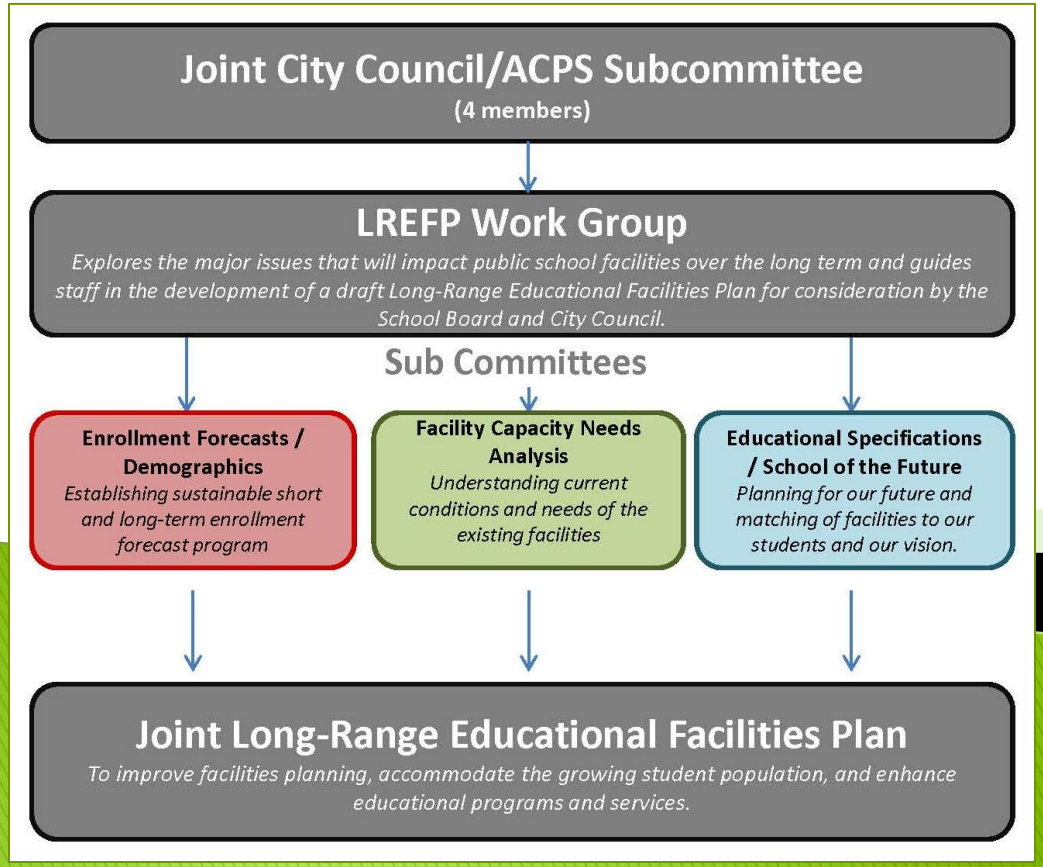
Facility Capacity Needs Analysis Subcommittee

ACPS & City of Alexandria

February 10, 2014



Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Agenda

- Review Work Program
- Progress by Hughes Group Architects
- Capacity Discussion
- Next Steps

- Tonight's goal is to discuss different methods of calculating capacity using fictional PK-3rd grade school

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Review Work Program

- Goals
  - Assess existing conditions
  - Review capacity analysis methodology
  - Review how existing capacity is allocated to meet demand
  - Establish guidelines for adding capacity, supporting education
  - Identify potential school site types

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Review Work Program

- Approach
  - Develop a school facility and site inventory
  - Develop a capacity and utilization assessment for each school site
  - Identify space needs by type of use
  - Review findings of Enrollment Subcommittee and Educational Specifications Subcommitee
  - Reallocate existing capacity to meet current demand
  - Develop guidelines for adding capacity
  - Review potential future school sites

