

CHAPTER 4

MINI MASTER PLANS

EDUCATIONAL ADEQUACY ASSESSMENT

The mini master plans were developed based on an educational adequacy assessment that measured existing ACPS facilities against the educational specifications adopted by the School Board in January 2015 and outlined in Chapter 4.

The initial step in the evaluation process was to document existing conditions of building interiors. This assessment, conducted September 2013 — March 2014 by Hughes Group Architects (HGA), electronically gathered data on each school including square footages, light and acoustic levels and presence of technology. In fall 2014, the exterior school sites were assessed and documented including natural resources, parking, circulation, recreation features and utilities. This existing conditions information served as the baseline for the educational adequacy assessments supported by the project team of Studio27 and Brailsford and Dunlavey.

The educational adequacy assessment evaluated specific components of the school campus including individual instructional and support spaces, and provided an evaluation of projected school capacity and utilization. The areas of evaluation as well as the scoring methodology were based on an approach previously developed by the Council for Educational Facility Planners International (CEFPI).

Facility condition assessments evaluate the condition of building systems such as mechanical, electrical, plumbing and structural, through a on-site inspection by technical experts. This is recommended for all the facilities. ACPS is currently in the process of evaluating all the building conditions and the results from that effort should be combined with the recommendations of this report.

SCORING

Scoring for the site, building assessment, and individual spaces was conducted based on the percentage criteria met for each factor evaluated. The **rating categories** assigned

to these scores were based on the ranges of scores shown in *Table 4.1*.

Rating	Range	
Excellent	89.5	100
Satisfactory	69.5	89.4
Borderline	49.5	69.4
Inadequate	29.5	49.4
Very Inadequate	0	29.4

Table 4.1

Scoring for building utilization was conducted based on projected enrollment through school year 2020 divided by the capacity. Capacity figures were established based on the quantity and size of teaching spaces established in the educational specifications.

Rating of building utilization included an upper and lower range, because both underutilization and overutilization of facilities is problematic. *Table 4.2* indicates the rating categories established for **building utilization**:

Rating	Range			
Excellent	100			
Satisfactory	90	99.9	100.001	110.0
Borderline	80	89.9	110.001	115.0
Inadequate	70	79.9	115.001	120.0
Very Inadequate	0	69.9	120.001	300.0

Table 4.2

Prioritization of the educational adequacy factors was undertaken via a tiered approach based on five groups of evaluation factors established by the LREFP subcommittee.

The 5 tier groups of evaluation factors are:

1. Safety
2. Capacity
3. Support of Educational Program
4. Enhancements to Learning Environment
5. Other

Each of the educational adequacy evaluation factors was assigned to a tier group and, when combined with the rating for that factor, is used to establish the relative priority of that factor. The priorities have been utilized to focus project recommendations for each school on issues that are most pertinent to ACPS and the City of Alexandria. *Table 4.3* clarifies how the rating and the tier result in a priority score for each factor evaluated.

The goal of this assessment is to provide an overall snapshot of the health of a school and provide guidance to the issues that may need to be addressed. The results of this analysis is summarized in the *At A Glance* table for each school and provided in detail as *Appendix- Exhibit As*. A summary of data gathered from all schools in the educational adequacy assessment is shown in *Table 4.4*.

Rating	Tier	Priority
Very Inadequate	1- Safety & Security	1
	2- Capacity	2
	3- Support of Educational Program	3
	4- Enhancement to Learning Environment	4
	5- Other	5
Inadequate	1- Safety & Security	6
	2- Capacity	7
	3- Support of Educational Program	8
	4- Enhancement to Learning Environment	9
	5- Other	10
Borderline	1- Safety & Security	11
	2- Capacity	12
	3- Support of Educational Program	13
	4- Enhancement to Learning Environment	14
	5- Other	15
Satisfactory	1- Safety & Security	16
	2- Capacity	17
	3- Support of Educational Program	18
	4- Enhancement to Learning Environment	19
	5- Other	20
Excellent	1- Safety & Security	21
	2- Capacity	22
	3- Support of Educational Program	23
	4- Enhancement to Learning Environment	24
	5- Other	25

Table 4.3

School Site	Average Priority of Site, Building Assessment and Individual Spaces	Average Utilization Score	Electric Usage in kwh (7-1-13/6-30-14) Per SF	Number of Maintenance Calls (7-1-13/6-30-14) Per SF
Charles Barrett	73	68	10.6	0.30
Cora Kelly	70	19	9.0	0.35
Douglas MacArthur	68	68	9.6	0.24
George Mason	61	73	7.7	0.22
James K. Polk	77	68	9.9	0.19
John Adams	82	85	7.7	0.17
Lyles-Crouch	60	84	7.2	0.30
Matthew Maury	66	72	7.9	0.14
Mount Vernon	53	73	9.6	0.28
Samuel Tucker	80	30	11.8	0.13
William Ramsay	58	74	5.7	0.16
Francis C. Hammond	61	66	9.2	0.09
George Washington	73	50	7.4	0.10

Table 4.4

An overall summary of the elementary assessments is outlined below and in *Table 4.5*:

- All elementary schools (including Jefferson-Houston) are **currently** over capacity by a total of **290** students.
- In 2020, elementary schools will be over capacity by a total of **1,271** students.
 - In the east end (CB, GM, DM, CK, JH, LC, MV, MM): **457**
 - In the west end (JKP, ST, JA, WR, PH): **814**
- In 2020, the elementary level will need a total of **23** core classrooms (PK-5) to accommodate expected enrollment.
 - In the east end (CB, GM, DM, CK, JH, LC, MV, MM): **1**
 - In the west end (JKP, ST, JA, WR, PH): **22**
- Three elementary schools are projected to be over the maximum recommended size of 850 students. If capped at 850, **77** Polk students, **330** Adams students, and **148** Ramsay students (a total of **555 students**) will need to be served elsewhere.

School Site	2014	Current Capacity	Current Utilization	2020 Projections	Future Capacity	Projected Utilization	Future Net Room Surplus/	Future Core Classroom Surplus/ Deficit
Charles Barrett	458	428	107%	512	524*	98%	(4)	2
Cora Kelly	341	429	79%	409	429	95%	3	5
Douglas MacArthur	708	554	128%	772	554	139%	(11)	(6)
George Mason	541	368	147%	692	368	188%	(15)	(11)
James K. Polk	704	660	107%	927	756*	123%	(13)	(4)
Jefferson-Houston	444	800	56%	553	800	69%	6	6
John Adams	944	858	110%	1,180	858	138%	(7)	(2)
Lyles-Crouch	396	375	106%	360	375	96%	(3)	4
Matthew Maury	441	350	126%	473	350	135%	(9)	(2)
Mount Vernon	817	755	108%	841	755	111%	(6)	1
Patrick Henry	596	790	75%	701	790	89%	-	-
Samuel Tucker	750	620	121%	780	620	126%	(3)	(7)
William Ramsay	885	748	118%	998	748	133%	(18)	(9)
ES Total	8,025	7,735	104%	9,198	7,927	138%	(80)	(23)

*Future capacity includes 2 summer 2015 capacity projects at Barrett and Polk of 4 classrooms each

Table 4.5

An overall summary of the middle school assessments is outlined below and in *Table 5.6*:

- At middle school, **currently** over capacity by a total of **113** students.
- In 2020, middle schools will be over capacity by a total of **685** students.
- If both middle schools are capped at the maximum ideal school size of 1200 students, there are **831** sixth through eighth graders to house.

School Year	2014	Current Capacity	Current Utilization	2020 Projections	Future Capacity	Projected Utilization	Future Net Room Surplus/ Deficit	Future Core Classroom Surplus/ Deficit
Francis Hammond	1,436	1,396	103%	1,832	1,396	131%	6	(1)
George	1,223	1,150	106%	1,399	1,150	122%	(15)	(11)
MS Total	2,659	2,546	104%	3,231	2,546	127%	(9)	(12)

Table 4.6

MINI MASTER PLAN ORGANIZATION

Each mini-master plan has four main features:

1. At A Glance Table
2. Narrative describing the results of the analysis
3. Recommendations and Cost Estimates
4. School attendance boundary, context and proposed future conceptual design

The recommendations section is divided into required planning, first and second priorities, and long range recommendations — and is intended to be a menu of options for the School Board’s consideration during the development of the Capital Improvement Program.

The conceptual design shown in each plan is only one visual representation of how to potentially accommodate the future growth. This drawing is intended to be illustrative only.

The cost estimates provided are based on implementing the suggested master plan in its entirety and in certain cases, breaks out costs for renovation versus new construction (additions). These are conceptual cost estimates, based on the one option illustrated in the mini-master plans and are subject to change. Future costs will be affected by market conditions. Priorities must be balanced with fiscal resources. Further evaluation of existing conditions may recommend modifications to the plans as shown. Projects and cost estimates will be reevaluated and refined through the development of the capital improvement budget which occurs annually.

Table 4.7 defines the information contained in each plan’s *At A Glance* section. Each table contains information on the existing building and site (year built, current floor area, lot size, floor area ratio), zoning (zoning, floor area permitted by zoning) and educational adequacy (school site, building assessment, instruction & support spaces, and utilization).

<u>AT A GLANCE...</u>			
Year Built Year school was built	Current Floor Area Current square footage of the building	Lot Size (acres) The size of the lot in acres.	Floor Area Ratio Gross Floor Area/Lot Size
Zoning Zone or zones in which the property lies.	Floor Area Permitted by Zoning (SF) Floor area permitted by the zoning code	Core Classroom Surplus/Deficit (2020) Number of core classrooms needed as determined by the assessment.	Total Program Square Feet (2020) Total program square feet (includes core spaces, encore and core classrooms) needed as determined by the assessment.
School Site Evaluated site circulation, size and appropriateness of play areas	Building Assessment Organization of the building, technology and supporting infrastructure	Instructional & Support Spaces Size of classrooms, loose and fixed furnishings, lighting, acoustics and air quality	Utilization Required spaces per the educational specifications compared against existing spaces

Table 4.7

CHARLES BARRETT ELEMENTARY SCHOOL

1115 Martha Custis Drive, Alexandria, VA 22302

AT A GLANCE...			
<i>Year Built</i> 1949	<i>Current Floor Area</i> 62,760 (school) 9,800 (rec center)	<i>Lot Size (acres)</i> 5	<i>Core Classroom Surplus/Deficit (2020)</i> +2 (includes 2015 capacity project)
<i>Zoning</i> R-B (006.01-03-01)	<i>Floor Area Permitted by Zoning (SF)</i> 113,061	<i>Floor Area Ratio</i> 0.75	<i>Total Program Surplus/Deficit (Sq. Ft.) (2020)</i> -4,756
POS (006.01-03-01)	0	0.0	N/A
<i>School Site</i> Satisfactory	<i>Building Assessment</i> Satisfactory	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 98%

BACKGROUND

Charles Barrett Elementary School was built in 1949. The 1997 addition of a media center is the only major renovation the school has undergone since its establishment. The building shares a gymnasium and play fields with the adjacent Charles Barrett Recreation Center.



In 2014, Charles Barrett's enrollment was 458 students with a measured capacity of 428. Enrollment projections indicate the school population will increase to a student body of 512 by the year 2020.

The academic curriculum at Charles Barrett includes reading, language arts, mathematics, social studies, and science and also offers:

- Music instruction once a week
- Art instruction once a week
- Band and orchestra beginning in 4th grade
- Two physical education classes a week
- Family life instruction at age-appropriate levels
- English as a second language classes
- Special education programs
- TAG pull out program
- Talented and Gifted program for grades K-5¹

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	458	512
Capacity	428	524*

Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

* includes summer 2015 capacity project

KEY FINDINGS

SUMMARY

The data collected through this assessment reveals Charles Barrett Elementary School meets 73 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

- The majority of classrooms did not meet the minimum size requirements.
- Core and specialty classrooms are not equipped with appropriate storage furnishings.

¹<http://www.acps.k12.va.us/barrett>

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Steeper slopes in outfall channel and around open fields</i>
<i>Playgrounds</i>	3
<i>Recreation Features</i>	<i>Ball fields, open fields, recreation center</i>
<i>Resource Protection Areas</i>	None
<i>Parking</i>	42
<i>Storm Water Management</i>	<i>Flow through planter boxes & bioretention</i>



The school site received a satisfactory rating. The school's site circulation rated borderline due to conflicts between vehicular and pedestrian traffic patterns. The kiss-and-ride, school bus lane, and pedestrian traffic all access the school from the same point of entry. This causes significant congestion on the main street near the school's front entrance during peak times. A study is recommended to determine whether the drop-off location can be relocated or reconfigured.

INSTRUCTIONAL AND SUPPORT SPACES

The most urgent items in this section are classroom capacity and HVAC mechanical issues.

Overall, the instructional and support spaces ranked satisfactory. **All spaces failed to meet appropriate size requirements.** The measured average classroom size for grades one through five is 775 square feet rather than the desired 900 square feet needed to provide a flexible learning environment. The majority of resource rooms and specialty classrooms are not only too small, but also lacked the necessary equipment, furniture, fixed infrastructure, and storage. The overall size of specialty classrooms is approximately 56 percent smaller than the square foot minimums detailed in the educational specifications. A renovation is recommended to right-size core and specialty classrooms.

The school has significant deficiencies with air temperature and classrooms lack individual temperature controls. Occupants deal with major temperature fluctuations from season-to-season.

Instructional classrooms do not have individual student desks and therefore do not support diverse learning styles or flexible seating arrangements. The student and teacher program furniture, which includes shelving, cabinets, wardrobes, and cubbies, is either not adequate or non-existent in most classrooms.

BUILDING ASSESSMENT

The school's capacity is below satisfactory primarily because the core classrooms, specialty classrooms, and administrative spaces all fail to meet the required size. Most classrooms at Charles Barrett have the technology infrastructure and tools required to support a 21st century learning environment. The third, fourth, and fifth grade classrooms are not organized in grade level clusters as required by the educational specifications. There are no defined extended learning areas adjacent to the classrooms to allow for flexible and alternate teaching or break-out groups. Additionally, shared spaces, including the gym, art room, and cafeteria, are not centrally located as required. The recommended renovation will address deficiencies in classroom size as well as provide extended learning areas.

RECOMMENDATIONS

Charles Barrett must be expanded and reconfigured to meet the recommended size requirements and key organizational adjacencies. This analysis assumes the four classroom addition currently scheduled for construction summer 2015.

GROUP 1 — REQUIRED PLANNING

- **Site** assessment to determine whether the drop-off location for the school can be relocated/reconfigures (based on property boundaries, setbacks, etc.). It will also help inform opportunities for additional parking.
- **Assess** HVAC and mechanical issues through the facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the spaces within the existing school to meet the recommended size requirements for individual academic spaces as outlined in the educational specifications (\$24.5M).
- **Demolish** the existing north wing and build an addition to the school to meet recommended size requirements and key organizational adjacencies outlined in the educational specifications (\$4.3M).

GROUP 3 — SECOND PRIORITY

- **Provide** additional storage for teachers and students as well as an upgrade to the furniture, fixtures and equipment.
- **Equip** all classrooms with individual climate controls.

GROUP 4 — LONG RANGE RECOMMENDATIONS

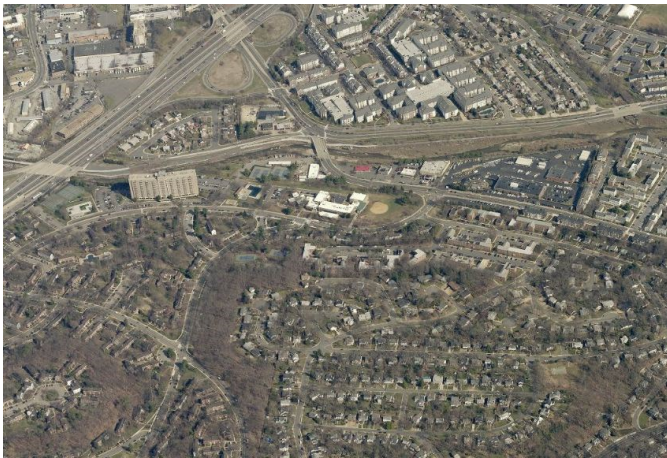
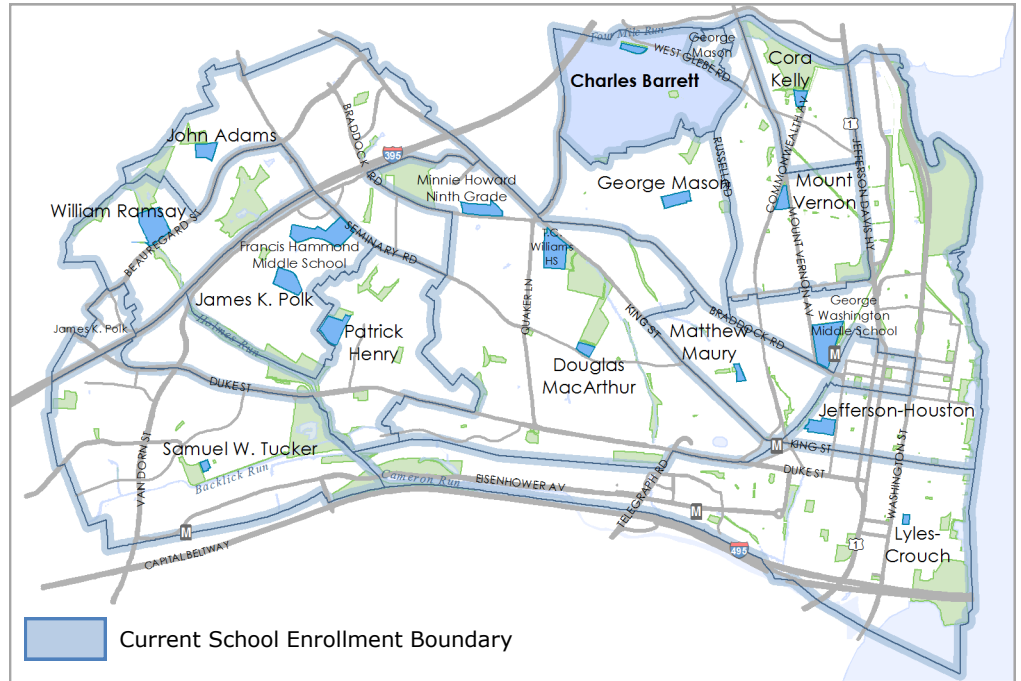
- **Reconfigure**, based on the site assessment, the vehicular circulation to reduce potential conflicts with pedestrians.
- **Upgrade** the recreation fields to meet the standards.

CONCEPTUAL COST ESTIMATES

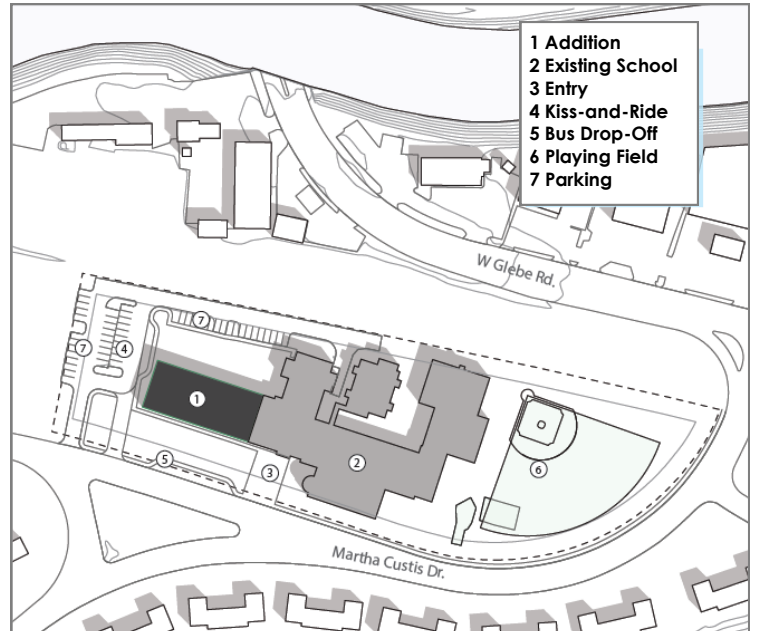
- **Total Renovation, Excluding the Rec Center — \$24.5M (\$309/SF) includes:**
 - All new mechanical, HVAC, plumbing, electrical and window systems
 - New food service and A/V equipment for auditorium, cafeteria and classrooms and sufficient classroom storage
 - New interior walls, floors and ceilings
- **Addition — \$4.3M (\$388/SF) includes:**
 - Replacement of existing Kindergarten pod
- **Complete master plan construction- \$28.8M (\$319/SF) includes:**
 - 15% contingency and 17% fees, insurance, etc.

Barrett is not currently in the modernization program per the FY 2016-2025 CIP; however, a four classroom addition will be built in summer 2015. Additional renovations, additions or the complete master plan project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

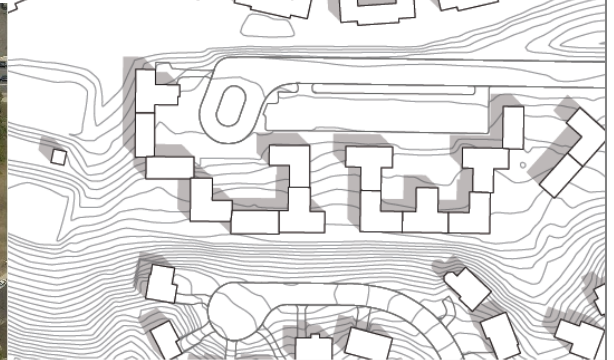
CHARLES BARRETT ELEMENTARY SCHOOL



Neighborhood Context



School site looking north across Martha Custis Drive.

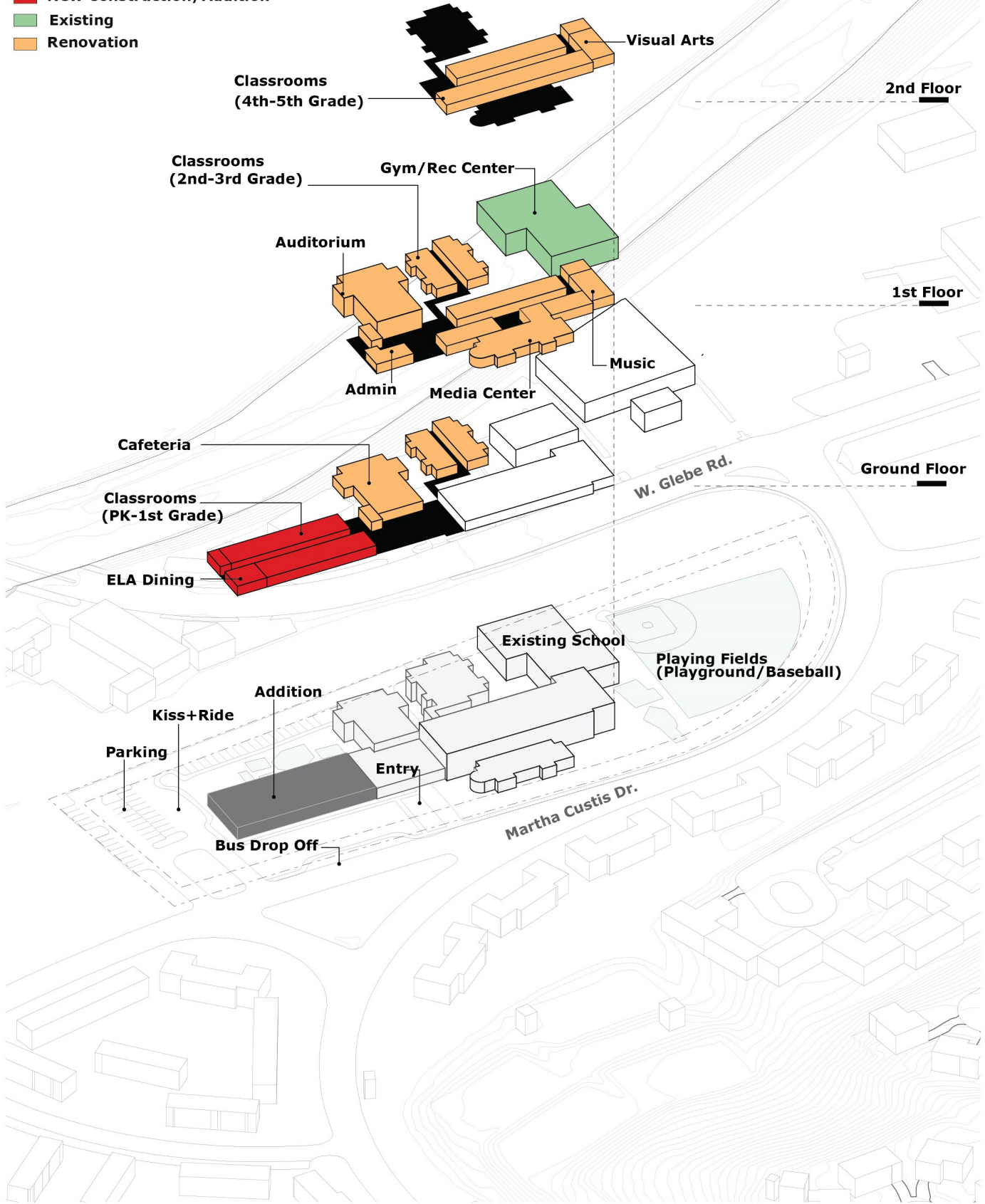


Master Plan concept showing school addition.

Charles Barrett

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



CORA KELLY ELEMENTARY SCHOOL

3600 Commonwealth Avenue, Alexandria, VA, 22305

AT A GLANCE...			
<i>Year Built</i> 1955	<i>Current Floor Area</i> 69,000 (school) 25,840 (rec center)	<i>Lot Size (acres)</i> 4.5	<i>Core Classroom Surplus/Deficit (2020)</i> 5
<i>Zoning</i> R-B (015.02-09-01)	<i>Floor Area Permitted by Zoning (SF)</i> 148,255	<i>Floor Area Ratio</i> 0.75	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> 10,500
POS (007.04-09-04)	0	0.0	
<i>School Site</i> Satisfactory	<i>Building Assessment</i> Inadequate	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 95%

BACKGROUND

Cora Kelly Elementary School was built in 1955 and shares a gymnasium with the adjacent to the Cora Kelly Recreation Center. Enrollment projections indicate the school's population will increase to 409 students by year 2020.



The academic curriculum includes reading, language arts, mathematics, social studies, and science and also offers:

- Guided Math with personalize instruction meeting individual needs of students
- Core subject matter is integrated within encore classes (i.e. art, library, music and physical education)
- Science & computer labs are provided for students to help develop science and technology literacy.¹

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	341	409
Capacity	429	429

Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

Based on the data collected through this assessment, Cora Kelly meets 70 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

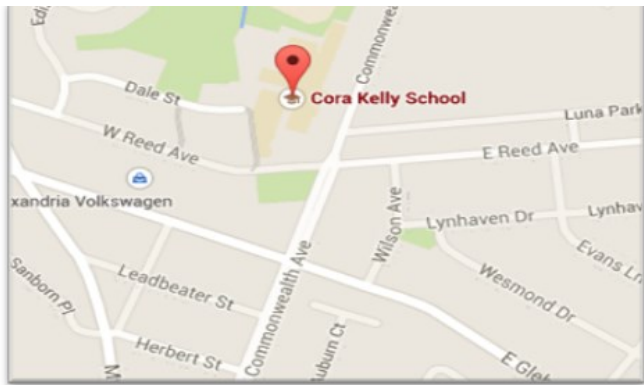
HIGH PRIORITY ITEMS

- Core classrooms are generally under-sized and lack air temperature controls.
- The building's technology and supporting infrastructure, also earning a score of inadequate, must provide basic capabilities such as wireless internet access and ample supply of electrical outlets for teaching devices.

