



## A2 BOND TEAM

### 2012 Technology Bond Briefing Book

# A2 BOND TEAM

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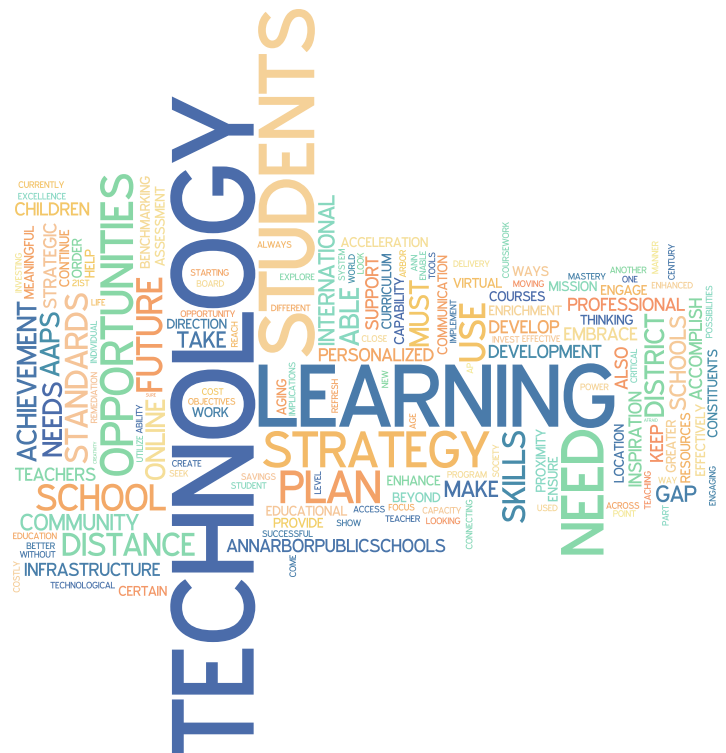
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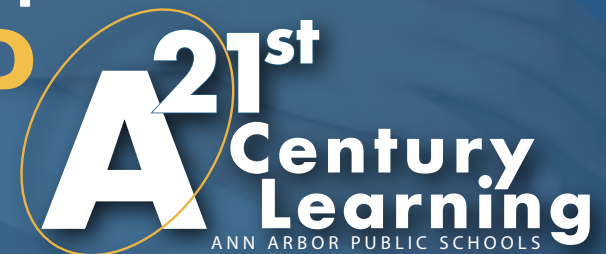
## 2012 Tech Bond Cost Plan







# **ANN ARBOR PUBLIC SCHOOLS 2012 TECHNOLOGY BOND**





A group of approximately ten diverse students are captured in mid-air, jumping joyfully on a lush green grassy field. They are all smiling and have their arms raised, some with hands clasped or reaching towards the sky. The background is a clear, bright blue sky. The students are wearing casual clothing like t-shirts, jeans, and shorts. The overall mood is one of happiness and energy.

# Ann Arbor Public Schools **STRATEGIC PLAN**

# WE WILL...

- 1.** Create a complete educational program featuring personalized learning that realizes student aspirations and meets international standards.
- 2.** Develop and implement a personalized learning plan for each student.
- 3.** Actualize the potential for excellence in all students through inspiration and support.
- 4.** Ensure meaningful learning through effective teaching.
- 5.** Enhance the district's professional learning system in order to provide relevant learning experiences and support for all staff in order to continually improve academic and social achievement for all students.
- 6.** Engage and inform our constituents to engender trust and support to accomplish our mission and objectives.
- 7.** Create and maintain physical learning environments that enable us to fulfill our mission.
- 8.** Ensure resources adequate to accomplish our mission and objectives.



- ✓ Delivery of Curriculum
- ✓ Increasingly Digital World
- ✓ Hyperlinked
- ✓ Digital World of Online Access
- ✓ Mobile Technology
- ✓ Distance Learning
- ✓ Virtual Proximity



# Student Achievement and Technology Implementation in the Curriculum

- ✓ Current initiative and technology integration map
- ✓ Digital citizenship
- ✓ Educational technology standards alignment
- ✓ Personalized learning plans, including online courses and the Choices A2.0 programs
- ✓ Strategies and measures for supporting student achievement
- ✓ Supporting ALL students with alternative curriculum resources



**Curriculum designed to prepare students for the world of work in a technologically driven global society through Information and Communication Literacy.**



- ✓ Critical Thinking Skills
- ✓ Collaboration Skills
- ✓ Problem Solving
- ✓ Creativity and Innovation
- ✓ Imagination
- ✓ Interactive Literacy Skills



# THE DIGITAL DIVIDE

The gap between people or groups of people with effective access to digital and information technology and those with limited or no access at all.

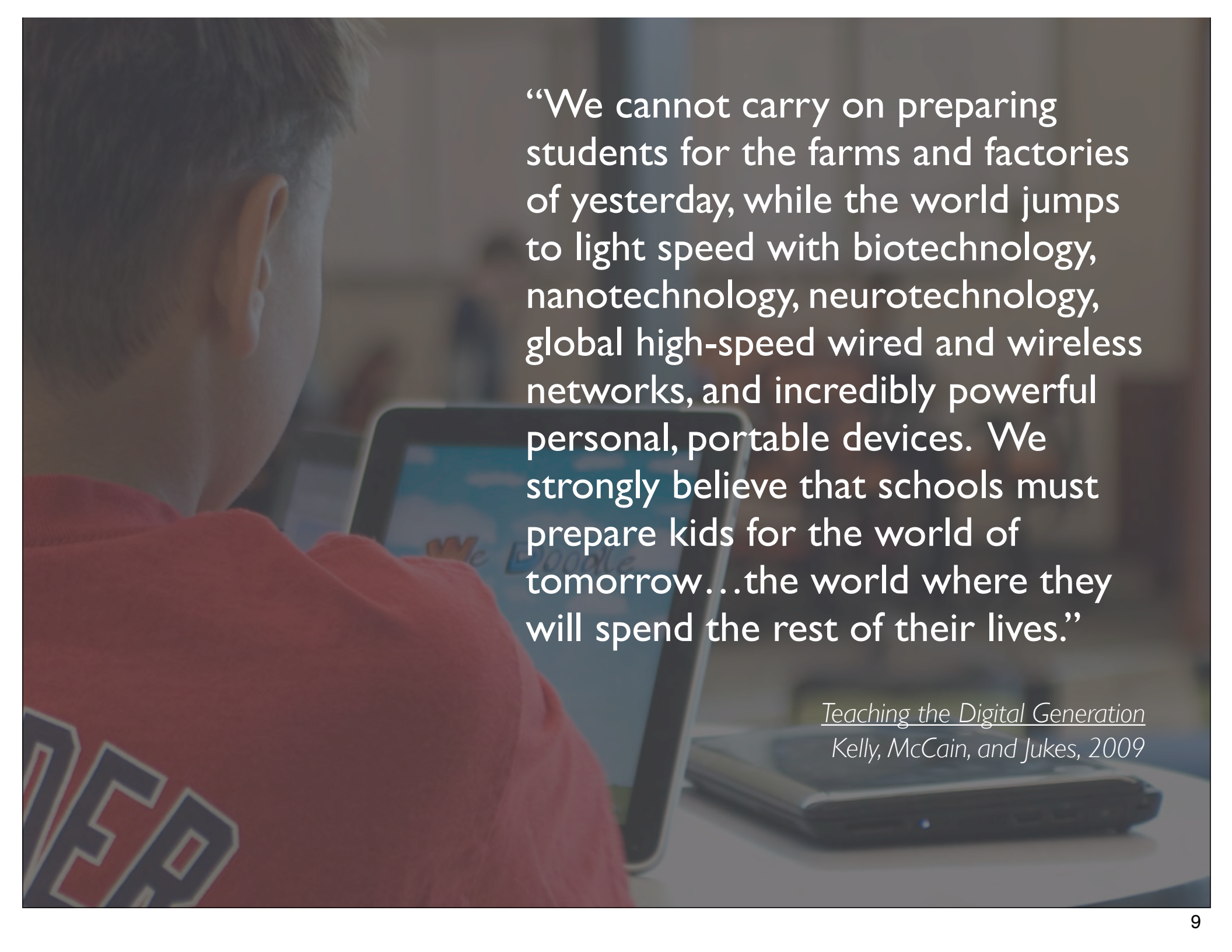
It also includes the imbalances in physical access to technology as well as imbalances in resources and skills needed to effectively participate as a digital citizen as a result of compromised state funding for Ann Arbor Public Schools.

# THE ANN ARBOR DIGITAL DIVIDE

## BETWEEN...

- ➡ Home and school
- ➡ Each building and each grade level
- ➡ Where the District is now and where it needs to be to enable students to be competitive and cutting edge in a global society



A child with short brown hair, wearing a red long-sleeved shirt, is seen from the side, looking at a tablet. The tablet screen displays a Google search page with the word "Google" in its characteristic multi-colored font. The background is blurred, showing what appears to be a classroom or office setting. The text of the quote is overlaid on the right side of the image in a white, sans-serif font.

