



BEECHER ROAD SCHOOL  
INDOOR AIR QUALITY REVIEW  
SPRING 2024

# THE BIG PICTURE

## Recent IAQ Requirements From the Department of Administrative Services (DAS)

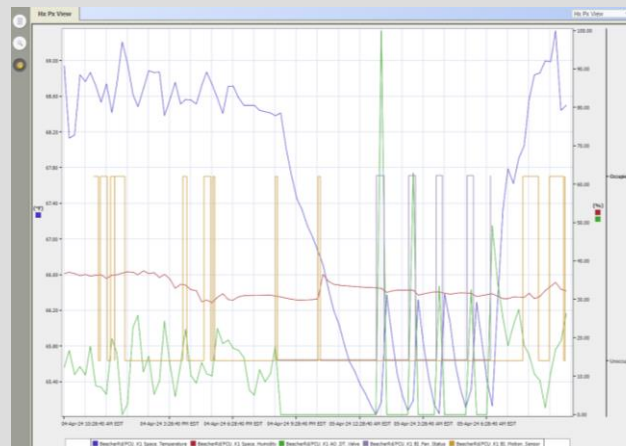
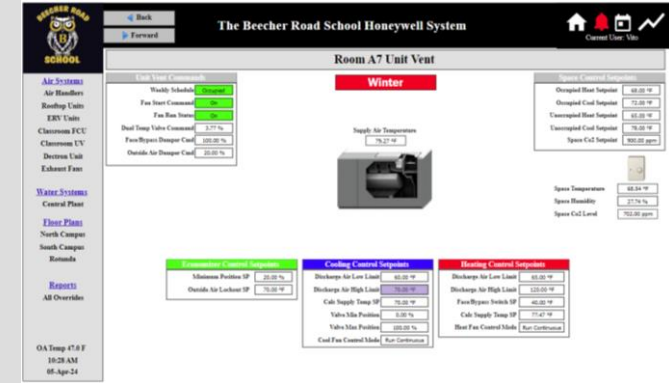
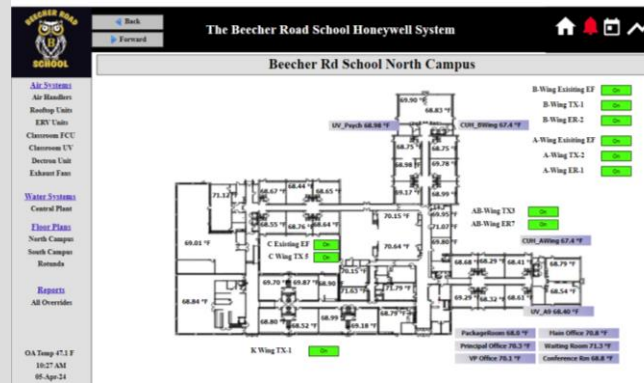
- **1. Annual Reporting Form for Indoor Air Quality** – On January 1, 2024, and annually thereafter, each local or regional board of education shall provide for a uniform inspection and evaluation program of the indoor air quality within each school building **using the Environmental Protection Agency's Indoor Air Quality Tools for Schools Program**, and shall submit the results of such inspection and evaluation to DAS. See CGS § 10-220(d), PA 22-118, and PA 23-167.
- **2. 5-Year Reporting Form for Heating, Ventilation, and Air Conditioning** – Prior to January 1, 2025, and every five years thereafter, each local or regional board of education shall provide for a uniform inspection and evaluation of the heating, ventilation and air conditioning system within each school building under its jurisdiction. Such inspection and evaluation shall be performed by a certified testing, adjusting and balancing technician, an industrial hygienist certified by the American Board of Industrial Hygiene or the Board for Global EHS Credentialing, or a mechanical engineer, and the report and results of such inspection and evaluation shall be submitted to DAS. See CGS § 10-220(d), PA 22-118, and PA 23-167.