SCHOOL SITE

¹<http://www.acps.k12.va.us/kelly>

SITE DATA	
<i>Steep Slopes</i>	<i>Steep slopes to offsite channel around open fields</i>
<i>Playgrounds</i>	3
<i>Recreation Features</i>	<i>Playground, adjacent natural area</i>
<i>Resource Protection Areas</i>	None
<i>Parking</i>	85
<i>Storm Water Management</i>	<i>Bio-retention, multiple storm inlets</i>



Based on the assessment, the school site received a satisfactory rating. The site circulation is the main area of concern for this section. The school’s kiss-and-ride and bus lane are not separated and all vehicles access the same driveway in front of the school. Additionally, some of the primary pedestrian routes are not separated from vehicular traffic, as required.

The existing school building was partially constructed in the adjacent park (POS zone). Any future projects should consider rectifying this property boundary issue.

INSTRUCTIONAL AND SUPPORT SPACES

While the instructional and support spaces ranked satisfactory. **Core classrooms fail to meet size requirements.** The measured average size for pre-kindergarten and kindergarten class is 810 instead of the desired 1,025 square feet. The measured average size for grades one through five is 741 instead of the desired 900 square feet. Collectively, only three of the twenty-four classrooms, or thirteen percent, meet the recommended size requirement. A renovation is recommended to right-size the core classrooms.

The core classrooms do not have individual student desks and therefore do not support flexible seating arrangements. Very few of the core classrooms have restrooms within the classroom or shared with an adjacent room, as specified. These rooms also lack individual temperature controls and occupants deal with major temperature fluctuations from season-to-season.

The specialty classrooms and shared spaces generally have adequate square footage, but they typically lack adequate storage, fixed equipment, and infrastructure. The rooms are missing two teaching walls and sound enhancement equipment. There are very few classrooms with teacher desks and personal storage equipment. In general, the student and teacher program furniture (e.g. shelving, cabinets, wardrobes, and cubbies) is either not adequate or non-existent in most classrooms.

BUILDING ASSESSMENT

The building component of the educational adequacy assessment revealed an inadequate rating. The technology infrastructure and tools are not capable of serving a 21st century learning environment as defined in the educational specifications. Electrical outlets are not present in multiple locations along classroom and corridor walls. The clocks and PA system throughout the building are not integrated, nor are the clocks digital, as desired. Additionally, there is limited wireless connectivity in the hallways and corridors. Finally, the school does not provide wireless bandwidth at a one-to-one student-to-device ratio.

The other two sub-sections of the building assessment did not score much higher. Both building organization and accessibility earned a borderline rating. The building organization rating is due to the lack of distinct academic clusters and extended learning areas (ELAs) throughout the building. The building’s configuration allows for after-hours access without compromising the school’s security. Lastly, the building’s accessibility is poor because the only handicapped access to the second floor is by a stair lift.

RECOMMENDATIONS

While Cora Kelly can meet the projected enrollment within the existing building, reconfiguration is required to achieve the standards in the educational specifications. Because it is under capacity, there is an opportunity to address capacity issues in adjacent districts. Additionally, there are site considerations and ADA projects that should be considered.

GROUP 1 — REQUIRED PLANNING

- **Site assessment** to determine whether all pedestrian circulation routes can be separated from vehicular traffic as recommended in the education specifications.
- **Explore** the feasibility of installing an elevator near the main entry to address the existing ADA accessibility issue.
- **Assess** building condition comprehensively through a facility condition assessment

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the existing building to ensure the core classrooms meet the recommended size requirements outlined in the educational specifications (\$19.1M).

GROUP 3 — SECOND PRIORITY

- **Equip** all classrooms and support spaces with individual climate control.
- **Equip** all core classrooms, corridors and support spaces with additional electrical receptacles as required.
- **Provide** additional storage for teachers and students should be integrated into the reconfigured classrooms as well as an upgrade to furniture, fixtures and equipment.
- **Equip** all classrooms with two teaching walls.

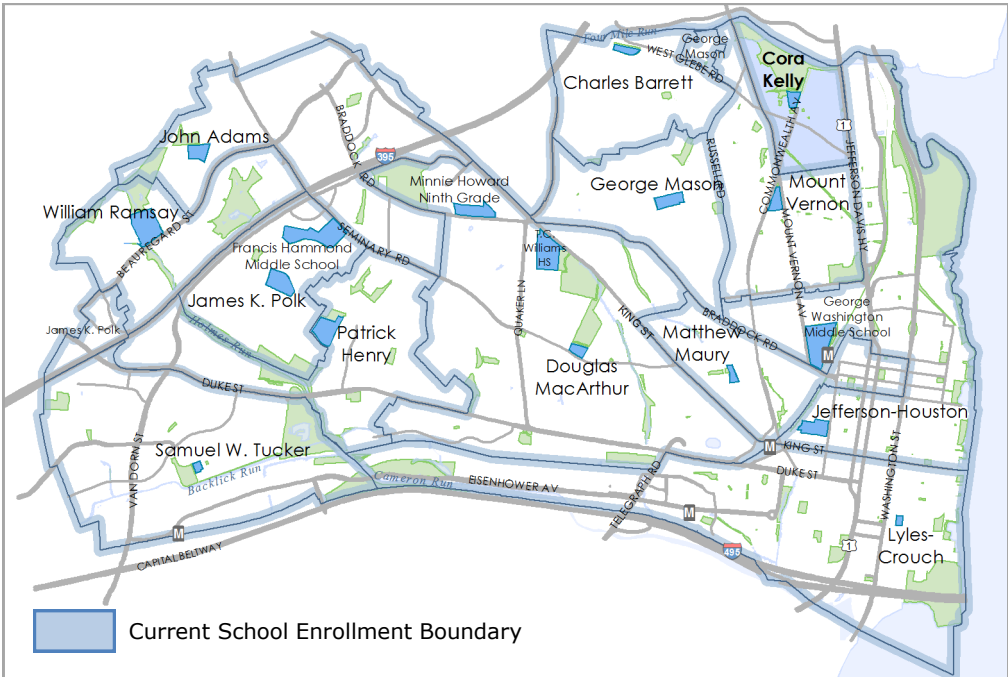
GROUP 4 — LONG RANGE RECOMMENDATIONS

- **Combine** circulation routes and parking with adjacent recreation center to improve efficiency.

CONCEPTUAL COST ESTIMATES

- **Complete master plan construction — \$19.1M (\$275/SF) includes:**
 - 15% contingency and 17% fees, insurance, etc., (*excludes* the rec center in 2015 dollars)
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings

In the FY 2016-2025 School Board CIP, Cora Kelly is budgeted to receive a modernization and addition beginning in FY 2019 based on division-wide capacity needs. The construction budget for that project is currently \$20,145,000 and includes a capacity component.



CORA KELLY ELEMENTARY SCHOOL



Neighborhood Context



School site looking west across Commonwealth Avenue

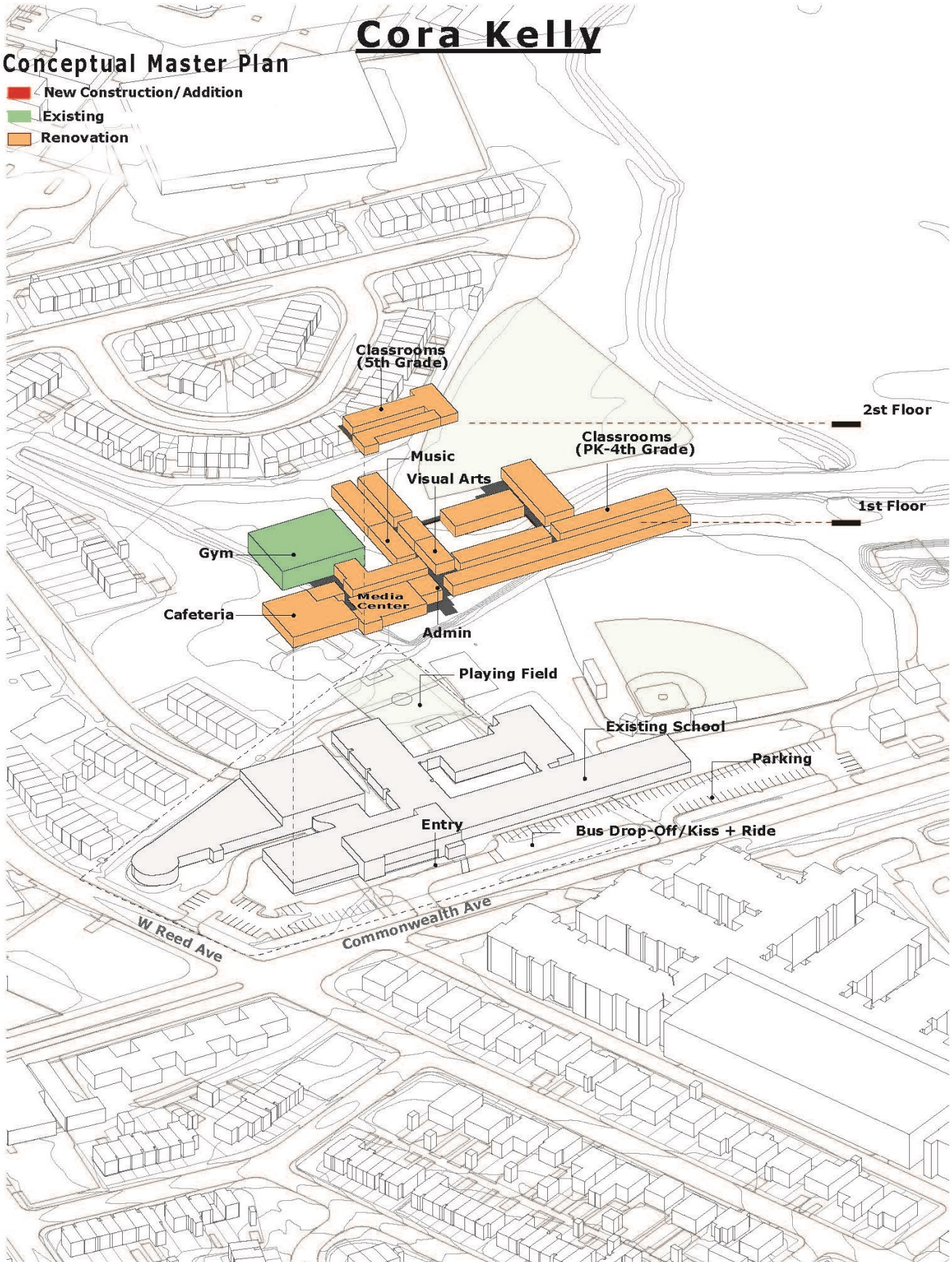


Master Plan Concept with renovation within current footprint

Cora Kelly

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



DOUGLAS MACARTHUR ELEMENTARY SCHOOL

1101 Janneys Lane, Alexandria, VA 22302

AT A GLANCE...			
<i>Year Built</i> 1942	<i>Current Floor Area</i> 56,098	<i>Lot Size (acres)</i> 4.4	<i>Core Classroom Surplus/Deficit (2020)</i> -6
<i>Zoning</i> R12 (051.02-03-16)	<i>Floor Area Permitted by Zoning (SF)</i> 57,000	<i>Floor Area Ratio</i> 0.3	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -19,970
<i>School Site</i> Satisfactory	<i>Building Assessment</i> Borderline	<i>Instructional & Support Spaces</i> Borderline	<i>Projected Utilization (2020)</i> 139%

BACKGROUND

Douglas MacArthur Elementary School was built in 1942 predominantly for children of the Naval Torpedo Plant workers living in Chinquapin Village. The school has undergone a number of renovations with a minor one occurring in 2008. The existing school is adjacent to Forest Park.

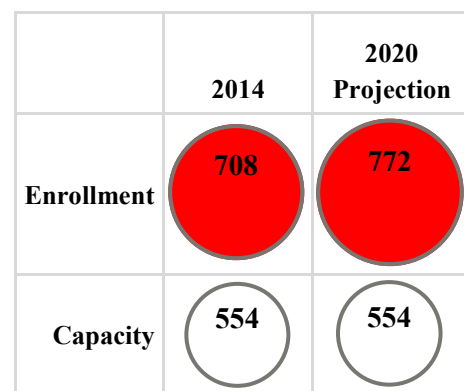


In 2014, Douglas MacArthur had an enrollment of 708 students with a capacity of 554 students. By 2020, enrollment is expected to increase by 9.5 percent to 772 students.

The academic curriculum at MacArthur includes reading, language arts, mathematics, social studies, and science and also offers:

- Art instruction once per week
- Two physical education classes per week
- Global Art on a Timeline
- Habits of the Mind and Character Counts
- Family life instruction at age-appropriate levels
- Band and orchestra beginning in 4th grade
- Vocal music instruction once per week
- Visiting science teacher
- Weekly library visits
- Talented & Gifted program for grades K-5
- ELL program for students learning English as a second language
- Opportunity to participate in numerous after school programs¹

STUDENT ENROLLMENT (# OF STUDENTS)



Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

With a score of 68 percent, the site assessment completed for Douglas MacArthur rates this school as borderline on the educational adequacy benchmark.

High Priority Issues

- The school will be significantly over capacity by 2020. The major issues in the school are the classroom sizes, need for additional storage areas and temperature controllability.

¹<http://www.acps.k12.va.us/macarthur>

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Rolling slopes</i>
<i>Playgrounds</i>	<i>4</i>
<i>Recreation Features</i>	<i>Playgrounds, basketball court,</i>
<i>Resource Protection Areas</i>	<i>No</i>
<i>Parking</i>	<i>59</i>
<i>Storm Water Management</i>	<i>No existing BMPs</i>



The assessment of this school site resulted in a satisfactory rating. The school is lacking a student drop-off area with sufficient room for cars to stack and the pedestrian pathways are not adequately separated from vehicular traffic. There are significant drainage issues that have caused flooding and deterioration of the north wing of the school.

INSTRUCTIONAL AND SUPPORT SPACES

The instruction and support space assessment ranked borderline. Items contributing to this low score include classroom size, internal organization, loose furnishings, and air quality.

The majority of classrooms were below the minimum square footage requirement. The desired square footage for a kindergarten classroom is 1,025, however, at Douglas MacArthur; the average for this grade level was 961 square feet. First through fifth grade classrooms require 900 square feet but the average at this school is 742 square feet. **The overall capacity of the instructional classrooms is only 69 percent of their ideal square foot size (per student) as detailed in the educational specifications.**

The lack of controllable lighting and air temperature were borderline for both core and specialty classrooms. Although most core instructional classrooms contained appropriate equipment, infrastructure and acoustics.

However, several core classrooms lack natural daylight. The specialty classrooms were lacking in lighting and temperature controls as well as adequate storage and an interactive electronic device.

BUILDING ASSESSMENT

MacArthur received a borderline rating in the assessment of building accessibility and technology and support infrastructure. Some technology inadequacies include: lack of wireless internet for students at a 1:1 ratio, lack of electrical outlets in classrooms and hallways, and an integrated clock and public announcement system.

Building organization received a satisfactory score due to the lack of extended learning for first through third grade clusters. Public visitor restrooms were not available at MacArthur.

RECOMMENDATIONS

Because of the building condition and the interior configuration, a total school replacement is recommended to rectify the deteriorating building condition and to accommodate the projected future enrollment. A new building, sized to accommodate the 2020 projections, will likely exceed the FAR allowed under the current zoning.

GROUP 1 — REQUIRED PLANNING

- **Site** assessment to determine an appropriate drop-off location for the school with sufficient stacking room and separated from buses and pedestrians (based on property, boundaries, setbacks, etc.).
- **Assess** building condition comprehensively through a facility condition assessment

GROUP 2 — FIRST PRIORITY

- **Consider** a total school replacement. This should address additional square footage supporting projected utilization and address deficient key organizational adjacencies while maximizing open space at the existing site (\$37.0M).

GROUP 3 — SECOND PRIORITY

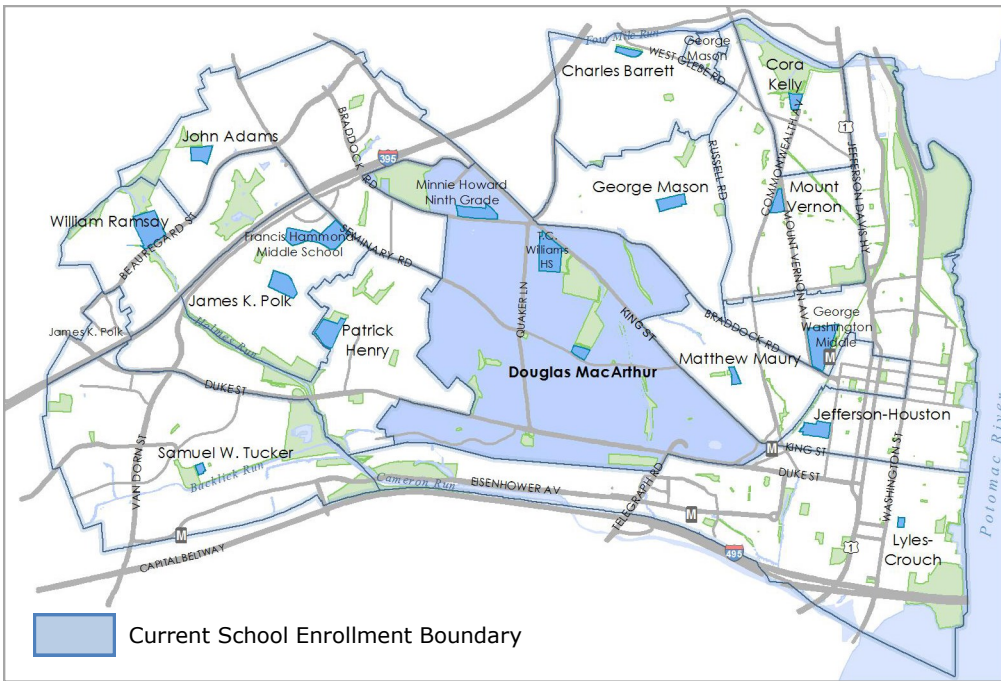
- **Equip** all core classrooms and support spaces with wall mounted interactive devices.
- **Provide** integrated storage for teachers and students in the reconfigured classrooms.
- **Equip** all classrooms and support spaces with individual climate and lighting controls.

GROUP 4 — LONG RANGE RECOMMENDATIONS

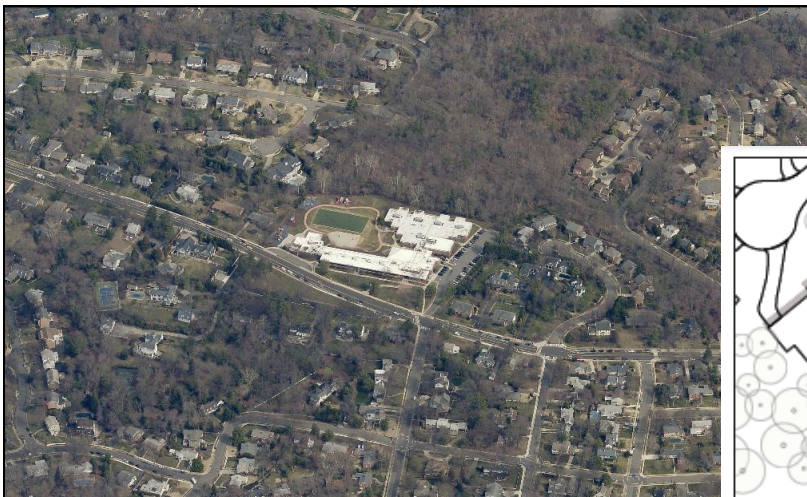
CONCEPTUAL COST ESTIMATES

- **Complete master plan construction- \$37.0M (\$405/SF) in 2015 dollars**
 - Total demolition of existing building
 - Grading for new building, parking and fields
 - Storm water management, landscaping, site lighting
 - New recreation features including basketball courts, playing field and playgrounds
 - All new mechanical, plumbing, electrical systems
 - New interior walls, floors and ceilings
 - Two new elevators
 - New food service and a/v equipment for gymnasium, cafeteria and classrooms

In the FY 2016-2025 School Board CIP, Douglas MacArthur is slated to receive a modernization and capacity addition beginning in FY 2017. The construction budget for that project is currently \$28,000,000.



DOUGLAS MACARTHUR ELEMENTARY SCHOOL



Neighborhood Context



School site looking north across Janneys Lane

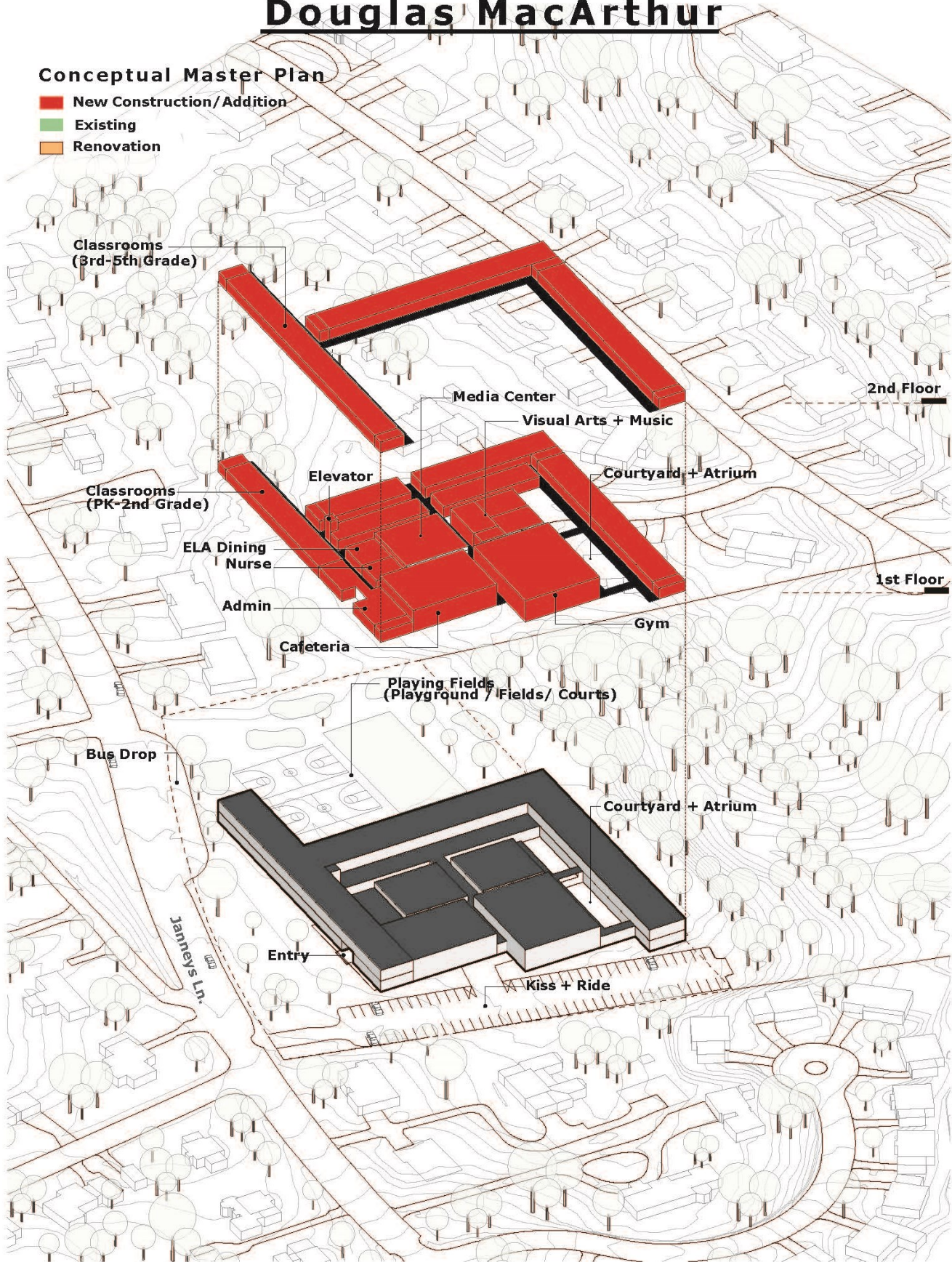


Master Plan Concept
School Replacement

Douglas MacArthur

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



GEORGE MASON ELEMENTARY SCHOOL

2601 Cameron Mills Road, Alexandria, VA 22302

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1939	<i>Current Floor Area</i> 65,291	<i>Lot Size (acres)</i> 9.4	<i>Core Classroom Surplus/Deficit (2020)</i> -11
<i>Zoning</i> R-8 (023.04-10-20)	<i>Floor Area Permitted by Zoning (SF)</i> 142,552	<i>Floor Area Ratio</i> 0.35	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -21,994
<i>School Site</i> Borderline	<i>Building Assessment</i> Borderline	<i>Instructional & Support Spaces</i> Borderline	<i>Projected Utilization (2020)</i> 188%

BACKGROUND

George Mason Elementary School was built in 1939 and has undergone two major renovations, in 1949, and 1977. Other minor renovations occurred in 1988, 1997, and 2005. In 2014, the school underwent a substantial expansion which included enlarging the cafeteria, adding two courtyards and four new classrooms. The school has a total square footage of 65,291 over the span of two floors.



In 2014, George Mason had an enrollment of 541 students and a measured capacity of 368 students. By 2020, the enrollment is expected to increase to 692 students.

The academic curriculum at George Mason includes reading, language arts, mathematics, social studies, and science and also offers:

- Art instruction once per week
- Vocal and instrumental music lessons beginning in 4th grade
- Two physical education classes per week
- Family life instruction at age-appropriate levels
- Special education programs
- Talented and Gifted programs for grades K-5
- ELL program for those learning English as a second language
- Opportunity to participate in numerous after school programs¹

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	541	692
Capacity	368	368

Color	Enrollment as % of Capacity	
Light Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

The data collected through this assessment revealed that George Mason Elementary School meets 61 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

- The school will be severely over capacity lacking space for nearly 324 students in 2020.
- Classrooms are undersized and lack of fixed equipment and infrastructure, and poor acoustics.

¹<http://www.acps.k12.va.us/mason>

SCHOOL SITE

SITE DATA	
Steep Slopes	Relatively flat with steeper slopes down to natural channels
Playgrounds	2
Recreation Features	Playground, tennis courts, asphalt play area, baseball and open fields.
Resource Protection Areas	None
Parking	19
Storm Water Management	Flow-thru planter boxes, multiple riprap channels and inlets



George Mason is not equipped with a dedicated vehicular traffic drop-off and pick-up area for students and visitors. The school bus lane and the kiss-and-ride are not separated. Buses and cars park on the public road in front of the school to drop-off and pick-up students. The play areas, located behind the school, are in a good location and connect to a few pedestrian foot paths. The school does not have outdoor learning areas.

