




ACPS ENROLLMENT AND CAPACITY ANALYSIS



Based on Fall 2010 Projections
School Board Work Session
November 9, 2010



Agenda

- Overview of enrollment trends: history and projected future growth
- Elementary and secondary classroom capacity analysis
- Estimated room surpluses and shortfalls, current through 2030
- Projected new construction requirements

Enrollment History and Projections

- Quick Facts about ACPS enrollment:
 - Since FY 2007 (SY 2006-07) ACPS enrollment is up by 16% or 1,667 students
 - This represents an increase of 3.8% per year, for each year since FY 2007
 - Elementary enrollment is up 1,293 students in this period, or 5.5% average growth each year
 - This is equivalent to adding enough students to fill about 3 ACPS elementary schools in 4 years
- Other Northern Virginia school divisions are seeing similar increases
- National demographic studies indicate that the traditional out-migration to the outer suburbs of families with young children may be reversing

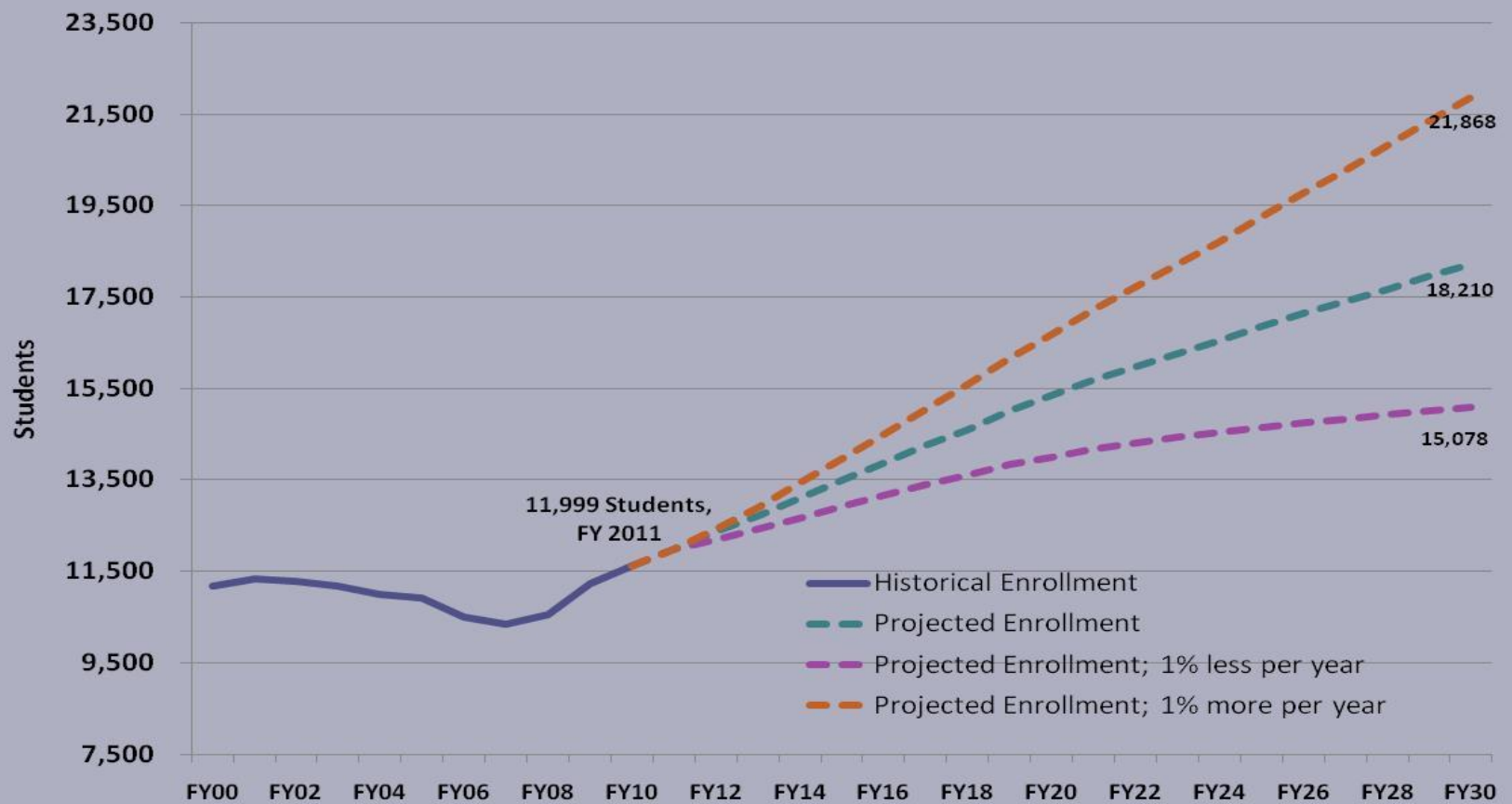


Factors used for Enrollment Projections

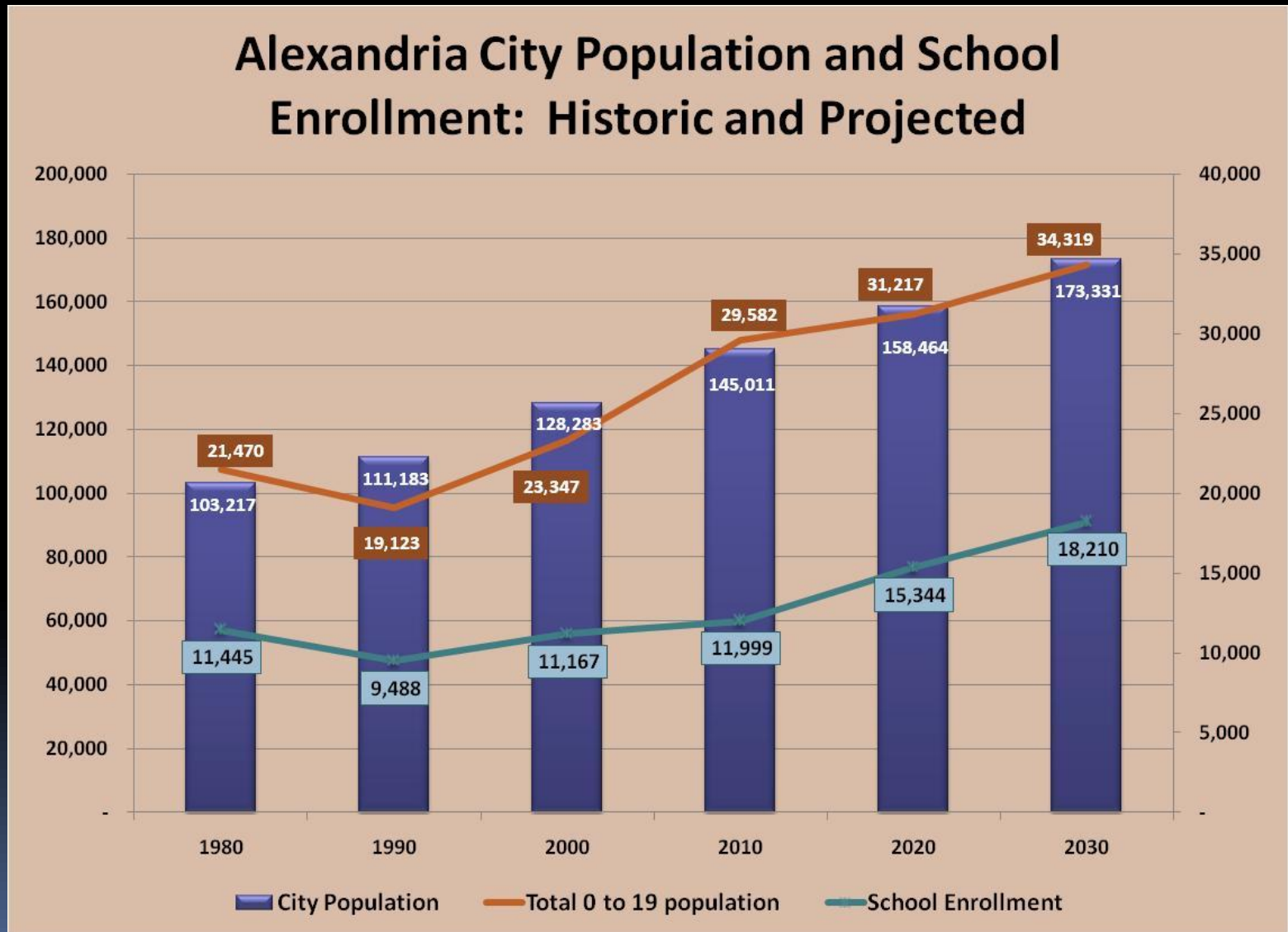
- Births to Alexandria residents
- Cohort survival rates
- New development projects and student yield ratios for type of housing
- Historical enrollment patterns
- City population growth
- Composition of city population (0-19 years of age)

ACPS Total Student Enrollment is projected to increase to 13,501 students by FY 2015. If current trends continue, enrollment will exceed 15,000 students by FY 2020

