Note: Meeting materials will be posted as they become available.

21st Century School Facilities Commission

Martin G. Knott, Jr., Chair

Agenda
November 10, 2016
10:00 a.m.
House Office Building, Room 120
Annapolis, Maryland

I. Call to Order and Chair's Opening Remarks

II. Role of the Interagency Committee on School Construction (IAC) and Maryland State Department of Education (MSDE) in School Construction Project Review/Decision Process

- IAC
  - Joan Schaefer, Acting Executive Director of the IAC

- MSDE
  - Kristy Michel, Deputy State Superintendent, Finance and Administration
  - Barbara Bice, School Facilities Branch Chief

III. Review of Existing and Alternative State Procurement and Construction Methods

- David Lever, former Executive Director of the IAC

IV. Public Testimony

V. Chair's Closing Remarks and Adjournment

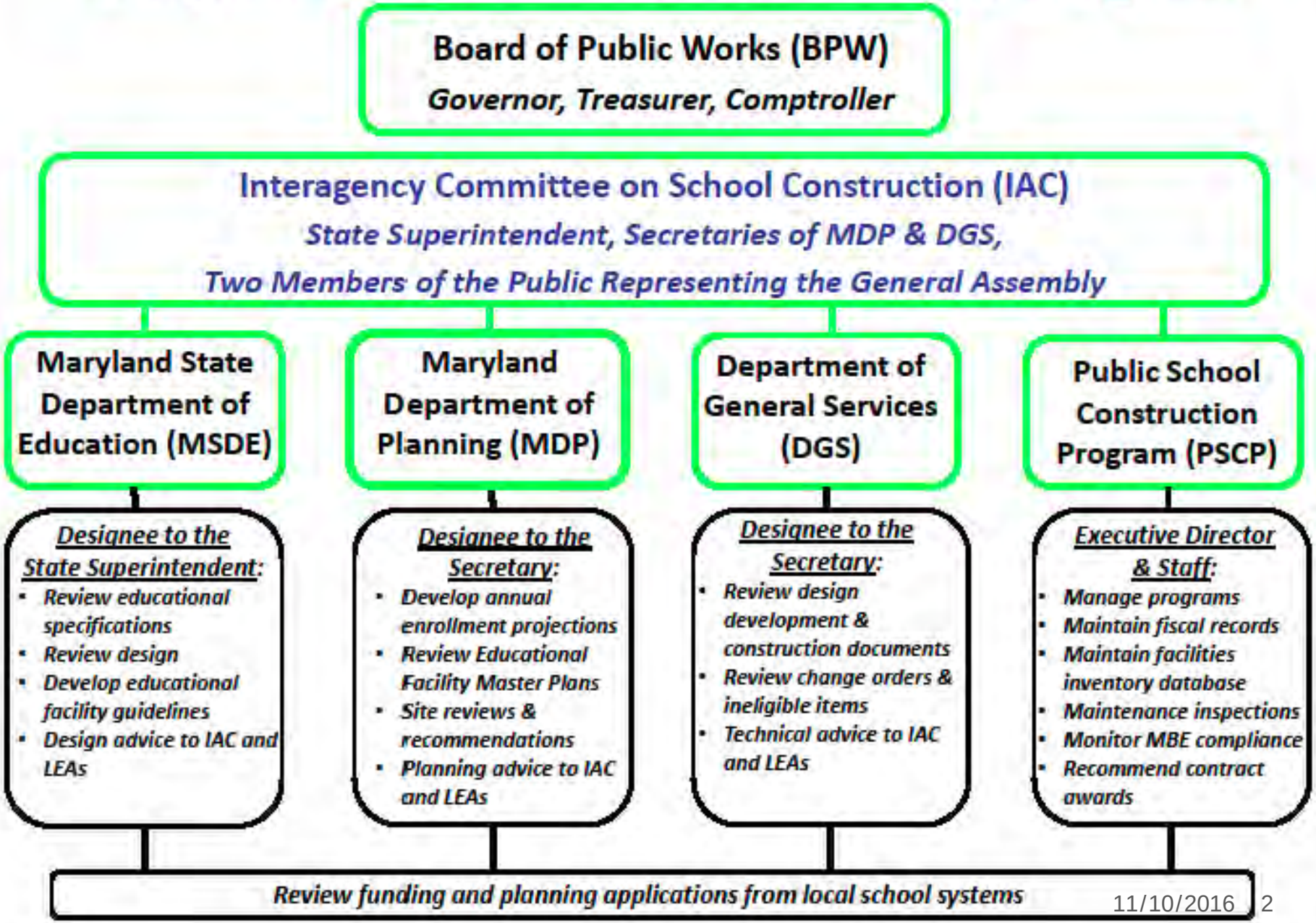
Interagency Committee on Public School Construction

IAC AGENCY ROLES & RESPONSIBILITIES

21ST CENTURY SCHOOL FACILITIES COMMISSION

November 10, 2016

Maryland Public School Construction Program



Public School Construction Program
Facility Inventory Report
Anne Arundel

PSC# 02.079 **LEA#** 02.1162 **Project Name:** Marley Elementary
Address: 715 Cooper Road, Glen Burnie, MD 21060

TAX ASSESMENT ID: 390046697 **IAC Site Approval Date**
Maryland General Assembly Election District: 31A **ACREAGE** 21.14
LIFE CYCLE: ACTIVE **SRC** 724
Current Grade Levels in Building: PreK-5 (e.g. PreK-5, 6-8, 9-12) **School Type(s):** Elementary

Square Foot History Summary

Construction

	ODate	SQFT	ADJ.SQFT	
New	**1953**	**22,760**	-	
Demolition	2005	22,760	-	
Addition	**1962**	**11,657**	-	
Demolition	2005	11,657	-	
Addition	**1971**	**5,184**	-	
Demolition	2005	5,184	-	
Addition	**1996**	**1,400**	-	
Demolition	2005	1,400	-	
Addition	**2005**	**67,111**	67,111	
Addition	**2014**	**9,856**	9,856	Kindergarten
	Total Adjusted SQFT	**76,967**		

Other State Capital Improvements

TIMS	1998	- $25,000 TIMS
Security Initiative	2013	- Door Hardware/Camera Surveillance

Current Year(Sept 30) 2015 **RATED CAPACITY**
HEAD COUNT 715 **LOCAL** 724 **STATE** 724
FT ENROLLMENT 696 **SRC Approval Date** 04/05/2016 **UTILIZATION** 125.41

Adjacent Schools: Freetown Elementary, Glendale Elementary, Marley Elementary, Point Pleasant Elementary, Solley Elementary

Remarks:

PSCP Remarks:

Maintenance Inspection Results

FY	Inspection Date	SurveyID	Numerical Rating	Overall Rating
2011	05/09/2011	1,167	95.65	Superior

Facility Inventory data extracted from the PSCP Facility Inventory database, updated annually by each LEA.
CIP, ASP, and QZAB project data is extracted from the PSCP Financial databases.

Printed: November 09, 2016
Page 1 of 3

Public School Construction Program
Facility Inventory Report
Anne Arundel

PSC# 02.079 **LEA#** 02.1162 **Project Name:** Marley Elementary
Address: 715 Cooper Road, Glen Burnie, MD 21060

Adjusted Age Calculation

SCHOOL NAME	SUBTYPE	ODATE	ADJ Age	ADJ AGE%	ADJ SQFT	Point Value
Marley Elementary	New	1953	63	-	0	
	Addition	1962	54	-	0	
	Addition	1971	45	-	0	
	Addition	1996	20	-	0	
	Addition	2005	11	0.87	67,111	
	Demolition	2005	11	-	0	
	Demolition	2005	11	-	0	
	Demolition	2005	11	-	0	
	Demolition	2005	11	-	0	
	Addition	2014	2	0.13	9,856	
			9.85	**1.00**	**76,967**	**1**

Year used for age calculation = 2016

Point Values earned based on adjusted age of building
1= 1-20 2= 21-25 3= 26-30 4= 31-39 5= 40+

Capital Improvement Program (CIP) Funding from CFAS

CIP Year(s) - Project Category - Sub category	Current Allocation	Current Approved Contract	Current Expenditures
1995 - Construction - K-PK Addition	$ 18,610	$ 18,610	$ 18,610
1998 - Construction - Wiring	$ 25,000	$ 25,000	$ 25,000
2004, 2005 - Construction - Replacement	$ 3,127,608	$ 3,127,608	$ 3,127,608
2014 - Construction - K-PK Addition	$ 850,859	$ 850,859	$ 850,859
Facility Totals	**$ 4,022,077**	**$ 4,022,077**	**$ 4,022,077**

Note:Current Allocation amounts do not include the project contingency balance.