George Mason is bordered on one side by a church which serves as a temporary parking lot for staff and visitors during the week. Although the size of the lot is adequate, it is not located near the school's main entrance, nor is it owned by the school.

INSTRUCTIONAL AND SUPPORT SPACES

The school is suffering from a significant shortage of classrooms which is compounded by the fact that the recommended ratio of square feet per student is not met.

The overall quality of the core classrooms is borderline. The core, specialty, and shared spaces do not meet the minimum square footage requirements and lack individual temperature and lighting controls. There is not adequate storage for the students and teachers.

The average core classroom size for pre-kindergarten and kindergarten is 877 rather than the suggested 1,025 square

feet. The measured average classroom size for grade one through five is 686 square feet rather than the desired 900 square feet needed to provide a flexible learning environment. The overall capacity of specialty classrooms and small support rooms is approximately 29 percent smaller than that square foot minimums detailed in the educational specification.

Most rooms do not have full control of the HVAC system and multiple occupants noted there are issues with humidity. Several of the specialty classrooms did not have an interactive electronic presentation device.

BUILDING ASSESSMENT

Roughly half the classrooms at George Mason do not have the technology infrastructure and tools to support a 21st century learning environment. Overall, the school does not meet the division's expectations for small learning environments and key adjacencies. The current spatial layout requires all students and staff to walk through the Media Center in order to access the music room or art room.

The shared programmatic spaces are not centrally located. This does not allow for ease of access from the core academic classrooms. The building is organized in grade level clusters, but there are no extended learning areas or collaborative learning spaces within these areas.

RECOMMENDATIONS

In order to meet the educational specifications, the school requires interior reconfiguration and an addition. Overall, it would be beneficial to demolish portions of the existing structure and reconfigure.

GROUP 1 — REQUIRED PLANNING

- **Evaluation** of the site analysis information will accurately determine whether the drop-off location for the school can be relocated/reconfigured (based on property boundaries, setbacks, etc.).
- **Analyze** existing building conditions to determine if partial demolition is a more cost effective option to renovation.

GROUP 2 — FIRST PRIORITY

- **Improve** overall operational efficiency by demolishing and reconfiguring portions of the existing structure attain the additional square footage will also be required to support the projected utilization (\$40.9M).

GROUP 3 — SECOND PRIORITY

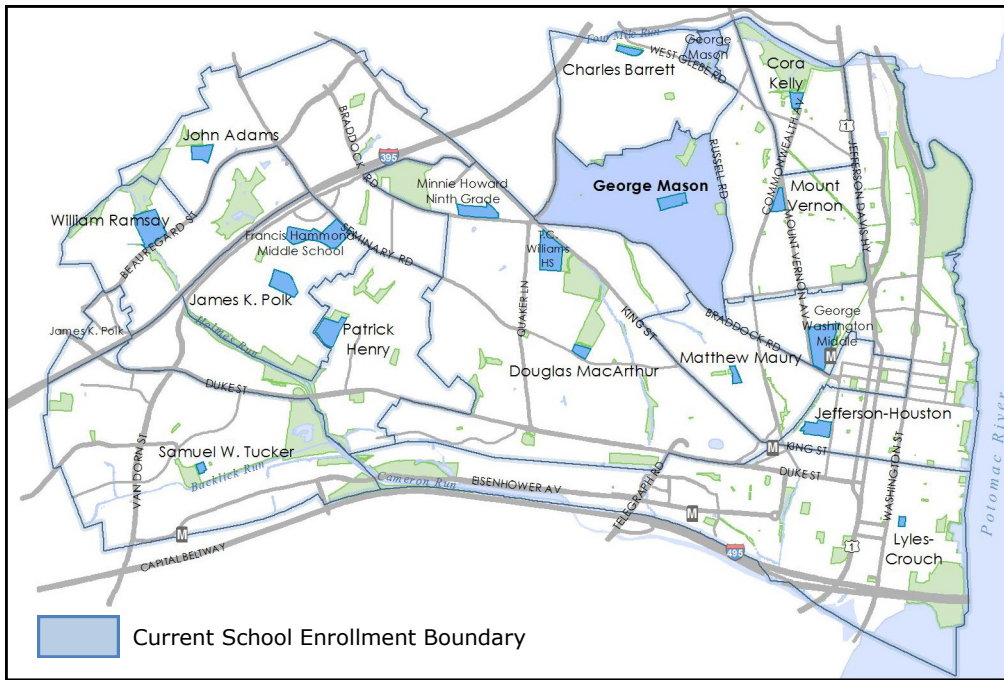
- **Equip** all classrooms and support spaces with individual climate controls, variable lighting controls, and technological equipment and infrastructure.
- **Provide** additional storage for teachers and students in the reconfigured classrooms.
- **Upgrade** the furniture, fixtures and equipment as many classrooms do not have the required millwork necessary for the teaching environment.

GROUP 4 — LONG RANGE RECOMMENDATIONS

CONCEPTUAL COST ESTIMATES

- **Complete master plan construction- \$40.9M (\$418/SF) in 2015 dollars:**
 - 15% contingency
 - 17% other fees, insurance, etc.
 - New 80,000 SF addition
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New windows
 - All new mechanical, plumbing, electrical systems
 - Two new elevators
- **Renovation of 18,000SF of the existing building including (admin and cafeteria):**
 - Rehabilitation of the existing façade portions to remain
 - New interior walls, floors and ceilings
 - Security, fire alarm and IT/data system
 - Exterior improvements including playgrounds, site lighting, landscaping, basketball courts, soccer field, and storm water management.

In the FY 2016-2025 School Board CIP, George Mason is slated for renovation, without capacity, beginning in FY 2021. The construction budget for that project is currently \$13,222,510, because it does not include additional capacity.

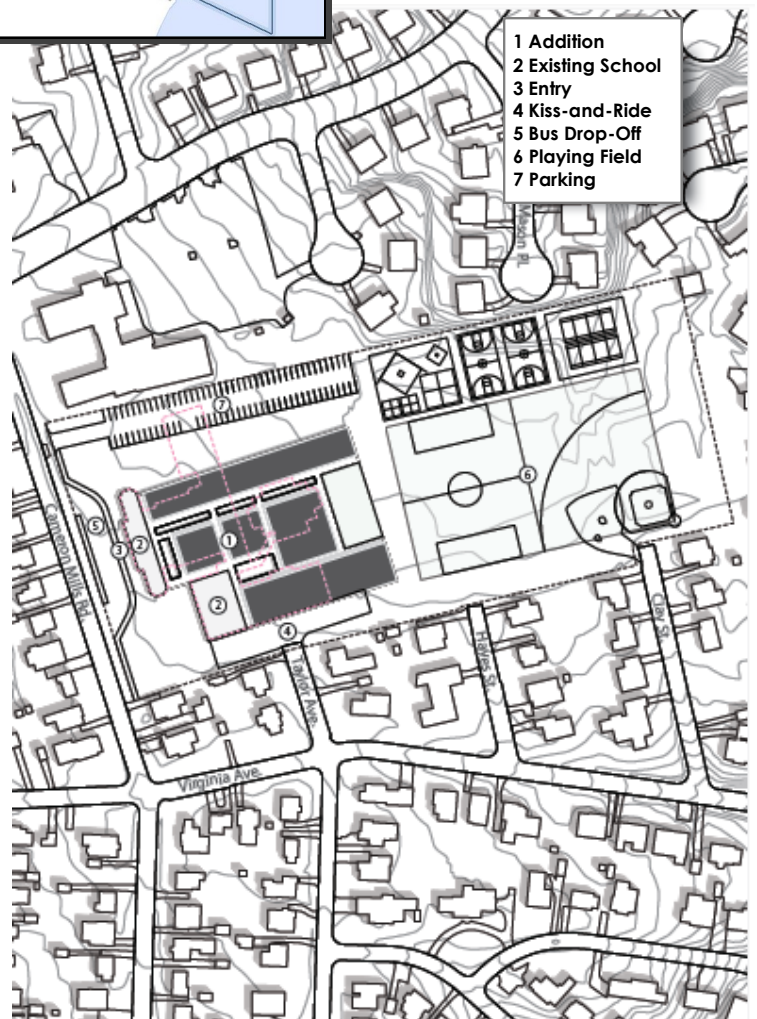


GEORGE MASON ELEMENTARY SCHOOL

Neighborhood context looking north



School site looking east across Cameron Mills Road. *Note: This image does not reflect construction completed in Summer 2014.*

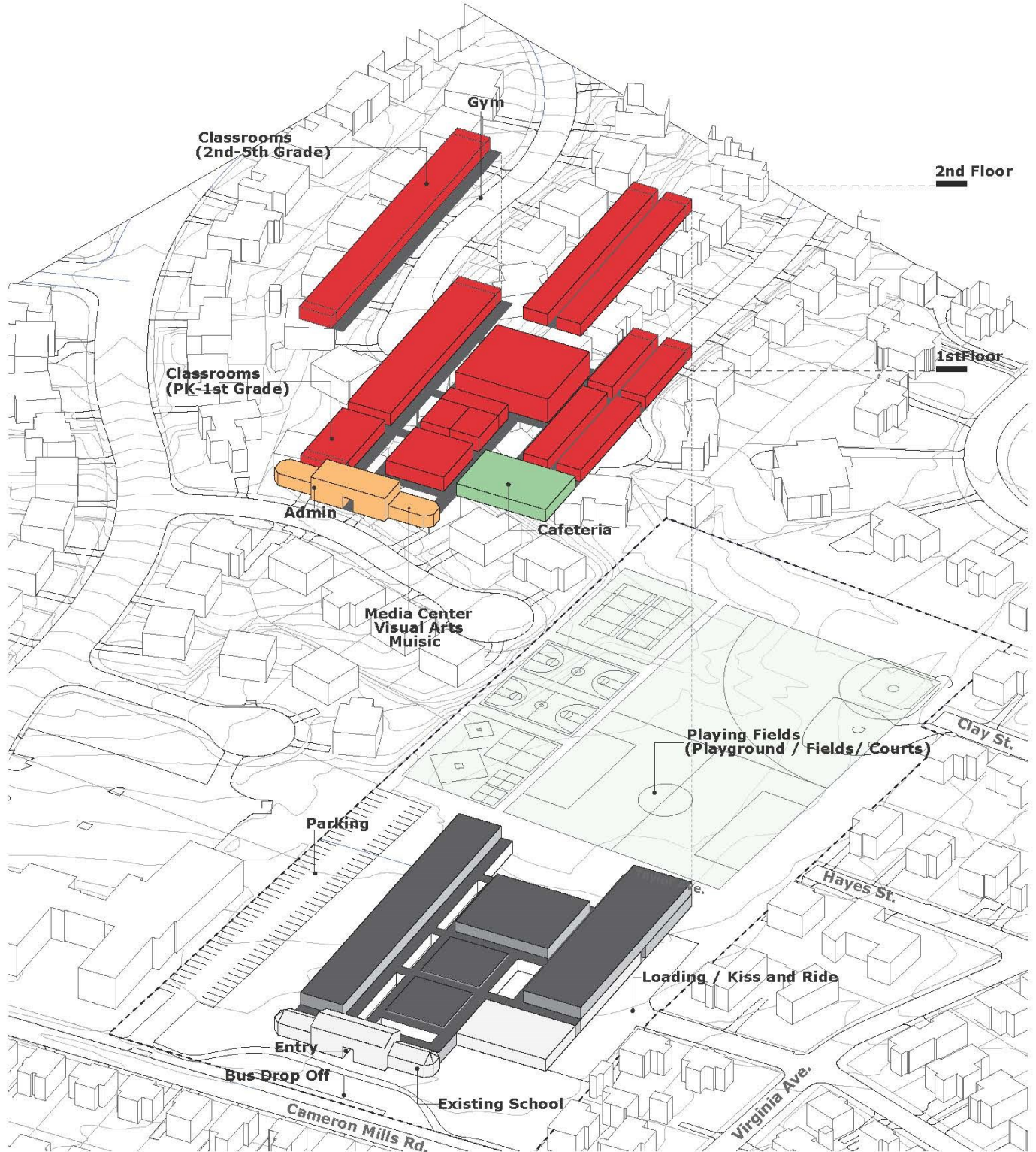


Master Plan Concept
Potential Addition

George Mason

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



JAMES K. POLK ELEMENTARY SCHOOL

5000 Polk Avenue, Alexandria, VA, 22304

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1965	<i>Current Floor Area</i> 83,230	<i>Lot Size (acres)</i> 13.5	<i>Core Classroom Surplus/Deficit (2020)</i> -4 (includes 2015 capacity project)
<i>Zoning</i> R12 (039.01-01-01)	<i>Floor Area Permitted by Zoning (SF)</i> 128,041	<i>Floor Area Ratio</i> 0.30	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -16,929
R20 (039.01-01-01)	40,250	0.25	
<i>School Site</i> Satisfactory	<i>Building Assessment</i> Satisfactory	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 123%

BACKGROUND

James K. Polk Elementary, built in 1965, sits on a 13.5 acre site. The school expansion in 1994 included a new library, main office, music room, and secure main entrance. In February 2010, Polk received a new gymnasium that was



predominantly pre-fabricated off-site. During the summer of 2011, Polk added four new classrooms using the same modular approach and four more are planned for construction in summer 2015.

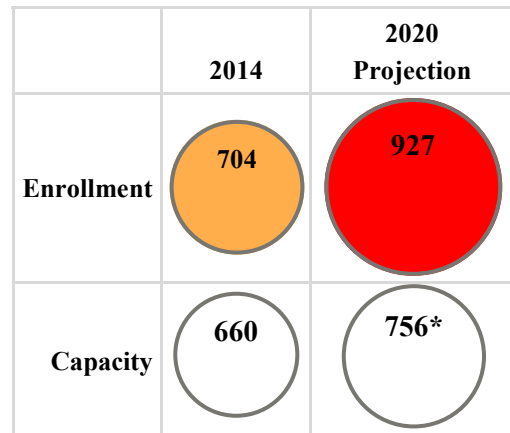
In 2014, James K. Polk had an enrollment of 704 students and a measured capacity of 660 students. By 2020, the school should increase to 927 students. The existing school capacity will not accommodate the increase of students, the school will be over-utilized, and the projected enrollment will exceed the recommended maximum school size of 850 for elementary schools.

The academic curriculum at James Polk includes reading, language arts, mathematics, social studies, and science and also offers:

- Art instruction once per week
- Two physical education classes per week
- Family life instruction at age-appropriate levels
- Band and orchestra beginning in 4th grade
- Vocal music instruction once per week
- Talented & Gifted program for grades K-5
- 3, 4, and 5th grade Keyboarding
- TAG Pullout program
- Special education programs ¹

¹<http://www.acps.k12.va.us/polk>

STUDENT ENROLLMENT (# OF STUDENTS)



Color	Enrollment as % of Capacity	
Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

* includes summer 2015 capacity project

KEY FINDINGS

SUMMARY

Based on the data collected through this assessment, James K. Polk meets 77 percent of the educational adequacy benchmarks for an ideal 21st century elementary school. The school has a satisfactory rating in all sections except for utilization.

Besides utilization, there are still other areas of concern that this report will address.

RECOMMENDATIONS

The school will be over capacity by 2020 and will exceed the recommended size for an elementary school. In order to accommodate the projected enrollment, a significant addition and interior renovation is required. Consideration should be given to accommodating the projected increase in enrollment at another location due to the overall school size.

GROUP 1 — REQUIRED PLANNING

- **Explore** a new west end elementary school to alleviate the over enrollment.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** existing instructional, shared and support spaces to meet the recommended size requirements outlined in the educational specifications (\$22.1M).

GROUP 3 — SECOND PRIORITY

- **Equip** all core classrooms, corridors and support spaces with additional electrical receptacles as required, and all classrooms with two teaching walls.
- **Equip** all classrooms and support spaces with individual climate control.
- **Additional** storage for teachers and students should be integrated into the reconfigured classrooms as well as an upgrade to furniture, fixtures and equipment.
- **Upgrade** the building technology equipment and infrastructure to meet the educational adequacy standards.

GROUP 4 — LONG RANGE RECOMMENDATIONS

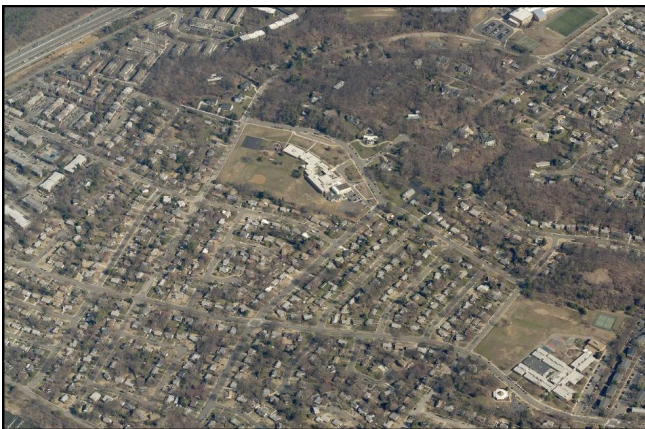
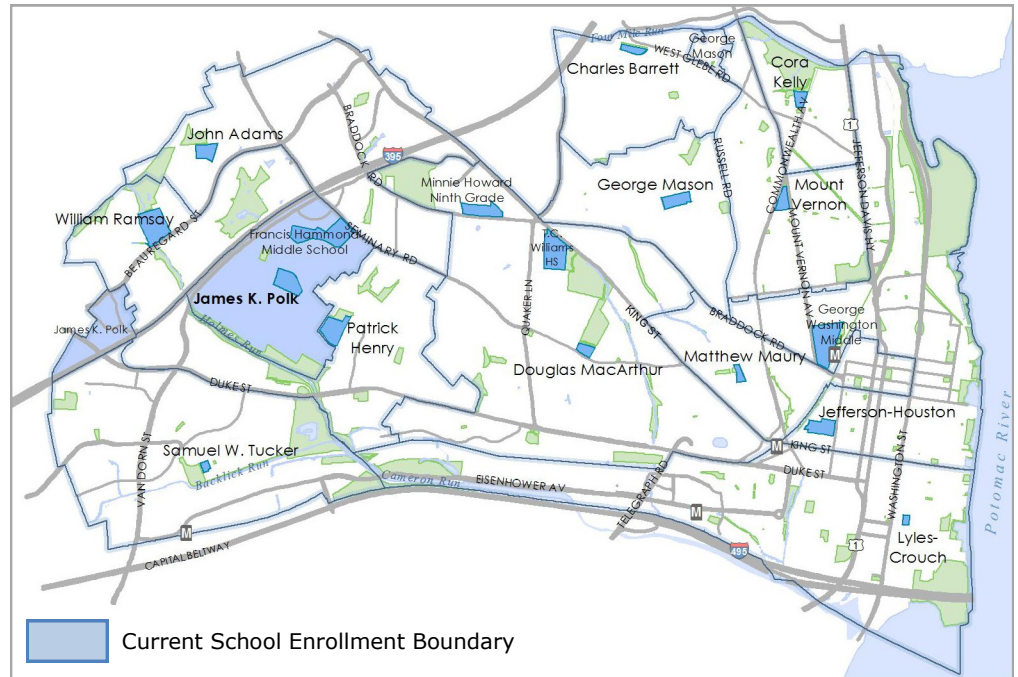
- **Resize** the gymnasium to meet the standards required for the size of the student population.
- **Explore** the feasibility of an expansion to attain additional instructional square footage required to support the projected enrollment if a decision is made to exceed the recommended size for an elementary school or if alternatives cannot be determined.

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$34.2M (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **New 38,000 SF addition (\$12.1M) including:**
 - Demolition of existing pod to be replaced
 - Relocation and expansion of the gymnasium
- **Total renovation of existing building (\$22.1M) including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings

Polk is not currently in the modernization program per the FY 2016-2025 CIP; however, a four classroom addition will be built in summer 2015 and a ten classroom addition is scheduled beginning in FY 2016. The construction budget for that project is currently \$4.8M. Additional renovations, additions or the complete master plan projects will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

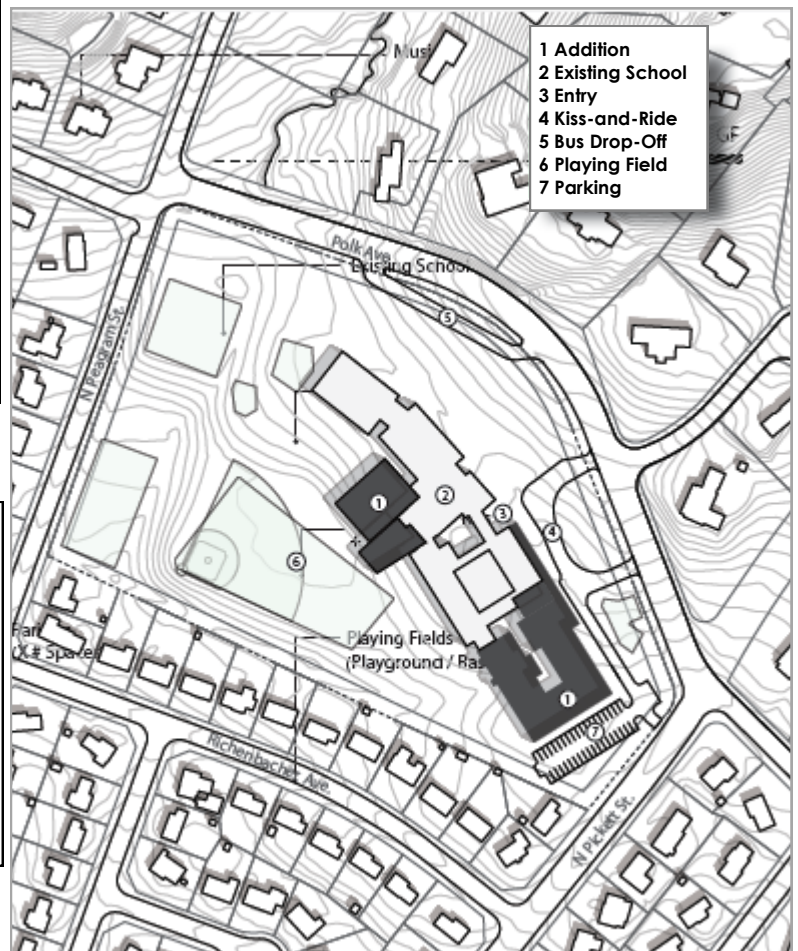
JAMES K. POLK ELEMENTARY SCHOOL



Neighborhood context looking north. Patrick Henry Elementary School is at lower right.



School site looking west across Polk Avenue

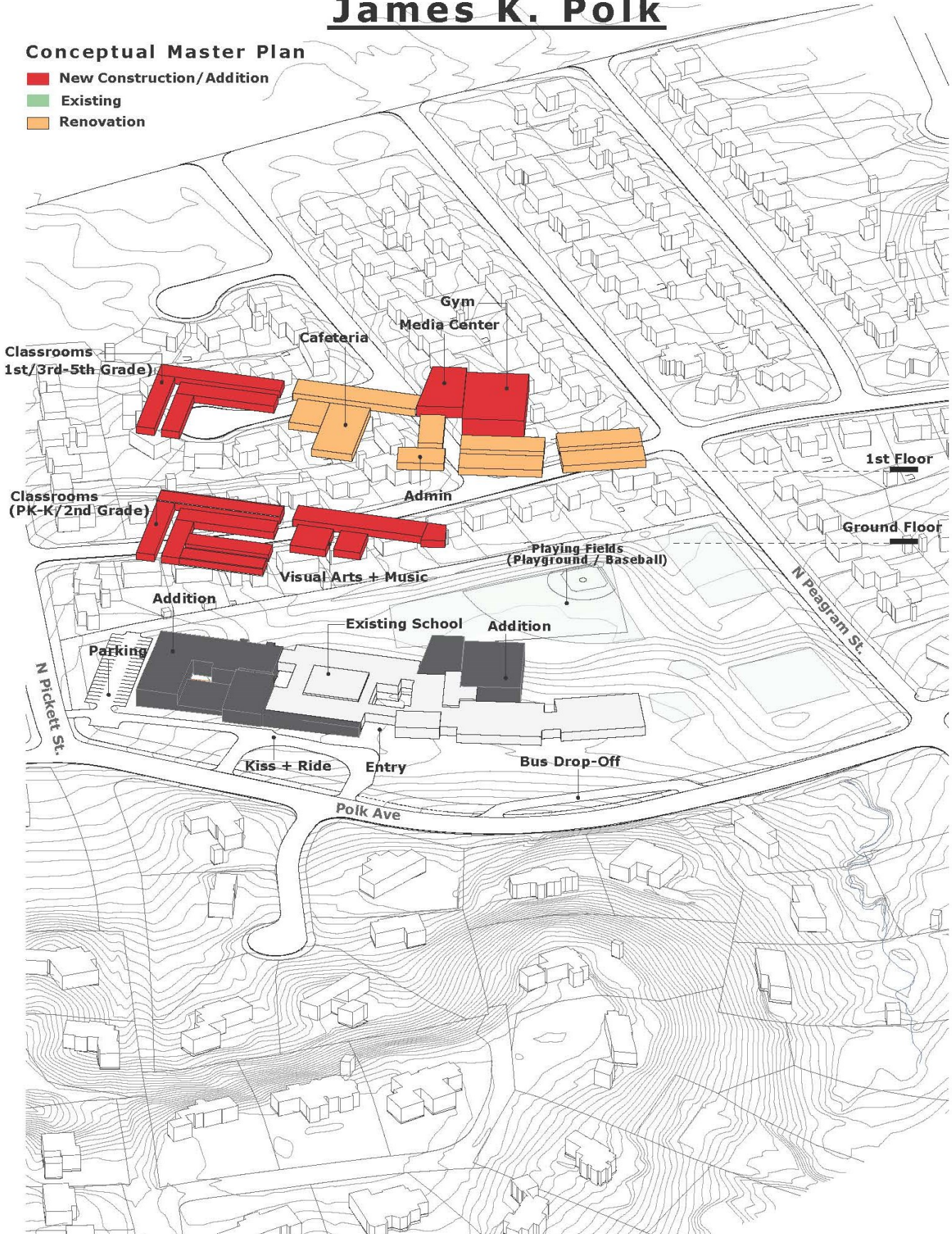


Master Plan concept showing potential additions

James K. Polk

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



JEFFERSON-HOUSTON SCHOOL

1501 Cameron Street, Alexandria, VA 22314

AT A GLANCE...

<i>Year Built</i>	<i>Current Floor Area</i>	<i>Floor Area Permitted by Zoning (SF)</i>
2014	124,000 (school) Durant Center (15,358) Old Town Pool (5,336)	241,705
<i>Zoning</i>	<i>Lot Size (acres)</i>	<i>Floor Area Ratio</i>
RB (064.03-01-01)	7.4	0.75
POS (064.03-01-01)	2.9	0.0

Jefferson-Houston was not included in the educational adequacy analysis because it opened in September 2014.

BACKGROUND

Jefferson-Houston School was built in 2014. The building includes a full size gymnasium, a white box theater, and a distributed dining operation instead of a traditional cafeteria.



Adjacent to the school is the City of Alexandria's Durant Center, Old Town Pool and Buchanan Park.

