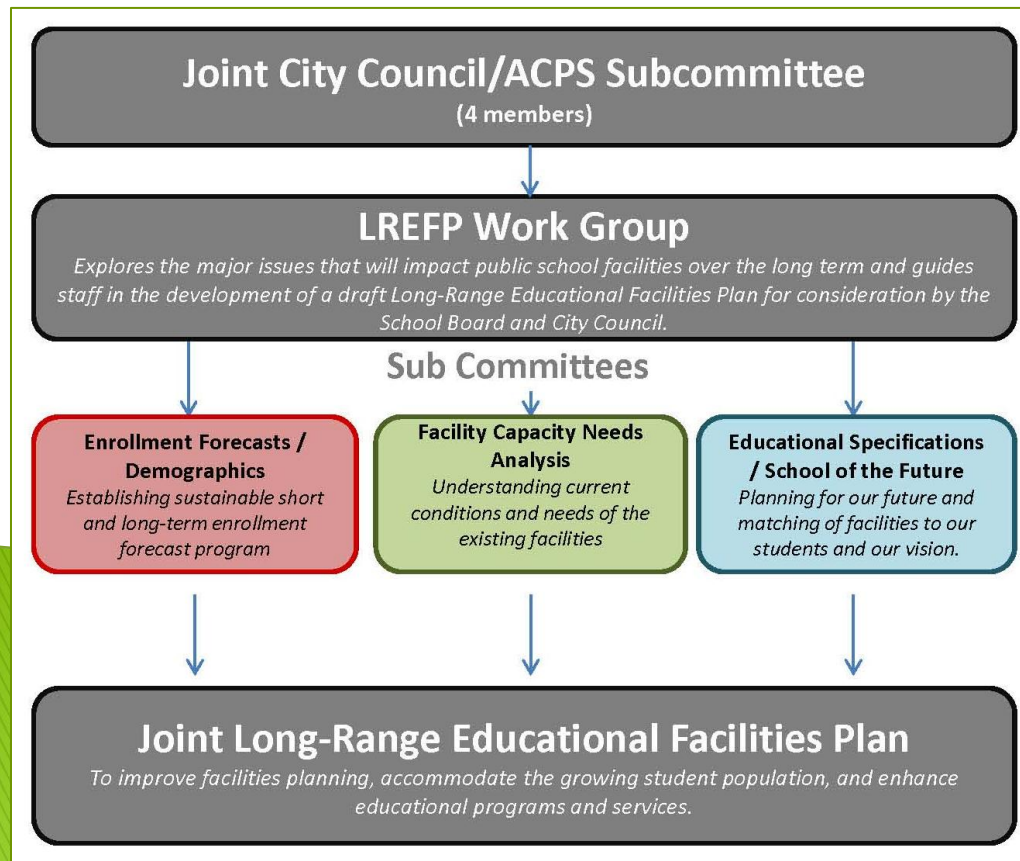


Facility Capacity Needs Analysis Subcommittee

ACPS & City of Alexandria

February 10, 2014



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

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

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 Subcommittee
- 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

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

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

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

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

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

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%

Discussion/Next Steps

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