Stratford Public Schools

Administration Center
1000 East Broadway, Stratford, CT 06615

Uniform Indoor Air Quality Inspection and Evaluation Program

Reporting Year: 2024

Report Date: December 16, 2024

District: Stratford School District

School: Stratford High School
245 King Street, Stratford, CT 06615

In accordance with section 10-220(d) of the Connecticut General Statutes ("CGS § 10-220(d)" or "IAQ Statute"), Stratford Public Schools (SPS) will have a complete uniform Indoor Air Quality (IAQ) inspection and evaluation of Stratford High School was performed by Van Zelm during 2024.

This report will provide summaries of the School's inspections and evaluations undertaken pursuant to the 14 IAQ categories set forth in the IAQ Statute. Where applicable, SPS referred to and relied on the U.S. Environmental Protection Agency's (EPA's) IAQ Tools for Schools (TFS) guidance and checklists in its inspections and evaluations. The TFS checklists completed for the Schools in 2024 are included in Appendix A.

1. *Heating, Ventilation and Air Conditioning (HVAC) Systems*

SPS completed this assessment requirement using a combination of the TFS general Walkthrough Inspection Checklist and Ventilation Checklist. These checklists provide guidance for evaluating multiple elements of the building's HVAC systems, including the building's outdoor intakes and potential pollutant sources, system cleanliness and preventative maintenance programs, control components, distribution systems, and exhaust systems.

In accordance with section 10-231e of the Connecticut General Statutes, SPS also ensures that the School's HVAC systems are (1) maintained and operated in accordance with the prevailing maintenance standards at the time of installation or renovation of such system, and (2) operated continuously during the hours in which students or School personnel occupy School facilities, except (A) during scheduled maintenance and emergency repairs, and (B) during periods for which School officials can demonstrate that the quantity of outdoor air supplied provides sufficient air changes.

In addition, SPS expects to be in position to undertake a standalone evaluation of the HVAC system at Stratford High School in compliance with the requirements of the IAQ statute, with said evaluation required to be performed by qualified professionals and occur at least once between July 1, 2026, and June 30, 2031, and every five years thereafter.

The HVAC systems for SPS are maintained by the Town of Stratford. There are known operational issues associated with the HVAC system in the school and contractors are engaged and actively evaluating the system to address these issues.

2. *Radon Levels in Air*

SPS has a long-established radon testing program for the School in accordance with CGS § 10-220(d) and the State of Connecticut Department of Public Health (CTDPH) guidance. This program requires qualified and trained professionals to evaluate each school building for radon through sampling and laboratory analysis every three years as well as reporting to CTDPH. The most recent radon evaluation was performed for SPS during the 2024-2025 school year and Stratford High School had sixteen classrooms tested in November, 2024 by Environmental Transactions, with no further action on radon is required. The school is due for the next evaluation during the 2026-2027 school year.

3. *Potential for Exposure to Microbiological Airborne Particles, Including, But Not Limited To, Fungi, Mold and Bacteria*

SPS addressed this assessment requirement using a combination of EPA's TFS general Walkthrough Inspection, Building and Grounds Maintenance, and Food Service checklists. The focus items include evaluation of drainage at the exterior and roof of the building, any evidence of interior moisture intrusion or moisture issues through roof or plumbing leaks or any consistent condensation, evidence of mold/mildew growth, etc.

The School's IAQ conditions were typical of school buildings and no concerns for microbiological airborne particles were noted during the assessment.

4. *Chemical Compounds of Concern to Indoor Air Quality Including, But Not Limited To, Volatile Organic Compounds*

SPS addressed this assessment requirement using a combination of EPA's TFS general Walkthrough Inspection and Building and Grounds Maintenance checklists. The focus items include evaluation of building maintenance supplies and grounds maintenance supplies and how they are used, stored, and labeled as well as spill response, engineering and administrative controls used in conjunction with these products.

The assessment did not identify issues with chemicals of concern impacting the School's IAQ. The majority of building and grounds maintenance products are stored offsite at the Town of Stratford Public Works Building. Additionally, SPS continues to operate its green cleaning program utilizing environmentally preferable cleaning and disinfecting products.

5. *Degree of Pest Infestation, Including, But Not Limited To, Insects and Rodents*

SPS addressed this assessment requirement using a combination of EPA's TFS general Walkthrough Inspection, Waste Management, Food Service and Integrated Pest Management checklists. The focus items include evaluation of pest evidence, entry points, food, water, and identification of potential pest habitats as well as establishing a regular monitoring program.

The assessment did not identify any material pest issues at the School. On occasion, SPS has identified pest concerns associated with food stored in classrooms and other similar scenarios. SPS maintains a contract with a pest management company that performs monthly visits, or more, as needed. The pest management company regularly evaluates the exterior of the building for potential entry points and deploys non-toxic pest control devices such as glue traps.

6. *Degree of Pesticide Usage*

SPS operates an Integrated Pest Management (IPM) program in accordance with CGS § 10-231a-231d. The IPM program requires SPS to evaluate alternative pest management methods before using pesticides, utilize the least toxic method to address the pest problem, and ensure all pest control products are used and stored in accordance with regulatory and manufacturer requirements by trained and qualified personnel. The plan further requires notifications to school occupants and parents of pesticide applications through posted notices and/or letters and that records of IPM practices and a pest management log is maintained for the School. SPS and the pest management company do not regularly use or store pest control chemicals at the School. The application of pesticides on School grounds is avoided when possible.

7. *The Presence of And the Plans for Removal of Any Hazardous Substances That Are Contained on The List Prepared Pursuant to Section 302 Of the Federal Emergency Planning and Community Right- To-Know Act, 42 USC 9601 Et Seq. (EPCRA)*

SPS has evaluated the School for the potential presence of hazardous substances listed in EPCRA Section 302 and determined there are currently none present.

8. *Ventilation Systems*

The School's ventilation systems were addressed in Section 1 herein.

9. *Plumbing, Including Water Distribution Systems, Drainage Systems and Fixtures*

SPS addressed this assessment requirement using a combination of EPA's TFS General Walkthrough Inspection, Building and Grounds Maintenance, and Food Service checklists. The focus items include evaluation of drainage and plumbing systems for evidence of leaks, odors, staining, condensation, and evidence of mold/mildew growth.

Based on the walkthrough and checklist, no plumbing issues affecting IAQ were identified and the Town of Stratford Public Works Department handles all of SPS plumbing needs.

10. *Moisture Incursion*

SPS addressed this assessment requirement using a combination of EPA's TFS General Walkthrough Inspection, Building and Grounds Maintenance, and Food Service checklists. The focus items include evaluation of drainage at the exterior and roof of the building, evidence of interior moisture intrusion or moisture issues through roof or plumbing leaks or consistent condensation, and evidence of mold/mildew growth.

No moisture incursion issues were identified during the assessment. Should a moisture issue be identified during a regular building review, a work request will be entered into the Town's work order system and a representative of Stratford Public Works will investigate the issue. Our custodial staff make regular walkthroughs of the buildings to look for any problem and report it to myself and again enter a ticket to the town.

11. Overall Cleanliness of The Facilities

SPS addressed this assessment requirement using a combination of EPA's TFS General Walkthrough Inspection, Waste Management, Food Service, and Integrated Pest Management checklists. The focus items include evaluation of sanitary conditions in food handling and storage areas, ensuring waste does not accumulate, verifying walk-off mats are present at each entrance, ensuring proper procedures are in place for dust control during cleaning activities and a schedule is established for vacuuming and mopping floors.

Minor dust accumulation was noted in limited areas, but overall, the School facility was acceptably clean. Should a particular location be identified by a staff member or administration to require supplemental cleaning, a work request will be entered into the Town's work order system. SPS custodial team does a great job of cleaning the schools nightly. When something is reported by a teacher or student a staff member will take care of immediately. Our custodians fill out a monthly form to check on status of work tickets that were completed, emergency lights are checked monthly also. The custodians also make sure the areas by the dumpsters are clean at all times.