The new building includes:

- 10 early-childhood classrooms
- 21 classrooms for first- through eighth-grade students
- Full-size gymnasium
- Synthetic turf playing field
- Play areas and structure for all grade levels
- Green features that are on target for LEED Silver designation

SCHOOL SITE

Jefferson-Houston has a full-size athletic turf field, playgrounds, and an outdoor learning garden. Adjacent City recreation features include:

- Buchanan Park, located behind the Old Town Pool, has a playground that is accessible throughout the day.
- Durant Center, home of the Alexandria Commission for the Arts, provides space for community rehearsals, performances, special events, meetings and arts focused classes.
- Old Town Pool is a 25-yard pool with a diving well and separate training pool for small children.

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	444	553
Capacity	800	800

Color	Enrollment as % of Capacity	
Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity



RECOMMENDATION

Because this is the newest ACPS facility, it is recommended to reassess in 10 years.

JOHN ADAMS ELEMENTARY SCHOOL

5651 Rayburn Avenue, Alexandria, VA 22311

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1967	<i>Current Floor Area</i> 143,290	<i>Lot Size (acres)</i> 7.9	<i>Core Classroom Surplus/Deficit (2020)</i> -2
<i>Zoning</i> R-12 (019.01-01-48)	<i>Floor Area Permitted by Zoning (SF)</i> 103,842	<i>Floor Area Ratio</i> 0.3	<i>Total Program Square Feet (2020)</i> -13,843
<i>School Site</i> Excellent	<i>Building Assessment</i> Satisfactory	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 138%

BACKGROUND

John Adams was built in 1967 to serve the community as a middle school. It became an elementary school in 1980. The school's mission is to create a community of high achieving students through their involvement in arts-integrated learning environments.

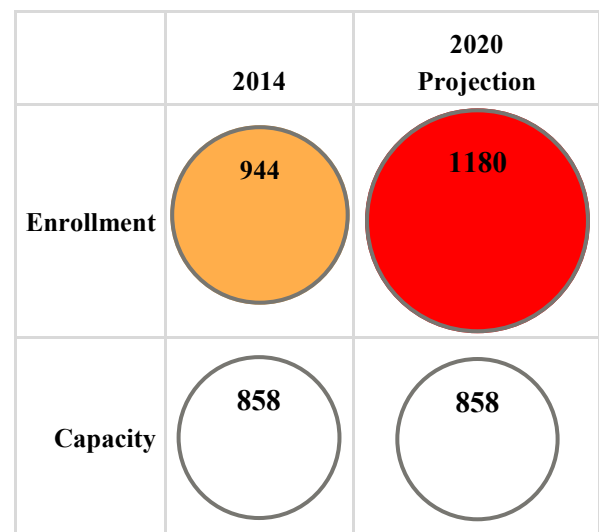


In 2014, John Adams had an enrollment of 944 students with a measured capacity of 858 students. By 2020, enrollment is expected to increase to 1,180 students lacking space for approximately 322 students. Both the current and projected enrollment exceeds the recommended size for an elementary school.

The academic curriculum at John Adams includes reading, language arts, mathematics, social studies, and science and also offers:

- Vocal and Instrumental music instruction once a week
- Art instruction once a week
- Band and orchestra beginning in 4th grade
- Two physical education classes a week
- Family life instruction at age-appropriate levels
- English as a second language classes
- Special education programs
- TAG pull out program
- Talented and Gifted program for grades K-5¹

STUDENT ENROLLMENT (#OF STUDENTS)



Color	Enrollment as % of Capacity	
Light Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

Based on the data collected through this assessment, John Adams meets 82 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

HIGH PRIORITY ITEMS

- Core classrooms are under-sized.
- School exceeds the recommended size for an elementary school.

¹<http://www.acps.k12.va.us/adams>

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Steep slope changes around the edges of the school</i>
<i>Playgrounds</i>	4
<i>Recreation Features</i>	<i>Playgrounds, asphalt play area. Adjacent Chambliss Park includes baseball field, tennis courts and open field.</i>
<i>Resource Protection Areas</i>	
<i>Parking</i>	124
<i>Storm Water Management</i>	<i>Severe ponding around site. No known SWM facilities.</i>



John Adams earned an excellent rating on their school site assessment. While it met the minimum requirements of separated vehicular, bus and kiss and ride circulation, the one vehicular access off of Rayburn Avenue causes traffic problems during arrival and dismissal. Additionally, there is not enough staff and visitor parking so currently overflow parking is located adjacent to Chambliss Park (zoned POS). A parking lot expansion is underway and expected to be completed prior to the 2014-2015 school year. The portion of the park currently used for parking will be restored as open space once the school lot is expanded. Site access is constrained, even with planned improvements.

The existing square feet of the school exceeds the allowed square feet per the zoning.

INSTRUCTIONAL AND SUPPORT SPACES

The highest priority item at John Adams is the measured size of core classrooms. **Collectively, only five out of 52 core classrooms, or ten percent, meet the educational adequacy size requirements.** The average size for a pre-kindergarten or kindergarten class is 749 square feet instead of the desired 1,025 square feet. The average size

for grades one through five is 705 instead of the desired 900 square feet.

The second highest priority item in this section is the fixed equipment and infrastructure in the specialty classrooms. All of these rooms lack sound enhancement systems and half of them are not equipped with wall mounted interactive devices. These classrooms are not equipped with the required infrastructure to function as a 21st century learning space.

Additional issues with the instructional spaces are the lack of storage, plumbing fixtures, and fixed equipment. The classrooms lack adequate student and teacher built-in storage and shelving. Over 90 percent of the classrooms have an interactive electronic device as needed but are missing a secondary teaching wall.

The educational standards require an internal or adjoining bathroom for all core classrooms, but these are absent from over 50 percent of John Adams' classrooms. In addition, 70 percent of classrooms are not equipped with sinks and bubblers.

BUILDING ASSESSMENT

The building assessment of John Adams is rated satisfactory. The portion most lacking is sufficient electrical receptacles being present in multiple locations along classroom and corridor walls. The clocks and PA system throughout the building are not integrated, nor are the clocks digital, as desired. Finally, there is limited wireless connectivity in the hallways and corridors and the school does not provide wireless bandwidth at a one-to-one student-to-device ratio.

John Adams also lacks extended learning areas.

RECOMMENDATIONS

The student enrollment currently exceeds the optimal school size for an elementary school. To serve the projected enrollment, an addition is required and should only be considered in conjunction with major circulation /transportation improvements. Considerations should be given to accommodating the projected increase in enrollment at another location due to the overall school size. Also, the current building exceeds the FAR allowed under the current zoning.

GROUP 1 — REQUIRED PLANNING

- **Assess** building condition comprehensively through a facility condition assessment.
- **Explore** a new west end elementary school to alleviate the over enrollment.

GROUP 2 — FIRST PRIORITY

- **Reconfiguration** of the school to achieve size and layout requirements in the instructional classrooms and provide extended learning areas, per the educational specifications (\$43.9M).

GROUP 3 — SECOND PRIORITY

- **Additional** electrical receptacles added to the classrooms and corridors.
- **Provide** additional storage for teachers and students.
- **Equip** all classrooms with two teaching walls
- **Upgrade** the building technology in specialty classrooms to meet the educational adequacy standards.

GROUP 4 — LONG RANGE RECOMMENDATIONS

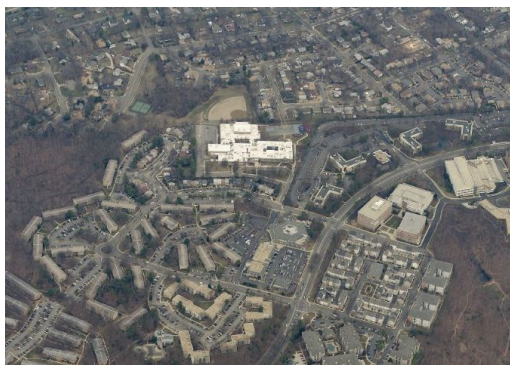
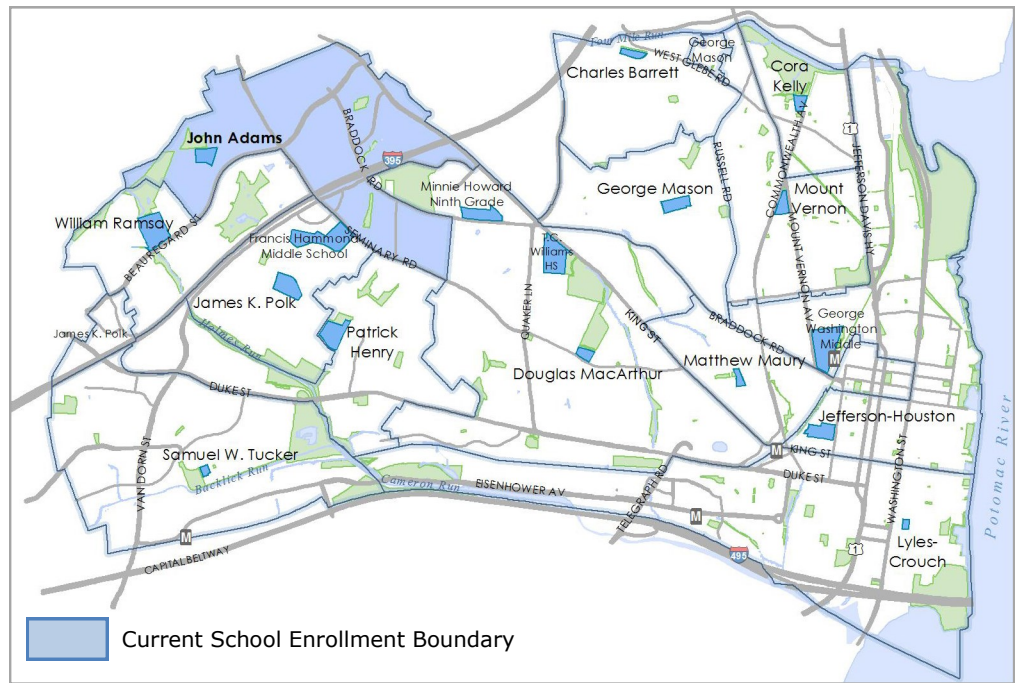
- **Implementation of the future Beauregard Small Area Plan (SAP)** road network may provide opportunities for alternate and cohesive site strategies including relocating playgrounds to build a parking lot adjacent to the new parallel road, which includes a pull-off for student kiss-and-ride.
- In conjunction with the implementation of the Beauregard SAP road network, **an addition could be considered** to accommodate an increase in enrollment if a decision is made to exceed the recommended size for an elementary school. This addition should only be considered in conjunction with major circulation/transportation improvements and would exceed the FAR under the current zoning.

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$49.4 (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **New 9,000 SF addition (\$5.2M) including:**
 - New parking and playing field
 - New playgrounds and storm water management
- **Total renovation of existing building (\$43.9M) including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings

John Adams is not currently in the modernization program per the FY 2016-2025 CIP. This project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

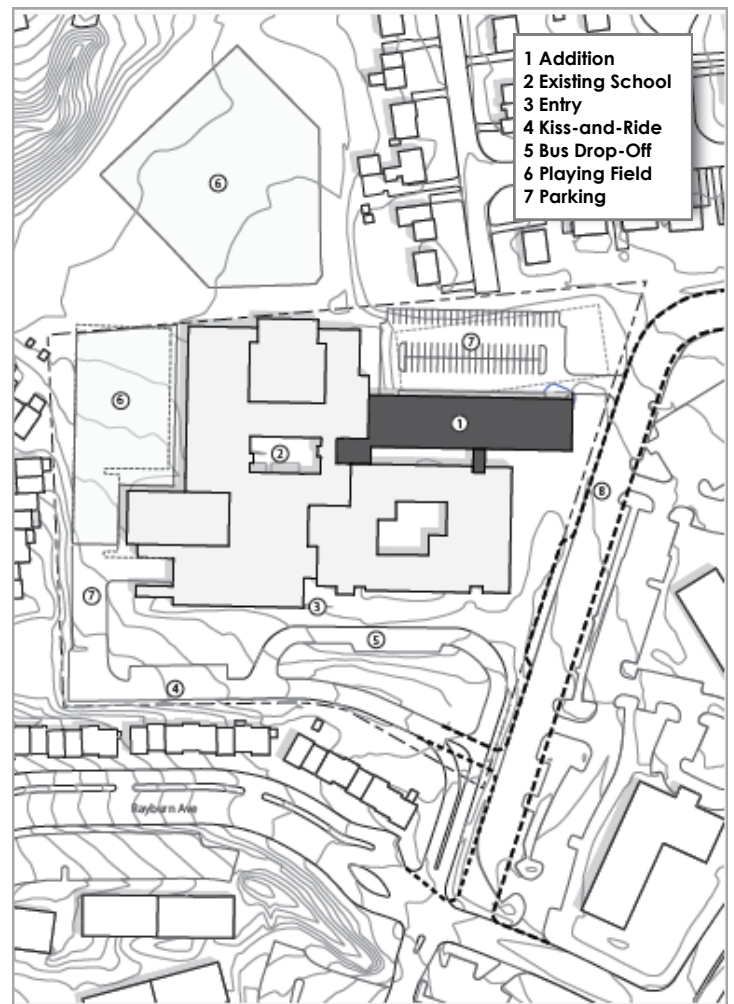
JOHN ADAMS ELEMENTARY SCHOOL



Neighborhood Context



School site looking north across Rayburn Avenue

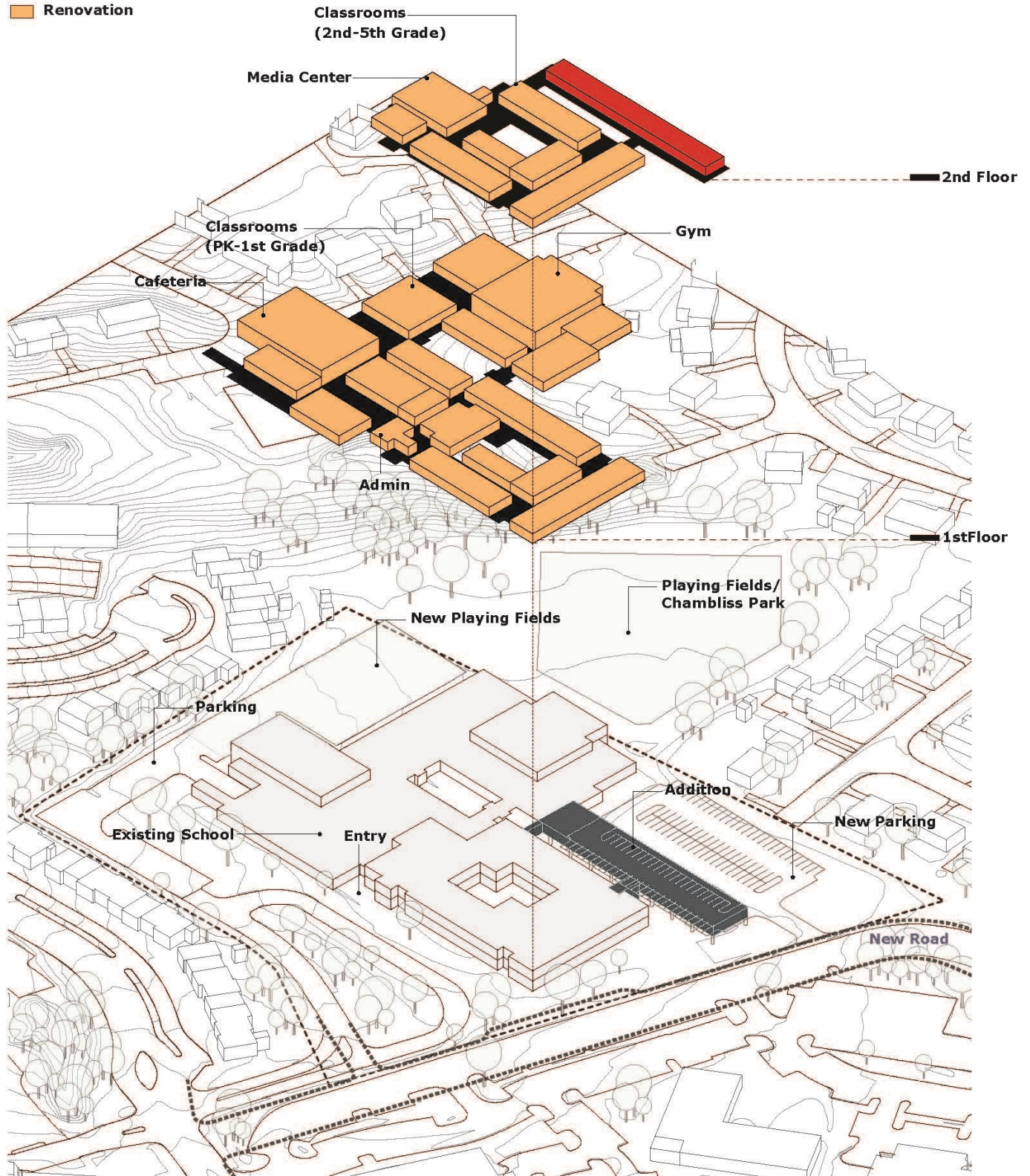


Master Plan concept showing potential addition and potential future access road alignment.

John Adams

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



LYLES-CROUCH TRADITIONAL ACADEMY

530 South St. Asaph Street, Alexandria, VA, 22314

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1958	<i>Current Floor Area</i> 65,645	<i>Lot Size (acres)</i> 2.0	<i>Core Classroom Surplus/Deficit (2020)</i> +4
<i>Zoning</i> RM (080.02-03-01)	<i>Floor Area Permitted by Zoning (SF)</i> 86,838	<i>Floor Area Ratio</i> 1.5	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -3,243
<i>School Site</i> Inadequate	<i>Building Assessment</i> Borderline	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 96%

BACKGROUND

Lyles-Crouch is a traditional academy educating children from kindergarten through fifth grade.



In 2014, Lyles-Crouch's enrollment was 396 students with a measured capacity of 375. By 2020, enrollment is expected to decrease nine percent to 360 students. Therefore, based on the school's existing capacity it will be able to accommodate the future enrollment size, as currently projected.

The academic curriculum at Lyles-Crouch includes reading, language arts, mathematics, social studies, and science and also offers:

- Art instruction with a certified art teacher once a week
- Vocal music instruction with a certified music teacher once a week
- Instrument music lessons beginning in fourth grade
- Fourth and Fifth graders can join band or orchestra
- Two physical education classes a week with a certified P.E. teacher
- Family life instruction at age-appropriate levels
- English as a second language classes
- Special education programs
- Talented and Gifted program for grades K-5¹

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	396	360
Capacity	375	375

Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

Based on the data collected through this assessment, Lyles-Crouch meets 60 percent of the educational adequacy requirements. A score of 66 earns this school a borderline rating.

While there is an adequate number of core classrooms to accommodate future enrollment, the existing rooms are not large enough. An interior reconfiguration would expand the classrooms to meet the square footage requirements of the educational specifications.

HIGH PRIORITY ITEM

- Core classrooms are all under-sized.

¹<http://www.acps.k12.va.us/adams>

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>No steep slopes</i>
<i>Playgrounds</i>	<i>1</i>
<i>Recreation Features</i>	<i>Picnic and bench areas. Asphalt play areas, open field & baseball field. Garden beds.</i>
<i>Resource Protection Areas</i>	<i>No RPAs or natural areas.</i>
<i>Parking</i>	<i>43</i>
<i>Storm Water Management</i>	<i>Sand filter</i>



Lyles-Crouch earns an inadequate rating on the school site assessment. The school's site circulation lacks proper separation of the kiss-and-ride and school bus lane. There is no stacking area for the student kiss-and-ride. The on-site parking is not adequate to accommodate the needs of the school, although there is street parking on the adjacent streets that accommodate school visitors and staff.

The school's play field size is inadequate and the outdoor play equipment appear undersized. Additionally, the site design does not incorporate outdoor learning spaces.

INSTRUCTIONAL AND SUPPORT SPACES

The instructional and support spaces at this school earn a satisfactory rating. The highest priority item at Lyles-Crouch is the measured size of the core classrooms.

Collectively, none of the core classrooms meet the educational adequacy size requirements. The average size for a kindergarten class is 750 square feet instead of the desired 1,025. The average size of grades one through five is 727 square feet instead of the desired 900 square feet. An interior reconfiguration is recommended to right-size the core classrooms.

The second priority item, in this section, is the measured size of the specialty classrooms and shared spaces. Both these sections earn an inadequate rating and an addition is recommended to address this inadequacy.

Additional issues with the specialty and shared spaces are the lack of temperature controllability, the lack of storage, and the lack of fixed equipment. Only half of these spaces possess an interactive electronic device as needed. In addition, 70 percent of spaces are missing a secondary teaching wall. Lastly, the educational standards require an internal or adjoining bathroom for all core classrooms; these are only present in 10 percent of the core academic classrooms.

BUILDING ASSESSMENT

The building assessment of Lyles-Crouch reveals a borderline rating. The building organization is inadequate because there are no distinct academic clusters, the shared programmatic spaces are not appropriately located and clustered, and the building lacks extended learning areas.

The technology infrastructure is inadequate because the school lacks the adequate wireless access for students and lacks a sufficient amount of electrical receptacles in corridors and classrooms. In addition, the clock and PA system are not integrated, nor are the clocks digital as required.

RECOMMENDATIONS

The school has the adequate number of core classrooms but they are not the adequate size. A small addition is recommended to provide sufficient size of the specialty classrooms and shared spaces.

GROUP 1 — REQUIRED PLANNING

- **Assess** the site to determine whether the separation of the kiss-and-ride and school bus lane is feasible (based on property boundaries, setbacks, etc.). It will also help inform opportunities for additional parking
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** existing instructional classroom spaces to meet the recommended size requirements and provide extended learning areas as outlined in the educational specifications (\$12.7M).

GROUP 3 — SECOND PRIORITY

- **Equip** all core classrooms, corridors and support spaces with additional electrical receptacles as required and all classrooms with two teaching walls.
- **Upgrade** the building technology equipment and infrastructure to meet the educational adequacy standards in the specialty classrooms.
- **Upgrade** the playing fields and play equipment.
- **Equip** all classrooms and support spaces with individual climate control.

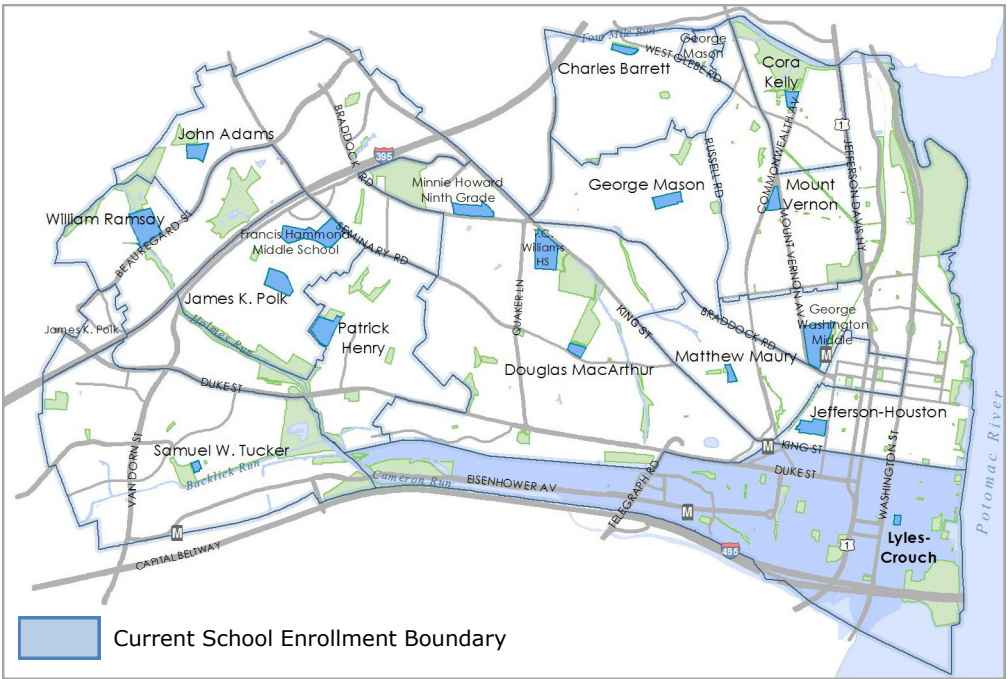
GROUP 4 — LONG RANGE RECOMMENDATIONS

- **Expand** the building to allow for right-sized specialty classrooms such as art and music (\$2.0M).

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$14.7 (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **New one-story 5,500 SF addition (\$2.0M) including:**
 - Concrete columns on the ground floor level
- **Total renovation of existing building (\$12.7M) including:**
 - All new mechanical, plumbing, electrical and window systems
 - New a/v equipment for classrooms
 - New interior walls, floors and ceilings

Lyles-Crouch is not currently in the modernization program per the FY 2016-2025 CIP. Renovations, additions or the complete master plan projects will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

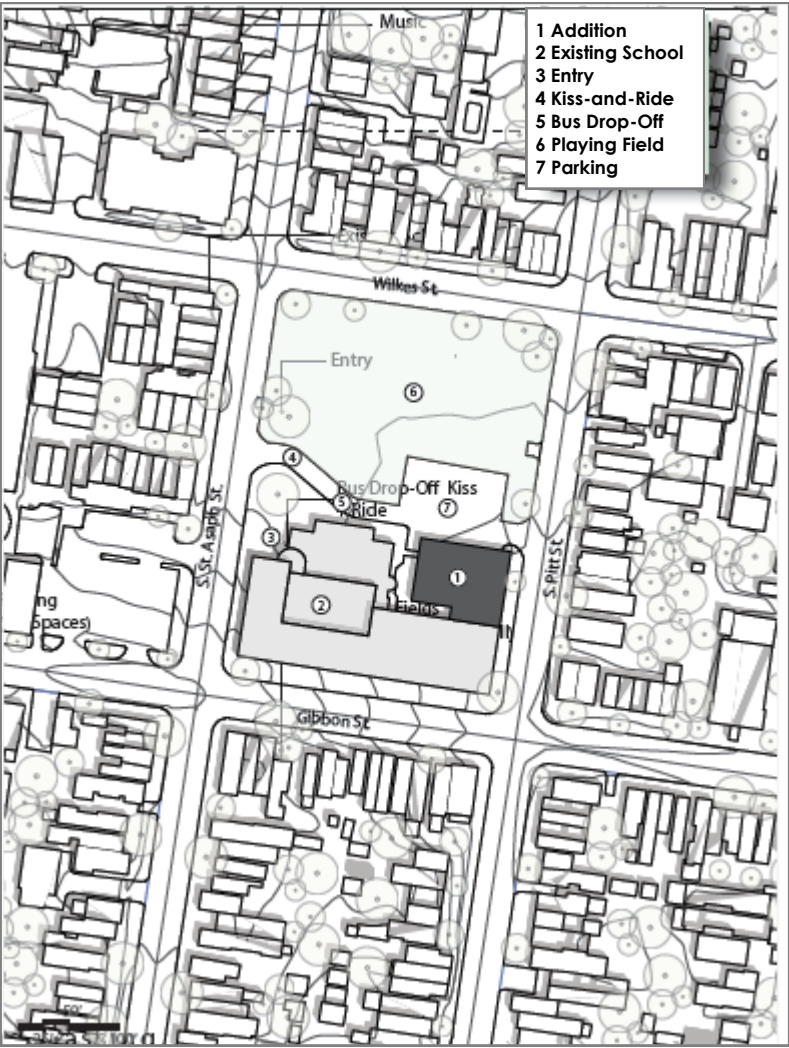


LYLES-CROUCH TRADITIONAL ACADEMY SCHOOL

Current School Enrollment Boundary



Neighborhood context looking north with Washington Street on the left and Royal Street on the right.



