maximize site area available for fields and parking.

PROPOSED SITE
The proposed access to the new school would be at the Northwest side of the site off of Walther Boulevard. Parking would be provided for 200 cars for staff and students and 30 buses. A separate drop off would be provided for cars and buses. Site amenities would include a stadium, baseball field, and four tennis courts. A bridge would need to be provided across the stream buffer to access the stadium. Due to the smaller size of the site than Option 1 a softball field and multipurpose field would not be provided on this site. In addition to the site amenities we would also need to provide areas for storm water management. The natural slope of the site will drain to the east and south. Since the surrounding area is fully developed utilities are available nearby. There is no space on-site for future expansion.
OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE

The Belmont Park site is located to the South of East Joppa Road and West of Route 1. The proposed site is located to the East of the existing Parkville High School.

VICINITY MAP
OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE

EXISTING SITE
- 47.52 ACRE SITE (26.5 Acres developable)
- County Park containing ballfields, pavilions, playground, and parking
- Steep slopes
- Heavily wooded
- Stream buffer divides site
- Existing power lines to East of site

EXISTING SITE PLAN
OPTION 2 - NEW SCHOOL AT BELMONT PARK SITE

PROPOSED BUILDING
• 178,000 SF
• Three Story School
• SRC – 1,000
• 178 SF/Student

PROPOSED SITE
• Bus Parking – 30
• Car Parking – 200
• Stadium
• Baseball Field
• Tennis Courts

PROPOSED SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS

Option 3 proposes additions be built at three existing high schools, to spread the added capacity over a larger area in the region. Additions to include 242 seats at Perry Hall High School, 321 seats at Overlea High School, and 75 seats at Kenwood High School. The map below shows the proximity of these three schools to one another.

VICINITY MAP
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
PERRY HALL HIGH SCHOOL

EXISTING CONDITIONS
The existing Perry Hall High School is one of the larger schools in the northeast planning region. The existing school is 272, 234 SF and has a state rated capacity of 2,100 students.

PROPOSED ADDITION
The proposed total additions for Perry Hall would be 43,076 SF with an addition of 242 students. The addition size is based on 178 SF per student added. The increased capacity of the school would need an additional 10 classrooms. In addition to the 10 classrooms some of the existing core spaces in the school would need to be increased to address the increased overall capacity of the school.

A one story 5,684 SF addition to the South of the existing gymnasium would allow for expansion of the gymnasium and bleachers. A one story 18,146 SF addition at the Northeast side of the building would allow for expansion of the learning commons, cafeteria, and offices. Three classrooms adjacent to the learning commons would be eliminated to expand the learning commons. These three classrooms would be added to the ten new classrooms in a three story 19,246 SF addition on the Southwest side of the building. The playground in the location of the new classroom addition would need to be relocated.

With the increased student capacity of the school we would also look at expanding the existing parking lot by 120 spaces and providing additional storm water management on site.

PROPOSED BUILDING
The proposed new Perry Hall High school with the proposed additions would be 315,310 SF with a new state rated capacity of 2,352 students.
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
PERRY HALL HIGH SCHOOL

The existing Perry Hall High School is located to the Southeast of Route 1, Northwest of Interstate 95, and North of White Marsh Boulevard. The school is accessed off of Ebenezer Road just north of the school.

VICINITY MAP
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
PERRY HALL HIGH SCHOOL

EXISTING SITE
• 46 ACRE SITE
• 272,234 SF
• SRC – 2,110

EXISTING SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
PERRY HALL HIGH SCHOOL

PROPOSED ADDITION
• 43,076 SF
• 242 Seats
• 10 Classrooms
• 120 Additional Parking Spaces
• Core Space Additions/Renovations:
  Learning Commons, Cafeteria, Gym

PROPOSED BUILDING
• 315,310 SF
• SRC - 2,352

PROPOSED SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

EXISTING CONDITIONS
The existing Overlea High School is mid size school in the northeast planning region with a terraced design. The existing school is 216,083 SF and has a state rated capacity of 1,230 students.

PROPOSED ADDITION
The proposed total additions for Overlea would be 57,138 SF with an addition of 321 students. The addition size is based on 178 SF per student added. The increased capacity of the school would need an additional 13 classrooms. In addition to the 13 classrooms some of the existing core spaces in the school would need to be increased to address the increased overall capacity of the school.

A one story 2,400 SF addition to the East of the existing auditorium would allow for expansion of the auditorium seating. A one story 2,493 SF addition to the South of the existing learning commons space would allow for expansion of the learning commons. The existing gymnasium would need to expand into the adjacent corridor and storage rooms to provide additional bleacher space for the added capacity. A one story 9,282 SF addition to the South of the gym and cafeteria would need to be added to replace the existing spaces lost in the gym expansion and to provide additional space to the cafeteria. Four of the new classrooms can be added in a two story 4,084 SF addition at the intersection of the main classroom block and the auditorium. The remaining nine classrooms would be added on in a three story 38,879 SF addition at the East end of the existing classroom block.

With the increased student capacity of the school we would also look at expanding the existing parking lot by 50 spaces and providing additional storm water management on site.

