Roanoke County Schools

Average Daily Membership
Capital Improvement Program

Joint School Board & Board of Supervisor's Meeting

February 7, 2017

Agenda

- Review of Demographic Data for Roanoke County Schools
  - Cropper GIS Study in 2016
- Review of School Capital Improvement Plan for 2018-2027
  - Program Development
  - Funding Overview
  - Proposed Projects
  - Project Slides
  - Next Steps

Demographic Study 2016

- Projection – "extrapolates the past (and present) into the future with little or no attempt to take into account any factors that may impact the extrapolation"
- Forecast – "modifies a projection by reasoning from factors that may impact the future", including:
  - Changes In fertility rates
  - Housing patterns
  - Migration patterns

- The Cropper GIS study represents the first "forecast" conducted for the school division

Demographic Study Methodology

- RCPS classified as a “small area” population – more complicated to calculate because local variations in fertility, mortality, and migration may be more irregular than in larger areas
- Cohort component method divided by gender and age groups
- Constructed age and gender-specific fertility, mortality, and migration models for each attendance area
- Enrollment forecasts calculated using modified average survivorship method
- Kindergarten fluctuations due to parental choice, state age requirements, early admission options – larger potential for variation
- Cropper GIS forecasts with margin of error at +/-2%

Demographic Study Data Sources

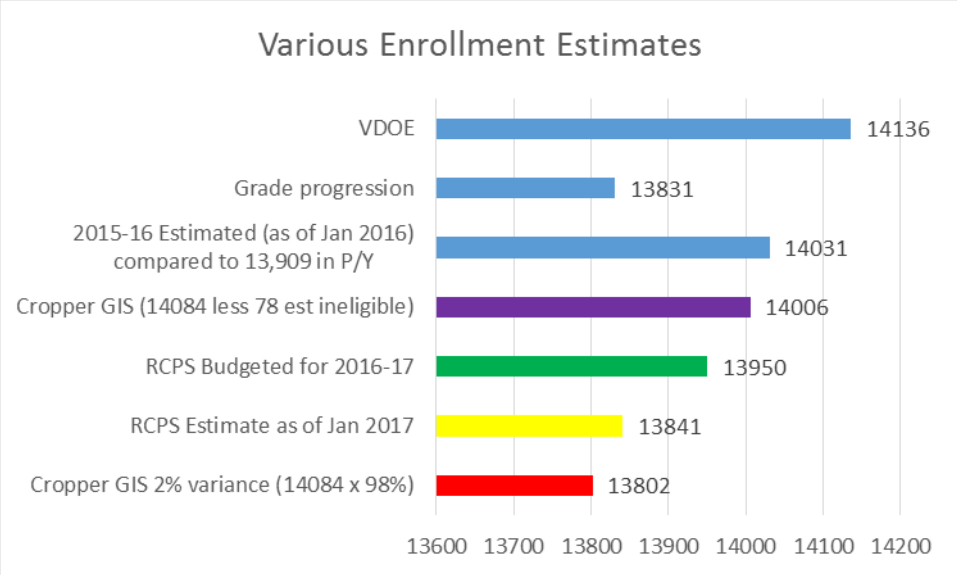
- Enrollment by grade and school for 2010-11 to 2015-16 (RCPS)
- Birth and death data for 2000 through 2014 (Va Dept of Health)
- Net migration data calculations (IRS migration reports and US Census)
- Population counts (US Census)
- Rate and type of existing housing unit sales and future housing unit construction data available locally

Demographic Study Conclusions

- Fertility rates in Roanoke County are below replacement level (1.9 vs 2.1)
- Most in-migration occurs in 0-9 and 25-39 age groups
- 18-24 age continues to leave the district (largest segment of out-migration)
- Primary factor in decline is increase in turnover of “empty nest” households coupled with static level of in-migration of young households
- Changes in next 4 years likely to be due to smaller incoming class sizes and larger outgoing class sizes
- Median age increasing from 43.4 in 2010 to 46.4 in 2025
- Total County population is expected to increase by 1.7%
- Total school enrollment is projected to decrease by 1% from 2016 to 2026

