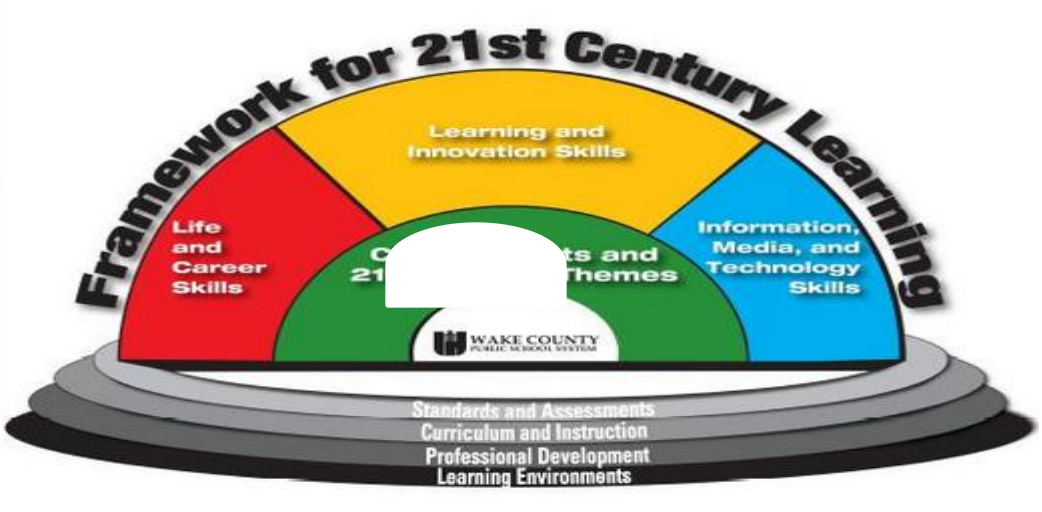
North Merrick UFSD
Smart Schools Bond Act and Smart Schools Investment Plan



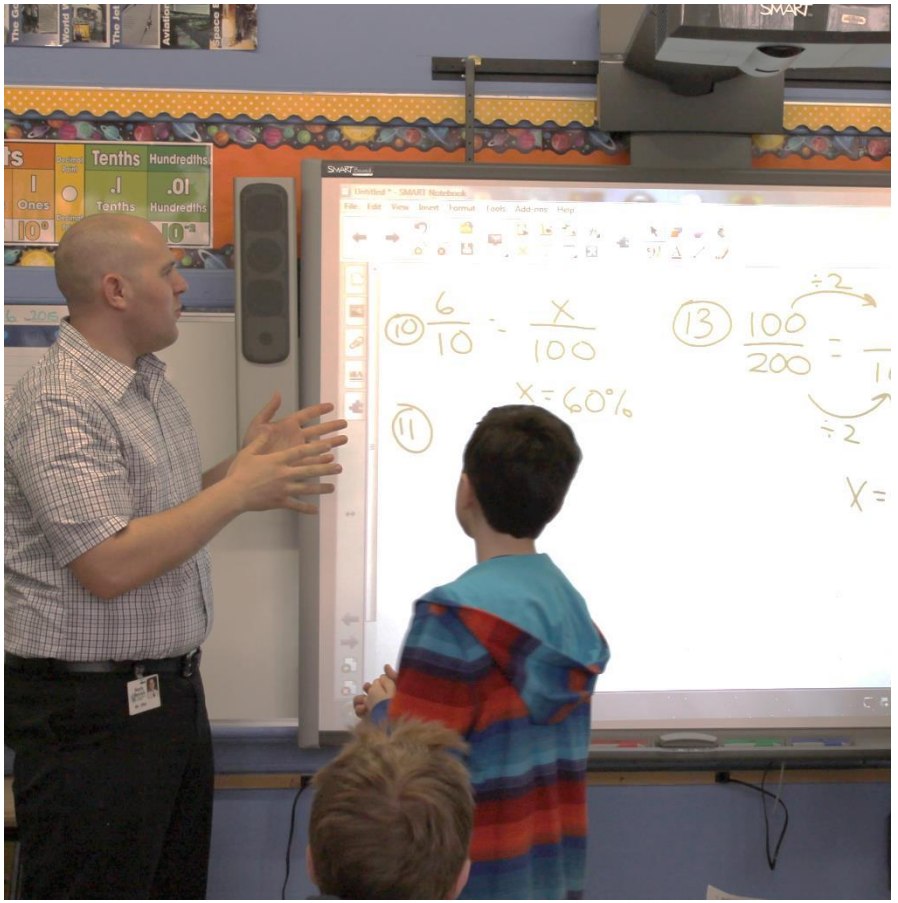
Public Hearing
Monday, February 29, 2016, 7:00 PM

David S. Feller, Superintendent of Schools
Beth L. Friedman, Deputy Superintendent
Thomas P. McDaid Jr., Esq., Assistant Superintendent for Business

