



Haverstraw-Stony Point Central School District
65 Chapel Street
Garnerville, NY 10923

Haverstraw-Stony Point Central School District
New York State Smart Schools Bond Act Investment Plan
Project #2 Investment Plan

Public Hearing on Smart Schools Bond Funding

A Public Hearing will be held on Smart Schools Bond Act Funding at the Board of Education Meeting on November 7, 2017 at 7:00pm at Fieldstone Middle School

If you would like to submit written feedback on this proposed Preliminary Investment Plan, please email:

ssba@northrockland.org

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PLAN OVERVIEW

In November 2014, New York State's voters approved the Smart School's Bond Act (SSBA.) The Haverstraw-Stony Point Central School District (NRCSD) allocation is \$5,294,721.

The State required that as a first step in acquiring funds, districts submit an instructional technology plan for approval. Working with the North Rockland CSD Cabinet, and in consultation with a group of stakeholders, including District Administrators, Teachers, Students, Parents, PTA members, Board of Education members, Community members and the Principal of St. Gregory Barbarigo School , NRCSD's plan was submitted and approved in October, 2016. The 2015-2018 Technology Plan aligns with this investment plan to focus on School Connectivity and infrastructure as a part of our first submission and to meet the connectivity milestones established in our NYSED Approved Instructional Technology Plan.

TECHNOLOGY INFRASTRUCTURE PRECONDITIONS

The Haverstraw-Stony Point Central School District has Worked with our local RIC to upgrade our Wide Area Network (WAN) backbone network to 10Gig. The SSBA funds will allow us to build out of this 10 Gig backbone to provide reliable, high speed and a secure Gigabit (1GB) local area network (wiring, access points, and switching equipment), upon which every location in the district will be capable of 1 Gig access. The District will use the SSBA funds towards costs associated with the purchase of the network/access costs, and school building internal connections and components.

This investment in infrastructure and instructional technology will increase the number of locations in our school buildings which will enable us to meet or exceed the Federal Communications Commission minimum speed standard of 100 Mbps per 1,000 students.

SMART SCHOOLS INVESTMENT PLAN PHASE 1 GOALS

The Haverstraw-Stony Point School District intends on using Smart Schools Bond Act funds for costs to install network equipment and WiFi networking equipment in order to expand network access and increase wireless capacity in and around the school buildings for our students. Funding for this infrastructure project will ensure that all school buildings meet or exceed the Federal Communications Commission minimum speed standard of 100Mbps per 1,000 students. This plan is built on guiding principles that outline how technology supports the District's strategic framework and enhances great teaching and learning for all students. The focus is on teaching and learning.

With the investment in infrastructure, the District will have an opportunity to provide more capacity and more access to a high quality digital infrastructure which will lead to the following:

- more actively engage students as participants in their own learning

- deepen student learning and the complexity of connections among subject matter
- provide students with the technology that will prepare them for higher education and careers in the 21st century
- teach students the appropriate use of technology in their role as digital citizens
- close the opportunity gap affecting children’s access to technology
- allow for online learning from anywhere in the world

SMART SCHOOLS INVESTMENT PLAN PHASE 2 GOALS

North Rockland Central School District’s goal is to upgrade its physical security network across the entire district.

Physical Security Servers

Day will provide and install 18 new Avigilon Network Storage Servers and 9 – 3000VA UPSs’ in the existing school MDF data center racks. Day will also provide and install a VM instance of Avigilon Access Control Manager Server with software licensed for 80 doors. Avigilon Enterprise Camera Connection Licensing has been provided for 590 cameras. The servers will be configured for all physical security cameras and access control doors provided in our proposal. See ‘table – 1’ for District server metrics.

Table 1

District Server Metrics	Total Cameras	30 Days Storage (TB)	Calculated Throughput (Mbps)	54TB Storage Server	84TB Storage Server	Total Storage (TB)	Available Storage (TB)	Total Throughput (Mbps)	Total Avail Throughput (Mbps)
District Office	46	56.17	315	2		108	51.83	2600	2285
Farley Elementary	55	95.39	491	1	1	138	42.61	2600	2109
Fieldstone Middle School	96	99.33	625	1	1	138	38.67	2600	1975
Haverstraw Elementary	56	95.10	464	1	1	138	42.90	2600	2136
High School	121	123.19	785		2	168	44.81	2600	1815
Stoney Point Elementary	45	64.13	335	2		108	43.88	2600	2265
Thiells Elementary	43	77.18	358	2		108	30.82	2600	2242
West Haverstraw Elementary	38	58.51	282	2		108	49.49	2600	2318
Willow Grove Elementary	53	60.41	355	2		108	47.59	2600	2245
District Totals	553	729.40	4010	13	5	1122	392.60	23400	19390

Installation Budget Pricing

Budget pricing has been provided for installation of the cameras, camera network cables along with intercom, intercom master, access control cables, devices and electronic locks. Final installation services for cable and lock

pricing would be provided by Day after an installation quote by at least 3 Day installation partners.

