

ED COMMITTEE #1  
April 28, 2014

**M E M O R A N D U M**

April 25, 2014

TO: Education Committee

FROM: *KL* Keith Levchenko, Senior Legislative Analyst  
Essie McGuire, Senior Legislative Analyst *EMC*

SUBJECT: **FY15-20 Montgomery County Public Schools (MCPS) Capital Improvements Program (CIP) Follow-up Issues: Technology Modernization and MCPS CIP Affordability**

The following officials and staff are expected to participate in this meeting:

**MCPS**

Philip Kauffman, Board of Education President  
Michael Durso, Board of Education Member  
Patricia O'Neill, Board of Education Member  
Joshua Starr, Superintendent of Schools  
Larry Bowers, Chief Operating Officer  
Sherwin Collette, Chief Technology Officer  
James Song, Director, Department of Facilities Management  
Adrienne Karamihas, Budget and Operations Manager, Department of Facilities Management

**County Government**

Blaise Defazio, Office of Management and Budget  
Jane Mukira, Office of Management and Budget

**FY15-20 CIP SCHEDULE**

The Board of Education's FY15-20 Proposed CIP was transmitted to the Council on December 2, 2013. The County Executive's Recommended CIP was transmitted on January 15, 2014.

The Council held public hearings on the FY15-20 CIP on February 5 and 6, 2014.

The Education Committee held an overview discussion on February 10 and also met on March 10 to discuss specific projects. Council review is tentatively scheduled for May 5.

### TECHNOLOGY MODERNIZATION

The Board of Education requested a total of \$154.45 million in the Technology Modernization CIP project for FY15-20, an increase of \$21.12 million over the most recent approved FY13-18 level. The Project Description Form (PDF) reflecting the Board’s request is attached on ©5. The table below shows the Board’s request and the approved level for FY15-18:

	FY15	FY16	FY17	FY18	FY19	FY20
BOE Request	\$26.805 m	\$26.358 m	\$23.997 m	\$25.277 m	\$25.348 m	\$26.665 m
Approved	\$22.758 m	\$22.538 m	\$21.358 m	\$21.998 m	n/a	n/a

The County Executive’s CIP states that “The Executive recommends maintaining the FY13-18 approved funding level of \$130.2 million for the Technology Modernization project for FY15-18”. The approved level for FY15-18 totals \$88.652 million; based on this statement, the Executive would allocate the remaining \$41.548 million in FY19-20. This recommendation implies that the Executive’s total for the project is \$24.25 million less than the Board’s total request, \$4.05 million less than the Board’s request for FY15, and \$3.82 million less for FY16.

The Board of Education’s operating budget request also included \$3 million for a technology modernization initiative. The operating funds are very closely linked to the capital effort and involve purchases for the same initiative to increase acquisition of mobile devices. The Executive’s recommendation for the MCPS operating budget is \$14.5 million less than the full Board of Education request. Whatever funding decision the Council ultimately makes, the decision on whether these technology funds are included in the final operating budget allocation is up to the Board of Education and will not be known until the Board takes action in June.

**In total, the Board’s capital and operating requests include a total increase for technology modernization of \$7.05 million, \$4.05 million in the Tech Mod CIP project and \$3 million in the operating budget.**

***E-rate funding:*** The E-rate Federal reimbursement funding is appropriated each year by the Council as a supplemental appropriation once the funding amount is more certain. The Council appropriated a total of \$2.042 million in FY13 E-rate funding in November 2012. At that time, the FY14 E-rate funding was projected to be \$3.2 million; the supplemental appropriation for the FY14 funding is pending Board action and will then be transmitted to the Council.

In the FY13-18 CIP, the Board had requested an increase to Tech Mod, and the Executive had recommended level funding. The Council added new funding above the approved level toward the Board’s request. The Council also assumed that for FY13 and FY14, the E-rate funding could be added to the approved level to get closer to the Board’s requested funding

level. The Council specified that its intent for the additive E-rate approach was for FY13-14 only, and would be re-evaluated in the FY15-20 CIP discussion.

The table on ©11 shows the projected E-rate funding for the six year period. It assumes that \$2.074 million will be available in FY15, and \$1.9 million in FY16-20. The table shows the E-rate funding above the Board's requested funding level.

*New initiative:* The requested \$7.05 million increase for technology modernization primarily relates to a new initiative to increase acquisition of mobile devices for students and teachers. MCPS has provided extensive descriptive detail of this effort and its relationship to the current technology program on ©6-10. Council Staff highlight three key aspects:

- The total projected cost for mobile devices is \$27 million, and anticipates four-year financing. The plan is to deploy the devices over the next three years and to work toward continuity for students as they progress through the grade levels.
- Mobile technologies are necessary to implement the new Partnership for Assessment of Readiness for College and Careers (PARCC) assessments that the State is requiring. PARCC has several specific requirements for testing, including size of the device, sequencing, and the number of devices, that will influence what technology is necessary as well as the quantity that is necessary.
- In addition to the specific PARCC requirements, MCPS is working to integrate mobile technologies to meet several other related priorities. Increasing mobile devices allows more students to access technology than otherwise possible in limited desktop lab space and allows for greater integration of technology into the curriculum. It is also important for students to experience the mobile devices as part of their instructional program, rather than being unfamiliar with them in the assessment process.

MCPS reports that if additional funding is not available, the school system will have to make reductions in other areas of Tech Mod to try to be compliant with the PARCC requirements. This will include not only extending the life of older machinery but also not updating software and telecommunications elements. MCPS will also have to extend the timeframe for implementing these mobile strategies more broadly.

*Base Tech Mod components:* The charts on ©11-12 show the complete funding breakdown of the Tech Mod components, which are predominantly financing payments on previously purchased equipment. MCPS provides the update on ©6 of the effort to implement wireless networks across all schools, which is nearing completion of the second phase of infrastructure coverage. MCPS also reports that the Board's request does not change the current five year replacement cycle, because the additional funds focus on implementing the mobile technology strategy.

