

Memorandum

To: Rick Ives, First Selectman  
Town of Brooklyn

From: Mary P. Conway, Ed.D. *mpc*  
Superintendent, Brooklyn Public Schools

Date: January 26, 2017

Subject: Capital Request

In the spring of 2016, Brooklyn Public Schools Facilities Director Tony Tusia submitted a capital request to the Town for an upgrade of the three energy management systems used by the Brooklyn Public Schools. The requested work was unable to be included on the approved list of capital items for 2016.

Please accept this memorandum as an official request for this item to be included on the Town of Brooklyn's 2017 capital project list. Attached is the documentation including an estimate of \$200,000 for the work needed to upgrade the systems.

Thank you for consideration of this request.

PC: Tony Tusia  
Brooklyn Board of Education



FMC Technologies, Inc.  
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April 14, 2016

Mr. Tony Tusia  
Brooklyn Schools  
119 Gorman Road  
Brooklyn, CT 06234

**RE: Brooklyn Middle/Elementary Schools – EMS Upgrade**

Dear Tony:

We are pleased to provide the following quotation for upgrades to the Energy Management System at the Brooklyn Middle/Elementary Schools.

Scope of Work

The school presently has <sup>THREE</sup> ~~two (2)~~ primary control system manufacturers as part of the building-wide Energy Management System (EMS). This includes Novar LOGIC ONE Trend Controls and Distech. Presently, these systems operate independent of each other, with a separate software package for each system.

Here is what we propose:

- Elementary School
  - General
    - Remove the two existing Lingo's and baseplates and replace with Trend TONN's
      - One TONN will be dedicated to the Middle School
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  - Boiler Room
    - Provide a new Ethernet BACnet controller for the boiler room with appropriate input/output modules
    - Remove existing IOM's and reconnect all input/output points to new controller
    - Replace all temperature sensors
  - Other Existing IOM's (8)
    - Provide a new BACnet controller for each existing IOM
    - Remove existing IOM's and reconnect all input/output points to new controller
    - Replace all space temperature sensors (36)

- Miscellaneous
  - Remove the existing Distech Jace Controller and wire existing BACnet units directly to new Trend TONN
  - Reprogram entire system, checkout and commissioning
- Middle School
  - Boiler Room
    - Provide a new Ethernet BACnet controller for the boiler room with appropriate input/output modules
    - Remove existing IOM's and reconnect all input/output points to new controller
    - Replace all temperature sensors
  - Other Existing IOM's (15) and UVC's (2)
    - Provide a new BACnet controller for each existing IOM
    - Remove existing IOM's and reconnect all input/output points to new controller
    - Replace all space temperature sensors (83)
  - Miscellaneous
    - Provide a new Trend IQ4 Router for communications to the existing BACnet devices
    - Reprogram entire system, checkout and commissioning
- New Front End
  - Furnish and install a new rack-mounted server to be installed in an IT closet.
    - Note: Network connectivity by owner
  - Furnish and install new graphical user Interface software.
  - Create a new graphical user interface for monitoring and control of the following:
    - Floor plans
    - Equipment pages
    - Trend logs, alarms, etc.
    - Owner training (8 hours)

**Pricing**

Our budget price to complete this work is ... **\$200,000.00**

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**Clarifications**

- All work to be completed by non-union electrician and technicians during normal working hours.
- We have not included repair or replacement of existing HVAC control equipment (i.e. valves or damper actuators).

Please review this quotation and do not hesitate to contact me if you have any questions.

Sincerely,

Brian S. Crafts  
President

cc: Joe Preble, FMC