

Fairfield Board of Education Proposed Capital Non-Recurring Projects 2014 - 2015



December 10, 2013

Dear Board of Education Members:

For our 2014-2015 Capital Non-Recurring Projects we provide an overview of all the proposed projects in this booklet format. We hope that this information and format will provide sufficient backup material for every request. The format is based on the "14 points" document used in Fairfield and from many public meetings where this information has been requested.

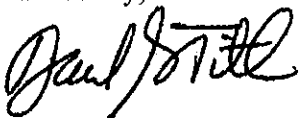
Two of these projects, the Mill Hill partial roof replacement and the North Stratfield boilers, have long been part of the facilities planning updates we have provided to the Board and the Town over the past two years. The third project, the Warde boiler, was originally scheduled for replacement in 2016-2017. However, that boiler recently failed earlier than anticipated and a temporary patch is in place to make it through this winter. Therefore, we have moved the funding request to 2014-2015.

Each project request includes:

1. Justification and background information.
2. Cost proposal 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,

A handwritten signature in black ink, appearing to read "David G. Title". The signature is stylized with a large, looped "D" and a cursive "Title".

David G. Title

Fairfield Public Schools
Capital Non-Recurring Project Overview 2014-2015

<u>Location</u>	<u>Project</u>	<u>Estimated Cost</u>	<u>Page</u>
Mill Hill Elementary	Partial Roof Replacement	\$ 461,614	1
North Stratfield Elementary	Replace two 1964 boilers	364,652	12
Fairfield Warde High School	Replace one 1971 boiler	<u>152,500</u>	18
Total		\$ 978,766	

Mill Hill Elementary School

Partial Roof Replacement

\$ 461,614

Background: Four roof areas are at the end of their useful lives and in need of replacement. The roofs are original to the 1991 installation and are out of warranty as of 2001. This request is for funding the replacement of these roofs.

Purpose & Justification: The condition of these roof areas is declining and leaks are increasing in frequency and severity. Replacement of these roofs now will prevent the need to replace them as an emergency thus preventing disruption to the school's learning environment.

Detailed Description: The expenditure would cover the total cost and removal of the four roof areas down to the existing roof deck and installation of a new roofing system. These funds would also cover design, bidding and construction administration costs 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 \$461,614. This number is based on similar replacement projects undertaken in the system and estimates provided by contractors.

Long Range Costs: Roof replacements will reduce maintenance costs on the old roofs as well as produce energy savings through the use of a better insulated roof system. This roof replacement is part of the Fairfield Public Schools Facilities Plan 2011-2015 and the anticipated life of this upgrade is 20+ years.

Demand on Existing Facilities: This project would reduce the maintenance costs for roof repairs and increase energy efficiency in the building.

Security, Safety and Loss Control: This project would enhance safety and loss control by drastically reducing the risk of a roof failure while school is in session.

Environmental Considerations: This project would greatly reduce greenhouse gases by increasing the energy efficiency of the building thus reducing energy consumption.

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 eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: The schedule is to have work done this summer.

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.

Mill Hill Elementary School

Partial Roof Replacement

\$ 461,614.00

Details

Licensed contractor to provide labor and materials
Tecta America

Breakdown:

Set-up safety for our associates to perform their scope of work, and to protect the occupants of the property.

Remove the existing roofing system down to the existing metal deck.

Confirm and/or secure the existing metal deck per Factory Mutual guidelines 1-28 specifications.

Install new pressure treated wood blocking to the height of the new perimeter edges.

Install new Polyisocyanurate insulation including 1/4" per foot tapered system with an average R-25 value to be in compliance with 2014 ASHRAE guidelines.

Install new two ply SBS Modified Bitumen roofing membrane system in cold applied adhesive with a granulated cap sheet. (Roofing system meets the current code for uplift pressures - FM 1-90 approved system.)

Install all flashings per manufacturer's specification.

Remove and replace existing drain bowl assemblies.

Install new extruded metal edges with Kynar coated color cover plate that has been pre tested and approved per ANSI -SPRI ES-1 specifications. (Color will be selected by owner from standard color selections.)

