

Smart Schools Investment Plan

Overview

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 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 improved educational technology and infrastructure to improve learning and opportunity for students throughout the State. North Shore Central School District's share of the bond allocation is \$413,397.

Preconditions

- **Internet Bandwidth:** The District is in compliance with the Federal Communication Commission's stated goal of achieving 100 Mbps Internet bandwidth per 1000 students. We currently serve approximately 2600 students with 500 Mbps in total bandwidth.
- **Instructional Technology Plan Survey:** In compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner's Regulations, the District's Instructional Technology Plan Survey was submitted and approved by the New York State Education Department on October 1, 2015. Per NYSED's additional requirement of annual updates, the survey update was submitted and approved July 5, 2016.
- **Equity Of Benefit:** Per NYSED's guidance on successful Smart School Investment Plans, the District's planned use of its Smart Bond allocation will address the educational needs of all students, include linkage to the Instructional Technology Plan Survey, and support learning opportunities beyond the classroom.

Proposed Use

In accordance with NYSED's recommendation, we have engaged in strategic planning to build long-term capacity in the District with our Smart Bond allocation. We have designed our Smart Schools Investment Plan to address the improvement of educational needs of all of our students in our District by targeting an essential instructional technology resource that all stakeholders regularly use and depend upon. We believe that our allocation of the Smart Bond monies would be most equitably applied in support of our three-year plan to comprehensively upgrade the network wiring infrastructure in all of our school buildings.

This plan has been informed by a needs assessment of the District's technology infrastructure and assets, taking into consideration input from various stakeholder constituencies, and is in alignment with the investment strategies and priorities outlined in the District's New York State Education Department approved Instructional Technology Plan Survey. This proposed work will be classified as a "School Connectivity Project" and will be assigned a project number and

building permit by the New York State Office of Facilities Planning. The project is being coordinated by the technology department in cooperation with various District stakeholders, Nassau BOCES, and its partners.

Rationale

We chose to focus the Smart Bond allocation on upgrading the District's network wiring infrastructure for a number of reasons:

- An upgrade to the network wiring and fiber will provide an equitable level of benefit to every teacher, student, and staff member
- The extra bandwidth that will be created in every classroom through this upgrade will provide present and future support for the proliferation of mobile student devices
- The majority of the core network wiring and fiber that is currently in all buildings was installed in the early 2000's, which requires a baseline upgrade to better support our increasing volume of networked devices
- As we continue to increase our availability of broadband connectivity in acknowledgement with the FCC's broadband goals for schools, internal connections must also remain several generations ahead to avoid becoming a point of network latency
- Feedback solicited from our stakeholders consistently expresses a strong preference to improve the overall speed and responsiveness of our networked devices (particularly wireless), systems, and services in all buildings
- Given the typical life cycle of network wiring and fiber and the proposed materials that we will be using (Cat-6/6A copper, OM-3/4 fiber), we believe that this project will deliver the best value from the Smart Bond monies in terms of providing long-lasting and equitable benefit to the District's instructional technology program

Timeline

Due to the total cost, scope, and disruptive nature of the work, we are planning to implement this upgrade in three smaller phases over three budget cycles:

- Phase 1 (2017-2018): Upgrade of North Shore High School and Sea Cliff Elementary
- Phase 2 (2018-2019): Upgrade of Glen Head Elementary, Glenwood Landing Elementary, and North Shore Middle School
- Phase 3 (2019-2020): Upgrade of Central Office and the Transportation Depot

Assuming approval of the District's SSIP, the specific start date of Phase 1 is still to be determined pending pre-approval by both the New York State Education Department and the Office of Facilities Planning prior to the start of any work.

Projected Cost

We intend to target Phase 1 (2017-2018) of the project for Smart Bond reimbursement:

- The projected total cost of materials and labor for phase 1 is expected to be approximately \$698,156
- \$413,397 of phase 1's projected cost will be funded by the Smart School Bond monies
- The remainder of the phase 1's projected cost will be funded by the general budget for the 2017-2018 school year

Support and Sustainability

After the network wiring upgrade is completed, the internal network switching bandwidth capacities of all buildings will increase from 1 GB (100 MB in some locations) up to a theoretical maximum of 10 GB in all buildings. In particular, we are setting the groundwork for fully supporting the next generation of wireless standards and speeds (802.11ax as of this writing) for our students' devices in all classrooms through the use of Cat-6A cabling to all access points.

In anticipation of future expansions of instructional spaces and the increase of networked student devices in use, our upgrade plan is accounting for the installation of additional network drops beyond current need assessed capacities in all classrooms, offices, and other instructional spaces. We are simultaneously planning to adjust our technology budget and E-Rate category-2 bid requests for the next three years to procure network switches with higher port densities and wireless access points that offer the latest IEEE standards.

Maintenance, repairs, and other technical support of network cabling (ex: damaged cable, broken jack, etc.) is expected to be a minimal and rare occurrence that will be accounted for within the technology department's regular operating budget. As significant changes to cabling standards and capabilities occur (a very infrequent event), we will also plan to implement strategically placed upgrades to continue improving our wireless support for student devices.

The District currently contracts with Nassau BOCES for ongoing technical support of our IT Infrastructure, including network wiring maintenance, repairs, upgrades, and expansions.

Public Feedback

Questions or comments related to the Smart Schools Investment Plan should be addressed to:

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