Merrick UFSD

New York State Smart Schools Bond Act

BOE Approved Investment Plan

August 2018

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Smart Schools Bond Act (SSBA) Description

The Smart Schools Bond Act 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 (SSBA) authorized the issuance of $2 billion of general obligation bonds to finance improvements in educational technology, infrastructure and security. The Merrick UFSD has been allocated $643,422 for this purpose. This will be paid to the District by New York State as reimbursement for expenses incurred under the plan. The entire text of the Smart Schools Bond Act Implementation Guidance can be found at:

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

Working with District leadership, school building administrators, teachers, staff and input from community members, our Instructional Technology Plan contains the overarching goals for technology instruction for the Merrick Union Free School District. This investment plan is in alignment with the goals expressed in our NYSED Instructional Technology Plan.

Plan Overview

Merrick UFSD Technology Vision Statement

Technology facilitates the purposeful integration of learning between subjects, throughout the day, and across the school site in order to individualize learning and allow for student choice. A shared vision prioritizes administrator, teacher, and parent professional development opportunities, curriculum development, and student engagement activities. Through training and regular use of technology, staff become experts in ensuring that the appropriate technology tool is used to provide our students with opportunities to learn and share knowledge that inside and outside the classroom

Technology Guiding Principles

Technology use needs to be grounded in teaching and learning. The Merrick UFSD envisions an environment that provides appropriate access and security, while supporting teaching and learning. The Merrick UFSD also assures that the school environment offers all students and teachers opportunities to support the priorities of 21st century learning, to become increasingly digitally literate:

- Learning environments that are equipped with technology tools to support all students
- Students take ownership and develop independence in determining the right technology tool for each activity
- Technology is purposefully integrated to support clear learning goals
- Technology Specialists propel staff and student use of technology in innovative and purposeful ways
- Technology is the vehicle used to provide enhanced opportunities for rich multimedia collaboration
- Teachers and administrators actively explore and implement emerging trends in the effective use of technology for their potential to improve student learning
- Inspire student self-directed inquiry and creativity
- Promote and model digital citizenship and responsibilities
- Engage in authentic communication, both within and beyond the walls of the classroom
- Utilize technology to better access curriculum and develop functional communication

In order to realize this vision, technology must be infused into the daily functions of our classrooms and instructional programs. This requires that infrastructure, hardware, and software make electronic and non-print resources accessible to students and teachers at the classroom level.

The Smart Schools Investment Plan supports the vision of our Instructional Technology Plan. After examining the district's technology needs and reviewing our Smart Schools Bond allocation, it was determined to use the money to fund the following:

1. Expand current VMware Server virtualization
2. Upgrade wireless infrastructure
3. Expand network infrastructure
4. Expand Network Backup Systems
5. Upgrade classroom technology

The preliminary Smart Schools Investment Plan information was reviewed by the District Innovation Design Team (IDT) on Wednesday, May 30, 2018. The District Innovation Design Team is made up of district administrators, building administrators, classroom teachers, special area teachers, instructional coaches, and teaching assistants.

Technology Infrastructure Preconditions

In order for students and faculty to receive the maximum benefit from the technology made available under the Smart Schools Bond Act, their school buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day. Smart Schools Investment Plans must demonstrate that sufficient infrastructure that meets the Federal Communications Commission's 100 Mbps per 1,000 student's standard currently exists in the buildings where new devices will be deployed, or is a planned use of a portion of Smart Schools Bond Act funds, or is under development through another funding source.
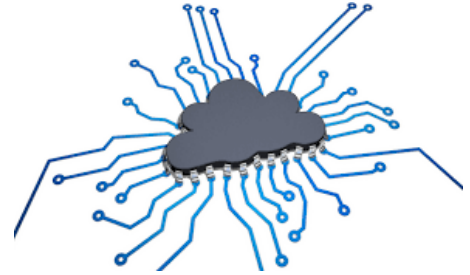
Our current network infrastructure is limiting our expansion into educational technology due to insufficient wireless drops, lack of back-up capacity, and need for updated wiring. We plan on using the smart bond money to secure reliable and fast connectivity to all current and future mobile devices used in the classroom. We currently bring in 150mps of bandwidth into our buildings, however, our ability and infrastructure to internally distribute this level of bandwidth needs to be upgraded.

Smart Schools Investment Plan Goals

1. **Goal:** Upgrade Wireless Infrastructure

   Rationale: The current wireless infrastructure allows for coverage throughout the district, however, does not account for device density. At times of high usage (video streaming, computer-based testing for NYSED and teacher accountability) connectivity is inconsistent. In larger spaces such as multi-purpose rooms, cafeterias and auditoriums, coverage is uneven, particularly during times when the room approaches capacity. As students and teachers rely on wireless devices in the classroom, our infrastructure must grow with it.