“We cannot carry on preparing students for the farms and factories of yesterday, while the world jumps to light speed with biotechnology, nanotechnology, neurotechnology, global high-speed wired and wireless networks, and incredibly powerful personal, portable devices. We strongly believe that schools must prepare kids for the world of tomorrow...the world where they will spend the rest of their lives.”

*Teaching the Digital Generation*  
Kelly, McCain, and Jukes, 2009

# HISTORY

## 2004 Bond

Dedicated to Technology

- ✓ \$20 Million
- ✓ Every administrator, teacher, office professional and student (1:3 ratio) received new computers
- ✓ Assistive technology
- ✓ Career & Tech Ed lab enhancements (auto & computer)
- ✓ \$7 Million in additional new computers in FY09 & FY10
- ✓ Total purchases 2004-2010 = \$27 million

# FUTURE

## 2012 Technology Bond

- ✓ \$45,855,000 over 10 years
- ✓ Align to Strategic Plan Goals
- ✓ Expand Wireless Infrastructure for Support and Speed
- ✓ Expand Network Video System
- ✓ Create 21st Century Learning Environments
- ✓ Computers and Mobile Devices for an Increasing Digital World



Google<sup>TM</sup>  
1998



2001



2004



2010

ADVANCES IN  
THE WEB AND  
TECHNOLOGY



Podcast 2004



2010



2007

YouTube  
2005

## 2012 TECHNOLOGY BOND PLAN

HARDWARE	CYCLE	PURCHASED	EXISTING NUMBER	TYPE	CYCLE TOTAL:
Student School Computers	3yr	2005/2006	1,900		\$19,496,500.00 AAPS
	3yr	2005/2006	628		
	3yr	2006	32		
	3yr	2006	175		
	3yr	2008	161		
			<u>2,896</u>	DESKTOPS	
	3yr	2008	2,556		
	3yr	2010	818		
			<u>3,374</u>	LAPTOPS	
Teacher/Admin Computers	3yr	2009	<u>1,700</u>	LAPTOPS	\$5,479,000.00 AAPS
	3yr	2008/2009	<u>172</u>	DESKTOPS	



**TOTAL UNITS PURCHASED** **8,142**

**Area Subtotal: \$24,975,500.00**

District Switch Replacement	5yr	2005/6	\$1,965,500.00	PM
District Server Replacement/Upgrade	5yr	2005/6	\$1,000,000.00	PM
			<b>Area Subtotal: \$2,965,500.00</b>	
Administrative Software	10yr	1998, 2005	\$500,000.00	AAPS
Student Intervention Support Services	10yr	2005/6	\$242,500.00	AAPS/PM
Career Tech and Ed	10yr	2005/6	\$490,000.00	AAPS/PM
MediaCast	10yr	2006/7	\$300,000.00	AAPS
Classroom Technologies	10yr	2005/6	\$4,697,500.00	AAPS/PM
			<b>Area Subtotal: \$6,230,000.00</b>	

### INFRASTRUCTURE

10 Gig Backbone (Elementary)	10yr	2005/6	\$848,000.00	PM
Server Rooms/Wiring Closets	10yr	1995/96	\$3,471,000.00	PM
Wireless	10yr	2005/6	\$3,423,000.00	PM
			<b>Area Subtotal: \$7,742,000.00</b>	

**Average Age:  
Over 6 Years**

**SubTotal All Areas: \$41,913,000.00**

**Contingency: \$1,911,700.00**

**Design and Program Management: \$1,200,000.00**

**Soft Costs (Bond Issuance, Permits, General Conditions, Engineers, etc) \$830,300.00**

**GRAND TOTAL: \$45,855,000.00**

**Updated: January 31, 2012**



## **Technology Improvements Bond Proposal**

Shall the Public Schools of the City of Ann Arbor, County of Washtenaw, Michigan, borrow the principal sum of not to exceed Forty-Five Million Eight Hundred Fifty-Five Thousand Dollars (\$45,855,000) and issue its unlimited tax general obligation bonds for the purpose of defraying the cost of acquiring and installing instructional technology and technology infrastructure and equipment in the School District, and associated remodeling, equipping, furnishing, re-equipping and refurnishing of existing School District buildings?

**YES**

**NO**

The estimated millage to be levied in 2012 to service this issue of bonds is .45 mill (\$.45 per \$1,000 of taxable value) and the estimated simple average annual millage rate required to retire the bonds of this issue is .51 mill (\$.51 per \$1,000 of taxable value). The bonds may be issued in multiple series, payable in the case of each series in not to exceed 11 years from the date of issue of such series. The debt millage levy required to retire all bonds of the School District currently outstanding and proposed by this ballot proposal is currently estimated at or below 2.60 mills.

*(Under state law, bond proceeds may **not** be used to pay teacher or administrator salaries, routine maintenance costs or other School District operating expenses.)*



**A<sup>21st</sup>** Century Learning  
ANN ARBOR PUBLIC SCHOOLS



### A. An Instructional Overview

The School District's Strategic Plan and the Technology Plan component of the Strategic Plan together provide a vision for the future of technology use in the School District. These two Plans are the framework and drivers for our vision of 21st Century learning in Ann Arbor Public Schools. They describe our goals and how we are getting there through our curriculum and delivery of instruction. The Technology Plan provides direction through 2012 and the years beyond for its full implementation. We are currently exactly where the Plans predicted the District would be with its technology at this time, in that it contemplates that the District would, in 2012, begin to refresh, renew, sustain its current technology and re-engage in the thought processes about technology and the future. Given limitations in general fund budget funding, a challenge facing the District has been to identify the resources required to fund the cost of new equipment and updated infrastructure to implement the Plans without compromising other District priorities. The Technology Bond represents a way to accomplish that.

## **B. The Strategic Plan... The Blueprint for the Future:**

*The Strategic Plan contains eight strategies, each with the School District's rationale, conclusions and objectives. How do the eight Strategies identified in the Ann Arbor Strategic Plan drive our Technology Plan going forward?*

**Strategy One: We will create a complete educational program featuring personalized learning that realizes student aspirations and meets international standards.**

The richness and importance of technology in this strategy cannot be overemphasized and the implications are enormous. This Strategy references the analytic and communication skills and networks that the District concluded our students need to be able to access and be successful in the world that they are the 21<sup>st</sup> growing up in and will enter into workforce as Century productive citizens in a global economic society. This includes literacy skills beyond mathematics, reading, science, and writing, to include creativity, innovation, and international standards that embrace critical thinking skills, problem solving, and decision making in order to be successful in the world of work in their future. Embedded in the Strategic Plan and the Technology Plan are the Michigan Standards for Technology, the National Standards for Technology, and the International Standards for Technology based on the International Society of Technological Education. Thinking strategically as we continue implementing both the Strategic Plan and the Technology Plan, we believe we must hold ourselves accountable for these standards.

**Strategy Two: We will develop and implement a personalized learning plan for each student.**

Ann Arbor Public Schools has students who need remediation, others who need enrichment, as well as those students who need acceleration. The acquisition and mastery of international standards has tremendous implications with Strategy Two. Ann Arbor Public Schools intends to provide personalized — learning opportunities to reach all students. There are students caught up in an achievement gap and the only way we can fully address this is through personalized learning. Looking at how we can benchmark the skills our students have and those that they still need to master should be assessed at the beginning, at the middle, and at the end of each school year to eliminate the achievement gap definitively. Through individual assessment, we want to identify deficient skills and then teach to acquire mastery of these skills to make certain that we close the gap, once and for all. To help in doing that, Ann Arbor Public Schools purchased the North West Evaluation Association assessment that enables teachers to assess those needs at the elementary level, gathering necessary data to develop individual plans for our students. However, the technology in Ann Arbor Public Schools is at a point where it is starting to show its age and falter to the extent that the School District is performing “work-arounds” in order to complete assessment benchmarking in a limited manner. The current Technology Plan was developed



with the idea in mind that at his juncture in time, 2011-12, Ann Arbor Public Schools would REFRESH its technology in order to keep up and be able to accomplish these kinds of assessments effectively. To fulfill the Technology Plan and the Strategic Plan, the School District also needs to provide online learning opportunities for ACCELERATION and ENRICHMENT for our students and be able to have distance learning opportunities so we can have students with AP courses in one school connecting with another school, if needed, without having to get on buses and physically move from location to location. This can be accomplished through virtual proximity as we establish a broader reach to look across the region at opportunities to embrace this technology while saving expenses by bringing this coursework to fruition online or through distance learning for remediation, acceleration, and enrichment of the curriculum.