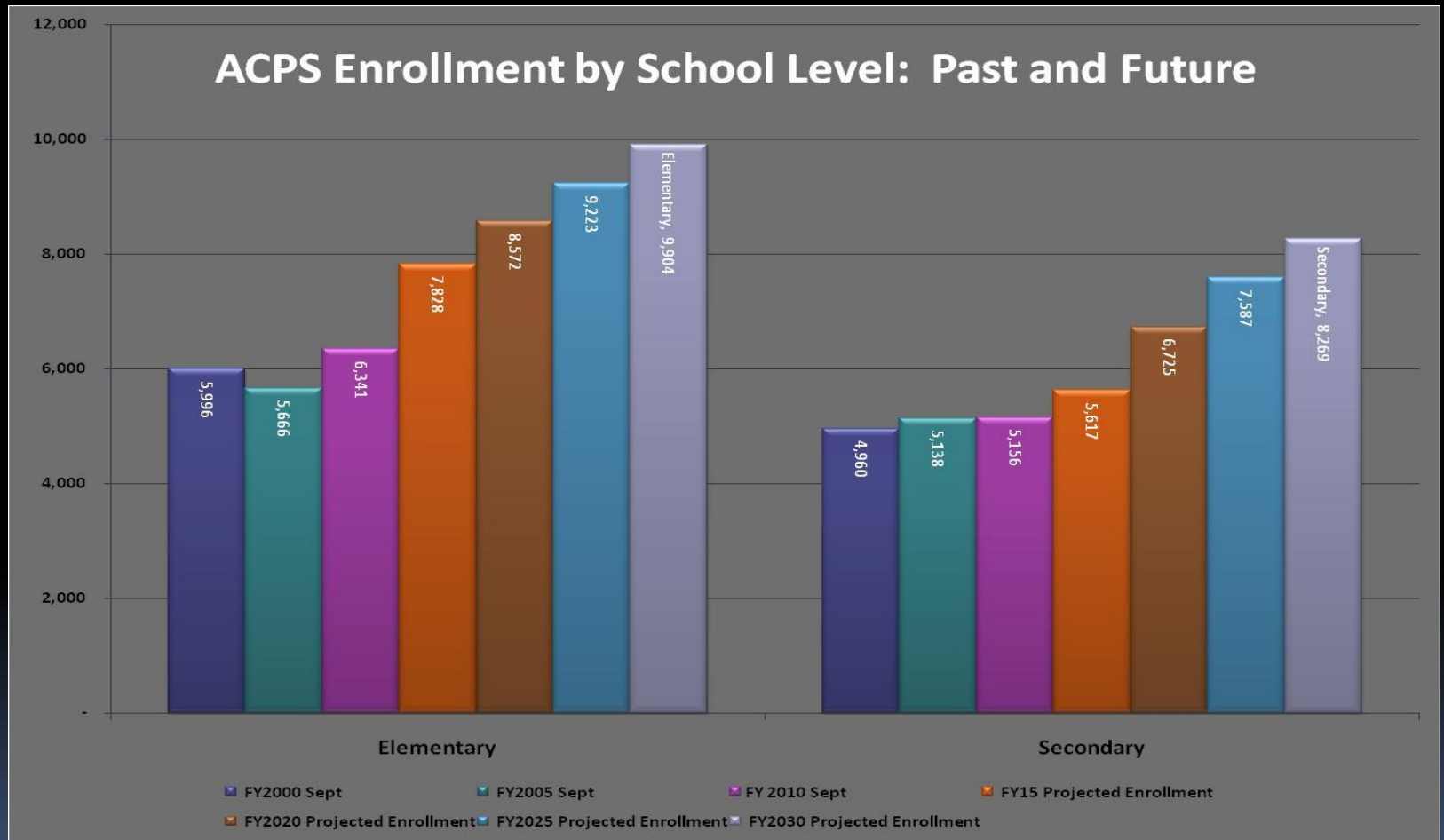
Historic and Projected Enrollment Alexandria City Public Schools



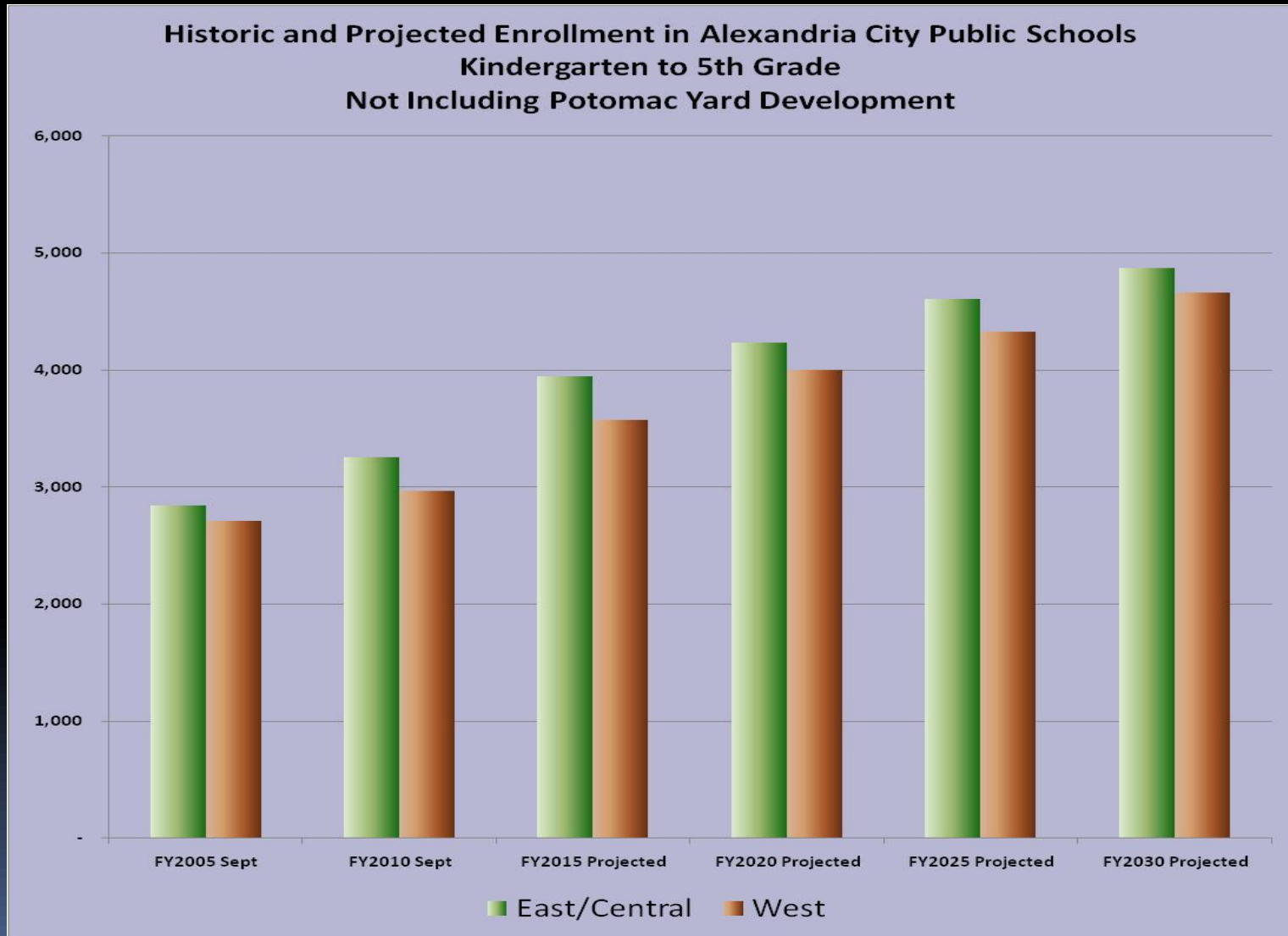
Growth in School Enrollment is proportionate to City Population growth for the 0-19 age cohort