IAQ Recommendations and Requirements	Beecher Road School
Tools for Schools Inspections	YES
5-Year IAQ Report	YES
MERV-13 Filter Upgrades	YES
Carbon Dioxide Monitoring	YES

# A LOOK INTO OUR HVAC MONITORING

## Features of our Building Management System (BMS)

- Monitored multiple times a day.
- Compiles a host of data from each space in real-time including; temperature, humidity, CO2, valve position, OA Damper position, and more.
- Stores data on all units for at least 24 hours including, temperature, humidity, fan status, and valve position. This data can be customized.
- Features unit summary tables to quickly identify rooms exhibiting unusual data points.
- Is equipped with alarms that send alerts if a major issue is detected



Name	Occupancy	Space Temp	Space Humidity	Space CO2	Supply Temp	DT Value	Face Bypass	Economizer	Fan Start	Fan St
UV_A1	Occupied	69.16 °F	26.82 %	613.00 ppm	64.48 °F	38.09 %	100.00 %	20.00 %	On	On
UV_A2	Occupied	68.67 °F	27.11 %	608.00 ppm	72.58 °F	10.86 %	100.00 %	20.00 %	On	On
UV_A3	Occupied	68.32 °F	30.47 %	643.00 ppm	69.90 °F	6.80 %	100.00 %	20.00 %	On	On
UV_A4	Occupied	68.31 °F	27.42 %	573.00 ppm	66.61 °F	13.32 %	100.00 %	20.00 %	On	On
UV_A5	Occupied	68.74 °F	29.64 %	896.00 ppm	64.79 °F	0.00 %	100.00 %	20.00 %	On	On
UV_A6	Occupied	68.45 °F	30.25 %	903.00 ppm	66.48 °F	2.32 %	100.00 %	20.00 %	On	On
UV_A7	Occupied	68.55 °F	27.72 %	694.00 ppm	72.27 °F	20.62 %	100.00 %	20.00 %	On	On
UV_A8	Occupied	68.81 °F	28.42 %	817.00 ppm	73.59 °F	6.09 %	100.00 %	20.00 %	On	On
UV_A9	Occupied	68.86 °F	26.88 %	727.00 ppm	73.52 °F	9.00 %	100.00 %	20.00 %	On	On
UV_B1	Occupied	68.95 °F	25.76 %	771.00 ppm	71.23 °F	6.09 %	100.00 %	20.00 %	On	On
UV_B2	Occupied	69.14 °F	28.80 %	983.00 ppm	69.01 °F	0.00 %	100.00 %	100.00 %	On	On
UV_B3	Occupied	69.77 °F	26.01 %	877.00 ppm	73.43 °F	9.99 %	100.00 %	100.00 %	On	On
UV_B4	Occupied	68.89 °F	26.26 %	734.00 ppm	63.34 °F	35.00 %	100.00 %	42.48 %	On	On

# KEY TAKEAWAYS FROM OUR IAQ REPORT

## EXECUTIVE SUMMARY

The following Findings Report is an overview of the heating, ventilation, and air conditioning (HVAC) systems and operations that impacts overall ventilation and indoor air quality to support a healthy learning environment in your school. **The report's main focus, however, relates to occupied areas indoor ventilation and the compliance or non-compliance of this school with current ASHRAE-62.1, (2010) guidelines regarding Ventilation for Acceptable Indoor Air Quality for Schools**

## AHSRAE-62.1, (2010) Compliance

Our field observations indicate, **most if not all of the individual occupied spaces at this school seem to comply with the applicable building codes or guidelines** regarding indoor air quality and outdoor ventilation.

## Outside Air Flow Improvement Recommendations

... Due to the age of the building and changes over the years in occupancy, systems and codes, **considerations for HVAC rebalancing and systems recommissioning to current design requirements will provide added benefits** to building performance and operations.



**Beecher Road Elementary School**  
40 Beecher Rd.  
Woodbridge, CT 06525



## **Indoor Air Quality (IAQ) Evaluation and HVAC Systems Assessment**

van Zelm Project # 2022231.00  
March 28, 2024

VAN ZELM HEYWOOD & SHADFORD, INC.

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# KEY TAKEAWAYS FROM OUR IAQ REPORT

## IN CONCLUSION

“The Woodbridge Public Schools clearly has taken measures in the past to address identified deficiencies with aging equipment including proper maintenance and filtration upgrades for indoor air quality (IAQ) improvements.

The School had also previously installed CO2 Sensors in the classrooms which are helpful to control the volume of outside ventilation air, which in turn helps reduce the humidity levels in the spaces (DCV increases or decreases outdoor ventilation air into areas based upon CO2 levels within the spaces).

As stated above, this evaluation found that the Beecher Road Elementary School seems to be meeting the current minimum ventilation requirements per ASHRAE-62.1, (2010) guidelines with CO2-based Demand Control Ventilation strategies

**Given the results of this survey, we highly recommend further evaluation to be performed with whole building Recommissioning, which would entail further testing and verification to confirm proper equipment and BAS operation.”**



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