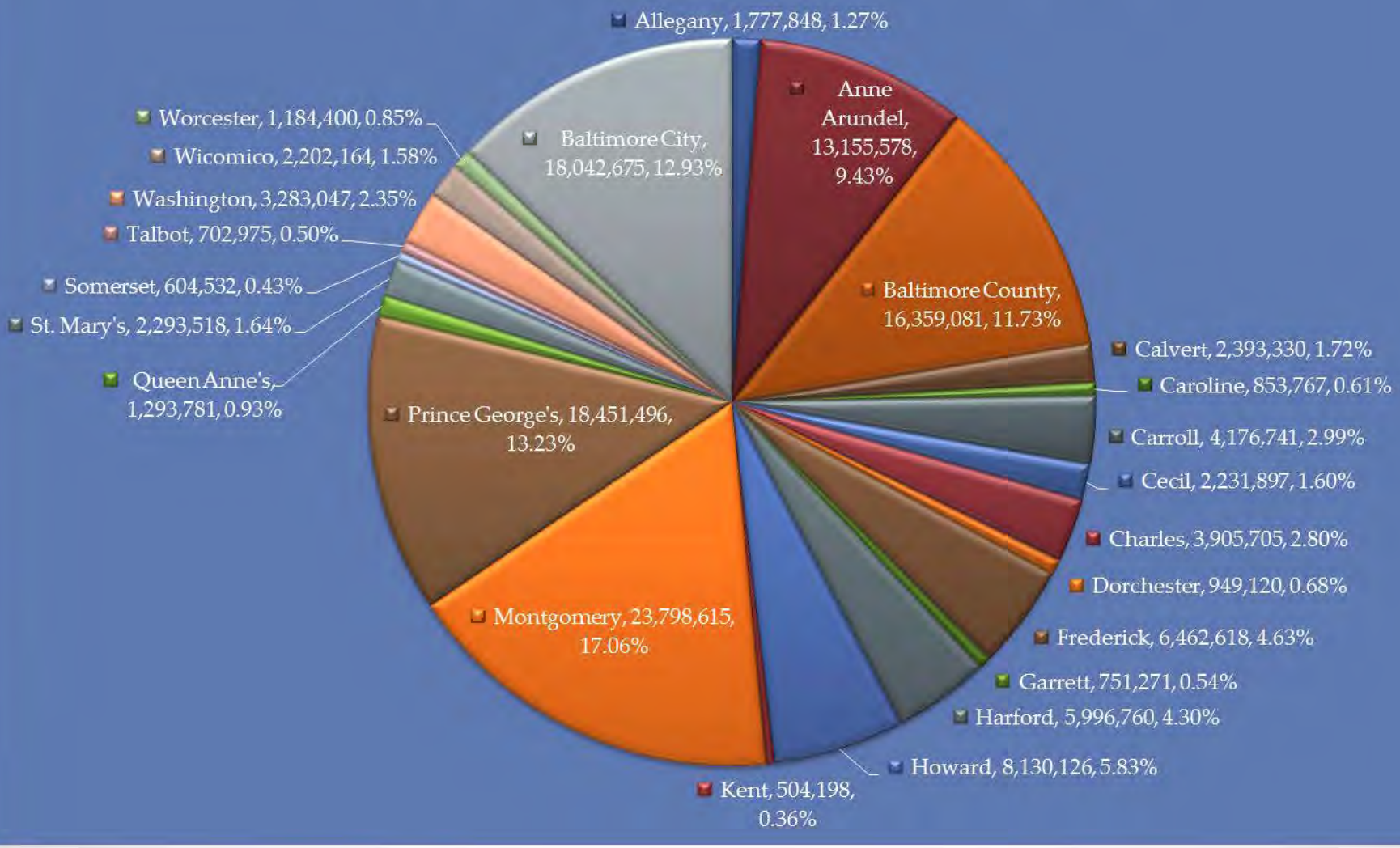
Security Initiative Funding (SI)

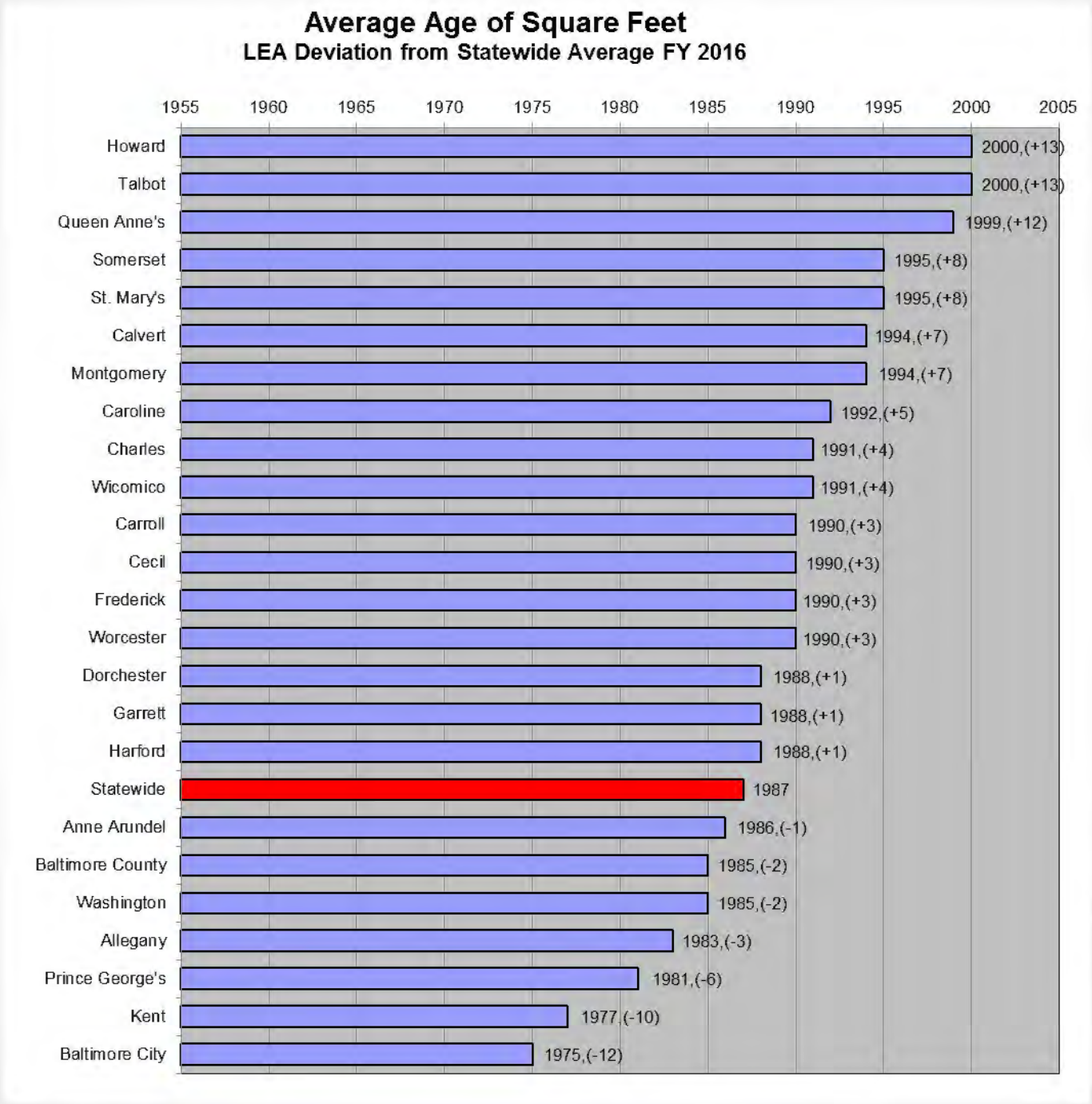
PSC\SI #		SI $ Approved	Expenditure
02.079.14	Door Hardware - Installation of one Kaba Simplex proximity lock system on one entry door.	$-	$0
02.079.14	Camera Surveillance - Installation of Axis, IQinVision surveillance camera system consisting of 31 surveillance cameras, associated Cisco wiring, camera server and LenSec software.	$28,041	$28,041
		$28,041	**$28,041**

Facility Inventory data extracted from the PSCP Facility Inventory database, updated annually by each LEA.
CIP, ASP, and QZAB project data is extracted from the PSCP Financial databases.

