Fairfield Board of Education Proposed Capital Non-Recurring Projects 2016 - 2017

Central Office IT Server Room renovation

Dwight School unsafe stairs up to playground

Fairfield Ludlowe High School boilers

Systemwide Multimedia CAT 6 low voltage

December 8, 2015

Dear Board of Education Members:

This booklet provides an overview and backup material for all of our proposed 2016-2017 Capital Non-Recurring Projects. The format is based on the "14 points" document used in Fairfield and from many previous public meetings where this information has often been requested.

Two of these projects, the Dwight Elementary School playground retaining wall and stairs, and the Fairfield Ludlowe High School boilers, have long been part of the long-term facilities planning updates we have provided to the Board and the Town over the past five years. The third, Central Office Administration Information Technology server room project, has increasingly become a problem with very old equipment, HVAC equipment issues and fire suppression equipment issues. The fourth project is for the upgrading of our security infrastructure (phase two) in all schools in alignment with the Fairfield Police Department's study of our buildings. The fifth and final project in this funding request is for the Systemwide Information Technology upgrades for the multimedia projectors at the high schools and middle schools that need upgrades for CAT 6 low voltage wiring and electrical power quad outlets.

Each project request includes:

1. Justification and background information.

2. A cost estimate that brings together information from previous projects, verbal quotations, and/or written proposals.

3. Photographs of projects in existing conditions and, in most cases, photographs showing new conditions from previous projects to provide a side-by-side comparison.

We hope you find this information helpful and we are confident it will answer many of your questions as we begin the budget discussions. Thank you for your continued support.

Sincerely,

David G. Title

Fairfield Public Schools
2016-2017
Capital Non-Recurring Projects

Table of Contents

Central Office Administration

Information Technology Server Room Renovation $ 200,000

Background: The information technology server room is located at 501 Kings Highway East and is a part of the central office administration. This server room is the central hub for the school system computer network or wide area network. It supports major functions of the district including email and Infinite Campus. This server room is original to the renovation of 2002. The current configuration of the space is now 13 years old and is overcrowded and the HVAC system and fire suppression system are out of compliance with regulations. This request is for funding the renovation of the space, the installation of new air-conditioning system, and the installation of a new fire suppression system, relocation of equipment as necessary to complete the task to ensure all systems are rated and specified for an information technology server room.

Purpose & Justification: The air conditioning system is undersized for the equipment and scope of the current configuration within the server room. In the past year, the air conditioning system has failed on multiple occasions, forcing shut down of critical systems, including access to the internet for the schools.

Detailed Description: This expenditure would cover the total costs for the relocation of the existing phone equipment, demolition and removal of an existing wall, demolition and removal of the old air conditioning systems, demolition and removal of the existing fire suppression system, and the installation of new air conditioning and fire suppression systems sized appropriate for the space.

Estimated Cost: The cost of this funding request is $200,000. This number is based on estimates provided by vanZelm Engineers, a professional licensed engineering firm.

Long Range Costs: New air conditioning equipment and new fire suppression equipment will reduce maintenance costs versus the old equipment as well as produce energy savings through the use of higher efficiency units. We anticipate the life of this upgrade to be 25 years on the air conditioning equipment and 12 years on the fire suppression equipment. Service agreement for this equipment will continue as part of the preventative maintenance program for this server room.

Demand on Existing Facilities: This project would reduce the loss of instructional and administrative time and productivity by reducing the frequency of air conditioning failures necessitating the shutdown of critical information technology systems.

Security, Safety and Loss Control: This project would enhance safety and loss control by drastically reducing the frequency of failure to the server room. It will greatly reduce the risk associated with excessive heat to expensive server and switch equipment.

Environmental Considerations: This project would greatly reduce greenhouse gases and emissions released into the environment with newer energy efficient equipment. Clean running equipment would improve the conditions for the staff and users located around this server room.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: Approval of this funding will allow completion of the work as soon as possible to avert another equipment failure.

Other Considerations: The work will be bid out by the Town Purchasing Department and will be performed by outside contractors.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will delay this needed replacement and further delay other similar projects scheduled in the BOE future planning.