Install new expansion joints to replace existing.

Fabricate and install new counter flashings as needed for proper termination.

Clean up and dispose of all debris from the above scope of work.

Provide owner with a 20 year No Dollar Limit (NDL) warranty that includes the cost of both labor and material to repair any leaks or material failures during the warranty period.

\$ 424,964.00

Breakdown:

Hoffmann Architects will provide the following professional services related to the scope of work described in this proposal:

Review original Contract Documents and previous reports as such documents relate to conditions described in the Scope of Work and are supplied to Hoffmann Architects by the Town of Fairfield Public Schools.

Visit the site to verify existing conditions and construction details. Coordinate with a Contractor retained by The Town of Fairfield Public Schools to perform exploratory openings so as to examine concealed conditions.

Based upon the results of Hoffmann Architects' field verification activities and the established scope of work, provide a proposed roof replacement system and scope of work for review and approval by the Town of Fairfield Public Schools.

Meet with the Office of School Facilities for a pre-review evaluation meeting to review requirements for submission of the project.

Based on the agreed upon scope of work, prepare Contract Documents consisting of drawings and specifications, setting forth in detail the requirements for construction of the project.

Meet with the Office of School Facilities to review the 100% Contract Documents (Plan Completion Test) for comments and approval.

Respond to Office of School Facilities comments as required.

Assist in the preparation of the necessary bidding information, bidding forms, conditions of the Contract and Form of Agreement between Owner and Contractor.

Assist the Town of Fairfield Public Schools in obtaining bids.

Prepare an agenda for a pre-bid conference at the site.

Conduct a pre-bid conference at the site.

Prepare minutes from the pre-bid conference.

Respond to contractor questions and prepare addenda, as necessary.

Assist the Town of Fairfield Public Schools in evaluating bids and in awarding construction contract.

Conduct a meeting with a representative from the Town of Fairfield Public Schools and the Contractor prior to the commencement of the work, to review the Contractor's proposal for compliance with the requirements of the Contract Documents.

Review and take appropriate action on Contractor's submittals such as shop drawings, product data and samples, to establish their conformance with the design concept expressed in the Contract Documents; forward to the Town of Fairfield Public Schools, for review and record, written warranties and related documents required by the Contract Documents and assembled by the Contractor.

Visit the site four (4) times during construction to become familiar with the progress and quality of work and to determine if the work being performed is in general compliance with the Contract Documents.

Conduct meetings in conjunction with site visits to assess the progress of the work. Prepare field observation reports following site visits to document progress and quality of the Contractor's work.

Authorize minor changes in the work if they are necessary and do not involve adjustment to the contract sum or extension of the contract time.

Review and certify amounts due the Contractor.

Visit the site to develop a punch list and again to conduct a final inspection with the manufacturer's representative.

Determine the date of final completion.

Certify Contractor's requisition for Final Payment based upon the final inspection indicating the work is in general compliance with the requirements of the Contract Documents.