12. Building Structural Elements, Including, But Not Limited To, Roofing, Basements or Slabs

SPS addressed this assessment requirement using a combination of EPA's TFS General Walkthrough Inspection and Building and Grounds Maintenance checklists. The focus items include visual evaluation of roofing materials and structural components of the building. Nothing of note was identified during the assessment and the roof was replaced in 2018.

13. Use of Space, Particularly Areas That Were Designed to Be Unoccupied

SPS continuously evaluates the use of space at the School. SPS staff understand that spaces not designed to be occupied may not have adequate ventilation or meet minimum requirements for heating or cooling. SPS did not identify the use of any spaces contrary to their intended use (e.g., use of a closet as an office).

14. The Provision of Indoor Air Quality Maintenance Training for Building Staff

SPS building staff have been trained in the use of the EPA TFS checklists to gather information related to the overall condition of the school building. Staff understand that findings must be documented and addressed promptly. Additionally, certain staff members have specialized training related to HVAC, plumbing, nursing, groundskeeping, etc. and serve a critical role in addressing identified concerns if/when they arise.

APPENDIX A

Building and Grounds Maintenance Checklist

Name: Richard Ruggiero
School: Stratford High School
Room or Area: Entire School Date Completed: 11-12-2024
Signature: Richard Ruggiero

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. BUILDING MAINTENANCE SUPPLIES

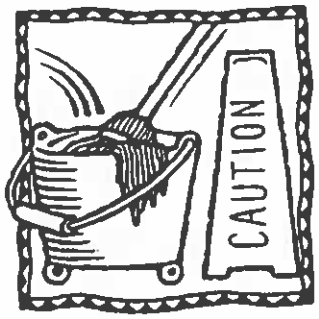
		Yes	No	N/A
1a.	Developed appropriate procedures and stocked supplies for spill control	☑	☐	☐
1b.	Reviewed supply labels	☑	☐	☐
1c.	Ensured that air from chemical and trash storage areas vents to the outdoors	☑	☐	☐
1d.	Stored chemical products and supplies in sealed, clearly labeled containers	☑	☐	☐
1e.	Researched and selected the safest products available	☑	☐	☐
1f.	Ensured that supplies are being used according to manufacturers' instructions	☑	☐	☐
1g.	Ensured that chemicals, chemical-containing wastes, and containers are disposed of according to manufacturers' instructions	☑	☐	☐
1h.	Substituted less- or non-hazardous materials (where possible)	☑	☐	☐
1i.	Scheduled work involving odorous or hazardous chemicals for periods when the school is unoccupied	☑	☐	☐
1j.	Ventilated affected areas during and after the use of odorous or hazardous chemicals	☑	☐	☐

2. GROUNDS MAINTENANCE SUPPLIES

2a.	Stored grounds maintenance supplies in appropriate area(s)	☐	☐	☑
2b.	Ensured that supplies are used and stored according to manufacturers' instructions	☐	☐	☑
2c.	Established and followed procedures to minimize exposure to fumes from supplies	☐	☐	☑
2d.	Reviewed and followed manufacturers' guidelines for maintenance	☐	☐	☑
2e.	Replaced portable gas cans with low-emission cans	☐	☐	☑
2f.	Stored chemical products and supplies in sealed, clearly-labeled containers	☐	☐	☑
2g.	Ensured that chemicals, chemical-containing wastes, and containers are disposed of according to manufacturers' instructions	☐	☐	☑

3. DUST CONTROL

3a.	Installed and maintained barrier mats for entrances	☑	☐	☐
3b.	Used high efficiency vacuum bags	☑	☐	☐
3c.	Used proper dusting techniques	☑	☐	☐
3d.	Wrapped feather dusters with a dust cloth	☑	☐	☐
3e.	Cleaned air return grilles and air supply vents	☑	☐	☐



4. FLOOR CLEANING

	Yes	No	N/A
4a. Established and followed schedule for vacuuming and mopping floors	☑	☐	☐
4b. Cleaned spills on floors promptly (as necessary)	☑	☐	☐
4c. Performed restorative maintenance (as necessary)	☑	☐	☐

5. DRAIN TRAPS

5a. Poured water down floor drains once per week (about 1 quart of water)	☑	☐	☐
5b. Ran water in sinks at least once per week (about 2 cups of water)	☑	☐	☐
5c. Flushed toilets once each week (if not used regularly)	☑	☐	☐

6. MOISTURE, LEAKS, AND SPILLS

6a. Checked for moldy odors	☑	☐	☐
6b. Inspected ceiling tiles, floors, and walls for leaks or discoloration (may indicate periodic leaks)	☑	☐	☐
6c. Checked areas where moisture is commonly generated (e.g., kitchens, locker rooms, and bathrooms)	☑	☐	☐
6d. Checked that windows, windowsills, and window frames are free of condensate	☐	☐	☑
6e. Checked that indoor surfaces of exterior walls and cold water pipes are free of condensate	☑	☐	☐
6f. Ensured the following areas are free from signs of leaks and water damage:			
Indoor areas near known roof or wall leaks	☑	☐	☐
Walls around leaky or broken windows	☑	☐	☐
Floors and ceilings under plumbing	☑	☐	☐
Duct interiors near humidifiers, cooling coils, and outdoor air intakes	☑	☐	☐

7. COMBUSTION APPLIANCES

7a. Checked for odors from combustion appliances	☑	☐	☐
7b. Checked appliances for backdrafting (using chemical smoke)	☑	☐	☐
7c. Inspected exhaust components for leaks, disconnections, or deterioration	☑	☐	☐
7d. Inspected flue components for corrosion and soot	☑	☐	☐

8. PEST CONTROL

8a. Completed the *Integrated Pest Management Checklist*	☑	☐	☐

NOTES

Food Service Checklist

Name: Jesenia Cuevas
School: Stratford High
Room or Area: Kitchen Date Completed: 10/30/24
Signature: Jesenia Cuevas

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. COOKING AREA

		Yes	No	N/A
1a.	Determined that local exhaust fans operate properly (note if fans are excessively noisy)	☑	☐	☐
1b.	Checked for odors near cooking, preparation, and eating areas	☑	☐	☐
1c.	Ensured that exhaust fans are used whenever cooking, washing dishes, and cleaning	☑	☐	☐
1d.	Determined that gas appliances function properly	☑	☐	☐
1e.	Verified that gas appliances are vented outdoors	☑	☐	☐
1f.	Ensured there are no combustion gas or natural gas odors, leaks, back-drafting, or headaches when gas appliances are used	☑	☐	☐
1g.	Ensured that kitchen is clean after use	☑	☐	☐
1h.	Checked for signs of microbiological growth in the kitchen, including the upper walls and ceiling (for example, mold, slime, and algae)	☑	☐	☐
1i.	Selected biocides registered by EPA (if required), followed the manufacturer's directions for use, and carefully reviewed the method of application	☑	☐	☐
1j.	Verified the kitchen is free of plumbing and ceiling leaks (signs include stains, discoloration, and damp areas)	☑	☐	☐

2. FOOD HANDLING AND STORAGE

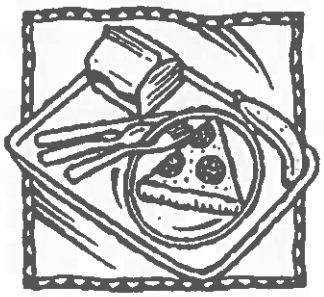
2a.	Checked food preparation, cooking, and storage areas for signs of insects and vermin (for example, feces or remains)	☑	☐	☐
2b.	Stored leftovers in well-sealed containers with no traces of food on outside surfaces	☑	☐	☐
2c.	Ensured that food preparation, cooking, and storage practices are sanitary	☑	☐	☐
2d.	Disposed of food scraps properly and removed crumbs	☑	☐	☐
2e.	Cleaned counters with soap and water or a disinfectant (according to school policy)	☑	☐	☐
2f.	Swept and wet mopped floors	☑	☐	☐