Avigilon Control Center – IP Surveillance Software

Day will provide and install 590 camera connection licenses. Camera connection license can be used on any District server. Camera licenses are not tied to servers or MAC addresses.

Avigilon Software – Avigilon does not license servers, only camera connections per site server collective. Configuration services are included to setup recording for all video streams in the Avigilon database. The Avigilon database is replicated throughout all servers in the Avigilon network. Full viewing and control of the cameras locally is available if the local building is disconnected from the NRCSD network. This database architecture allows for maximum redundancy. No single point of database failure exists as is present in other enterprise video management systems. Systems that have separate directory or authentication servers require that the authentication server always be available. If the authentication server is off-line the end-user will not have access to video in directory server type VMS systems. Avigilon has no separate directory server. Avigilon Mobile Client server application software will be provided and installed on each server provided. This unique server architecture provides maximum PC and mobile client resiliency and uptime with quick server rebuild time whenever needed.

Storage has been calculated for approximately 30 days at 7 frames per/second at the max resolution for each camera. The creation of graphic maps in Avigilon is included in our proposal. Day will import AutoCAD drawings for each building – provided by owner. The maps will be configured to show interactive camera symbols on maps provided.

Each camera that is provided in our proposal will also have a camera symbol added to each respective building map. Right clicking the camera symbol will allow the user to select an option to view live video for each camera.

We will configure three user profiles that can be assigned to users of the Avigilon software. The levels will consist of administrator, intermediate user and operator.

The enterprise Avigilon camera license provides / includes unlimited web and thick client licenses, iPad-iPhone-Android app and user collaboration licensing. Mobile applications are licensed for viewing of multiple streams and recorded video as well as live.

Avigilon Access Control Manager (ACM)

The access control server has been licensed for 80 doors and includes photo badging. Also included in our proposal is the importing of card holders with permissions using an XLS spreadsheet. The spreadsheet will be provided to the school to add names and access permissions. The Avigilon LDAP integration configuration for card holder additions has also been provided. Our proposal also includes, REST, XML and SQL integration licenses for any need future system integration. Services for

integration of these licenses is not included at this time but would be estimate at the time of integration. Day technical staff will work with the District IT staff to coordinate LDAP integration for synchronization of card holders. Existing card holders and their credentials will be imported into the new access control database. Existing access control profiles that define door grouping and schedules will be recreated / duplicated in the new access control database prior to importing existing card holders.

Physical Security Workstations

Day will provide and install one new “photo badging” workstation that would be dedicated to administration of the access control system and the printing of the proximity credentials/ cards. This “photo badging” workstation will be delivered with one double sided badge printer, tripod, light and camera to capture photos. Proximity cards are not included in this proposal. Additional cards can be provided at any time.

The workstation will be provided with Windows 10 Professional, an I7 64 bit processor, 8GB of RAM and a 22” LCD monitor. The new workstation will be connected to the network using existing network jacks at the locations

installed. Day can provide new cabling for a network drop for the workstations if requested.

New Access Control – Exterior Doors Only

We will provide and install a new access control panel and door equipment at 10 access control doors as indicated on attached pricing schedule. Day will provide a new electronic lock at each location. We will provide and install a new CAT6 network drop from the new door controller to the closest IDF closet. Power and control for new door locks will be provided by the new PoE door controller provided at each new or existing door. Electronic latch retraction will use 24VDC not 110 VAC circuits. Ethernet switching is not included in our proposal at this time. Day will provide and install a card reader, electronic lock, new door contact and request to exit motion sensor at the new door location.

Day Automation will upgrade the (42) existing access controlled doors to the Avigilon access control system reusing the existing lock devices, wiring and network connections. Day will remove and replace existing antiquated card reader, door controller with upgraded door controller and card reader. Day will provide and install door contact and “request to exit motion” at each existing access control door location. See ‘table – 2’ for District access control metrics.