Master Plan concept with potential addition over parking

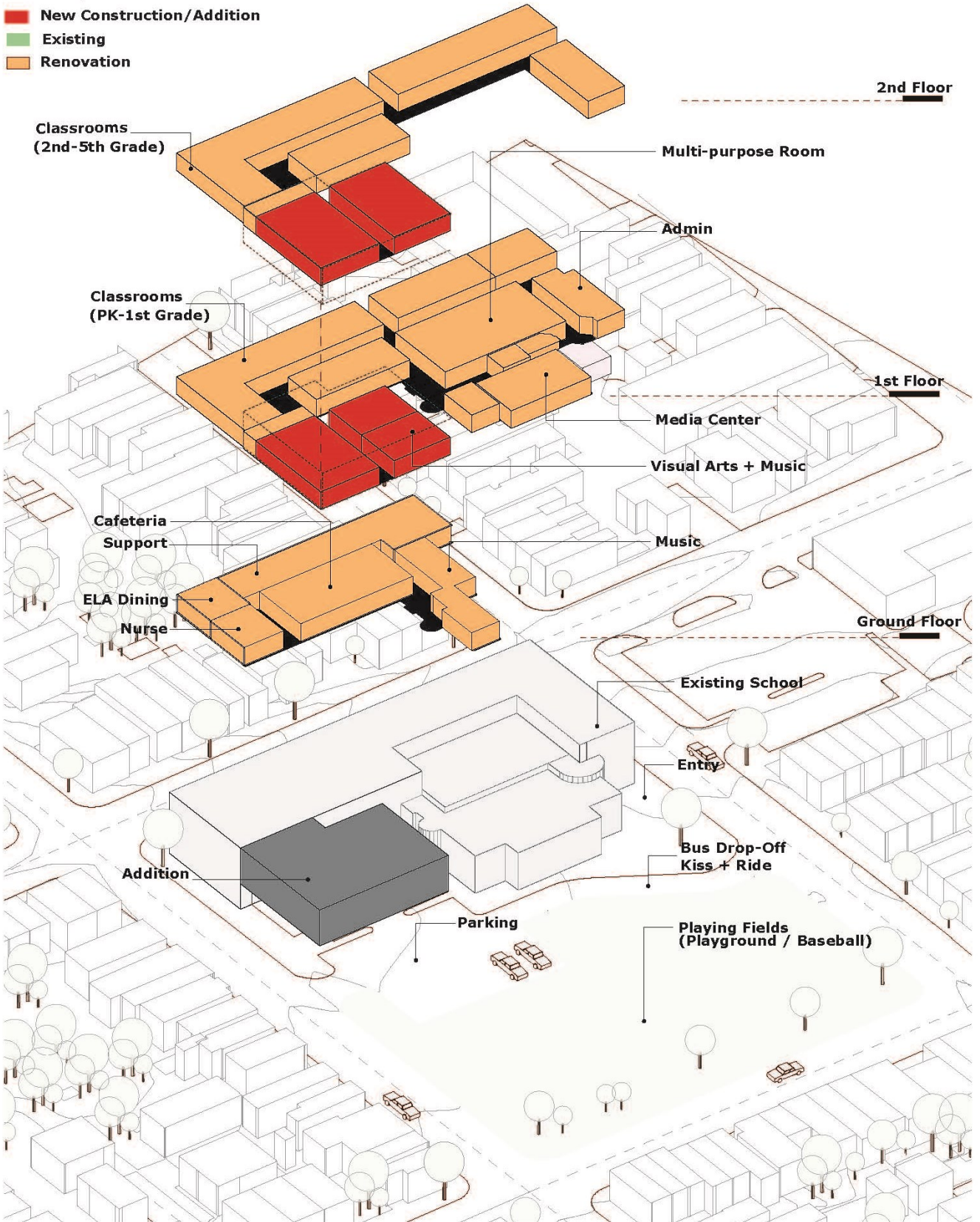


School site looking south across Wilkes Street with St. Asaph Street on the right of the image

Lyles-Crouch

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



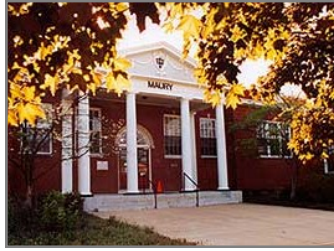
MATTHEW MAURY ELEMENTARY SCHOOL

600 Russell Road, Alexandria, VA, 22301

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1929	<i>Current Floor Area</i> 51,800	<i>Lot Size (acres)</i> 3.9	<i>Core Classroom Surplus/Deficit (2020)</i> -2
<i>Zoning</i> R-5 (053.03-02-02)	<i>Floor Area Permitted by Zoning (SF)</i> 76,840	<i>Floor Area Ratio</i> 0.45	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -10,308
<i>School Site</i> Borderline	<i>Building Assessment</i> Satisfactory	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 135%

BACKGROUND

Matthew Maury Elementary School was built on seven acres of farm land purchased in 1929. Classroom additions occurred in 1941, 1949, and 1961. In 1971, a gymnasium was added while the library underwent a major renovation. In 2005, a new media center, additional classrooms, teacher work area, new offices, and security upgrades were added.






In 2014, Matthew Maury's enrollment was 441 students with a measured capacity of 350. By 2020, enrollment is expected to increase to 473 students.

The academic curriculum at Maury includes reading, language arts, mathematics, social studies, and science and also offers:

- Music instruction once a week
- Art instruction once a week
- Band and orchestra beginning in 4th grade
- Two physical education classes a week
- Family life instruction at age-appropriate levels
- Dedicated science exploration lab
- Talented and Gifted program for grades K-5¹

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	441	473
Capacity	350	350

Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

The data collected through this assessment reveals that Matthew Maury Elementary School meets 66 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

HIGH PRIORITY ITEMS

- Based on the 2020 enrollment projections, as it exists now, the school will be significantly over capacity and lacking space for over 120 students.

¹<http://www.acps.k12.va.us/maury>

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Flat with steep slope around playground</i>
<i>Playgrounds</i>	<i>1</i>
<i>Recreation Features</i>	<i>Playground, asphalt play areas, basketball goals, baseball and open fields; Natural area adjacent to main building</i>
<i>Resource Protection Areas</i>	
<i>Parking</i>	<i>7</i>
<i>Storm Water Management</i>	<i>Nyloplast inlets-underground detention system, but many SWM issues on site.</i>



The Matthew Maury site is poorly organized for both pedestrian and vehicular traffic. Site circulation does not separate these types of traffic creating potential conflicts. The bus lane and parent kiss-and-ride drop off occur in the same location; on the street in front of the school. There is a small parking lot behind the school with room for about 7 vehicles and due to the urban nature of the site, a majority of parking occurs in the street. Furthermore, the small school site does not allow for full-size athletic fields as recommended by the Virginia Guidelines. The equipment provided is weathered and dated. The playground is not accessible for students with disabilities; play courts are deteriorating and drainage is poor.

INSTRUCTIONAL AND SUPPORT SPACES

The instructional and support spaces of the building earned a satisfactory rating. While the overall assessment resulted in a positive rating, it should be noted that **most of the instructional spaces do not meet the division's size requirements.** Common deficiencies throughout the spaces include dated furniture that is not flexible, inadequate space to accommodate flexible furniture arrangements, lack of electrical outlets, and poor internal adjacencies for required restrooms or collaborative learning spaces.

The most urgent items in this section are classroom capacity. **The average classroom size for kindergarten is**

680 rather than the suggested 1,025 square feet. This is the smallest in the division. The measured average classroom size for grade one through five is 715 square feet rather than the desired 900 square feet. The overall capacity of specialty classrooms and small support rooms is approximately 29 percent smaller than the square foot minimums detailed in the educational specification.

BUILDING ASSESSMENT

Most classrooms in Matthew Maury have the technology infrastructure and tools required to support a 21st century learning environment. However, overall space arrangements do not meet the division's expectations for providing small learning environments and key classroom adjacencies. Classrooms are loosely organized by grade grouping with few adjacent restrooms and no collaborative learning spaces. Additionally, the school is not ADA equitable with the main entrance not providing ADA access.

RECOMMENDATIONS The shortage of classroom numbers and space must be addressed in order to bring Matthew Maury up to levels designated in the Ed Specs for ACPS, and to address the level of student population currently projected. The Site and Building Plan improvements should be considered and incorporated into the comprehensive site and building plan listed below. Site and building recommendations (Groups 2-4) are generally grouped according to priority; however, due to the limited size of the school site, each decision may impact the others.

GROUP 1 — REQUIRED PLANNING

- **Develop** a vision, goals and strategies with a comprehensive Site and Building Plan for the school.
- **Develop** priority phasing with associated Return-on-Investment to determine whether existing building renovations, demolition, and new construction should be combined or phased separately. Funding sources, level of service, and schedule disruption should be identified. Funding should consider coordinated impacts of future construction in an effort to prevent double-work or demolition of new facilities.
- **Consolidate** the two adjacent properties of the main school site—600 Russell Road and 701 Johnston Place—to create one single lot. Analyze the newly combined FAR to determine whether further rezoning is necessary to accommodate projected additional spaces.
- **Seek** abandonment and dedication to the school of the Rucker Place spur east of Johnston Place.
- **Develop** a long-range management plan for the school and site facilities to coordinate capital improvement and operations projects. Management plan should incorporate decisions which may be allowed to evolve in response to future needs and opportunities.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 3 — SECOND PRIORITY

- **Provide** outdoor learning areas with sufficient infrastructure, allowing flexible programming.
- **Address** physical and/or operational changes for the drop-off location, configuration for busses, and kiss-and-ride.
- **Reorganize** overall layout of classrooms—may allow opportunity to create a PreK/Kindergarten “wing” at the school.
- **Explore** the utilization of Johnston Place for greater connection to Beach Park. Various approaches may include temporary closures (times barricades) to connect the school with Beach Park, narrowing the street for greater space or converse utilization for parking. Coordinate with the Neighborhood Park planning process and the City’s Recreation Parks and Cultural Activities to enhance Beach park facilities for greater utilization by the school and Community.
- **Provide** all classroom and support spaces with the appropriate loose furnishings and fixed equipment to address noted deficiencies for a 21st century learning environment.
- **Consider** the improved utilization of the southwestern on-property alley (from Elm Street) for additional parking opportunities in that area of the school site.
- **Upgrade** the existing play areas and field to meet ACPS and ADA guidelines.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the space within the existing school to meet recommended size requirements outlined in the Educational Specifications.
- **Construct** a new, two-story wing in the general location of the existing northern wing and gymnasium to provide the missing classroom and support space needed to meet the projected utilization. Redistribute the core classroom types accordingly.

GROUP 4 — LONG RANGE RECOMMENDATIONS

- **Consider** the purchase of adjacent property as it may provide more area for the school thus creating a more efficient site.

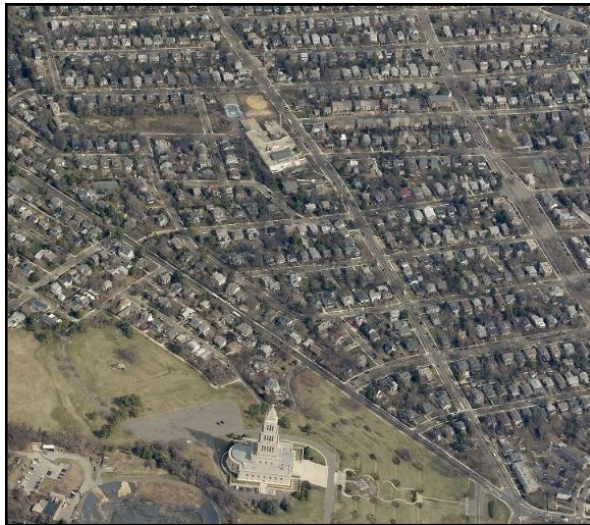
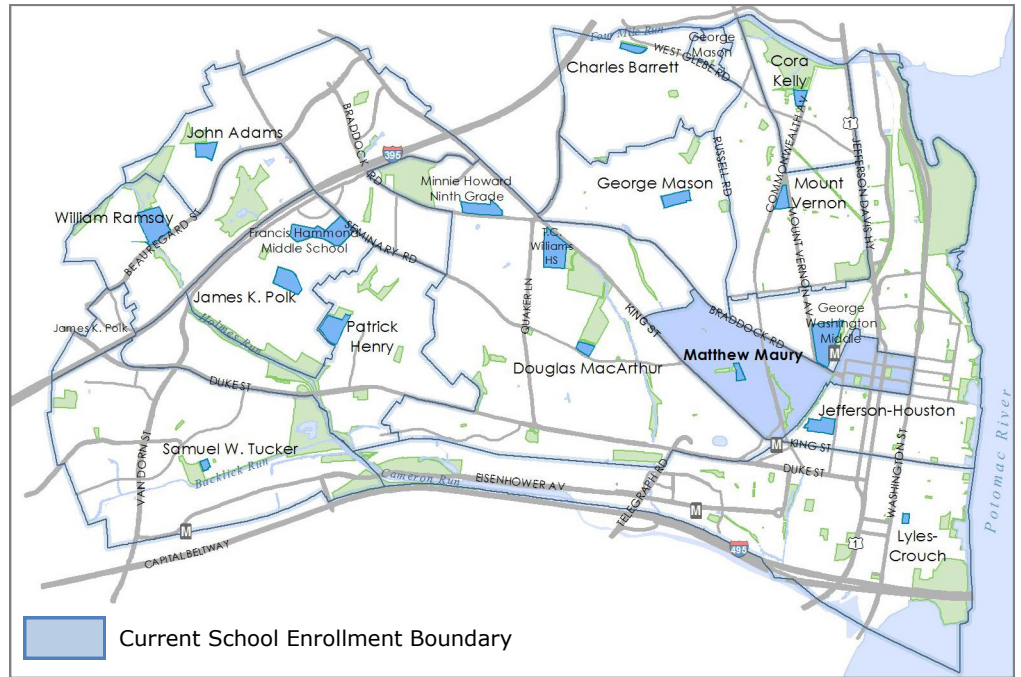
CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$23.7 (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **Total renovation of existing building (\$10M) including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings

- **New 31,000 SF addition (\$13.6M) including:**
 - Demolition of portions of the existing building
 - New elevator
 - New gymnasium and relocated cafeteria

In the FY 2016-2025 School Board CIP, Maury is currently slated to receive a modernization and capacity addition beginning in FY 2023. The construction budget for that project is currently \$16,500,000.

MATTHEW MAURY ELEMENTARY SCHOOL



Neighborhood context looking north across King Street from Masonic Memorial



Master Plan concept showing potential second-level addition

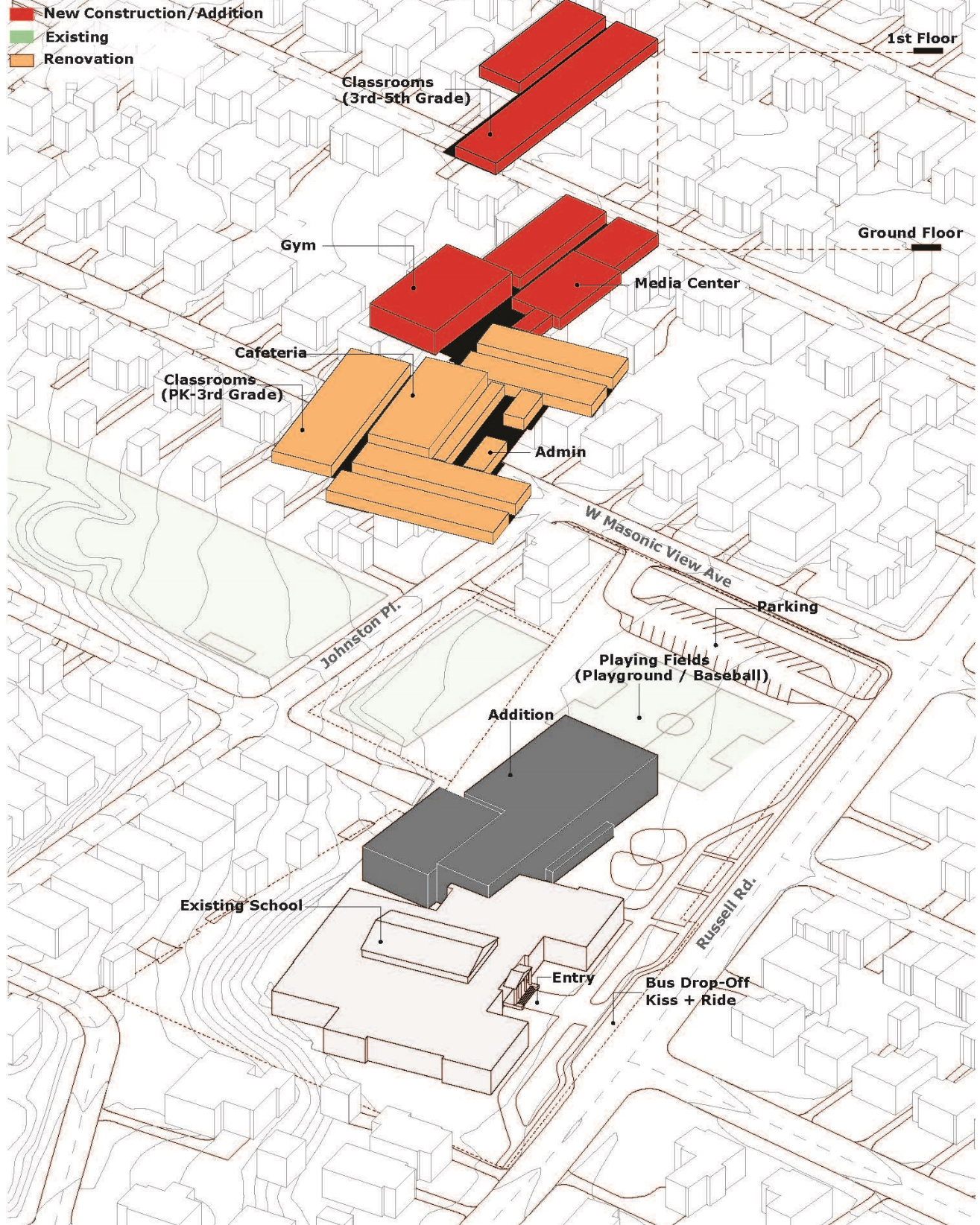


School site looking west across Russell Road

Matthew Maury

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



MOUNT VERNON COMMUNITY SCHOOL

2601 Commonwealth Avenue, Alexandria, VA 22301

AT A GLANCE...			
<i>Year Built</i> 1923	<i>Current Floor Area</i> 112,730 (school) 18,000 (rec center) (library*)	<i>Lot Size (acres)</i> 6.5	<i>Core Classroom Surplus/Deficit (2020)</i> +1
<i>Zoning</i> R-2-5 (024.04-02-03)	<i>Floor Area Permitted by Zoning (SF)</i> 90,272	<i>Floor Area Ratio</i> 0.45	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -1,064
POS (024.04-02-03)	0	0.0	
<i>School Site</i> Borderline	<i>Building Assessment</i> Inadequate	<i>Instructional & Support Spaces</i> Borderline	<i>Projected Utilization (2020)</i> 111%

BACKGROUND

The current Mount Vernon Community School structure was built in 1923.

Classroom additions were built in 1941 and 1950 with major building additions in 1967 and 1991. The adjacent Mount Vernon Recreation Center, built in 1997, shares the gym and outdoor fields with the school.



In 2014, Mount Vernon had an enrollment of 817 students with a capacity of 755 students. By 2020, enrollment is expected to increase to 841 students. Mount Vernon is a community school encouraging partnerships between school and community in an effort to improve academics, health, and development of the community and its students. This relationship fosters a personalized curriculum teaching real-world problem solving skills. Mount Vernon offers an English-Spanish Dual Language program aiming to make students bilingual, bi-literate, and culturally aware. The school also offers:

- Art instruction once per week
- Two physical education classes per week
- Family life instruction at age-appropriate levels
- Band and orchestra beginning in 4th grade
- Vocal music instruction once per week
- Talented & Gifted program for grades K-5
- 3, 4, and 5th grade Keyboarding
- TAG Pullout program
- Special education programs¹

¹<http://www.acps.k12.va.us/mtvernon>

* Because the school, recreation center and library are located on the same site, all contribute to the floor area ratio calculation.

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	817	841
Capacity	755	755

Color	Enrollment as % of Capacity	
Light Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

The data collected through this assessment reveal that Mount Vernon Community School meets only 53 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

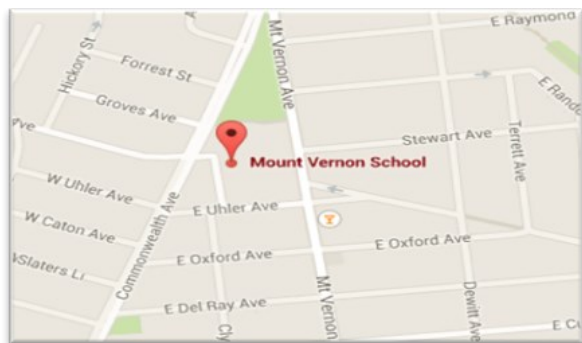
HIGH PRIORITY ITEMS

- Based on the 2020 projections, as it exists now, the school will be substantially over capacity, lacking space for nearly 86 students. The school is suffering from a shortage of classrooms which is compounded by the fact that the recommended ratio of square feet per student is not met.

- The classroom conditions are also below satisfactory levels for reasons such as, inadequate classroom size, lack of storage space, poor acoustics and the absence of individual controllability of the HVAC and lighting systems.

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Isolated steep area</i>
<i>Playgrounds</i>	<i>3</i>
<i>Recreation Features</i>	<i>Open field, playground, baseball field and basketball court.</i>
<i>Resource Protection Areas</i>	<i>No</i>
<i>Parking</i>	<i>27</i>
<i>Storm Water Management</i>	<i>Multiple inlets, two underground detention systems.</i>



Organization of vehicular and pedestrian traffic patterns are not efficiently organized about the site. Site circulation does not separate vehicular and pedestrian traffic creating potential life safety hazards for all users. Pedestrian paths cross vehicular thoroughfares during after-school pickup times. Additionally, the bus lane is also used as the kiss and ride drop off area which could create a dangerous situation for students. It was also observed, while appropriately located near the main entrance, on-site parking for staff and visitors is inadequate based on the number of spaces provided.

While the apparent rating of the fields is borderline, the two play fields, located adjacent to the gym, do not meet Virginia Guidelines but are adequate for the school's use. Finally, the field condition is deteriorating with observable divots and dry patches noted that could pose a hazard to students.

INSTRUCTIONAL AND SUPPORT SPACES

The most urgent items in this section are classroom capacity and HVAC mechanical issues.

The instructional and support spaces of the building earned a borderline rating. Some factors that contributed to this rating include: the rooms do not meet the size requirements; the lack of lighting and HVAC controllability, and noise interference from inside and outside the rooms was not mitigated. Numerous teachers reported humidity and moisture issues in their classroom which they indicate increases during the warmer months.

The average core classroom size for prekindergarten and kindergarten is 885 rather than the suggested 1,025 square feet. The measured average classroom size for grade one through five is 757 square feet rather than the desired 900 square feet needed to provide a flexible learning environment.

The overall capacity of specialty classrooms and small support rooms is approximately 28 percent smaller than the square foot minimums detailed in the educational specification. The facility had significant deficiencies with air temperature, humidity and acoustical elements. The lighting, in most classrooms, was adequate but not adjustable. Finally, several classrooms had no natural light or windows with a view outdoors.

Among the core classrooms, the item of greatest concern is the **acoustics**. Many of the classrooms are divided by a thin, operable partition which does not provide an adequate sound barrier between the two classrooms. The student and teacher program furniture, which includes shelving, cabinets, wardrobes and cubbies, is either not adequate or non-existent in most classrooms. Classrooms are not equipped with the required number of teaching walls and electrical outlets are not readily available on all walls. The shared spaces, including the gym, art room, and cafeteria are not centrally located.

BUILDING ASSESSMENT

Most classrooms in Mount Vernon have the technology infrastructure and tools required to support a 21st century learning environment. However, overall space arrangements do not meet the standards for providing small learning environments and key classroom adjacencies. While classrooms are mainly organized by grade level groupings, there were no defined extended learning areas observed and not all shared programmatic spaces were centrally located.

The building organization also contributed to the school's low rating because the shared spaces such as: the gym, cafeteria and art room are not centrally located and did not meet their intended size or space requirements.

RECOMMENDATIONS

Mount Vernon currently lacks sufficient space to accommodate future enrollment. An addition and interior renovation is recommended after a building conditions assessment. Because of the age of the building, a partial demolition may be a more cost effective option to renovation. Currently the school building exceeds the allowed FAR for the building, which has implications on a future significant renovation and the feasibility of a future addition.

GROUP 1 — REQUIRED PLANNING

- **Site** assessment to determine whether the drop-off location for the school can be relocated/reconfigures (based on property boundaries, setbacks, etc.). It will also help inform opportunities for additional parking.
- **Explore** existing building conditions to determine if partial demolition is a more cost effective option to renovation due to the building's age.
- **Rezone** to rectify the existing FAR issue and allow room for an addition or major reconfiguration.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the spaces within the existing school to meet the recommended size requirements for individual academic spaces as outlined in the educational specifications incorporation of collaborative learning spaces (\$35.9M).
- **Construct** an addition to the school which may be necessary to attain the additional square footage required but will be more accurately determined once the building reorganization and redistribution has been studied (\$3.2M).

GROUP 3 — SECOND PRIORITY

- **Equip** all classrooms and support spaces with individual climate controls, and technology equipment and infrastructure.
- **Provide** additional storage for teachers and students as well as an upgrade to the furniture, fixtures and equipment.
- **Upgrade** existing playing areas .