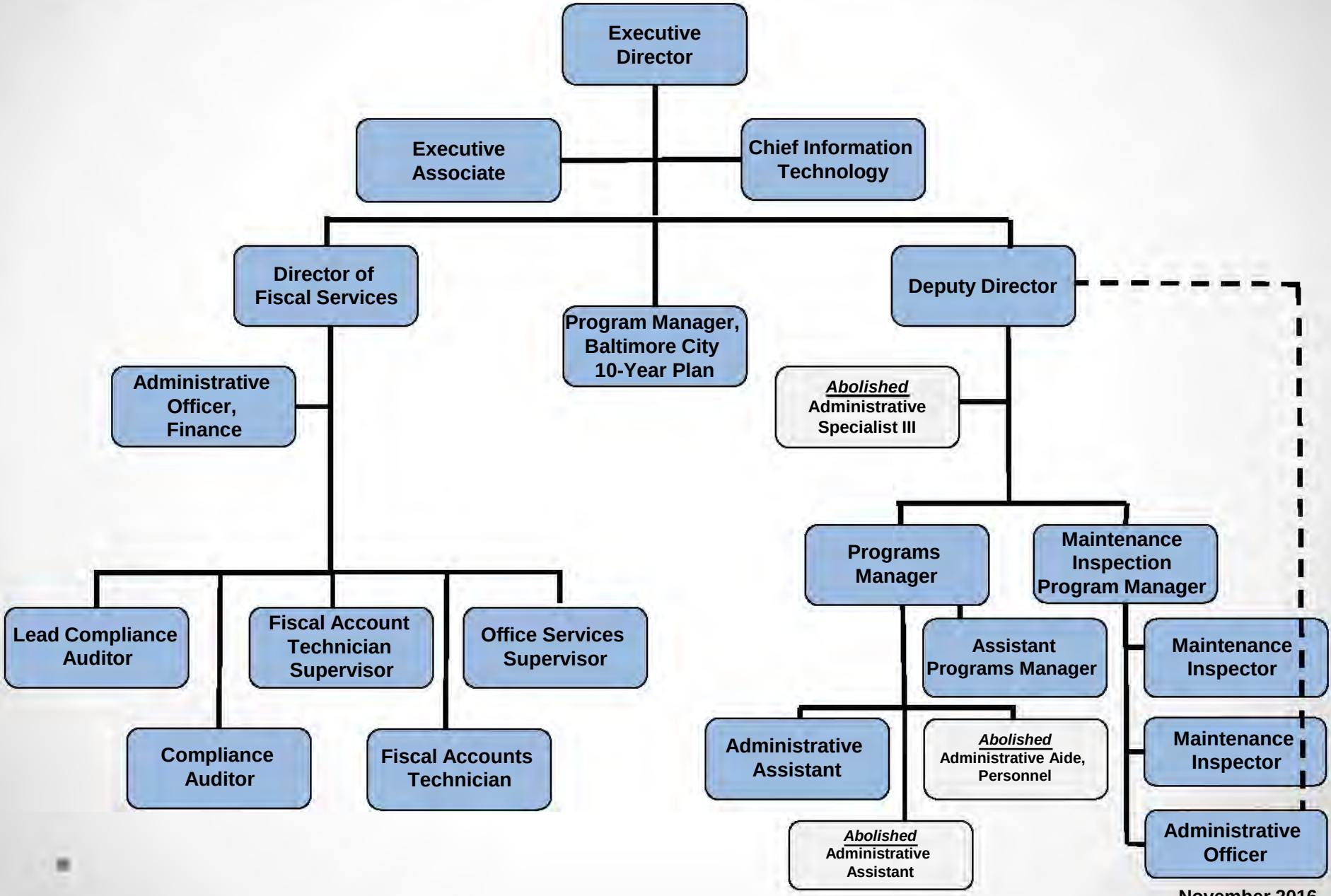
Printed: November 09, 2016
Page 2 of 3

Total Statewide Square Footage of 139,505,243 in 1,386 "Active" and "Holding" School Facilities By LEA, SF and Percentage of Statewide Total




Average Age of Square Feet
LEA Deviation from Statewide Average FY 2016
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
Howard
2000,(+13)
Talbot
2000,(+13)
Queen Anne's
1999,(+12)
Somerset
1995,(+8)
St. Mary's
1995,(+8)
Calvert
1994,(+7)
Montgomery
1994,(+7)
Caroline
1992,(+5)
Charles
1991,(+4)
Wicomico
1991,(+4)
Carroll
1990,(+3)
Cecil
1990,(+3)
Frederick
1990,(+3)
Worcester
1990,(+3)
Dorchester
1988,(+1)
Garrett
1988,(+1)
Harford
1988,(+1)
Statewide
1987
Anne Arundel
1986,(-1)
Baltimore County
1985,(-2)
Washington
1985,(-2)
Allegany
1983,(-3)
Prince George's
1981,(-6)
Kent
1977,(-10)
Baltimore City
1975,(-12)

PUBLIC SCHOOL CONSTRUCTION PROGRAM
Agency Organizational Chart, with Current Positions (and Abolished Positions)



November 2016

Public School Construction Program - Staffing

An independent agency of **19** full-time professional staff with an operating budget of approximately **$1.9** million of which **98%** is wages and salaries. The State cost in salaries is less than **1%** of the average annual **$318** million CIP budget.

Administration (Staffing =7)

- 6 Programs, 5 Initiatives
- Funding Review
- Regulations, Procedures
- Statutory Reports
- Special Projects
- Legislative Duties
- Advisory to the LEAs
- Meetings
- Baltimore City 21st Century Building Plan

Finance (Staffing = 7)

- Operating Budget
- Financial Transaction, Reporting
- Contract Analysis
- Auditing
- School Property Disposal
- Human Resources
- Internal Controls

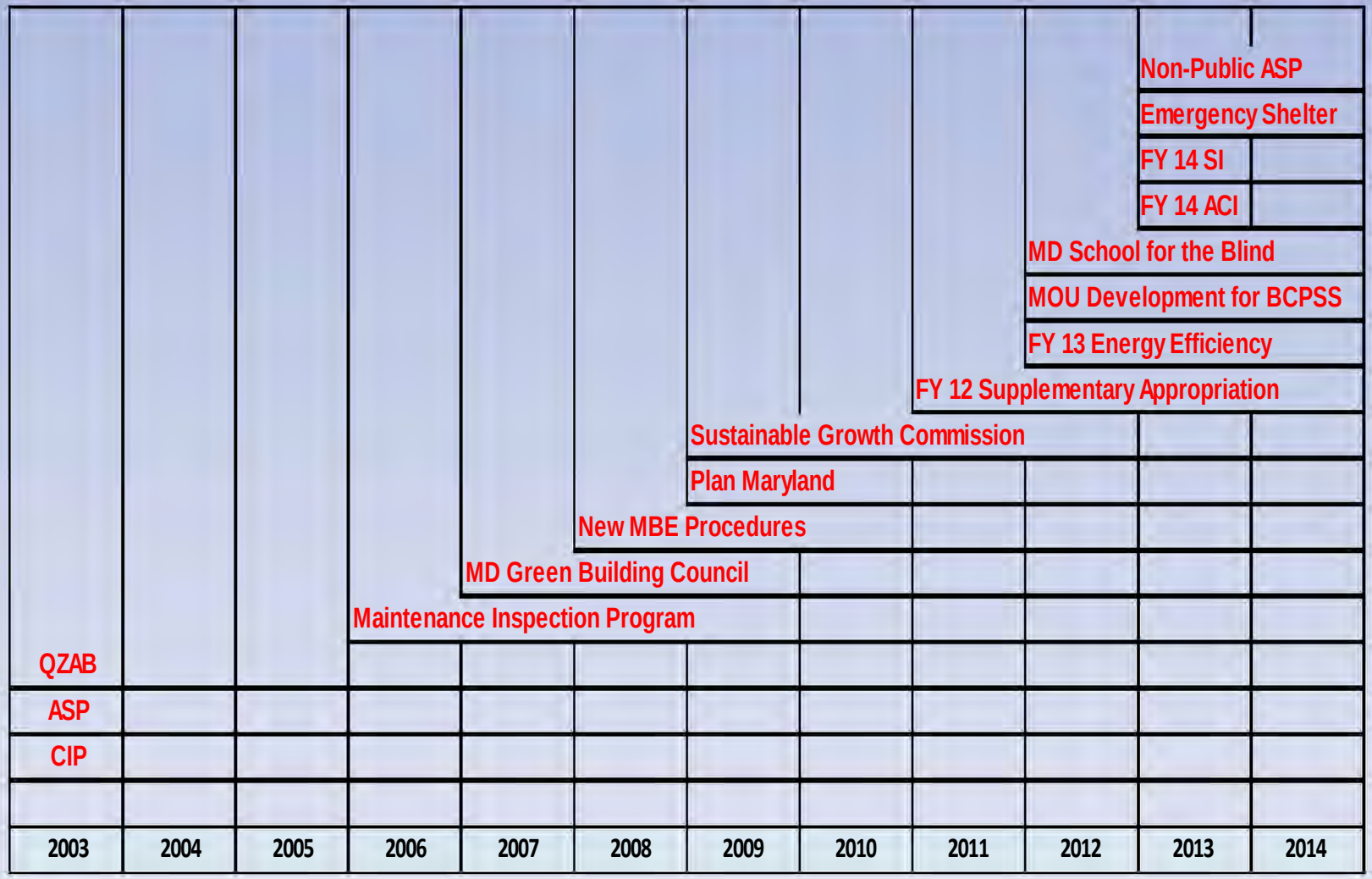
Maintenance (Staffing = 4)

- Annual School Inspections
- Reviews, Analysis of Maintenance Issues
- Reporting to LEAs, BPW, Legislative Committees, Public

Information Technology (Staffing = 1)

- Data Collection, Management and Dissemination
- Facility Inventory of school facilities
- Technology Tools
- Document Management
- Data Security

Public School Construction Program
New Tasks, 2003-2014



Collaborative Efforts with MD State Agency and Others

- Maryland Emergency Management Agency (MEMA)
- Maryland Historic Trust (MHT)
- Governor's Office of Minority Affairs (GOMA)
- Department of Labor, Licensing and Regulation (DLLR)
- Department of Human Resources (DHR)
- Maryland Energy Agency (MEA)
- State Treasurer's Office (STO)
- General Accounting Division (GAD)
- Office of Legislative Auditor's (OLA)
- Department of Information Technology (DOIT)
- Maryland Stadium Authority(MSA)
- Maryland Association of Counties(MACO)
- Maryland Association of Board of Education(MABE)
- Public School Superintendent Association of Maryland (PSSAM)
- Sustainable Growth Commission
- MD Green Building Council

PSCP Administration

- **Administrative**
  - Programs Management
    6 Programs, 5 Initiatives
  - Legislation
  - BPW/IAC
  - Coordinates Communications
  - LEA Facility Planner Meetings
- **Regulations & Procedures**
  - Develops, Updates, Enforces
- **Funding Recommendations**
- **Reporting**

Funding Programs Initiatives

Capital Improvement Program (CIP)