The source of funding for Tech Mod in the capital budget is current revenue. **The Committee will return to the issue of what funding is available for Tech Mod in both the**

**capital and operating budgets when it finalizes its recommendation on the MCPS FY15 operating budget.**

### **MCPS CIP AFFORDABILITY**

At the March 10 meeting, the Council asked MCPS to provide further information as to how the FY15-20 MCPS CIP request could be adjusted in case the \$230.7 million in new State aid (School Financing Bonds) assumed in the County Executive's Recommended CIP for MCPS was not forthcoming.

Ultimately, the necessary State legislation to create the new State Financing Bond program did not pass during the 2014 Legislative session which ended earlier this month.

The focus of the April 28 Education Committee meeting is for the Committee to recommend to the Council an FY15-20 MCPS CIP which takes into account this lost revenue. While marginal CIP affordability adjustments are typically done during Council reconciliation in early May, the magnitude of the reduced revenue from the baseline of the County Executive recommendation cannot be accommodated in that process.

The Superintendent recommended, with the support of the Board of Education President, an affordability scenario that would partially address the \$230.7 million issue. Council Staff have reviewed this scenario and developed some additional alternatives that, in conjunction with MCPS' scenario, would offset the \$230.7 million gap. The MCPS scenario and Council Staff's additional alternatives are discussed in more detail below.

#### MCPS Scenario (summary chart attached on ©2)

The MCPS scenario provided to Council Staff assumes the following:

- The Board of Education's FY15-20 CIP Transmittal from December 2013 is assumed to be the baseline from which this new scenario starts (see ©1 for a summary list of projects and expenditures included in the original request).
- Elementary school revitalization/expansion projects would be delayed one year (this is in addition to any delays assumed in the Board of Education's original request), beginning with Wayside Elementary School.
- Secondary school revitalization/expansion projects would be delayed one year, beginning with Tilden Middle School and Seneca Valley High School.
- All new schools and addition projects would be delayed one year (except for those schools already in design or under construction).
- The requested Blair Ewing Center Improvements project would begin design in FY16 instead of FY15 as originally requested.

A list of the specific projects (including revitalization/expansion projects) affected is attached on ©3-4.

As shown in the following table, this scenario would result in a reduction of \$169.5 million in six-year costs from the original Board of Education Request.

	Total 6 Years	FY15	FY16	FY17	FY18	FY19	FY20
<b>Original BOE Request</b>	1,741,972	251,589	348,228	397,790	278,312	236,014	230,039
<b>MCPS Affordability Scenario - 1 Yr Delays</b>	1,572,439	242,209	282,316	236,282	318,589	262,620	230,423
Expenditure Change From BOE Request <sup>r</sup>	<b>(169,533)</b>	<b>(9,380)</b>	<b>(65,912)</b>	<b>(161,508)</b>	<b>40,277</b>	<b>26,606</b>	<b>384</b>
<b>CE State Financing Bonds (SFB) Assumption</b>	<b>230,700</b>		<b>72,000</b>	<b>149,000</b>	<b>9,700</b>		
Remaining Gap	61,167	(9,380)	6,088	(12,508)	49,977	26,606	384

Since this scenario is \$61.2 million short of the \$230.7 million goal for reductions in the FY15-20 period, Council Staff has reviewed other possible adjustments in the Board of Education's CIP request that could close the remaining gap.

Since the current and future replacements/expansion project schedule has faced delays in recent years and is already included for delay again in the MCPS affordability scenario, Council Staff looked at MCPS' Countywide systemic projects (which are not included in the affordability scenario) as well as outyear projects that could be reconsidered in future years.

Council Staff suggests two additional areas of potential reductions that would close the gap:

- **HVAC/Electrical Replacement:** The Board of Education's original request assumes a substantial increase in the level of effort in this project (\$49.8 million in FYs 15-18). While the request is justified given MCPS' backlog of work, the Council could achieve some savings here while still providing a significant increase in the project. Council Staff did not see significant reduced funding opportunities in any other systemic projects.
- **New Elementary School Addition projects in the outyears of the CIP:** Four new elementary school addition projects are requested in the Board of Education's original CIP request, with design to begin for each in FY17:
  - Ashburton ES (Walter Johnson Cluster)
  - Burtonsville ES (Northeast Consortium)
  - Judith Resnick ES (Magruder Cluster)
  - S. Christa McAuliffe ES (Seneca Valley Cluster)

While MCPS' affordability scenario would delay each of these projects one year, another approach would be to not include these requested projects in the FY15-20 CIP. Not including the projects would save approximately \$36.9 million in FYs18-20 (after taking into account the delays assumed in MCPS' affordability scenario). Since these projects were not requested to begin work until FY17 at the earliest (and in FY18 under the MCPS affordability scenario), there is time for these projects to be brought back for consideration in future years and still meet the completion dates previously requested.

None of these four projects if removed would affect the Subdivision Staging Policy School Test.

Council Staff Recommendations

**Council Staff recommends removal of the four outyear elementary school addition projects discussed above. The remaining amount of the savings needed (\$24.3 million) should be drawn from the HVAC/Electrical Replacement project. This reduction would still result in an increase in the project of over \$25 million in the six-year period.**

Council Staff suggests assuming to preliminarily spread (pending final reconciliation) the HVAC project savings across FY15 through FY18 as follows: -\$9.0 million, -\$9.0 million, -\$4.0 million, and -\$2.3 million respectively. This spread would still provide substantial increases in the HVAC project in the first two years of the CIP.

The following table summarizes the impact of both the MCPS affordability scenario and the additional adjustments recommended by Council Staff.

