

Hoosic Valley Central
School District

**SMART SCHOOLS INVESTMENT
PLAN(SSIP)**

2016-2018

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PLAN OVERVIEW

In November of 2014, the voters of New York State approved the Smart Schools Bond Act (SSBA). The Smart Schools Bond Act (SSBA) was passed in the 2014-15 enacted budget and approved by the voters in a statewide referendum held during the New York State 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 improvements in educational technology, infrastructure, and security. The entire text of the Smart Schools Bond Act Implementation Guidance can be found at:

http://www.p12.nysed.gov/mgtserv/smart_schools/docs/Smart_Schools_Bond_Act_Guidance_04.27.15_Final.pdf

DISTRICT ALLOCATION

The total amount allocated to Hoosic Valley Central School District is \$967,472. This amount will be reimbursed to the District by New York State after expenses under the plan have been incurred. There is no time limit on purchases to be reimbursed and there is no requirement to expend all the funds at one time. The District Technology Committee reviewed the District's needs, and determined that a portion of the funds (Phase I) could be utilized to replace some of the District's outdated networking components as well as purchase wireless devices to enhance classroom instruction and learning.

PRECONDITIONS

As a precondition to utilizing the SSBA allocations, each District has ensured that there is adequate Internet bandwidth (equal to or exceeding 100 Mbps per 1000 students) to sustain computer-based initiatives.

The District's current internet bandwidth meets the SSBA requirements. The District has recently worked with Time Warner Cable to increase District bandwidth to required levels. Time Warner Cable has completed the construction of the fiber optic cables and equipment to the District. The District technology staff moved to the new connection in February 2017.

PLAN GOALS

The goals for the SSBA allocation closely align to the District's 2016-2019 Technology Plan. The Technology Plan goals include:

- Increase the accessibility of computers for students by moving to a one-to-one device program to support student learning initiatives.
- Update teacher computers and classroom presentation illumination monitors and

- devices.
- Update support staff computers.
- Establish and maintain network infrastructure to support the demands of current use.
- Review new technologies that will assist the move to student-centered learning.

The SSBA allocation will specifically focus on

- Expanding the one-to-one Chromebook initiative by purchasing Chromebooks for 7th to 12th grade students.
- Increase computer accessibility by purchasing Chromebooks for the 3rd to 6th grade students.
- Providing one-to-one iPads for all Kindergarten to 2nd grade classrooms.
- Updating teacher classroom computers and classroom presentation illumination monitors and devices.
- Updating the network servers and switches.

PURCHASE PLAN AND ALLOCATIONS

In alignment with the approved 2016-2019 District Technology Plan, the District plans to utilize SSBA allocations as described below in Table 1 for the SSBA allowable expenditure Budget Category areas.

Table 1. Summary of Allowable SSBA Phase 1 Expenditures

SSBA Budget Category	Allocations
School Connectivity	\$61,184
Classroom Technology	\$525,367
TOTAL- Phase 1 Expenditures	\$586,551
Unallocated Funds Available for Phase II	\$380,921

School Connectivity

With the ever-increasing demand for network resources, the HVCSD has several wiring closets unable to support additional network connectivity. These network connectivity demands include additional computers, Chromebooks, copiers, digital signage, IP cameras, iPads, Smart TVs, VoIP phones and gateways, as well as wireless access points. To meet these demands, additional Hewlett Packard switches and hardware are required to provide additional ports; a list is provided below.

The current Hewlett Packard network solution provides Hoosic Valley with a robust data & voice PoE network, comprised of stackable switches, a 10GB fiber backbone and 1GB speeds to the desktop and other endpoints. Since its implementation, Hoosic Valley has purchased 240 Chromebooks, 90 Cisco IP phones, 90 iPads, 50 Wireless Access Points

(High School Building) and several Smart TVs.

Location	Current Available Ports	Quantity and Switch Types Needed
ES-Break Room	30	(1) HPE-3800-48G-PoE+4SFP+ Switch 48 Port
ES-Room-54	13	(1) HPE-2920-48G-PoE+740 Switch 48 Port
ES-Room-17	0	(1) HPE-2920-48G-PoE+740 Switch 48 Port
HS LGIA	22	(1) HPE-3800-48G-PoE+4SFP+ Switch 48 Port
HS-Room-121	5	(1) HPE-2920-48G-PoE+740 Switch 48 Port
HS-Room-20	2	(1) HPE-2920-48G-PoE+740 Switch 48 Port
HS-Room-226	0	(1) HPE-2920-48G-PoE+740 Switch 48 Port
Spare		(1) HPE-3800-48G-PoE+4SFP+ Switch 48 Port

To take full advantage of any potential Smart Schools Bond Act funding for classroom technology, Hoosic Valley upgraded the existing 1GB, campus fiber backbone, with a 10GB, hybrid fiber cable in 2014-2015. This hybrid fiber cable is currently supporting a 10GB backbone and can support speeds of 40GB and 100GB in the future.