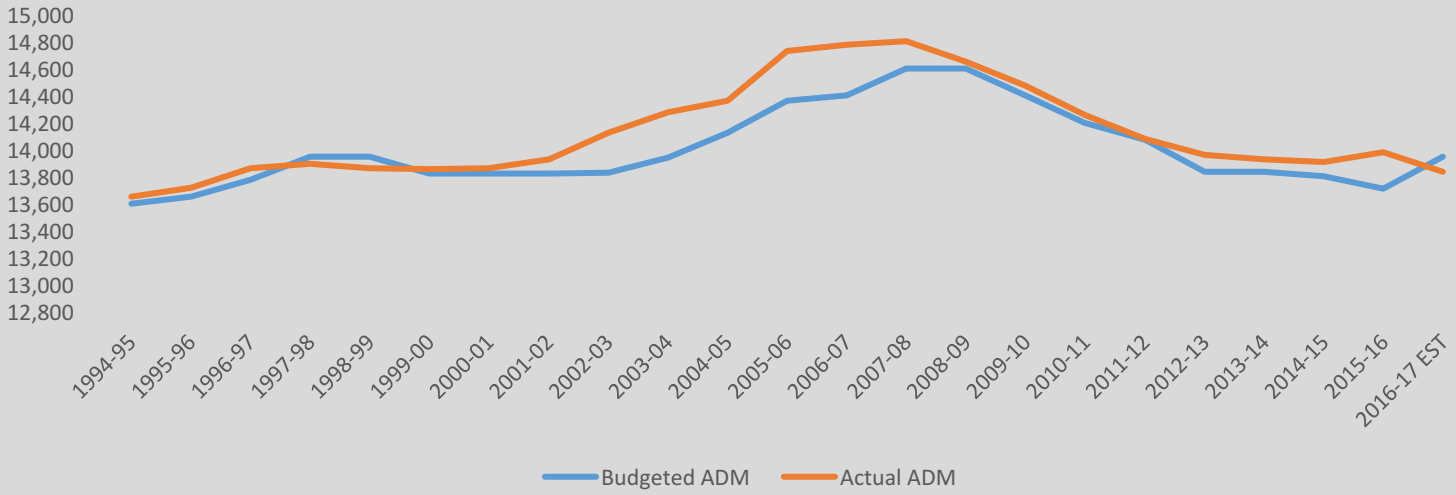
RCPS Enrollment Calculation for 2016-17

- Past practice included analysis of each of the following:
  - VDOE projections – Per VDOE, "although we have confidence in the accuracy of our ADM projections on a statewide basis, experience has shown that the accuracy of our projections for individual divisions may vary."
  - Grade progression – Moving existing students up one grade and predicting KG enrollment based on current KG and early registration by parents
  - Current year budget to monthly enrollment to date
- Added the Cropper GIS forecast with factors previously not considered
  - Manual deducted for students not eligible for ADM funding