	Total 6 Years	FY15	FY16	FY17	FY18	FY19	FY20
<b>Original BOE Request</b>	1,741,972	251,589	348,228	397,790	278,312	236,014	230,039
<b>MCPS Affordability Scenario - 1 Yr Delays</b>	1,572,439	242,209	282,316	236,282	318,589	262,620	230,423
Expenditure Change From BOE Request	(169,533)	(9,380)	(65,912)	(161,508)	40,277	26,606	384
<b>CE State Financing Bonds (SFB) Assumption</b>	230,700		72,000	149,000	9,700		
Remaining Gap	61,167	(9,380)	6,088	(12,508)	49,977	26,606	384
<b>Council Staff Additional Adjustments</b>							
Remove Four Outyear ES Addition Projects	(36,911)				(1,502)	(12,061)	(23,348)
HVAC/Electrical Replacement (Lower Level of Increase)	(24,256)	-9000	-9000	-4000	-2256		
Remaining Gap	-	(18,380)	(2,912)	(16,508)	46,219	14,545	(22,964)

*NOTE: As with all projects, CIP reconciliation in early May could require additional adjustments to these or other MCPS projects to balance the CIP across all agencies and in all fiscal years.*

**Attachments**

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## Board of Education's Requested FY 2015 Capital Budget and FY 2015–2020 Capital Improvements Program

December  
2013

(figures in thousands)

Project	FY 2015 Approp.	Total	Thru FY 2013	Remaining FY 2014	Total Six-Years	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>Individual School Projects</b>											
Arcola ES Addition	130	3,841	141	1,096	2,604	1,057	1,547				
Ashburton ES Addition					7,221			256	2,052	4,017	896
Lucy Bamsley ES Addition	1,156	12,974			12,974	462	3,462	7,434	1,616		
Bethesda ES Addition	171	3,970	143	1,168	2,659	1,082	1,577				
Bethesda-Chevy Chase HS Addition	2,808	30,787			30,787	1,123	9,034	17,325	3,305		
Bethesda-Chevy Chase MS #2		52,314		250	52,064	829	15,181	30,674	5,380		
Brookhaven ES Addition (DCC Solution)		5,381			5,381		192	1,515	3,026	648	
Burtonsville ES Addition		12,818			12,818			469	3,692	7,288	1,369
Clarksburg Cluster ES (Clarksburg Village Site #1)		28,218	7,194	8,613	12,411	12,411					
Clarksburg HS Addition	529	11,823	377	3,229	8,217	3,269	4,948				
Clarksburg/Damascus MS (New)	48,750	52,764	200	1,107	51,457	14,633	31,246	5,578			
Diamond ES Addition	804	8,926			8,926	322	2,615	4,971	1,018		
Blair Ewing Center Improvements	1,512	16,579			16,579	605	3,527	10,425	2,022		
Glen Haven ES Addition (DCC Solution)		4,092			4,092		147	1,306	2,180	459	
Highland ES Addition (DCC Solution)		8,225			8,225		285	2,320	4,502	1,118	
Kemp Mill ES Addition (DCC Solution)		8,658			8,658		310	2,515	4,803	1,030	
Kensington-Parkwood ES Addition	998	11,156			11,156	399	3,244	6,192	1,321		
S. Christa McAuliffe ES Addition		10,171			10,171			364	2,959	5,646	1,202
North Bethesda MS Addition	1,691	18,610			18,610	676	5,324	10,547	2,063		
North Chevy Chase ES Addition	260	6,820	230	1,921	4,669	1,880	2,789				
Northwest ES #8	2,979	32,450			32,450	1,192	8,958	18,831	3,469		
Judith Resnik ES Addition		11,512			11,512			413	3,358	6,397	1,344
Rosemary Hills ES Addition	172	5,708	198	1,668	3,842	1,569	2,273				
Sargent Shriver ES Addition (DCC Solution)		3,881			3,881		136	1,108	2,136	501	
Waters Landing ES Addition		8,827	1,794	3,487	3,546	3,546					
Julius West MS Addition	13,798	15,303		409	14,894	4,664	8,554	1,676			
Wood Acres ES Addition	7,800	8,606		232	8,374	2,637	4,822	915			
<b>ADA Compliance: MCPS</b>											
ADA Compliance: MCPS	3,000	24,393	10,393	3,200	10,800	3,000	3,000	1,200	1,200	1,200	1,200
Asbestos Abatement	1,145	15,520	7,505	1,145	6,870	1,145	1,145	1,145	1,145	1,145	1,145
Building Modifications and Program Improvements	3,500	27,432	18,132	2,300	7,000	3,500	3,500				
Current Replacement/Modernizations	55,906	1,374,005	507,905	121,982	744,118	97,274	132,654	187,357	162,667	115,679	48,487
Design and Construction Management	4,900	65,775	31,475	4,900	29,400	4,900	4,900	4,900	4,900	4,900	4,900
Energy Conservation: MCPS	2,057	29,750	15,351	2,057	12,342	2,057	2,057	2,057	2,057	2,057	2,057
Facility Planning: MCPS	900	10,997	6,807	600	3,590	900	450	770	400	670	400
Fire Safety Upgrades	2,000	15,483	6,712	1,503	7,268	2,000	2,000	817	817	817	817
Future Replacements/Modernizations		153,375			153,375	0	0	0	3,368	33,772	116,235
HVAC (Mechanical Systems) Replacement	28,000	169,775	63,415	10,360	96,000	28,000	28,000	10,000	10,000	10,000	10,000
Improved (Safe) Access to Schools	1,200	10,828	7,228	1,200	2,400	1,200	1,200				
Indoor Air Quality Improvements	2,147	28,061	16,282	1,497	10,282	2,147	2,147	1,497	1,497	1,497	1,497
Planned Life-Cycle Asset Replacement (PLAR)	7,250	90,404	52,199	4,741	33,464	7,250	7,250	4,741	4,741	4,741	4,741
Rehabilitation/Renovation of Closed Schools (RROCS)	3,258	110,820	75,439		35,381	1,303	8,780	21,391	3,907		
Relocatable Classrooms	5,000	45,811	26,811	4,000	15,000	5,000	5,000	5,000			
Restroom Renovations	1,000	13,085	8,735	1,000	3,350	1,000	1,000	1,000	350		
Roof Replacement: MCPS	8,000	78,929	30,589	6,468	41,872	8,000	8,000	6,468	6,468	6,468	6,468
School Security Systems		18,610	9,614	5,860	3,136	3,136					
Stormwater Discharge and Water Quality Management	616	9,367	5,055	616	3,696	616	616	616	616	616	616
Technology Modernization	26,805	315,487	138,949	22,088	154,450	26,805	26,358	23,997	25,277	25,348	26,665
<b>Total Requested CIP</b>	<b>240,242</b>	<b>3,002,321</b>	<b>1,048,873</b>	<b>218,697</b>	<b>1,741,972</b>	<b>251,589</b>	<b>348,228</b>	<b>397,790</b>	<b>278,312</b>	<b>236,014</b>	<b>230,039</b>