GROUP 4 — LONG RANGE RECOMMENDATIONS

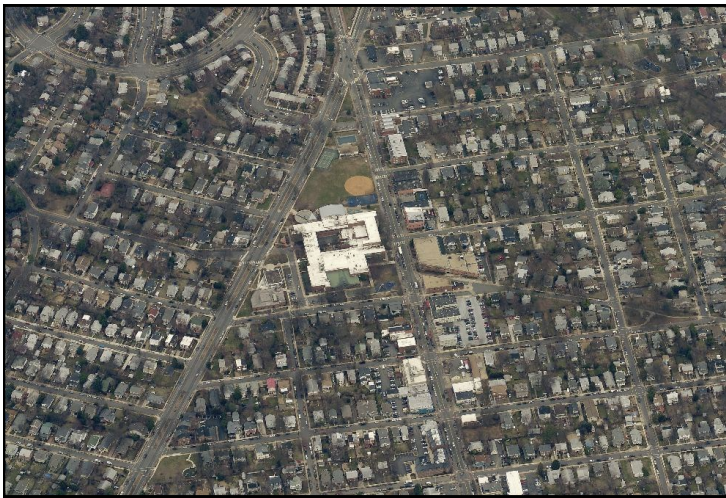
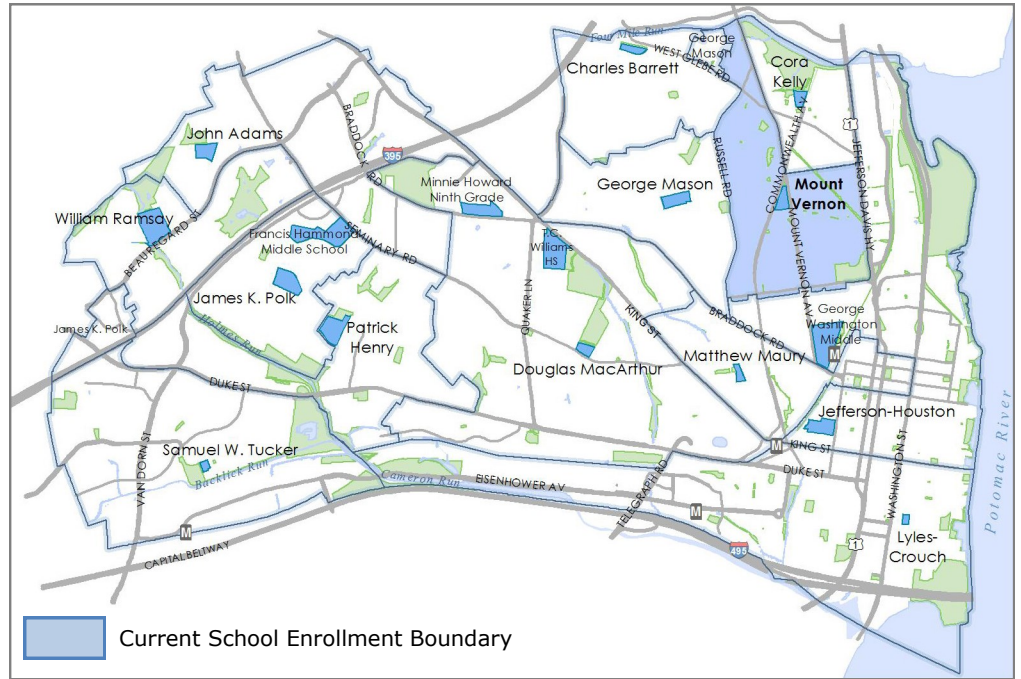
- **Relocate** tennis courts to allow for upgraded playing fields.

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$39.1 (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **New 10,000 SF addition (\$3.2M)**
- **Total renovation of existing building (\$35.9M) including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings

Mt. Vernon is not currently in the modernization program per the FY 2016-2025 CIP. Renovations, additions or the complete master plan projects will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

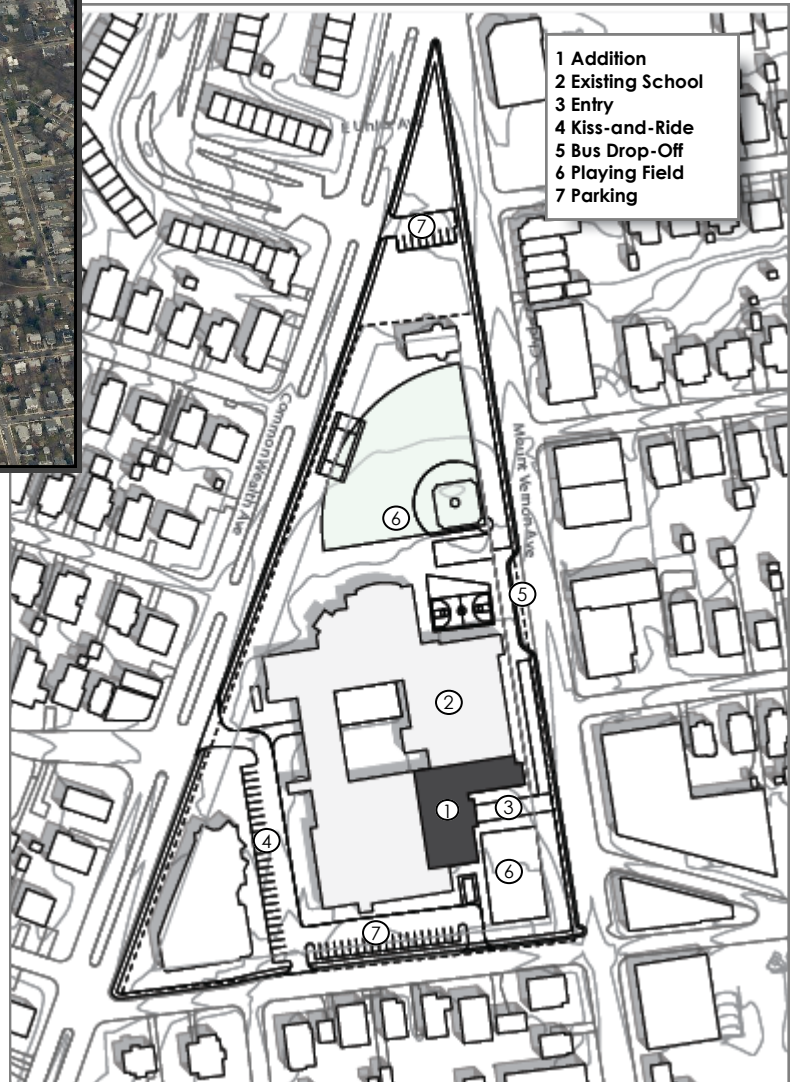
MOUNT VERNON COMMUNITY SCHOOL



Neighborhood context looking north.



School site looking north. Commonwealth Avenue is on the left, and Mount Vernon Avenue on the right. Duncan Library is at the lower left.

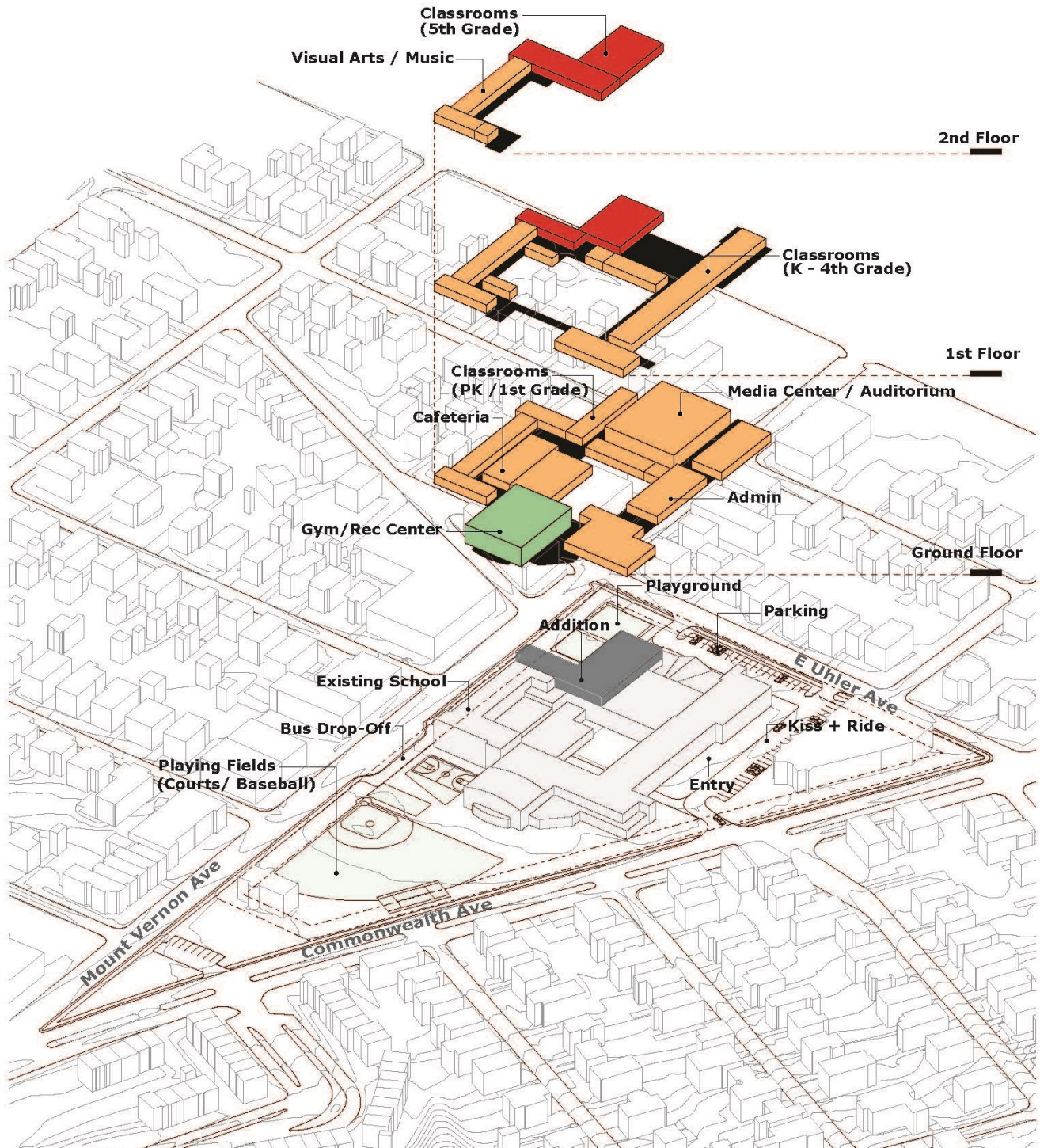


Master Plan concept showing two-level addition on southeastern part of school site.

Mount Vernon

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



PATRICK HENRY ELEMENTARY SCHOOL

4643 Taney Avenue, Alexandria, VA 22304

AT A GLANCE...

Year Built 1953	Current Floor Area 62,400 (school) 8,850 (rec center)	Floor Area Permitted by Zoning (SF) 176,418
Zoning R-12(039.03-05-14)	Lot Size (acres) 15.0	Floor Area Ratio 0.30

Patrick Henry was not included in the educational adequacy analysis because there is a feasibility study under a separate effort.

BACKGROUND

Patrick Henry Elementary School was originally constructed in 1953, classroom additions in 1995 and 2011. The City of Alexandria constructed a gymnasium addition in 1973 that included a full-time recreation center. In 1996, a media center was constructed. This site is shared with a full-time City recreation center and tennis courts.



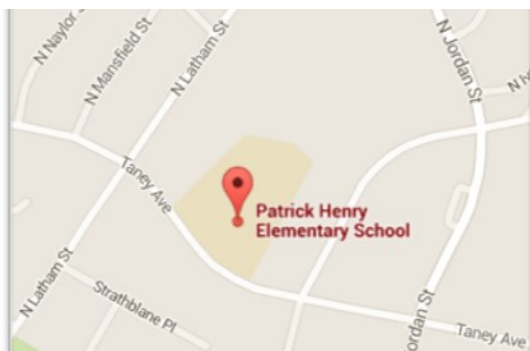
RECOMMENDATION

Patrick Henry was not included in the educational adequacy analysis due to the fact that a study was currently underway. Results of the study should be incorporated into the next update of the Long Range Plan.

ACPS currently has a Patrick Henry Capacity Project in the CIP. This project will create Pre K-8 program with additional capacity for ACPS on the west side of the city. Planning is underway to analyze the current school and recreation center conditions and site to review options for construction versus renovation. A recommendation will be made to the School Board in Spring 2015.

SCHOOL SITE

The Patrick Henry site includes two open fields, tennis courts and a playground. Student drop-off occurs along Taney Avenue which conflicts with local traffic during peak times. Buses use the parking lot which often conflicts with staff, visitor and Rec Center patrons. Analysis of these circulation issues is a part of the study currently underway.



SAMUEL W. TUCKER ELEMENTARY SCHOOL

435 Ferdinand Day Drive, Alexandria, VA, 22304

<i>AT A GLANCE...</i>			
<i>Year Built</i>	<i>Current Floor Area</i>	<i>Lot Size (acres)</i>	<i>Core Classroom Surplus/Deficit (2020)</i>
2000	80,180	2.4	-7
<i>Zoning</i>	<i>Floor Area Permitted by Zoning (SF)</i>	<i>Floor Area Ratio</i>	<i>Total Program Square Feet (2020)</i>
CDD 9 (068.01-02-01)	80,000	0.35	-6,398
<i>School Site</i>	<i>Building Assessment</i>	<i>Instructional & Support Spaces</i>	<i>Projected Utilization (2020)</i>
Satisfactory	Satisfactory	Satisfactory	126%

BACKGROUND

Samuel W. Tucker Elementary opened in 2000, making it the City's first new school in 30 years. The school is situated at the west end of the Cameron Station development and serves kindergarten through fifth grade students.



In 2014, Samuel Tucker had an enrollment of 750 students and a measured capacity of 620 students. By 2020, the school should increase to 780 students. Therefore, the existing school capacity will not accommodate the increase of students and the school will be over-utilized. The academic curriculum includes reading, language arts, mathematics, social studies, and science and also offers:

- Music instruction once a week
- Art instruction once a week
- Band and Orchestra beginning in 4th grade
- Two physical education classes a week
- Family life instruction at age-appropriate levels
- English as a second language classes
- Special education programs
- TAG pull out program
- Talented and Gifted program for grades K-5¹

¹<http://www.acps.k12.va.us/tucker>

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	750	780
Capacity	620	620

Color	Enrollment as % of Capacity	
Light Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

Based on the data collected through this assessment, Samuel Tucker meets 80 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

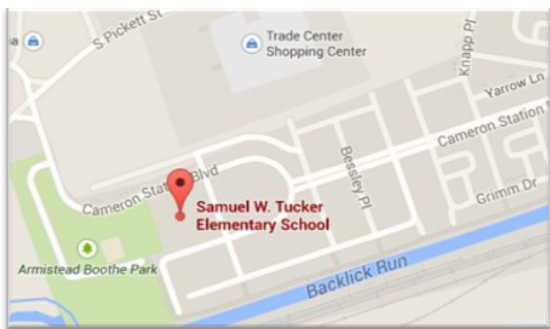
HIGH PRIORITY ITEMS

- The inadequate measured size of the specialty classrooms
- Inadequate size and number of core classrooms to accommodate the projected enrollment

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>No steep slopes</i>
<i>Playgrounds</i>	<i>2 (one in the adjacent Boothe Park)</i>
<i>Recreation Features</i>	<i>Adjacent Boothe Park contains playgrounds, a shelter, a baseball field, basketball court and tennis court</i>
<i>Resource Protection Areas</i>	<i>No natural areas</i>
<i>Parking</i>	<i>106</i>
<i>Storm Water Management</i>	<i>No known facilities onsite</i>

Samuel W. Tucker earns a satisfactory rating on the site assessment. The school meets all the requirements for site circulation and play areas except inadequate parking and lack of outdoor learning areas. Within the CDD zoning, the school site and park site are separately platted properties. The recreational features used by the school are on adjacent property. Because of this distinction, it may be difficult add parking and outdoor



learning areas to the school site.

It should be noted that the potential multi-modal bridge that may occur adjacent to Boothe Park could impact the size and number of recreational fields in close proximity to the school.

INSTRUCTIONAL AND SUPPORT SPACES

The instructional and support spaces at this school earn a satisfactory rating. **The highest priority item for this section is the measured size of the core classrooms.** Comprehensively, only 39 percent of the core classrooms meet the educational adequacy size requirements of 900 square feet. The average size of a specialty classroom is 437 square feet which is significantly higher than the desired 250 square feet. While the existing specialty classrooms are larger than the required size in the educational specifications, there is a deficit of three in

the total quantity. Multiple teachers typically share these spaces to accommodate the student capacity needs. The classes often run concurrently in these spaces indicating a lack of quantity. Only 17 percent of the classrooms have temperature controls.

The second highest priority item, in this section, is the natural lighting in the shared spaces. Only one third of these spaces have adequate natural lighting. The gymnasium, for example, only has a few windows even though it is not an interior space and could potentially accommodate more.

Additional issues the specialty classrooms are the lack of storage, bubblers and fixed equipment. The specialty classrooms lack adequate student and teacher built-in storage and shelving. Many rooms do not have adequate teacher furnishings, such as a desk or wardrobe. The rooms are not equipped with interactive learning devices and secondary teaching walls, as required. In spite of the satisfactory rating for this section, the items discussed above need attention to ensure this school continues to be an excellent teaching and learning environment for its students.

BUILDING ASSESSMENT

The building assessment of Samuel W. Tucker reveals a satisfactory rating. The only category that does not meet the educational adequacy standards is technology and supporting infrastructure. The inadequate rating for this section is due to electrical receptacles not being present in multiple locations along classroom and corridor walls. Additionally, the clocks and PA system throughout the building are not integrated, nor are the clocks digital, as desired. Finally, there is limited wireless connectivity in the hallways and corridors and the school does not provide wireless bandwidth at a one-to-one student-to-device ratio.

The other two categories: building organization and accessibility; both meet the standards. However, the school's noisier programmatic spaces are not adequately separated from the instructional classrooms, as required.

RECOMMENDATIONS

The school will continue to be over capacity by 2020. In order to accommodate the projected enrollment, an addition to the building would likely exceed the FAR allowed by the zoning. Considerations should be given to accommodating the projected increase in enrollment at another location due to the overall school size and site constraints.

GROUP 1 — REQUIRED PLANNING

- **Assess** opportunities to reconfigure existing instructional classroom spaces to meet the recommended size requirements outlined in the educational specifications.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the existing interior to provide sufficient sized classrooms (\$14.5M).
- **Renovate** the shared spaces to provide sufficient natural light.

GROUP 3 — SECOND PRIORITY

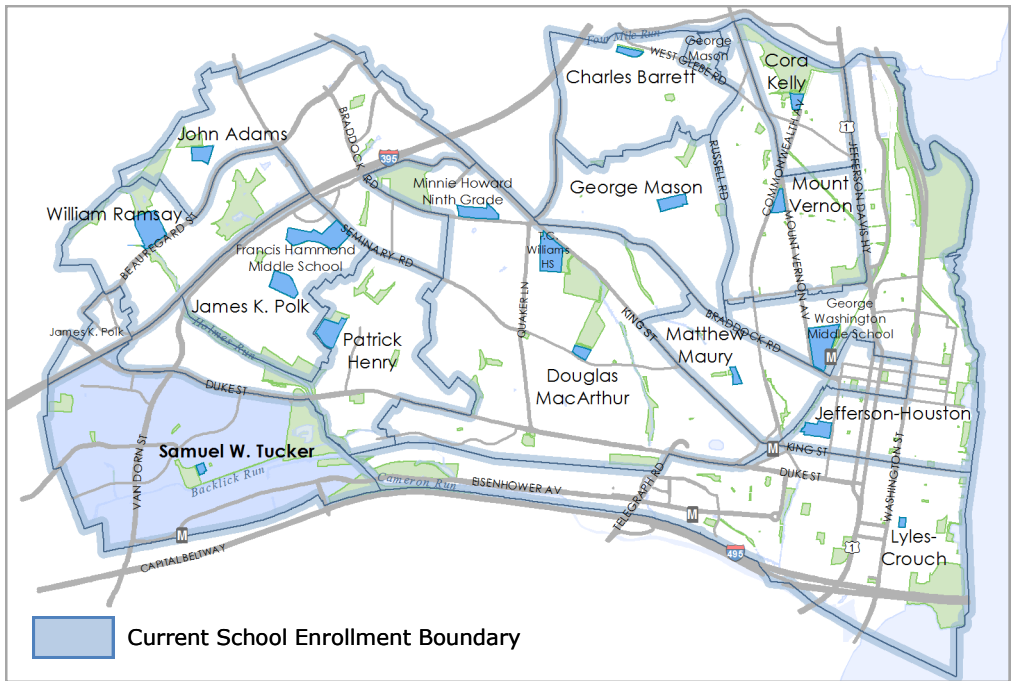
- **Assess** the possibility of equipping all classrooms and support spaces with individual climate control.
- **Provide** additional storage for teachers and students in the reconfigured classrooms.
- **Equip** all classrooms with two teaching walls and technology

GROUP 4 — LONG RANGE RECOMMENDATIONS

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$14.5M (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **Limited renovation of existing building including:**
 - New floor and ceiling finishes
 - New walls and MEP systems as necessary for new classroom configuration
 - Renovation of cafeteria and gymnasium
 - New plumbing and light fixtures

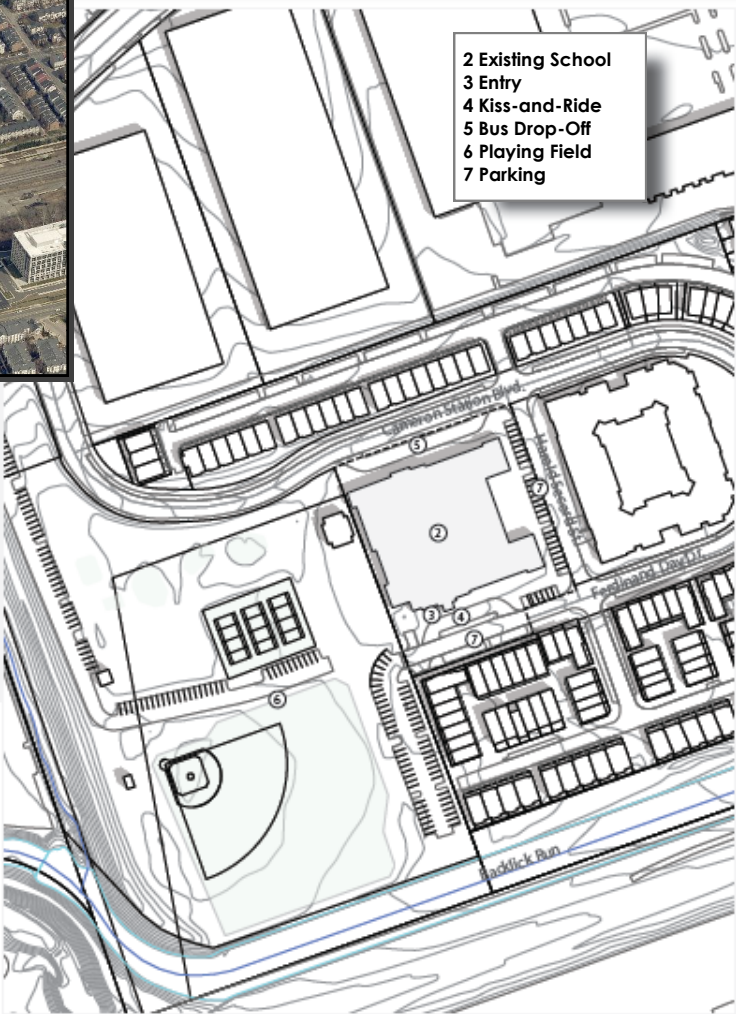
Tucker is not currently in the modernization program per the FY 2016-2025 CIP. This project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.



**SAMUEL W. TUCKER
ELEMENTARY SCHOOL**



Neighborhood context. The Norfolk Southern tracks and Cameron Run separate the site from uses along Eisenhower Avenue, shown at bottom right in this photo. Pickett Street runs along the upper left. The Cameron Station residential development is to the right of the school.



Master Plan concept showing renovations within the existing school footprint only.

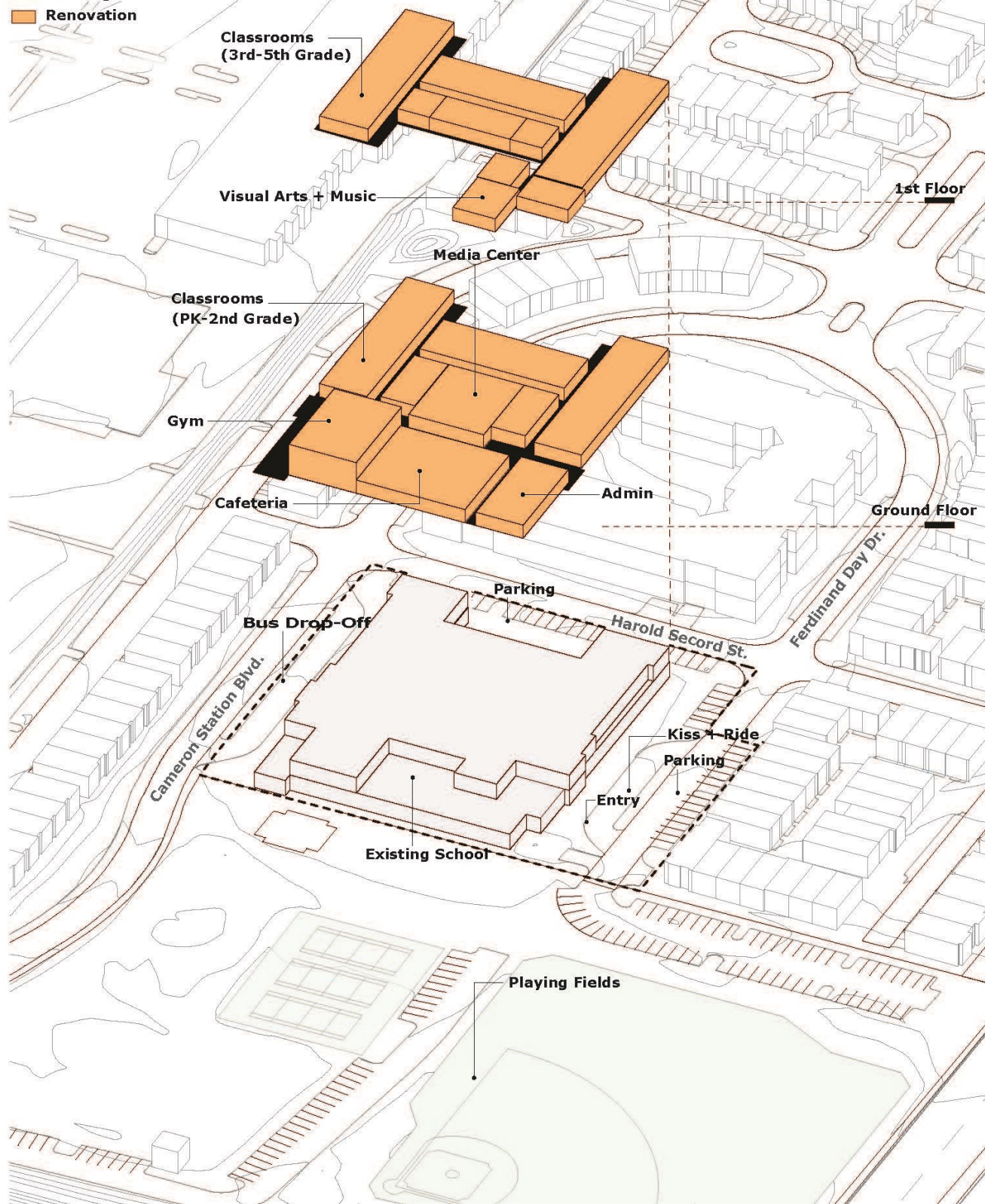


School site looking north, showing adjacent park and ball field. Cameron Run runs along the lower part of this photo.