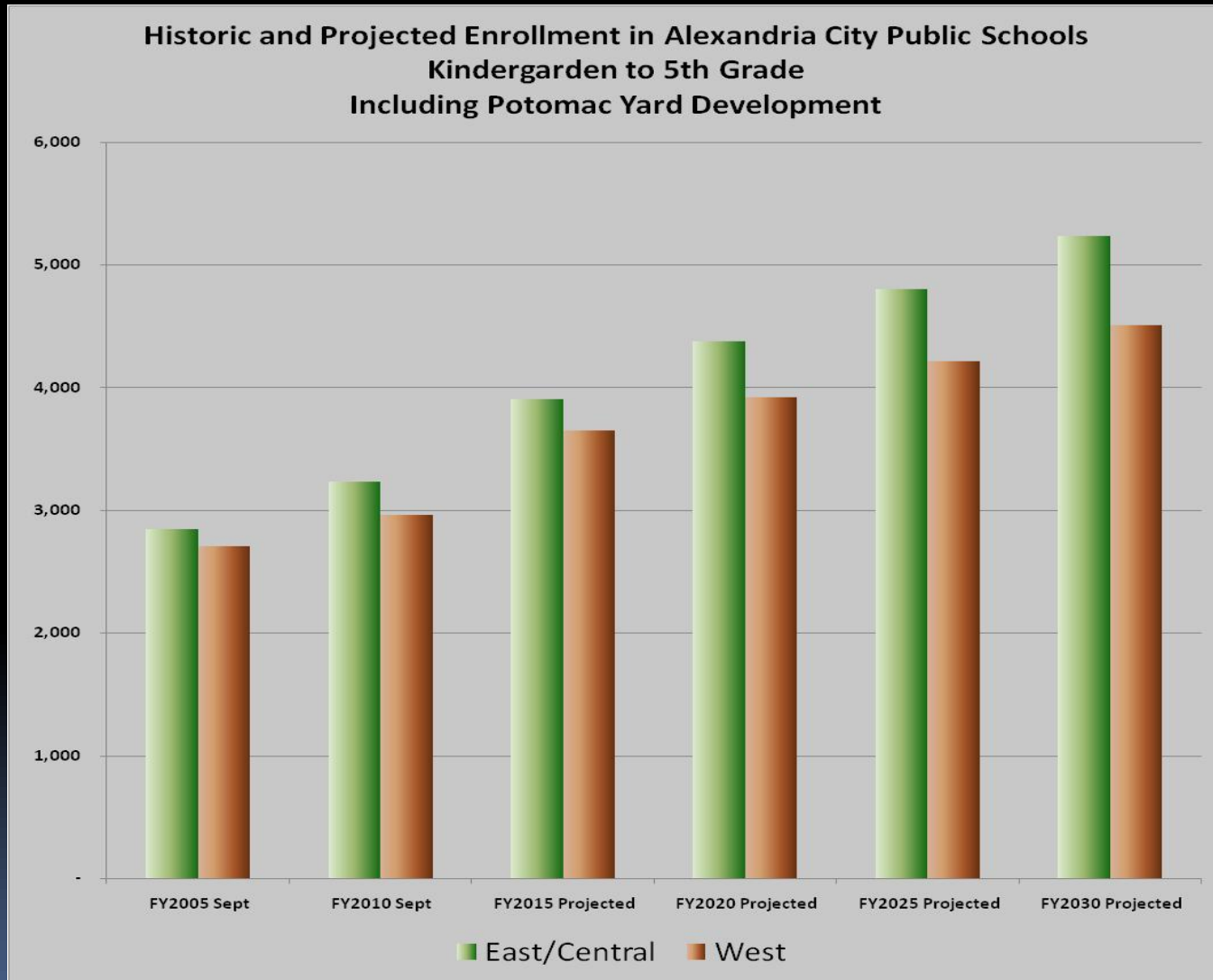
Enrollment growth is occurring at both elementary and secondary levels



Elementary Students: Growth is occurring in all parts of the City



The Potomac Yard Development Increases Demand for Elementary Classroom Space over the Next 20 Years



How do we determine building and classroom needs?