**Scenario -- BOE Request with one year delay of all individual capacity projects,  
one year delay of all Rev/Ex Projects**

(figures in thousands)

Project	FY 2015 Approp.	Total	Thru FY 2013	Remaining FY 2014	Total Six-Years	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Beyond
<b>Individual School Projects</b>												
Arcola ES Addition	130	3,841	141	1,096	2,604	1,057	1,547					
Ashburton ES Addition		7,221			6,325				256	2,052	4,017	896
Lucy Barnsley ES Addition		12,974			12,974		462	3,462	7,434	1,616		
Bethesda ES Addition	171	3,970	143	1,168	2,659	1,082	1,577					
Bethesda-Chevy Chase HS Addition		30,787			30,787		1,123	9,034	17,325	3,305		
Bethesda-Chevy Chase MS #2		52,314		250	52,064	829	15,181	30,674	5,380			
Brookhaven ES Addition (DCC Solution)		5,381			5,381			192	1,515	3,026	648	
Burtonsville ES Addition		12,818			11,449				469	3,692	7,288	1,369
Clarksburg Cluster ES (Clarksburg Village Site #1)		28,218	7,194	8,613	12,411	12,411						
Clarksburg HS Addition	529	11,823	377	3,229	8,217	3,269	4,948					
Clarksburg/Damascus MS (New)	48,750	52,764	200	1,107	51,457	14,633	31,246	5,578				
Diamond ES Addition		8,926			8,926		322	2,615	4,971	1,018		
Blair Ewing Center Improvements		16,579			16,579		605	3,527	10,425	2,022		
Glen Haven ES Addition (DCC Solution)		4,092			4,092			147	1,306	2,180	459	
Highland ES Addition (DCC Solution)		8,225			8,225			285	2,320	4,502	1,118	
Kemp Mill ES Addition (DCC Solution)		8,658			8,658			310	2,515	4,803	1,030	
Kensington-Parkwood ES Addition		11,156			11,156		399	3,244	6,192	1,321		
S. Christa McAuliffe ES Addition		10,171			8,969				364	2,959	5,646	1,202
North Bethesda MS Addition		18,610			18,610		676	5,324	10,547	2,063		
North Chevy Chase ES Addition	260	6,820	230	1,921	4,669	1,880	2,789					
Northwest ES #8		32,450			32,450		1,192	8,958	18,831	3,469		
Judith Resnik ES Addition		11,512			10,168				413	3,358	6,397	1,344
Rosemary Hills ES Addition	172	5,708	198	1,668	3,842	1,569	2,273					
Sargent Shriver ES Addition (DCC Solution)		3,881			3,881			136	1,108	2,136	501	
Waters Landing ES Addition		8,827	1,794	3,487	3,546	3,546						
Julius West MS Addition	13,798	15,303		409	14,894	4,664	8,554	1,676				
Wood Acres ES Addition	7,800	8,606		232	8,374	2,637	4,822	915				
<b>ADA Compliance: MCPS</b>												
ADA Compliance: MCPS	3,000	24,393	10,393	3,200	10,800	3,000	3,000	1,200	1,200	1,200	1,200	
Asbestos Abatement	1,145	15,520	7,505	1,145	6,870	1,145	1,145	1,145	1,145	1,145	1,145	
Building Modifications and Program Improvements	3,500	27,432	18,132	2,300	7,000	3,500	3,500					
Current Replacement/Modernizations	48,143	1,027,827	507,905	121,982	397,940	93,976	106,674	60,563	75,691	41,826	19,210	
Design and Construction Management	4,900	65,775	31,475	4,900	29,400	4,900	4,900	4,900	4,900	4,900	4,900	
Energy Conservation: MCPS	2,057	29,750	15,351	2,057	12,342	2,057	2,057	2,057	2,057	2,057	2,057	
Facility Planning: MCPS	900	10,997	6,807	600	3,590	900	450	770	400	670	400	
Fire Safety Upgrades	2,000	15,483	6,712	1,503	7,268	2,000	2,000	817	817	817	817	
Future Replacements/Modernizations		334,831			334,831	0	0	26,654	70,668	113,906	123,603	
HVAC (Mechanical Systems) Replacement	28,000	169,775	63,415	10,360	96,000	28,000	28,000	10,000	10,000	10,000	10,000	
Improved (Safe) Access to Schools	1,200	10,828	7,228	1,200	2,400	1,200	1,200					
Indoor Air Quality Improvements	2,147	28,061	16,282	1,497	10,282	2,147	2,147	1,497	1,497	1,497	1,497	
Planned Life-Cycle Asset Replacement (PLAR)	7,250	90,404	52,199	4,741	33,464	7,250	7,250	4,741	4,741	4,741	4,741	
Rehabilitation/Renovation of Closed Schools (RROCS)	3,258	110,820	75,439		35,381		1,303	8,780	21,391	3,907		
Relocatable Classrooms	5,000	45,811	26,811	4,000	15,000	5,000	5,000	5,000				
Restroom Renovations	1,000	13,085	8,735	1,000	3,350	1,000	1,000	1,000	350			
Roof Replacement: MCPS	8,000	78,929	30,589	6,468	41,872	8,000	8,000	6,468	6,468	6,468	6,468	
School Security Systems		18,610	9,614	5,860	3,136							
Stormwater Discharge and Water Quality Management	616	9,367	5,055	616	3,696	616	616	616	616	616	616	
Technology Modernization	26,805	315,487	138,949	22,088	154,450	26,805	26,358	23,997	25,277	25,348	26,665	
<b>Total - Scenario</b>	<b>220,531</b>	<b>2,844,820</b>	<b>1,048,873</b>	<b>218,697</b>	<b>1,572,439</b>	<b>242,209</b>	<b>282,316</b>	<b>236,282</b>	<b>318,589</b>	<b>262,620</b>	<b>230,423</b>	

