



**BOE/CO  
Friday Packet  
September 17, 2021**

Upcoming Meeting Dates

9-21-2021 Policy Committee Agenda

FWHS Ventilation Reports

HVAC Recommendations



Upcoming Board of Education Meeting Dates **2021**

<b>September 21</b>	<b>5:00 PM</b>	Policy Committee Meeting Superintendent Conference Room 501 Kings Hwy East
<b>September 28</b>	<b>7:30 PM</b>	Regular Meeting CO Board Room and Virtual 501 Kings Hwy East
<b>October 5</b>	<b>5:00 PM</b>	Policy Committee Meeting Superintendent Conference Room 501 Kings Hwy East
<b>October 6</b>	<b>3:30 PM</b>	Finance Committee Meeting Superintendent Conference Room 501 Kings Hwy East
<b>October 12</b>	<b>7:30 PM</b>	Regular Meeting CO Board Room and Virtual 501 Kings Hwy East

[Other Town Meetings](#)

[Wed. September 29, BOF Quarterly/Year-End Review](#)

[October TBD, BOF Capital Planning Summit](#)

[November 16 – BOF Quarterly Review](#)

BOARD OF EDUCATION  
FAIRFIELD PUBLIC SCHOOLS  
FAIRFIELD, CT

**Policy Committee Meeting**  
**Tuesday, September 21, 2021**  
5:00 PM  
501 Kings Highway East  
Superintendent's Conference Room

**Agenda**

- I. Call to Order
- II. Approval of August 17, 2021 minutes
- III. Approval of August 31, 2021 minutes
- IV. Approval of September 8, 2021 minutes
- V. Policy
  - a. Update on Grading Policy
  - b. 5131.911 Bullying
  - c. Parent Teacher Conferences
  - d. Graduation Requirements
- VI. Future Items
  - a. Parent Organizations and Booster Clubs
  - b. Homework Policy
- VII. Open Discussion/Public Comment
- VIII. Adjournment

Future Meetings: October 5, October 19, November 23, December 7.

All meetings will be held at 501 Kings Highway East, Superintendent's Conference Room unless otherwise noted.

## Fairfield Warde High School

- Servery: Many upper windows for the kitchen near RTU-B-3 are cracked/not sealing against the frame properly. A compromised building envelope leads to thermal losses and potential indoor air quality concerns. **Windows Replaced and resealed**
- General Comment: The fan squirrel cage in any unit with one is generally dirty **Cleaned during PM work**
- General Comment: Many filter racks at Warde are distorted / have screws along the length that catch the filters as they are moved in or out, causing some damage upon changeout. We observed many filters found with damage from this but were installed anyway. We recommend straightening the racks and fixing bypasses created in this way, especially before installing costlier MERV 13 filters. **Fixed and MERV 13 filter installed**
- The A-wing Plymovent EF guy-wires are not affixed to the roof anymore.
- RTU-A-1
  - The filters are dirty. Two filters have fallen out of the rack **Filters replaced**
  - The filter section lower door handle is broken in the shut position **Does not affect indoor air quality**
  - The unit interior is dirty **Cleaned during PM**
  - The coil is dirty **Cleaned during PM**
- RTU-A-2
  - The unit interior is dirty **Cleaned during PM**
  - The coil is dirty **Cleaned during PM**
  - The dampers need to be lubricated **Serviced**
  - The filters are very dirty and are being pulled out of the racks. **Filters replaced**
  - The condenser coils need to be combed to straighten the fins **Combed during PM**
  - The supply air duct insulation seams are coming undone near the steam coil. There appear to be some sections where the duct is leaking, as evidenced by the insulation ballooning. With the insulation damaged, water could get into the ductwork in these locations, so it should be patched wherever possible. **Duct checked and resealed**
- RTU-A-3
  - There was excessive water found in the filter section of the unit. Some debris and paper was sitting in the water; these should be removed. **Serviced in**
  - The condenser fans are imbalanced **Waiting on updated report**
  - The condenser coils need to be combed to straighten the fins **Combed during PM**
- RTU-A-4
  - The unit was running but the DX cooling was not operating. We would have expected it to, given the conditions. **Unit operating properly**
  - RTU-A-5 **Replaced with New Unit**
  - ~~For the unit serving the Black Box Theater, the unit nameplate tags this unit at RTU-A-2, but that designation is taken by another unit. The previous list had this unit as “AC-E-5” but this building section is still A. For this report, the unit is designated as “RTU-A-5”.~~
  - ~~The fan belt is missing~~
  - ~~The fan bearing is destroyed and needs to be replaced~~
  - ~~Piping insulation in the unit is damaged~~
  - RTU-A-6
  - For the unit serving Technical Education, the unit nameplate tags this unit at RTU-A-3, but that designation is taken by another unit. The previous list had this unit as “AC-E-6” but this building section is still A. For this report, the unit is designated as “RTU-A-6”.