- Regulations/Procedures
- Application review
- $200,000 minimum project cost threshold
- Eligibility criteria
- Funding Allocation Methodology
- State/local cost share %
- Designee review(DGS, MDP, MSDE
- IAC/BPW Approvals
- Procurement Review
- Payment/Reimbursement
- Final Audit
- Data Management

Aging Schools Program (ASP)

- Regulations/Procedures
- Application review
- $10,000 minimum project cost threshold
- Eligibility criteria
- Funding Allocation Methodology
- 100% State
- Designee review(DGS, MDP, MSDE
- IAC/BPW Approvals
- Procurement Review
- Payment/Reimbursement
- Final Audit
- Data Management

Qualified Zone Academy Bond (QZAB)

- Procedures
- Application review
- $30,000 minimum project cost threshold
- Eligibility criteria
- Funding Allocation Methodology
- 100% State
- Designee review(DGS, MDP, MSDE
- IAC/BPW Approvals
- Procurement Review
- Payment/Reimbursement
- Final Audit
- Data Management

Other Funding Initiatives (EEI, ACI, SA, SI, NPASP)

- Procedures
- Application review
- Various Minimum project cost thresholds
- Eligibility criteria
- Funding Allocation Methodology
- State/local cost share %
- Designee review(DGS, MDP, MSDE
- IAC/BPW Approvals
- Procurement Review
- Payment/Reimbursement
- Final Audit
- Data Management

PSCP Finance

- Fiscal Management
  - Active projects **864**
  - Totaling **$1.678 Billion**
- Contract Analysis
  - Annual Average **618** Contracts
  - Annual Average **394** Projects

- Transactions
  - Annual Expenditures of $**305 Million**
  - Annual Invoices of **2,112**
- Reporting
- Auditing
- School Property Disposal
- Human Resources
- Operating Budget **$1.9 M**
- Internal Controls

PSCP Maintenance

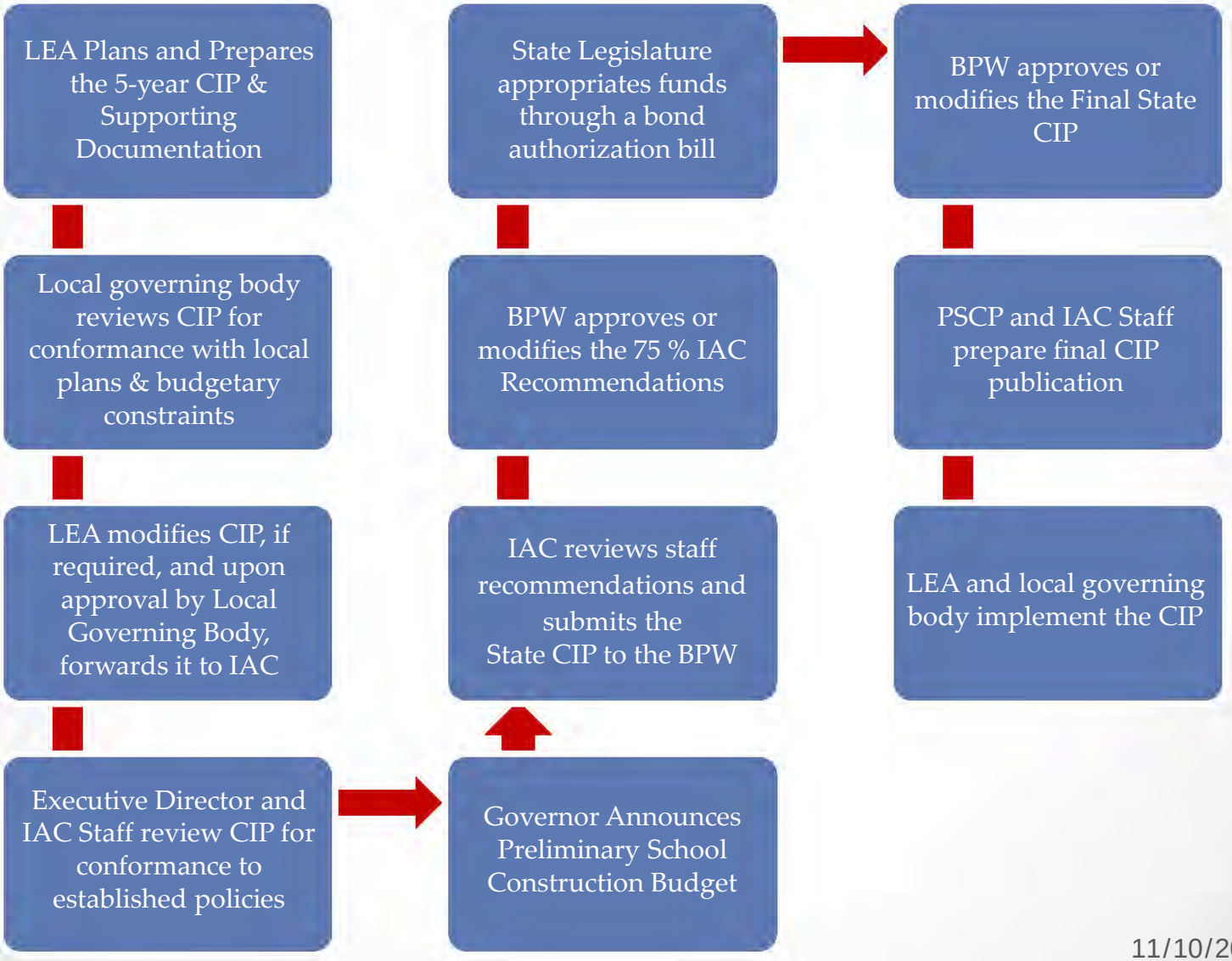
- 1392 Public School Buildings (number varies)
- 220 Annual School Inspections
- Reviews and analyzes maintenance issues
- Reporting to LEAs, BPW, Legislative committees and the public

PSCP Information Technology

- **Database Management**
  - Consolidated Financial Accounting System (CFAS)
  - School Facility Inventory
  - Maintenance Inspection Results
  - ASP
  - QZAB
  - CIP
  - Contract Approval
  - MBE
- **Data Dissemination & Reporting**
- **Technology Tools**
  - SharePoint
  - Report Repository
- **Document Management**
- **Data Security**

Agency Collaborations for the Annual CIP

School Construction Fund Approval Process



Funding Programs and Initiatives

- Capital Improvement Program (CIP)
- Aging Schools Program (ASP)
- Qualified Zone Academy Bond (QZAB)
- Enrollment Growth Relocatable Classrooms (EGRC)
- Relocatable Repair Fund
- Emergency Repair Fund
- Energy Efficiency Initiative (EEI)
- Supplemental Appropriation (SA)
- Air Conditioning Initiative (ACI)
- Security Initiative (SI)
- Non-Public ASP (NPASP)

For Further Information

Contact:

Joan Schaefer

Acting Executive Director

Pubic School Construction Program

joan.schaefer@maryland.gov

410-767-0096

Website link:

Public School Construction Program

MARYLAND STATE DEPARTMENT OF EDUCATION
PREPARING WORLD CLASS STUDENTS

Maryland State Department of Education

MSDE & IAC RESPONSIBILITIES

21st Century School Facilities Commission

November 10, 2016

MSDE Organization/Staffing

- SCHOOL EFFECTIVENESS
- TEACHING AND LEARNING
- FINANCE AND ADMINISTRATION

- SCHOOL FACILITIES BRANCH
  - 3 Registered Architects (Program Mgrs)

General Responsibilities

- 60% Capital Projects, Planning, Design, and Construction
- 25% Technical Assistance to Other State Agencies and MSDE
- 10% Facilities Guidelines, Standards, and Focus Areas
- 5% Administration and Management

TIME: 50% IAC/50% MSDE

MARYLAND STATE DEPARTMENT OF EDUCATION
PREPARING WORLD CLASS STUDENTS

Major Capital Construction Projects

- Current Active Major Projects
  - 50 State and 100 Local
- For STATE APPROVED Projects
  - feasibility studies, budgeting, educational specifications, schematic design review
- For LOCALLY-FUNDED Projects
  - also review design development, construction document, addenda, contract award

Design Review Process

- Standard Design Review
  - State and local actions required
  - General scope/schedule/budget
  - Broad/specific educational program elements
  - Technical/procedural requirements
- Differentiated Review Levels
  - Local need for assistance
  - Scope of Project – impact on students; renov/new
  - Specific programs
  - Phase of design

Technical Assistance to the Public School Construction Program

- Funding Programs
  - Capital Improvement Program
  - Aging Schools Program
  - Qualified Zone Academy Bond Program
  - Nonpublic Aging Schools Program
- Other
  - IAC Mtgs and hearings
  - Designee's Mtgs
  - Local Facilities Planners Mtgs
  - Special Reports – prototype schools, relocatables, etc.