MCPS Affordability  
Scenario

**MCPS Affordability Scenario:  
Impact on Individual School Projects**

**Projects Under Construction - No Change Recommended**

Arcola ES Addition (DCC)
Bethesda ES Addition (B-CC)
Clarksburg Cluster ES
Clarksburg HS Addition
North Chevy Chase ES Addition (B-CC)
Rosemary Hills ES Addition (BCC)
Waters Landing ES Addition (SV)

**Projects in Design - No Change Recommended**

Clarksburg/Damascus MS (C/D)
Julius West MS Addition (RM)
Wood Acres (Whitman)
Bethesda-Chevy Chase MS (B-CC)

**Projects with Design Requested in FY15 - To Be Delayed One Year**

Bethesda-Chevy Chase HS Addition (B-CC)
Blair Ewing Center Improvements
Diamond ES Addition (NW)
Kensington-Parkwood ES Addition (WJ)
Lucy V. Barnesley ES Addition (Rockville)
North Bethesda MS Addition (WJ)
Northwest ES #8 (NW)
RM Cluster ES #5 (Hungerford Park site) - RROCs

**New Projects Requested to Begin in FY16 or Beyond - Not to Be Included in the FY15-20 CIP**

Ashburton ES Addition (WJ)
Burtonsville ES Addition (NE)
Judith Resnick ES Addition (Magruder)
S. Christa McAuliffe ES Addition (SV)

**Projects with Design Requested to Begin in FY16 or Beyond - To Be Delayed One Year**

Brookhaven ES Addition (DCC)
Glen Haven ES Addition (DCC)
Highland ES Addition (DCC)
Kemp Mill ES Addition (DCC)
Sargent Shriver ES Addition (DCC)

FY 2015-2020 CIP  
Scenario

Revitalization/Expansion Schedule

One Year Delay of ES Rev/Ex Projects beyond BOE Request and  
One Year Delay of Secondary Rev/Ex Projects beginning with Tilden MS and Seneca Valley HS

	School	FY 15 Approp.	Comp Date	Total Project	Prior Years Expend.	Six-Year Total	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Beyond
1	Gaithersburg HS		8/13	107,149	95,812	11,337	11,337						
2	Bel Pre ES		8/14	28,872	17,206	11,666	11,666						
3	Candlewood ES	950	1/15	24,133	5,224	18,909	9,763	9,146					
4	Rock Creek Forest ES	976	1/15	29,100	4,677	24,423	11,839	12,584					
5	William Farquhar MS	46,217	8/16	50,892	1,035	49,857	13,767	31,061	5,029				
6	Wheaton HS/Edison Tech	3,950	8/18	171,595	8,917	162,678	35,604	50,585	52,910	16,941	6638		
7	Wayside ES		8/18	24,074	329	23,745			5,661	15,339	2,745		
8	Brown Station ES		8/18	34,446	400	34,046			8,988	21,405	3,653		
9	Wheaton Woods ES		8/18	33,406	457	32,949			8,483	20,930	3,536		
10	Seneca Valley HS	3,813	8/19	129,126	200	119,070		3,298	2,624	58,750	35,188	19,210	9856
11	Potomac ES		1/20	21,320		21,320			457	6,091	12,505	2,267	
12	Maryvale ES/Sandburg Learning Ctr.		1/20	48,908		48,908			894	3,205	24,733	20,076	
13	Luxmanor ES		1/20	20,747		20,747			257	609	11,574	8,307	
14	Tilden MS @ Tilden Center*		8/20	54,985		45,968			1,107	1,476	27,971	15,414	9,017
15	Wootton HS		8/21	101,767		70,008			807	1,613	23,821	43,767	31,759
16	Cold Spring ES		8/21	20,273		7,565					403	7,162	12,708
17	Duffel ES		8/21	20,273		7,565					403	7,162	12,708
18	Belmont ES		8/21	20,273		7,565					403	7,162	12,708
19	Stonegate ES		8/21	20,273		7,565					403	7,162	12,708
20	Eastern MS		8/22	50,786		2,406					802	1,604	48,380
21	Damascus ES		1/23	25,012		403						403	24,609
22	Twinbrook ES		1/23	25,012		403						403	24,609
23	Summit Hall ES		1/23	25,012		403						403	24,609
24	Rosemary Hills ES		1/23	25,012		403						403	24,609
25	Poolesville HS		8/23	83,889		2,862					954	1,908	81,027
26	E. Brooke Lee MS		N/A	50,028		0							50,028
27	Poolesville ES		N/A	25,012		0							25,012
28	Burnt Mills ES		N/A	25,012		0							25,012
29	South Lake ES		N/A	25,012		0							25,012
30	Woodfield ES		N/A	25,012		0							25,012
	Current Rev/Ex	55,906		880,520	134,257	397,940	93,976	106,674	60,563	75,691	41,826	19,210	9,856
	Future Rev/Ex			465,891	0	334,831	0	0	26,654	70,668	113,906	123,603	469,527