PROPOSED BUILDING
The proposed new Overlea High school with the proposed additions would be 273,221 SF with a new state rated capacity of 1,551 students.
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

The existing Overlea High School is located just north of interstate 95 and West of the interstate 695 and interstate 95 interchange. The school is accessed off of Kenwood Avenue to the Northeast of the school.

VICINITY MAP
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

EXISTING SITE
• 74 ACRE SITE
• 216,083 SF
• SRC – 1,230

EXISTING SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

PROPOSED ADDITION
- 57,138 SF
- 321 Seats
- 13 Classrooms
- 50 Additional Parking Spaces
- Core Space Additions/Renovations: Learning Commons, Cafeteria, Gym, Auditorium

PROPOSED BUILDING
- 273,221 SF
- SRC - 1,551

PROPOSED SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
KENWOOD HIGH SCHOOL

EXISTING CONDITIONS
The existing Kenwood High School is one of the larger schools in the northeast planning region. The existing school is 292,029 SF and has a state rated capacity of 1,918 students.

PROPOSED ADDITION
The proposed total additions for Kenwood would be 24,865 SF with an addition of 75 students. The addition size is based on 178 SF per student added plus additional square footage to right size the core space in the school for the added capacity. The increased capacity of the school would need an additional three classrooms.

The location of the existing learning commons in the school is not ideal to expand the space. Therefore we are proposing converting the existing learning commons into three classrooms to accommodate the increased capacity, and building a one story 11,400 SF addition to house a new learning commons. A small 960 SF addition would be added to the north side of the existing kitchen to expand the kitchen. A one story 5,665 SF addition to the Southwest of the existing gym would be added to expand the gymnasium and bleachers space. A three story 6,840 SF addition would be added to the Southeast of the existing athletics wing to increase the size of the auxiliary gyms.

With the increased student capacity of the school we would also look at expanding the existing parking lot by 80 spaces and providing additional storm water management on site.

PROPOSED BUILDING
The proposed new Kenwood High school with the proposed additions would be 316,894 SF with a new state rated capacity of 1,993 students.
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
KENWOOD HIGH SCHOOL

The existing Kenwood High School is located just north of the Southeast Freeway. The school is accessed off of Stemmers Run Road.
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
KENWOOD HIGH SCHOOL

EXISTING SITE
• 53 ACRE SITE
• 292,029 SF
• SRC – 1,918

EXISTING SITE PLAN
OPTION 3 - ADDITIONS AT THREE EXISTING HIGH SCHOOLS
KENWOOD HIGH SCHOOL

PROPOSED ADDITION
• 24,865 SF
• 75 Seats
• 3 Classrooms
• 80 Additional Parking Spaces
• Core Space Additions/Renovations:
  Learning Commons, Kitchen, Gym

PROPOSED BUILDING
• 316,894 SF
• SRC - 1,993

PROPOSED SITE PLAN
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS

Option 4 proposes additions be built at two existing high schools, to spread the added capacity over a larger area in the region. Additions to include 319 seats at Loch Raven High School and 319 seats at Overlea High School. The map below shows the proximity of these two schools to one another.

VICINITY MAP
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
LOCH RAVEN HIGH SCHOOL

EXISTING CONDITIONS
The existing Loch Raven High School is mid size school in the northeast planning region. The existing school is 190,600 SF and has a state rated capacity of 1,049 students.

PROPOSED ADDITION
The proposed total additions for Loch Raven would be 56,782 SF with an addition of 319 students. The addition size is based on 178 SF per student added. The increased capacity of the school would need an additional 13 classrooms. In addition to the 13 classrooms some of the existing core spaces in the school would need to be increased to address the increased overall capacity of the school.

The existing kitchen and cafeteria need to be expanded due to the increased capacity. The design looks at expanding the kitchen into the adjacent staff dining area and expanding the cafeteria and relocating the staff dining into the four classrooms adjacent to the cafeteria. These four classrooms would be added to the additional 13 classrooms provided in the addition. A four story 49,082 SF addition to house 17 classrooms will be added to the South of the existing gymnasium. A one story 7,700 SF addition will be added to the gymnasium to increase the bleachers in the gymnasium as well as provide additional auxiliary gym space.

With the increased student capacity of the school we would also look at expanding the existing parking lot by 40 spaces and providing additional storm water management on site.

PROPOSED BUILDING
The proposed new Loch Raven High school with the proposed additions would be 247,382 SF with a new state rated capacity of 1,368 students.
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
LOCH RAVEN HIGH SCHOOL

The existing Loch Raven High School is located just north of interstate 695 at the corner of Cromwell Bridge Road and Cowpens Avenue. The school is accessed off of Cowpens Avenue, with a parking lot accessed off of Cromwell Bridge Road.