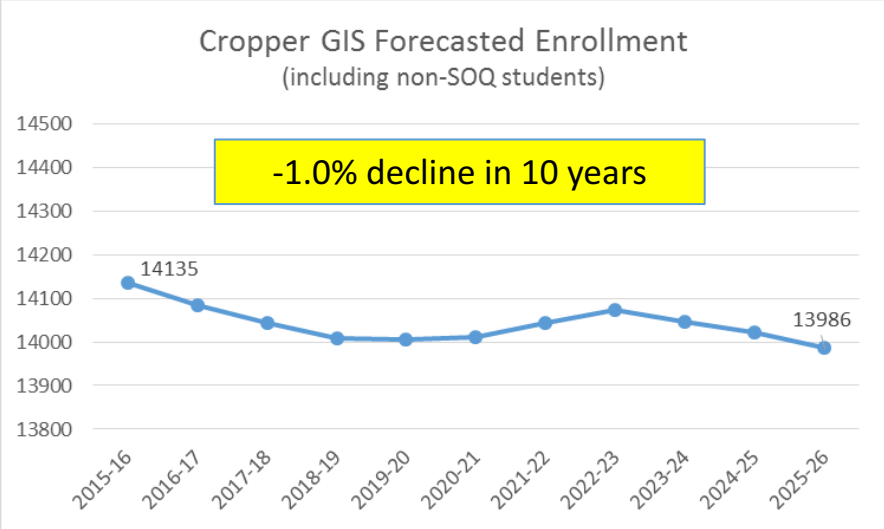
Final Decision……..13950 ADM for FY16-17

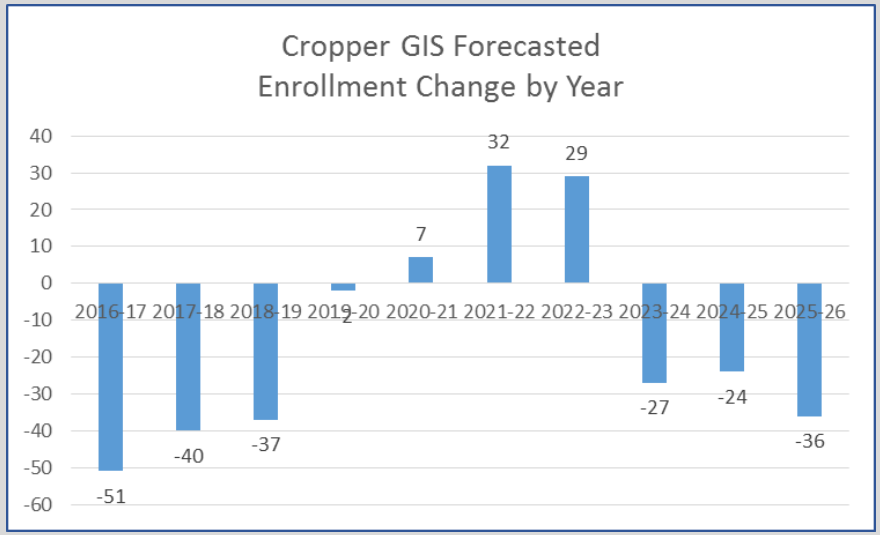
RCPS Enrollment History



- 50% of school budget is reliant on not over-budgeting ADM
- Conservative estimates protect County from deficit situation
- Excess revenues provide cash funding for capital projects under the joint agreement with the BOS
- Schools have not over-estimated ADM budget in past 18 years
- Wider variance between 2002 and 2008 during 7 years of growth
- Smaller variance between 2009 and 2015 during 7 years of decline
- FY2016 growth identified by Cropper GIS as an anomaly with no data supporting

Demographic Study Conclusions





2015-16	13982
2016-17	14006
2017-18	13966
2018-19	13929
2019-20	13927
2020-21	13934
2021-22	13966
2022-23	13995
2023-24	13968
2024-25	13944
2025-26	13908
	0.53%

Enrollment is essentially flat for next 10 years without new growth in the County

2016-17	-51
2017-18	-40
2018-19	-37
2019-20	-2
2020-21	7
2021-22	32
2022-23	29
2023-24	-27
2024-25	-24
2025-26	-36

FY 2018 – FY 2027
Capital Improvement Program

FY 2018 – FY 2027 CIP Program Development

In 2016, the School Board conducted several studies that impacted the development of the CIP, including the following:

- Demographics Study – Forecast of future enrollment in county schools by building, grade, and overall through 2026.
- Facility Use Study – Identify space needed for current educational programming purposes and student capacities by school.
- Facilities Condition Assessment Study – Evaluate condition of each school facility and identify renovations needed to maintain optimal operating conditions into the future.

FY 2018 – FY 2027 CIP Program Development

With the data obtained from the studies, the CIP projects were prioritized and aligned with available resources to fund projects over the ten-year period. Project priorities in the CIP include:

- Protecting existing investment in facilities and infrastructure which are vital in delivering quality educational programs to students.
- Providing appropriate facilities for the educational and developmental needs of all student populations.
- Identifying capital maintenance (infrastructure) needs that will extend the useful life of the buildings including roof, pavement, HVAC, and other critical building systems.
- Anticipating future facility and infrastructure needs to best leverage capital resources.
- Complying with applicable federal, state, and local regulations.

FY 2018 – FY 2027 CIP Program Development

The School Board is responsible for preserving and maintaining 33 physical buildings measuring 2.6 million square feet with an average age of 48 years, including:

- 16 elementary schools
- 5 middle schools
- 5 high schools
- 1 specialty high school
- Transportation building
- Maintenance building
- 2 Warehouse buildings
- Technology building
- Administration building

FY 2018 – FY 2027 CIP Program Development

The timing of projects is based on funding opportunities over the 10 year timeframe and tied to the joint capital financing plan with the County Board of Supervisors that plans $10 million in bond funding every two out of three years for school projects.