No  
Change  
From  
BOE  
Request

Reflects  
Delay  
Beyond  
BOE  
Request

## Technology Modernization (P036510)

Category	Montgomery County Public Schools	Date Last Modified	11/13/13
Sub Category	Countywide	Required Adequate Public Facility	No
Administering Agency	Public Schools (AAGE18)	Relocation Impact	None
Planning Area	Countywide	Status	Ongoing

	Total	Thru FY13	Est FY14	Total 6 Years	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	Beyond 6 Yrs
<b>EXPENDITURE SCHEDULE (\$000s)</b>											
Planning, Design and Supervision	315,487	138,949	22,088	154,450	26,805	26,358	23,997	25,277	25,348	26,665	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>315,487</b>	<b>138,949</b>	<b>22,088</b>	<b>154,450</b>	<b>26,805</b>	<b>26,358</b>	<b>23,997</b>	<b>25,277</b>	<b>25,348</b>	<b>26,665</b>	<b>0</b>

<b>FUNDING SCHEDULE (\$000s)</b>											
Current Revenue: General	188,349	37,004	15,728	135,617	11,711	24,779	22,917	24,197	25,348	26,665	0
Current Revenue: Recordation Tax	116,430	91,237	6,360	18,833	15,094	1,579	1,080	1,080	0	0	0
Federal Aid	10,708	10,708	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>315,487</b>	<b>138,949</b>	<b>22,088</b>	<b>154,450</b>	<b>26,805</b>	<b>26,358</b>	<b>23,997</b>	<b>25,277</b>	<b>25,348</b>	<b>26,665</b>	<b>0</b>

### APPROPRIATION AND EXPENDITURE DATA (000s)

Appropriation Request	FY 15	26,805
Appropriation Request Est.	FY 16	26,358
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		161,037
Expenditure / Encumbrances		138,949
Unencumbered Balance		22,088

Date First Appropriation	FY 03
First Cost Estimate	
Current Scope	0
Last FY's Cost Estimate	216,755

### Description

The Technology Modernization (Tech Mod) project is a key component of the MCPS strategic technology plan, Educational Technology for 21st Century Learning. This plan builds upon the following four goals: students will use technology to become actively engaged in learning, schools will address the digital divide through equitable access to technology, staff will improve technology skills through professional development, and staff will use technology to improve productivity and results.

The funding source for the initiative is anticipated to be Federal e-rate funds. The Federal e-rate funds programmed in this PDF consist of available unspent e-rate balance: \$1.8M in FY 2010, \$1.8M in FY 2011, and \$327K in FY 2012. In addition, MCPS projects future e-rate funding of \$1.6M each year (FY 2010-2012) that may be used to support the payment obligation pending receipt and appropriation. No county funds may be spent for the initiative payment obligation in FY 2010-2012 without prior Council approval. This PDF reflects a decrease in the FY 2010 appropriation and FY 2010-2012 expenditures as requested by the Board of Education. The decrease in expenditures will temporarily extend the MCPS desktop replacement cycle from four to five years.

An FY 2011 appropriation was approved; however, it was \$1.011 million less than the Board of Education's request. The appropriation will continue the technology modernization project and fund one additional staff position for this project. During the County Council's reconciliation of the amended FY 2011-2016 CIP, the Board of Education's requested FY 2012 appropriation was reduced by \$3.023 million due to a shortfall in Recordation Tax revenue. An FY 2012 supplemental appropriation of \$1.339 million in federal e-rate funds was approved; however, during the County Council action, \$1.339 million in current revenue was removed from this project resulting in no additional dollars for this project in FY 2012. An FY 2013 appropriation was requested to continue the technology modernization project and return to a four-year replacement cycle starting in FY 2013; however, the County Council, in the adopted FY 2013-2018 CIP reduced the request and therefore, the replacement cycle will remain on a five-year schedule. An FY 2013 supplemental appropriation in the amount of \$2.042 million was approved in federal e-rate funds to roll out Promethean interactive technology across all elementary schools and to implement wireless networks across all schools. An FY 2014 appropriation was approved to continue this project. An FY 2015 appropriation is requested to continue the technology modernization program which will enable MCPS to return to a four-year refreshment cycle and provide more mobile (laptop and tablet) devices in the classrooms.

### Coordination

(\$000)	FY 15	FYs 16-20
Salaries and Wages:	1893	9465
Fringe Benefits:	807	4035
Workyears:	20.5	102.5

## Responses

- 1. Please provide a breakout of the Board's request for the Tech Mod CIP project, showing the amounts for new equipment, payment schedule for new equipment, the wireless initiative, and any other expenses. Please also indicate what E-rate funds are projected during the 6 year period and how those would be allocated.**

The attached table outlines the projected costs over the next six years. This includes the finance payments for the wireless and the Promethean boards that are included in the FY15, 16, and 17 payments.

- 2. Please provide an update on the status of implementing wireless networks across all schools, such as how many schools are left and the anticipated timeframe for completion.**

Phase One of the wireless installation, which included installation of wireless access points, controllers, and licenses was completed in September 2013, for all schools that did not have wireless. Phase Two, which represents current efforts, focuses on optimizing placement of the access points to ensure maximum coverage and integrating the wired and wireless network infrastructures and security layers. These current efforts will allow schools to securely and effectively support the use of personally owned devices by staff and students to support teaching and learning. Pilot Bring Your Own Device (BYOD) initiatives are beginning in select schools that have completed Phase Two of the wireless implementation. This work on the wireless infrastructure is expected to be completed prior to the beginning of the 2014–2015 school year.

- 3. The BOE Request states that the FY 2015 request includes funding to return the desktop replacement cycle to a four year cycle. What would the funding request be to maintain the current five year cycle?**

The funding requests in the FY 2015 Capital Budget and the FY 2015–2020 Capital Improvements Program (CIP) assumes no change to the present five-year refresh cycle. This was misstated previously. However, as we integrate more mobile technologies and tablets into our classrooms, these technologies have shorter lifespans than traditional desktop computers. The requested funding is critical to begin the necessary large-scale deployment of mobile technology and supporting infrastructure across all school levels.

