SMART RESPONSE MEASURES
COVID-19 UPDATE

December 16, 2020
PREVENTATIVE ACTIONS TAKEN

- SMART has implemented multiple measures to prevent and limit the spread of COVID-19 including:
  - Installing hand sanitizer stations throughout the railcars
  - Posting local Health Official guidelines
  - Increasing cleaning of the vehicles from once daily to twice daily
  - Providing facial coverings freely to the public for any customers who did not have one
  - Adding the usage of electrostatic sanitizers to the vehicle cleaning procedures
  - Upgrading the onboard air circulation system including:
    - Upgrading the onboard recirculation filters
    - Implementing UV sanitizers for circulating air
INCREASED CLEANING

- SMART cleans and sanitizes its fleet and stations two times per day using products on the Environmental Protection Agency approved list for use against COVID-19.
ELECTROSTATIC SANITIZERS

In addition to the cleaning of the Diesel Multiple Units two times a day by our Vehicle Maintenance Team.

- SMART uses an electrostatic application system which offers an increased level of surface disinfection.
- SMART also provides hand sanitizer towelettes upon request to passengers which will allow them to wipe their hands, tables, or handrails if they choose.
ONBOARD HVAC OPERATION

- SMART’s DMU’s each have 2 Heating, Ventilation, Air Conditioning (HVAC) units.
- These units each pull in 25% of their air supply from outside (fresh air) and 75% of their air from the inside (recirculated/filtered).
- This air is mixed and released throughout the car length through overhead vents.
- SMART’s HVAC units replace the air in the car with filtered/fresh roughly every 1 minute and 20 seconds. They also entirely replace the air in the car with fresh outside air every 5 minutes and 20 seconds.
AIR FILTER UPGRADE

- Filters are rated by their minimum efficiency reporting value (MERV).
- The higher the MERV rating, the more airborne materials the filter will pull from the air.
- SMART previously used MERV-8 filters and has upgraded them to MERV-13 following CDC recommendations.
- Before implementation of this upgrade, it was estimated that upgrading SMART’s filters from MERV-8 to MERV-13 could provide roughly a 20% improvement in removing harmful pathogens from the air.

### MERV Ratings

Captures allergens smaller than 1 micron

<table>
<thead>
<tr>
<th>MERV 8</th>
<th>MERV 11</th>
<th>MERV 13</th>
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</thead>
<tbody>
<tr>
<td>Dust</td>
<td>Dust</td>
<td>Dust</td>
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<tr>
<td>Mold</td>
<td>Mold</td>
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<tr>
<td>Smoke</td>
<td>Smoke</td>
<td>Smoke</td>
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<tr>
<td>Dust Mites &amp; Debris</td>
<td>Dust Mites &amp; Debris</td>
<td>Dust Mites &amp; Debris</td>
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<tr>
<td>Bacteria</td>
<td>Bacteria</td>
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<td>Virus Carriers</td>
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<tr>
<td>Smog</td>
<td>Smog</td>
<td>Smog</td>
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<tr>
<td>Allergens</td>
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AIR FILTER UPGRADE

Air filter upgrades now pull out more airborne particles than before.
RESULTS OF UPGRADE

- SMART Vehicle Maintenance Staff conducted air quality testing on trains with and without the upgraded filter using an “air particle counter”.

- This testing equipment sucks in air within the passenger compartment and counts airborne particles and potential pathogens.

- Testing showed that this modification actually provides a 67% improvement over the old filters.

- Air within the passenger cabin now has 67% less airborne particulates than before.
UV LIGHT STERILIZATION

- As a second line of defense against airborne pathogens, SMART has demonstrated installing UV sterilizers to the HVAC systems aboard SMART Trains.
- These systems break down the DNA within pathogens to keep them from growing, effectively killing them.
TIMELINE FOR ALL UPGRADES

- Air filter upgrades have been completed for the entire fleet and will be replaced during periodic maintenance.
- UV upgrades are estimated to be completed by March 2021.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>OCTOBER</th>
<th>NOVEMBER</th>
<th>DECEMBER</th>
<th>JANUARY</th>
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<td>FILTERS DELIVERED</td>
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<td>INSTALL FILTERS</td>
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<td>TESTING AND UV DEMONSTRATION</td>
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<td>INSTALL UV SYSTEM</td>
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MTC GUIDANCE

Agency Commitments

- State mandated and properly-worn **face coverings are required**.
- Agencies are managing capacity to allow for safe distancing.
- We’re cleaning and disinfecting our vehicles, stations, workspaces, and high-touch areas daily to keep everyone healthy.
- Agencies are sharing data between agencies and on this dashboard.
- Agencies will clearly communicate rules and expectations.

Additional Paratransit Commitment:
- Contact outreach if a customer is reported as infected.

Customer Responsibilities & Tips

- Wear a mask when you ride. Properly worn face coverings are mandatory.
- Give others space to keep everyone healthy. Plan your trip and avoid crowded vehicles.
- Wash your hands before and after your trip. Carry hand sanitizer with you.
- Reduce the spread of COVID-19 -- minimize talking when possible.
• Bay Area Transit Agencies have been tracking onboard statistics and sharing data with the MTC to ensure both passenger and employee safety.
• This data was then turned into a 0-5 star rating system based on compliance.
• SMART has received a 5 star rating across the metrics covered.
CONCLUSION

- All procedures and modifications were designed and implemented in-house by SMART Vehicle Maintenance Staff.

- SMART recognizes that passenger & employee safety is paramount and has been and will continue to implement the most up-to-date technologies and practices to provide the community with a safe, high quality transportation option.
SMART’s Vehicle Maintenance Team cleans each train twice a day.

Wear a facial covering
Watch your distance
The 3Ws help reduce the risk of COVID-19

Wash or sanitize your hands

#StayingApartKeepsUsMoving