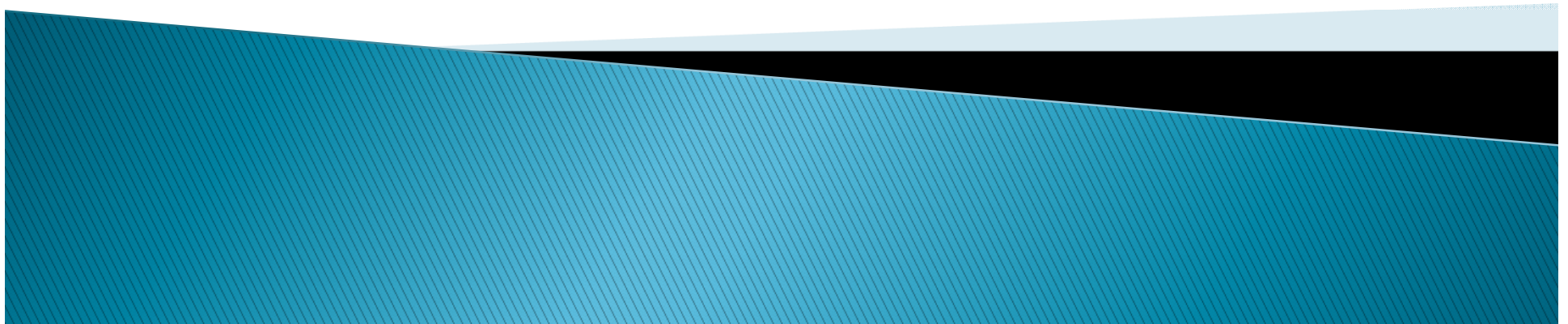
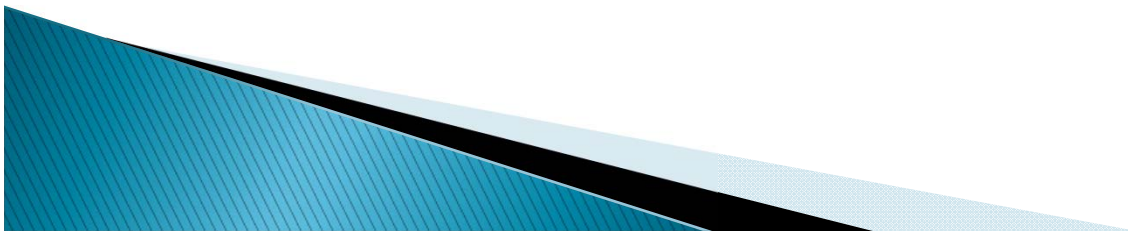


# Facilities Reopening Plan



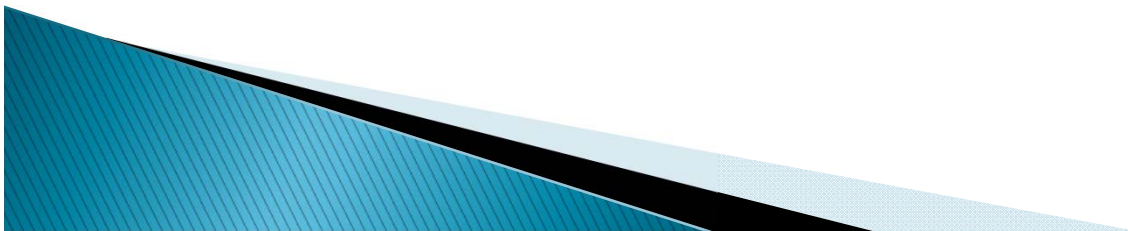
# Complying with Facility Guidance

- ▶ HVAC
- ▶ Cleaning Protocols
- ▶ PPE



# HVAC: Guidance is Being Met

- ▶ Maximizing fresh air intake
- ▶ Upgrading filters and frequency of replacement
- ▶ Contracted with 3<sup>rd</sup> party HVAC engineer to ensure adherence to guidance and compliance with ASHRAE industry standards



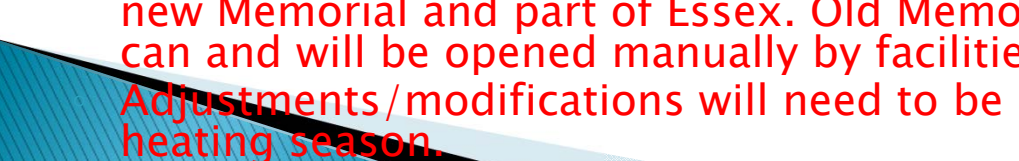
# HVAC Layout

- ▶ High School/Middle School
  - HVAC equipment and building automated system installed in 2010.
- ▶ Essex Elementary School
  - Building automated system installed in half of classrooms and gymnasium in 2018. The rest of building is controlled by pneumatic thermostats.
- ▶ Memorial Elementary School
  - HVAC equipment and building automated system installed 2020 in new classroom wing. Old Memorial equipment controlled by pneumatic thermostats.



