



Deploying the 5M-420

Barrio said the city worked out a timeline with N/S which included the demolishing of its old bus wash. After disposing of the old wash, N/S began preparing MBL's wash bay for the new system. This included pressure-washing walls, priming and re-coating the walls with epoxy paint to ensure a 20-year lifespan and installing LED lights to reduce energy consumption.

Next came installing a new reverse-osmosis system, soft-water treatment system with new pumps, and a new reclaim tank. The system also features robust pump motors. N/S assembled the 5M-420 system, which meets all Buy America standards, and then installed necessary electronics and the air-blowing system with Smart Gate®. All in all, N/S and MBL completed the process in just under 10 months.

MBL included a turnkey service for several years in its RFP so that N/S can ensure the system runs optimally over time. Even so, N/S provided operation and maintenance training to the agency's transit facility technicians, followed by training the city's bus cleaners on system driving speed and making sure buses are not damaged during washing. Finally, all necessary parties were trained on using the cloud-based maintenance system, which will provide advance warning on problems with any of the motors, pumps and overspeeding reports.

"There is always a learning curve, but our techs have picked up quickly from the N/S training," Barrio said. "We also implemented additional fail-safe measures to help the service workers. For example, the system flashes a red light if a bus is driving too quickly, a yellow light if the vehicle is moving too slowly and a green one for the correct speed."

System maintenance

The city specified a low-maintenance, minimal fitting system in its RFP. In terms of preventive maintenance, the system typically only requires monthly greasing of the bus wash's bearings. The reverse-osmosis system is a tried and proven design, requiring only periodic inspection and filter changes.



The remote-monitoring diagnostics alert N/S technicians when a motor or any other wash component malfunctions or needs to be serviced.


"We do not need as much maintenance on the system because of its design," Barrio said. "N/S visits us monthly to do a routine check-up, but otherwise they can monitor it all remotely. If we do have issues, we have a 24-hour support line we can call, and they typically respond by having an engineer visit within 24 hours or less."

Washing made easy

"We bought a heavy-duty bus wash capable of handling 150 buses per night," Barrio said. "We were never going to run that many buses through the system, but we needed a reliable and durable solution. The appearance of our buses is a big part of rider satisfaction."

Barrio said that with the new system, water spots are essentially a thing of the past. The wash minimizes water runoff and the blowers force most runoff water back into the system for recycling, helping to meet MBL's environmental requirement.

The system is currently optimized for heavy-duty transit buses, but Barrio said that MBL will modify the wash within the next six months to also accommodate medium- and light-duty vehicles. He said that the system will soon easily be able to handle washing police cars and fire trucks, as well as light-duty support vehicles.

"The wash has multipurpose capability, we just need to upgrade our system to meet that," Barrio said. "It is scalable in addition to being reliable, which is exactly why we selected it." 

BUSride Maintenance

NOV / DEC 2019 / BUSRIDE.COM

THE EXCLUSIVE MAINTENANCE RESOURCE FOR THE TRANSIT AND MOTORCOACH INDUSTRY



Official *BUSride Maintenance* Field Test:

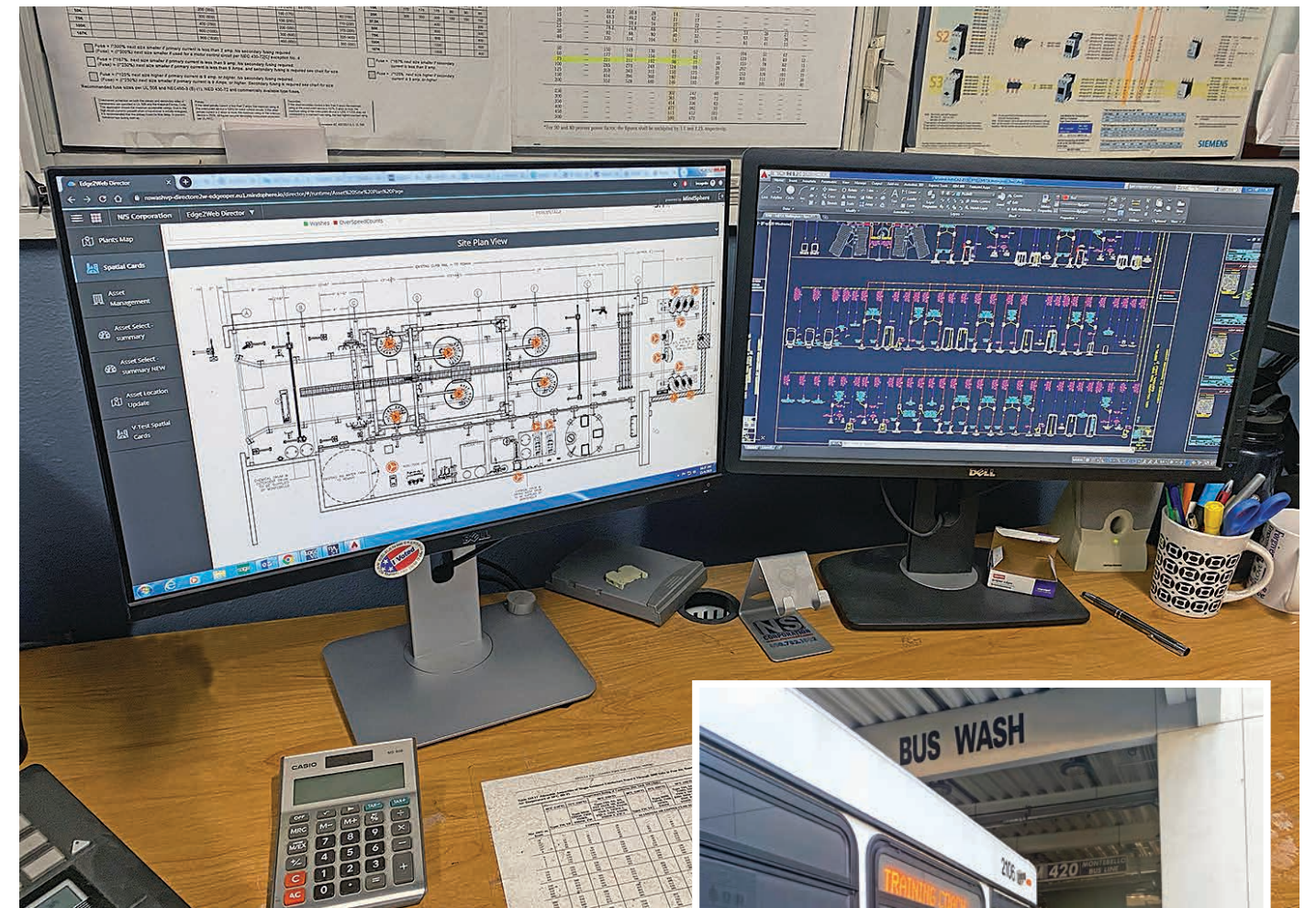
Montebello Bus Lines'
technologically advanced wash system with N/S Corporation