- Based on the filters, it looks like this unit has not run at all since the previous filter change on 5/4/2020. While it is likely that the unit has had little to no occupancy load due to COVID-19, most units were found to operate some during this time. **Filters replaced. Unit previously off by request of previous shop teacher.**
- RTU-A-7
  - For the unit serving the Early Childhood Center, the unit nameplate tags this unit at RTU-A-1, but that designation is taken by another unit. The previous list had this unit as “AC-E-7” but this building section is still A. For this report, the unit is designated as “RTU-A-7”.
  - The coil is dirty **Cleaned during PM**
  - The condensate pan is dirty and needs to be cleaned out **Cleaned during PM**
  - We found this unit running in 100% return air recirculation. **Serviced**
  - With the positioning of the ductwork and piping for this unit, access is impossible without stepping on one or the other. This has led to the insulation being crushed, which compromised both the vapor barrier and the effectiveness of the insulation. Additionally, the ductwork itself seems to have been damaged. Repairing the damaged insulation and installing a permanent means of accessing this unit are recommended to prevent future damage. **Does not affect indoor air quality large project to re-pipe**
  - Piping insulation inside of the unit is damaged **Replaced during PM**
  - The programming module was found within the unit control cabinet, plugged into the convenience receptacle on the exterior of the unit with an extension cord. Upon discussion with the facilities staff, they informed us that unit does not receive a cooling signal command from the control system. Whenever cooling is desired, somebody needs to go to the roof and manually enable it. This manual enable only lasts for 75 minutes when it would need to be re-enabled. This is not something that would have been corrected with the controller upgrade by ALC, so further investigation should be done. **New controls installed**
- RTU-B-1
  - The unit was found off **Unit operating properly**
- RTU-B-2
  - This unit was operating with much higher airflow than expected compared to RTU-B-1 and 3.
  - The top filters were found installed facing the wrong direction. We faced them correctly. **Filters replace**
- RTU-B-3
  - Debris was found inside of the unit **Debris removed**
  - Some of the control relays appear to have burned out and should be changed **Relays operational**
- RTU-C-1
  - The unit was found not running, and it seems that it hasn’t run in a while.
  - The condenser coil need cleaning **Unit operating properly**
- RTU-C-2
  - Access to this unit is precarious. Recommend installing a permanent stair/ladder to safely traverse over the solar panel electrical conduit. **Noted as part of the roofing safety upgrades**
- RTU-C-3
  - The 2” pre-filters are dirty **Filters replaced**
  - The coil is slightly dirty **Cleaned during PM**
- RTU-E-1
  - The filters are very dirty, and some have been pulled out of the frame. The broken filters were removed, and facilities was informed. **Filters replaced**