Technical Assistance to the State Department of Education

- Proposed Legislation
- Governor's Work Control System
- Academic Innovation
  - Charter School Leases And design reviews
- Student Support
  - Health Services
  - Children's Environmental Health and Protection Advisory Council
- Nutrition/Wellness Plan
- County Library Capital Grant Program
- Green Ribbon Schools
- Nonpublic Schools Workgroup
- Juvenile Services Education Facilities
- Green Cleaning Policies

Technical Assistance to State Agencies

- Department of Agriculture
- Department of the Environment
- Department of Health & Mental Hygiene
- Department of Juvenile Services
- Department of Natural Resources
- Department of Transportation
- Commissions/Task Forces

Technical Assistance to State and National Associations

- National Council on School Facilities
- Education Facilities Clearinghouse Technical Advisory Council
- American National Standards Institute/Acoustical Society of America Workgroup on classroom acoustics
- Association of School Business Officials

Standards, Guidelines, and Focus Areas

- Regulations & Procedures (IAC, MSDE)
- Facilities Planning Guidelines
- Focus Areas
  - Accessibility
  - Indoor Air Quality
  - Safety and Security – Emergency Mgmt.
  - Outdoor Environmental Education programs
  - Other

State-Local Cost Share

- Revised every three years
- State Department of Education
  - Department of Legislative Services
  - Public School Construction Program

For further information

Contact:

Barbara Bice

School Facilities Branch Chief

Division of Business Services

barbara.bice@maryland.gov

410-767-0097

Maryland State Department of Education

Preparing World Class Students

21ST CENTURY SCHOOL FACILITIES COMMISSION

PUBLIC SCHOOL CONSTRUCTION IN MARYLAND: PROJECT PROCUREMENT AND PROJECT DELIVERY

David Lever, RA DA
November 10, 2016

I. OVERVIEW – PROCUREMENT AND PROJECT DELIVERY TOOLS

Background: The Public School Facilities Act of 2004
In Maryland's public school construction arena, the procurement and delivery of capital projects is guided by three overarching principles:

- Transparency of process;
- Open competition to allow all eligible vendors to participate, and;
- Delivery to the public of the highest quality of product at the most reasonable possible cost.

Every dimension of facility management is affected by these principles, from project planning through design, construction, and maintenance. The regulations of the Interagency Committee on School Construction (IAC) on project procurement and project delivery are also oriented around these principles.

Until 2006, the only method of procurement available for public school construction projects in Maryland was Competitive Sealed Bidding. While this method ensures that the principles outlined above will be met, and still remains the predominant approach to procurement in Maryland, it is also restrictive in some circumstances. Under Competitive Sealed Bidding, only two project delivery methods were feasible, General Contracting and Construction Management Agency. Delivery methods that involved an assessment of the vendors' qualifications as part of the selection process, or projects in which the requirements were not yet completely defined at the time of procurement, were very cumbersome to procure under the Competitive Sealed Bidding restriction; this limited the use of Construction Management At Risk and Design-Build.

Meanwhile, the broader development and construction industries had established a wide range of procurement and project delivery tools to suit the immense variety of circumstances under which commercial, residential and institutional projects are carried out. Where their use is appropriate, these alternative approaches may deliver high quality projects at reduced costs and on improved schedules.

The discrepancy between State procurement requirements and industry practices was discussed by the Task Force on Public School Facilities in 2003. It was recognized that in order for public school construction projects to use public resources efficiently, and in particular to make it possible to use alternative financing strategies, an expansion of the procurement/project delivery toolbox was in order. As a result, the February 2004 Task Force *Report* recommended a number of changes. These were incorporated into the Public School Facilities Act of 2004 and subsequently into the regulations of the IAC in October 2007 (COMAR 23.03.03 and 23.03.04).

A Diverse Toolbox for Diverse Circumstances – *Charts 1 and 2*
Through the authority of the 2004 Act, Maryland school systems now have access to the procurement, project delivery, and alternative financing tools that are available in the private sector. The Act has prompted considerable creativity and innovation, while protecting the principles of transparency, competitiveness, and fiscal accountability stated above. As examples:

- In 2007 Wicomico County Public Schools took the lead in implementing Construction Management At Risk. In a manner that is typical of how innovations are adopted in our state, a number of other

jurisdictions learned from Wicomico's experience and have implemented very successful CMR projects, and WCPS continues to explore further dimensions of this project delivery methodology.

- Washington County Public Schools in 2007 took advantage of the new Competitive Negotiation option (in combination with the new regulations on alternative financing, COMAR 23.03.05) to undertake Maryland's first true public-private partnership school project, the Barbara Ingram School for the Arts in Hagerstown.

- Several jurisdictions have used Intergovernmental Cooperative Purchasing to acquire high-quality services while considerably shortening the time required for procurement.

Charts 1 and *2* summarize the range of project procurement and project delivery methods that are allowable under COMAR 23.03.03 and 23.03.04 respectively, and outline the advantages and disadvantages of each method.

Choice of Method: Decision Factors

No one procurement or project delivery method is best for every educational facility project; rather, a number of factors will dictate the combination of methods that is appropriate for a specific situation. Different procurement and project delivery methods demand very different levels of effort, experience, and expertise in order to be applied successfully. To guide their decisions, informed facility planners and procurement officers consider at a minimum the following factors:

- The size and complexity of the project;
- The project budget;
- The project schedule;
- The level of risk that the school system as Owner is willing and able to sustain;
- The school system staff's familiarity with and success with its current methods;
- The school system's capacity to investigate, implement and manage new methods, including research, development of new procurement instruments, and setting up monitoring and accountability measures.

As with any tool in a toolbox, the implement must be suited to the task and the worker. The IAC has held firmly to the principle that the State should enable and provide guidance on a broad range of tools, but the local school systems should decide for themselves on the combination of procurement and project delivery methods that are best suited to their tasks, their capacities, and their cultures.

Transfer of Risk

Fundamental to the choice of procurement and/or project delivery method is the concept of risk transfer. Capital projects carry a number of inherent risks; those most typical associated with school facilities are:

- *Design*: If all design requirements are not fully known and explicitly explained at the time of procurement, changes can lead to cost increases. Even when all of the building and site design features are known, unforeseen conditions in soils, subsurface utilities, or existing structures can require design changes. Changes can also occur due to new code mandates or to owner-initiated modifications of the program or other requirements.

- *Construction Cost*: Even with detailed estimates, the volatility of market conditions can make the cost of construction unpredictable for a project with a long duration. In a major institutional structure some elements cannot be acquired or installed for one, two or even three years after construction begins; therefore there is a considerable risk of substantial cost increases in labor, materials, site operations, or other factors. Construction cost is the single largest risk factor in most projects.

- *Project Costs*: Aside from construction cost, there is risk associated with "soft costs", including design fees, permits, and furnishings and equipment. However, construction cost is always the largest component of project cost, and also carries the highest level of risk.

- *Schedule*: Weather conditions, unforeseen conditions, and labor or material shortages are the most common factors that can affect project schedules. Approvals from local, State and federal authorities can in some cases lead to delays.

- *Quality and Performance*: The quality of design and construction affects the suitability of the school building to support the educational program as well as its performance as a healthy, safe, energy efficient environment for its occupants.

- *Life-Cycle Maintenance and Operations (M&O)*: A poorly designed or constructed building imposes excessive M&O burdens on staff, and it is likely to require premature repair or renovation.

- *Budget*: In public works, the timing and size of budget allocations may be uncertain. With construction cost escalation, delays in budgeting can lead to cost increases.

- *Opportunity Cost*: Loss of opportunity to use capital debt for other projects or purposes.

- *Occupancy*: In rare instances, a new or renovated school facility is found to be no longer needed at some point before the project has completed its anticipated life cycle.

- *Political*: Bad decisions (or good decisions with unforeseen bad outcomes) can cost political capital.

The choice of project procurement and project delivery method should be determined by which party is best able to bear a specific risk. If budgets and occupancy are not in question and soft costs are in the normal range, then design, construction cost and schedule are the risks most affected by the choice of methods. For example, in a traditional Design-Bid-Build project in Maryland – the most common arrangement, using Competitive Sealed Bidding with a General Contractor – the risks are usually allocated as follows:

COMPETITIVE SEALED BID / GENERAL CONTRACTING (DESIGN-BID-BUILD)	**Who Carries the Risk?**			
Type of Risk	***Fiscal Authority (County & State)***	***School Board (Owner)***	***Architect/Engineer Team***	***Constructor***
Design & Performance				
Educational program		√	√	
Building performance		√	√	√ (during warranty)
Cost				
Construction Cost			√ (errors & omissions)	√
Project Costs		√		
Opportunity Cost	√	√		
Life-Cycle Cost (M&O)	√	√		
Schedule				
Planning		√		
Design		√	√	
Construction			√	√
Occupancy		√		
Life-Cycle		√	√	√ (during warranty)

Similar charts could be constructed for each combination of procurement and project delivery method covered under COMAR. For example, Construction Management At Risk transfers an increased share of the risks to the constructor, as shown by the cells highlighted below:

CONSTRUCTION MANAGEMENT AT RISK (CMR)	**Who Carries the Risk?**			
Type of Risk	***Fiscal Authority (County & State)***	***School Board (Owner)***	***Architect/Engineer Team***	***Constructor***
Design & Performance				
Educational program		√	√	
Building performance		√	√	√ (during warranty)
Cost				
Construction Cost			√ (errors & omissions)	√
Project Costs		√		√
Opportunity Cost	√	√		
Life-Cycle Cost (M&O)	√	√		√
Schedule				
Planning		√		
Design		√	√	
Construction			√	√
Occupancy		√		
Life-Cycle		√	√	√ (during warranty)

As another example, the Design-Build method would show a further transfer of the design risk from the Owner and the Owner's agent, the A/E team, to the DB team, along with the construction risk. Various financing approaches also affect the transfer of risk: the Design-Build-Finance-Maintain-Operate (DBFMO) model used in Canada and elsewhere transfers portions of the life-cycle maintenance and operations (M&O) risk to the private sector team, in addition to the design and construction.