**Strategy Three: We will actualize the potential for excellence in all students through inspiration and support.**

Inspiration and support are different ways of looking at the curricular needs of our students. Our children who need the inspiration to keep moving forward also need support through distance learning courses, the opportunity to access our OPTION program, in order to take advantage of the full range of what AAPS offers. We have not been able to currently do that effectively with the aging infrastructure of desktops, laptops, and other technology equipment that is starting to show its age. Students develop fluency skills through blended learning in various ways: online and with a teacher. Read 180 currently uses the technology that we have and we utilize credit recovery through technology to help struggling students from falling through the cracks. AAPS seeks to enhance the inspiration of students who seek greater opportunities such as taking vocal music and orchestra, but want to go beyond that coursework through the use of technology and online courses or distance learning pathways. If AAPS can REFRESH its aging technology, we expect it will take the District beyond the basics.

**Strategy Four: We will ensure meaningful learning through effective teaching.**

Meaningful learning through effective teaching comes to life through an inspiring teacher. When a technology is used appropriately and teachers are trained properly, beautiful moments in education can come to life that enhance the educational experience for all. This is exactly the type of situation that can help AAPS close the achievement gap. Teachers with the proper technology at their fingertips, engaging their students by benchmarking their progress through a skill development process augmented by technology, will enable them to develop personal, digital portfolios for students. This is an integral part of the Strategic Plan and the Technology Plan that we intend to keep at the forefront of all discussions of the achievement gap, curriculum delivery, and benchmarking for success.

**Strategy Five: We will enhance the district’s professional learning system in order to provide relevant learning experiences and support for all staff in order to continually improve academic and social achievement for all students.**

Professional Development is becoming more costly to do in the traditional manner but we see greater opportunities if we can work with technology in developing Professional Learning Communities that are online. They can be enhanced “Skyping” opportunities between schools using virtual proximity where teachers and coordinators can engage in meaningful conversation, collaboratively, through distance learning and not always having to come to a central location. The aging infrastructure and available technology must continue to be functional to do this.

**Strategy Six: We will engage and inform our constituents to engender trust and support to accomplish our mission and objectives.**

We are moving in a direction that engages the community in numerous ways. The use of PowerSchool and how we can enhance its use is important in conjunction with the enhanced use of SchoolMessenger. We should not overlook that we didn’t always have these communication tools and that our website can take us in another direction with its redesign capability. We have the ability to use e-newsletters more frequently and the use of electronic tools can reduce costly paper communications. Paperless Board Meetings in the future can also accomplish cost savings as we focus on reduction of production costs and a greater reach to our constituents. All of this requires an infrastructure, software, and hardware that will support our current efforts and keep AAPS on the cutting edge. In engaging our constituents, we want to embrace web-based social media and not be afraid of its use. By embracing it and learning how to utilize it better and more effectively we can take community engagement to a higher level. Part of the Plan is that technology should create 21<sup>st</sup> Century learning opportunities for our children, our schools and our community.

**Strategy Seven: We will create and maintain physical learning environments that enable us to fulfill our mission.**

We want to connect our schools through virtual proximity at every opportunity. We do not want our schools and facilities to be out in orbits of their own without connections to each other, instructionally. We have the CAPABILITY if we have the WILL to make this happen for our students. To do so, we seek a shared commitment that our wide area network, Polycom units used for distance learning, LCD projectors, the capability for streaming video, the ability to provide AP and AC classes online or through distance learning opportunities, and, linking our Professional Learning Community through a different form and use of technology are valuable tools for the future achievement of our children. There is the opportunity for future cost savings of funds in this new future by investing in a new way of connecting our schools together if the community is willing to explore this next frontier with the School District.



**Strategy Eight: We will ensure resources adequate to accomplish our mission and objectives.**

We have concluded that: Not to explore the possibilities of investing in these resources would diminish our effectiveness as a School District in the present with one eye on the future. Not to invest in the Power of Possibility Thinking as it applies to technology, its power in curriculum delivery, communication, and professional development is a dangerous risk for a world- class educational system like AAPS. We must look at, discuss, and invest in the technological possibilities and the potentialities of sustaining, updating, and enriching the infrastructure, while expanding the opportunities for enriched classroom technologies. We must make certain we seek the resources our children need and make certain we are positioning our students and their achievement levels to continue on a Journey to Excellence, now and in the future.

**C. Technology Integration in Ann Arbor Public Schools:**

What does all this mean to Ann Arbor Public Schools and its students? The Technology Plan is driven by the following principles:

It is all about CURRICULUM and instruction. It is all about Student Academic ACHIEVEMENT. It is not just about literacy as we think about it in terms of the past that we, as adults, have known, but it is about making certain Ann Arbor Public School students are able to master the Communications and Information Literacy skills they will need to thrive in a 21<sup>st</sup> Century, technologically-driven global society. We have to prepare them for *their* future, not our past. If they fail to develop these new interactive communication and literacy skills of collaboration, problem solving, creativity, innovation, and imagination, they will fail to be competitive in the world that awaits them in the future. We cannot stand by and lose the ability to fully educate this generation of students for their place in 21<sup>st</sup> Century America.

1/31/12

**1. What is a technology bond proposition?**

A technology bond proposition is a request by the school district for voters to approve the sale of bonds, which will raise funds to purchase equipment, renovate and/or construct facilities to support the district's technology plan.

**2. Why is a technology bond proposal necessary?**

The Board has concluded chosen to pursue the technology bond proposal because it permits the district to defray the capital cost of its plan for instructional technologies and related facilities without using general fund dollars.

*\* Please see question 4 to learn how technology relates to the AAPS Strategic Plan.*

**3. What is on the May 8, 2012 ballot?**

On May 8, 2012 voters in the Ann Arbor Public Schools will be asked to support a bond issue to replace aging district technology and provide technology to support its Strategic Plan for 21<sup>st</sup> Century Learning. The program supports the Plan for the next 10 years by issuing the bonds through three separate series.

Series 1: \$27,275,000 beginning in 2012

Series 2: \$10,570,000 beginning in 2015

Series 3: \$8,010,000 beginning in 2018

Total: \$45,855,000

**4. How does the Technology Bond support the AAPS Strategic Plan?**

Please use this link <http://www.aaps.k12.mi.us/aaps/techbond12/faqs> to find how the technology bond integrates with AAPS Instructional programs.

**5. How was this plan developed?**

A Citizens and Staff Committee was formed in Fall, 2011, comprised of community members, parents, teachers, board representatives, and administrative staff. This committee was charged with reviewing the Ann Arbor Public Schools Strategic Plan and Technology Plan to evaluate the impacts of achieving the plan with equipment installed 6+ years ago and the requirements to further implement the Plan going forward.

A technical assessment of the technology infrastructure was conducted by architects and engineers at all district buildings to outline the needs at each facility.

The Board determined to finance the capital elements of the next phase of the Plan and approved the Bond Program to be put on the May 8, 2012 ballot.



## **6. How is technology used?**

Integrating technology into the 21st century classroom effectively is challenging. According to a Henry J. Kaiser Family Foundation survey, youngsters ages 8-18 use electronic media for more than six hours a day. (Roberts, D. (1999) "kids & media @the new millennium.") Born into a world of computers, cell phones, mp3 players, and gaming devices, today's students expect to learn:

- In their own time
- At their own pace
- With one another
- By doing things that matter
  - Outside the classroom
  - Virtually
  - Interactively
  - With voice and influence (Metiri Group, 2003)

Our Strategic Plan contemplates that by combining technology judiciously with new approaches to education, a more personalized kind of learning can occur. Technology in Education addresses these areas:

- Creativity and innovation
- Communication and collaboration
- Research and information fluency
- Critical thinking, problem-solving and decision-making
- Digital citizenship
- Technology operations and concepts.

Effective technology integration by the District should allow incorporation of Universal Design for Learning principles to help educators customize their teaching for individual student differences. These principles offer the following:

- Multiple means of representation to give learners various ways of acquiring information and knowledge
- Multiple means of action and expression to provide learners alternatives for demonstrating what they know
- Multiple means of engagement to tap into learners' interests, challenge them appropriately, and motivate them to learn CAST (<http://www.cast.org>)

As a public- school district we compete for students with private and charter institutions. Tech-savvy students may leave schools that do not supply learning challenges which they perceive to be relevant to life outside the classroom. The Ann Arbor Public Schools Technology Plan was developed by the District for students who live in a different world than their parents and grandparents. Ann Arbor will have a competitive advantage if, by intelligently using technology in the classroom, we help our students achieve the skills necessary to live successfully in the 21st Century.

Link to the AAPS 2009-20 12 Technology Plan

[http://www.a2schools.org/ins.technology/files/aaps\\_techplan\\_2009-12\\_opt.pdf](http://www.a2schools.org/ins.technology/files/aaps_techplan_2009-12_opt.pdf)

**7. What are the major features of the technology bond program and costs for the program?**

This is a 10 -year technology program. Use of the bond proceeds has been prioritized through 3 series of bonds. The majority of the infrastructure is expected to be complete with the first series along with the first wave of replacement computers. The second series primarily includes equipment replacement, while the third series includes a mix of equipment and infrastructure replacements.