- RTU-E-2
  - The filters were very dirty **Filters replaced**
- RTU-E-5
  - The filters were very dirty **Filters replaced**
- RTU-E-6
  - Unit nameplate is missing, could not confirm model/serial
  - Filters are extremely dirty and wet **Filters replaced**
  - The unit interior is dirty **Serviced**
  - The coil is dirty **Cleaned during PM**
  - The condensate pan is dirty and needs to be cleaned out **Cleaned during PM**
- RTU-E-8
  - The condenser coil should be cleaned **Cleaned during PM**
  - The fan belt is incredibly loose and is whipping around on the pulleys, though it has not yet fallen off. **Serviced**
- HV-D-1
  - The unit returns air from the mechanical space that it is in (Small Gym MER South). By code, this is not allowed since it will have adverse effects on the indoor air quality. The return air must be ducted to the space or a section of the building where all of the materials are plenum-rated. **This is a large project still being investigated**
- HV-D-3
  - The coil is coated with dust, pollen, and debris; this requires a full cleaning. **Cleaned during PM**
  - The unit returns air from the mechanical space that it is in (Small Gym MER South). By code, this is not allowed since it will have adverse effects on the indoor air quality. The return air must be ducted to the space or a section of the building where all of the materials are plenum-rated. **This is a large project still being investigated**
- RTU-F-1
  - The mixed air damper jackshaft is bent, possibly from over torqueing. Dampers should be greased, and the jackshaft replace.
  - The unit interior is very dirty. We observed large sections of rust and corrosion inside the cabinets particularly near the condensate pans.
  - The DX cooling was not running at the time of inspection, but we would have expected it to be given the conditions.
  - The supply fan belt is loose **Serviced**
  - The supply fan is imbalanced
  - **Unit scheduled to be replaced 2022**
- RTU-F-2
  - The supply fan belt is loose **Serviced**
  - The supply fan is imbalanced
- RTU-F-4
  - The damper actuator linkage was detached, and the damper were found locked in place at approximately 90% return air position.
  - The supply fan belt is loose **Serviced**
  - The supply fan is imbalanced
  - **Unit scheduled to be replaced 2022**
- RTU-H-6
  - This unit was found above the auditorium with no nameplate and only the label “AC-H-6” painted on the side. It is assumed to not be needed since RTU-AUD now serves the auditorium. **Not used**
- RTU-L-1

- The coil and the coil section of the unit are dirty **Cleaned during PM**
  - The condensate pan is dirty and needs to be cleaned out **Cleaned during PM**
- RTU-L-2
  - The coil is dirty **Cleaned during PM**
  - The condensate pan is dirty and needs to be cleaned out **Cleaned during PM**
- RTU-L-4
  - This unit is mounted directly on the roof without some sort of structural/acoustic base. It is one of the smaller units, but this is still not advised. **Unit is on curb. Roofing built up around curb giving impression curb isn't present.**
- RTU-L-6
  - Filters are very dirty and damaged ones were pulled out from the frames. The damaged filters were removed, and facilities was notified. **Filters replaced**
  - The supply fan belt is loose **Serviced**
  - The coil is dirty **Cleaned during PM**
- RTU-L-8
  - Unit is operating much quieter than expected compared to similar units.
- RTU-L-9
  - The coil is dirty **Cleaned during PM**
  - The mixed air damper shaft is disconnected from the actuator at the linkage **Done to bypass so unit can be run at 100% outside air**
  - The unit was found off, but the outside air damper remained at 100% open. This should be closed whenever the unit is off, but it is unclear if the damper is stuck or if this is a sequence issue. **Serviced**
- RTU-L-10
  - Unit was not running at the time of inspection **Unit is make up air controlled by manual switch in class room below**
- RTU-L-11
  - This MagicAire unit, located on the L roof, does not have an actual designation.
  - Facilities staff informed us that this unit was never operational from the beginning, and it has been abandoned in place. **Unit is make up air controlled by manual switch in class room below**
  -
- RTU-M-1
  - There is no safe access to this unit. Planks are used to bridge the gap between the nearby roof and the unit itself **Part of the roof safety plan improvements**
- RTU-W-1
  - The duct insulation vapor barrier is compromised where it connects to the unit. This should be sealed to prevent damage to the insulation. **Re-taped**
  - Both the supply and return fan belts are loose and are rubbing **Serviced**
  - Wasps have infested the unit exterior; we advise caution when nearby **Removed by exterminator**
  - The filters are dirty **Filters replaced**
- RTU-W-2
  - The coil is dirty and has bugs on the entering side **Cleaned during PM**
- RTU-W-3