Estimated project costs include the following:

- Hard costs estimated by the consultant in the Facilities Condition Assessment Study,
- Soft costs for design and engineering costs,
- Annual inflation over the ten year period of 3% per year, and
- Any other known costs associated with the specified project.

FY 2018 – FY 2027 CIP Program Development

10-year plan for capital infrastructure needs

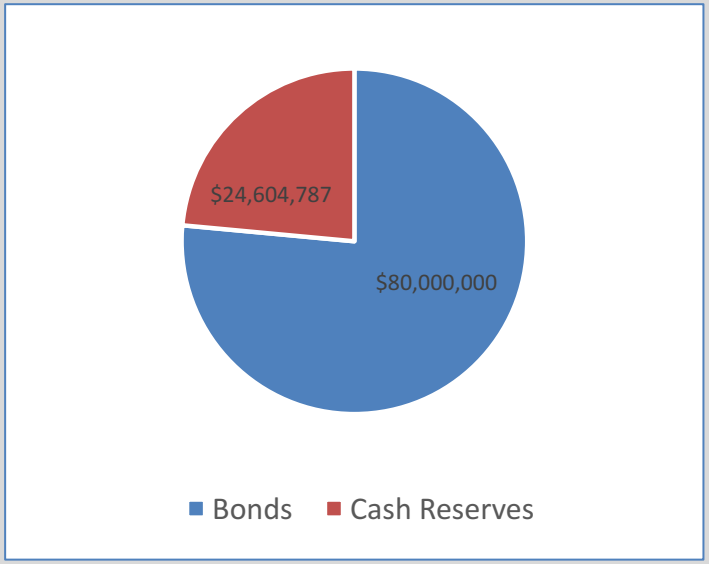
- First year (FY 2018) to be appropriated by the School Board and Board of Supervisors
- Years 2-10 (FY 2019 – FY 2027) serve as roadmap for capital planning
- All proposed projects have identified funding sources for each year of the plan
- Updated and adopted annually

A capital project is generally defined as:

- Useful life of five years or more
- Minimum cost of $500,000
- If funded by a bond issue, the useful life must be equal to or exceed the length of the bond

Proposed FY 2018 – FY 2027 CIP Funding Overview

	Schools FY 2018 – FY 2027	
Funding Source	**Amount**	**% of Total**
Cash Sources • Capital reserves • Debt fund cash • VPSA refunding credits • Operating transfer for CMP	$24.6M	23.5%
VPSA Bonds	$80.0M	76.5%
Total	$104.6M	100.0%



Recommended FY 2018 – FY 2027 CIP Projects

FY 2018 $28.05 million / FY 2019 – FY 2027 $74.6 million

Requested Projects	FY 2018	FY 2019-2027
Cave Spring High School ($2M approved in FY16)	$27.0M	$8.5M
William Byrd High School	---	$22.8M
Hidden Valley Middle School	---	$13.2M
Burlington Elementary	---	$5.3M
Glenvar Elementary	---	$6.2M
WE Cundiff Elementary	---	$10.0M
Glen Cove Elementary	---	$0.9M
Schools Capital Maintenance Program	$1.0M	$9.0M
HR & Payroll Software System (see Note)	$0.05M	$0.7M

Recommended FY 2018 – FY 2027 CIP Projects

Roanoke County Public Schools
2018-2027 Capital Improvement Program
PENDING SCHOOL BOARD APPROVAL IN MARCH

