

Smart Schools Investment Plan

Report to SCSD BoE

9.8.15



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Executive Summary

*“In January 2014, Governor Andrew M. Cuomo called for New York State to invest **\$2 billion** in its schools through a Smart Schools Bond Act (SSBA) that will build out schools and classrooms for the 21st Century to ensure that our students graduate with the skills they need to thrive in the economy of today and tomorrow. Voters approved the Bond Act in November 2014.”*

<http://programs.governor.ny.gov/smart-schools-ny>

The above quote from the governor’s office identifies the origination of the funds available for the Somers Central School District. The funds identified by the Department of Education for Somers total \$713,823.

Through the spring of 2015 the community was apprised of the passage of the Smart Schools Bond Act and now the next steps required to obtain the funds have been identified. Throughout the spring of 2015 and moving forward through the process, the school district has engaged with a multitude of stakeholders:

1. Parents - via multiple conversations at the district-wide PTA monthly meetings.
2. Teachers – at monthly technology leaders meetings and SFA District Leadership meetings.
3. Students – at the seasonal “Gear Shack” meetings.
4. Community members – at the Citizen Finance Committee meetings.
5. Nonpublic school – direct conversations.

The following steps must be completed to fulfill the requirement of the NY State Education Department and thus allowing access to the allocated funds:

1. The development of and BoE approval of a preliminary Smart Schools Investment Plan (SSIP). (9.8.15)
2. Community sharing of Draft Smart Schools Investment Plan to allow for community feedback. (9.9.15)
3. A public hearing allowing the District stakeholders to respond to the draft plan. (10.20.15)
4. Final Smart Schools Investment Plan approved by the BoE. (10.20.15)
5. Submission of the investment SSIP to the NY Department of Education. (10.21.15)

A key philosophical approach on how to best use one-time funds drives the allocation of the Smart School Bond funds. The BoE has historically and currently

operates on using one-time funds sparingly, and if so, the dollars will be directed to long-term investment. While the actual Smart School Bond legislation allows for the use of the funds on what the District would consider to be more consumable type expenditures (e.g. tablets that last 3 years), the intent is to use these funds to support the current Somers School District Technology structure and future plans. Specifically, the District has provided a Personal Learning Device (e.g. Microsoft Surface) to each child in grades 6-12. These resources are supported by the ongoing revenue in the general budget and the devices are planned to be refreshed every three years. Furthermore, the District has increased the bandwidth for the schools with plans to continue to increase the bandwidth each of the following 5 years. While the District has plans to replace elements of the hardware network infrastructure each year, these Smart Bond funds allow the District to expend them in such a way to best leverage the current general funds expenditures previously identified.

In closing, the Smart Schools Bond funds, in essence provided by all NY Tax payers, will be expended with the utmost fiduciary responsibility. We will allocate these funds to provide updated technology infrastructure with a life span of 7+ years to support the unparalleled Somers community historical support of the schools.

Smart Schools Investment Plan

Below is the Draft Smart Schools Investment Plan. The next step is to place the SSIP on the District web page for community feedback. Then a public hearing will be held at a regularly scheduled BoE meeting in the fall of 2015 and ultimately culminating with the approval of the final SSIP by the BoE.

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.

Update an aging architecture to support high-speed traffic requirements for online productivity and assessment operations. Our SSBA fund allocation will support the upgrade of our internal network backbone to accommodate fast connections and power over ethernet (POE) required for modern telecommunications equipment. The allocation will permit us to replace all 47 networking switches in all buildings. Additionally, the funds will be used to solidify existing wireless infrastructure by replacing aging wireless infrastructure and bringing online 244 new access points; including the installation of additional 115-125 network drops to bring adequate high-speed wireless saturation to each learning space.

2. Briefly describe the linkage between the district's District Instructional Technology Plan and the proposed projects. (There should be a link between your response to this question and your response to Question 1 in Part E. Curriculum and Instruction "What are the district's plans to use digital connectivity and technology to improve teaching and learning?").

Our plan highlights the importance of providing students with real-time access to learning resources and to support personalized learning opportunities. As a district, we believe in providing technology infused learning opportunities to infuse the following researched based instructional strategies:

1. *Identifying similarities and differences*
2. *Summarizing and note taking*

3. *Reinforcing effort / providing recognition;*
4. *Homework and practice*
5. *Non-linguistic representations*
6. *Cooperative learning*
7. *Setting goals and providing feedback*
8. *Generating and testing hypothesis*
9. *Activating prior knowledge.*

3. To ensure that districts maximize the return on their investment in education 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.

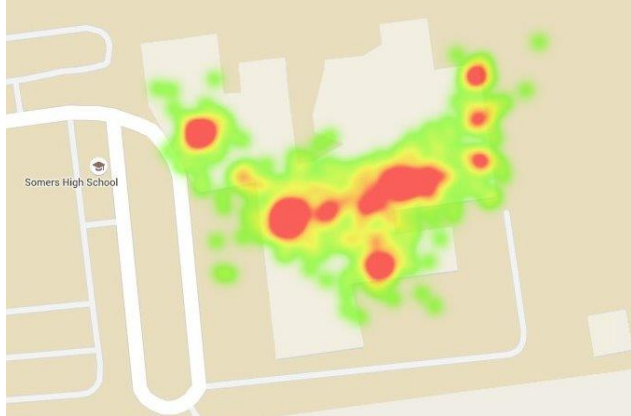
We currently do not meet the requirements of 100Mbps per 1,000 students. Our current bandwidth is 260Mbps, which is 81Mbps per 1,000 students. We will be increasing our bandwidth through BOCES TLS to match the requirement to achieve this standard by the 2016-2017 school year.

