



# **SCHOOL BOARD ACTION REPORT**

**DATE:** October 7, 2019  
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**For Introduction:** November 20, 2019  
**For Action:** December 11, 2019

## **1. TITLE**

BTA IV: Approve purchase of Metropolitan/Wide Area Network (MAN/WAN) hardware upgrade for elementary schools, and one-year support with DynTek, Inc. in the amount of \$2,194,364.89, of which an estimated \$1,090,505.04 is federal E-rate funding, resulting in a net cost in the amount of \$1,103,859.85.

## **2. PURPOSE**

The purpose of this Board action is for the review and approval of an upgrade of our Metropolitan/Wide Area Network for elementary schools with DynTek, Inc. as the value-added reseller of Infinera hardware, software, and support.

## **3. RECOMMENDED MOTION**

I move that the School Board authorize the Superintendent to execute an agreement with DynTek, Inc to provide a Metropolitan/Wide Area Network elementary hardware upgrade with one-year support for a total Not-To-Exceed amount of \$2,194,364.89.

## **4. BACKGROUND INFORMATION**

- a. **Background** – Seattle Public Schools (SPS) Metropolitan/Wide Area Network (MAN/WAN) was installed in 2001. There are 2 aspects to this network: optical fiber cabling and the hardware nodes that connect this fiber to our schools. This upgrade is for the hardware nodes for the elementary schools. All network, voice, camera, and internet traffic travels over this network. The increase in the number of schools, students, and devices on the network and increased use of digital online resources has increased bandwidth usage both internally and externally exponentially each year and the nodes themselves have reached end-of-life, therefore the hardware nodes need to be replaced. The fiber itself is suitable well into the future. This does not impact the SPS fiber sharing agreement with the city. In addition, the increase in security at elementary schools has increased the need to install more cameras and Aiphone entry systems for external doors, which use more of the network's capacity. To make sure all students, staff, and guests have required access, acceptable experience, and needed security, the district needs to upgrade to higher bandwidth capabilities. The system was identified to receive an

upgrade/replacement as part of the Buildings, Technology and Academics Capital Levy (BTA IV) approved in February 2016 and has become part of the 2019-2023 5-year technology implementation plan. This project is part of \$3.2 million budgeted for the upgrade.

In March 2019, the district issued a Request for Quote (RFQ) B02966 process to upgrade elementary school hardware nodes that manage traffic on our existing optical fiber network that meets the future technology and bandwidth needs and leverages eligible Universal Service Schools and Libraries Program (E-Rate) discounts. Hardware, and software purchased with E-Rate Program discounts are approved by the Universal Service Administrative Company (USAC) following requirements for eligibility. USAC has strict requirements for the E-Rate program which is in place to ensure schools have adequate internet access and must approve all equipment and services. The result of the RFQ and E-Rate application was a credit reimbursement in the amount of \$1,090,505.04 being approved and issued to DynTek, Inc. by USAC. These discounts are applied to invoices from DynTek.

This RFQ and associated work will provide a capability of 10 Gigabit (Gb) dedicated (up from 1 Gb) to all elementary schools by 2023. This purchase will support upgrading the elementary schools, including the 13 Strategic Plan focus schools to full 10 Gb connections, from their existing 1 Gb connection. Where possible, the team will work to prioritize installation of the 13 critical schools first.

- b. **Alternatives** – We can decide not to upgrade our network. This option would mean schools will max out their available bandwidth making online resources difficult to access. Hardware would also get more expensive to support as it approaches end of life, making it more difficult to find spare parts.
- c. **Research** – Monitoring graphs showing how much bandwidth each school has been using over time and how much the consolidated bandwidth impacts the overall internet connectivity illustrates the need to upgrade the current infrastructure. Data from each school and a projection of what devices wired and wireless are being added in the future points to a trend of increased usage and strain. Demands for more security cameras and devices using more bandwidth at each site adds to the projections of sustained minimum bandwidth needed for each site.

The State Educational Technology Directors Association (SETDA) recommends that for the 2020-21 school years, districts should have at least 10 Gbps per 1,000 users for wide area network (WAN) access. (<https://www.setda.org/wp-content/uploads/2016/09/SETDA-Broadband-ImperativeII-Full-Document-Sept-8-2016.pdf>).

## 5. **FISCAL IMPACT/REVENUE SOURCE**

The actual net impact to the district will be approximately \$1,103,859.85 once the E-Rate funding is applied to invoices after work is completed. The undiscounted value of this action

will be up to and not to exceed \$2,194,364.89 which includes applicable Washington state sales tax.

The revenue source for this motion is BTA IV Wide Area Network (WAN) Modernization and Expansion (Y07310000T).

Expenditure:  One-time  Annual  Multi-Year  N/A

Revenue:  One-time  Annual  Multi-Year  N/A

## **6. COMMUNITY ENGAGEMENT**

With guidance from the district's Community Engagement tool, this action was determined to merit the following tier of community engagement:

Not applicable

Tier 1: Inform

Tier 2: Consult/Involve

Tier 3: Collaborate

The upgrade was part of engagement for the BTA IV Levy and included under the Safety and Security component of the Technology portion focused on modernizing the district's telecommunications system. This specific proposed upgrade was discussed at the December 17, 2018 Information Technology Advisory Committee (ITAC) meeting with the committee getting the chance to review the technology proposed and offer feedback. The district's community engagement tool kit was applied to this proposed upgrade with Tier 2: Consult/Inform being the most applicable level of engagement identified.

## **7. EQUITY ANALYSIS**

Initially the upgrade was part of the Equity Analysis for the BTA IV Levy decision making. The Network is a central core piece of infrastructure that all internet and intranet traffic passes through. Every user (Student, Staff, and Guest) along with building automation and security devices have the same path being used from every school building. This upgrade will increase the speed for every elementary school to make sure we keep equity in the availability to all that allows for more bandwidth where it is needed. Work will be prioritized for the 13 Strategic Plan focus schools first.

## **8. STUDENT BENEFIT**

Students will experience higher quality internet and intranet access to digital online sources and information encompassed within district resources. They will be able to use online tools including Office 365, applications, and learning systems both internally and on the internet. Higher bandwidth will be available to teachers to use digital content related to student learning.

**9. WHY BOARD ACTION IS NECESSARY**

- Amount of contract initial value or contract amendment exceeds \$250,000 (Policy No. 6220)
- Amount of grant exceeds \$250,000 in a single fiscal year (Policy No. 6114)
- Adopting, amending, or repealing a Board policy
- Formally accepting the completion of a public works project and closing out the contract
- Legal requirement for the School Board to take action on this matter
- Board Policy No. \_\_\_\_\_, [TITLE], provides the Board shall approve this item
- Other: \_\_\_\_\_

**10. POLICY IMPLICATION**

Per Policy No. 6220, Procurement, any contract over \$250,000 must be brought before the Board for approval.

**11. BOARD COMMITTEE RECOMMENDATION**

This motion was discussed at the Audit and Finance Committee meeting on November 4, 2019. The Committee reviewed the motion and moved the item forward to the full Board with a recommendation for \_\_\_\_\_.

**12. TIMELINE FOR IMPLEMENTATION**

Upon approval of this motion, the vendor will start working with the district to plan the upgrade to the district equipment.

**13. ATTACHMENTS**

- Not Applicable