Projects	For Appropriation FY 2018 $10M	For Future Planning FY 2019 $10M	FY 2020	FY 2021 $10M	FY 2022 $10M	FY 2023	FY 2024 $10M	FY 2025 $10M	FY 2026	FY 2027 $10M	Total CIP 2018-2027
Cave Spring High ($2M funded in 2016)	27,000,000	8,500,000	-	-	-	-	-	-	-	-	35,500,000
HR & Payroll Software System (50%)	50,000	350,000	350,000	-	-	-	-	-	-	-	750,000
Capital Maintenance Plan	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000
William Byrd High School	-	1,500,000	-	12,879,955	8,372,185	-	-	-	-	-	22,752,140
Hidden Valley Middle	-	-	-	-	860,000	2,271,320	10,051,477	-	-	-	13,182,797
Burlington Elementary	-	-	-	-	-	-	325,000	4,975,199	-	-	5,300,199
Glenvar Elementary	-	-	-	-	-	-	379,030	5,813,601	-	-	6,192,631
WE Cundiff Elementary	-	-	-	-	-	-	-	-	650,000	9,386,373	10,036,373
Glen Cove Elementary	-	-	-	-	-	-	-	-	-	890,647	890,647
Total Capital Costs Planned	**28,050,000**	**11,350,000**	**1,350,000**	**13,879,955**	**10,232,185**	**3,271,320**	**11,755,507**	**11,788,800**	**1,650,000**	**11,277,020**	**104,604,787**
Funding Sources:											
Major Capital Reserves	4,384,376	-	-	1,108,051	-	-	-	-	-	-	5,492,427
VPSA Bond Issue	20,000,000	10,000,000	-	10,000,000	9,232,185	767,815	10,000,000	10,000,000	-	10,000,000	80,000,000
Debt Fund - Schools	2,502,064	350,000	350,000	1,441,502	-	1,275,856	640,701	676,244	650,000	128,924	8,015,291
2015 VPSA Refunding Credit	163,560	-	-	330,402	-	227,649	114,806	112,556	-	148,096	1,097,069
CIP Joint Funding Plan for CMP	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000
Total Funding Sources Planned	**28,050,000**	**11,350,000**	**1,350,000**	**13,879,955**	**10,232,185**	**3,271,320**	**11,755,507**	**11,788,800**	**1,650,000**	**11,277,020**	**104,604,787**

Note: Proposed VPSA Bond Issue in FY18 includes bond sale "saved" in FY16 for next project on School CIP (CSHS)

Project Slides

Cave Spring High School

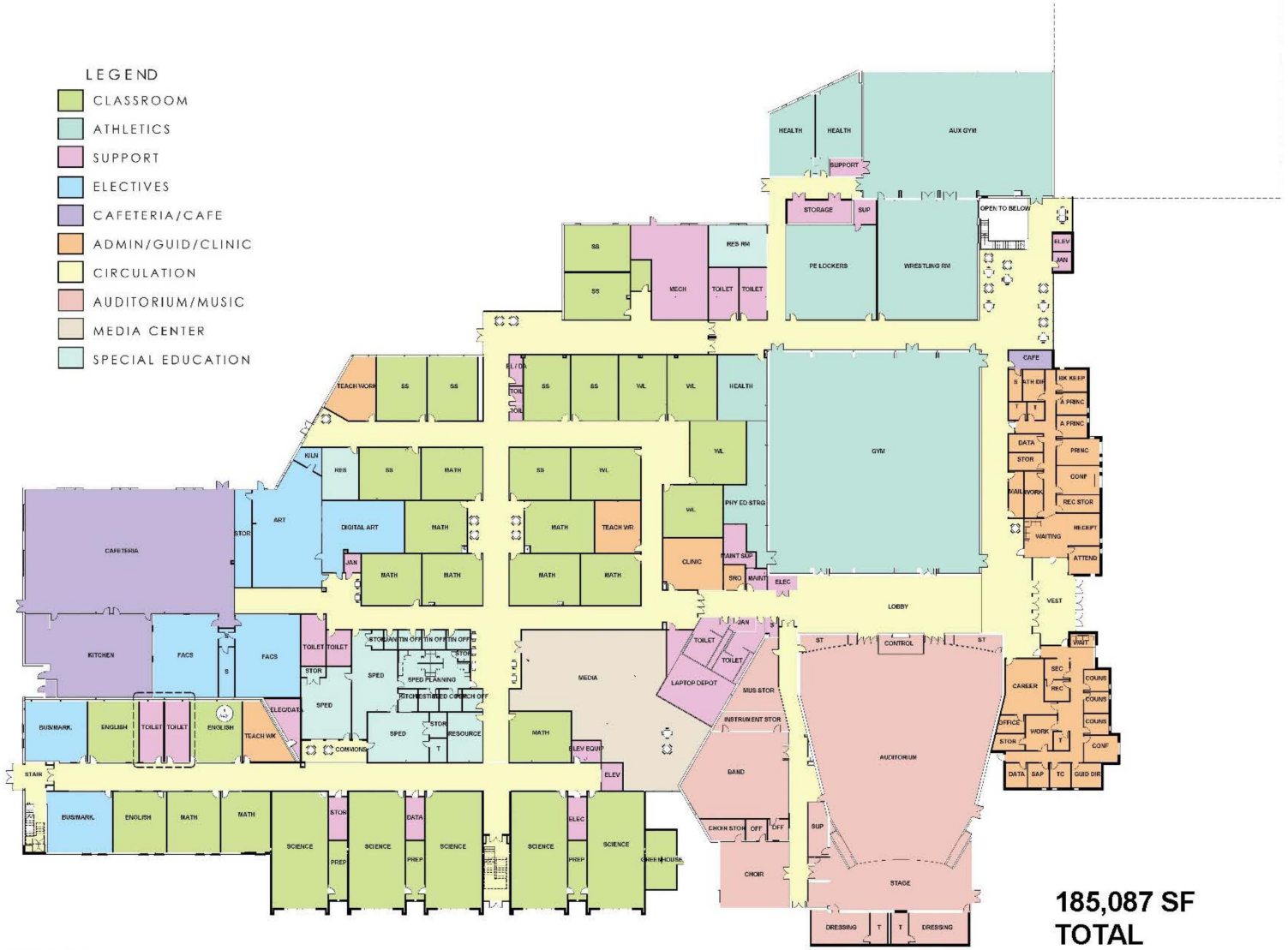
Location:	3712 Chaparral Drive, Roanoke, VA 24018
Magisterial District:	Cave Spring
Grade Levels:	9-12
Current Enrollment:	1036 (Jan 2017)
Projected Enrollment / Year:	1163 / 2019
Capacity:	1190
Year of Construction:	1968
Year(s) of Major Renovation/Addition:	1970, 85, 87, 98, 2008