3. WASTE MANAGEMENT

3a.	Selected and placed waste in appropriate containers	☑	☐	☐
3b.	Ensured that containers' lids are securely closed	☑	☐	☐
3c.	Separated food waste and food-contaminated items from other wastes, if possible	☑	☐	☐
3d.	Stored waste containers in a well-ventilated area	☑	☐	☐
3e.	Ensured that dumpsters are properly located (away from air intake vents, operable windows, and food service doors in relation to prevailing winds)	☑	☐	☐

4. DELIVERIES

	Yes	No	N/A
4a. Instructed vendors to avoid idling their engines during deliveries	☑	☐	☐
4b. Posted a sign prohibiting vehicles from idling their engines in receiving areas	☐	☐	☑
4c. Ensured that doors or air barriers are closed between receiving area and kitchen	☐	☐	☑



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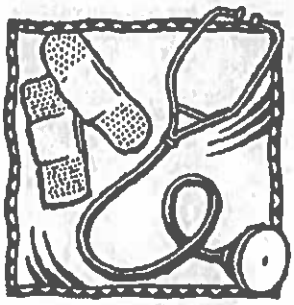

Health Officer/School Nurse Checklist

Name: Kim Velazquez RN
School: Stratford High School
Room or Area: Nurse Date Completed: 11/1/24
Signature: Kim Velazquez RN

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. MAINTAINING STUDENT HEALTH

		Yes	No	N/A
1a.	Completed health records for each student	☑	☐	☐
1b.	Updated health records, as appropriate	☑	☐	☐
1c.	Obtained necessary information about student allergies and other health factors	☑	☐	☐
1d.	Developed a system to log health complaints (note symptoms, location and time of symptom onset, and exposure to pollutant sources)	☑	☐	☐
1e.	Monitored trends in health complaints (especially in timing or location of complaints)	☑	☐	☐
1f.	Investigated potential causes of health complaints (for example, school was renovated or refurnished recently; individual recently started working with new or different materials or equipment; new practices or products, such as cleaners or pesticides, were introduced into the school)	☑	☐	☐
1g.	Ensured that the school prohibits smoking	☑	☐	☐
1h.	Noted any new warm-blooded animals introduced into classrooms	☐	☐	☑
1i.	Reviewed and understood indicators of IAQ-related problems	☑	☐	☐

2. HEALTH, IAQ, AND HYGIENE EDUCATION

2a.	Educated students and staff about the importance of good hygiene	☑	☐	☐
2b.	Arranged individual instruction/counseling where necessary	☑	☐	☐
2c.	Developed information and education programs for parents and staff	☑	☐	☐
2d.	Established an information and counseling program for smokers	☑	☐	☐
2e.	Provided literature on smoking and secondhand smoke	☑	☐	☐
2f.	Educated school staff, students, and parents on the link between IAQ and health	☑	☐	☐

3. HEALTH OFFICER'S OFFICE

3a.	Ensured the ventilation system operates properly and supplies adequate quantities of outdoor air (i.e., at least 25 cubic feet per minute of outdoor air per occupant)	☑	☐	☐
3b.	Ensured that air filters are clean and properly installed	☑	☐	☐
3c.	Ensured that air supply pathways are clear of any obstructions	☑	☐	☐
3d.	Determined that air removed from the health office is separated from the ventilation system to avoid affecting other occupied areas of the school	☐	☐	☑

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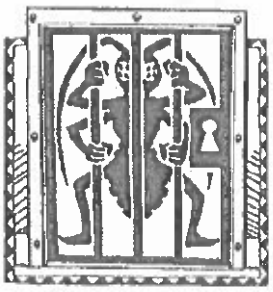


Integrated Pest Management Checklist

Name: Mark Hayden
School: Stratford High School
Room or Area: Entire School Date Completed: 11-12-2024
Signature: Mark B. Hayden TOTAL PEST CONTROL, LLC

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OFFICIAL POLICY STATEMENT

		Yes	No	N/A
1a.	Developed or located the school's official policy statement for integrated pest management (IPM)	☑	☐	☐

2. DESIGNATING PEST MANAGEMENT ROLES

		Yes	No	N/A
2a.	Assigned and trained a qualified person to be the pest manager	☑	☐	☐
2b.	Involved decision makers in the IPM program	☑	☐	☐
2c.	Educated students and staff (the occupants of the building) about IPM and asked them to keep their areas clean and free of clutter	☑	☐	☐
2d.	Encouraged parents to learn about IPM practices and implement them at home	☑	☐	☐
2e.	Developed a program to educate and train all IPM participants	☑	☐	☐
2f.	Included language about IPM into contracts with pest management professionals	☑	☐	☐

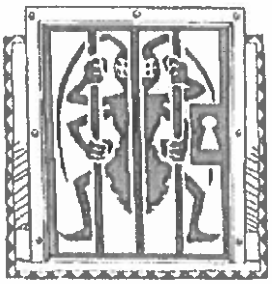
3. SETTING PEST MANAGEMENT OBJECTIVES

		Yes	No	N/A
3a.	Set appropriate pest management objectives for school buildings (such as preventing pests from interfering with students' learning environment and preserving the integrity of the building structure)	☑	☐	☐
3b.	Set appropriate pest management objectives for school grounds (such as providing safe playing areas and the best athletic surfaces possible)	☑	☐	☐

4. INSPECTING, IDENTIFYING, AND MONITORING

		Yes	No	N/A
4a.	Inspected all buildings and grounds for pest evidence, entry points, food, water, and harborage sites	☑	☐	☐
4b.	Identified potential pest habitats in buildings and grounds	☑	☐	☐
4c.	Pinpointed the source of any current pest problems	☑	☐	☐
4d.	Monitored to determine the extent of pest problems and to estimate pest populations	☑	☐	☐
4e.	Developed plans to modify habitat (for example, exclusion, repair, and sanitation efforts) to prevent or resolve any pest problems	☑	☐	☐
4f.	Established a monitoring program that consists of routine inspections to estimate pest population levels and identify evidence of pests and potential habitat	☑	☐	☐

5. SETTING ACTION THRESHOLDS



	Yes	No	N/A
5a. Evaluated all available data obtained through inspecting, identifying, and monitoring	☑	☐	☐
5b. Determined how many pests the school buildings, grounds, and occupants can tolerate	☑	☐	☐
5c. Set action thresholds	☑	☐	☐

6. PREVENTIVE STRATEGIES

INDOOR SITES

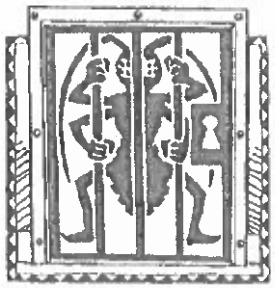
6a. Implemented appropriate strategies to prevent pests from inhabiting the following areas:			
• Entryways	☑	☐	☐
• Classrooms	☑	☐	☐
• Gymnasiums	☑	☐	☐
• Locker rooms	☑	☐	☐
• Offices	☑	☐	☐
• Staff lounges	☑	☐	☐
• Bathrooms	☑	☐	☐
• Food preparation and serving areas	☑	☐	☐
• Rooms with extensive plumbing	☑	☐	☐
• Maintenance areas	☑	☐	☐
• Other	☑	☐	☐

OUTDOOR SITES

6b. Implemented appropriate strategies to prevent pests from inhabiting the following areas:			
• Playgrounds	☑	☐	☐
• Parking lots	☑	☐	☐
• Lawns and athletic fields	☑	☐	☐
• Teaching gardens or greenhouses	☑	☐	☐
• Loading docks	☑	☐	☐
• Dumpsters	☑	☐	☐
• Areas with ornamental shrubs and trees	☑	☐	☐
• Other	☑	☐	☐

7. PESTICIDE USE AND STORAGE

7a. Explored alternative pest management methods before concluding that pesticides were necessary	☑	☐	☐
7b. Ensured that pest management professionals integrate IPM into their pest management methods	☑	☐	☐
7c. Identified the least toxic, target-specific chemical (or pesticide formulation) that is the most effective to address the pest problem, preferably as baits and granules	☑	☐	☐
7d. Reviewed and followed all label instructions on pesticides and learned how to properly apply and handle these chemicals	☑	☐	☐
7e. Used spot-treatment (or bait, crack, and crevice applications) to apply pesticides whenever possible and only treated the obviously infested plants in the area	☑	☐	☐
7f. Used protective clothing or equipment when applying pesticides	☑	☐	☐
7g. Placed all pesticides in tamper-resistant bait boxes or locations that are inaccessible to children and non-target species	☑	☐	☐