Table 2

District Access Control Metrics	Existing Door Location	New Door Location	Access Control Door Totals
District Office	6		6
Farley Elementary	4	1	5
Fieldstone Middle School	5	1	6
Haverstraw Elementary	5	1	6
High School	6	2	8
Stoney Point Elementary	4	1	5
Thiels Elementary	3	2	5
West Haverstraw Elementary	5	1	6
Willow Grove Elementary	4	1	5
District Totals	42	10	52

IP Intercom

Day will provide and install intercom stations with respective access control panel door release relays. Quantities will be provided as indicated in ‘table – 3’. Configuration and storage is included in our proposal to record the video streams from each of the new intercom stations in the new servers provided. Intercom stations provided are SIP compliant and can be registered in an IP phone system. Phone system licensing is excluded at this time. Phone system licensing and programming would be provided by the school district’s phone system provider. See ‘table – 3’ for District intercom metrics.

Table 3

District Intercom Metrics	Intercom Door Station	Intercom Master Station
District Office	2	2
Farley Elementary	1	2
Fieldstone Middle School	1	2
Haverstraw Elementary	1	2
High School	1	2
Stoney Point Elementary	1	2
Thiells Elementary	1	2
West Haverstraw Elementary	1	2
Willow Grove Elementary	1	2
District Totals	10	18

IP Cameras and Installation

Day will provide and install cameras quantities and types as indicated in ‘Table – 4’ below.

For new camera locations, we will install and provide a CAT6 cable from the respective IDF closet to a junction box located within 10’ of the camera mounting location. The camera end of the cable will be terminated with a female RJ45 connector. A 10’ patch cable will be provided and installed from the female jack to the jack on the camera. For exterior cameras, Day will provide and install a surge suppressor between the female demark at the camera and the camera itself. A 12G THHN wire will be installed from the surge suppressor to the closest metal support of the roof truss or support column connected with a ground clamp. Ethernet switching is excluded from our proposal at this time.

Existing cameras that are to be replaced will be provided / installed and connected to existing drop. Day will use the adjacent ceiling tile to install the new camera. The existing camera and ceiling tile will be turned over to the school district. Replacement ceiling tiles are excluded from our proposal. If the school provides new tiles prior to camera replacement Day will install the school provided tile in the existing camera location.

The video feed from one new camera near each access control card reader will be associated with the respective access control door locations such that video events from the respective camera will be attached to the event in the access control database for easy recall of video events associated with a deny, door forced or door prop event.

See ‘table – 4’ for District camera metrics.

Table 4

District Camera Metrics	SMP Interior Surface IR - Type 1	SMP Interior Surface Rugged IR - Type 2	SMP Interior Surface IR - Type 3	SMP Exterior IR Bullet - Type 4	16 MP Pro - Type 5	30 MP Pro - Type 6	Intercom Camera	Total New Cameras	Existing Interior Camera	Existing Exterior Camera	Total Existing Cameras
District Office	10			13			2	25	16	7	23
Farley Elementary	12			14	2	2	1	31	21	5	26
Fieldstone Middle School	22		6	21			1	50	39	8	47
Haverstraw Elementary	8		5	8	3		1	25	21	11	32
High School	46	2	11	17			1	77	25	17	45
Stoney Point Elementary	22			15	1		1	39	4	3	7
Thiels Elementary	12		2	13	2		1	30	7	7	14
West Haverstraw Elementary	13	2		10	1		1	27	5	7	12
Willow Grove Elementary	8			12			1	21	25	8	33
District Totals	153	4	24	123	9	2	10	325	166	73	239

Intelligent IP LED Lighting

Day will provide and install 5 Intelligent IP LED Lights at each school location. The location of the LED lights is estimated at an installation high not to exceed the 1st floor interior ceiling or 15' – whichever is lower. Intelligent IP

LED Lighting would be associated with the nearest camera for activation by the respective cameras analytic.

Intelligent IP LED Lighting would turn on and stay active during the respective cameras analytic trigger event.

Avigilon integrates directly to Raytec Intelligent IP LED Lighting devices. No additional licensing is required or needed for the respective integration. LED lighting locations are to be confirmed. District Office 10 13 2 25 16 7 23

Visitor Management

Day will provide install and configure 9 Visitor Management workstations with LCD monitor and UPS. Day will install and configure EZ-lobby software on each of the 9 workstations. Included for each workstation is (1) Dymo 450 B & W printer, (1) 250 pack of badges, (1) Logitech Orbit PTZ Web Cam, (1) SnapShell license scanner, 1st year of sex offender screening lookup and the EZ-lobby software license. Each workstation shall have its own database included. A centralized database SQL server and software for centralizing this database is excluded in our proposal. The SQL server would be provided by the school districts education site license and run in their existing SQL server.