The Role of the IAC

The IAC has been thoroughly involved in the development of these new procurement and project delivery tools, both helping to formulate the regulatory environment to enable their use and working closely with LEAs that have implemented and refined the methods. In addition to the typical project approval and design review procedures, IAC activities in these projects have included review of procurement documents and recommendations in order to increase accountability, to make the selection process more objective, to protect local boards of education against change orders or poor quality work, to increase MBE participation, and to explore new combinations of procedures (e.g. CMR combined with DB).

A partial list of LEAs that have used alternative approaches since approval of the regulations includes:

- *Anne Arundel County Public Schools* – Alternative Financing for high school additions
- *Baltimore County Public Schools* – Intergovernmental Cooperative Purchasing for numerous roof replacement projects
- *Caroline County Public Schools* – CMR for the renovation/addition to Colonel Richardson High and Preston Elementary School
- *Carroll County Public Schools* – CMR for the HVAC replacement at Westminster High
- *Charles County Public Schools* – CMR for the new St. Charles High
- *Dorchester County Public Schools* – CMR for replacement of the Dorchester Career and Technology Center and the North Dorchester High

- *Prince George's County Public Schools*: CMR for the replacement of Oxon Hill High and JOC for numerous small renovation and systemic projects
- *Talbot County Public Schools* – CMR for a new Head Start addition to an elementary school
- *Washington County Public Schools* – Competitive Negotiation for the alternative financing arrangement for the Barbara Ingram School for the Arts; Alternative Financing is under consideration for the proposed new academic expansion of BISFA
- *Wicomico County Public Schools* – CMR for replacement high and middle schools, two systemic renovation projects, and two track and field projects

Interaction Among Procurement and Project Delivery Methods – *Chart 3*

Project procurement and project delivery are linked: certain project delivery methods work best under certain procurement regimes. Many combinations are possible: for example, it is entirely possible for an Owner with limited staff resources to engage a Construction Manager on an Agency basis as a semi-permanent extension of staff, with the responsibility for procuring and managing projects on the Owner's behalf under any one of several project delivery models, including General Contracting. Active oversight by the Owner is, of course, essential under all scenarios.

Chart 3 provides an overview of the usual interactions between project procurement and project delivery methods. For each combination, a detailed analysis of risk transfer is appropriate.

List of Terms and Abbreviations

- Construction Management Agency – CMA
- Construction Management At Risk – CMR
- Design-Bid-Build - DBB
- Design-Build – DB
- General Contractor or General Contracting - GC
- Indefinite Delivery Indefinite Quantity – IDIQ (also called "On-Call")
- Job Order Contracting – JOC
- Local Educational Agency – LEA
- Request for Bids - RFB
- Request for Proposals – RFP
- Request for Qualifications - RFQ
- Value Engineering – V. E.

II. OUTLINE OF PROJECT PROCUREMENT AND PROJECT DELIVERY METHODS

A. PROJECT PROCUREMENT METHODS (COMAR 23.03.03)

Authority: COMAR 23.03.03.03: Methods of Source Selection.

.04 Unless otherwise authorized, school construction procurement contracts shall be awarded by one of the following methods:

A. Competitive sealed bidding, including competitive multistep sealed bidding;
B. Quality-based selection;
C. Competitive negotiation;
D. Unsolicited proposals;
E. Intergovernmental cooperative purchasing;
F. Sole source; or
G. Negotiated award after unsatisfactory competitive sealed bidding.

CHART 1: PROJECT PROCUREMENT METHODS (COMAR 23.03.03) – Summary

Note: Pre-qualification is not required by regulation for all procurement methods, but it is encouraged. Pre-qualification is intrinsic to a number of the procurement methods allowed under regulation.

Project Procurement Method	Description	Where Used	Solicitation	Selection of Constructor	Advantages	Disadvantages
A-1. Competitive Sealed Bidding	Vendor provides all project requirements for a single fixed price.	All LEAs; most common form of procurement for school construction; widely used for Design-Bid-Build.	Request for bids based on a single set of 100% complete technical requirements (drawings, specifications, other conditions); no substitutions or qualifications of bid are allowed.	Based on price only if bidder is "responsive & responsible" No negotiation. Bids opened in public meeting. Pre-qualification is not required by regulation, but is encouraged.	• Simplicity and familiarity of process. • All construction costs for the specific contract are known at bid time. • Thoroughly objective. • Requirements are the same for all vendors, and are complete at time of bid.	• Little flexibility for error or change in requirements, or to adjust scope to meet budget shortfalls. • Adversarial relationship can develop among Owner, A/E, and constructor. • Constructor's experience is not used to improve design. • An under-qualified constructor can delay project or lead to higher costs through change orders.
A-2. Competitive Multistep Sealed Bidding	Vendor provides all project requirements for a single fixed price that is submitted following a review of qualifications.	Selective LEAs; widely used for Design-Bid-Build.	Request for qualifications, followed by request for bids based on single set of technical requirements (drawings, specifications, other conditions); no substitutions or qualifications of bid are allowed.	Short-list based on project-specific qualifications, followed by selection based on cost only; no negotiation.	Similar to Competitive Sealed Bid, but in addition: • Higher quality of vendor; • Higher level of accountability because of more intensive pre-qualification process.	• Similar to Competitive Sealed Bid (but with reduced risk of poor performance by under-qualified constructor). • Some vendors may decline to participate because of increased complexity of process. • Review of qualifications may introduce subjective elements.
B. Quality-Based Selection (QBS)	Vendor is selected based on combination of qualifications and price, and provides all project requirements for a single fixed price.	Not used to date by any LEA for procurement of construction services (may have been used for professional services or locally-funded projects); suitable for Design-Bid-Build.	Request for qualifications and price combined in a single set of technical requirements (drawings, specifications, qualification factors, other conditions); no substitutions or qualifications of bid are allowed.	Based on point score that reflects best price in combination with qualifications; no negotiation.	• All costs are known at one time. • Higher quality of vendor. • Higher level of accountability because of more intensive pre-qualification process. • More compressed schedule than multi-step sealed bid.	• Complex process. • Review of qualifications may introduce subjective elements.

Project Procurement Method	Description	Where Used	Solicitation	Selection of Constructor	Advantages	Disadvantages
C. Competitive Negotiation	Vendor is engaged to work with Owner to determine project requirements.	Used in situations where exact project requirements are not known at the time of procurement: • All A/E procurements; • Many CMA procurements, especially when LEA intends to seek State reimbursement for CM costs; • All CMR procurements of CM services; • All alternative financing procurements; • DB procurements.	Depending on project scope, may include technical requirements (e.g. Schematic Design), performance specifications, general requirements, very broad intentions, or a combination of these.	Short list based on qualifications, followed by negotiation with top-ranked vendor over scope of services and price. Typically awarded to vendor which offers "Best Value".	• Allows private vendors to bring creativity and innovation to solution of public problems. • Establishes a partnering relationship among Owner, A/E, and constructor suitable for long, complex projects. • Gives priority to qualifications, with flexibility to determine cost.	• Very lengthy and complex process, with intensive involvement by Owner. • Review of qualifications may introduce subjective elements. • Large risks for Owner if project requirements are vague. • Best Value may not be understood by public, decision-makers compared to Best Price.
D. Unsolicited Proposals	Vendor presents a solution to a public problem.	Typically has been offered for donor-contribution projects, or for unique alternative financing projects.	If interested in the unsolicited proposal, Owner is required to develop a public solicitation similar to Competitive Negotiation.	Following public solicitation, follows same process as for Competitive Negotiation.	• Similar to Competitive Negotiation.	• Similar to Competitive Negotiation. • Schedule increases due to re-solicitation requirements.
E. Inter-governmental Cooperative Purchasing	Owners join in procurement of requirements (pooling) or purchase requirements from an existing contract that has been competitively procured by another government or a parent organization (piggybacking).	Extensive use by some LEAs for smaller projects with prescriptive requirements (e.g. open space pod renovations) or performance specifications (e.g. HVAC replacement). Used by some LEAs to procure Job Order Contracting (JOC) project delivery or IDIQ.	*Pooling*: Joint solicitation per requirements of method (Competitive Sealed Bid, Competitive Negotiation, etc.). *Piggybacking*: Owner-specific requirements are provided to vendor selected by parent organization to develop price.	*Pooling*: Jointly among Owners, per requirements of method (Competitive Sealed Bid, Competitive Negotiation, etc.). *Piggybacking*: Contractor is selected by parent entity; Owner awards to this contractor based on an acceptable price and meeting Owner-specific requirements.	• *Pooling*: Similar to those for procurement method selected. • Volume purchase may reduce costs. • Economizes on time required for separate procurements, and distributes procurement costs (e.g. advertising). • *Piggybacking*: Similar to those for procurement method selected, but with: - Significant reduction of solicitation time. - Advantage of volume purchasing in some cases.	• *Pooling*: Multiple Owners must work cooperatively and align their requirements and their procurement policies and practices. • *Piggybacking*: - Small and local vendors may be excluded from competing. - Prices must be tested against market conditions.