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Central Office Administration

Information Technology Renovation Project **$ 200,000**

Details

Licensed contractor to provide labor and
materials Prepared by: van Zelm Engineers. Inc.

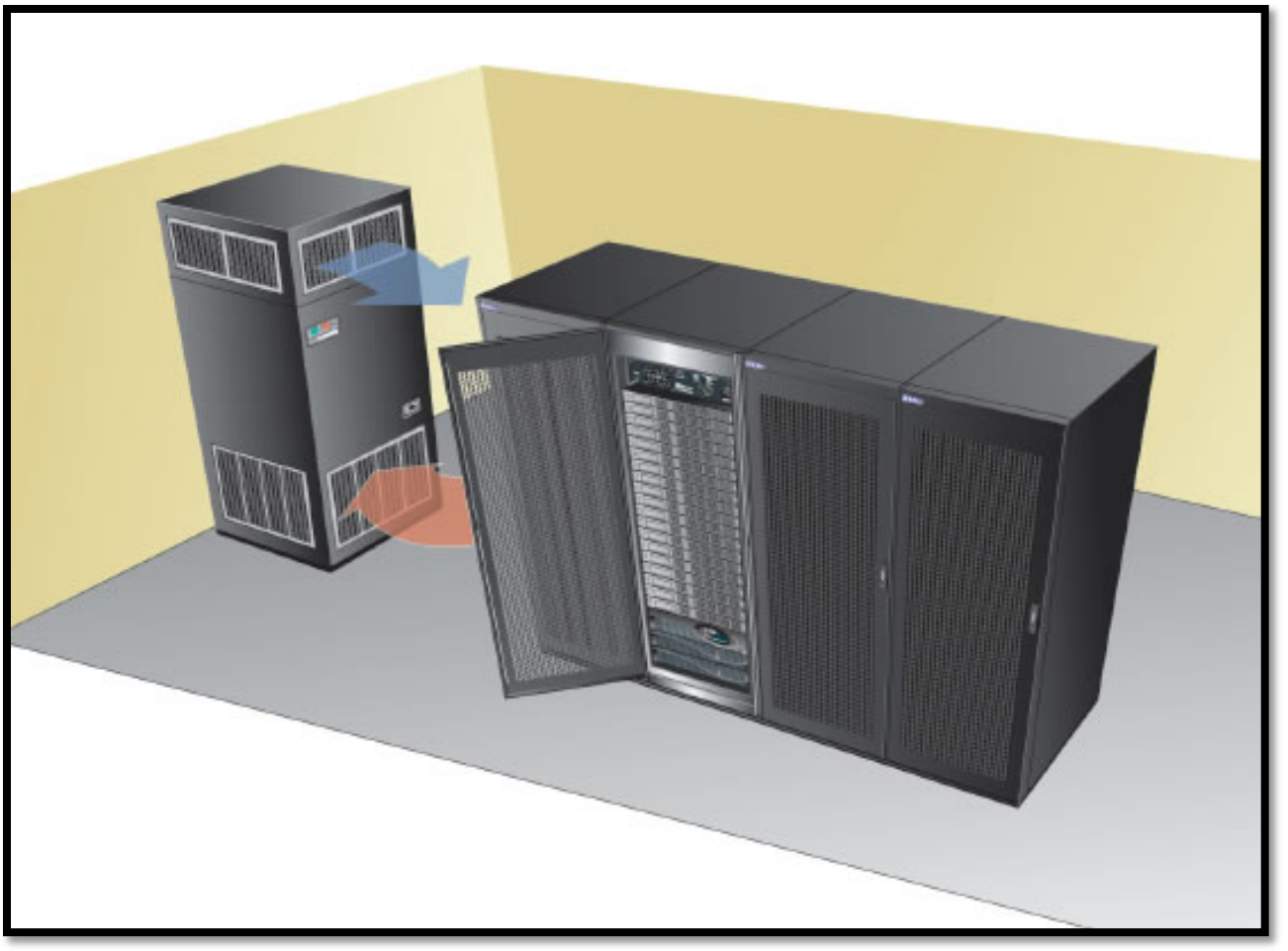
Breakdown:

Shut down existing systems and provide I.T. Server Equipment protection within the server room in preparation for all construction work.
Demolition of existing mechanical air conditioning systems within the server room and on the rooftop.
Demolition of existing fire suppression system.
Demolition of existing wall, door and frame, and ceiling system.
Relocation of existing telephone system.
Furnish and install new Liebert air conditioning system.
Furnish and install new Stuart White fire suppression system.
Provide patching and matching of vinyl floor tile.
Provide patching and matching of drywall wall system.
Furnish and install new lighting with appropriate switches for new room configuration.
Furnish and install new acoustical ceiling system.
Furnish and install new painting of room.
Provide new electrical systems to meet the needs and specifications of new equipment in the server room and on the rooftop.
Provide new controls, control wiring, and special sequencing for all new equipment.
Roofing work to be coordinated with a licensed roofing contractor for any and all penetrations.
Start-up and testing of equipment.
One year warranty.
Permits as required.

Total **$ 200,000**

Existing information technology server room depicting cramped conditions

Temporary cooling unit



New I.T. server room with Liebert cooling system

Dwight Elementary School

Playground Retaining Wall and Stairs $ 100,000

Background: The existing playground is in excellent condition. The area leading up to the playground is in need of repair/replacement and has become a safety issue. Specifically, the wood timber stairs filled with wood chips near the top of the stair section are not appropriate for small children and have become a safety issue. The retaining wall needs to be expanded across the right side of the playground barrier to keep the wood fiber chips contained within the playground fall zone for the children. The washout occurring on a regular basis is making both of these items a safety issue. This request is for funding the extension of the retaining wall system and the installation of new concrete stairs.

Purpose & Justification: The condition of the wood timber stairs filled with wood chips near the top of the playground stair section is deteriorating and is not keeping the walk zone safe for students or staff to access the playground area. It is also a concern when leaving the playground area. The old design of wood timbers filled with wood fiber chips is no longer appropriate for walk zones while climbing up and down stairs. The retaining wall extension will also help with the wash out of wood fiber chips down the hill and will keep the area contained for the required fall zone. Renovations of this type will prevent complete failure of the fall zone system and the injuries to students and/or staff who use this playground on a daily basis.

Detailed Description: This expenditure would cover the total cost of the project for both areas. This would include all labor and material, soil testing, monitoring, the cutting and removal of the old wood stair and wood fiber chips system and the excavation for the retaining wall work. These funds would also cover design, bidding and construction administration costs for a professional licensed architect as well as a contingency for unforeseen conditions that might be uncovered during the construction activities.

Estimated Cost: The cost of this funding request is $100,000. This number is based on similar replacement projects undertaken in the immediate area of the Town of Fairfield and estimates provided by the professional licensed architect and a licensed contractor.

Long Range Costs: This retaining wall work and new concrete stair system is expected to last 30 years. Long-range costs would only relate to general preventative maintenance.

Demand on Existing Facilities: This project would reduce the maintenance costs due to the new system working better than the existing system, fewer problems with wood fiber chips washing out and needing to be replenished and, more importantly, will reduce slips and falls by students and staff walking up and down the stairs.

Security, Safety and Loss Control: This project would enhance safety and loss control by drastically reducing the risk of injury to students and staff using the playground and access way to the playground.

Environmental Considerations: Not applicable.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: The schedule is to have all this work done in the summer of 2016.

Other Considerations: The work will be bid out by the Town Purchasing Department and will be performed by outside contractors.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will delay this needed replacement and further delay other similar projects scheduled in the BOE future planning. This could increase the risk of injury to students and staff related to the walk zone and fall zone requirements per local and state codes.

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Dwight Elementary School

Playground Retaining Wall and Stairs **$ 100,000**

Details

Licensed contractor to provide labor and materials
Prepared by: Philip Cerrone, Architect and Frank Capasso and Son's Inc., Contractor

Breakdown:

Stairs

Demolish and remove existing wood timber stair sections.
Remove and relocate all existing wood fiber chips within the wood timber stair sections and evenly spread them around the existing playground fall zones.
Dig out existing grade and prepare area for wood forms to pour new concrete stair sections per drawings and specifications.
Provide new sand finish and rough troweling for gripping.
Provide proper markings on stair tread nosings for safety.

