

Smart Schools Investment Plan

[Completed District Technology Plan](#) - Approved by NYSED on 10/15/2015

Smart Schools Bond District Allocation: \$430,913

Summary:

The SMART SCHOOLS BOND ACT OF 2014 was passed in the 2014-15 Enacted Budget and approved by the voters in a statewide referendum held during the 2014 General Election on Tuesday, November 4, 2014. The Smart Schools Bond Act authorized the issuance of \$2 billion of general obligation bonds to finance improved educational technology and infrastructure to improve learning and opportunity for students throughout the State.

The purpose of the Smart Schools Bond Act is to improve learning and opportunity for public and nonpublic school students by funding capital projects to:

1. Install high-speed broadband or wireless internet connectivity for schools and communities;
2. Acquire learning technology equipment or facilities, including but not limited to interactive whiteboards, computer servers, and desktop, laptop, and tablet computers;
3. Construct, enhance, and modernize educational facilities to accommodate pre-kindergarten programs and to provide instructional space to replace classroom trailers; and/or
4. Install high-tech security features in school buildings and on school campuses, including but not limited to video surveillance, emergency notification systems, and physical access controls.

All districts will be required to submit a Smart Schools Investment Plan to demonstrate how Smart Schools Bond Act funds will be used to provide the educational tools and opportunities students will need to succeed in the 21st century economy.

During the past decade, the Harrison Central School District with ongoing support from its community, has established a viable technology infrastructure that enhances learning, facilitates the management and analysis of data and streamlines communications. With approximately 1600 computers connected to a modern, sophisticated, high speed network, a wide array of software applications and web-based digital content available anytime, anywhere, the Harrison learning community is ready for the next phase of evolution, a clear, unambiguous focus on technology as a vehicle for improving student achievement.

The Harrison Central School District will utilize the SSBA funding to install high-speed broadband or wireless internet connectivity for its schools, acquire learning technology equipment, and install high-tech security features in school buildings and on school campuses.

Budget Sub Category	Estimated Allocation
School Connectivity	\$250,000.00
Community Connectivity Projects	\$0.00
Classroom Technology	\$165,000.00
Pre-Kindergarten Classrooms	\$0.00
Replace Transportable Classrooms	\$0.00
High-Tech Security Features	\$15,913.00
TOTAL	\$430,913.00

School Connectivity:

1. Briefly describe how you intend to use Smart Schools Bond Act funds for high speed broadband and/or wireless connectivity projects in school buildings.

Over the past 5 years, the district has prepared our infrastructure for the necessary upgrades that will ensure maximum benefit from all existing and future technologies. Changes have been made to all major parts of our infrastructure including the upgrading of servers and wiring across the district.

However, in order to maximize the effectiveness of existing and future technology, additional work must take place. This includes:

- Upgrading all wiring (Cat V and Fiber Optic) within buildings, as well as between buildings
- Replacing outdated equipment including access points, servers and wiring switches
- Upgrade internet bandwidth from 300 Mbps to 1 Gbps

2. Briefly describe the linkage between the district’s District Instructional Technology Plan and the proposed projects. [E.1 from Curriculum and Instruction](#)

The Technology Plan creates an environment in which teachers and staff will continue to utilize digital tools to improve teaching and learning. The Harrison Central School District has several technology initiatives in place. The district has a commitment to equity and access for all. To this end, the district has implemented BYOD (Bring Your Own Device) in our middle school and high school. This initiative will expand district wide within 2 years. Teachers are encouraged to use digital tools such as tablets and laptops to facilitate student collaboration, communication, creativity, and curation. Providing all students with access to Google Apps for Education platform supports these objectives. and The district also employs the most effective research based software to deliver instruction and assess student growth. This effort is supported through

ongoing professional development, curriculum revision and classroom based technological support for all teachers, administrators and students.

Strategies to achieve goals of the Instructional Technology Plan:

- Expand faculty, student and staff remote access to include application level access to promote complete 'work-at-home' access, making tools for teaching and learning available 24/7. This includes the district-wide rollout of Google Apps for Education for all students grades 3 - 12 and all teachers and administrators.
- Maintain state of the art SmartBoard technology by planning for anticipated life cycle and replacement.
- Provide for additional Smartboard installations in all newly created learning spaces.
- Expand and upgrade wireless access district-wide.
- Refine and enhance the current evaluation of network usage and demands.
- Continue the exploration and evaluation of emerging technologies that offer cost-effective, ubiquitous access in learning environments.
- Continue the ongoing review and revision of procedures for the evaluation, selection and procurement of curriculum specific software and hardware.
- Provide ongoing professional training for all administrators and teachers to enhance fluency.

3. To ensure that districts maximize the return on their investment in educational technology and devices, Smart Schools Bond Act funds used for technology infrastructure investments must increase the number of school buildings that meet or exceed the Federal Communications Commission minimum speed standard of 100 Mbps per 1,000 students.

Please describe how you will use SSBA funds to meet this standard.

All 6 schools in the Harrison Central School District already meets the minimum Federal Standard. However, in order to maximize the use of this technology, the district must exceed the minimum standard. The district currently has contracted for 300 Mbps internet speed in all 6 buildings through Cablevision's Lightpath. However, the internet bandwidth is shared between the 6 schools. With a total district student population of 3,500, it is the district's goal to increase the existing bandwidth to 1 Gbps in order to meet our effective use of instructional technology. On an average day, we currently have 2,400 students and faculty utilizing the internet. 300 Mbps is the minimum internet speed to successfully connect those 2,400 devices. With the daily use by students and teachers of tools such as Google Apps for Education, YouTube, databases for research, and many others, increasing our internet and wireless technology is paramount to advancing the effective use of technology to improve student learning.