The district is highly aware that technology is ever changing. This bond allows for flexibility to make adjustments in equipment purchases in phases 2 and 3 to reflect the latest technology available for the classroom.

**Equipment (Budget)**

	<b>Series 1</b>	<b>Series 2</b>	<b>Series 3</b>
<b>School Student Computers: Laptops, Desktops &amp; Additional Handheld Devices</b>	\$7.85 million	\$9.35 million	\$6.95 million
<b>Teacher &amp; Administrative Computers</b>	\$2.126 million		
<b>District Switch Replacement</b>	\$1.966 million		
<b>District Server Replacement</b>	\$0.5 million		
<b>C.T.E. - Career and Technology Education</b> Career and Tech Lab computer replacement at the middle school and high school levels	\$0.15 million	\$0.17 million	\$0.17 million
<b>S.I.S.S. - Student Intervention and Support Services</b> Assistive technologies to provide better educational resources (e.g. Smart Boards)	\$0.175 million	\$0.04 million	\$0.03 million
<b>Administrative Software</b> Replacing 1998 DOS based accounting and Human Resources software & VoIP telephone upgrades	\$0.5 million	—	—
<b>Classroom Technologies</b> Soundfields, Printers, Mounted Projectors, Hardwire Data Access	\$3.886 million	\$0.4 million	\$0.4 million
<b>MediaCast</b> Distribution district-wide of video instructional media	\$0.3 million	—	—

**Infrastructure (Budget)**

<b>Wireless</b> Redesign of the wireless delivery to create two independent wireless networks	\$3.423 million	—	—
<b>Server Rooms</b> Clean, cool rooms to store and protect the servers	\$3.47 million	—	—
<b>10 Gig Backbone</b>	\$0.85 million		
<b>Contingency and Bond cost</b>	\$1.68 million	\$0.6 million	\$0.46 million
<b>Project Management</b>	\$1.2 million	—	—

**Totals:    \$27.27 million    \$10.57 million    \$8.01 million**

**8. Why is the District pursuing this bond?**

**To fulfill the District's Strategic Goals to:**

- ✓ To build a culture of creativity, innovation, and communication that directly supports the “triangle of success” - family, student, and teacher.
- ✓ To build on, and replace, aging technology equipment and infrastructure to support teaching methods that embrace the skills necessary for our students to compete in a global world.
- ✓ Ensure our schools and community will continue to be in high demand.
- ✓ Create 21st Century learning environments that meet the needs of our students.
- ✓ Help keep general fund dollars in the classroom by using bond proceeds for technology equipment and related infrastructure.

**Instructional Capabilities/Student Access [“Needs” is a very subjective term]**

- Building wide wireless access
- Provide mobile computing devices for classrooms
- Continue to provide 24 hour access to “Power School” services
- Expanded access to student portfolios

**District Operational Capabilities**

- Building wide wireless access
- Provide mobile computing devices for classrooms
- Upgrade district infrastructure to support increased data flow
- Speed: A bigger “pipe” to push more data faster to schools

**9. Since cell phones, iPods, etc. are becoming more powerful, won't there be a time when all students will have devices and the students won't need computers?**

Each device has its own purpose and both our Technology Plan and Strategic Plan are reviewed regularly to benefit from evolving technologies. This also highlights one of the needs of the bond, to increase the infrastructure to allow more devices to be used in our facilities. The infrastructure needs increase dramatically as more staff and students expect to use the infrastructure for their devices. Last year saw a dramatic surge in network activity right after the holidays as students and staff brought their new devices to school. We want to encourage improving learning opportunities and have the technology systems in place to allow it.

**10. How does this 10-year plan differ from previous bond issues passed by the community?**

This is a continuation of the previous 5-year bond issue plan to maintain the technology plan for the next 10-years.



**11. How much will the proposal cost the average taxpayer?**

If the bond proposal is approved, the average homeowners' taxes will be increased by 0.45 mills. Homeowners can use the following home value samples to determine their individual tax increases.

<u>Home Market Value</u>	<u>Cost Per Day*</u>	<u>Cost Per Month*</u>	<u>Cost Per Year*</u>
\$100,000	\$.07 Per Day	\$2.10 Per Month	\$26 Per Year
\$200,000	\$.14 Per Day	\$4.25 Per Month	\$51 Per Year
\$300,000	\$.21 Per Day	\$6.30 Per Month	\$77 Per Year

\*Estimate

**12. If the ballot issue passes, when will property taxes be levied?**

If the bond proposal passes on May 8, 2012, the first tax levy related to the bond would be in July 2012.

**13. Why bond now?**

- ✓ Interest rates on school bonds remain at historically low levels.. When interest rates are lower, the overall cost of financing the equipment and improvements is lower.
- ✓ A lower interest rate may allow for a lower millage rate or reduce the time period for retiring the bonds.

**14. Will money from the bond proposal be used to pay teacher salaries and benefits?**

**No.** School districts are not allowed to use funds from a bond issue for operating expenses such as teacher, administrator, or employee salaries. Bond funds must be kept separate from operating funds.

**15. Why can't this be funded with operating funds?**

Over the past five years, the district has had to reduce its operating budget by over \$50 million. Because of limitations on revenues for the general fund operating budget and the lack of availability of other resources the Board did not want to make further general fund budget cuts to accommodate the Technology Plan, preferring instead to finance the improvements through the Technology Bond as it did through the 2004 bond proposal.

**16. How will the bond proposal appear on the ballot in May?**

**Technology Improvements Bond Proposal**

Shall the Public Schools of the City of Ann Arbor, County of Washtenaw, Michigan, borrow the principal sum of not to exceed Forty-Five Million Eight Hundred Fifty-Five Thousand Dollars (\$45,855,000) and issue its unlimited tax general obligation bonds for the purpose of defraying the cost of acquiring and installing instructional technology and technology infrastructure and equipment in the School District, and associated remodeling, equipping, furnishing, re-equipping and refurbishing of existing School District building?

**YES**

**NO**

The estimated millage to be levied in 2012 to service this issue of bonds is .45 mill (.45 per \$1,000 of taxable value) and the estimated simple average annual millage rate required to retire the bonds of this issue is .51 mill (\$.51 per \$1,000 of taxable value). The bonds may be issued in multiple series, payable in the case of each series in not to exceed 11 years from the date of issue of such series. The debt millage levy required to retire all bonds of the School District currently outstanding and proposed by this ballot proposal is currently estimated to be at or below 2.60 mills.

(Under state law bond proposals may *not* be used to pay teacher or administrator salaries, routine maintenance costs or other School District operating expenses)

**17. What are the key dates leading up to the May vote?**

Final Day to Register to Vote: April 9, 2012

Absentee Ballots Available: March 24, 2012

**Election Day:** **Tuesday, May 8, 2012**  
**7:00 AM – 8:00 PM**

**18. Where and when do I register to vote?**

You may register in person with your city, township, county clerk, or at any Secretary of State office. Printable voter registration forms are available on the Secretary of State website at:

[http://www.michigan.gov/sos/0,1607,7-127-1633\\_11619-1\\_23989--,00.html#5](http://www.michigan.gov/sos/0,1607,7-127-1633_11619-1_23989--,00.html#5)

NOTE: anyone using the “mail-in” voter registration process MUST vote in person the FIRST time they vote (no absentee voting allowed at the first election)

Polling Locations

[http://www.ewashtenaw.org/government/clerk\\_register/elections/elprecincts.html](http://www.ewashtenaw.org/government/clerk_register/elections/elprecincts.html)

**19. What is the procedure for absentee voting?**

Absentee Ballot Applications will be available at all Ann Arbor Public School buildings and city clerk offices beginning March 24, 2012. Complete the application and return it to the address shown at the top of the application. An Absentee Ballot will then be mailed to you.

**20. Why is equity an important goal of this bond program?**

The School District subscribes to the constitutional principle of equal opportunity for Public Schools. Through this bond issue the District seeks to provide an equitable learning environment for every child.

**22. What if we move away from laptops completely?**

If we were to move away from laptops completely, we do not believe we would be able to support the teachers in an appropriate manner nor would we have the flexibility to move computer carts from room to room. But the flexibility of this bond allows the district to assess and make changes based on the latest classroom technology that is available. The District plans to undertake assessments with the assistance of a technology advisory committee made up of technology experts from a variety of local and national tech-based companies.

**23. Why are we not moving away from desktops entirely?**

In an educational environment, desktops have been a more reliable and durable form of classroom computer because they do not move and last longer.

50% of the district's computers are desktop models that are 5 to 6 years old. These older desktops now represent 21% of the district's total repairs. 50% of the district's computers are laptops that are on average 2 to 3 years old. Laptops represent 79% of total repairs.