1. Define the standard program, including class size, and associated space requirements
2. Prepare short- and long-term enrollment projections
3. Convert enrollment projections into teacher staffing required
4. Quantify current space
 1. Full-size, resource, and small classroom spaces
 2. Dedicated space for other uses, such as science labs, existing preschool programs
5. Put all the pieces together

The ACPS Standard Program for Space Usage: Elementary Schools

- Full-size rooms provided for:
 - Every homeroom teacher
 - Art and vocal music
 - Talented and Gifted may be in a full-size room depending on enrollment at each school
 - Some self-contained special education programs
 - Preschool classes
- Resource-size rooms provided for
 - Teacher work room
 - Talented and gifted, depending on enrollment at each school
 - English-language learner and special education teachers
 - Reading teachers
 - Instrumental music practice
- Other (smaller) spaces provided for
 - Instructional coaches
 - Child find/study
 - Social worker/guidance counselor

Elementary Capacity Analysis

As of Fall 2010; based on FY 2012-2030 Projections

Elementary Building Capacity and Utilization Analysis: FY 2012 Proposed Budget Projections

As of November 1, 2010

Class size ratios/caps of K=20, Grades 1 & 2 = 22; Grades 3 - 5 = 24

School Name	Classrooms as Currently Configured			Full-Size Classrooms				Resource or Small RR Classrooms			Room Balance		
	Full-Size Rooms (FSR)	Resource Rooms (RR)	Office or Small RR (SRR)	FSR Rooms available for HR	Homeroom Teachers	Other Full-Size Required Uses	Total FSR Required	Special Education, ELL, and Other Teachers	Program Needs	Total RR/SRR Required	Excess (Deficit) FSR	Excess (Deficit) RR/SRR	Net Room Balance
Charles Barrett	19	7	-	15	18	4	22	6.1	3.0	10	(3.0)	(3.0)	(4.5)
Cora Kelly	40	5	3	30	19	10	29	10.1	5.0	16	11.0	(8.0)	7.0
D MacArthur	34	8	4	31	31	3	34	7.3	3.0	11	-	1.0	0.5
George Mason	25	9	-	22	22	3	25	6.5	3.0	10	-	(1.0)	(0.5)
Jefferson-Houston	43	15	3	27	18	16	34	8.7	4.0	14	9.0	4.0	11.0
JK Polk	34	3	2	31	31	3	34	9.7	3.0	14	-	(9.0)	(4.5)
John Adams	64	11	7	40	37	24	61	13.5	5.0	19	3.0	(1.0)	2.5
Lyles-Crouch	23	6	2	21	21	2	23	4.3	4.0	9	-	(1.0)	(0.5)
Maury	23	7	3	20	20	3	23	5.1	3.0	9	-	1.0	0.5
Mt. Vernon	49	6	5	38	36	11	47	14.1	4.0	19	2.0	(8.0)	(2.0)
Patrick Henry	35	10	2	28	24	7	31	9.3	3.0	13	4.0	(1.0)	3.5
S Tucker	35	9	3	32	32	3	35	12.5	1.0	14	-	(2.0)	(1.0)
W Ramsay	39	16	1	36	36	3	39	17.4	4.0	22	-	(5.0)	(2.5)
Grand Total	463	112	35	371	345	92	437	124.6	45	180	26.0	(33.0)	9.5
With Additional 20 Modular Classrooms	483	112	35	371	345	92	437	124.6	45	180	46	(33)	29.5

Net result all schools: 26 full size rooms available; a short-fall of 33 resource-size rooms, for a composite availability of 9.5 rooms City-wide. With the addition of the 20 proposed classrooms, 29.5 rooms are available City-wide.

A “Common Sense” Double-Check for Elementary Capacity

- Full-Size Rooms available for home room = 371
- Average class size = 20
- 20 students/class x 371 rooms = 7,420 students
- Number of elementary students in FY 2013 = 7,339