Official BUSRide Maintenance Field Test: Montebello Bus Lines' technologically advanced wash system with N/S Corporation

Montebello Bus Lines (MBL), the third largest municipal bus system in Los Angeles County, prides itself on exceptional, safe service, and well-maintained, clean buses. MBL provides annual trips to 8 million passengers in the communities of Alhambra, Bell Gardens, Boyle Heights, Commerce, Downtown Los Angeles, East Los Angeles, La Mirada, Montebello, Monterey Park, Pico Rivera, Rosemead, South Gate and Whittier – which means a rigorous washing schedule for the fleet of 66 transit buses.

“We wash buses every other day,” said Tom Barrio, director of transportation for The City of Montebello, “which means we run 72 buses, every other day, through a single wash location.”

MBL has used bus-washing systems from N/S Corporation since 1995, and in late 2016 the agency saw its wash system entering the end of its usable life. Barrio said the city crafted a request for proposals (RFP) for a new, modernized bus wash system.



Searching for a “smart” wash

Posted in March 2017, the RFP called for a cloud-connected system with a 20-year lifespan. The system needed a multiplex system requiring minimal maintenance, a reverse osmosis system, RO water treatment processes, reclaimed water, undercarriage rinsing, wheelwashing capabilities, and the ability to effectively blow off most of the remaining water when a bus exits the wash. Furthermore, the manufacturer needed to be easily accessible in case maintenance issues arose in the future.

N/S Corporation of Inglewood, California, has been designing and building bus-washing equipment since 1961, and handily met all the necessary criteria for MBL. The company’s technological capabilities, and those of bus-washing technology in general, had progressed significantly since MBL had last purchased an N/S system two decades prior.

MBL purchased the 5M-420 model, which N/S considers the flagship of its 5000 series and caters to wash transit-buses. Engineered for a high volume of vehicles and durability, the wash features a dual pair of sectional Wrap-A-Round brushes (with air retract) and a pair of maintenance-free side brushes; Ladderized framework of 6061-T6 structural aircraft grade aluminum and Lambscloth brushes, to protect the vehicles’ paint finish, that are comprised of variable density pelts designed to adapt to unique configurations. N/S has a design feature that precludes damage to the bus wash system due to accidents or vehicles negligently speeding through the wash system up to 5 mph.

“The system reclaims 85 percent of the water it uses, and the remaining is lost to evaporation, drive-off and sewer overflow – which means we are essentially reclaiming most of the water,” said Michael Howlett, transit account manager at N/S Corporation. He continues, “that is incredibly important to agencies in the eco-conscious state of California.”



Other eco-friendly features this NS wash system has is a SMART GATE Air Blower System. This system will reduce power consumption on start and idle operations by half, reduce noise pollution and prolong the life of the motors.

The Smart Activated Rinse Arch “SARA” provides the release of a preset volume of water to the bus going through the rinse arch regardless of the speed it is traveling. So, if a bus is speeding or driving too slow through the rinse arch, both get the same amount of the preset volume of water applied to it.

The system’s current remote diagnostics allow N/S Corp and MBL to monitor washes and the status of all pumps and motors. The next phase of advanced upgrades will include monitoring the water and chemical usage, as well as the levels in all tanks. According to N/S, in addition to the planned upgrades to the remote monitoring systems, MBL’s wash will have a vehicle type identification system. Montebello is on the cutting edge as a transit authority, so these upgrades are on their way. ☑