

Navigating the 495 Express Lanes

Road crew manages traffic flow with mobile barrier

By Mary Ellin Arch

Working on a road-repair crew can be a risky business. Even with orange vests, hard hats, steel-toed boots, and safety signage, the potential for injury or even death is present every time a crew takes to the highway.

Toll road manager Transurban, operator of the 495 Express Lanes on Virginia's Capital Beltway, and Roy Jorgensen Associates, Inc., an engineering consulting firm and operations and maintenance contractor for the project, have tackled this problem head-on by using an innovative mobile barrier that greatly increases safety for both work crews and those driving through the work zone of the 495 Express Lanes.

POWER AND PROTECTION

The Mobile Barrier MBT-1 is an all-in-one power-and-protection tool on wheels. Lights, power, and air tools plug into it. Materials and supplies are carried on its decks. And a built-in, variable-length, construction-grade barrier gives the MBT-1 the functionality of a utility truck, flatbed hauler, power cart, and protective barrier in just one device.

"The Mobile Barrier is transforming how we maintain the 495 Express Lanes," says Rob Kerns, Transurban's road operations manager in charge of keeping the tolled lanes safe and in top condition. "When we use the MBT-1, we know we can get the job done and keep our workers and our customers safer in the process."

The Mobile Barrier MBT-1 was developed after two Colorado maintenance workers were killed in a roadside accident in 2004. After 4 years of design and development, the first generation of the barrier was put into use, and it

received the American Traffic Safety Services Association's Innovation of the Year Award for 2009. It has since received additional awards and been hailed as a revolutionary improvement in highway work-zone safety.

EFFICIENT DESIGN

The Mobile Barrier MBT-1 offers many advantages over traditional tools used by highway crews. It eliminates the need for multiple pieces of equipment, such as generator carts, flatbeds for supplies, utility trucks, and a separate protective barrier. The MBT-1 offers all of these functions in one device, putting all the tools at the work crew's fingertips.

This kind of efficiency helps work crews finish their jobs faster. The manufacturer and work crews have all reported completing as much as a week's worth of work in just 1 night, thanks to the efficiencies made possible by the MBT-1. In addition, work zones are much easier and quicker to set up and dismantle—the MBT-1 operator merely pulls in and stops, and pulls away when the job is done.

"The Mobile Barrier system on the 495 Express Lanes provides maximum protection to our roadway crews," says Bruce Bartoe, regional manager with Roy Jorgensen Associates. "In addition to our primary safety goal, the system has increased our productivity and has greatly contributed to our zero lost-time incidents record on the project."

SAFER WORK ZONE

For continuing traffic along the work zone, the MBT-1 helps reduce distraction and glare, keeps more lanes open, and allows higher and more uniform speeds to prevail while work

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I-495, just outside of Washington, D.C., carries heavy traffic. The 495 Express Lanes are the product of a P3. Roy Jorgensen Associates provides the associated maintenance and operations management.

is done. The barrier's 5-foot-high walls prevent drivers—even those in high-profile vehicles—from seeing into the work zone. These benefits not only help prevent work-zone traffic incidents, but also reduce complaints from passing motorists because the work zone is less disruptive to their travel.

The MBT-1 also protects against debris entering the work area or the roadway while traffic is moving. It works equally well for lane closures and for shoulder closures.

“Any time we need to work in the 495 Express Lanes, we need to be concerned with traffic not only in the Express Lanes, but also in the general purpose lanes of the Capital Beltway,” Kerns says. “The Mobile Barrier MBT-1 offers a high level of protection for everyone. We have incorporated this barrier because Transurban is dedicated to safety and a commitment to excellence in operating and managing the 495 Express Lanes.” ■

Mobile Barriers MBT-1®

Improving safety, efficiency and traffic flows in and around work zones. Available with rear steer, 120/240 power, lighting and other options.

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