2. **Goal:** Expand Network Infrastructure

   Rationale: New hardware switches are required to provide increased network capacity for the district servers. Updated servers are necessary to run V-Center, V-Sphere, and VM ware to increase productivity within our server infrastructure. Replacement of network storage units are necessary to house home directories. We need to incorporate 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. Due to this increase in POE (Power over Ethernet) demand, there is currently a need to add additional POE switches.

3. **Goal**: Expand current VMware Server virtualization

   Rational: Our current servers are nearing the end of their effectiveness. Increasing the districts VM ware to virtually manage district-wide servers is cost effective and provides the District with flexibility and redundancy.

4. **Goal**: New Classroom Technology

   Rational: Many of our current classroom interactive white boards and document cameras are nearing the end of their classroom effectiveness. We are consistently replacing projectors. We would like to replace those that are no longer working to support teaching and learning in the classroom.

Allocation of Funds – Purchase Plan

Merrick UFSD Allocation - $643,422

School Connectivity

Proposed: We are proposing an expansion of the current wireless system. Replacement of all wireless access points in classrooms, offices, and instructional spaces, in order to increase wireless connectivity throughout the building for student use. Replacement of all existing wired connectivity with CAT-6 cabling will increase access through the new access points. An investment in an upgraded wireless server controller to manage all wireless infrastructure will be necessary to support the additional access points and upgraded wiring.

Cost: The expected total cost of the Upgrade/Expand Wireless Infrastructure project is $265,000, funded by the Smart Schools Bond Act.

Proposed: We are proposing that the district invest in additional POE Cisco switches that will accommodate the additional device counts. New hardware switches to provide increased network capacity for the district servers. Update servers to run V-Center, V-Sphere, and VM ware to increase productivity within our server infrastructure. Replacement of network storage units are necessary to house home directories.

Cost: The expected total cost of the Upgrade/Expand Network Infrastructure project is $43,000, funded by Smart Schools Bond Act.

Proposed: Our current servers are nearing the end of their effectiveness. Increasing the districts VM-ware licensing, servers, and storage to virtually management district-wide servers is cost effective and provides the District with flexibility and redundancy.

Cost: The expected total cost to Upgrade/Expand Network Infrastructure project is $183,000, funded by Smart Schools Bond Act.

Classroom Technology

Proposed: Replacement of 27 interactive classroom white boards and document cameras.

Cost: The expected total cost of this project is $152,000, funded by the Smart Schools Bond Act.

Sustainability

To ensure the sustainability of technology purchases made with Smart Schools funds, districts must demonstrate a long-term plan to maintain and replace technology purchases supported by Smart Schools Bond Act funds. This sustainability plan shall demonstrate a district's capacity to support recurring costs of use that are ineligible for Smart Schools Bond Act funding such as device maintenance, technical support, Internet and wireless fees, maintenance of hotspots, staff professional development, building maintenance and the replacement of incidental items. Further, such a sustainability plan shall include a long-term plan for the replacement of purchased devices and equipment at the end of their useful life with other funding sources.

The District currently works collaboratively with Nassau BOCES for ongoing technical support for all districtwide IT Infrastructure hardware, software, and instructional devices. Through this collaborative effort, the district will ensure sustainability of all technology infrastructure hardware and software.

The Merrick Union Free School Districts Instructional Technology Plan, supported by the annual budget, allocates funds for technology purchases via:

- Local District Funds
- Hardware Allocations
- Grant Funding
- Letter of Intent (LOI) Purchase Agreements (PA) with Nassau BOCES

Future Technology budgets will support the replacement and maintenance detailed in this Preliminary Smart Schools Investment Plan, as well as maintenance and support for all of the district's hardware and technology infrastructure, through the existing district's equipment replacement cycle. Each year the district allocates funds for the normal repair cost of the learning devices and infrastructure throughout the school district.

Investment Plan Timeline

Date	Description
May 30, 2018	Innovation Planning Team Meeting to review Preliminary Smart Schools Investment Plan
June 12, 2018	Preliminary Plan BOE Presentation & Approval
June 23, 2018	Preliminary Plan posted to website for comment (30 days)
August 7, 2018	Public Hearing & Information Session
August 7, 2018	BOE approval of final plan
August 8, 2018	Post final plan to website & submit application via NYSED Portal
TBD	Application approved by NYSED Smart Schools Review Board

Feedback

This document will be posted on the Merrick UFSD website:

www.merrick.k12.ny.us

If you have any questions regarding the District's technology plan and/or utilization of Smart School bond funding, please contact:

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