Retaining Wall

Excavate and remove existing grade to prepare area for new concrete footings and new stone work retaining wall.
Remove and relocate all existing wood fiber chips within the wood timber stair sections and evenly spread them around the existing playground fall zones.
Dig out existing grade and prepare area for wood forms to pour new concrete footing section per drawings and specifications to accept a new stone work retaining wall.

Total **$ 100,000**

Dwight Elementary School playground old wood framed stairs filled with wood fiber chips

Dwight Elementary School playground wood fiber chips washing down stairs causing unsafe conditions

New concrete stairs at Fairfield Ludlowe High School

Washed out area at Dwight Elementary School playground

New 2015 retaining wall at RLMS

Fairfield Ludlowe High School

Boiler Replacement $ 620,000

Background: Fairfield Ludlowe High School houses three boilers of which two are original from 1971 and are at the end of their useful lives. These boilers are dual fuel and produce high steam to heat the school building. The boilers are in need of replacement due to numerous repairs and fixes and the number of hours and run time over the past 45 years. This request is for funding the replacement of the two existing 1971 boilers with the installation of two new high-efficiency boilers with dual fuel capabilities.

Purpose & Justification: The condition of the existing boilers is poor and continues to require high maintenance on a regular basis. New boilers would provide a much higher efficiency rating for the school and prevent emergency boiler failure during a peak cold weather period.

Detailed Description: This expenditure would cover the total costs for demolition and removal of old boilers, asbestos abatement, new burners, associated piping and peripheral components and purchase and installation of two new boilers.

Estimated Cost: The cost of this funding request is $620,000. This number is based on similar boiler replacement projects undertaken in the system and estimates provided by licensed contractors. This includes professional engineering specifications and other associated work for obtaining bids. This project funding request also includes the cost for crane services to lift the new boilers over the school building and into the courtyard to access the boiler room.

Long Range Costs: Boiler replacements will reduce maintenance costs on the old equipment as well as produce energy savings through the use of higher efficiency units. We anticipate the life of this upgrade to be 30+ years. Energy consumption based on prior installations indicates a 20-30% decrease after replacement. At today's fuel prices, this equates to an annual savings of $5,400-8,100.

Demand on Existing Facilities: This project would reduce the maintenance costs of older boiler repairs and increase energy efficiency in the school building.

Security, Safety and Loss Control: This project would enhance safety and loss control by drastically reducing the risk of boiler failure during a peak cold weather period.

Environmental Considerations: This project would greatly reduce the hazardous materials (asbestos) in the boiler room area. Clean-burning boilers would improve emissions from the boilers into the air.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: Approval of this funding will allow completion of the work before the next heating season.

Other Considerations: The work will be bid out by the Town Purchasing Department and will be performed by outside licensed contractors.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will delay this needed replacement and further delay other similar projects scheduled in the BOE future planning and increase the risk of a major boiler failure during a peak cold weather period.

Fairfield Ludlowe High School

Boiler Replacement **$ 620,000**

Details

Licensed contractor to provide labor and materials
Prepared by: Connecticut Combustion Company

Breakdown:

Disconnect existing piping, electrical and breaching from existing flue.
Remove existing Power Flame burner from boilers and all related piping.
Cut up and remove from premises existing boilers.
Furnish and install two (2) new Cleaver Brooks or Easco steam generating boilers with dual fuel fired burners.
Mount boilers on new structural steel beam supports.

Boiler to be equipped with the following:

a. new steam controls
b. two low water cut-off valves
c. relief valves
d. man hole covers
e. six hand hole covers
f. gauge glass with tricocks
g. 12 gauge boiler tubes
h. burner mounting plate
I. saddles which boiler will rest on to match height of other boilers

Furnish and install two (2) 12” Metal-Fab PIC boiler flues.
Furnish and install two (2) Power Flame burners onto new boilers.
Complete refractory work for front wall of burner mounting plate.
Complete tie-in of oil and gas piping from existing lines into new burners, mounted onto the new boilers.
Install new safety and operating controls for the boilers including piping and wiring.
Wiring will be tied into existing service in building.
Pipe new relief valves to 6" above floor.
Pipe in gauge glass and water columns.
Fabricate and install breeching transition pieces to tie new boilers into existing breechings.
Furnish, weld and install supply and return piping tying into existing lines.
Pipe in feed water lines tying into existing service.
Boil out boiler prior to putting into service.
Start- up burners and set up.

