



TOWN OF SOUTHBOROUGH FIRE DEPARTMENT

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Mr. Jason Malinowski
Chair, Public Safety Building Committee
17 Common Street
Southborough, MA 01772

Dear Jason,

I am writing to address a concern that was raised by the firefighters in regards to the vehicle exhaust system that is being proposed in the apparatus bay of the new public safety building. The system proposed is a recirculating air filtration system. It is my understanding that the firefighters would prefer a direct source capture system.

During the initial phase of planning for the systems and services that would be installed in the building, several items were evaluated such as the station alerting system, radios & communications, furniture, IT and vehicle exhaust systems. All were vetted through the department and the Public Safety Building Committee. These items were added to the bid specs or included in the overall project budget.

Initially, a direct source capture system was the only consideration because that's the system that is currently in the existing fire station. A visit to the Medfield Public Safety Building introduced me to a recirculating air filtration system, which I was not familiar with, and became educated with this system as an alternative to the direct vent system. Both systems are NFPA 1500 (National Fire Protection Association) compliant to meet emission reduction goals for exposure from vehicle exhaust. The major difference between the two is that a direct source capture system is vented directly through a series of hoses and piping and the air filtration system exchanges the air within the apparatus bay through a series of filters. Each system has its pros and cons and the goal is to reduce the risk of exposure to the firefighters.

My first concern is the safety of the firefighters and the ability to reduce the exposure to potential carcinogens from vehicle exhaust and off gassing from firefighting equipment. When comparing systems, they both were adequate to accomplish the goal of reducing exposure to exhaust but the decision to purchase a recirculating air filtration system was based on the following factors.

1. A direct source capture system relies on firefighters placing the exhaust hose onto the tailpipe of the vehicle to evacuate exhaust. This places the responsibility on the firefighters to make sure they are consistently complying with operating procedures.

A recirculating air filtration system does not rely on human intervention and automatically engages without having to rely on firefighter interaction.

2. A direct source capture system doesn't always allow for easy flexibility of apparatus placement to different locations in the apparatus bays and can be further complicated if the hoses are set up for drive through activation or backing in, which is the case in our new apparatus bay.

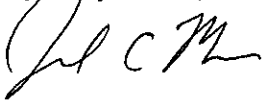
With a recirculating air filtration system, apparatus can be moved around and placed where needed without any impediment. There are no hoses hanging from the ceiling which keeps personnel walking through or working in the apparatus bay easier.

3. A direct source capture system has a specific attachment on the tailpipe to hook-up the exhaust hose and is only used on the diesel powered vehicles. This does not include the smaller gasoline powered vehicles (Fire Prevention and Chiefs car) or other small gasoline or diesel powered equipment that may get run inside the building during routine maintenance and would not be captured by this system.

A recirculating air filtration system filters the air for the other vehicles and hazards associated with small equipment in addition to the diesel vehicles. This system also monitors the apparatus bay for carbon monoxide and nitrogen dioxide levels to ensure safe levels from these hazards.

For these reasons, A recirculating air filtration system was chosen to reduce the potential exposure to the firefighters and eliminates their responsibility of ensuring that vehicle exhaust is removed from the apparatus bays on a consistent basis.

Very Truly Yours,



Joseph C. Mauro
Fire Chief/Emergency Management Director