**24. If I have questions not covered in this material, where can I get additional information?**

Contact the Communications Department at [\(734\) 994-2236](tel:7349942236).



**Tech Bond 2012 - Communication Plan**

<b>Task</b>	<b>Start Date/Week</b>	<b>Notes &amp; Comments</b>
Begin preparation of school district informational trifold. Note: Bond project should be referenced to in all.	WEEK 13 (1/9)	
Develop individual school display boards and district boards	WEEK 13 (1/9)	
<b>Identify &amp; schedule presentations/info booths at ALL building activities:</b> Sporting Events                      Music Performances Booster Meetings PTO Meetings (Scheduled by Principals and cleared with Administration)	WEEK 13 (1/9)	Informational areas, "booths", with bond literature for voters - working in conjunction with Liz Margolis.
R&D for Technology Stories for all schools for District Newsletter	WEEK 13 (1/9)	
Begin scheduling meetings in school buildings and large community groups	WEEK 13 (1/9)	
Draft letter for Superintendent to send to Absentee Voters	WEEK 12 (2/1)	
Distribute building and community brochures (if not yet completed)	WEEK 8 (3/5)	
Develop backpack fliers/school messenger for the 4-Week Distribution Beginning in April	WEEK 6 (3/19)	

**Tech Bond 2012 - Communication Plan**

<b>Task</b>	<b>Start Date/Week</b>	<b>Notes &amp; Comments</b>
Send out Tech Bond newsletter with information to Voters	WEEK 5 (3/26)	Liz to monitor
Begin 4-Week Backpack/School Messenger Distribution Program - sent with students on Friday's	WEEK 4 (4/9)	
Friday - Electronic Tech Bond Story Sent	WEEK 4 (4/13)	
Friday - Trifold for Elementary sent out (electronic sent for rest)	WEEK 3 (4/20)	
Friday - Electronic only "Tech Story" sent out	WEEK 2 (4/27)	
Remind Teachers and all other school employees to vote	WEEK 1 (5/4)	
Friday - "Please Vote" 8.5x11 Flier for Elementary Schools (electronic version for rest)	WEEK 1 (5/4)	

AAPS PTO Meetings  
2012 Tech Bond Presentations

SCHOOL	EVENT	DATE	TIME	PRESENTERS
TAPPAN	PTO	March 5 Monday	6:00 pm	
FORSYTHE	PTO	March 13 Tuesday	6:30 pm	
LAWTON	PTO	March 14 Wednesday	7:00 pm	
LAKEWOOD	PTO	April 9 Monday	6:30 pm	
SKYLINE	PTO	April 9 Monday	6:30 pm	
CLAGUE	PTO	April 9 Monday	7:00 pm	
PITTSFIELD	PTO	April 10 Tuesday	6:00 pm	
CARPENTER	PTO	April 10 Tuesday	7:00 pm	
KING	PTO	April 10 Tuesday	7:00 pm	
COMMUNITY	PTO	April 11 Wednesday	6:30 pm	
EBERWHITE	PTO	April 11 Wednesday	6:30 pm	
NORTHSIDE	PTO	April 11 Wednesday	6:30 pm	
AA OPEN	Coordinating Council	April 11 Wednesday	6:45 pm	
BACH	PTO	April 12 Thursday	7:00 pm	



BRYANT/ PATTENGILL	PTO	April 12 Thursday	7:00 pm	
DICKEN	PTO	April 12 Thursday	7:00 pm	
WINES	PTO	April 12 Thursday	7:00 pm	
MITCHELL	PTO	April 17 Tuesday	6:00 pm	
ABBOT	PTO	April 17 Tuesday	6:30 pm	
PIONEER	PTO	April 17 Tuesday	7:00 pm	
SLAUSON	PTO	April 18 Wednesday	6:00	
ALLEN	PTO	April 19 Thursday	6:30 pm	
ANGELL	PTO	April 19 Thursday	6:30 pm	
BURNS PARK	PTO	April 19 Thursday	7:00 pm	
HURON	PTO	April 23 Monday	6:30 pm	
THURSTON	PTO	May 1 Tuesday	6:00 pm	
HAISLEY	PTO	May 3 Thursday	4:00 pm	
LOGAN	PTO	May 3 Thursday	7:00 pm	

# Ann Arbor Public Schools

## Abbot Elementary

Series 1 Building Project Worklist

Building Size:

52,765 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for infrastructure				Computer lab
	Add raceway/receptacles for relocated TR's				Move rack to new location in MDF
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Allen Elementary

Series 1 Building Project Worklist

Building Size:

65,388 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				Main telecommunication room
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				MDF cabinet located under water lines
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



**Ann Arbor Public Schools**  
**Angell Elementary**  
Series 1 Building Project Worklist

Building Size:  
36,868 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Distance issues with existing IDF
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Ann Arbor Open Elementary (Mack)**  
Series 1 Building Project Worklist

Building Size:  
88,513 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Bach Elementary

Series 1 Building Project Worklist

Building Size:

53,090 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF. 12/20 Ed said potential IDF is OK as is
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocate MDF & add IDF
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Bryant Elementary**  
Series 1 Building Project Worklist

Building Size:  
56,913 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Interior Work	Enlose telecommunication room				Consider sport cage around IDF
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Fiber backbone to IDFs for 10G				IDF currently fed via copper.
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



# Ann Arbor Public Schools Burns Park Elementary

Series 1 Building Project Worklist

Building Size:

60,992 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Interior Work					
	Replace lockset on IDF				
Mechanical Work					
	Add cooling to technology closets				MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Carpenter Elementary

Series 1 Building Project Worklist

Building Size:  
49,805 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				MDF
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Dicken Elementary

Series 1 Building Project Worklist

Building Size:

45,050 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Eberwhite Elementary

Series 1 Building Project Worklist

Building Size:  
62,177 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



**Ann Arbor Public Schools**  
**Haisley Elementary**  
Series 1 Building Project Worklist

Building Size:  
58,032 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Replace cabinets due to depth issues
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools King Elementary

Series 1 Building Project Worklist

Building Size:

52,200 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				MDF
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for infrastructure				
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Add IDF for distance (wireless added IDF)
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Lakewood Elementary**  
Series 1 Building Project Worklist

Building Size:  
42,549 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				Relocated MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for infrastructure				
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocate MDF
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Lawton Elementary**  
Series 1 Building Project Worklist

Building Size:  
59,009 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				MDF and relocated IDF
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for infrastructure				
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocate IDF from under water lines
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



**Ann Arbor Public Schools**  
**Logan Elementary**  
Series 1 Building Project Worklist

Building Size:  
59,970 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				Main technology room
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for infrastructure				
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Replace MDF cabinet
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Mitchell Elementary

Series 1 Building Project Worklist

Building Size:

43,435 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Replace cabinet in MDF
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Northside Elementary

Series 1 Building Project Worklist

Building Size:  
50,450 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Pattengill Elementary**  
Series 1 Building Project Worklist

Building Size:  
53,800 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Fiber backbone to IDFs for 10G				Replace copper uplink to IDFs
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



# Ann Arbor Public Schools

## Pittsfield Elementary

Series 1 Building Project Worklist

Building Size:  
41,567 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Interior Work					
Mechanical Work					
	Add cooling to technology closets				MDF and IDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Replace telecommunication rooms				Replace IDF cabinet
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Thurston Elementary

Series 1 Building Project Worklist

Building Size:  
58,470 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Wines Elementary

Series 1 Building Project Worklist

Building Size:

49,842 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Consolidate MDF and IDF
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Clague Middle School

Series 1 Building Project Worklist

Building Size:  
156,864 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work	Add cooling to technology closets				MDF and new IDF
Electrical Work	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Add IDF for length issues
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: based on new estimated quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Forsythe Middle School

Series 1 Building Project Worklist

Building Size:

182,564 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Interior Work					
	Enlose telecommunication room				Consider sport cage around IDF 1
Mechanical Work					
	Add cooling to technology closets				MDF and IDF 2
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: based on new estimated quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



# Ann Arbor Public Schools Scarlett Middle School

Series 1 Building Project Worklist

Building Size:

161,892 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				MDF and both IDF's
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocate IDF 1 out of custodial office
	Fiber backbone to IDF's for 10G				
	Data cabling infrastructure				12/20: based on new estimated quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Slauson Middle School

Series 1 Building Project Worklist

Building Size:

190,954 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				12/20: based on new estimated quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

**Ann Arbor Public Schools**  
**Tappan Middle School**  
Series 1 Building Project Worklist

Building Size:  
215,942 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF and relocated IDF's
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				MDF and both IDF's to avoid water
	Data cabling infrastructure				12/20: based on new estimated quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Huron High School

Series 1 Building Project Worklist

Building Size:

398,187 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				MDF and "Venus" replacement
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Consolidate IDF #9 into #11 when recable
	Fiber backbone to IDFs for 10G				
	Data cabling infrastructure				Estimated count
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				40 drops per computer lab + 6 mini labs
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Pioneer High School

Series 1 Building Project Worklist

Building Size:  
434,119 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
	Environmental Work				
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
	Mechanical Work				
	Add cooling to technology closets				MDF and relocated IDF's
	Electrical Work				
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocate "some" due to limited access
	Fiber backbone to IDF's for 10G				Remaining IDF's
	Data cabling infrastructure				Estimated count
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



**Ann Arbor Public Schools**  
**Skyline High School**  
Series 1 Building Project Worklist

Building Size:  
367,742 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Have existing. Budget to relocate if needed.
<b>Technology Infrastructure</b>					
	Fiber backbone to IDFs for 10G				Install singlemode fiber to IDFs
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Community High School

Series 1 Building Project Worklist

Building Size:

58,200 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				Relocated MDF and new IDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Relocated MDF and new IDF
	Fiber backbone to IDFs for 10G				New IDF
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools

## Ann Arbor Technical HS (Stone)

Series 1 Building Project Worklist

Building Size:

37,835 SF

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				For new IDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				Add IDF for distance
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Roberto Clemente Dev. Center

Building Size:

22,920 SF

## Series 1 Building Project Worklist

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Mechanical Work					
	Add cooling to technology closets				New MDF
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
	Add raceway/receptacles for relocated TR's				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Replace telecommunication rooms				New MDF
	Data cabling infrastructure				12/20: only replace office, media center, etc.
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
	Data cabling for current loose computer labs				Based on 40 drops per computer lab
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace student cart laptops				12/13: 2 cart per elem, 4 ms, 12 hs
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

# Ann Arbor Public Schools Preschool / Family Center

Building Size:

58,517 SF

## Series 1 Building Project Worklist

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Electrical Work					
	Add raceway/receptacles for projectors				12/13: Updated based on existing quantities
<b>Technology Infrastructure</b>					
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Additional portable devices				12/13: Budget only. May be purchased as alternate to laptops.
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Document camera				12/22: Provide one for each art room.
	Remove existing televisions				Based on estimated quantities
	Replace network infr. - building core				10GB to building and IDF's
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Replace multipurpose room projector				12/20: Replace portable projector on existing cart.

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.



# Ann Arbor Public Schools

## Balas Admin / Transportation / SISS

Building Size:

64,894 SF

Series 1 Building Project Worklist

Category	Work Item Description	Qty.	Unit Cost	Total Estimate	Notes
<b>Remodeling Work</b>					
Environmental Work					
	Abate asbestos				12/22: Estimate from AAPS facilities dept after reviewing scope
Interior Work					
	Build out district head-end				
Mechanical Work					
	Modify cooling in district head-end				
Electrical Work					
	Modify electrical in district head-end				
<b>Technology Infrastructure</b>					
	Remove Category 5 and legacy cabling				Allowance for selective removal as needed.
	Data cabling infrastructure				Based on existing cable quantities
	Data cabling for classrooms				12/20: 2 per classroom, eliminated projector
<b>Instructional Technology Equipment</b>					
	Replace teacher/staff laptops				12/22: Based on existing quantities from ITD staff
	Replace student / lab desktops				12/22: Based on existing quantities from ITD staff
	Replace staff desktops				12/22: Based on existing quantities from ITD staff
	Replace printers and peripherals				Estimate based on district quantity of 500
	Replace sound field equipment				Anticipate replacing 1/3 in each bond series
	Install classroom projectors				Based on existing classroom or projector quantities
	Replace network infr. - district core				10GB to building and IDFs
	Replace network infr. - switches				Includes PoE switches for all necessary ports
	Replace wireless infrastructure				Expand coverage. Based on 802.11n standards.
	Wireless management system				
	Career Tech and Ed				Based on CTE spreadsheet 7/21/11 for series 1
	Network video system - allowance				12/22: Based on 12/21 with Carlos and Mediacast
	Replace district servers				Based on district bond summary
<b>Loose Furnishings/Equipment</b>					
	Conference room / IEP displays				One per building. Location TBD
	Student Intervention Support Services				Based on Assistive Tech Projections for series 1
	Administrative Software				12/20: Reduced to cover HR sw only

The list shown describes the general intent of the project.  
The final detail of work may vary as the actual design is developed.

## What will this cost the average taxpayer?

Home Market Value	Cost Per Day*	Cost Per Month*	Cost Per Year*
\$100,000	7¢	\$2.10	\$26
\$200,000	14¢	\$4.25	\$51
\$300,000	21¢	\$6.30	\$77

\*Estimate

**\$45,855,000**  
**PUBLIC SCHOOLS OF THE CITY OF ANN ARBOR**  
**COUNTY OF WASHTENAW, STATE OF MICHIGAN**  
**PROPOSED 2012, 2015 & 2018 SCHOOL BUILDING AND SITE BONDS**  
**(GENERAL OBLIGATION - UNLIMITED TAX)**

	Series 2012	Series 2015	Series 2018
Amount:	\$27,275,000	\$10,570,000	\$8,010,000
NIC:	4.50%	4.50%	4.50%
Dated:	Jun 15, 12	May 1, 15	May 1, 18
Delivered:	Jun 15, 12	May 1, 15	May 1, 18
1:5 Ratio:	TRUE	TRUE	TRUE
Debt/(TV+HFT):	2.63%	2.42%	1.90%
Bond Term:	9 yrs., 11 mos.	7 yrs., 0 mos.	7 yrs., 0 mos.
Capitalized Int.	\$0.00	\$0.00	\$0.00

120% of Project Useful Life > Avg. Life of Bond Term		
	120% Project Useful Life	Average Life
Series 2012	8.86	5.21
Series 2015	7.20	4.02
Series 2018	7.20	4.89

Taxable Value Growth History			July Levy: 50%	
2006	\$7,388,565,467		Proposed Levy	2.60%
2007	7,818,222,440	5.82%	Current Levy	2.15%
2008	7,939,602,092	1.55%	Net Increase	0.45%
2009	7,945,379,786	0.07%		
2010	7,577,828,686	(4.63%)		
2011	7,452,814,496	(1.65%)		
Average Growth Rate:		0.23%		

[illegible]

[2] Includes	\$0	of Existing LTNQ Debt and \$168,860,000 of Existing UT Debt as of Dated Date.
[3] Includes	\$12,492,915	of Equivalent IFT Valuations and Less DDA/TIFA Debt Captures of \$0

For questions regarding this information, please contact Robert Allen, Deputy Superintendent, 734-994-2250.



STATE OF MICHIGAN  
RUTH JOHNSON, SECRETARY OF STATE  
DEPARTMENT OF STATE  
LANSING

**MAY 8, 2012 ELECTION  
CALENDAR OF DATES**

<b>Feb. 3</b>	Last day a recall petition can be filed for election. (168.963)
<b>By 4:00 p.m., Feb. 14</b>	Local School Board candidates, Community College Trustee candidates and District Library Board candidates who wish to seek office at the May 8 election must file an Affidavit of Identity and a nominating petition. (A \$100.00 nonrefundable fee may be filed in lieu of a petition.) Withdrawal deadline elapses at 4:00 p.m. on February 17. (If filing official is a local clerk, filing official notifies county clerk of candidates' names and addresses within 3 days after withdrawal deadline.) (168.303; 397.181; 389.152)
<b>By Feb. 14</b>	Petitions to place proposals on ballot filed with county and local clerks. (If governing law sets an earlier petition filing deadline, earlier deadline must be observed.) (168.646a)
<b>By Feb. 28</b>	Ballot wording of proposals qualified to appear on ballot certified to county and local clerks. (168.646a)
<b>Mar. 29 through Apr. 17</b>	Precinct inspectors appointed for election. (168.674)
<b>By Apr. 1</b>	Notice of close of registration for election published. One notice required. (168.498)
<b>Apr. 9</b>	Last day to register for election. (168.498)
<b>By Mar. 24</b>	Absent voter ballots must be available for issuance to voters. (168.714)
<b>By Apr. 27</b>	Pre-Election Campaign Statements filed (closes Apr. 22). (169.233)
<b>By 4:00 p.m., Apr. 27</b>	Write-in candidates file Declaration of Intent forms. (168.737a as amended under PA 87 of 2006)

<b>By May 1</b>	Notice of election published. One notice required. (168.653a)
<b>By May 3</b>	Public accuracy test must be conducted. (R 168.778) Notice of test must be published at least 48 hours before test. (168.798)
<b>By 2:00 p.m., May 5</b>	Electors who wish to receive an absent voter ballot for election by mail submit applications. (168.759)
<b>Up to 4:00 p.m., May 7</b>	Electors qualified to obtain an absent voter ballot for election may vote in person in clerk's office. (168.761)
<b>Up to 4:00 p.m., May 8</b>	Emergency absentee voting for election. (168.759b)
<b>May 8</b>	<b>ELECTION</b>
<b>By May 14</b>	Boards of County Canvassers meet to canvass election. (168.821)
<b>By Jun. 7</b>	Post-Election Campaign Statements filed (closes May 28). (169.233)



## School Campaign/Election Do's and Don'ts

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As we begin the informational campaign stage of the millage proposal, here are a few “Do's and Don'ts” from our bond counsel, Amanda VanDusen from Miller Canfield.