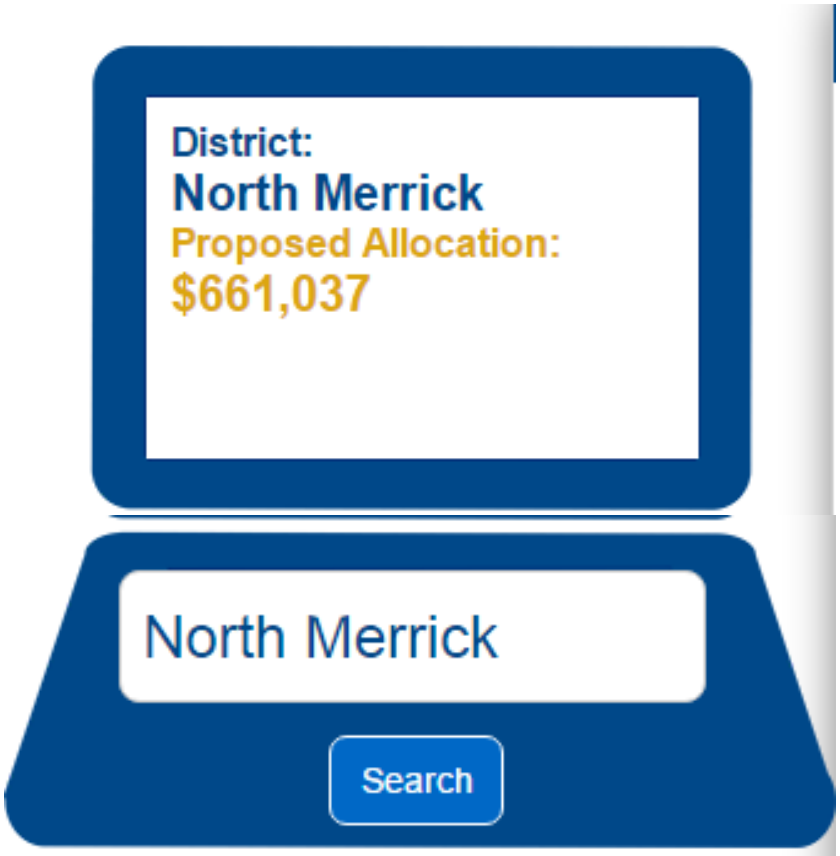
Smart School Bond Act

- **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 purpose of the Smart Schools Bond Act is to improve learning and opportunity for public and nonpublic school students**



*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 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.*



Allowable Smart School Bond Expenditures

- **Install high-speed broadband or wireless internet connectivity for schools and communities;**

- **Acquire learning technology equipment or facilities, including but not limited to interactive whiteboards, computer servers, and desktop, laptop, and tablet computers;**

- **Construct, enhance, and modernize educational facilities to accommodate prekindergarten programs and to provide instructional space to replace classroom trailers; and/or**

- **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.**

Critical Elements of a Successful Plan Include:

- **Demonstration of Need**: Smart Schools Investment Plans must demonstrate that the district has taken a strategic approach to understanding and meeting the needs of its students.
- **Adequate Technological Infrastructure**: School buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day.
- **Professional Development**: The district must describe a plan to provide professional development to ensure that staff can employ the technology purchased with funds from the Smart Schools Bond Act to enhance instruction successfully.

Critical Elements of a Successful Plan Include

- **Technical Support**: The district should provide sufficient on-going tech support to ensure that the technology purchased with funds from the Smart Schools Bond Act will be distributed, prepared for use, maintained and supported appropriately.
- **Sustainability**: Districts are required to demonstrate a long-term plan to physically maintain the investments made under the Smart Schools Bond Act in a useful condition. This sustainability plan will demonstrate a district's capacity to support the recurring costs of use.
- **Special Notes:**
  - **Smart Schools Bond funds may not be used for professional development or technical support.**

Smart Schools Bond Act and Smart Schools Investment Plan Overview

1- Upgrade/Expand wireless infrastructure

2- Upgrade/Expand network infrastructure

3- Upgrade/Expand network cabling

4- Expansion of instructional devices throughout district

UTILIZE THE FUNDS TO UPGRADE/EXPAND WIRELESS INFRASTRUCTURE

Rationale:

- The current wireless infrastructure allows for coverage throughout the district however, does not account for device density. The reason the deployment was done for coverage was due to the budgetary limitations at the time. As mobile devices grow within the district, the needs of wireless will grow with it.

UTILIZE THE FUNDS TO UPGRADE/EXPAND WIRELESS INFRASTRUCTURE

Proposed:

- We are proposing an expansion of the current wireless system. The district will need to have network cabling installed for all additional wireless access points. Along with the cabling and access points, an investment in an upgraded wireless controller will be required as well. The current wireless controller does not support the latest and upcoming wireless standards and is limited in terms of how many access points can be provisioned on it. The upgraded controller will be able to support up to 512 access points.

Cost:

- The expected total cost of the Upgrade/Expand Wireless Infrastructure project is $100,000, funded by Smart Schools.