Project Summary:
In 2015, the School Board placed Cave Spring High School on the CIP as the next Major Capital Project. In 2016, the Construction Committee approved the school to have a student capacity of 1200 and established a project budget of $37.5 million. An instructional programming study was completed in late fall of 2016 which subsequently lead to the schematic design phase. The schematic design phase is expected to conclude in late February 2017. During this design phase, the architect is solving space needs in accordance with the programming study, addressing the internal circulation patterns, identifying major infrastructure components, and providing conceptual interior and exterior elevations.

The renovation of Cave Spring High School is an estimated $37.5 million dollar project, with $2.0 million funded in FY 2016, $27.0 million planned in FY 2018, and $8.5 million planned in FY 2019. The project as proposed is anticipated to be funded with $7.5 million in RCPS cash sources, and $30.0 million in VPSA Bonds.

FIRST FLOOR PLAN



185,087 SF TOTAL

02|07|2017

CAVE SPRING HIGH SCHOOL

ADDITION AND RENOVATIONS

ROANOKE COUNTY PUBLIC SCHOOLS Excellence

SPECTRUM DESIGN
architects | engineers

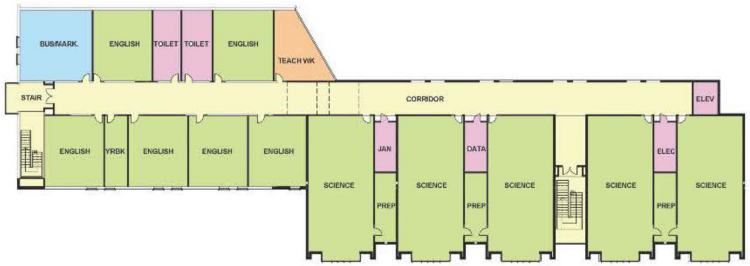
UPPER AND LOWER LEVEL PLANS

LEGEND

- CLASSROOM
- ATHLETICS
- SUPPORT
- ELECTIVES
- CAFETERIA/CAFE
- ADMIN/GUID/CLINIC
- CIRCULATION
- AUDITORIUM/MUSIC
- MEDIA CENTER
- SPECIAL EDUCATION