Samuel Tucker

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



WILLIAM RAMSAY ELEMENTARY SCHOOL

5700 Sanger Avenue, Alexandria, VA 22311

<i>AT A GLANCE...</i>			
<i>Year Built</i> 1958	<i>Current Floor Area</i> 87,650 (school) 18,150 (rec center) 5,700 (nature center)	<i>Lot Size (acres)</i> 20	<i>Core Classroom Surplus/Deficit (2020)</i> -18
<i>Zoning</i> R-12 (028.02-03-34)	<i>Floor Area Permitted by Zoning (SF)</i> 99,989	<i>Floor Area Ratio</i> 0.30	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i> -23,857
RA (028.02-03-34)	58,432	0.75	
POS (028.02-03-34)	0	0.0	
<i>School Site</i> Borderline	<i>Building Assessment</i> Inadequate	<i>Instructional & Support Spaces</i> Satisfactory	<i>Projected Utilization (2020)</i> 133%

BACKGROUND

William Ramsay Elementary was built in 1958 and received building additions in 1963, 1977, 1990 and 2001. The school is bordered by an adjoining nature and recreation center. The school supports the community through Campagna Extended



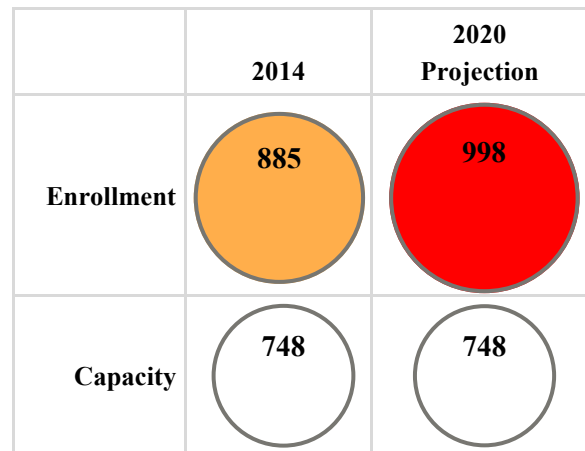
Day Care Programs, nature center programs, PTA reflections programs, and recreation center activities. The nature center and recreation center have an independent entrance; therefore, the community can access them without going through the school. Additionally, the projected enrollment will exceed the recommended maximum school size for elementary schools.

In 2014, Ramsay’s enrollment was 885 students with a measured capacity of 748. The 2020 enrollment projection indicates the school’s population will increase to 998 students.

The academic curriculum at Ramsay includes reading, language arts, mathematics, social studies, and science and also offers:

- Art instruction with a certified art teacher
- Vocal music
- Band, Orchestra and Instrument music lessons beginning in fourth grade
- Two physical education classes per week
- Family life

STUDENT ENROLLMENT (# OF STUDENTS)



Color	Enrollment as % of Capacity	
	100% and below	Fully or underutilized
	101% to 120% of capacity	Substantially over capacity
	Above 120% of capacity	Extremely over capacity

- English as a second language
- Special education programs
- TAG pull out program
- Talented and Gifted program for grades K-5¹

¹<http://www.acps.k12.va.us/ramsay>

KEY FINDINGS

SUMMARY

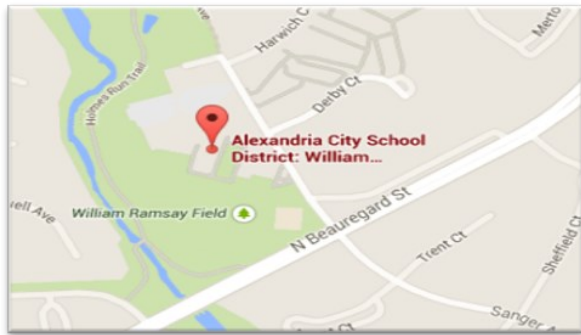
William Ramsay meets 58 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

HIGH PRIORITY ITEMS

- Accessibility sub-section which received a very inadequate rating.
- Inadequate measured size of the core and specialty classrooms.

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Steep Slopes</i>
<i>Playgrounds</i>	2
<i>Recreation Features</i>	<i>Baseball field, tennis court, asphalt play area, and open field</i>
<i>Resource Protection Areas</i>	<i>Adjacent to Dora Kelly Natural Park & dense trees</i>
<i>Parking</i>	135
<i>Storm Water Management</i>	<i>Storm filter & storm captor at western end of parking lot</i>



Based on the assessment, the school site received a borderline rating. The site circulation received a borderline rating because the school's kiss-and-ride driveway and the bus lane share the same vehicular entrance. The shared driveway also provides the school with limited stacking area which can cause congestion on adjacent streets. Finally, the on-site parking is not adequate based on the size of the school.

The play fields and play areas are in safe locations, but not adequate in size, nor do they possess the required equipment per the educational specifications. Included in the Beauregard Small Area plan is a multi-purpose field

that will provide adequate field space for the school. This will be located in the area of the existing tennis courts at the corner of Sanger Avenue and North Beauregard Street. The school is located between the William Ramsay Recreation Center and the Dora Kelly Nature Center.

INSTRUCTIONAL AND SUPPORT SPACES

While the instructional and support spaces rank satisfactory, there are a few areas of concern in this section. **The most important issue to note is the lack of sufficient square footage in the core and specialty classrooms.** The measured average size for pre-kindergarten and kindergarten class is 924 square feet instead of the desired 1,025. The measured average size for first through fifth grade class is 816 square feet instead of the desired 900.

Instructional rooms lack temperature controls with more than 60 percent of the occupants reporting humidity issues. In specialty classrooms, there is minimal student and teacher program furniture includes shelving, cabinets, wardrobes, and cubbies. These items are either not adequate or non-existent in most instructional spaces. The majority of these specialty spaces are also missing an interactive electronic device. Lastly, the shared spaces would benefit with additional windows increasing natural light levels.

BUILDING ASSESSMENT

The comprehensive building assessment of William Ramsay reveals an inadequate rating. The school lacks extend learning areas and public restrooms for visitors. Additionally, the shared programmatic spaces are not appropriately clustered nor located away from academic classrooms.

Electrical outlets are not present in multiple locations along classroom and corridor walls. The clocks and PA system throughout the building are not integrated, nor are the clocks digital, as desired. Additionally, there is limited wireless connectivity in the hallways and corridors. Finally, the school does not provide wireless bandwidth at a one-to-one student-to-device ratio.

This school lacks judicious use of ramps, elevators, and signage to allow a handicapped student, teacher, or visitor access to the entire school. The school has two separate floors and multiple split levels. There is an elevator at the school, but poorly located at one corner of the school, and only provides access to four resource classrooms on the second floor addition. The second floor addition is a separate building from the first and second floor of the main school.

RECOMMENDATIONS

The school will be over capacity by 2020. In order to accommodate the projected enrollment, an addition to the building would likely exceed the FAR allowed by the zoning. Considerations should be given to accommodating the projected increase in enrollment at another location due to the overall school size and site constraints.

GROUP 1 — REQUIRED PLANNING

- **Site** assessment to determine whether the drop-off and bus entrance for the school can be separated (based on property boundaries, setbacks, etc.) in coordination with the Recreation and Nature Centers.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Install** an elevator near the main entry to address existing ADA accessibility issue. Assess possible solutions to address existing ADA accessibility issues within the corridors.
- **Reconfigure** the existing school to meet the recommended size requirements and key organizational adjacencies outlined in the educational specifications (\$18.3M).

GROUP 3 — SECOND PRIORITY

- **Equip** all rooms with individual climate control.
- **Equip** all core classrooms and support spaces with additional electrical receptacles to meet educational adequacy standards.
- **Upgrade** the building technology to meet the educational adequacy standards.
- **Provide** additional storage for teachers and students as well as an upgrade to the furniture, fixtures and equipment.

GROUP 4 — LONG RANGE RECOMMENDATIONS

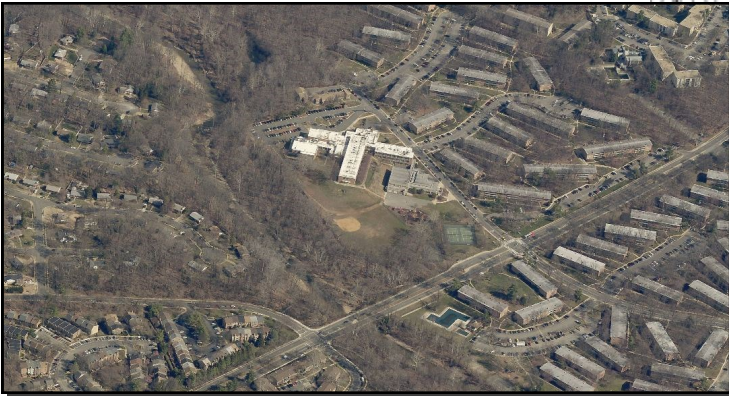
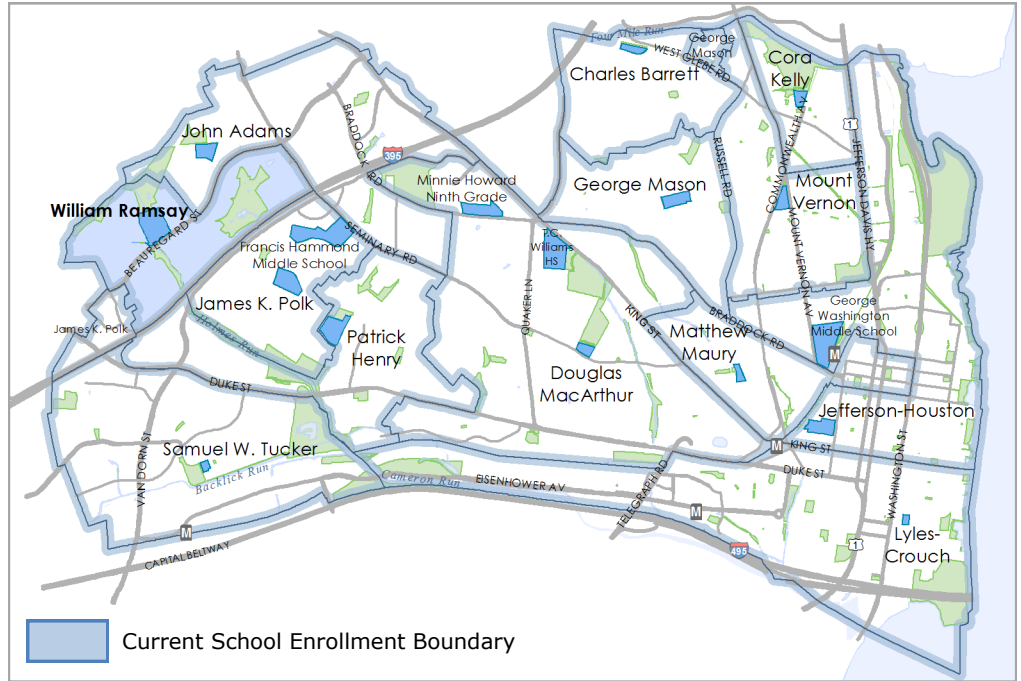
- **Reconfigure** parking to improve efficiency.
- **Included** in the Beauregard Small Area plan is a multi-purpose field that will provide adequate field space for the school.
- **The implementation of the Beauregard Small Area Plan** will reconfigure the area's road network and the surrounding neighborhoods. An addition could be considered to accommodate the projected enrollment increase, if expansion beyond the recommended school size is warranted. This addition would likely exceed the FAR and require a rezoning (\$18.1M).

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$36.4 (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **New 53,000 SF addition (\$18.1M)**
 - Demolition of the portion of the existing building to be replaced
- **Total renovation of 68,000 SF of the existing building (\$18.3M), including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for gymnasium, cafeteria and classrooms
 - New interior walls, floors and ceilings
 - New elevator

Ramsay is not currently in the modernization program per the FY 2016-2025 CIP. This project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

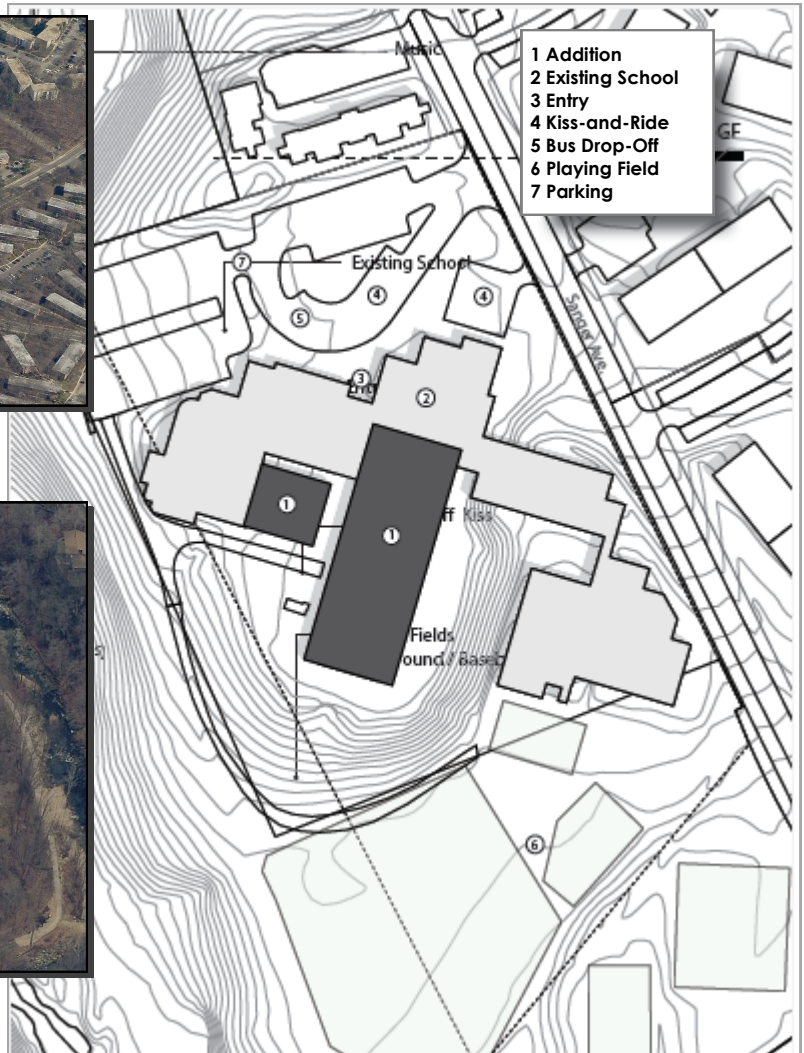
WILLIAM RAMSAY ELEMENTARY SCHOOL



Neighborhood context looking north across Beauregard Street.



School site looking south across Sanger Avenue with Holmes Run on the right.

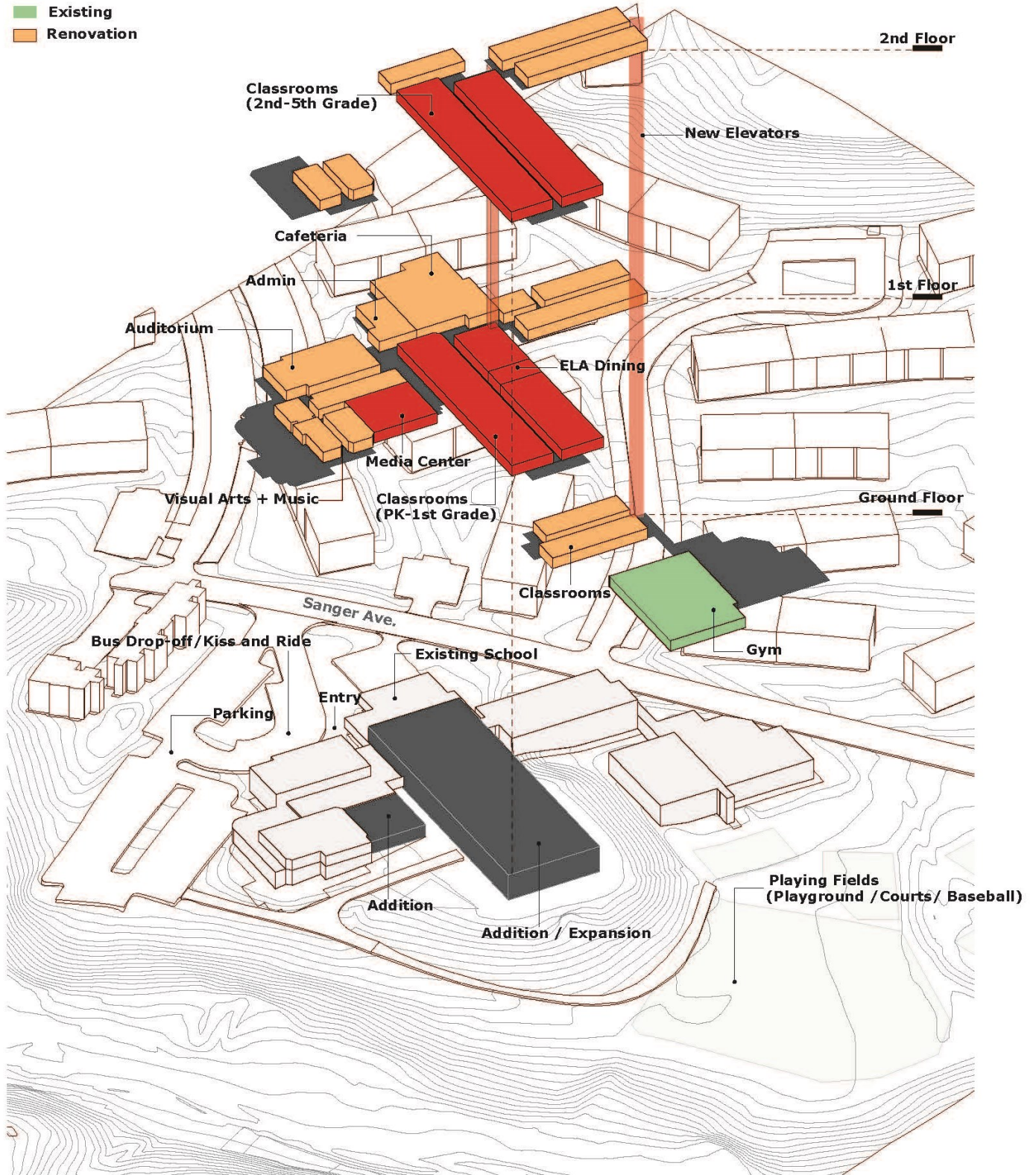


Master Plan concept showing potential enlargement of south wing and media center addition.

William Ramsay

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



FRANCIS C. HAMMOND MIDDLE SCHOOL

4646 Seminary Road, Alexandria, VA 22304

<i>AT A GLANCE...</i>			
<i>Year Built</i>	<i>Current Floor Area</i>	<i>Lot Size (acres)</i>	<i>Core Classroom Surplus/Deficit (2020)</i>
1956	236,125	25	-11
<i>Zoning</i>	<i>Floor Area Permitted by Zoning (SF)</i>	<i>Floor Area Ratio</i>	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i>
R-8 (030.01-01-03)	364,659	0.45	-29,368
R-20 (030.01-01-03)	69,811	0.25	
<i>School Site</i>	<i>Building Assessment</i>	<i>Instructional & Support Spaces</i>	<i>Projected Utilization (2020)</i>
Satisfactory	Inadequate	Borderline	131%

BACKGROUND

Francis C. Hammond was originally built in 1956. The building operated as a high school from 1956 through 1971. In fall 1979, Hammond Junior High School opened and served grades seven through nine. In fall 1993, the junior high was reorganized into a middle school for grades six through eight.



In 2014, Hammond had an enrollment of 1,436 students and a capacity of 1,396 students. By 2020, enrollment is expected to increase to 1,832 students. Therefore, the existing school capacity will not accommodate the increase of students and will be over utilized and it will exceed the recommended size for a middle school.

The academic curriculum at Francis Hammond includes reading, language arts, mathematics, social studies, and science and also offers:

- Art, Band, Orchestra, Choir
- Health/Physical Education
- Family life instruction at age-appropriate levels
- Computer Applications
- Foreign Languages (Chinese, German, French, Spanish and Latin)
- Technology
- ELL programs for students learning English as a second language
- Opportunity to participate in numerous after school programs¹

¹<http://www.acps.k12.va.us/fch>

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	1,436	1,538
Capacity	1,396	1,396

Color	Enrollment as % of Capacity	
Light Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

The data collected through this assessment revealed that Hammond meets only 61 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

HIGH PRIORITY ITEMS

- Based on the 2020 projections, Hammond will be significantly undersized if it remains in its current condition.

- Core classroom lack square footage.
- Shared spaces are not supplied with proper fixed equipment.

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Significant drop in grade from the front of the school to the rear.</i>
<i>Playgrounds</i>	<i>None</i>
<i>Recreation Features</i>	<i>Synthetic turf field, track, exercise area, roller rink, tennis courts and open field</i>
<i>Resource Protection Areas</i>	<i>Onsite conservation area, dense trees surrounding open field</i>
<i>Parking</i>	<i>143</i>
<i>Storm Water Management</i>	<i>Filters, two underground detention systems, underground sand filter</i>



Hammond is located on a busy main road in Alexandria. The front of the school is dedicated to school bus and kiss-and-ride traffic. As required by the educational specifications, these two types of vehicular traffic should be separated. There are three main areas for staff parking which causes inefficiencies.

The main play field is easily accessible from the school and does not require students or staff to cross any vehicular traffic paths. The visitor parking is located close to the main entrance, as required. There is currently a paved skate rink that could serve as a future revenue generator for the school.

There are no formal outdoor learning spaces, but could be accommodated in the courtyard between the original school and new addition. Lastly, the site is lacking adequate outdoor security lighting.

INSTRUCTIONAL AND SUPPORT SPACES

The overall instructional and support spaces scored borderline. Areas of concern include insufficient classroom sizes, absence of adequate storage and

furnishings, and poor internal organization of the spaces. **Very few core classrooms and shared spaces met the square footage requirement.** The academic classrooms at Hammond have an average square footage of 651, rather than the desired 850 square feet or 30 percent undersized. The lack of space in these capacity driving rooms reduced each room's ability to support all the recommended arrangements and teaching program activities. The rooms would also benefit from additional storage.

The next high priority issue is the lack of fixed equipment in shared spaces which included marker boards and tack boards, electronic interactive boards, sound enhancement devices, and support furniture. Over 56 percent of the classrooms did not have an interactive electronic presentation device and 92 percent did not have sound enhancement systems. The support furniture missing in most shared spaces are itinerant desks. Additionally, shared spaces lack proper technological infrastructure.

The rooms lack temperature controllability and therefore making the learning environment substandard and inadequate. Humidity is a noticeable issue in over half the spaces. Most occupants report extreme temperature shifts in classrooms ranging from too hot to too cold throughout the school year.

BUILDING ASSESSMENT

Accessibility within the school needs to be addressed. The building lacks ramps. To access a classroom adjacent to the main office and accessible by a short staircase, a person in a wheelchair must travel three times the same distance to arrive at the same destination.

Shared spaces including the media center, resource classrooms, and cafeteria are not centrally located as required.

RECOMMENDATIONS

The school will be significantly over capacity by 2020. Considerations should be given to accommodating the projected increase in enrollment at another location due to the building capacity and the overall school size.

GROUP 1 — REQUIRED PLANNING

- **Plan** to accommodate the projected increase in enrollment at another location due to the building capacity and the overall school size.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the existing instructional classroom spaces to meet the recommended size requirements outlined in the educational specifications (\$33.4M).
- **Address** the ADA accessibility issue through the installation of ramps and/or elevators.

GROUP 3 — SECOND PRIORITY

- **Equip** all classrooms and support spaces with individual climate controls.
- **Provide** additional storage for teachers and students in the reconfigured classrooms.

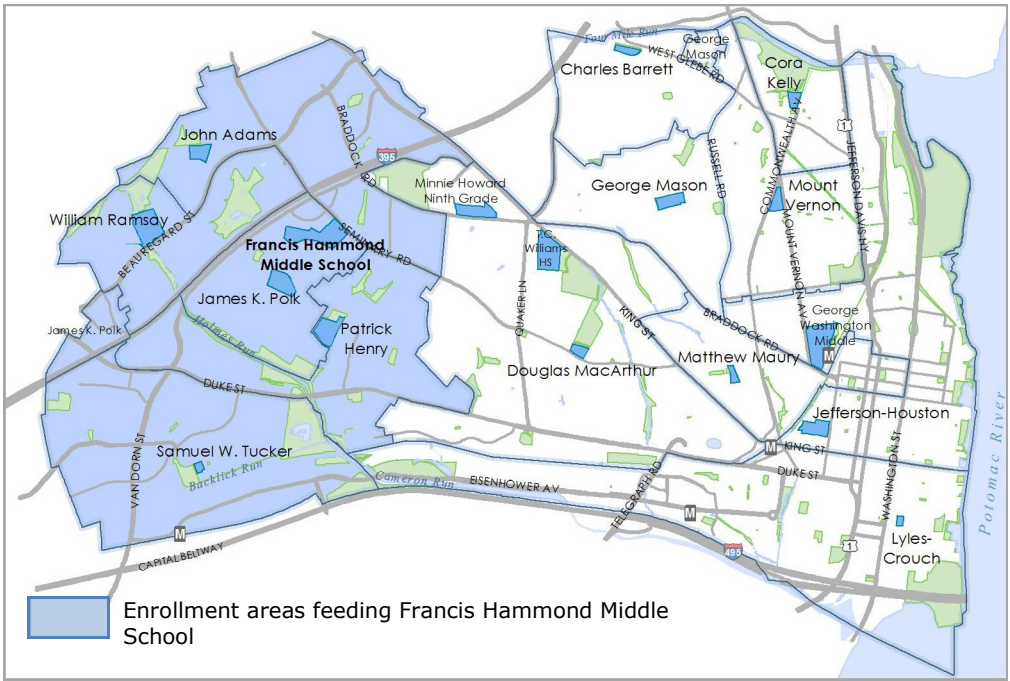
GROUP 4 — LONG RANGE RECOMMENDATIONS

- **Reconfigure** site circulation to consolidate the staff parking and separate the bus drop off from the kiss and ride and to improve site efficiency.
- **Utilize** the lower field/roller rink area as a site for a future school.