\$ 36,650.00

Total

\$ 461,614.00



Old 1991 roof system showing failures





Roof membrane failures and patches around skylight





More roof patches and ponding of water failures



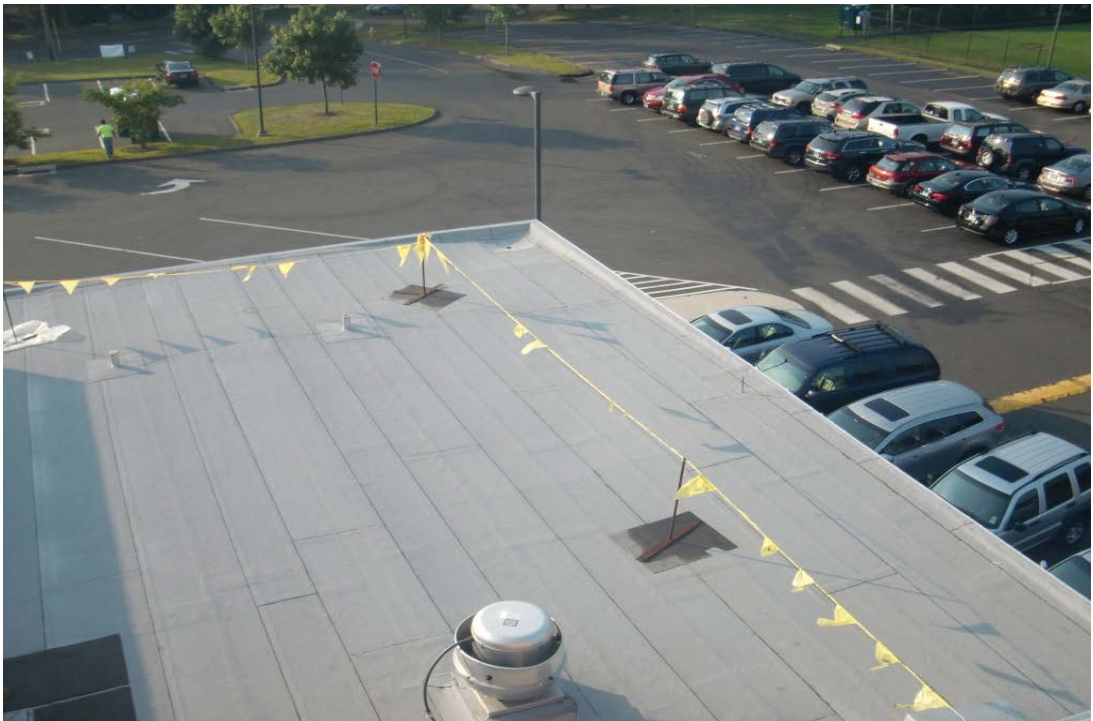


More roof patches and corner patches failures





New 2013 roof system at Fairfield Warde High School





New 2013 roof system at Fairfield Warde High School



North Stratfield Elementary School

Boiler Replacement

\$ 364,652

Background: The boilers to be replaced are original from 1964 and are well into their useful lives. This request is for funding the replacement of both existing boilers with new, dual fuel, higher efficiency Viessman Boilers.

Purpose & Justification: The condition of the boilers is poor and new boilers would provide a much higher efficiency rating for the school building and prevent emergency boiler failure.

Detailed Description: The 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 \$364,652. This number is based on similar boiler replacement projects undertaken in the system and estimates provided by contractors. This includes abatement and air sampling consultant/monitoring.

Long Range Costs: Boiler replacements will reduce maintenance costs on the old as well as produce energy savings through the use of higher efficiency units. We anticipate the life of this upgrade is 30+ years.

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

North Stratfield Elementary School

Boiler Replacement

\$ 364,652.00

Details

Licensed contractor to provide labor and materials
Controlled Air, Inc.

Breakdown:

Disconnect existing piping, electrical and flue.
Asbestos abatement of mechanical room.
Mechanical demolition to remove existing boiler, pumps and tanks.
Mount boilers on new concrete pads.
Furnish and install two (2) new Viessman non-condensing boilers with dual fuel burner.
Demo old flue and cap at chimney.
Furnish and install two (2) 12" Metal-Fab PIC boiler flues. New flues to go through roof.
Install two (2) expansion tanks and one (1) air separator.
Furnish and install two (2) primary pumps and connect to existing piping.
Furnish and install VFDs on primary pumps.
Furnish and install new oil booster pumps and connect to existing oil piping.
Furnish and install one (1) A.O. Smith hot water heater with auxiliary water storage tank and connect to existing piping.
Gas piping to new boiler units. Includes new regulators.
Hot water piping from new boilers and connect to existing 6" header/Mains. All piping 3" and larger to be welded steel.
Piping insulation on new, existing, and abated pipe.
Controls and control wiring; based on Johnson Controls.
Electrical as required. Based on tying into existing boiler and pump feeds.
Roofing work for two new boiler flues through roof.
Provide core boring through concrete roof for flue.
Structural steel as required for roof penetrations.
Rigging of equipment.
Start-up and testing of units.
One year warranty.
Permits as required.