- 4. Please indicate how funds would be allocated and what elements of the Board's request would not be implemented if the Executive's recommendation for level funding in the Tech Mod CIP project is adopted.**

If the Tech Mod CIP is not funded at the requested levels, we will need to further extend the use of equipment and risk being out of compliance in several key areas that impact instructional and operational programming in Montgomery County Public Schools (MCPS). In order to preserve the acquisition of mobile technologies to support both the daily instructional and assessment programs, including the new Partnership for

Assessment of Readiness for College and Careers (PARCC) assessment, we would be forced to further extend the use of printers that are already between four and nine years old. Printers of this age are already a challenge to support because of the increasing scarcity of parts and frequency of breakdowns. In addition, school data and application servers that already are over five years old will need to be kept and not replaced and pose similar support and reliability challenges as with printers. Similarly, scheduled updates of selected telecommunication switches and educational and productivity software would be not be upgraded and may put the district out of compliance on some licensing agreements.

Furthermore, we will need to increase computer allocation ratios. This not only disrupts our ability to efficiently administer the PARCC assessment and minimize disruptions to the instructional program, but also moves MCPS backwards in providing students greater access to instructional experiences that mirror the ways in which they will be assessed and from the digital reality of their daily lives outside of school.

- 5. How does the CIP request relate to the funds identified in the operating budget request (\$3 million) to acquire mobile devices? Are there funds for this initiative in both budgets? Please provide additional detail on this initiative, including the number of devices anticipated, how/what school levels they would be distributed, etc.**

Mobile learning devices are an essential part of providing students meaningful opportunities to engage the curricular content from the perspective from which they will be assessed on the state's new performance-based assessments. Moreover, the introduction of mobile devices also will accelerate our work to transition the MCPS assessment program to a fully computer-enabled platform. In addressing this question, it is important to provide background information on how these funding requests directly support MCPS strategic thinking about technology for teaching and learning. The MCPS 2014–2016 Strategic Technology Plan that was shared with the Board of Education on May 30, 2013, frames a vision for how we have begun to reimagine learning in a connected, digital age. In addition, the plan also highlights the forces that are pulling and pushing us to this future. Specifically, the plan summarizes how digital and mobile technology are changing how we live, work, and learn, and therefore is spurring us to adapt and integrate these technologies to create inspiring and motivating learning experiences.

The \$3 million request in the FY 2015 Operating Budget together with the FY 2015–2020 CIP funding for the Technology Modernization (Tech Mod) Project are critical to fund the significant budgetary requirements to transform our learning environments to more appropriately meet the learning needs of our students in the 21<sup>st</sup> century. The \$3 million FY 2015 Operating Budget request will contribute to the purchase of mobile devices, enhance warranty coverage, provide instructional software and resources for students, and provide software that enables teachers to more easily support students and ensure appropriate use of the technology. Yes, this initiative anticipates funding in both budgets.

Relatedly, because of the size of our school system, the FY 2015–2020 CIP funding for the Tech Mod Project also is vital to support timely expansion and deployment of mobile (laptop and tablet) devices to our students and classrooms. In addition, the Tech Mod Project funding also is essential to pay finance payments for prior year hardware expenditures; upgrade eight-year old network printers that we have delayed replacing; upgrade key components of the telecommunications infrastructure required to support and integrate these mobile devices; replace school servers whose scheduled replacement also have been delayed; deploy a virtualized desktop and application services solution that will help the district extend the use of existing computing devices and support staff and student use of their own technology devices at our schools; and rolling out cloud-based access to Microsoft Office applications.

Support for these critical funding requests enhances the district’s ability to systematically move forward in integrating greater customizable and flexible learning opportunities directly in our classrooms. Undeniably, advances in mobile, social, information, and cloud technologies are facilitating these new opportunities for how we teach and learn. The convergence of these four technologies (our students and staff already are deeply immersed with these technologies outside of school) present tremendous opportunities to redesign our learning environments. Since mobile devices (which include laptops, tablets, and hybrid laptop-tablets) wirelessly connect to the network and can be recharged out of the way, we can integrate these technologies into existing classroom configurations and support teachers as they implement a variety of technology-enhanced, student-centered pedagogical strategies.

The systematic integration of the mobile technologies along with the interactive, multimodal pedagogical strategies they support promotes deeper, more customizable, and collaborative learning options for our students. Moreover, to prepare students to succeed in college and career pursuits, MCPS schools must have the ability to use instructional resources and pedagogical strategies that incorporate the technologies that are part of daily life outside the classroom. Consequently, the \$3,000,000 requested for mobile technologies in the FY 2015 Operating Budget and the FY 2015–2020 CIP funding for the Tech Mod Project are vital in operationalizing the MCPS 2014–2016 Strategic Technology Plan’s vision for classroom communities where—

- digital curricular resources offer students multiple opportunities to integrate challenging content, represented through different mediums including text, video, audio, graphic, and multimedia formats;
- technology supports disciplined inquiry and making students’ thinking visible as they make sense of complex and real-world phenomena;
- there are ambitious expectations for all students, and the flexibility for grouping and access to learning is in place to meet their needs;
- highly effective teachers and all staff members have the resources and support to expertly engage students in digital learning and communicate with their parents/guardians about their progress;



- technology-enhanced formative and performance assessments are used effectively to make daily instructional decisions and to provide meaningful feedback to students that empowers them to own their learning; and
- technology is used to differentiate instruction and scaffold learning opportunities that meet the learning needs and diverse backgrounds of all students.