LOWER FLOOR



SECOND FLOOR
02|07|2017

CAVE SPRING HIGH SCHOOL

ADDITION AND RENOVATIONS

SPECTRUM DESIGN
architects | engineers

William Byrd High School

Location:	2902 Washington Ave., Vinton, VA 24179
Magisterial District:	Vinton
Grade Levels:	9-12
Current Enrollment:	1080 (Jan 2017)
Projected Enrollment / Year:	1025 / 2022
Capacity:	1107
Year of Construction:	1969
Year(s) of Major Renovation/Addition:	1986, 96, 98, 2010



Project Summary:

William Byrd High School, scheduled for planning and design funding in FY 2019 with construction planned in 2021, was originally constructed in 1969 and received additions and renovations in the 1980's and 1990's. In 2010, a partial renovation of the school was completed that included repurposing of the auxiliary gym for new classrooms to eliminate modular units and address enrollment growth in the Vinton attendance area, addition of a new auxiliary gym and classrooms, expansion of the cafeteria, new curtains and seating in auditorium, ceiling and lighting upgrades, new front entry and administrative offices, and athletic facility improvements.

The proposed future project scope includes renovation to classrooms, media center, guidance offices, corridors, toilets, science labs, interior door improvements, replacement of the main gym floor, HVAC retrofits, electrical upgrade and plumbing upgrades, replacement of auditorium lighting/sound system, and sprinkler system. A separate study conducted by OWPR in 2016 to identify infrastructure needs at this school identified $17.1M in the above areas, or $20.7M with soft costs added, and is included in the CIP.

Hidden Valley MiddleSchool

Location:	4902 Hidden Valley School Road, Roanoke, VA 24018
Magisterial District:	Windsor Hills
Grade Levels:	6-8
Current Enrollment:	577 (Jan 2017)
Projected Enrollment / Year:	624/ 2024
Capacity:	952
Year of Construction:	1972
Year(s) of Major Renovation/Addition:	



Project Summary:

Hidden Valley Middle School, scheduled for planning and design funding in FY 2022 with construction planned in FY 2024, was constructed in 1972 and has not been renovated since that time. The 119,824 s.f. school is in need of significant renovations to portions of the facility. Proposed renovations include window replacement, door replacement, ADA compliance upgrades, ceiling replacement, HVAC repairs and upgrades, sprinkler system installation, plumbing replacement and toilet facility upgrades, and miscellaneous site related upgrades.

Burlington Elementary School

Location:	6533 Peters Creek Road, Roanoke, VA 24019
Magisterial District:	Hollins
Grade Levels:	PK - 5
Current Enrollment:	416 (Jan 2017)
Projected Enrollment / Year:	435 / 2025
Capacity:	525
Year of Construction:	1939
Year(s) of Major Renovation/Addition:	1953, 66, 70, 99, 2012



Project Summary:

Burlington Elementary, scheduled for planning and design funding in FY 2024 with construction planned in FY 2025, was constructed in 1939 and has had several additions and renovations to the facility over the past 75 years. Much of the original 22,374 s.f. building has not undergone major renovations. Proposed renovations to the originally constructed facility include roofing replacement, window replacement, door replacement, ADA compliance upgrades, flooring upgrades, painting, and miscellaneous site related upgrades.

Glenvar Elementary School

Location:	4507 Malus Drive, Salem, VA 24153
Magisterial District:	Catawba
Grade Levels:	PK - 5
Current Enrollment:	362 (Jan 2017)
Projected Enrollment / Year:	420 / 2025
Capacity:	420
Year of Construction:	1959
Year(s) of Major Renovation/Addition:	1970, 86



Project Summary:

Glenvar Elementary, scheduled for planning and design funding in FY 2024 with construction planned in FY 2025, was constructed in 1959 and has not undergone major renovations. Much of the interior remains untouched since the schools original construction. Proposed renovations to the facility include HVAC replacement, window replacement, ADA compliance upgrades, new ceilings, sprinkler system installation, and miscellaneous site related upgrades.