Project Procurement Method	Description	Where Used	Solicitation	Selection of Constructor	Advantages	Disadvantages
F. Sole Source	Single vendor is solicited to meet narrow requirements or because of an emergency condition.	Used to procure systems or elements that must coordinate with existing systems (e.g. HVAC controls), and for emergency procurements that do not allow time for routine procurement.	Project requirements are provided to single vendor.	To meet a narrow requirement, select a specific contractor who meets the requirement. For an emergency, typically select a trusted contractor who has already provided satisfactory work for the school system under routine circumstances.	• *Narrow requirement*: - Product is sure to meet the Owner's needs for coordination with existing systems. - Speed of selection. • *Emergency*: Speed of response, avoiding lengthy procurement process.	• *Narrow requirement*: May exclude competition and innovation for an extended period of time. • *Emergency*: - Cost, quality, and schedule risks are high because of inability to develop thorough project requirements prior to beginning of work. - Work may be initiated before cost is negotiated or contract is developed. - High level of trust is placed in vendor's reputation, integrity and abilities.
G. Negotiated Award After Unsatisfac-tory Competitive Sealed Bidding	Allows Owner to issue new sealed bid solicitation to original bidders, after re-design based on Value Engineering.	Very rarely used; used where funding does not permit an award, and delay from re-solicitation would be severely detrimental.	Revised Request for Bids following Value Engineering and/or re-design.	Similar to Competitive Sealed Bidding.	• Bidders can provide input into the V. E. suggestions (but do not know which V. E. or other changes will be incorporated into the final RFB). • Shortens re-bid period. • Bidders are already very familiar with project requirements, can adapt to new requirements quickly.	• Bidders know one another's initial prices. • If project requirements are reduced significantly, could open protest from bidders who did not submit prices originally because of bonding limits or firm's capacities.

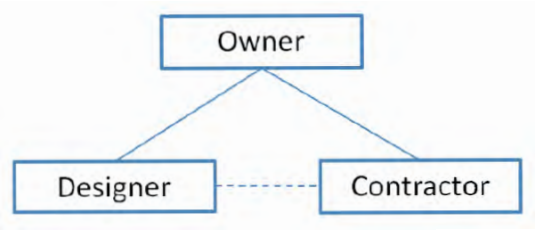
B. PROJECT DELIVERY METHODS

1. Authority: COMAR 23.03.04

.03.A. For a public school construction project, an LEA may use one of the following methods:
(1) General contracting; or
(2) Alternative project delivery including:
(a) Construction management agency;
(b) Construction management at risk;
(c) Design build; and
(d) Job order contracting.
.03.B. The LEA may use fast track to accelerate project delivery in accordance with Regulation .09 of this chapter.

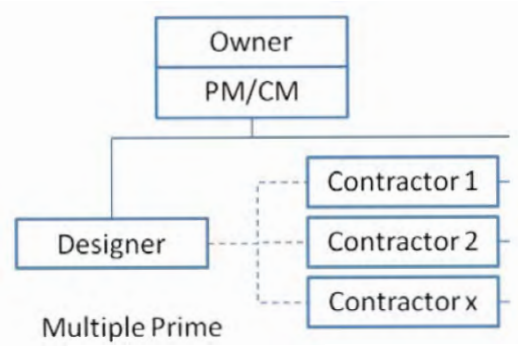
2. Common Delivery Methods (Construction Management Association of America, *An Owner's Guide to Project Delivery Methods*, 2012)

A(1). General Contracting (GC)



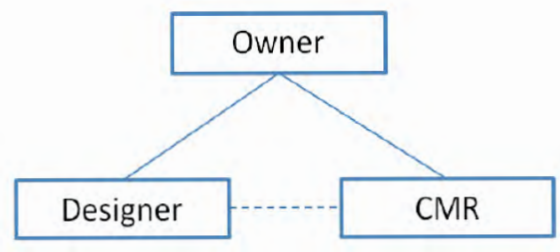
Design-Bid-Build

A(2)(a). Construction Management Agency (CMA)



Multiple Prime
With PM/CM

A(2)(b). Construction Management At Risk (CMR)



A(2)(c). Design-Build (DB)

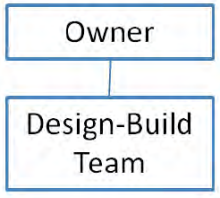


CHART 2: PROJECT DELIVERY METHODS (COMAR 23.03.04) - Summary

Project Delivery Method	Description	Where Used	Usual Procurement Method	Selection of Constructor	Advantages	Disadvantages
A(1). General Contracting (GC)	GC provides all construction requirements under a single contract, and is responsible for selection and performance of all trade subcontractors.	All LEAs; most common form of project delivery. Some LEAs use for all projects. Some LEAs use only for smaller or more limited projects.	Invariably competitive sealed bid in Design-Bid-Build.	Contractor typically pre-qualified on general issues, and may be specifically pre-qualified for the project. After pre-qualification, selection is based only on price; no negotiation.	• Single point of responsibility for all construction requirements. • Total construction cost is known before construction begins. • Construction risk is transferred to contractor. • Process, requirements, contracts are extremely well known to all parties. • Owner has control of design through A/E, who is contractually independent of constructor.	• Once contract is signed, difficult to correct for poor performance or introduce new project requirements. • Owner's design risk is high (errors & omissions lead to change orders). • Procurement process does not necessarily reveal all qualification concerns, and bonding agents are often unresponsive. • Owner has little control over selection of subcontractors, and there is little communication between designer and subcontractors. • GCs with sufficient bonding capacity and interest can be difficult to attract for large projects in remote areas.
A(2)(a). Construction Management Agency (CMA)	CM serves in an agent role to Owner to manage the project, often from near start of design; in Maryland, Owner holds multiple prime contracts directly with trade contractors.	Used exclusively in Maryland for multiple-prime contract projects; Used by all large and mid-size LEAs, in some cases for selective types of projects, while GC is used for others; also used by some smaller LEAs.	Competitive negotiation for CM services. Competitive Sealed Bidding for trade contractors.	CM selected on qualifications and fee basis. Trade contractors selected on price (following pre-qualification), without negotiation.	• CM is involved early to provide pre-construction services (constructability review, V.E, estimates, packaging of trades, etc.). • CMs are highly professional based on interest in long-term relationships. • Trade packages procured by familiar method, and trade contractors are known to Owner. • Multiple-prime format provides flexibility to eliminate poor contractors, increase MBE participation, adjust schedule, phase work, etc. • Trade contractors somewhat easier to attract than GCs in some parts of state. • Allows trade contractors to grow from sub to prime status.	• Multiple trade packages can be difficult to coordinate, add substantially to Owner's, A/E's paperwork burden. • Total cost is not known until last package is awarded. • CM is not at risk for project cost or schedule. • CM's qualifications can be difficult to assess in advance. • Competition for some trade packages can be limited in some parts of state. • Multiple contractual points of responsibility exist for resolution of delay claims, scope conflicts.

Project Delivery Method	Description	Where Used	Usual Procurement Method	Selection of Constructor	Advantages	Disadvantages
A(2)(b). Construction Management At-Risk (CMR)	CM serves in agent role for pre-construction, then assumes risk for entire construction when design is sufficiently developed, with trade contractors in subcontractor relationship to CM (similar to GC).	A few LEAs, typically for large and complex projects; appears to be increasing in use and familiarity among the LEAs.	Competitive negotiation for CM services. Competitive Sealed Bidding for trade contractors. Other methods are allowable under regulation, but are more complex.	CM selected on qualifications and fee basis prior to Guaranteed Maximum Price (GMP); Trade contractors selected on price (following pre-qualification); GMP consists of CM's fees etc. combined with trade contractor prices.	Combines best features of GC with CMA: • CM is involved early for pre-construction services, but then becomes single point of responsibility when GMP is accepted. • Strong partnering relationship among Owner, A/E, CM. • Multiple trade subcontractor format provides same flexibility as CMA. • Trade contractors are known to Owner. • Trades bid in a familiar context, but then Owner's risk is transferred to the CM. • Open book bidding of trades ensures high degree of accountability.	• Complex to put in place first time. • Competition for both CM services and trade packages can be limited in some parts of state.
A(2)(c). Design Build (D-B)	Contractor/Design team provides complete project services for a single price.	Used by some LEAs for small projects with highly defined performance specifications (e.g. HVAC, classroom renovations); not used by any LEA for a major project to date. Has been combined in UK, Canada & Australia with finance, maintenance and operations (DBFMO).	Competitive negotiation, often based on a preliminary design submission as well as qualifications and price, all derived from Owner's specification.	Best value: best design concept, best team, best experience, acceptable price.	• Single point of responsibility for both design and construction, eliminating adversarial relationship between designer and constructor. • Can allow for accelerated project schedule through fast track.	• Owner's performance or prescriptive specification must be thorough and contractually unassailable; otherwise, can lead to poor quality as vendor struggles to work within the contractual cost. • Loss of Owner control over design: A/E is not independently engaged agent to control quality or assist in case of constructor default. • Under some arrangements, owner may lose A/E's detailed input during final phases of design.