Review Work Program

- 1st meeting
  - Reviewed Work Program/ HGA Scope of Work
  - ACPS Elementary Standard Program/Room Allocations
  - Methodology for Elementary and Secondary Capacity Analysis
- 2nd meeting
  - Reviewed data collected on pilot school
  - Community uses of school facilities

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Status on School Facility Inventory– Building Interiors

- Package #1 and #2 delivered to staff
  - Samuel Tucker, James K. Polk, Lyles-Crouch, Charles Barrett
  - Minnie Howard, Cora Kelly, George Mason, Matthew Maury, John Adams
- Sites remaining
  - George Washington, Douglas MacArthur, William Ramsay, Mt. Vernon, Francis C. Hammond, T.C. Williams King Street

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Capacity Discussion

- Physical
  Programmatic
  Core
  Level of Service
  Example

Physical Capacity

- Also known as design or building capacity
- How many students can a school building accommodate with a traditional instructional program?
- Number of full-size classrooms x Number of students a classroom is designed to accommodate

Program Capacity

- How many students can a school building accommodate based upon the specific educational program
- Four different models illustrated
  - #1- actual student/teacher ratio
  - #2- class-size caps
  - #3- design capacity
  - #4- actual square feet

Core Capacity

- Core spaces include cafeteria, gymnasium, multipurpose room, library/media center
- Calculated based on square foot allowance per student
- VDOE Guidelines depend on type of furniture
  - Cafeteria
    - Elementary 8-14 SF/student
    - Middle 9-14 SF/student
    - High 11-14 SF/student
  - Art 45 SF/student
  - Music 15-20 SF/student

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Utilization Factor

- Percentage applied to the optimum capacity to account for the uneven distribution of students across grade levels and cohort groups
- Recommended rates
  - Elementary 90%–100%
  - Middle School 70%–85%
  - High School 80%–85%

Level of Service

- Goal for acceptable level of service provided by a facility based on the operational characteristics
- Can vary based on program and level
- Reaching a certain level can trigger a study or project

Other

- Hybrid/Combination
  - Uses a combination of factors to provide a more realistic capacity calculation
- Net Area
  - Gross square feet of permanent facilities (minus SPED & ELL classrooms)/square foot per student

Capacity Example

- Fictional Pk-3rd School
  - 21 Instructional Classrooms
  - 5 Core Spaces
- 632 Design Capacity

- 534 Program Capacity Model #1
  - Student/Teacher Ratio of 23
  - 95% Utilization
- 541 Program Capacity Model #2
  - Current ACPS Class-Size Caps
  - 95% Utilization
- Calculations provided in handout

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Capacity Example Cont.

- Fictional Pk-3rd School
  - 21 Instructional Classrooms
  - 5 Core Spaces
- 602 Program Capacity Model #3
  - All classrooms can accommodate 26 students
  - 95% Utilization
- 568 Program Capacity Model #4
  - Assumes standard goal of 35 SF/student in general ed. and 75 SF/student in special ed.
  - 95% Utilization
- Range between high and low models: 93
- Calculations provided in handout

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Capacity Example Cont.

- Level of Service

Level of Service	85%	90%	100%	110%	120%
Design	538	569	632	696	759
Program #1	454	481	534	588	641
Program #2	460	487	541	596	650
Program #3	512	542	602	663	723
Program #4	483	512	568	625	682

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Capacity Example Cont.

- Capacity Analysis Enrollment and Capacity

	SY 2011	SY 2012	SY 2013	SY 2014	SY 2015
Enrollment	**500**	**520**	**540**	**560**	**580**
Design	79%	82%	85%	89%	92%
Program #1	94%	97%	101%	105%	109%
Program #2	92%	96%	100%	104%	107%
Program #3	83%	86%	90%	93%	96%
Program #4	88%	92%	95%	99%	102%

Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Discussion/Next Steps

- Next meeting
  - Review progress of architect
  - Review methodologies and finalize recommendation
  - Apply recommended methodology to individual schools