VICINITY MAP
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
LOCH RAVEN HIGH SCHOOL

EXISTING SITE
• 47 ACRE SITE
• 190,600 SF
• SRC – 1,049

EXISTING SITE PLAN
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
LOCH RAVEN HIGH SCHOOL

PROPOSED ADDITION
• 56,782 SF
• 319 Seats
• 13 Classrooms
• 40 Additional Parking Spaces
• Core Space Additions/Renovations:
  Cafeteria, Kitchen, Gym

PROPOSED BUILDING
• 247,382 SF
• SRC - 1,368

PROPOSED SITE PLAN
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

EXISTING CONDITIONS
The existing Overlea High School is mid size school in the northeast planning region with a terraced design. The existing school is 216,083 SF and has a state rated capacity of 1,230 students.

PROPOSED ADDITION
The proposed total additions for Overlea would be 56,782 SF with an addition of 319 students. The addition size is based on 178 SF per student added. The increased capacity of the school would need an additional 13 classrooms. In addition to the 13 classrooms some of the existing core spaces in the school would need to be increased to address the increased overall capacity of the school.

A one story 2,400 SF addition to the East of the existing auditorium would allow for expansion of the auditorium seating. A one story 2,493 SF addition to the South of the existing learning commons space would allow for expansion of the learning commons. The existing gymnasium would need to expand into the adjacent corridor and storage rooms to provide additional bleacher space for the added capacity. A one story 9,282 SF addition to the South of the gym and cafeteria would need to be added to replace the existing spaces lost in the gym expansion and to provide additional space to the cafeteria. Four of the new classrooms can be added in a two story 4,084 SF addition at the intersection of the main classroom block and the auditorium. The remaining nine classrooms would be added on in a three story 38,523 SF addition at the East end of the existing classroom block.

With the increased student capacity of the school we would also look at expanding the existing parking lot by 50 spaces and providing additional storm water management on site.

PROPOSED BUILDING
The proposed new Overlea High school with the proposed additions would be 272,865 SF with a new state rated capacity of 1,549 students.
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

The existing Overlea High School is located just north of interstate 95 and West of the interstate 695 and interstate 95 interchange. The school is accessed off of Kenwood Avenue to the Northeast of the school.

VICINITY MAP
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

EXISTING SITE
• 74 ACRE SITE
• 216,083 SF
• SRC – 1,230

EXISTING SITE PLAN
OPTION 4 - ADDITIONS AT TWO EXISTING HIGH SCHOOLS
OVERLEA HIGH SCHOOL

PROPOSED ADDITION
• 56,782 SF
• 319 Seats
• 13 Classrooms
• 50 Additional Parking Spaces
• Core Space Additions/Renovations: Learning Commons, Cafeteria, Gym, Auditorium

PROPOSED BUILDING
• 272,865 SF
• SRC - 1,549

PROPOSED SITE PLAN
OPTION 5 - REPLACEMENT SCHOOL AT LOCH RAVEN SITE

EXISTING CONDITIONS
The existing Loch Raven High School is mid size school in the northeast planning region. The existing school is 190,600 SF and has a state rated capacity of 1,049 students.

PROPOSED BUILDING
This option looks to build a new larger capacity school on the Loch Raven site while the existing school is operational and then move the students into the new school and tear down the existing school. The new proposed school would be a four story 300,286 SF school with a state rated capacity of 1,687 students (638 plus 1,049 current Loch Raven capacity). The new school size is based on 178 SF per student added.

During construction of the new school, the contractor would access the site from Cromwell Bridge Road and the school staff and students would enter the site from Cowpens Avenue, entirely separating school and construction traffic. The parking lot off of Cromwell Bridge Road and two softball fields would not be accessible to the school during construction. After construction of the new school is complete students would move into the new school, and the existing Loch Raven school would be torn down and that part of the site would be turned into parking for cars and buses and a practice field space for the new school.

PROPOSED SITE
The proposed site for the completed school would include Bus drop off, parking for 30 buses, and car parking for 280 cars accessed off of Cowpens Avenue. Student drop off area and parking for 50 cars off of Cromwell Bridge Road would be provided. The existing stadium, Baseball field, and courts would remain in their existing locations. A practice field would be added near Cowpens Avenue to replace the field lost in the construction of the new building. There are some existing bad soils on the site in the area of the proposed bus parking area that would need to be remediated.
OPTION 5 - REPLACEMENT SCHOOL AT LOCH RAVEN SITE

The existing Loch Raven High School is located just north of interstate 695 at the corner of Cromwell Bridge Road and Cowpens Avenue. The school is accessed off of Cowpens Avenue, with a parking lot accessed off of Cromwell Bridge Road.

VICINITY MAP
OPTION 5 - REPLACEMENT SCHOOL AT LOCH RAVEN SITE

EXISTING SITE
• 47 ACRE SITE
• 190,600 SF
• SRC – 1,049

EXISTING SITE PLAN
OPTION 5 - REPLACEMENT SCHOOL AT LOCH RAVEN SITE

PROPOSED BUILDING
• 300,286 SF
• Four Story School
• SRC – 1,687
• 178 SF/Student
• Construct new school on site and then demolish the existing building.

PROPOSED SITE
• Bus Parking – 30
• Car Parking – 330
• Stadium
• Baseball Field
• (2) Softball Fields
• 400’x250’ Practice Field
• Tennis Courts
• Basketball Courts

PROPOSED SITE PLAN