As part of this network upgrade, Hoosic Valley replaced the outdated Cisco data network with a more affordable Hewlett Packard solution. In 2015-2016, Hoosic Valley completely upgraded the Cisco VoIP infrastructure including call managers, unity, gateways, routers, and IP phones.

In order to meet the increased need for online access and to meet the bandwidth requirements for the SSBA, the District plans to purchase eight network server switches to add to existing equipment. Additionally, the original wireless access switches that support the District's current wireless network at the Elementary School will be replaced with 40 new Aruba wireless access point switches which will be capable of supporting higher throughput and will have PoE functionality.

Table 2. School Connectivity Sub-Allocation

SSBA Connectivity Projects for Schools	Sub-Allocations
Network/Access Costs	\$0
Outside Plant Costs	\$0
School Internal Connections and Components	\$61,184
Professional Services	\$0
Testing	\$0
Other Upfront Costs	\$0
Other Costs	\$0
TOTAL	\$61,184

Classroom Technology

The District plans to increase the number of wireless devices in several areas.

To support the District’s ongoing one-to-one device initiative for students, the District has developed the implementation of Chromebooks as an instructional tool for grades 3 to 12 and iPads as an instructional tool for Kindergarten through 2nd grade. The District plans to purchase Dell Chromebook 11 3189 Education 2 in 1(or the equivalent model) Chromebooks with touch screen capability. These units will have 4 GB of RAM and 32 GB solid state hard drives. They will support the AC wireless standard and have 11.6" screens. They will be purchased with the Chrome OS Management license so that they can be added to the District’s existing G Suite for Education domain (Google Apps for Education (GafE)). They will be purchased with a secure cart per 30 devices for storage and charging to ensure the units are well protected. The District is planning on purchasing the Apple iPad Air 2 Wi-Fi tablet(or the equivalent model). The District will be able to manage the devices utilizing the District’s existing Cisco Meraki management system. These devices will have a 64 GB hard drive and a 9.7" screen. These devices will also be purchased with a secure cart per 30 devices for storage and charging to ensure the units are well protected. Each device will be kept in a high-impact case.

Elementary School Instructional Technology Student Devices

At the Elementary School, wireless devices will be purchased to increase student accessibility to web-based resources. A total of 200 Chromebooks will be purchased to support the one-to-one Chromebook initiative for 3rd to 6th grade. The specifications for these devices are the same as the Chromebooks listed above. The total of 200 Chromebooks is made up of 6 sets of 30 Chromebooks with an additional 20 total Chromebooks being purchased to accommodate replacements for repairs when needed. One set of these Chromebooks will be utilized by the Elementary Library. A total of 9 secure Chromebook carts will be purchased. In addition to the 6 sets of Chromebooks, three additional secure carts will be purchased for storage and logistical charging of these Chromebook devices in additional classrooms.

To increase the primary students' accessibility to technology applications and web-based resources, an additional 200 Apple iPad devices (or the equivalent model) will be purchased for the Elementary primary classrooms. The devices will be utilized by Kindergarten through 2nd grade classrooms, the Music Education classroom, and the Art Education classroom. The District is planning on purchasing the Apple iPad Air 2 Wi-Fi tablet. The device specifications are the same as the iPads listed above. They will have a 64 GB hard drive and a 9.7" screen. Each device will be kept in a high-impact case. A total of 10 secure iPad carts will be purchased. In addition to the 6 sets of iPads, 4 additional secure carts will be purchased for storage and logistical charging of these iPad devices in additional classrooms.

High School Instructional Technology Student Devices

For the High School, 11 sets of 30 Chromebooks will be purchased to supplement the number of already existing Chromebooks available in the High School for grades 7 to 12. The specifications for these devices are the same as the Chromebooks listed above. Secure carts will be available for storage of these devices in the homeroom classrooms. The carts will be available to all teachers, but will be maintained daily in the homeroom classroom. A total of 15 secure Chromebook carts will be purchased for the High School. In addition to the 11 sets of Chromebooks, 4 additional secure carts will be purchased for storage and logistical charging of these Chromebook devices in additional homeroom classrooms.

To support the curriculum within the High School Music and Art classrooms, the District plans to purchase a total of 120 Apple iPad devices. The District is planning on purchasing the Apple iPad Air 2 Wi-Fi tablet (or the equivalent model). The device specifications are the same as the iPads listed above. They will have a 64 GB hard drive and a 9.7" screen. Each device will be kept in a high-impact case. A total of 4 secure iPad carts will be purchased (2 for the Music Classrooms & 2 for the Art Classrooms).