This installation is a total turn-key job.
Pricing is based on the project being prevailing wage.
Crane and rigging of equipment from parking lot into courtyard.
One year warranty.
Permits as required.
Asbestos abatement of mechanical room, if needed.

Total **$ 620,000**

FLHS 1971 boilers showing age, rusting and leaks

FWHS new 2015 Easco boiler

Proposed Security Infrastructure Upgrades

Systemwide $ 2,020,692

Background: Following the Sandy Hook Elementary School tragedy, the Fairfield Police Department along with the Central Office Administration conducted a security assessment of all the Fairfield Public School buildings. Based on this assessment the Fairfield Police Department recommended several improvements to the Fairfield Public Schools' security infrastructure. Some of the low cost items on this list have been implemented with operating budget funds over the past two years.

Purpose & Justification: The purpose of this funding request is to make recommended security infrastructure improvements as recommended by the Fairfield Police Department. These recommended improvements will enhance the security and safety at our facilities for our students and staff. The scope of this work is too great to be handled within the BOE operating budget.

Detailed Description: The expenditure would cover the total costs for multiple security improvements to our facilities. These include security film on windows, camera system improvements, upgrades to public address systems, protective secure fencing, door hardware upgrades, visitor management systems, and other operational security improvements as detailed in the accompanying spreadsheet. Details about these specific improvements cannot be shared in public upon the advice of the Fairfield Police Department.

Estimated Cost: The cost of this funding request is $2,020,692. Estimates were provided by multiple professional licensed contractors/vendors for the different projects in this funding request.

Long Range Costs: Most of the projects listed do not have added long-term costs associated with their implementation. However, two of the projects (RAPTOR and BeSafe) would incur yearly licensing renewal fees. These fees would be accounted for in the Fairfield Public Schools "Security Account" line as an operational expense.
The protective secure fencing at the portable classroom locations and annex building connectors will require yearly maintenance and repairs until the portables are removed. These fees would be accounted for in the Fairfield Public Schools "Building Envelope" line as a preventative maintenance expense. If the school system's security account is maintained at current levels, no increase will be needed to maintain this equipment on an annual basis.

Demand on Existing Facilities: These projects will not add any additional demand to the existing facilities.

Security, Safety and Loss Control: This project would greatly enhance security, safety and loss control by improving monitoring capabilities, hardening of our facilities against unauthorized entry, and enhancing communications during emergencies.

Environmental Considerations: None

Funding, Financing & SDE Reimbursement: These projects would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities. Grant funding through the CT Department of Emergency Management and Homeland Security "School Security Competitive Grant Program" (SSCGP) was applied for but not received in 2014. Future grants may be available to offset some of these costs.

Schedule, Phasing & Timing: Approval of this funding will allow the implementation of these projects over the next two years as identified in the Fairfield Public Schools Facilities Plan "Waterfall Schedule" -- half in 2015-2016 and half in 2016-2017.

Other Considerations: Town of Fairfield Purchasing Department will award the work per the guidelines and will be performed by outside contractors/vendors.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will require continuing with the present security and safety infrastructure and its limitations.

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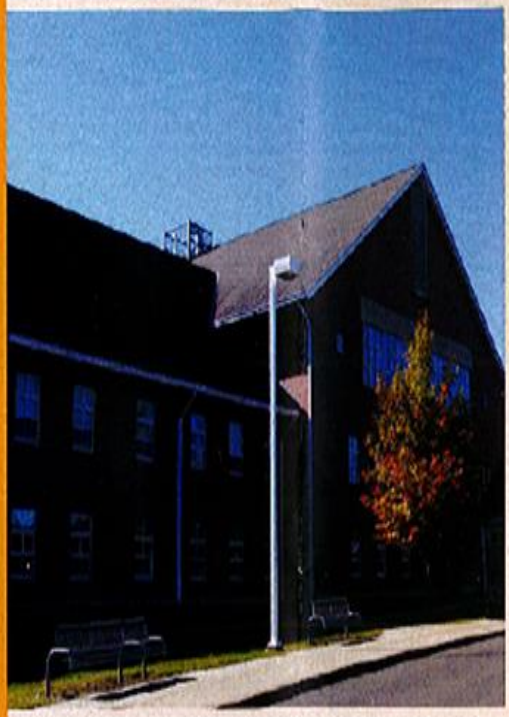
PROPOSED SECURITY INFRASTRUCTURE UPGRADES