# DESE Guidelines: HVAC Engineer Checklist

- ▶ Perform preventative maintenance and adjustments for HVAC Systems, including boiler, chillers, pumps, air handling units, exhaust fans, etc.
    - ATCO provides PM work on all AHU, pumps, exhaust fans, split systems, ac units.
    - Frank Rounds /Industrial Boiler for PM work on boilers.
    - Encor PM on chiller system at HS/MS.
    - Steve Hunt conducts regular inspections/repairs on all mechanical equipment.
    - Maintenance logs and all PM service reports will be kept and made available.
  
  - ▶ Conduct PM on Building Automated Systems to verify outdoor air damper operation; economizer operation, heating/cooling valve operation and disable CO2 control
    - Guardian Energy for Essex BAS
    - RP O'Connell for HS/MS and Memorial BAS
  
  - ▶ Prevent or minimize air recirculation.
    - All district outside air dampers can be programmed to open at 100% which reduces air circulation.
    - This is achieved through a Building Automated System (BAS) at the HS/MS, new Memorial and part of Essex. Old Memorial and part of Essex dampers can and will be opened manually by facilities staff.

Adjustments/modifications will need to be made in various areas during heating season.
- 

# DESE Guidelines: HVAC Checklist (contd.)

- ▶ Clean Ventilation Systems
  - Air Duct Services to clean all AHU and ductwork.
  - Custodians/Maintenance Staff perform cleaning on classroom unit ventilators.
  
- ▶ Take Airflow reading using Airflow measurement stations and compare to design airflows for Supply Air, Return Air and Outside Air.
  - The THB Company to perform all air balancing testing including air flow readings.
  
- ▶ Perform a building flush out, operating HVAC systems in occupied mode for 24/7 a minimum of one week prior to school building opening.
  - All buildings HVAC systems are currently in flush out mode and will continue until 9/16.
  
- ▶ Maintain ventilation for longer hours
  - Current HVAC schedule is 2–3 hours before and after school.
  
- ▶ Consider upgrading filters and increase filter change/inspection
  - MERV 13 & 14 filters are used and installed at HS/MS and new Memorial.
  - MERV 8 + HEPA filters recommended for Essex and Old Memorial.



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### VENTILATE WITH OUTDOOR AIR

HVAC SYSTEM?

YES ..... NO  
Open system dampers      Open windows

2

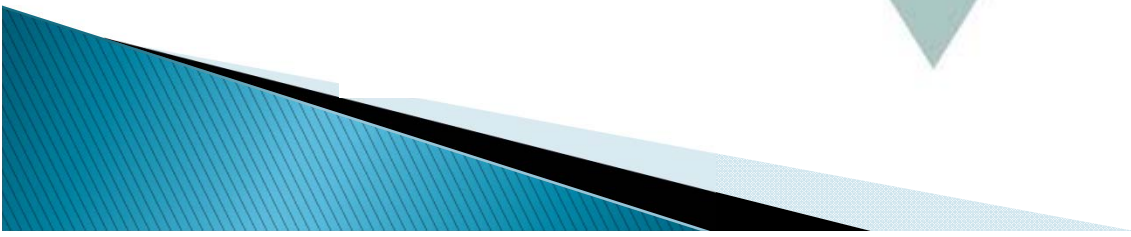
### INCREASE FILTER EFFICIENCY

HVAC SYSTEM?

YES ..... NO  
Upgrade system filters to  $\geq$ MERV13

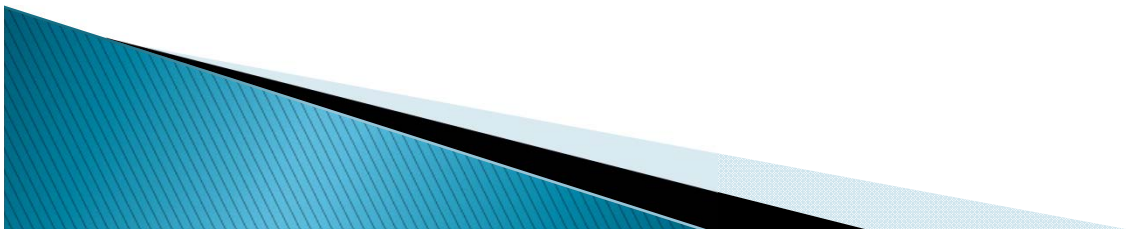
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### SUPPLEMENT WITH PORTABLE AIR CLEANERS