Total

\$ 364,652.00



Old 1964 boilers showing age and leaks





Notice oil catching mat and rusting





New 2012 boilers at Dwight Elementary School





Close up of boiler at Dwight Elementary School

Fairfield Warde High School

Boiler Replacement

\$ 152,500

Background: The boiler to be replaced is original from 1971 and is well into its useful life. This request is for funding the replacement of one existing boiler with a new, dual fuel, higher efficiency Easco Boiler. This boiler replacement was scheduled for 2016-2017. This past year it failed inspection and cannot be fired. We were able to provide a \$20,000.00 temporary fix to get us through the winter.

Purpose & Justification: The condition of the boiler is poor, failed inspection, and a new boiler would provide a much higher efficiency rating for the school building and prevent emergency boiler failure.

Detailed Description: The expenditure would cover the total costs for demolition and removal of the old boiler, asbestos abatement, new burner, associated piping and peripheral components and purchase and installation of one new boiler.

Estimated Cost: The cost of this funding request is \$152,500. This number is based on similar boiler replacement projects undertaken in the system and estimates provided by contractors.

Long Range Costs: Boiler replacement will reduce maintenance costs on the old as well as produce energy savings through the use of a higher efficiency unit. We anticipate the life of this upgrade is 30+ years.

Demand on Existing Facilities: This project would reduce the maintenance costs of older boiler repairs and increase energy efficiency in the 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: A cleaner burning boiler would improve emissions from the boiler 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 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.

Fairfield Warde High School

Boiler Replacement

\$152,500.00

Details

Licensed contractor to provide labor and materials
Ratick Combustion, Inc.

Breakdown:

Remove existing Power Flame burner from boiler and all related piping and controls.
Cut up and remove from premises existing boiler.
This work will involve torch cutting.
Scope of work does not include removal or testing of asbestos.

Furnish and erect in the boiler room a new EASCO 250 h.p. low pressure steam firetube boiler.

Boiler will be welded together in the boiler room.

Boiler to be equipped with the following:

- a. new steam controls
- b. two low water cut-off valves
- c. relief valves
- d. man hole cover
- 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

Mount existing Power Flame burner on the new boiler.

Complete refractory work for front wall of burner mounting plate.

Complete tie-in of oil and gas piping from existing lines into existing burner, mounted on new boiler.

Install new safety and operating controls for the boiler including piping and wiring.

Wiring will be tied into existing service.

Pipe new relief valves to 6" above floor.

Pipe in gauge glass and water column.

Fabricate and install breeching transition piece to tie new boiler into existing breeching.

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 burner and set up.

This installation is a total turn key job.

Modification or installation of combustion air is not included in our scope of work.

Furnish Town of Fairfield permit (no permit cost should be charged because this is a Town building.)

Our pricing is based on the project being prevailing wage.