UTILIZE THE FUNDS TO UPGRADE/EXPAND NETWORK INFRASTRUCTURE

Rationale

- In 2014 there was a project to upgrade the network switches in the district. Nassau BOCES incorporated extra POE ports that would be required for the districts security initiative. POE (power over Ethernet) ports provide power to devices such as cameras, access points, and phones, as well as data communication. The security project ended up requiring more POE ports than originally planned. Due to this increase in POE (Power over Ethernet) demand, there is currently a need to add additional POE switches.

UTILIZE THE FUNDS TO UPGRADE/EXPAND NETWORK INFRASTRUCTURE

Proposed:

- We are proposing that the district invest in additional POE Cisco switches that will accommodate the additional device counts. This will help to ensure that the additional needs of the security project and wireless are met.

Cost:

- The expected total cost of the Upgrade/Expand Network Infrastructure project is $25,000, funded by Smart Schools.

UTILIZE THE FUNDS TO UPGRADE/EXPAND NETWORK CABLING

Rationale

- There are no fiber connections between network closets which is typically a standard for most networks. There is only one copper cable which interconnects all network closets. This design is not optimal as it limits the district from going from 1 Gigabit speeds up to 10 Gigabit. Also, there the connectivity is dependent upon one cable and there is no redundancy. The copper cable is also antiquated as it is only Category 5. This standard is now limited and not future proof.

  Additionally, the existing network cabling lengths in multiple locations does not meet standards. There is a certain length that a category 5 or 5E cable can run without signal degradation. Currently, these standards have not been followed.

UTILIZE THE FUNDS TO UPGRADE/EXPAND NETWORK CABLING

Proposed:

Nassau BOCES is proposing that fiber be run between all existing network closets. This will enable the district to handle up to 10 Gigabit speeds in the future. Additionally, this will allow for redundancy utilizing multiple pairs of fiber between those closets. Also, we are proposing that the additional Category 6 network cabling be run to classrooms for wireless access points. As a result, we will have to add additional network closets in Camp and Old Mill. These closets will need to be placed to meet standards for cabling that currently are not being followed.

UTILIZE THE FUNDS TO UPGRADE/EXPAND NETWORK CABLING

Cost:

- The expected total cost of the Upgrade/Expand Network Cabling project is $132,000, funded by Smart Schools.

EXPANSION OF INSTRUCTIONAL DEVICES THROUGHOUT DISTRICT

Rationale

- District is moving to accommodate a 1:1 computing initiative. There is an average of 3 computers in each classroom; however the majority of these computers are over 5 years old. There is also currently one Smart Board per classroom and several Smart Board in special areas; however majority of the Smart Boards are also over 5 years old.

EXPANSION OF INSTRUCTIONAL DEVICES THROUGHOUT DISTRICT

Proposed:

- Purchase new Projectors for all Smart Boards and New Laptops/Ipads for all sections.

Cost:

- The expected total cost of the Expansion of instructional devices throughout district is $815,000 funded by Smart Schools ($404,037) and the general budget ($410,963) for the next few school years.

Proposed Professional Development

The District recognizes the importance of ongoing and sustained professional development for staff and students.

The District is committed to allocating an annual expenditure of $25,000-$50,000 per school year to provide professional development to ensure that staff can employ the technology purchase through the Smart School Bond.

This will ensure all our teachers, school administrators and staff will be empowered to best utilize these new technologies for instructional purposes.

SUSTAINABILITY

- The District currently contracts with Nassau BOCES for ongoing technical support for our IT Infrastructure and devices. This will ensure sustainability of the District’s technology infrastructure.

- In addition The District will integrate the Smart Schools Bond purchases into the existing district's Equipment replacement cycle. Each year the district allocates funds for the normal repair cost of the learning devices in the district.

TIMELINE

- The District will make multiple submissions to the State Education Department SSBA Program for our SSBA Allocation and Projects. Once the Investment Plan is approved by the State, the District will begin necessary preparations to begin the Upgrade/Expansion of the wireless infrastructure, network infrastructure and network cabling. Actual dates are to be determined as this project requires pre-approval by the New York State Education Department prior to the start of work.

- Once the infrastructure is in place the District will begin gradually purchasing Projectors for Smart Boards and Laptops/Ipads. All purchases will be made in accordance with the District's purchasing policy. The district will also include this new equipment in its existing inventory database and monitor it to ensure equipment is securely maintained and supported at its designated locations.

References

Smart Schools Investment Plan
http://www.nmerrickschools.org/files/2051037/smart%20schools%20investment%20plan%20north%20merrick%20.pdf

Smart Schools Bond Act Implementation Guidance
http://www.p12.nysed.gov/mgtserv/smart_schools/docs/Smart_Schools_Bond_Act_Guidance_04.27.15_Final.pdf

FAQs for Smart Schools Bond Act
http://www.p12.nysed.gov/mgtserv/smart_schools/docs/smart_school_bond_act_faqs.html