Policymaking administrators and trustees as individuals and as a group may express their views freely as a matter of free speech. The tricky part is the medium used to disseminate those views. School district resources may not be used to disseminate board member opinion, as opposed to information. For example:

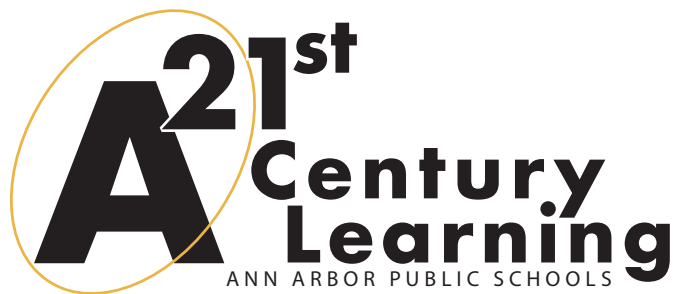
- ➔ Trustees and policymaking administrators may not use district email, phones, copiers or faxes, postage or stationery to campaign.
- ➔ Trustees and policymaking administrators may, however, express their views in the normal course of a televised board meeting or in other face-to-face encounters or in interviews with the press.
- ➔ Trustees and policymaking administrators may, on their own nickel, or through materials paid for and disseminated by the CMC (Citizen's Millage Committee), solicit support for the millage proposals.
- ➔ Some editorial content is permitted in regularly disseminated district newsletters, but not in a special edition and not in an issue, which is dominated in content by the ballot proposals.

We would also like to share with you a list of “Do's and Don'ts” for our building principals and staff:

- ➔ Circumstances under which the School District may permit a bond issue campaign committee to meet at the School District's facilities: The general rule is that the School District may permit a school district bond issue campaign committee to use its facilities on the same terms as it would allow other nonprofit or other citizen's or community groups to use school facilities. If the school district incurs a cost in making the school facilities available to a campaign committee, which it would not otherwise have incurred, the campaign committee should reimburse the School District for that cost. For example, if the School District retains custodial staff who would not otherwise be present and whom the School District must compensate specially for being available to keep the building open for a meeting, the School District should charge the campaign committee for that cost. Of course, if an opposition group requests the same access, the School District must provide it.
- ➔ School District employees would be permitted to wear buttons saying “Please Vote” before but not on the election date. They should not wear “Vote Yes” or similar buttons while on school time.
- ➔ The campaign committee may solicit contributions from a variety of groups and individuals, including School District employees.
- ➔ While we would advise against a campaign committee placing a table in a School District building for the purpose of disseminating literature, it would be permissible

for campaign committee members and volunteers to attend PTA meetings or opening of school meetings or other informational meeting regarding the bond issue which are conducted in school buildings at the beginning of the school year and to stand up as a member of the audience at those meetings to advocate in favor of the election and to pass out literature to those present at the meeting.

- ➔ It is not permissible for the campaign committee to send campaign literature home with students from school
- ➔ It is permissible for School District employees and administrators to make monetary contributions to the bond issue campaign regardless of where they live.
- ➔ Videos present special challenges as the video and sound elements can be used independent of the script to appeal to the sympathies of voters. Great caution must be used in all materials prepared or paid for by the district to assure objectivity in visual, auditory and textual content.
- ➔ It is not permissible to use school district email to promote a yes vote.



**ABSENTEE BALLOT INFORMATION**  
Regular School Election

**May 8, 2012**

**A registered voter within the Ann Arbor Public School District  
may apply for an absentee ballot if he or she:**

- expects to be absent from the community on Election Day;
- is physically unable to attend the polls without assistance;
- cannot attend the polls due to religious tenets;
- is 60 years of age or older;
- is an election worker who will be working at a polling place different from the place where he or she resides;
- is confined to jail awaiting arraignment or trial.

**TO RECEIVE AN ABSENTEE BALLOT APPLICATION**  
*(Please allow at least two weeks if applying by mail)*

Write to the address at the bottom of the page, or call the school election office at 734-994-2233 and ask for an application for an absentee ballot. Applications also will be available from all Ann Arbor Public School buildings, district libraries, and city and township clerk offices.

*Absentee ballots will be available beginning Saturday, March 24, 2012.*

**WHEN YOU RECEIVE THE APPLICATION**

Complete it and return it to the address shown at the top of the application or you may return it **in person** to the school election office.

*All completed ballots must be mailed no later than 2:00 pm, May 5, 2012.*

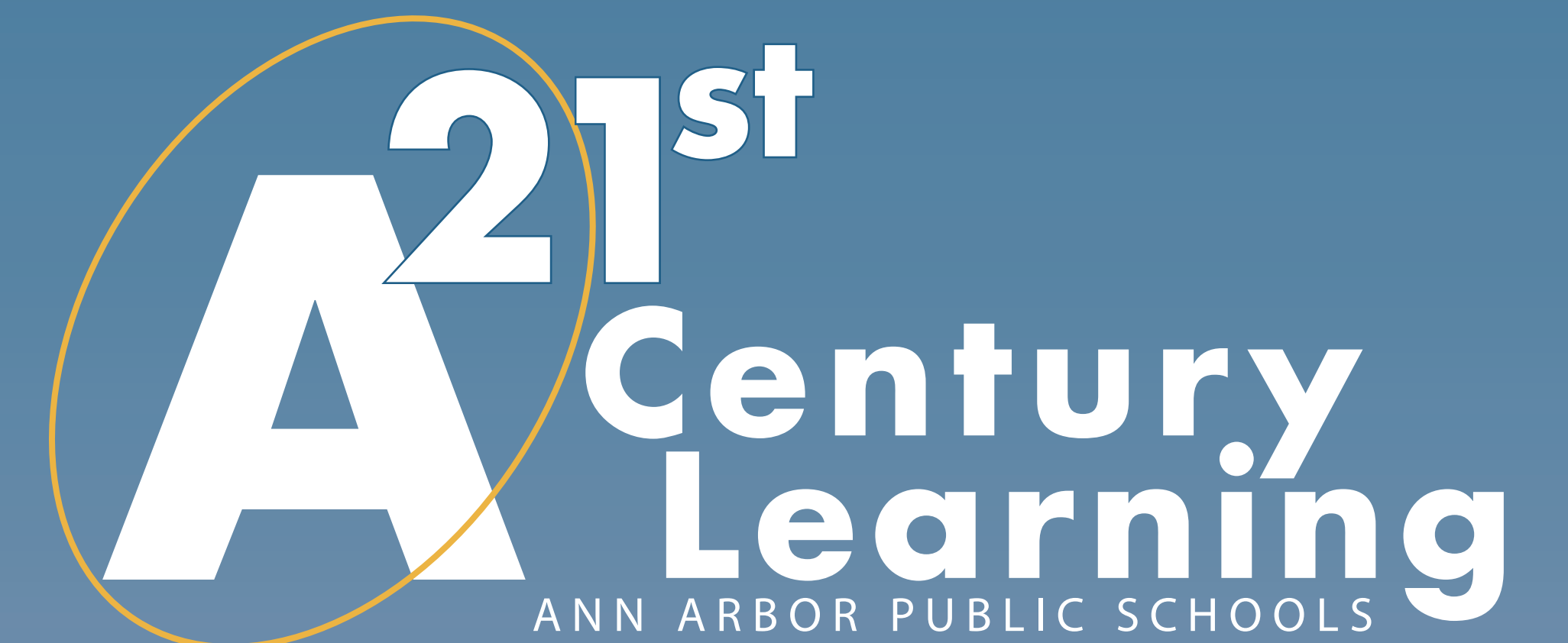
**Questions? Call 734-994-2233**  
*Election Office*

**Ann Arbor Public Schools**  
2555 South State Street  
PO Box 1188  
Ann Arbor, MI 48106



# ABBOT ELEMENTARY SCHOOL

## May 8, 2012 Technology Bond



### What is on the May 8, 2012 ballot?

On May 8, 2012 voters in the Ann Arbor Public Schools will be asked to consider a bond issue to replace aging district technology and provide technology to support the district's plan for 21st Century Learning. The program addresses equipment and infrastructure components for the next 10 years by financing the equipment through three separate series of bonds.