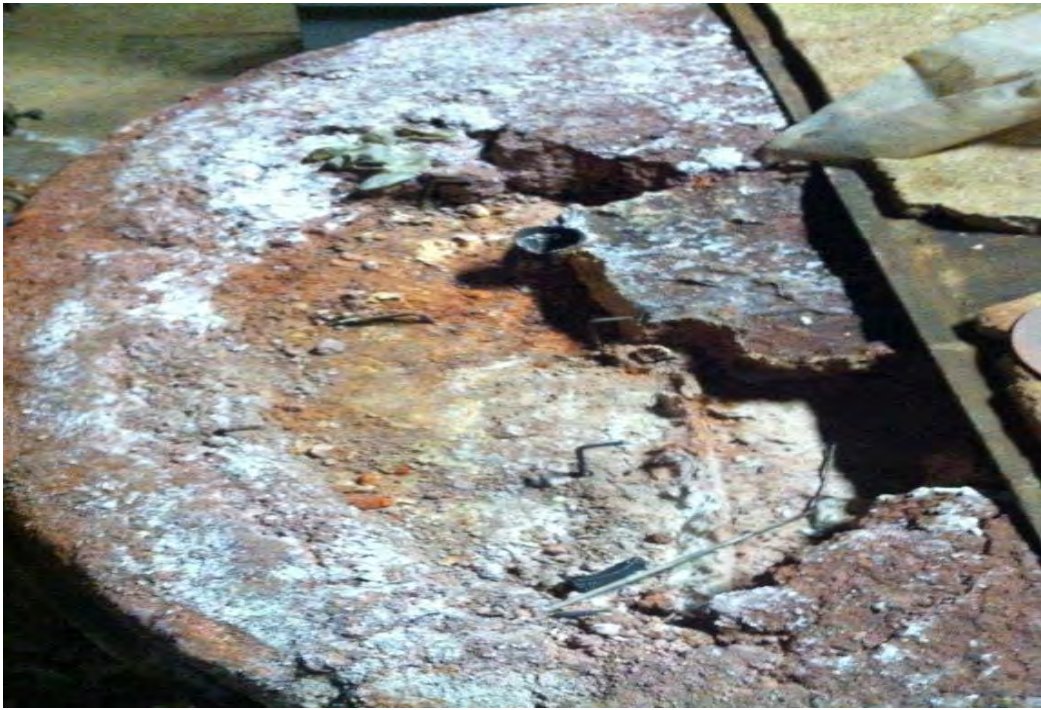
Total

\$ 152,500.00



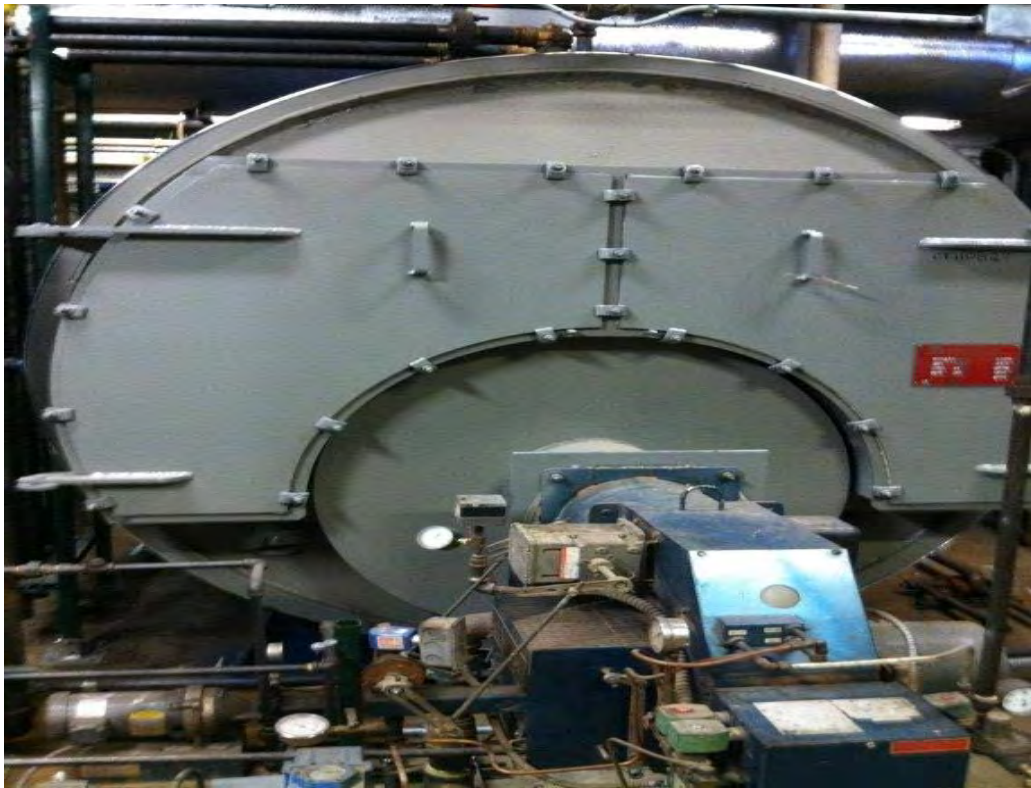
Old 1971 boiler #1 showing age and fractured wall section





Close up of fractured sections





New 2012 boiler #2 at Fairfield Warde High School