Project Delivery Method	Description	Where Used	Usual Procurement Method	Selection of Constructor	Advantages	Disadvantages
A(2)(d). Job Order Contracting (JOC)	Vendor provides construction services based on a fix-priced list of items, with a mark-up for overhead and profit.	Several LEAs use JOC for smaller projects, sometimes in a Design-Build situation; often established as an IDIQ contract.	Competitive Sealed Bidding or Intergovernmental Cooperative Purchasing.	Vendor with lowest markup (all other costs are fixed by the price list).	• Costs are highly predictable in advance, if quantities are known. • Works well for multiple projects of similar type (e.g. science classroom renovations).	• Needs to be re-competed periodically to ensure price list aligns with market conditions. • IDIQ may exclude competition from small, local contractors. • May not have application to larger, more complex projects.
B. Fast Track	Construction begins on some elements of the project while other elements are still under design.	Used under extreme schedule constraints. Rarely used because of risks. Can be used in conjunction with almost all project delivery methods.	Can be an additional requirement within any form of procurement.	The same qualifications as apply to the form of procurement, with additional attention to vendor's ability to meet the demands of the schedule.	• Speed of construction: mobilization, sitework, early purchase of long-lead-time items can occur while other parts of the project are still in design.	• Very high design risk (hence cost and schedule risk): since design is not complete, conflicts between early installed work and later design requirements can lead to very costly and time-consuming corrections, or to an under-performing facility.

CHART 3: PROJECT PROCUREMENT AND PROJECT DELIVERY: COMMON INTERACTIONS

Notes: "√" – Very commonly used
"Possible": Not prohibited, but never tried in Maryland (to the knowledge of the IAC).
"Unlikely": Not prohibited, but the project procurement method would undercut the benefits of the project delivery method.
"Not recommended": May generate practical or perception problems that will undermine purported benefits.

	Project Delivery Method					
Project Procurement Method	**General Contracting (GC)**	**Construction Management Agency (CMA)**	**Construction Management At-Risk (CMR)**	**Design Build (D-B)**	**Job Order Contracting (JOC)**	**Fast Track**
A-1. Competitive Sealed Bidding	√	√ - trade packages only; not recommended for CM services	√ - trade packages only; not recommended for CM services	Not recommended for major projects	√	√
A-2. Competitive Multistep Sealed Bidding	√	√ - trade packages only; not recommended for CM services	√ - trade packages only; not recommended for CM services	Not recommended for major projects	√	√
B. Quality-Based Selection (QBS)	√	√ - trade packages only; possible for CM	√ - trade packages only; possible for CM	Possible	√	√
C. Competitive Negotiation	Unlikely	√ - CM only	√ - CM only	√	Unlikely	Possible
D. Unsolicited Proposals	Possible	Possible	Possible	Possible	Possible	Possible
E. Intergovernmental Cooperative Purchasing	√	Possible	Possible	Possible	√	Possible
F. Sole Source	√ (for emergency)	√ - CM and trades (for emergency)	Not recommended	Not recommended	√ (for emergency)	√ (emergency)
G. Negotiated Award After Unsatisfactory Competitive Sealed Bidding	√	√ - trade packages only	√ - trade packages only	Not recommended	Possible	Possible

III. RECOMMENDATIONS

A. General

- Undertake pilot projects to test alternative procurement and project delivery methods:
    - Provide incentives to reduce the risk for LEAs to explore:
        - The merits of procurement methods that have not been used, e.g. Quality Based Selection (QBS).
        - True side-by-side comparisons of alternative procurement methods
- Provide incentives for LEAs to explore true side-by-side comparisons of alternative project delivery methods, e.g. GC vs. CMA vs. CMR:
    - First Cost: Compare the same project procured under different project delivery methods;
    - Quality and Schedule: Compare projects of similar size and scope procured under different methods.
    - Complexity of process.

B. Other:

- Establish a clearinghouse of best procurement and project delivery practices for LEAs, including a full compendium of information on the benefits and risks of the different project delivery methods.
- Increase the capacity of the IAC to research and review alternative procurement approaches that do not fit neatly into the regulatory categories, or new approaches that develop in the industry.
- Investigate the barriers that may exist in current statute and regulation to the effective use of advanced project management approaches, including Building Information Modeling (BIM) and Integrated Project Delivery (IPD).

November 8, 2016

Martin G. Knott
Chairman, 21" Century School Facilities Commission
Department of Legislative Services
90 State Circle
Annapolis, MD 21401

Dear Chairman Knott and Commissioners:

The Coalition for Procurement Reform (CPR) respectfully submits its opposition to cooperative purchasing agreements as a procurement method for school roofing construction and maintenance in Maryland. Under a 2012 Maryland Court of Appeals decision (GAF Materials Corporation v. Board of Education of Baltimore County), public school reconstruction projects are excepted from open bid procurement as a "good or commodity." If each political subdivision in the State availed itself of the current state of Maryland common law on the subject, those unilateral actions would expose the State of Maryland's Capital budget to $100 million or more in annual expense. We advocate for open bidding of all public school roofing projects, and the closing of what we believe is a potentially costly loophole in Maryland law.

CPR is a nonprofit organization of the nation's top roofing contractors, consultants, manufacturers, and other interested parties. CPR's mission is to focus attention on the non-competitive bidding practices used in cooperative procurement programs by many school districts across the country. CPR advocates for open, transparent, fair competitive-bid practices in public procurement, resulting in the most responsible use of taxpayers' dollars. CPR is comprised of the following members: Contractors - Hertless Brothers Roofing, John T. Morgan Roofing & Sheet Metal; A&E Consultants - Foothills Roof Services, Foresight Services, HDH Associates, JSR Services, Luna & Associates, Mark J. Sobeck Consulting, Mays Consulting; Manufacturers - Barrett Company, Carlisle SynTec Systems, CertainTeed, Firestone Building Products, GAF, Johns Manville, Sika Sarnafil, Siplast, SOPREMA; Allied Nonprofits: RCI, Inc.; Professional Roofing Standards Council.

CPR advocates for the exclusion of school roofing construction from cooperative procurement programs. CPR advocates for independence of designers, suppliers, and installers from one another; for non-proprietary material specifications; and for open-bid competition in public procurement of school roofing construction. CPR does not oppose the process of "piggy backing."

The Maryland Office of Legislative Audits' July 2015 report on Baltimore County Public Schools roofing projects confirmed that cooperative procurement sourced projects exceeded the cost of open-bid competition projects by a factor of 60%. A full copy of that Audit is submitted

as part of our testimony. Several other states' agencies have confirmed similarly greater expense for cooperative procurement projects vs. open-bid competition projects; up to 100%% in Pennsylvania, 23% in Indiana, 15-26% in New Jersey, 49% in Minnesota.

CPR advocates for recognition that construction services are not a commodity. This position is supported by the Associated General Contractors of America in their recent website publication, *Construction is not a 'Commodity'* (https://www.agc.org/construction-not-commodity). A coalition of construction organizations in Texas also advocated this concept in the attached letter to the Texas House Committee on Government Efficiency and Reform. CPR recognizes the significant benefit for commodities' purchases through cooperative procurement programs; however, CPR maintains that construction is not a commodity and should be excluded from cooperative procurement programs.

The Coalition for Procurement Reform is grateful for this opportunity to share the experience and expertise of CPR's wide cross-section of companies involved in construction procurement. We look forward to working with the members of the Commission to develop a procurement policy that benefits the State and the taxpayers of Maryland, through open, fair, transparent, and competitive procurement for school roofing.

Respectfully,

C. Scott Shufflebarger
President, Coalition for Procurement Reform
President, Hertless Brothers Roofing, Inc.

cc: Members of the 21st Century School Facilities Commission

The Honorable Bill Callegari
Chairman
House Committee on Government Efficiency and Reform
P.O. Box 2910
Austin, TX 78768

Dear Chairman Callegari:

In recent years, purchasing cooperatives have proliferated in Texas. The original role and main purpose of purchasing co-ops is to provide economies of scale in purchasing. Some well-known examples of purchasing co-ops are TASB's "Buy Board," Region 4 Education Service Center's "TCPN," and Harris County Department of Education's "Choice Partners."

We believe that in the context of purchasing commodities, purchasing cooperatives have a positive role and likely achieve their purpose. We also believe, however, that in the context of purchasing construction and construction-related services, purchasing cooperatives are not the most competitive and taxpayer-friendly method for procurement, primarily because these types of services are inherently site-specific and more tied to local markets, climate, available (existing) infrastructure, soils, etc., than commodities are.

The Legislature has already recognized this: architectural and engineering services may not be procured through purchasing cooperatives, by statute. This bar should be expanded to construction and construction-related services.

We believe that the use of purchasing cooperatives to procure construction and construction-related services leads to a number of problems, including:

- Lack of transparency. Given the significant sums of public money involved, much more easily accessible information should be available about these entities such as their budgets, what they sell to whom, how much money the entity brings in, where the money goes, and how "recommended providers" are selected;
- Inhibiting competition. Although cooperatives might have a nominally pre-bid price for certain services on a statewide or regional basis at some specific point-in-time, there is no way to know whether current market conditions might yield a lower price, especially for larger projects and work authorizations; and

- Circumvention of architectural and engineering judgment. The current system creates incentives to avoid architectural and engineering considerations, which usually lower costs and protect public safety by ensuring reduced operating expense and increasing the feasibility and functionality of the improvement.

In sum, we believe that using purchasing cooperatives for site-specific services such as construction and construction-related services is inappropriate and a highly questionable use of taxpayer dollars—and that those services should be competitively procured on a project-by-project basis. This would lead to greater scrutiny, more disclosure, lower costs, and increased taxpayer savings. Alternatively, the process is in need of drastic reforms to promote transparency, increase local competition, and ensure appropriate oversight.

Sincerely,

Jon Fisher	Steve Stagner	Mike Chatron	James T. Perry
President	President & CEO	President	Executive Vice President
ABC of Texas	ACEC Texas	AGC-TX Building Branch	Texas Society of Architects