

# *Pneumatic Unit Ventilator Survey*



North Bellmore Union Free School District

Unit Ventilator  
Pneumatic Controls / Ventilation Survey

*July 28, 2020*

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**CARDINAL CONTROL SYSTEMS, INC.**

1703 Church Street • Holbrook, New York 11741  
Phone: 631-244-7200 • Fax: 631-244-7227  
[cardinalcontrol@optonline.net](mailto:cardinalcontrol@optonline.net)

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July 28, 2020

Mr. Rich Russo  
Facilities Department  
North Bellmore U.F.S.D.  
2616 Martin Avenue  
North Bellmore, NY 11710

Re: Unit Ventilator Ventilation Survey

Dear Mr. Russo,

As you know, earlier this month we conducted a brief survey of the pneumatic unit ventilator controls at your Martin Avenue, John J. Dinkelmeyer, Jacob Gunther, Saw Mill Road and Park Avenue Schools. The intent was to visually inspect the internal components of unit ventilators to determine if the fans were operational and if the outdoor air dampers were functional and open. A report listing each room with a unit ventilator in the above schools is attached.

The following are some general points about the control systems and equipment in these schools.

- The controls in the unit ventilators in the buildings listed above are pneumatic and date back to the building's original construction.
- Although the pneumatic controls do not provide a fixed minimum amount of outdoor air like a newer control system would, these units can still provide ventilation per their original design. In order to provide the maximum amount of ventilation possible, we strongly recommend the room thermostats be set at 68°.
- Since pneumatic controls rely on compressed air to open the outdoor air dampers it is more important than ever to ensure the compressed air system in each school is in good condition at all times.
- Since there is no BMS system at these schools, we recommend periodic, physical inspection of the controls and outdoor air dampers. This would also apply to the District's other HVAC equipment. Physical checks of each unit's supply fan, outdoor air dampers and the associated louvers, ducts, etc. is a low-cost way to ensure clean outdoor air is actually being introduced.

- The frequency and documentation of such inspections of the HVAC equipment and controls should be discussed to ensure the District feels comfortable they are meeting any State and CDC guidelines as well as providing assurance to the students, teachers, staff and their families that everything possible is being done.
- The information in the attached report reflects what we found during our inspection. It does not include any repairs made or changes to the condition of the equipment since our survey.
- At the Newbridge Road School, the unit ventilators are newer and can be monitored and adjusted via the building management system (BMS) so we were not asked to survey this school. Please let us know if you'd like us to do so.

**Exhaust Fans:**

While the District's unit ventilators, air handling units and other HVAC equipment provide a method for introducing fresh air from outside, the exhaust fans in each school play the equally important role of removing stale air from each occupied space.

We recommend that each existing exhaust fan be checked by the District's maintenance staff to ensure each fan is running properly. We also recommend that the exhaust fans be run for at least two hours before and after the building is occupied. Keeping them on 24/7 during the current situation should also be considered.

Please don't hesitate to let me know if you have any questions about the attached report.

We appreciate the opportunity to work with the District on a plan to safely reopen the buildings. We're here whenever you need us. Please don't hesitate to contact me anytime.

Sincerely,

*G. Scott McVetty*

G. Scott McVetty  
President

GSM/ckf