Training

Our proposal includes two – (4) hour training sessions. Day will also provide video on demand training services offered through the Avigilon website training portal. No additional cost is required for access to the Avigilon training portal.

OGS State Contract

- The system shall be provided in compliance with Day Automation's NYS OGS Security and Solutions Contract PT-64059. The company's NYS OGS Contract commenced on October 3, 2008 and is valid through August 26, 2020.
- Day Automation shall be a prime contractor working directly for North Rockland School District and shall be provided under the auspices of NYS GML-104 which allows "authorized users" to purchase of Building Security Systems technology under the NYS OGS contract.

Clarifications and Exclusions:

- All required system programming, testing, and system commissioning performed by Day Automation.
- All cable furnished and installed by Day Automation.
- All equipment furnished & installed by Day Automation.
- This proposal includes labor for pointing and focusing only new cameras
- All required 120 VAC circuits for system power requirements will be installed by Day from existing circuit breaker panel. No new 120VAC power panels are included.
- All work to be performed during regular business hours (7:00AM to 3:30PM, Monday – Friday, excluding holidays).
- Day Automation technicians assume either free access or escorted access to all required areas of the facility during the installation.
- Includes 1 year warranty, parts, Engineering, Project management and training on all new equipment. Warranty does not apply to existing equipment/cable.
- Prices quoted herein will be honored for a period of 60 days.
- The customer is responsible for any permits, fees as required.
- All network connectivity and static IP addresses will be provided by the customer.

System Engineering to include the following:

- Warranty, close-out documentation.
- O&M's.

Project management / Field Implementation:

- Coordinate the implementation of the project with the customer.
- Programming.
- User training as indicated.

PURCHASE PLAN & ALLOCATION OF FUND

SSBA Budget Category	Allocation
School Connectivity	\$2,601,650.29
Classroom Technology	
Replace/Construct pre-K program	
High-Tech Security Features	\$1,900,073
Unallocated Funds	\$701,756.52
Totals:	\$5,294,721.00

PROFESSIONAL DEVELOPMENT

The Haverstraw-Stony Point Central School District views ongoing professional development as an essential component for every staff member in the District, both instructional and administrative. The SSBA funding does not support Professional Development, however, the District will provide productive and effective professional development to support all District technology initiatives. All staff will have opportunities to learn about the latest in new and emerging technologies that support teaching and learning as well as to increase efficiency of administrative functions.

District Technology professional development goals include:

- Participation in the Lower Hudson Regional Information Center (LHRIC) Model Schools Program which offers various instructional technology workshops.
- District Tech staff provides one to one or small group training on GAFE, District systems and infrastructure.
- Use of Superintendent’s Conference Days, workshops, tutorials, webinars, lunch sessions, onetoone sessions, before and after school sessions and faculty meetings to provide technology training to teachers and administrators on resources and curriculum specific technologies as well as professional development for all staff members. Session facilitators include vendors, consultants, the LHRIC’s instructional technology trainers and District staff.
- Parents and community are provided with educationally relevant technology

information via physical meetings, social media and through an online presence within District cloud based platforms.

Our investment in School Connectivity and infrastructure will ensure ubiquitous access to high speed internet access and rich content for teaching and learning. Teacher and students will be able to expand the learning outside the classroom via anytime and anywhere access to instructional materials.

SUSTAINABILITY

The Smart School Schools Investment Plan funds will be sustained with additional investments that the District will make through E-rate funding as well as through our yearly district budget. We continually monitor and evaluate infrastructure and equipment replacement. Technology support for District equipment is also contracted with the LHRIC. – Lower Hudson Regional Information Center.

In order to sustain our investment in instructional technology and school connectivity infrastructure our district will evaluate and engage in other financial instruments such as IPAs with approval by NYSED and BOCES as well as grant and private funding when available.

INVESTMENT PLAN TIMELINE

Currently the Smart Schools Phase 1 project is underway and will be completed sometime in the Spring of 2018. The Phase 2 project is being submitted and with a goal of work being done in the summer of 2018.

REFERENCES:

To learn more about the Smart Bond Act Guidelines go to:

http://www.p12.nysed.gov/mgtserv/smart_schools/home.html

<http://www.p12.nysed.gov/facplan/SmartSchoolsBondAct.html>