# Medify MA-40 V2.0 Air Purifier

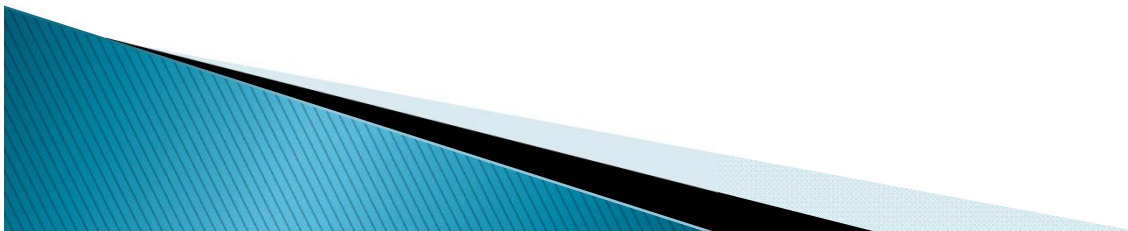
**Medify MA-40 2.0 Medical Grade  
Filtration H13 True HEPA for 840 Sq. Ft.  
Air Purifier, 99.9% | Modern Design**





# HVAC Conclusion

- ▶ Once all HVAC Checklist items are complete, all schools will be in accordance with State Guidelines and ASHRAE 62.1 recommendations.



# Cleaning Protocols

- ▶ All custodial staff have been properly trained on cleaning protocols, and be provided with the appropriate PPE according to the CDC and EPA.
- ▶ MERSD will use disinfectants and cleaners that are registered by the EPA.
  - Multi-Clean 128 E-Fecticide Disinfectant cleaner. EPA No. 6836-365-5449.
  - Hillyard Arsenal 1 Re-Juv-Nal: Disinfectant cleaner. EPA No. 6836-365-5449
  - Bru Tabs 6S-Disinfecting tablets for electrostatic sprayers. EPA Registration No 71847-6-106
- ▶ All appropriate PPE items for staff/students set forth by DESE/CDC have been ordered and delivered.
- ▶ Touch less flushometers being installed on all urinals and sinks at Essex and Old Memorial.
- ▶ Lids purchased and installed on all toilet seats.
- ▶ 250 hands free soap and sanitizer dispensers have installed throughout the district.
- ▶ 5 electrostatic disinfectant sprayers have been delivered and are currently is use on a daily and nightly basis.
- ▶ All classrooms will be provided with hand sanitizer pump bottles with 75% alcohol, as well as disinfecting wipes and paper towels.

# Cleaning Schedule

- ▶ Custodial Staff will be responsible for the cleaning and disinfecting of the following areas following CDC Guidelines.
  - Frequently touched surfaces shall be limited as best as possible (e.g hallway doors will remain open). All other surfaces such as door knobs, hand rails, elevator buttons, etc will be disinfected using a handheld electrostatic sprayer 3-4 times per day.
  - Offices/Classrooms- Including furniture, tables, chairs and desks will be cleaned and disinfected with an electrostatic backpack sprayer on a nightly basis.
  - Restrooms- To be cleaned and disinfected 3-4 times per day using an electrostatic sprayer.
- ▶ A cleaning log will be maintained on a daily basis for tracking purposes.
- ▶ Staff may clean shared and high touch items such as desks, tables, copiers, etc after each use using district supplied cleaning supplies.



# PPE Order–Masks

Group	Guidelines	Quantity Ordered
<b>Students</b>	1 disposable mask per week per student (to supplement the cloth masks provided by parent/guardian).	15,600
<b>Teachers and other staff</b>	5 disposable masks per week per teacher.	13,500
<b>School nurses and health providers</b>	10 disposable masks per week per school nurse.	720



# PPE Order–High Intensity Contact with Students

<b>Item</b>	<b>Guidelines</b>	<b>Quantity Ordered</b>
<b>Disposable Nitrile Gloves</b>	10 disposable nitrile gloves (pair) per week, per staff.	6,120
<b>Disposable Gowns</b>	10 disposable gowns per week, per staff.	6,120
<b>Eye Protection</b>	2 re-usable eye protection per staff total.	86
<b>Face Shields</b>	2 reusable face shields per staff total.	200
<b>Waste Disposal Medium</b>	1 unit per staff total.	75
<b>N-95 Ventilating Masks</b>	10 N-95 masks per week, per staff.	6,120

# Questions / Comments