W.E. Cundiff Elementary School

Location:	1200 Hardy Road, Vinton, VA 24179
Magisterial District:	Vinton
Grade Levels:	PK - 5
Current Enrollment:	509 (Jan 2017)
Projected Enrollment / Year:	492 / 2025
Capacity:	585
Year of Construction:	1972
Year(s) of Major Renovation/Addition:	



Project Summary:

W.E. Cundiff Elementary, scheduled for planning and design funding in FY 2026 with construction planned in FY 2027, was constructed in 1972 and has not undergone major renovations. Much of the interior and exterior remain untouched since the schools original construction. Renovations to the 61,759 s.f. facility are needed to extend its useful life. Proposed renovations to the facility include HVAC repair and replacement, window replacement, door replacement, ADA compliance upgrades, ceiling replacement, removal of combustible partitions, painting, sprinkler system installation, and miscellaneous site related upgrades.

Glen Cove Elementary School

Location:	5901 Cove Road, Roanoke, VA 24019
Magisterial District:	Catawba
Grade Levels:	PK - 5
Current Enrollment:	443 (Jan 2017)
Projected Enrollment / Year:	481 / 2025
Capacity:	470
Year of Construction:	1971
Year(s) of Major Renovation/Addition:	



Project Summary:

Glen Cove Elementary, scheduled for planning and design funding in FY 2027, was constructed in 1971 and has not undergone major renovations. Much of the interior and exterior remain untouched since the schools original construction. Significant renovations to the 60,010 s.f. facility are needed to extend its useful life. Proposed renovations to the facility include HVAC replacement, roofing replacement, window replacement, ADA compliance upgrades, ceiling and lighting replacement, power distribution system replacement, flooring upgrades, painting, sprinkler system installation, and miscellaneous site related upgrades.

HR & Payroll Software System (50%)

Location: District Wide

Magisterial District: County Wide

Category: Replacement



Project Summary:

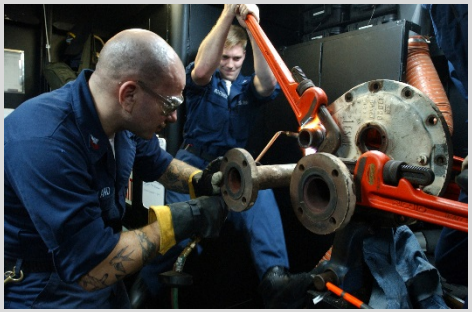
The Human Resources (HR) and Payroll Modules project, planned from FY 2017 to FY 2020, will replace the current modules utilized by Roanoke County Schools, County of Roanoke, and the Western Virginia Regional Jail Authority. The current HR and payroll systems require compatibility with the new Integrated Financial System (IFS) that went live July 2016. With all systems housed in the same software, processes will be more efficient for the County. Project costs are anticipated to be split 50/50 with the County of Roanoke.

Capital Maintenance Plan (CMP)

Location: District Wide

Magisterial District: County Wide

Category: Capital Maintenance Program



Project Summary: The Capital Maintenance Program (CMP) is the vehicle in which county school assets are programmed to receive regular maintenance and repair. Ongoing preventive maintenance of all school facilities will help ensure the safety and value of these assets while avoiding potentially large costs resulting from lack of proper maintenance. Dedicating $1,000,000 each year to the School's CMP will fund repairs and maintenance maximizing the life of the school facilities. A separate detailed report of planned CMP spending by school and by asset type has been prepared for the next ten years.

Next Steps

Proposed FY 2018 – FY 2027 CIP Next Steps

Timeline of Steps in CIP Process	Dates
Work Session on School Capital Improvement Program with County Board of Supervisors	February 7, 2017
School Board Adoption of FY 2018 Budget Appropriation including 1st Year of Capital Improvement Program; Adoption of Final CIP	March 30, 2017
Board of Supervisors Adoption of FY 2018 Budget including Appropriation for Schools Capital Improvement Program (year 1 only)	By May 15, 2017
Quarterly Joint Meeting of the School Board and Board of Supervisors (CSHS design update and next meeting)	May/June 2017 TBD
School Board and Board of Supervisors adoption of bond application and reimbursement resolution for sale of bonds to fund Cave Spring High School project from Fall 2018 VPSA Bond Sale	April/May 2018

Questions & Comments