7. PESTICIDE USE AND STORAGE (cont.)

		Yes	No	N/A
7h.	Locked or fastened lids of all bait boxes and placed bait away from the runway of the box	☑	☐	☐
7i.	Applied pesticides when occupants were not present or in areas where they would not be exposed to the chemicals	☑	☐	☐
7j.	Ensured that school occupants (students and staff) are notified of upcoming pesticide applications through posted notices and/or letters	☑	☐	☐
7k.	Ensured that parents are notified of upcoming pesticide applications through letters	☑	☐	☐
7l.	Kept copies of current pesticide labels and information on pesticides easily accessible	☑	☐	☐
7m.	Stored pesticides off site or in areas that are locked and accessible only to designated personnel	☑	☐	☐
7n	Ensured that storage areas are adequately ventilated and are located away from areas prone to flooding or where spills or leaks may contaminate the environment	☑	☐	☐
7o.	Ensured that flammable liquids are stored away from ignition sources	☑	☐	☐
7p.	Ensured that pesticides are stored in their original containers and all lids are securely fastened	☑	☐	☐
7q.	Ensured that air in the storage space cannot mix with the air in the central ventilation system	☑	☐	☐

8. EVALUATING RESULTS AND RECORD KEEPING

8a.	Ensured that accurate, up-to-date records of IPM practices and a pest management log for each property are kept	☑	☐	☐
8b.	Ensured that pesticide records necessary to meet all state, local, and school board requirements are maintained	☑	☐	☐
8c.	Ensured that each log book contains the following items:			
	• Copy of the pest management plan	☑	☐	☐
	• Service schedules for maintenance of buildings and grounds	☑	☐	☐
	• Current EPA-registered labels	☑	☐	☐
	• Current Material Safety Data Sheets (MSDS) for each pesticide project	☑	☐	☐
	• Pest surveillance data sheets	☑	☐	☐
	• Diagram noting the location of pest activity, traps, and bait stations	☑	☐	☐

NOTES

Ventilation Checklist

Name: Charles T Beals

School: Stratford High

Unit Ventilator/AHU No: Auditorium - 1

Room or Area: Auditorium Date Completed: 11/13/24

Signature: Charles T Beals

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

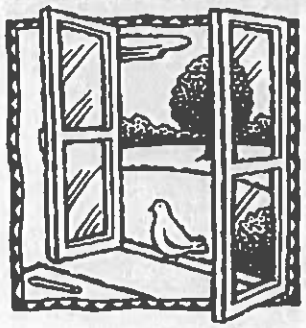
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

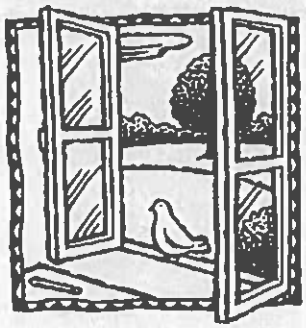
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☑	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☑	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☑

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☑
4d. Ensured that supply and return vents are open and unblocked	☑	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☑
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☑
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☑
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☑	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☑

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☑

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☑

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

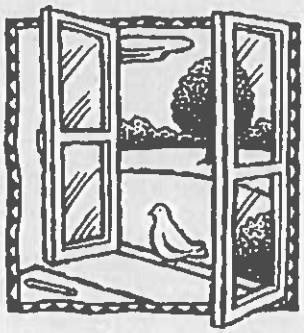
NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES



Ventilation Checklist

Name: Charles T Bell

School: Stratford High

Unit Ventilator/AHU No: Auditorium - 2

Room or Area: Auditorium Date Completed: 11/13/24

Signature: Charles T Bell

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

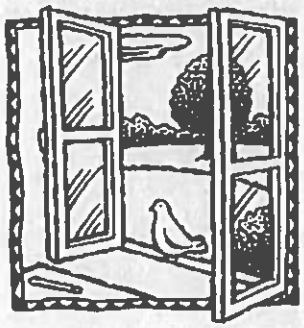
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☑	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☑	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☑	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☑	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☒
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☑	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☒

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☑	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☑	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES

Ventilation Checklist

Name: Charles T Bedo

School: Stratford High

Unit Ventilator/AHU No: Daikin RTU1

Room or Area: Cafeteria Date Completed: 11/13/24

Signature: Charles T Bedo

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☑
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☑	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☑	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☑	☐	☐

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☐	☐	☑
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☑	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☑	☐	☐

ACTIVITY 3: AIRFLOW

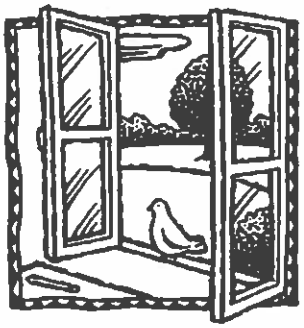
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☑	☐	☐
1i. Confirmed that outdoor air is entering the intake appropriately	☑	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☑	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☑	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☑
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☑	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☑	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☑	☐	☐
2g. Cleaned drain pans	☐	☐	☑
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☑
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☑	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☑	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☑	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☑
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☑	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☑	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☑	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☑	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☑	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☑	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☑
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☑

ACTIVITY 15: ECONOMIZERS

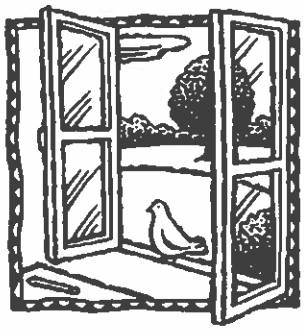
3x. Confirmed proper economizer settings based on design specifications or local practices	☑	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☑	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☑	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☐

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☑	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☑	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☑
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES

Ventilation Checklist

Name: Charles T Bedo
School: Stratford High
Unit Ventilator/AHU No: Gym - 2 RTU
Room or Area: GYM Date Completed: 11/12/24
Signature: Charles T Bedo

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

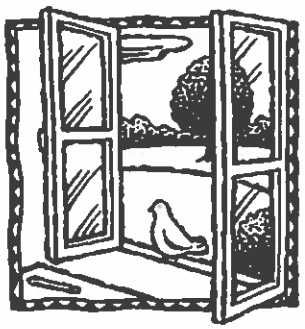
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES

Ventilation Checklist

Name: Charles T Bell
School: Stratford High
Unit Ventilator/AHU No: GYM-1 RTU
Room or Area: GYM Date Completed: 11/13/24
Signature: Charles T Bell

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

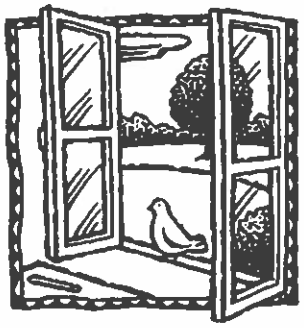
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

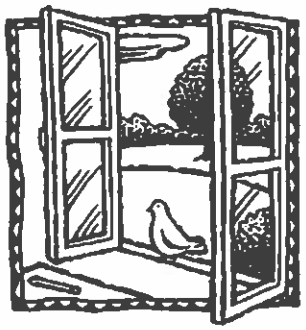
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

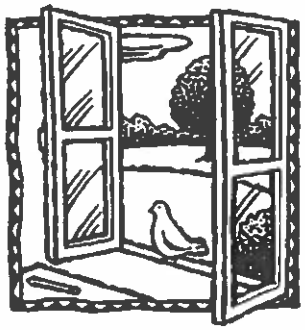
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

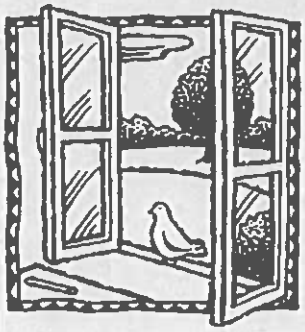
NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES



Ventilation Checklist

Name: Charles T Beebe

School: Stratford High

Unit Ventilator/AHU No: Red Kitchen

Room or Area: Kitchen Date Completed: 11/13/24

Signature: Charles T Beebe

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

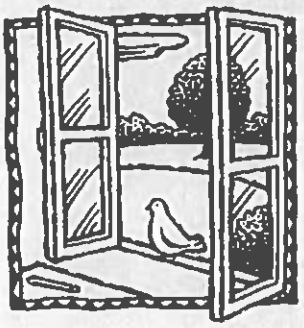
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☑	☐	☐
2g. Cleaned drain pans	☐	☐	☑
2h. Checked drain pans for mold and mildew	☐	☐	☑

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☑	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☑
2k. Ensured that ducts are clean	☐	☐	☑

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☑
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☑

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☑	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☑	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☑	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☑
3e. Set time clocks appropriately	☐	☐	☑
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☑

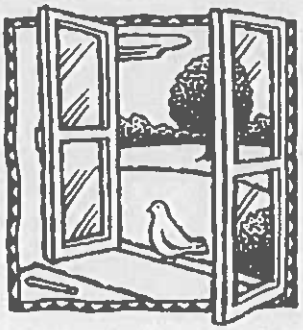
ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☑	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☑
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☑
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☑

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☑	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☑	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☑	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.



3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

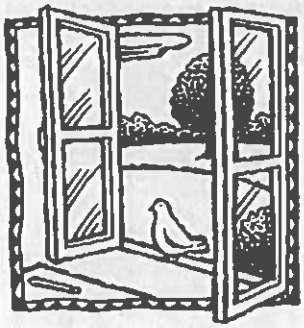
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

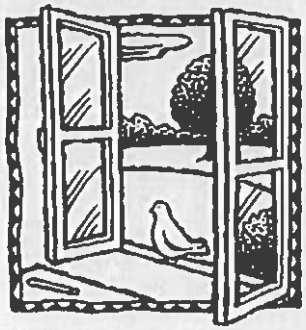
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES

Ventilation Checklist

Name: Charles T Bellos
School: Stratford High
Unit Ventilator/AHU No: Lecture Hall
Room or Area: Lecture Hall Date Completed: 11/13/24
Signature: Charles T Bellos

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

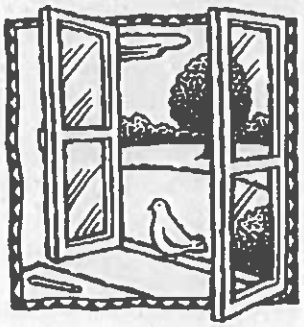
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☐	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required ☐ ☐ ☐

4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning ☐ ☐ ☐

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows) ☐ ☐ ☐

4d. Ensured that supply and return vents are open and unblocked ☐ ☐ ☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply ☐ ☐ ☐

4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes ☐ ☐ ☐

4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents ☐ ☐ ☐

4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities ☐ ☐ ☐

4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals ☐ ☐ ☐

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings) ☐ ☐ ☐

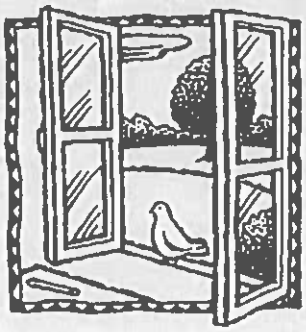
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s) ☐ ☐ ☐

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☑	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☑	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

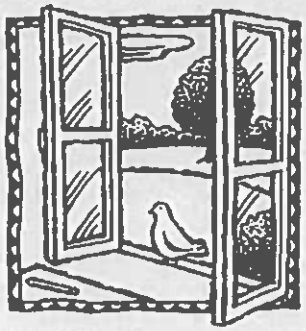
NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☑
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES



Ventilation Checklist

Name: Charles T Bello

School: Stratford High

Unit Ventilator/AHU No: Dec. 1 - 6

Room or Area: 113 - Area Date Completed: 11/13/24

Signature: Charles T Bello

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

		Yes	No	N/A
1a.	Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b.	Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c.	Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d.	Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e.	Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f.	Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g.	Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

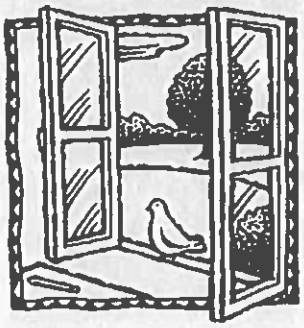
1h.	Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i.	Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a.	Replaced filters per maintenance schedule	☒	☐	☐
2b.	Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c.	Vacuumed filter areas before installing new filters	☐	☐	☒
2d.	Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e.	Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☑	☐	☐
2g. Cleaned drain pans	☐	☐	☑
2h. Checked drain pans for mold and mildew	☐	☐	☑

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☑	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☑
2k. Ensured that ducts are clean	☐	☐	☑

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☑
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☑

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☑	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☑	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☑	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☑
3e. Set time clocks appropriately	☐	☐	☑
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☑

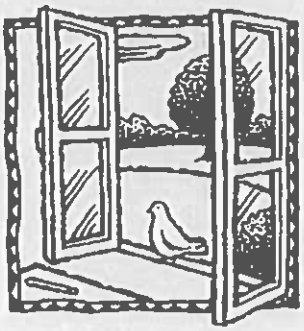
ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☑	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☑
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☑
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☑

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☑	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☑	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☑	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.



3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

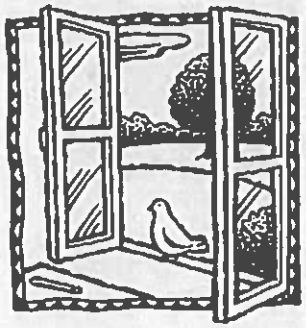
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES

Ventilation Checklist

Name: Charles T [illegible]
School: Stratford High
Unit Ventilator/AHU No: DOAS-7
Room or Area: 1B-Area Date Completed: 11/13/24
Signature: [signature]

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

	Yes	No	N/A
1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

	Yes	No	N/A
1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

	Yes	No	N/A
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

	Yes	No	N/A
2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)

ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☑	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☑	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☑	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☑	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☑	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☑	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☑
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☑	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☑	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☑	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☑	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☑	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☑	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☑
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☑

ACTIVITY 15: ECONOMIZERS

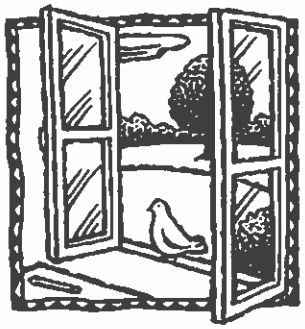
3x. Confirmed proper economizer settings based on design specifications or local practices	☑	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☑	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☑	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☑	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☑	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☑
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES

Ventilation Checklist

Name: Chaks T Bede
School: Stratford High
Unit Ventilator/AHU No: Doas - 5
Room or Area: 1st FLR-C-North
Date Completed: 11/13/24
Signature: [signature]

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Item	Yes	No	N/A
1a.	Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b.	Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

	Item	Yes	No	N/A
1c.	Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d.	Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

	Item	Yes	No	N/A
1e.	Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f.	Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g.	Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

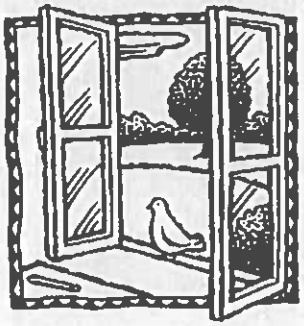
	Item	Yes	No	N/A
1h.	Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i.	Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

	Item	Yes	No	N/A
2a.	Replaced filters per maintenance schedule	☒	☐	☐
2b.	Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c.	Vacuumed filter areas before installing new filters	☐	☐	☒
2d.	Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e.	Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☑	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☑	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☑

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☑	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☑
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☑