Classroom Shortfalls

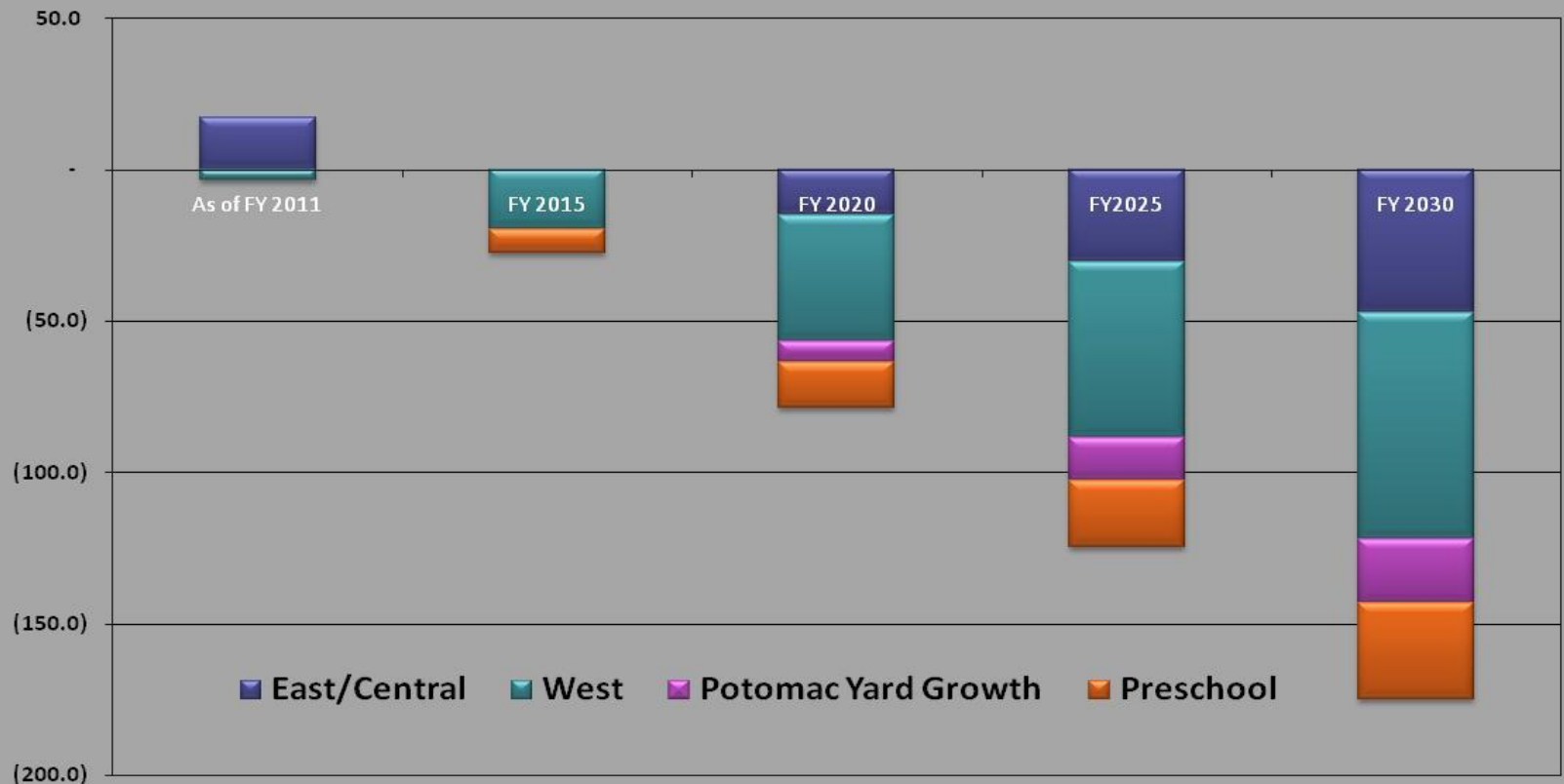
- Based on previously stated assumptions on student and population growth; changes in out-migration trends
- Assumes the need to add space for preschool programs, as preschool space is currently inadequate for existing needs. Preschool need is shown separately.
- Assumes some equalization of access to classroom space around the city through policy (modified open enrollment) or other changes

The End Result: Elementary Classroom Shortfalls over the Next 20 Years

Elementary Classroom Surplus (Shortfall)

Through FY 2030

Assumes no new construction



The Next Six Years: Elementary Classroom Overview

ACPS Elementary Capacity (Classroom) Needs FY 2012-2017
Based on Fall 2010 projections: Assumes no new construction

Fiscal Year	Classrooms as Currently Configured			Full-Size Rooms					Resource or Small Rooms				Balance			
	Full-Size Rooms	Resource Rooms	Office or Small Room	Homeroom Teachers	Special Education	Program Needs	All Preschool Programs	Total FSR Required	Special Education	ELL Tchrs	Other Tchrs	Program Needs	Total RR/SRR Required	Excess (Deficit) FSR	Excess (Deficit) RR/SRR	Net Rooms
FY 2012*	458	112	35	345	15	43	34	437	45	44	36	45	170	21.0	(23.0)	9.5
FY 2013	458	112	35	349	15	44	34	442	46	45	37	46	174	16.0	(27.0)	2.5
FY 2014	458	112	35	358	15	45	38	456	47	46	38	47	178	2.0	(31.0)	(13.5)
FY 2015	458	112	35	365	15	46	42	468	48	47	39	48	182	(10.0)	(35.0)	(27.5)
FY 2016	458	112	35	370	15	47	44	476	49	48	40	49	186	(18.0)	(39.0)	(37.5)
FY 2017	458	112	35	373	15	48	46	482	50	49	41	50	190	(24.0)	(43.0)	(45.5)

If no additional elementary capacity is provided, ACPS is projected to have a shortfall of 45.4 classrooms by 2017. This includes 12 additional classrooms for preschool programs.