4. Please describe how you will use SSBA funds to meet this standard. Note: If a district believes that it will be impossible to meet this standard within 12 months, it should describe how it meets the criteria for a waiver as described on the Smart Schools website.

We don't plan on using SSBA funds to directly increase internet bandwidth. Our general fund will accommodate this increase in bandwidth. Our expectation is to have the bandwidth requirement in place by 2016-2017.

5. 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 Wi-Fi 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.

Our SSBA funding allotment will be used to purchase wireless access points for each learning space. The intended target is to provide a wireless access point (WAP) per classroom District wide. The placement of the wireless hardware will correlate with existing wireless "heat-maps" the district has been maintaining. Below is a sample heat map of the wireless infrastructure at SHS.



6. As indicated in the Guidance on page five, the Office of Facilities Planning will have to conduct a preliminary review of all capital projects, including connectivity projects. Please indicate the project number(s) given to you by the Office of Facilities Planning.

Insert Project Number here: _____

Was your project deemed eligible for streamlined review? (+ streamlined).

Yes / No

This work will be determined by the contracted architect and project management services and ultimately determined by SED.

By checking this box, you certify that you, or your designee, have reviewed all installations with a licensed architect or engineer of record.

The District is in the process of seeking proposals for such engineering work.

Connectivity Projects for Schools	
Network/Access Costs	\$618,000
Outside Plant Costs	\$0
School Internal Connections and Components	\$45,000
Professional Services	\$50, 823

Testing	\$0
Other Upfront Costs	\$0
Other Costs	\$0
Subtotal	\$713,823

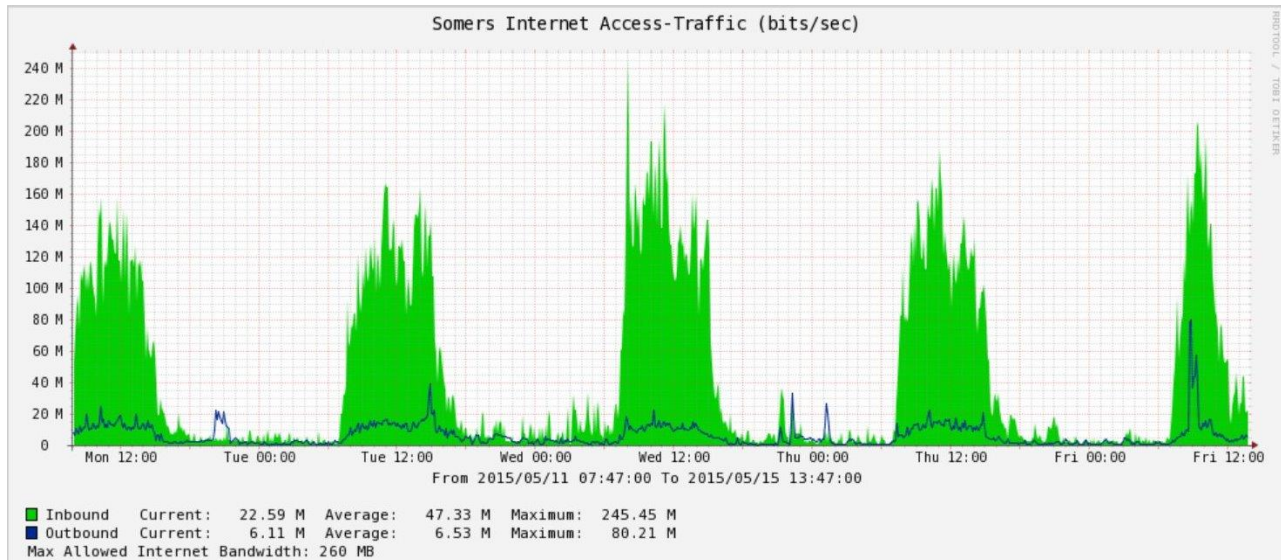
Appendix

Background Information

A. Historic Bandwidth Usage:

School Year	Bandwidth (Mbs)
2010-2011	60
2011-2012	70
2012-2013	80
2013-2014	100
2014-2015	150
2015-2016	260
2016-2017	320
Eventual Goal	1000

B. Sample Bandwidth Usage (May 11-15 2015)



C. Current Wireless Hardware Protocols by Building

Building	# Access Points (Vendor)	Wireless Radio Protocol	Wireless Throughput (Mbs)
High School	10 (Meraki)	AC	450
High School	18 (Cisco)	N	150
High School	2 (Cisco)	G	50
Middle School	20 (Meraki)	AC	450
Middle School	8 (Cisco)	N	150
Middle School	3 (Cisco)	G	50
Intermediate School	15 (Cisco)	N	150
Intermediate School	5 (Cisco)	G	50
Primrose Elementary School	10 (Cisco)	N	50
Primrose Elementary School	12 (Cisco)	G	50

D. Future Wireless Hardware Protocols by Building

Building	# Access Points (Vendor)	Wireless Radio Protocol	Wireless Throughput (Mbs)
High School	150 (Meraki)	AC	450
Middle School	150 (Meraki)	AC	450
Intermediate School	72 (Meraki)	AC	450
Primrose Elementary School	72 (Meraki)	AC	450