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☑

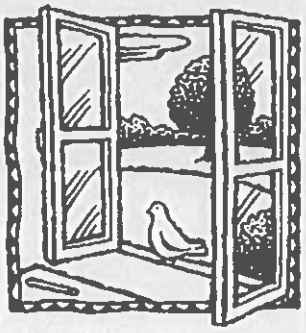
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☑

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☑	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☑	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☑
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES

Ventilation Checklist

Name: Charles T Bode
School: Stratford High
Unit Ventilator/AHU No: Doas - 1
Room or Area: 1st Flr offices Date Completed: 11/13/04
Signature: Charles T Bode

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Item	Yes	No	N/A
1a.	Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b.	Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

	Item	Yes	No	N/A
1c.	Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d.	Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

	Item	Yes	No	N/A
1e.	Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f.	Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g.	Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

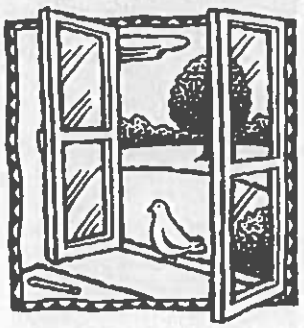
	Item	Yes	No	N/A
1h.	Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i.	Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

	Item	Yes	No	N/A
2a.	Replaced filters per maintenance schedule	☒	☐	☐
2b.	Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c.	Vacuumed filter areas before installing new filters	☐	☐	☒
2d.	Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e.	Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

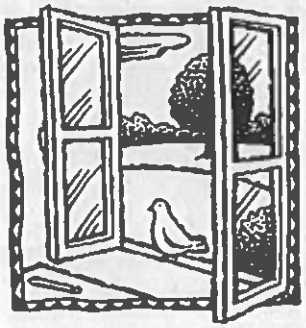
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*

5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES

Ventilation Checklist

Name: Chuck T Beck

School: Stratford High

Unit Ventilator/AHU No: Dock 2

Room or Area: 2nd FLR / some 1st FLR Date Completed: 11/13/24

Signature: Chuck T Beck

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

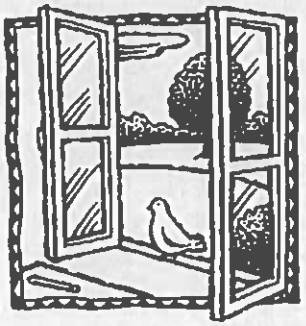
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

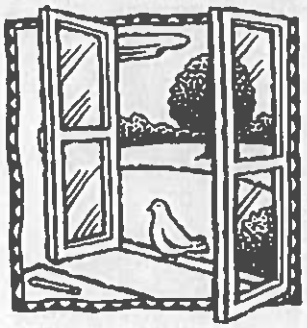
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

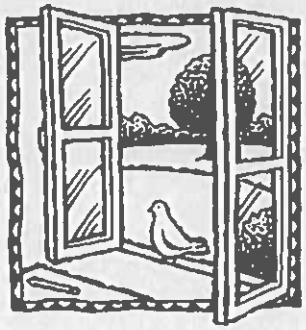
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES

Ventilation Checklist

Name: Charles T Bode

School: Stratford High

Unit Ventilator/AHU No: DOAS-3

Room or Area: Half 2nd Flr/3rd Flr Date Completed: 11/12/24

Signature: Charles T Bode

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

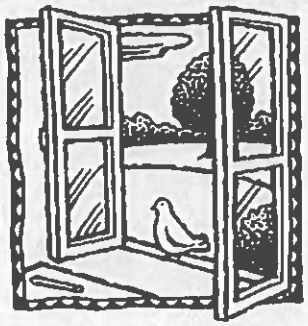
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☑
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

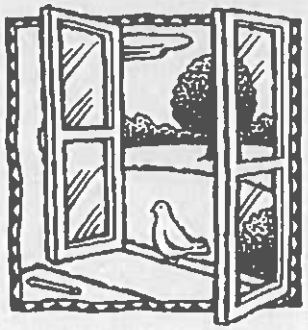
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☑

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☑	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☑	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

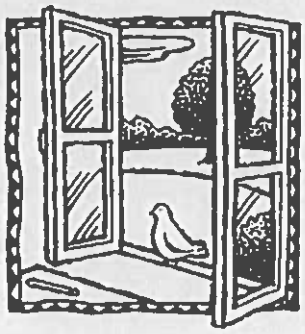
NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☑
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☑

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☑
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☑

NOTES



Ventilation Checklist

Name: Charles T Dido
School: Stratford High
Unit Ventilator/AHU No: Duct 4
Room or Area: 3rd FLR Date Completed: 11/13/24
Signature: Charles T Dido

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of this checklist for **each** ventilation unit in your school, as well as a copy for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. OUTDOOR AIR INTAKES

	Yes	No	N/A
1a. Marked locations of all outdoor air intakes on a small floor plan (for example, a fire escape floor plan)	☐	☐	☒
1b. Ensured that the ventilation system was on and operating in "occupied" mode	☒	☐	☐

ACTIVITY 1: OBSTRUCTIONS

1c. Ensured that outdoor air intakes are clear of obstructions, debris, clogs, or covers	☒	☐	☐
1d. Installed corrective devices as necessary (e.g., if snowdrifts or leaves frequently block an intake)	☐	☐	☒

ACTIVITY 2: POLLUTANT SOURCES

1e. Checked ground-level intakes for pollutant sources (dumpsters, loading docks, and bus-idling areas)	☒	☐	☐
1f. Checked rooftop intakes for pollutant sources (plumbing vents; kitchen, toilet, or laboratory exhaust fans; puddles; and mist from air-conditioning cooling towers)	☒	☐	☐
1g. Resolved any problems with pollutant sources located near outdoor air intakes (e.g., relocated dumpster or extended exhaust pipe)	☒	☐	☐

ACTIVITY 3: AIRFLOW

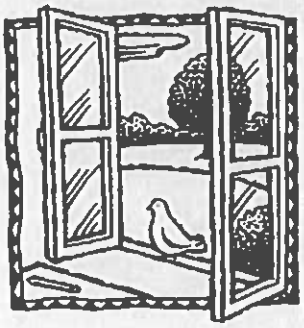
1h. Obtained chemical smoke (or a small piece of tissue paper or light plastic)	☐	☐	☒
1i. Confirmed that outdoor air is entering the intake appropriately	☒	☐	☐

2. SYSTEM CLEANLINESS

ACTIVITY 4: AIR FILTERS

2a. Replaced filters per maintenance schedule	☒	☐	☐
2b. Shut off ventilation system fans while replacing filters (prevents dirt from blowing downstream)	☒	☐	☐
2c. Vacuumed filter areas before installing new filters	☐	☐	☒
2d. Confirmed proper fit of filters to prevent air from bypassing (flowing around) the air filter	☒	☐	☐
2e. Confirmed proper installation of filters (correct direction for airflow)	☒	☐	☐

2. SYSTEM CLEANLINESS (continued)



ACTIVITY 5: DRAIN PANS

	Yes	No	N/A
2f. Ensured that drain pans slant toward the drain (to prevent water from accumulating)	☒	☐	☐
2g. Cleaned drain pans	☐	☐	☒
2h. Checked drain pans for mold and mildew	☐	☐	☒

ACTIVITY 6: COILS

2i. Ensured that heating and cooling coils are clean	☒	☐	☐

ACTIVITY 7: AIR-HANDLING UNITS, UNIT VENTILATORS

2j. Ensured that the interior of air-handling unit(s) or unit ventilator (air-mixing chamber and fan blades) is clean	☐	☐	☒
2k. Ensured that ducts are clean	☐	☐	☒

ACTIVITY 8: MECHANICAL ROOMS

2l. Checked mechanical room for unsanitary conditions, leaks, and spills	☐	☐	☒
2m. Ensured that mechanical rooms and air-mixing chambers are free of trash, chemical products, and supplies	☐	☐	☒

3. CONTROLS FOR OUTDOOR AIR SUPPLY

3a. Ensured that air dampers are at least partially open (minimum position)	☒	☐	☐
3b. Ensured that minimum position provides adequate outdoor air for occupants	☒	☐	☐