Secondary School Capacity Factors

- Determinants include:
 - Number of rooms with flexible vs. fixed uses
 - Specialized rooms such as science labs, computer/career and technical labs
 - Other program-specific requirements, such as project-based learning
 - Teacher work rooms
 - Number of periods that teachers teach -4, 5, or 6 vs. number of periods in the day
 - Sharing of rooms by teachers
 - Restrictions on offering of classes below certain sizes
 - Approaches to inclusion, push-in vs. pull-out for ELL, special education, and remediation

A “Common Sense” Double-Check for Secondary Capacity

Impact of Classroom Utilization and Section Size on School Capacity

	All FSR occupied at all times		Occupied 6 of 7 periods		Occupied 5 of 7 periods	
Minimum Students/Section	20	15	20	15	20	15
MS Rooms, Full-Size*	219	219	219	219	219	219
Total Theoretical Capacity	4,380	3,285	3,754	2,816	3,129	2,346
Year Capacity is reached	Beyond FY 2030	FY 2024	Beyond FY 2030	FY 2017	FY 2020	FY 2013
HS Rooms, Full-Size	205	205	205	205	205	205
Total Theoretical Capacity	4,100	3,075	3,514	2,636	2,929	2,196
Year of Capacity	FY 2023	FY 2015	FY 2018	FY 2006	FY 2010	NA

*Assumes school use of GW Third Floor

Preliminary Secondary Capacity Analysis: Distribution of Rooms at ACPS Secondary Schools

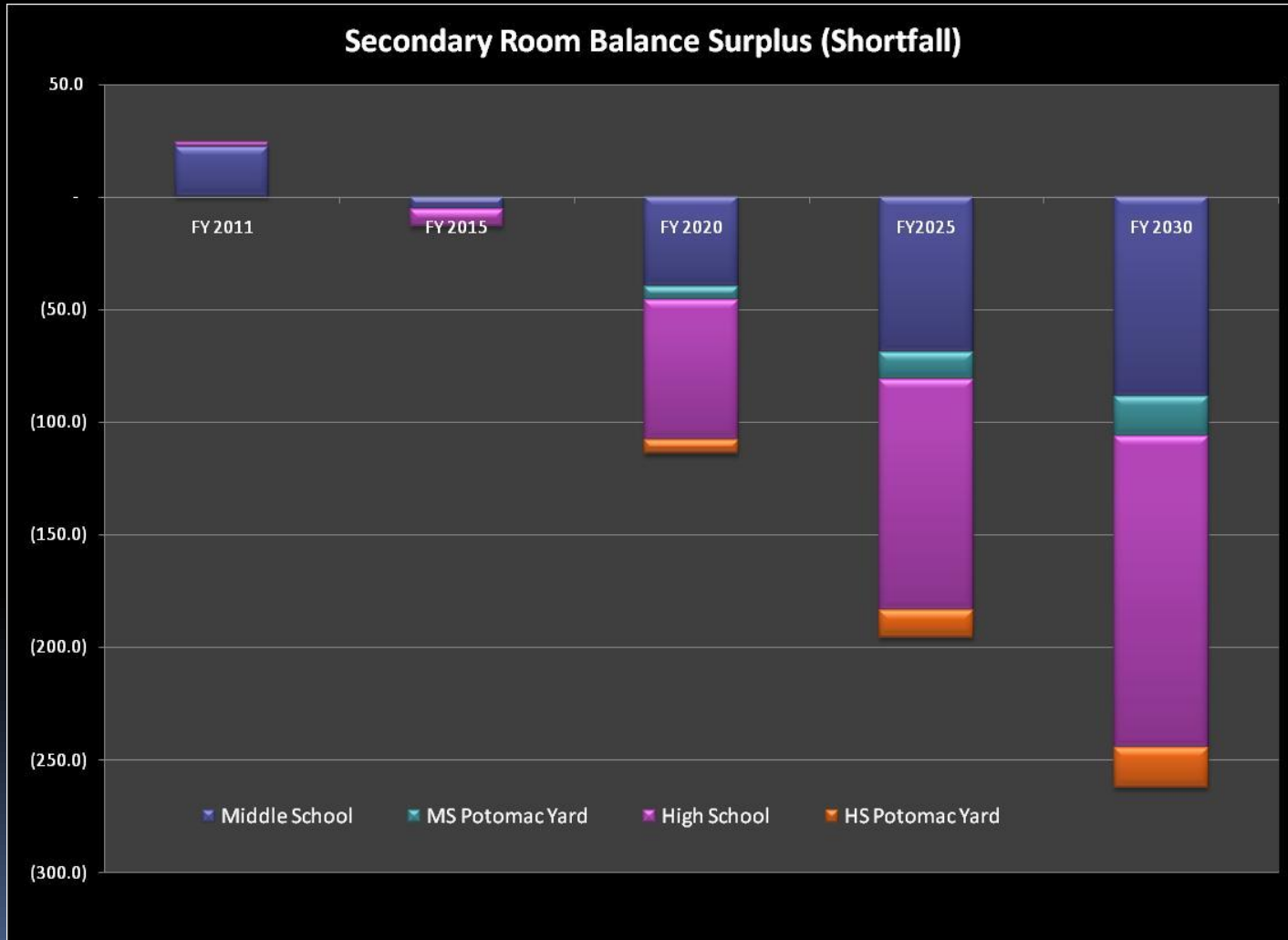
Secondary School Classrooms												
School	Physical Count of Rooms - October 2010											
	Full-Size Resource Small Resource or Office			Other Specialized Uses					Program Uses			Total Classrooms, Adjusted*
				Science	Art	Music	Career, Tech, Comp	Total Special Uses	Teacher Work Room	Multipurpose	Various	
FC Hammond	76	12	4	13	3	3	11	30	3	0	3	119.0
G Washington****	63	5	8	9	3	3	10	25	2	1	2	97.5
G Washington 3rd Floor	19	5	0	5	0	0	1	6				27.5
G Washington Head Start		1						0		4		4.5
Middle School, Subtotal	158	23	12	27	6	6	22	61	5	5	5	248.5
Minnie Howard	38	12	1	6	1	2	3	12			2	58.3
TC Williams	99	12	3	24	4	4	24	56	5	1	6	173.8
High School, Subtotal	137	24	4	30	5	6	27	68	5	1	8	232.0
Totals	295	47	16	57	11	12	49	129	10	6	13	480.5