**Series 1:** \$27,275,000 beginning in 2012

**Series 2:** \$10,570,000 beginning in 2015

**Series 3:** \$8,010,000 beginning in 2018

**Total:** \$45,855,000

### Abbot Elementary School Features

- ✓ Replace computers for students and staff
- ✓ Mobile Devices for Learning (i.e. iPads, laptop carts)
- ✓ Install classroom multi-media projectors
- ✓ Replace classroom outdated sound systems
- ✓ Replace printers
- ✓ New document camera for art classrooms
- ✓ Replace multipurpose room projector
- ✓ New video display for student conferences
- ✓ Data cabling for classrooms and labs

### District-Wide Improvements for All Schools

- ✓ Expanded wireless infrastructure to support increasing student devices and public Wi-Fi access.
- ✓ Increase network infrastructure speed to support emerging curricular needs.
- ✓ Expand network video system to district-wide use.
- ✓ Replace centralized computer servers.
- ✓ Cooling and electrical for district data center.
- ✓ Human Resource and Financial software to improve efficiency.
- ✓ Computers and Mobile Devices will be purchased in phases over a 10-year period **to keep our students current!**

### Why now?

- ✓ Interest rates on school bonds remain at historically low levels. When interest rates are lower, the overall cost of financing the equipment and improvements is lower.
- ✓ A lower interest rate may allow for a lower millage rate or reduce the time period for retiring the bonds.

### What will this cost me?

Home Market Value	Cost Per Day*	Cost Per Month*	Cost Per Year*
\$100,000	7¢	\$2.10	\$26
\$200,000	14¢	\$4.25	\$51
\$300,000	21¢	\$6.30	\$77

\*Estimate

### For More Information

Visit the district website at  
**[www.a2schools.org](http://www.a2schools.org)**  
or contact the Communications  
Department, 734-994-2236

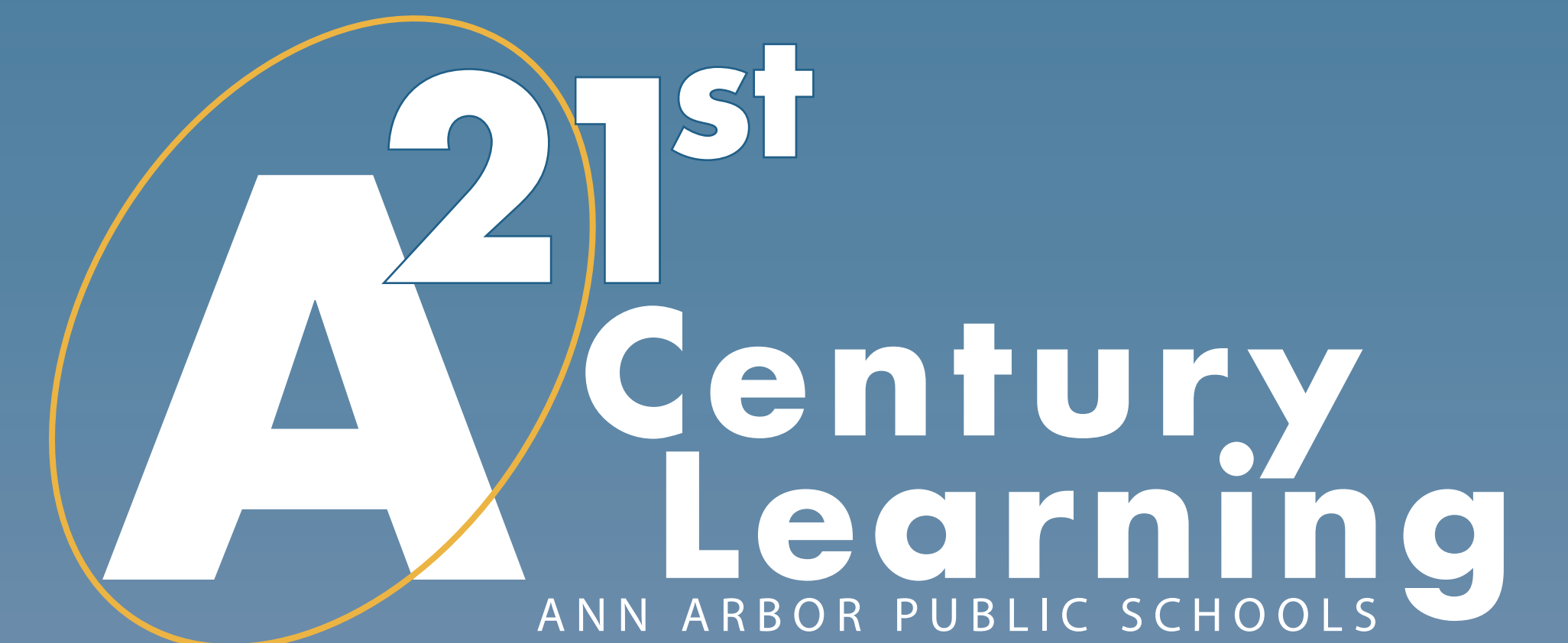
**Exceptional**<sup>a1</sup>  
ANN ARBOR PUBLIC SCHOOLS

Patricia P. Green, Ph.D., District Superintendent

# Please VOTE May 8, 2012



# ANN ARBOR PUBLIC SCHOOLS DISTRICT-WIDE IMPROVEMENTS FOR May 8, 2012 Technology Bond



## What is on the May 8, 2012 ballot?

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## Ann Arbor Public Schools Strategic Plan

1. We will create a complete educational program featuring personalized learning that realizes student aspirations and meets international standards.
2. We will develop and implement a personalized learning plan for each student.
3. We will actualize the potential for excellence in all students through inspiration and support.
4. We will ensure meaningful learning through effective instruction.
5. We will enhance the district's professional learning system in order to provide relevant learning experiences and support for all staff in order to continually improve academic and social achievement for all students.
6. We will engage and inform our constituents to engender trust and support to accomplish our mission and objectives.
7. We will create and maintain physical learning environments that enable us to fulfill our mission.
8. We will ensure resources adequate to accomplish our mission and vision.

## District-Wide Improvements for All Schools

- ✓ Expanded wireless infrastructure to support increasing student devices and public Wi-Fi access.
- ✓ Increase network infrastructure speed to support emerging curricular needs.
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**Exceptional**<sup>a1</sup>  
ANN ARBOR PUBLIC SCHOOLS

Patricia P. Green, Ph.D., District Superintendent

**Please VOTE May 8, 2012**



## 2012 TECHNOLOGY BOND PLAN

<b>HARDWARE</b>	<b>CYCLE</b>	<b>PURCHASED</b>	<b>EXISTING NUMBER</b>	<b>TYPE</b>	<b>CYCLE TOTAL:</b>
Student School Computers	3yr	2005/2006	1,900		\$19,496,500.00 AAPS
	3yr	2005/2006	628		
	3yr	2006	32		
	3yr	2006	175		
	3yr	2008	161		
			<b>2,896</b>	DESKTOPS	
	3yr	2008	2,556		
	3yr	2010	818		
			<b>3,374</b>	LAPTOPS	
Teacher/Admin Computers	3yr	2009	<b>1,700</b>	LAPTOPS	\$5,479,000.00 AAPS
	3yr	2008/2009	<b>172</b>	DESKTOPS	
<b>TOTAL UNITS PURCHASED</b>			<b>8,142</b>	<b>Area Subtotal:</b>	<b>\$24,975,500.00</b>
District Switch Replacement	5yr	2005/6			\$1,965,500.00 PM
District Server Replacement/Upgrade	5yr	2005/6			\$1,000,000.00 PM
				<b>Area Subtotal:</b>	<b>\$2,965,500.00</b>
Administrative Software	10yr	1998, 2005			\$500,000.00 AAPS
Student Intervention Support Services	10yr	2005/6			\$242,500.00 AAPS/PM
Career Tech and Ed	10yr	2005/6			\$490,000.00 AAPS/PM
MediaCast	10yr	2006/7			\$300,000.00 AAPS
Classroom Technologies	10yr	2005/6			\$4,697,500.00 AAPS/PM
				<b>Area Subtotal:</b>	<b>\$6,230,000.00</b>
<b>INFRASTRUCTURE</b>					
10 Gig Backbone (Elementary)	10yr	2005/6			\$848,000.00 PM
Server Rooms/Wiring Closets	10yr	1995/96			\$3,471,000.00 PM
Wireless	10yr	2005/6			\$3,423,000.00 PM
				<b>Area Subtotal:</b>	<b>\$7,742,000.00</b>
<b>SubTotal All Areas:</b>					<b>\$41,913,000.00</b>
<b>Contingency:</b>					<b>\$1,911,700.00</b>
<b>Design and Program Management:</b>					<b>\$1,200,000.00</b>
<b>Soft Costs (Bond Issuance, Permits, General Conditions, Engineers, etc)</b>					<b>\$830,300.00</b>
<b>GRAND TOTAL:</b>					<b>\$45,855,000.00</b>

Updated: January 30, 2012