- The supply fan squirrel cage is wobbling, and the belt is slightly loose **Serviced**
- There is too much bypass in the filter rack **Filter replaced**
- The condenser fans are imbalanced, causing excessive rattling
- RTU-W-4
  - There is too much bypass in the filter rack **Filters replaced**
  - The condenser fans are imbalanced, causing excessive rattling
- RTU-W-5 **Replaced with New Unit**
  - ~~○ The dampers are dirty and require lubrication~~
  - ~~○ The interior of the unit is dirty~~
  - ~~○ The coil is dirty~~
  - ~~○ The condenser coils are dirty and need to be combed to straighten the fins~~
  - ~~○ We found the outside air wire filter laying on the ground~~
  - ~~○ There is too much bypass in the filter rack~~
  - ~~○ This unit, and similar units, have packaged economizer control. This means that commands from the building automation system will not necessarily be able to open the outside air dampers if additional ventilation is desired when the unit controller decides that conditions are not favorable to do so. As part of improvements for increasing ventilation, the controls system should be reviewed, and devices/wiring should be adjusted to accommodate these commands.~~
- RTU-W-6
  - The condenser fans are imbalanced, causing excessive rattling
  - The filters seem to be slightly oversized. The door of the unit crushes the filter when closed and forms small bypasses. **Filters replaced**
- RTU-W-7
  - Wasps have infested the unit exterior; we advise caution when nearby
  - The supply fan belts are loose **Serviced**
  - The coil is dirty
- RTU-W-8
  - The filters seem to be slightly oversized. The door of the unit crushes the filter when closed and forms small bypasses. **Filters replaced**
  - The duct insulation vapor barrier is compromised where it connects to the unit. This should be sealed to prevent damage to the insulation. **Re-taped**
  - The condensate trap is not the right height for a draw-through configuration, causing too little condensate to drain out. **Operating properly**
- RTU-W-9
  - This Magic Aire unit, located on the W roof, does not have an actual designation.
  - Facilities staff informed us that this unit was never operational from the beginning, and it has been abandoned in place. **Unit is made up air controlled by manual switch in class room below**



## **A. Timothy Dwight**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**
2. The central units in the gym, all purpose room, gym office, administration wing and media room should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All Filters changed to MERV 13**
3. The exhaust fans in the classroom wings should run with the windows open to keep a negative pressure in the space. If possible the kindergarten wing should have additional exhaust added to increase airflow to those rooms. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. Note that as temperature drops the radiators will not be able to keep up and the exhaust fans will need to be shut off. In order to keep these exhaust fans operational through the winter a makeup air system will need to be installed on the roof with ducts into each classroom. The unit will need to have a steam, hot water or gas coil to heat the air to room temperature. **Staff advised to keep windows open**
4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fans run continuously and monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **B. Mill Hill**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**
2. The central units in the gym, all purpose room, administration wing, media center and portable classrooms should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All Filters changed to MERV 13**
3. The exhaust fans in the classroom wings should run with the windows open to keep a negative pressure in the space. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. Note that as temperature drops the radiators will not be able to keep up and the exhaust fans will need to be shut off. In

order to keep these exhaust fans operational through the winter a makeup air system will need to be installed on the roof with ducts into each classroom. The unit will need to have a steam, hot water or gas coil to heat the air to room temperature. **Staff advised to keep windows open**

4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fans run continuously and monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

### **C. Burr**

#### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**

2. The central units for the classrooms, gym, cafeteria, library, music rooms, and lobby should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. This quantity should be maintained even as the supply cfm is reduced on the units with VAV boxes. The ERU heat wheel section should be disabled to prevent cross contamination. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof from the central unit relief. **All Filters changed to MERV 13**