Preliminary Secondary Capacity Analysis: Room Balances When Rooms Occupied 6 of 7 periods

Current Teachers and Theoretical Room Requirements
Assumes Rooms are used 6 periods out of 7

School	Teachers	Minimum Rooms Required w Shared Use	Teachers	Minimum Rooms Required w Shared Use	Teachers	Minimum Rooms Required w Shared Use	Teachers	Minimum Rooms Required w Shared Use	Total Staffing	Room Balance Excess (Shortfall)				
	Total, Full Size		Total, Resource Rooms		Total, Other Program Uses		Total, Special Uses			Full Size	Resource	Special Uses	Program Uses	Net, Adjusted
FC Hammond	89.5	77.0	8.5	8.0	6.0	6.0	26.0	23.0	130.0	(1.0)	8.0	7.0	-	10.0
G Washington****	64.5	56.0	10.5	9.0	5.0	5.0	22.6	20.0	102.6	7.0	4.0	5.0	-	14.0
G Washington 3rd Floor	-	12.0	-	2.0	1.0	1.0	4.0	4.0	5.0	7.0	3.0	2.0	(1.0)	9.5
G Washington Head Start	-		1.0	1.0	4.0	4.0	-	-	5.0	-	-	-	-	-
Middle School, Subtotal	154.0	145.0	20.0	20.0	16.0	16.0	52.6	47.0	242.6	13.0	15.0	14.0	(1.0)	33.5
Minnie Howard	47.5	41.0	2.8	3.0	2.0	2.0	10.5	9.0	62.7	(3.0)	10.0	3.0	-	5.0
TC Williams	122.4	105.0	12.0	11.0	13.0	12.0	58.0	50.0	205.4	(6.0)	4.0	6.0	-	2.0
High School, Subtotal	169.9	146.0	14.8	14.0	15.0	14.0	68.5	59.0	268.1	(9.0)	14.0	9.0	-	7.0
Totals	323.9	291.0	34.8	34.0	31.0	30.0	121.1	106.0	510.7	4.0	29.0	23.0	(1.0)	40.5

The End Result: Secondary Classroom Shortfalls over the Next 20 Years



Options for Meeting the Long-term Shortfall in Classroom Space

- Build
 - Additional classrooms
 - Additional schools
- Policy changes
 - Modified open enrollment
 - Adjust class or section sizes
- Space utilization and program changes
 - Use rooms 6 or 7 periods/day
 - Increase inclusion; decrease pull-out
 - Change the academic calendar
 - Consider alternative uses of other City spaces
 - Locate instruction in flexible ways, e.g., on-line learning



Possible Building Scenarios

- See Handout
 - Elementary
 - Secondary

Other Factors to be Studied

- Core space requirements
 - Cafeteria space
 - Kitchen storage, layout, and number of lines
 - Grounds space: playgrounds and playing fields
 - Gymnasium and locker-room size
 - Other facility specific concerns, such as rest rooms, physical class-room size, and hallway size
- Parking and traffic flow issues with increased growth
- Office and storage space
- Secondary minimum section size
- Central office location
- Additional transportation space to accommodate more buses
- Replacement of Stonewall Jackson space when the lease expires in 2014

Next Steps

- Finalize planning for elementary capacity needs
- Continue analysis of secondary and other capacity requirements
- Continue collaboration with City Planning and Zoning
- Identify where ACPS central office space fits in these solutions
- Other capacity needs that must be included in the analysis:
 - Physical education/gym space
 - Playing fields and playgrounds
 - Cafeteria and kitchen size
 - Preschool needs
 - Multi-purpose room space
 - Possible program changes over the next 20 years



Questions?