This vision for learning requires greater access to a variety of digital, mobile, and multimodal technologies to create the inspiring and engaging learning experiences our students and staff are demanding. In addition to being an integral part of students' everyday learning experiences, the integration of the mobile devices this budget request supports also will enable MCPS to comply with the state's Partnership for Assessment of Readiness for College and Careers online assessment requirements. The new state assessment requirements expand mandatory online testing to students in grades 3-11. The Maryland State Department of Education's recommended PARCC testing requirements specify a one-to-one computer-to-student ratio within the largest tested grade level. To comply with these testing requirements, MCPS will need a minimum of 18,000 additional PARCC compliant devices to be able to complete the state's assessment within the prescribed testing window.

What may be overlooked in limiting the focus to rigging older computers is that there is a need for far greater concurrent access to computers under PARCC that was not the case for the optional online administration of the Maryland School Assessment and High School Assessment. This is the case because of the number of testing sessions, the length of the tests, the duration of the testing window, the number of students we must assess online during the testing window, and the increased times during which students will be assessed (PARCC will be administered in the spring and again at the end of the school year). Moreover, satisfying the state's access guidelines for student access for PARCC is not simply a matter of just reconfiguring older computers.

The approved specifications for computing devices, operating systems, computer memory, screen resolution, and screen size are different for the PARCC assessment. As a result, most of the desktop computers and all the netbooks, virtual workstations (N-Computing), and the vast majority of laptops in the 113 schools whose technology was last upgraded through Tech Mod in FY10 and FY11 do not meet the PARCC requirements and are not upgradeable to comply with these requirements. It also is true that even schools that participated in the Tech Mod upgrades in FY12 and FY13 have older netbooks that were kept to fill voids in specific uses—these netbooks are neither compliant with the PARCC requirements nor can they be upgraded to comply.

Practically, there is not sufficient space in our classrooms to accommodate 18,000 or more desktops across our schools. Furthermore, desktop and computer lab-based access do not provide real-time access to technology-enhanced learning opportunities, loses time in transition to the labs, and is not aligned with the future of technology and learning. By contrast, given the smaller sizes, increased processing power, ability to connect wirelessly, and the options for power management of mobile devices, those models that satisfy the prescribed size and processor requirements are ideally suited to support



creative, engaging classroom learning experiences and facilitate the administration of the PARCC assessment.

Over the next three years, the total device cost is projected to be approximately \$27,000,000. The financing of these mobile devices is expected to be over a four-year term. We expect that one-third of the total effort will be funded by the FY 2015 Operating Budget request. The plan is to deploy the devices over the next three years across school and grade levels in a manner that ensures that as students articulate to the next grade they will continue to have access to these mobile technologies. In addition, some considerations also are being given to deploy a select number of the devices to support specific curricula implementations—for example the rollout of new Algebra and Geometry curriculum.

**Technology Modernization Program  
FY 2015 - FY 2020 Detail**

<b>Technology Modernization Project Funding Summary</b>		<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>
1	<b>Current Year - Non-Financed Cost</b>	\$2,058,538	\$1,759,430	\$1,788,637	\$1,749,588	\$2,063,679	\$1,963,379
2	<b>Current Year - Finance Cost</b>	4,488,116	3,883,877	3,929,869	3,831,484	4,264,379	4,640,665
3	<b>Total Financed and Non-financed</b>	\$6,546,654	\$5,643,307	\$5,718,506	\$5,581,072	\$6,328,058	\$6,604,044
4	<b>Previous Years - Finance Payment</b>	\$14,683,343	\$16,281,279	\$14,602,295	\$12,301,861	\$11,645,229	\$12,025,731
<b>Additional Program Costs</b>							
5	Maintenance Software	1,857,585	2,106,111	2,389,995	2,714,685	3,086,214	3,511,514
6	WAN Upgrade Equipment and Materials	398,000	398,000	398,000	398,000	398,000	398,000
7	Staff	2,449,774	2,572,263	2,752,321	2,944,984	3,151,132	3,371,712
8	Program Design, Modeling, and Testing	529,000	529,000	529,000	529,000	529,000	529,000
9	Extended Warranty, Service, and Parts	435,000	310,000	260,000	260,000		
10	<b>Total Additional Program Costs</b>	5,669,359	5,915,374	6,329,316	6,846,669	7,164,346	7,810,226
	<b>TOTAL</b>	\$ 26,899,356	\$ 27,839,960	\$ 26,650,117	\$ 24,729,601	\$ 25,137,633	\$ 26,440,000
	<b>Total (000)</b>	\$ 26,899	\$ 27,840	\$ 26,650	\$ 24,730	\$ 25,138	\$ 26,440
	<b>FUNDING REQUEST</b>	\$ 26,805	\$ 26,358	\$ 23,997	\$ 25,277	\$ 25,348	\$ 26,665
	<b>Projected E-Rate Reimbursement</b>	\$ 2,074	\$ 1,900	\$ 1,900	\$ 1,900	\$ 1,900	\$ 1,900

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**Technology Modernization Program  
FY 2015 - FY 2020 Detail**

**Technology Modernization Finance Payments**

	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
FY12 Payment	2,890,180					
FY13 Payment	8,471,000	9,792,768	2,908,139			
FY14 Payment	3,322,163	3,322,163	3,322,163			
FY15 Payment	4,488,116	4,488,116	4,488,116	4,488,116		
FY16 Payment		3,883,877	3,883,877	3,883,877	3,883,877	
FY17 Payment			3,929,869	3,929,869	3,929,869	3,929,869
FY18 Payment				3,831,484	3,831,484	3,831,484
FY19 Payment					4,264,379	4,264,379
FY20 Payment						4,640,665
<b>Total Finance Payments Current and Previous Ye</b>	<b>19,171,459</b>	<b>21,486,924</b>	<b>18,532,164</b>	<b>16,133,345</b>	<b>15,909,608</b>	<b>16,666,395</b>
% of total (finance payments / funding request)	72%	82%	77%	64%	63%	63%

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