ACTIVITY 9: CONTROLS INFORMATION

3c. Obtained and reviewed all design inside/outside temperature and humidity requirements, controls specifications, as-built mechanical drawings, and controls operations manuals (often uniquely designed)	☒	☐	☐

ACTIVITY 10: CLOCKS, TIMERS, SWITCHES

3d. Turned summer-winter switches to the correct position	☐	☐	☒
3e. Set time clocks appropriately	☐	☐	☒
3f. Ensured that settings fit the actual schedule of building use (including night/weekend use)	☐	☐	☒

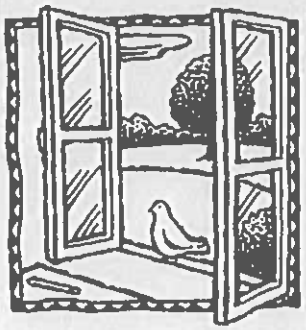
ACTIVITY 11: CONTROL COMPONENTS

3g. Ensured appropriate system pressure by testing line pressure at both the occupied (day) setting and the unoccupied (night) setting	☒	☐	☐
3h. Checked that the line dryer prevents moisture buildup	☐	☐	☒
3i. Replaced control system filters at the compressor inlet based on the compressor manufacturer's recommendation (for example, when you blow down the tank)	☐	☐	☒
3j. Set the line pressure at each thermostat and damper actuator at the proper level (no leakage or obstructions)	☐	☐	☒

ACTIVITY 12: OUTDOOR AIR DAMPERS

3k. Ensured that the outdoor air damper is visible for inspection	☒	☐	☐
3l. Ensured that the recirculating relief and/or exhaust dampers are visible for inspection	☒	☐	☐
3m. Ensured that air temperature in the indoor area(s) served by each outdoor air damper is within the normal operating range	☒	☐	☐

NOTE: It is necessary to ensure that the damper is operating properly and within the normal range to continue.



3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)

	Yes	No	N/A
3n. Checked that the outdoor air damper fully closes within a few minutes of shutting off appropriate air handler	☒	☐	☐
3o. Checked that the outdoor air damper opens (at least partially with no delay) when the air handler is turned on	☒	☐	☐
3p. If in heating mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 85°F	☐	☐	☒
3q. If in cooling mode, checked that the outdoor air damper goes to its minimum position (without completely closing) when the room thermostat is set to 60°F and mixed air thermostat is set to 45°F	☒	☐	☐
3r. If the outdoor air damper does not move, confirmed the following items:			
• The damper actuator links to the damper shaft, and any linkage set screws or bolts are tight	☒	☐	☐
• Moving parts are free of impediments (e.g., rust, corrosion)	☒	☐	☐
• Electrical wire or pneumatic tubing connects to the damper actuator	☒	☐	☐
• The outside air thermostat(s) is functioning properly (e.g., in the right location, calibrated correctly)	☒	☐	☐

Proceed to Activities 13–16 if the damper seems to be operating properly.

ACTIVITY 13: FREEZE STATS

3s. Disconnected power to controls (for automatic reset only) to test continuity across terminals	☐	☐	☐
OR			
3t. Confirmed (if applicable) that depressing the manual reset button (usually red) trips the freeze stat (clicking sound indicates freeze stat was tripped)	☒	☐	☐
3u. Assessed the feasibility of replacing all manual reset freeze-stats with automatic reset freeze-stats	☐	☐	☐

NOTE: HVAC systems with water coils need protection from the cold. The freeze-stat may close the outdoor air damper and disconnect the supply air when tripped. The typical trip range is 35°F to 42°F.

ACTIVITY 14: MIXED AIR THERMOSTATS

3v. Ensured that the mixed air stat for heating mode is set no higher than 65°F	☐	☐	☒
3w. Ensured that the mixed air stat for cooling mode is set no lower than the room thermostat setting	☐	☐	☒

ACTIVITY 15: ECONOMIZERS

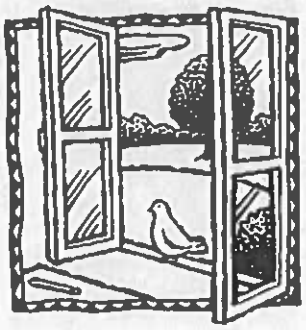
3x. Confirmed proper economizer settings based on design specifications or local practices	☒	☐	☐

NOTE: The dry-bulb is typically set at 65°F or lower.

3y. Checked that sensor on the economizer is shielded from direct sunlight	☒	☐	☐
3z. Ensured that dampers operate properly (for outside air, return air, exhaust/relief air, and recirculated air), per the design specifications	☒	☐	☐

NOTE: Economizers use varying amounts of cool outdoor air to assist with the cooling load of the room or rooms. There are two types of economizers, dry-bulb and enthalpy. Dry-bulb economizers vary the amount of outdoor air based on outdoor temperature, and enthalpy economizers vary the amount of outdoor air based on outdoor temperature and humidity level.

3. CONTROLS FOR OUTDOOR AIR SUPPLY (continued)



ACTIVITY 16: FANS

	Yes	No	N/A
3aa. Ensured that all fans (supply fans and associated return or relief fans) that move outside air indoors continuously operate during occupied hours (even when room thermostat is satisfied)	☒	☐	☐

NOTE: If fan shuts off when the thermostat is satisfied, adjust control cycle as necessary to ensure sufficient outdoor air supply.

4. AIR DISTRIBUTION

ACTIVITY 17: AIR DISTRIBUTION

4a. Ensured that supply and return air pathways in the existing ventilation system perform as required	☒	☐	☐
4b. Ensured that passive gravity relief ventilation systems and transfer grilles between rooms and corridors are functioning	☐	☐	☒

NOTE: If ventilation system is closed or blocked to meet current fire codes, consult with a professional engineer for remedies.

4c. Made sure every occupied space has supply of outdoor air (mechanical system or operable windows)	☐	☐	☒
4d. Ensured that supply and return vents are open and unblocked	☒	☐	☐

NOTE: If outlets have been blocked intentionally to correct drafts or discomfort, investigate and correct the cause of the discomfort and reopen the vents.

4e. Modified the HVAC system to supply outside air to areas without an outdoor air supply	☐	☐	☒
4f. Modified existing HVAC systems to incorporate any room or zone layout and population changes	☐	☐	☒
4g. Moved all barriers (for example, room dividers, large free-standing blackboards or displays, bookshelves) that could block movement of air in the room, especially those blocking air vents	☐	☐	☒
4h. Ensured that unit ventilators are quiet enough to accommodate classroom activities	☒	☐	☐
4i. Ensured that classrooms are free of uncomfortable drafts produced by air from supply terminals	☐	☐	☒

ACTIVITY 18: PRESSURIZATION IN BUILDINGS

NOTE: To prevent infiltration of outdoor pollutants, the ventilation system is designed to maintain positive pressurization in the building. Therefore, ensure that the system, including any exhaust fans, is operating on the "occupied" cycle when doing this activity.

4j. Ensured that air flows out of the building (using chemical smoke) through windows, doors, or other cracks and holes in exterior wall (for example, floor joints, pipe openings)	☐	☐	☒

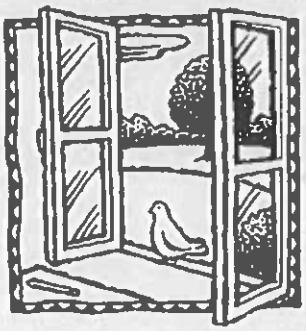
5. EXHAUST SYSTEMS

ACTIVITY 19: EXHAUST FAN OPERATION

5a. Checked (using chemical smoke) that air flows into exhaust fan grille(s)	☐	☐	☒

If fans are running but air is not flowing toward the exhaust intake, check for the following:

- *Inoperable dampers*
- *Obstructed, leaky, or disconnected ductwork*
- *Undersized or improperly installed fan*
- *Broken fan belt*



5. EXHAUST SYSTEMS (continued)

ACTIVITY 20: EXHAUST AIRFLOW

NOTE: Prevent migration of indoor contaminants from areas such as bathrooms, kitchens, and labs by keeping them under negative pressure (as compared to surrounding spaces).