Teacher Devices & Classroom Illumination Displays

To support student learning activities, the District plans to upgrade the teachers' desktop computers and presentation illumination devices in the classrooms. The support staff computers will also be updated. The District plans to purchase 118 Dell All in One Inspiron 24 7000 Series. The units will have 6th generation Intel core I 5 processor, 8 GB memory, and 1TB hard drive. The district also plans to purchase Vizio D-Series 50 inch LED LCD Smart TVs and Vizio E-Series 70 inch LED HD SmartCast TVs to be used as illumination monitors for teacher and student classroom presentation needs. With the monitors will be the purchase of a bracket, HDMI cables, and casting devices. At the High School a total of 41 Vizio 70 inch monitors and 4 Vizio 50 inch monitors will be purchased and installed by the district staff in classrooms including Art, Music, Library, and Cafeteria. A total of 21 Vizio 70 inch monitors and 5 Vizio 50 inch monitors will be purchased and installed for Elementary classrooms including Art, Music, Library, and Cafeteria. The District will also purchase additional Chromebook touch devices for teachers to cast information while conducting instruction moving around the classroom. The District plans to purchase 80 additional Dell Chromebook 11 3189 Education 2 in 1 (or the equivalent model) Chromebooks with touch screen capability (or an equivalent model device with stylus capabilities). These units will be consistent with the student devices and have 4 GB

of RAM and 32 GB solid state hard drives. They will support the AC wireless standard and have 11.6" screens. They will be purchased with the Chrome OS Management license so that they can be added to the District's existing G Suite for Education domain (Google Apps for Education (GafE)).

Table 3. Classroom Technology Sub-Allocation

SSBA Classroom Technology for Schools	Sub-Allocations
Interactive Whiteboards/ Classroom Monitors	\$0
Computer Servers	\$0
Desktop Computers	\$66,198
Laptop Computers	\$166,530
Tablet Computers	\$154,880
Other Costs/Storage Carts/Classroom Display Screen Monitors	\$137,759
TOTAL	\$525,367

PROFESSIONAL DEVELOPMENT

The District recognizes the need to provide targeted, rigorous, and sustained professional development for staff and students to effectively support technology. In order to support the use of technology in the District, including the projects outlined in the SSBA plan, the District contracts with Questar BOCES to provide a technology staff developer who works with teachers and students to assist with effective technology integration. The technology staff developer is provided through the Questar BOCES Model Schools Coser. The technology staff developer provides a variety of professional development opportunities including one-on-one sessions with teachers on use of technology in the classroom as well as group trainings on Chromebook use as well as online resources.

For the Chromebook & iPad initiative, teachers of students who will be receiving Chromebooks or iPads through the Smart Schools Investment Plan will receive ongoing staff development provided by Questar Model Schools prior to their students receiving devices. Training has been and will continue to be offered through embedded staff development, afterschool Wednesday Workshops, and additional professional development days in the 2017-18 school year. These training sessions will continue on through subsequent years to help support teachers in the use of these devices in the classroom.

SUSTAINABILITY

The District is committed to the expansion of use of mobile devices in the classroom, particularly in the area of Chromebook use at the Junior Senior High School and upper Elementary level. Money has been allocated in the technology budget for the past two years for the purchase of computer devices. The District made a commitment this year to continue allocating money in the budget to continue to support this initiative over the next several years. The District is also committed to integrating the mobile devices purchased into the regular

equipment upkeep/replacement cycle.

PLAN TIMELINE

- **October 27, 2017** – Preliminary Smart Schools Investment Plan posted on our website for public comment
- **November 6, 2017** – Preliminary Smart Schools Investment Plan approved by the Board of Education
- **December 4, 2017** – Public Hearing at the Board of Education meeting to present/discuss the Preliminary Smart Schools Investment Plan. Final plan approved by the Board
- **January 2, 2018** – Final plan approved by the Board of Education
- **January 5, 2018** - Smart Schools Investment Plan submitted to the State Education Department for approval

PROVISIONING AND DISTRIBUTION TIMELINE

Once the Investment Plan is approved by the State, equipment will be purchased in accordance with the District's purchasing policies. Once equipment arrives, the IT staff will prioritize the unboxing, inventorying and provisioning of the equipment. Additional staff from other departments will be utilized to assist in the unboxing and inventorying of the equipment. Based on the proposed quantities, equipment should be in place and operational within 30 to 60 days of its arrival. To implement the 30 day operational time line, equipment will be purchased in categorical groups to assist the district's Technology staff. The district will include this new equipment in its existing inventory database and monitor it to ensure equipment is securely maintained in its designated locations. The District's comprehensive asset insurance policy will be updated to reflect the additional equipment as well.

Written comments regarding this plan should be submitted to:

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