YEAR 2 REQUEST

Additional Intrusion Panel Installation (additional to the 2015-16 funding previously approved)	$500,000
Migration to IP based Security Camera System including interior and exterior cameras for full coverage (additional to the 2015-16 funding previously approved)	$1,352,677
Bollards at Entries (deferred from 2015-16 funding request)	$78,015
Door Hardware Upgrades for additional 'Safe Rooms' (deferred from 2015-16 funding request)	$90,000
TOTAL BOND REQUEST	**$2,020,692**



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NEWS & UPDATES

Software to keep track of Fort Lee High School visitors 5/1/2015

ID required to enter Hortonville schools 4/27/2015

SAFER CHECK-IN: Clarksville Schools gets donation for new security system 4/13/2015

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SCHOOL VISITOR SOFTWARE, VISITOR MANAGEMENT SOFTWARE AND VISITOR MANAGEMENT SYSTEMS FOR K-12 SCHOOLS AND COMMUNITY FACILITIES.

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Security Solutions Division

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Systemwide

Information Technology and Electrical Upgrades $ 230,000

Background: The existing multimedia projectors at the schools, installed before 2012, require data cabling to connect with a centralized management server located at the central office. This system allows the district personnel to monitor projector performance; identify bulbs and other consumables that are in need of replacement and allow remote control of the projectors to enable technicians to adjust projectors without the need to visit the classroom. In addition, the district has been migrating to wireless projection using various computing devices both by teachers and students to share and discuss work. In the schools with older projection installations, only two outlets were installed. In order to support the wireless projection devices, which also require a power source, additional outlets are required to put those rooms on par with other classrooms with more recent installation.

Purpose & Justification: All teachers and students need access to technology in their classrooms to facilitate instruction and delivery of curriculum. Remote management of the projectors maximizes the efficiency of the support staff and the uptime of the equipment for teachers.

Detailed Description: The expenditure would cover the cost for the installation of the low voltage cabling and installation of the additional dual outlet primarily in the secondary schools. The estimate is 625 units requiring the data cabling at an estimate of $275 per room for a total of $171,875. The power outlets are needed in 175 classrooms at an estimated $275 each for $48,125. The grand total is $ 220,000.

Estimated Cost: The cost of this funding request is $230,000 which includes the engineering professional for documents for bidding purposes.

Long Range Costs: This project has no long range cost other than preventative maintenance to monitor systems and to prepare for any damaged cable or electrical outlet. This new work is expected to last 15 years.

Demand on Existing Facilities: This project would facilitate remote control of the projectors, maximizing technician efficiency and limiting downtime of the projection systems in the classrooms.

Security, Safety and Loss Control: This project would enable proactive action regarding replacing projection bulbs.

Environmental Considerations: Not applicable.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: This work would be planned as a summer project to be prepared for the new school year.

Other Considerations: The work will be bid out by the Town Purchasing Department and will be performed by outside contractors.

Alternates to the Request: The alternate to this request is to do nothing which creates inequity between classrooms for access to projection technology systems.

Systemwide

Information Technology and Electrical Upgrades **$ 230,000**

Details

Licensed contractor to provide labor and materials
Prepared by: Yankee Electric and Auto Home Commercial Companies

Scope:
To upgrade existing Information Technology conditions related to the multimedia projectors by providing electrical power quad outlets next to all multimedia projectors.

Breakdown:

Electrical
Investigate school building electrical panel locations for spare breakers and feeders for new power requirements.
Remove acoustical ceiling pads to run new power wiring.
Provide material and labor for new quad outlets in all classrooms with multimedia projectors.
Run electrical power lines to main electrical panel.
Label and mark breaker locations clearly with marker.
Start-up and testing of units.
One year warranty.
Permits as required.