	Yes	No	N/A
5b. Checked (using chemical smoke) that air is drawn into the room from adjacent spaces	☐	☐	☒

Stand outside the room with the door slightly open while checking airflow high and low in the door opening (see "How to Measure Airflow").

5c. Ensured that air is flowing toward the exhaust intake	☒	☐	☐

ACTIVITY 21: EXHAUST DUCTWORK

5d. Checked that the exhaust ductwork downstream of the exhaust fan (which is under positive pressure) is sealed and in good condition	☒	☐	☐

6. QUANTITY OF OUTDOOR AIR

ACTIVITY 22: OUTDOOR AIR MEASUREMENTS AND CALCULATIONS

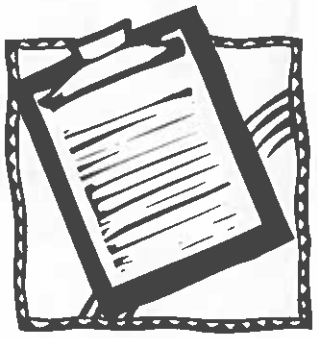
NOTE: Refer to "How to Measure Airflow" for techniques.

6a. Measured the quantity of outdoor air supplied (22a) to each ventilation unit	☐	☐	☒
6b. Calculated the number of occupants served (22b) by the ventilation unit under consideration	☐	☐	☒
6c. Divided outdoor air supply (22a) by the number of occupants (22b) to determine the existing quantity of outdoor air supply per person (22c)	☐	☐	☒

ACTIVITY 23: ACCEPTABLE LEVELS OF OUTDOOR AIR QUANTITIES

6d. Compared the existing outdoor air per person (22c) to the recommended levels in Table 1	☐	☐	☒
6e. Corrected problems with ventilation units that supplied inadequate quantities of outdoor air to ensure that outdoor air quantities (22c) meet the recommended levels in Table 1	☐	☐	☒

NOTES



Walkthrough Inspection Checklist

Name: Richard Ruggiero

School: Stratford High

Room or Area: Entire School Date Completed: 11-7-2024

Signature: Richard Ruggiero

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. GROUND LEVEL

		Yes	No	N/A
1a.	Ensured that ventilation units operate properly	☑	☐	☐
1b.	Ensured there are no obstructions blocking air intakes	☑	☐	☐
1c.	Checked for nests and droppings near outdoor air intakes	☑	☐	☐
1d.	Determined that dumpsters are located away from doors, windows, and outdoor air intakes	☑	☐	☐
1e.	Checked potential sources of air contaminants near the building (chimneys, stacks, industrial plants, exhaust from nearby buildings)	☑	☐	☐
1f.	Ensured that vehicles avoid idling near outdoor air intakes	☑	☐	☐
1g.	Minimized pesticide application	☑	☐	☐
1h.	Ensured that there is proper drainage away from the building (including roof downspouts)	☑	☐	☐
1i.	Ensured that sprinklers spray away from the building and outdoor air intakes	☑	☐	☐
1j.	Ensured that walk-off mats are used at exterior entrances and that they are cleaned regularly	☑	☐	☐

2. ROOF

While on the roof, consider inspecting the HVAC units (use the Ventilation Checklist*).*

2a.	Ensured that the roof is in good condition	☑	☐	☐
2b.	Checked for evidence of water ponding	☑	☐	☐
2c.	Checked that ventilation units operate properly (air flows in)	☑	☐	☐
2d.	Ensured that exhaust fans operate properly (air flows out)	☑	☐	☐
2e.	Ensured that air intakes remain open, even at minimum setting	☑	☐	☐
2f.	Checked for nests and droppings near outdoor air intakes	☑	☐	☐
2g.	Ensured that air from plumbing stacks and exhaust outlets flows away from outdoor air intakes	☑	☐	☐

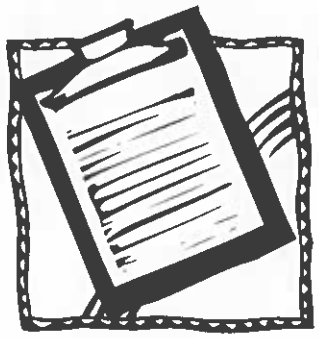
3. ATTIC

3a.	Checked for evidence of roof and plumbing leaks	☑	☐	☐
3b.	Checked for birds and animal nests	☑	☐	☐

4. GENERAL CONSIDERATIONS

4a.	Ensured that temperature and humidity are maintained within acceptable ranges	☑	☐	☐
4b.	Ensured that no obstructions exist in supply and exhaust vents	☑	☐	☐
4c.	Checked for odors	☑	☐	☐
4d.	Checked for signs of mold and mildew growth	☑	☐	☐

4. GENERAL CONSIDERATIONS (continued)



	Yes	No	N/A
4e. Checked for signs of water damage	☑	☐	☐
4f. Checked for evidence of pests and obvious food sources	☑	☐	☐
4g. Noted and reviewed all concerns from school occupants	☑	☐	☐

5. BATHROOMS AND GENERAL PLUMBING

5a. Ensured that bathrooms and restrooms have operating exhaust fans	☑	☐	☐
5b. Ensured proper drain trap maintenance:			
Water is poured down floor drains once per week (approx. 1 quart of water)	☑	☐	☐
Water is poured into sinks at least once per week (about 2 cups of water)	☑	☐	☐
Toilets are flushed at least once per week	☑	☐	☐

6. MAINTENANCE SUPPLIES

6a. Ensured that chemicals are used only with adequate ventilation and when building is unoccupied	☑	☐	☐
6b. Ensured that vents in chemical and trash storage areas are operating properly	☑	☐	☐
6c. Ensured that portable fuel containers are properly closed	☐	☐	☑
6d. Ensured that power equipment, like snowblowers and lawn mowers, have been serviced and maintained according to manufacturers' guidelines	☐	☐	☑

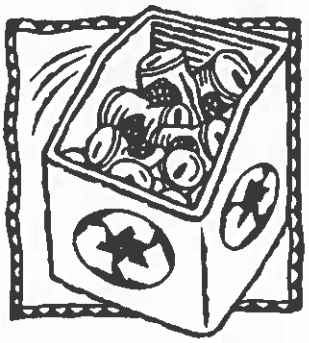
7. COMBUSTION APPLIANCES

7a. Checked for combustion gas and fuel odors	☑	☐	☐
7b. Ensured that combustion appliances have flues or exhaust hoods	☑	☐	☐
7c. Checked for leaks, disconnections, and deterioration	☑	☐	☐
7d. Ensured there is no soot on inside or outside of flue components	☑	☐	☐

8. OTHER

8a. Checked for peeling and flaking paint (if the building was built before 1980, this could be a lead hazard)	☑	☐	☐
8b. Determined date of last radon test	☑	☐	☐

NOTES



Waste Management Checklist

Name: Richard Ruggiero

School: Stratford High School

Room or Area: Parking lot Date Completed: 11-12-2021

Signature:

Instructions

1. Read the *IAQ Backgrounder* and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
   - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. WASTE MANAGEMENT

	Yes	No	N/A
1a. Ensured that waste containers are appropriate for use (for example, food waste containers should have lids)	☑	☐	☐
1b. Ensured that waste containers are lined	☑	☐	☐
1c. Ensured that waste from art, science, vocational classes, etc., are handled separately	☑	☐	☐
1d. Labeled recycling bins clearly	☑	☐	☐
1e. Ensured number of bins and dumpsters is adequate	☑	☐	☐
1f. Ensured appropriate location of dumpsters (i.e., away from air intakes, doors, and operable windows in relation to prevailing winds)	☑	☐	☐
1g. Ensured waste containers are emptied regularly	☑	☐	☐
1h. Ensured appropriate waste removal schedule	☑	☐	☐
1i. Ensured waste is stored in a well-ventilated room	☑	☐	☐
1j. Ensured any exhaust fans in the room are operating properly	☑	☐	☐
1k. Checked waste storage areas for odors, contaminants, or signs of vermin	☑	☐	☐

NOTES