CITY OF NEWTON, MASSACHUSETTS

PUBLIC BUILDINGS DEPARTMENT

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Re: School HVAC Project Update

As previously reported, Newton Public Schools spent the summer making sure the HVAC systems in the school buildings were all operable, clean, and functional. At the request of the superintendent in September, the City of Newton Public Buildings Department was asked to help Newton Public Schools perform a targeted and aggressive service and maintenance initiative of all ventilation equipment throughout the district with a focus on maximizing air flow and fresh air introduction capacity. Our current estimate to complete this project is $2,500,000. As of this update, invoiced costs are $2,225,173.

The Following is the status of the overall efforts to date as well as the steps needed to close this project out:

	Service and Maintenance	**Engineering**	**Initial Test and Balancing**	**Remedial Work**	**Final Test and Balancing**
Angier	Complete	Complete	Complete	Complete	Complete
Bowen	Complete	Complete	Complete	Complete	Tentative 12/16
Burr	Complete	Complete	Complete	Complete	Tentative 12/11
Cabot	Complete	Complete	Complete	N/A	Complete
Horace Mann	Complete	Complete	Complete	Complete	12/11
Countryside	Complete	Complete	Complete	Complete	12/17
Franklin	Complete	Complete	Complete	Complete	Complete
Lincoln-Eliot	Complete	Complete	Complete	Complete	Complete
Newton Early Education	Complete	Complete	In process	Complete	In process
Peirce	Complete	Complete	Complete	Substantially complete	12/18
Memorial Spaulding	Complete	Complete	Complete	12/14	Week of 12/21
Mason Rice	Complete	Complete	Complete	Complete	12/10
Underwood	Complete	Complete	Complete	Complete	12/12
Ward	Complete	Complete	Complete	Complete	Complete
Williams	Complete	Complete	Complete	Complete	In process
Zervas	Complete	Complete	Complete	Complete	Complete
Bigelow	Complete	Complete	Complete	Complete	12/21
Brown	Complete	Complete	Complete	Complete	12/14
Day	Complete	Complete	In process	Complete	In process
Oak Hill	Complete	Complete	Complete	Complete	Week of 12/14

Ed Center	Complete	Complete	In process	Complete	Start 12/7
NNHS	Complete	Complete	12/14	Complete	Start 12/14
NSHS	Complete	Complete	12/11	Complete	Start 12/11

Dashboards for Ward, Lincoln-Eliot, Cabot, and Horace Mann were posted on the NPS website last week. The balance of the available dashboards will be posted this week. The dashboards identify each of the primary spaces in the school and the status of the code-required fresh air requirements based on 50% and 100% design occupancy. Spaces which meet the requirements are shown in green, and spaces that needed remedial work are shown in yellow. As you can see from the previous chart, the vast majority of the remedial work has already been completed and much of that work was completed within 24 hours of being identified during the initial air flow testing. So far, at the schools which we have completed final testing, our remedial efforts have shown a 100% success rate in achieving the code-required fresh air introduction to support 100% design occupancy. NPS has been utilizing air purifiers in spaces which were identified as "yellow" on the dashboards while awaiting the final testing results. In some cases, the "yellow" spaces are currently unoccupied and as such do not require short-term remedial efforts like air purifiers. In these cases, the dashboard notes indicate if a particular space is unoccupied.

As a reminder, windows are being left cracked open in occupied spaces to the extent practical throughout this initiative to supplement the fresh air introduction. One of the reasons why we are pushing to complete this work as soon as possible is such that opening windows can be complimentary instead of supplementary. At this point we are very confident that we are, or in some cases will quickly be able to, meet the code-required fresh air introduction requirements in all classrooms in the district.

There will be some work to do after final testing, but none of it is expected to rise to the level of a capital expense, and much of it will be a matter of deciding the best solution for each application. For example, in some office spaces, built before the codes we are now retroactively applying, we will need to decide between mechanical ventilation, air purification, or ultraviolet light solutions. Other spaces which are currently unoccupied might need some form of forced mechanical ventilation to help support the future return to full occupancy. However, there are very few locations where this will be needed in the district and they will be identified on the dashboards.

Under the direction of Crowley Engineering the air flow testing and balancing firms will confirm that air flow rates and fresh air introduction are in line with applicable codes, and their reports will be made public as they become available. Contractors have been documenting all work performed in detail, with the aid of a 62-point unit ventilator service and maintenance checklist. All data will also be made available as it comes in. To complete this work, every school in the district has an assigned City and/or School project manager, and we are in direct contact with the principals and custodians. As the existing conditions reports from Crowley Engineering become available, these will also be made public and will be a valuable resource now and in the future.

Due to the size and complexity of both high schools and the F.A. Day middle school, our approach to initial and final testing will be slightly different. We are coordinating efforts at these schools such that all issues are addressed as we test to ensure every space is providing the code-require fresh air introduction prior to leaving that space. In other words, we will have ample contractual support to make any and all adjustments and/or immediately complete any necessary remedial work, such that each space is 100% complete as we go. The ultimate goal of this approach is to take advantage of the current reduced occupancy of these schools to complete both initial and final testing simultaneously to minimize the need for future disruption resulting from return visits.

The above efforts have been a coordinated effort of over a thousand City, School, and contractual employees. In addition to the efforts of Crowley Engineering, the following contractors have been working Sunday – Saturday, 12-16 hours a day in some cases, for the past 12 weeks to complete this initiative:

HVAC Contractors

- Associated Mechanical Services
- Cox Engineering Service Co.

- Fraser Engineering
- General Air Conditioning & Heating, Inc.
- Harold Brothers
- Mighty Duct
- NB Kenney Company
- Boston Mechanical Services
- Patrick J. Kennedy & Sons Inc
- Bay State Air
- Corporate Mechanical
- Enterprise Equipment
- R.P. O'Connell, Inc

Air Flow Testing and Balancing Firms

E.L. Barret
ATAB
Thomas Young
THB Company
JF Coffey
Precision Testing and Air Balancing
Balancing Technologies

Additional information can be found at https://www.newton.k12.ma.us/Page/3731 where we have posted thousands of pages of service, testing, and maintenance data showing our work to date throughout the district.

Again, we would like to thank the principals, teachers, and custodians as they have all been extremely supportive and accommodating of our efforts.

Sincerely,

Josh Morse
Public Buildings Commissioner