Low Voltage
Investigate school building MDF closet location for CAT 6 wiring integration.
Remove acoustical ceiling pads to run new low voltage wiring.
Provide material and labor for new CAT 6 wiring integration in all classrooms with multimedia Projector systems.
Run low voltage wiring lines to MDF closet.
Label and mark breaker locations clearly with marker.
Start-up and testing of units.
One year warranty.
Permits as required.

$ 220,000

Licensed professional engineer to provide labor and materials
Prepared by: van Zelm Engineers, Inc.

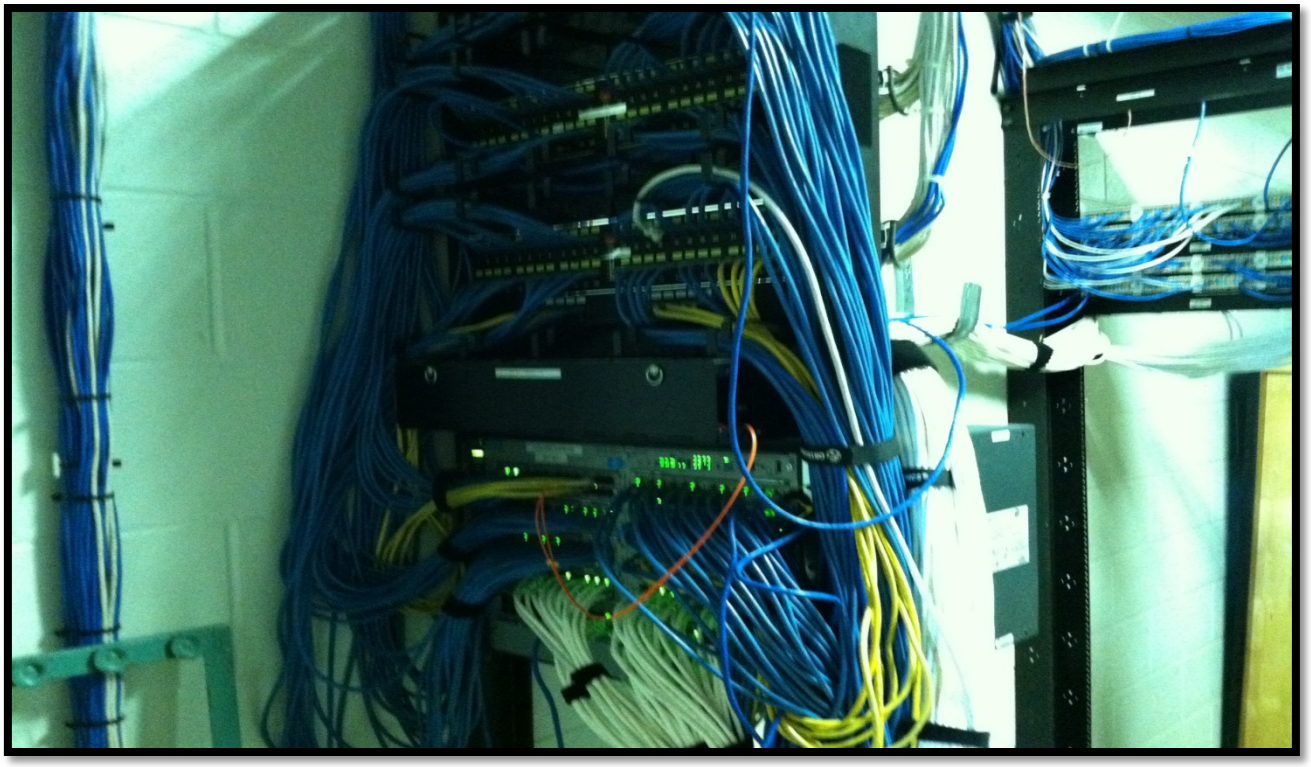
Breakdown:

Provide professional engineering drawings and specifications for information technology low voltage CAT 6 wiring and electrical power quad outlets for school classrooms with multimedia projector systems.

$ 10,000

Total **$ 230,000**

Multimedia projector CAT 6 low voltage



CAT 6 low voltage rack cabinet

Electrical power quad outlet