3. The temperature from the central units should be lowered so that the VAV boxes will open closer to 100% until outside air reaches a temperature that the lower discharge air temperature can't maintain the proper temperature in the space. This can be done on a sliding scale of discharge air temperature versus outdoor air temperature. It is recommended that this programming be done separately so that when the CoVid issues are resolved the base programming can be reinstated. **Outside air set to run at 100%**

4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run continuously custodial staff will monitor**

5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop **Adjusted**

6. Note that all of the above will result in higher energy costs.

### **D. Osborn Hill**

#### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied

mode for 2 hours before and 2 hours after occupancy. **Schedules adjusted to reflect this**

2. The central units in the gym, all purpose room, teachers lounge, administration wing, portable classrooms and media center should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**

3. The unit ventilator for the music room can't be fitted with a MERV13 filter and has no capability to increase outside air. This room would require a new system to provide a higher level of filtration and additional outside air. **Larger project still being investigated**

4. The exhaust fans in the classroom wings should run with the windows open to keep a negative pressure in the space. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. Note that as temperature drops the radiators will not be able to keep up and the exhaust fans will need to be shut off. In order to keep these exhaust fans operational through the winter a makeup air system will need to be installed on the roof with ducts into each classroom. The unit will need to have a steam, hot water or gas coil to heat the air to room temperature. **Staff advised to keep windows open**

5. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**

6. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**

7. Note that all of the above will result in higher energy costs.

## **E. North Stratfield**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**

2. The central units in the gym, all purpose room, teachers lounge, administration wing, portable classrooms and media center should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**

3. The fan coil units in the administration area be fitted with a MERV13 filter and they have no capability to increase outside air. These rooms should be monitored closely for potential coil freezeups as the MERV13 filters will provide a large static pressure for these small units. A central rooftop unit with ductwork is recommended for this area. **Filter changed HVAC staff keeping an eye on the unit**

4. The exhaust fans in the classroom wings should run with the windows open to keep a negative pressure in the space. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. Note that as temperature

drops the radiators will not be able to keep up and the exhaust fans will need to be shut off. In order to keep these exhaust fans operational through the winter a makeup air system will need to be installed on the roof with ducts into each classroom. The unit will need to have a steam, hot water or gas coil to heat the air to room temperature. **Staff advised to keep windows open**

4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run continuously custodial staff will monitor**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **F. Jennings**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**

2. The central units in the gym, cafeteria, administration wing and library should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**

3. The exhaust fans in the classroom wings should run with the windows open to keep a negative pressure in the space. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. Note that as temperature drops the radiators will not be able to keep up and the exhaust fans will need to be shut off. In order to keep these exhaust fans operational through the winter a makeup air system will need to be installed on the roof with ducts into each classroom. The unit will need to have a steam, hot water or gas coil to heat the air to room temperature. **Staff advised to keep windows open**

4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**

5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **G. Holland Hill**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**

2. The central units for the gym, all purpose room and media center should be provided with MERV 13 filters. The heat recovery wheel must not be used. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**
3. The central DOAS units for the classrooms don't need to be provided with MERV 13 filters as they provide outside air only. The heat recovery wheel must not be used. Outside air to each of these units is fixed. The DOAS units should be evaluated to see if additional outside air can be provided and not provide temperature control issues. Based on the balancing report the fan coil units in the ceilings are already low compared to design so they should not be provided with MERV13 filters. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. The additional static on the fan coil units must be checked so coils do not freeze at low airflow. **Filers changed HVAC staff keep an eye on the units**
4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **H. Stratfield**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**
2. The central units for the gym, all purpose room and media center should be provided with MERV 13 filters. The heat recovery wheel must not be used. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Some of these units dampers are not able to be adjusted at the computer front end, they need to be adjusted manually at each of the units. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**
3. The central DOAS units for the classrooms don't need to be provided with MERV 13 filters as they provide 100% outside air. The heat recovery wheel must not be used. Outside air to each of these units is fixed. The DOAS units should be evaluated to see if additional outside air can be provided and not provide temperature control issues. The fan coil units in the ceilings can be provided with MERV13 filters. However the static pressure available on these units is limited to 1" so filter changes would have to frequent. Recommended filter drop on a MERV13 filter is 1" so changeout would have to be at a lower static pressure drop. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will

not allow the units to provide proper heating at low temperatures. The additional static on the fan coil units must be checked so coils do not freeze at low airflow. **Filters changed HVAC staff keepin h an eye on operations of units**