4. **If the district wishes to have students and staff access the internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust WiFi network in place that has sufficient bandwidth to meet user demand.**

Please describe how you have quantified this demand and how you plan to meet this demand.

Prior to July, 2014, the Harrison Central School District operated its wireless network on one Cisco Wireless controller and 100 Wireless N access points across 6 school buildings. Our internet bandwidth at that time was 50 Mbps.

In July, 2014 we began upgrading our infrastructure and our bandwidth. This included purchasing a new Cisco Wireless controller and 40 additional new Wireless AC access points. We also upgraded our internet bandwidth to 100 Mbps.

In September, 2015 we began an implementation of BYOD for grades 6-9. The additional 1200 daily internet users required additional access points across the 2 schools (LMK Middle School and Harrison High School) as well as increase our bandwidth to 300 Mbps.

Moving into 2016 and beyond, even more students will be using the internet on a daily basis as our BYOD initiative will branch into grades 10-12 and full implementation K-12 by 2016-2017. The additional daily internet users will require that we continue to increase bandwidth, as well as increase the WiFi coverage within all 6 school buildings.

In addition to increasing our bandwidth, we will replace all outdated Access Points to the newest AC wireless standard. This will allow for better connectivity for all students and faculty.

Budgetary breakdown: School Connectivity:

<u>Budget Sub Category</u>	<u>Estimated Allocation</u>
Network Access Costs	\$125,000.00
Outside plant costs	
School internal connections and components	\$110,00.00
Professional services	
Testing	
Other upfront costs	
Other costs (wiring)	\$15,000.00

School Connectivity Total	\$250,000.00
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Classroom Technology:

- 1. As a precondition to any purchase of devices using Smart Schools allocation, a district must increase the number of school buildings that meet or exceed the Federal Communications Commission minimum speed standard of 100 Mbps per 1,000 students.**

Please describe how your district already meets or is planning to meet this standard within 12 months of plan submission.

All 6 schools in the Harrison Central School District already meets the minimum Federal Communications Commission standard required for SSBA funding. We plan to exceed this minimum standard in each building within the next 12 months by upgrading our bandwidth to 1 Gbps and upgrading all existing Cat V wiring between users and the network backbone as well as upgrade all wiring out to the internet.

- 2. If the district wishes to have students and staff access the internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust WiFi network in place that has sufficient bandwidth to meet user demand.**

Please describe how you have quantified this demand and how you plan to meet this demand.

[See answer 4 above.](#)

- 3. Districts that include educational technology purchases as part of their Smart Schools Investment Plan must have a submitted and approved Instructional Technology Plan survey on file with the NY State Education Department.**

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- 4. Describe the devices you intend to purchase and their compatibility with existing or planned platforms or systems.**

Classroom technology that will be purchased through SSBA funds will include Chromebooks, iPads, and SmartBoards.

Chromebooks are necessary for the BYOD initiative in grades 6-12. The district will purchase devices for families who are unable to provide a device in the Bring Your Own Device initiative. Devices will be available in each school library for short term and long term loaning. The availability of devices is essential to allow students who have temporary issues (devices needing repairs, forgotten devices, uncharged devices) to maintain continuity of instruction. When BYOD is implemented in our elementary schools, chromebooks will replace outdated laptops. Since the Harrison Central Schools is now a Google Apps for Education School, purchasing chromebooks is compatible with this initiative.

iPads are currently in place in all Kindergarten and Grade 1 classrooms. Each class has a set of 5 iPads that are used in Literacy and Math centers. Teachers adapt lessons by differentiating content using several effective iPad applications. Additional iPads will be purchased with SSBA funds to provide the same technology to grades 2 and 3.

Smartboards are currently in all teaching and learning spaces across the district. We will use SSBA funds to add Smartboards in newly created learning spaces as well as replace outdated or non functioning existing smartboards.

- 5. Describe how the proposed technology purchases will:**
- a. enhance differentiated instruction;**
 - b. expand student learning inside and outside the classroom;**
 - c. benefit students with disabilities and English language learners; and**
 - d. contribute to the reduction of other learning gaps that have been identified within the district.**

Harrison's core values include equity and access. Equitable access to digital tools and information is an essential goal of our instructional technology plan and the Smart Schools investment plan.. In addition to the devices provided to the general education population, special education students are provided additional instructional technology. Some of these supports include iPads, laptops, and additional assistive devices. Special education teachers receive professional development and support in the areas of assistive technology. We will work with consultants to ensure that we are adequately meeting the needs of all students in our district. The availability and access to technology will serve to enhance teachers' abilities to differentiate instruction and meet the needs of diverse students.

The use of Google Apps for Education in grades 3-12 will have a positive effect on expanding learning outside the traditional classroom, as well as outside the traditional school day. Engaging students in learning outside of the classroom will foster critical thinking and independent learning. Google Classroom allows teachers to provide realtime feedback to students. Formative assessments are more readily accessible for timely feedback and to inform instructional decisions.

Through professional development, teachers will refine their use of these technologies to meet the diverse needs of all students to enhance overall performance and reduce the achievement gap.

Budgetary breakdown: Classroom Technology:

<u>Budget Sub Category</u>	<u>Estimated Allocation</u>
Interactive Whiteboards	\$50,000.00
Computer Servers	
Desktop Computers	
Laptop Computers	\$50,000.00
Tablet Computers	\$65,000.00
Other Costs	
Classroom Technology Total	\$165,000.00