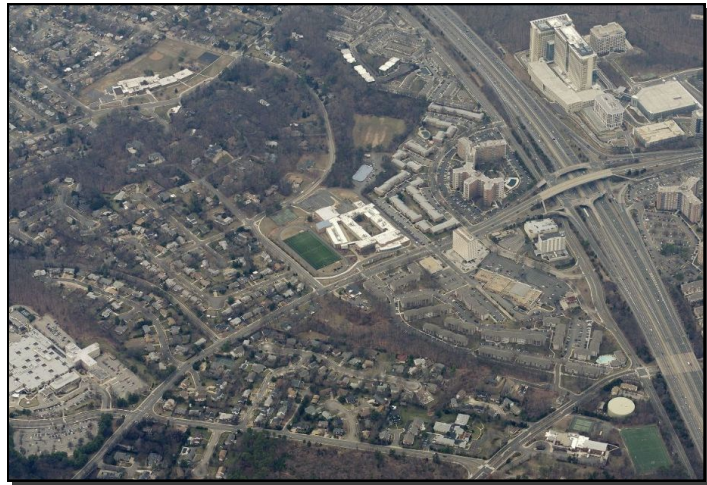
CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$33.4M (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **Total renovation of the existing building including:**
 - All new mechanical, plumbing, electrical and window systems
 - New food service and a/v equipment for classrooms
 - New interior walls, floors and ceilings
 - New elevator

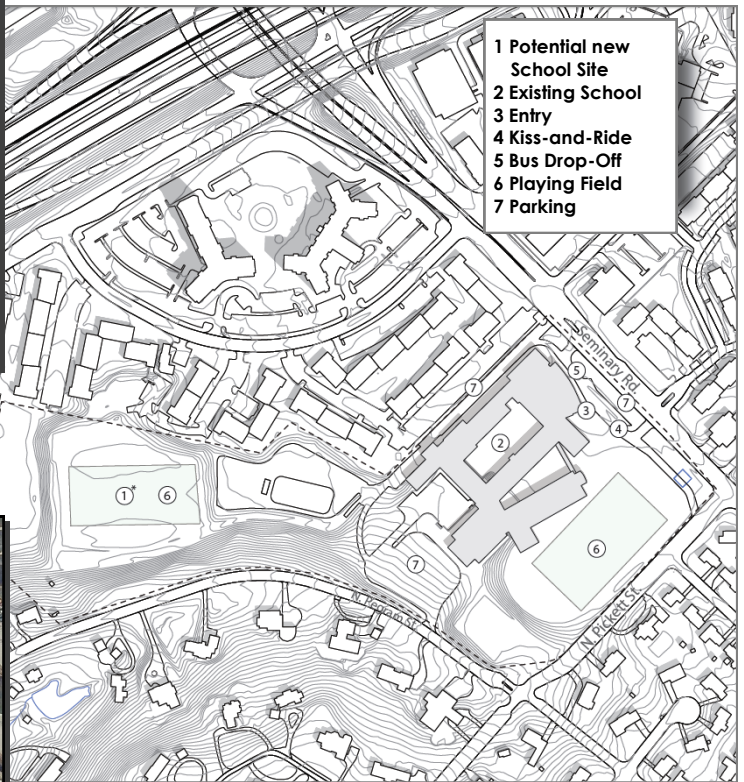
Hammond is not currently in the modernization program per the FY 2016-2025 CIP. This project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.



FRANCIS HAMMOND MIDDLE SCHOOL



Neighborhood context looking south along I-395 across Seminary Road. Inova Hospital is at the far left.



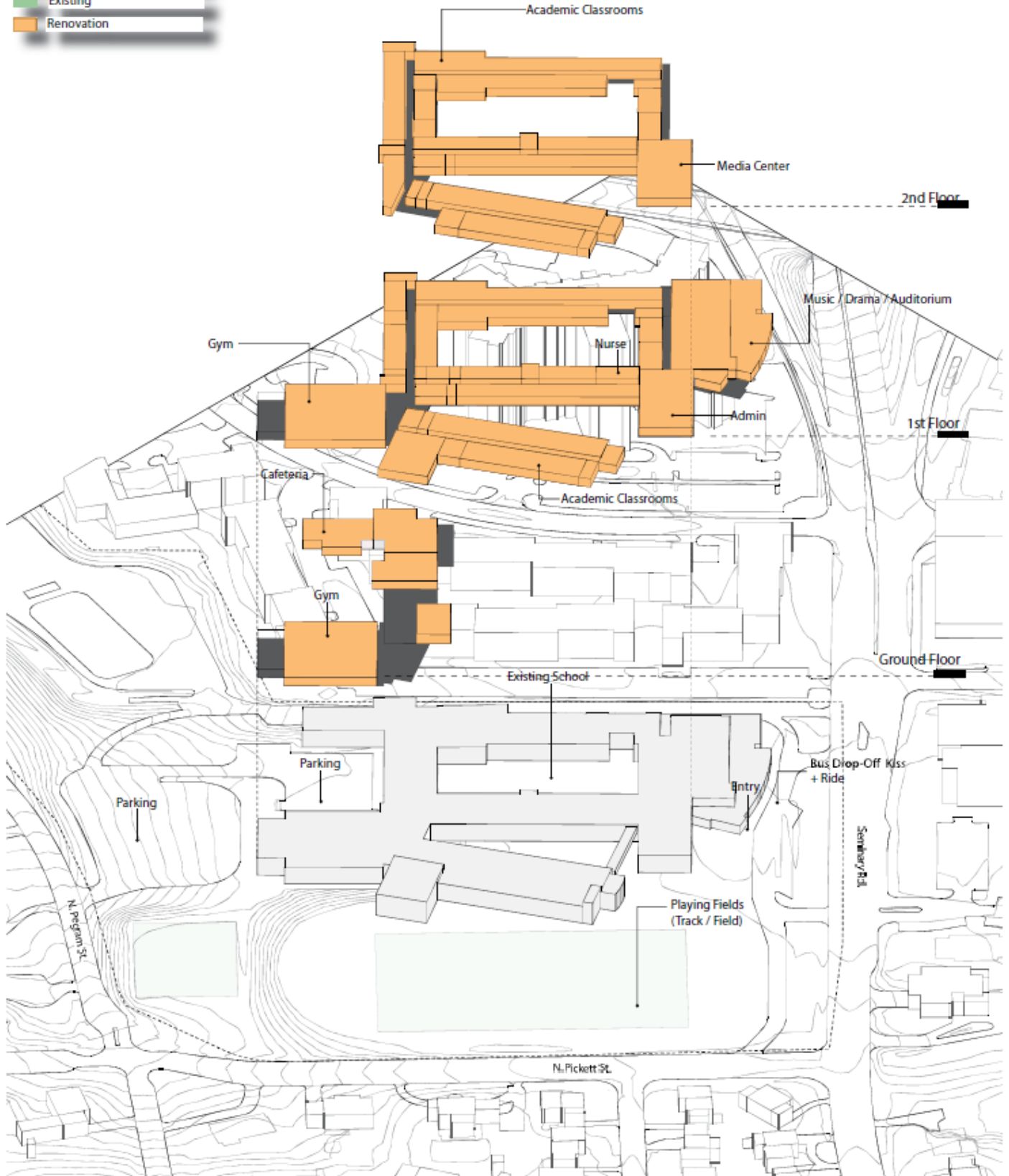
School site looking south across Seminary Road with Seminary Hills Apartments at right and North Pegrum Street behind the school at upper left.

Master Plan concept showing potential new school on unimproved lower playing field at left.

Francis C. Hammond

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



GEORGE WASHINGTON MIDDLE SCHOOL

1005 Mount Vernon Avenue, Alexandria, VA 22301

AT A GLANCE...			
<i>Year Built</i>	<i>Current Floor Area</i>	<i>Lot Size (acres)</i>	<i>Core Classroom Surplus/Deficit (2020)</i>
1935	237,332	23.2	-1
<i>Zoning</i>	<i>Floor Area Permitted by Zoning (SF)</i>	<i>Floor Area Ratio</i>	<i>Total Program Surplus/Deficit (Sq.Ft.) (2020)</i>
R-B (054.01-01-01)	574,090	0.75	+3,546
POS (054.01-01-01)	0	0.0	
CDD #10 (044.03-07-02)			
<i>School Site</i>	<i>Building Assessment</i>	<i>Instructional & Support Spaces</i>	<i>Projected Utilization (2020)</i>
Satisfactory	Borderline	Satisfactory	122%

BACKGROUND

George Washington was built in 1935 and operated as a high school until 1971. In 1971, George Washington and Francis Hammond (FH) schools were reorganized to serve ninth and tenth graders while T.C. Williams served eleventh and twelfth grade. George Washington was reorganized again in 1979 to serve seventh, eighth and ninth graders. George Washington finally became a middle school in 1993. In 2014, George Washington had an enrollment of 1,223 students with measured capacity of 1,150 students. By 2020, enrollment is expected to increase to 1,399 students. Therefore, the existing school will be over capacity by 249 students.



The academic curriculum at George Washington includes reading, language arts, mathematics, social studies, science and also offers:

- Art, Choir, Band and Orchestra
- Computer applications
- Speech and Drama
- Foreign Languages (Chinese, French, German, Spanish and Latin)
- Technology
- ELL program for students learning English as a second language
- Special education programs
- Health/Physical Education
- Opportunity to join many after school programs ¹

¹<http://www.acps.k12.va.us/gw>

STUDENT ENROLLMENT (# OF STUDENTS)

	2014	2020 Projection
Enrollment	1,223	1,402
Capacity	1,150	1,150

Color	Enrollment as % of Capacity	
Blue	100% and below	Fully or underutilized
Orange	101% to 120% of capacity	Substantially over capacity
Red	Above 120% of capacity	Extremely over capacity

KEY FINDINGS

SUMMARY

The data collected through this assessment reveals that George Washington Middle School meets 67 percent of the educational adequacy benchmarks for an ideal 21st century elementary school.

HIGH PRIORITY ITEMS

- Core classrooms are undersized.
- Main entrance does not meet the recommended standards for access control.

SCHOOL SITE

SITE DATA	
<i>Steep Slopes</i>	<i>Isolated steep area</i>
<i>Playgrounds</i>	2
<i>Recreation Features</i>	
<i>Resource Protection Areas</i>	<i>No</i>
<i>Parking</i>	271
<i>Storm Water Management</i>	<i>Multiple inlets, two underground detention systems.</i>



George Washington is not equipped with a dedicated vehicular traffic drop-off and pick-up area for students and visitors.

The school bus lane and the kiss-and-ride are located on the school premises, but essentially next to each other. Pedestrians being dropped off at the kiss-and-ride must cross the bus lane to access the school. The play areas, located behind the school, are in a good location and connect to a few pedestrian foot paths. However, to access the play fields, students must cross the thoroughfare road and parking lot. Outdoor learning areas were not observed.

INSTRUCTIONAL AND SUPPORT SPACES

George Washington earns a score of satisfactory for overall instructional and support spaces. This rating reflects areas of concern related to insufficient classroom sizes, absence of adequate storage and furnishings, and poor internal organization of the spaces. The most urgent items identified for this section of the assessment are core classroom size and capacity. Within the core classroom section, the academic classrooms are driving the overall rating to inadequate because the average size is 670 square feet, rather than the desired 850 square feet. While the average classroom is 22 percent undersized, which directly impacts capacity, the school has multiple un-used rooms that help improve the capacity score. The classrooms are also lacking temperature controls with many noting humidity issues.

The internal organization of a classroom defines its ability to support the recommended program activities within the space. Over 68 percent of classrooms do not have an interactive electronic presentation device.

BUILDING ASSESSMENT

Over half the classrooms at George Washington do not have the technology infrastructure and tools to support a 21st century learning environment. Overall the school does not meet the division's expectations for small learning environments and key adjacencies. Academic clusters are present; however there are no extended learning areas or collaborative learning spaces within these clusters. The shared programmatic space is not centrally located nor appropriately clustered to allow for after-hours access as needed. Lastly, the faculty is unable to secure the rest of the school from the after-hours space as desired.

RECOMMENDATIONS

The school will be over capacity by 2020. In order to accommodate the projected enrollment, an interior renovation is required. Additionally, a small addition is recommended to provide a more visible and controlled access point.

GROUP 1 — REQUIRED PLANNING

- **Site** assessment to determine whether the drop-off location for the school can be relocated/reconfigured (based on property boundaries, setbacks, etc.).
- **Explore** extending the main entry corridor to the existing gymnasium to help address the key shared space organization issues without the need for major reconfiguration or addition.
- **Assess** building condition comprehensively through a facility condition assessment.

GROUP 2 — FIRST PRIORITY

- **Reconfigure** the spaces within the existing school to meet the recommended size requirements for individual academic spaces as outlined in the educational specifications.
- **Reconfiguration/addition** of the main entry that would allow for a dedicated drop-off and entry point to the school from the existing bus lane. It would provide a more visible and controlled access point to the school for visitors as well.

GROUP 3 — SECOND PRIORITY

- **Equip** all classrooms and support spaces with individual climate controls, and technological equipment and infrastructure.
- **Provide** additional storage for teachers and students as well as an upgrade to the furniture, fixtures and equipment. The square footage from un-used spaces could be repurposed to increase the size of classrooms used throughout the day by students.

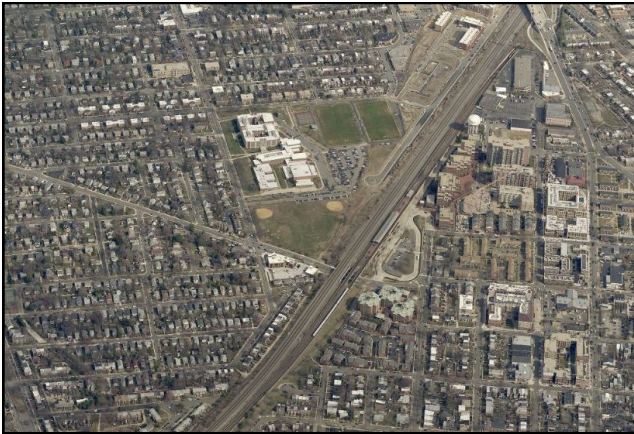
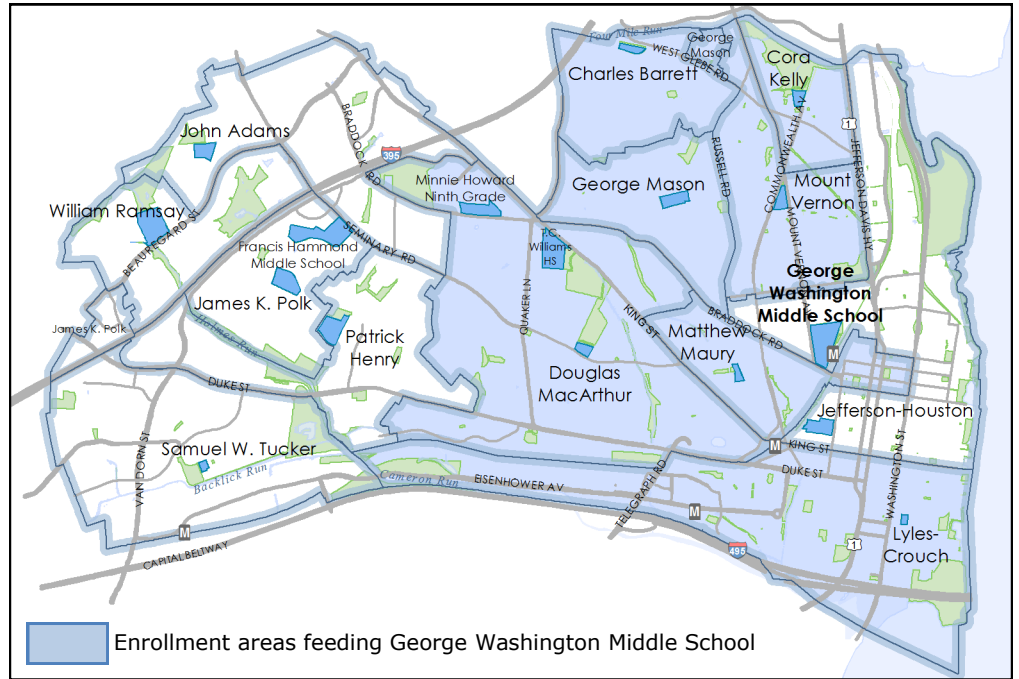
GROUP 4 — LONG RANGE RECOMMENDATIONS

CONCEPTUAL COST ESTIMATES

- **Complete Master Plan Construction \$70M (in 2015 dollars)**
 - 15% contingency
 - 17% other fees, insurance, etc.
- **Total renovation of the existing building and 2,000 SF addition including:**
 - All new mechanical, plumbing, electrical and window systems
 - Façade rehabilitation
 - New food service and a/v equipment for gymnasium, auditorium, cafeteria and classrooms
 - New interior walls, floors and ceilings
 - New elevator

George Washington is not currently in the modernization program per the FY 2016-2025 CIP. This project will be evaluated based on ACPS priorities and funding constraints during the development of future CIPs.

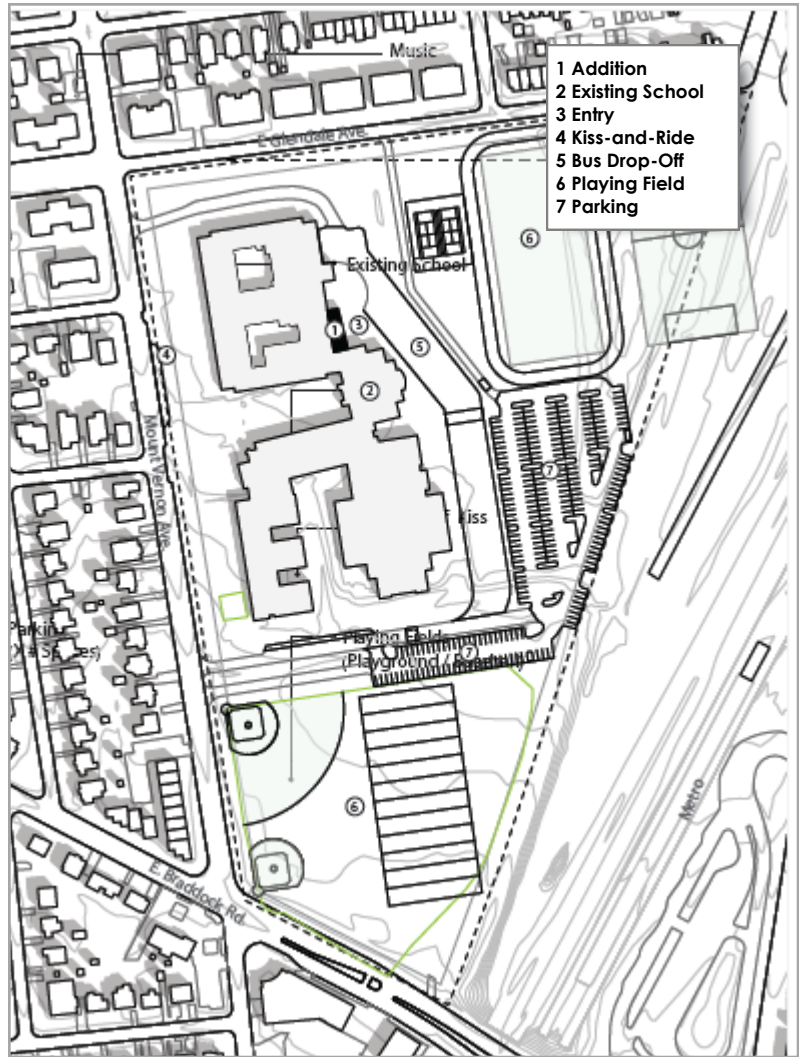
GEORGE WASHINGTON MIDDLE SCHOOL



Neighborhood context looking north across Braddock Road and Metro and CSX rail lines.



School site looking north across Braddock Road and the Metro and CSX rail lines. The Braddock Road Metro Station is at the lower right.

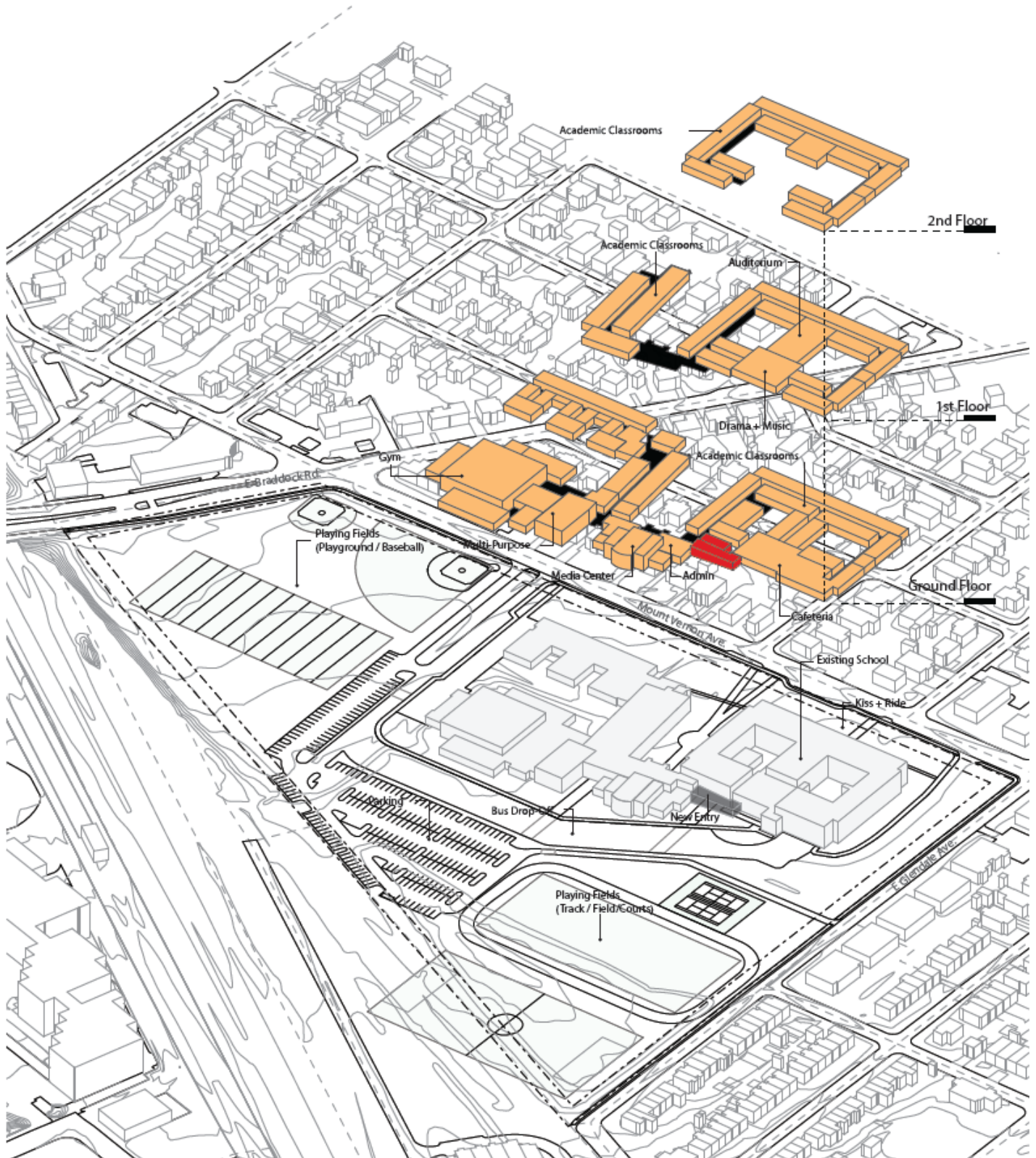


Master Plan Concept

George Washington

Conceptual Master Plan

- New Construction/Addition
- Existing
- Renovation



T.C. WILLIAMS: KING STREET CAMPUS

3801 West Braddock Road, Alexandria, VA 22302

AT A GLANCE...

<i>Year Built</i>	2007	<i>Current Floor Area</i>	461,147	<i>Floor Area Permitted by Zoning (SF)</i>	547,000
<i>Zoning</i>	R-20 (032.04-09-08)	<i>Lot Size (acres)</i>	25.6	<i>Floor Area Ratio</i>	0.51*

T.C. Williams: King Street Campus was not included in the educational adequacy analysis.

BACKGROUND

T.C. Williams is Alexandria's only high school. There are two campuses. The Minnie Howard Campus serves grade 9 and the King Street Campus serves grades 10-12. The King Street building is a state of the art facility that opened in 2007 and provides smaller learning communities as well as flexible academic space capable of meeting the evolving secondary school curriculum requirements. In Fall 2008, the second phase was complete and included an artificial turf sports field, renovated stadium, new athletic track, new playing field, new bus driveway, and a two story parking garage. The high school received a LEED Gold rating. The academic curriculum includes 188 courses. Special academic programs includes Academy of Finance, Advanced Placement/Honors, English as a Second Language, Special Education/Inclusion Program, STEM Academy and Vocational Programs.



TECHNOLOGY

Since 2003, each high school student has been provided a laptop by ACPS. During the 2013 school year, ACPS piloted the use of Amplify devices, a customized Android™ tablet designed specifically for K-12 education, to more than 400 students.¹

**MPA2003-00010 and REZ2003-00066 granted the R20 zones to develop at 0.51 FAR and increased the zoned size of the R20 lot (which normally allows 0.25).*

¹<http://www.acps.k12.va.us/tcw>

SCHOOL SITE

The King Street campus includes high school football field and a six lane track. Six tennis courts are currently under construction and are expected to open spring 2015. Adjacent to the school is Chinguapin Park. Features of the park include athletic fields, basketball courts, garden plots, a picnic area and playground, tennis courts and a wooded area.



RECOMMENDATION

The high schools were not included in the educational adequacy analysis. This work should be undertaken as subsequent part of this planning effort.

T.C. WILLIAMS: MINNIE HOWARD CAMPUS

3801 West Braddock Road, Alexandria, VA 22302

AT A GLANCE...		
<i>Year Built</i>	1954	<i>Current Floor Area</i>
		130,435
		<i>Floor Area Permitted by Zoning (SF)</i>
		287,036
<i>Zoning</i>	R-12(031.02-02-05)	<i>Lot Size (acres)</i>
		6.6
		<i>Floor Area Ratio</i>
		0.549*
	POS	0.0

T.C. Williams: Minnie Howard Campus was not included in the educational adequacy analysis.

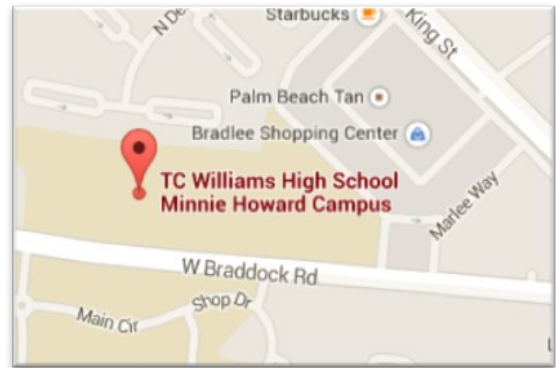
BACKGROUND

T.C. Williams is Alexandria’s only high school. There are two campuses. The Minnie Howard Campus serves grade 9 and the King Street Campus serves grades 10-12. The Minnie Howard School building was originally constructed in 1954 as an elementary school. There was a major classroom and gymnasium addition in 1969 when it was converted to a middle school. The facility served as the central administrative offices from 1981 to 1993, when it was again renovated and became the Ninth Grade Center.



SCHOOL SITE

The Minnie Howard site has rolling topography. The site contains tennis courts, a turf field, pavilion and separate bathroom shelter. There are two vehicular accesses to the site. Both have parking areas.



TECHNOLOGY & GREENOVATION

Since 2003, each high school student has been provided a laptop by ACPS. During the 2013 school year, ACPS piloted the use of Amplify devices, a customized Android™ tablet designed specifically for K-12 education, to more than 400 students.

In 2009/2010, Minnie Howard received a *greenovation* project. Solar panels were installed and geothermal wells dug. The school rid itself of two huge, decades-old boilers and replaced them with one that is the size of a compact refrigerator. The project also featured low-flow plumbing fixtures to reduce water consumption, automated lighting controls to cut down on energy usage and solartubes, skylights that direct natural sunlight, from the rooftop to rooms below.¹

* MPA2003-00010 and REZ2003-00066 granted the R20 zones to develop at 0.51 FAR and increased the zoned size of the R20 lot (which normally allows 0.25)

¹<http://www.acps.k12.va.us/tcw>

RECOMMENDATION

The high schools were not included in the educational adequacy analysis. This work should be undertaken as a subsequent part of this planning effort.