4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **I. Riverfield**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**
2. The central units for the gym and all purpose room. POD area and media center should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Some of these units dampers are not able to be adjusted at the computer front end, they need to be adjusted manually at each of the units. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. **All filters changed to MERV 13**
3. The central DOAS units for the classrooms should not be provided with MERV 13 filters as they provide 100% outside air only. The heat recovery wheel must not be used. Outside air to each of these units is fixed. The DOAS units should be evaluated to see if additional outside air can be provided and not provide temperature control issues. The fan coil units in the ceilings should also not be provided with MERV13 filters as their pressure drop is limited to .4". Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. The additional static on the fan coil units must be checked so coils do not freeze at low airflow.
4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## **J. McKinley**

### **RECOMMENDATIONS**

1. Prepurge and postpurge can be done on all systems. The units should run in occupied mode for 2 hours before and 2 hours after occupancy. **Schedule adjustments made to reflect this**
2. The central units for the classrooms, gym, cafeteria, library, and administration area should be provided with MERV 13 filters. Outside air to each of these units can be increased based on an outdoor temperature reset schedule. Note that each of these units needs to be evaluated for capacity as temperatures drop. Both the filters and outside air quantities will not allow the units to provide proper heating at low temperatures. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof from the central unit relief. **All filters changed to MERV 13**
3. The temperature from the central units that have VAV boxes should be lowered so that the VAV boxes will open closer to 100% until outside air reaches a temperature that the lower discharge air temperature can't maintain the proper temperature in the space. This can be done on a sliding scale of discharge air temperature versus outdoor air temperature. It is recommended that this programming be done separately so that when the CoVid issues are resolved the base programming can be reinstated.
4. Exhaust fans for the toilets should be run continuously. Access to the roof will need to be limited and anyone going to the roof will have to wear a mask as any virus will be discharged to the roof. **Fan set to run and will be monitored by custodial staff**
5. Any filter alarm on a MERV13 filter should be changed to a higher filter pressure drop. **Adjusted**
6. Note that all of the above will result in higher energy costs.

## RECOMMENDATIONS

1. Engage the services of a balancing contractor to ensure all outside air dampers are functioning properly and set to allow the original design ventilation rate. For units where the outside rate is unknown due to lack of information, set the minimum outside air position to 25%. **Outside air dampers set manually to 100%**
2. Engage the services of a mechanical contractor to repair dampers, actuators, motors, etc. that the balancer finds to be in disrepair. **Check by staff will be reconfirmed with retro-commissioning project**
3. Engage the services of a controls contractor to ensure the school's operating schedule is as intended and all units are functioning. **All schedules set by in-house staff to meet recommendations**
4. The controls contractor would also set the building's occupied schedule to 24 hrs. per day in lieu of a full open fresh air purge. This would include overriding any systems operating with demand control ventilation (CO2 control). **Controls set by in-house staff**
5. Retro-commission all heating, ventilating and air conditioning systems serving all schools. **This has gone out as a town RFP and should be awarded this week**
6. Engage the services of an architectural/engineering firm to perform load calculations and confirm design intent to determine required ventilation rates based on most current codes. Implement the findings with the help of a mechanical contractor, balancing contractor and controls contractor. **This work will be included in the retro-commissioning project**
7. Determine, if possible, the actual performance of the existing systems with respect to missing information including hot water, steam, chilled water and d/x refrigerant coil capacity. **This work will be part of the retro-commissioning project**
8. Determine, if possible, the extent to which existing systems can have their current filter ratings increased. **This work will be part of the retro-commissioning project**