

On the cover



Coast Mountain Bus Company's Derek Stewart demonstrates the approved barrier.

All aboard with bus safety barriers

By Helena Bryan

Thanks to a unique collaboration between B.C. bus companies, their unions, and WorkSafeBC, new safety barriers designed to protect drivers from acts of violence will soon ensure an easier ride for Coast Mountain Bus Company drivers, and their customers.

A major pilot took place in 2015 and 2016 between BC Transit and TransLink's Coast Mountain Bus Company (CMBC) to test various safety barriers meant to protect bus drivers from acts of violence. While BC Transit is in the final pilot phase, the Lower Mainland's CMBC is satisfied that they've found the right barrier to protect their drivers, and the company is installing permanent windshield-like barriers on all new buses — a measure many workers and employers say prevents dangerous or unwanted exchanges with problem passengers.

New buses equipped with barriers are expected to begin arriving by early 2018. Near the end of 2017, CMBC will begin retrofitting 208 of its conventional buses with barriers, a task it hopes to complete within two years.

While safety barriers are a common feature on European buses, here in Canada, the only other transit authority to equip its buses with barriers is Toronto — their version is a partial barrier with a pop-up top half. Ontario's Brampton Transit is currently testing prototypes for their system, but the jury is still out on whether barriers will become a standard feature on buses there.

Despite the lack of precedent for bus barriers in Canada, a current of optimism runs through the offices and transit centre depots of BC Transit and CMBC. BC Transit hopes the knowledge gained during the pilot process will improve future decision-making. And

“Imagine coming to work every day not knowing whether you'll be one of the more than 100 [workers] who are assaulted that year.”

—Haydn Acheson, Coast Mountain Bus Company president and general manager

CMBC is confident the decision to go ahead with the barrier will help drivers do their jobs more effectively, while protecting them from illness and injury.

Derek Stewart, safety, environment, and emergency management director for CMBC, says the greatest boost toward the project's success was its grassroots support. From the outset, he credits the close collaboration with both unions — BC Transit's Unifor local 333-BC and CMBC's Unifor local 111 — for finding common ground on an initiative meant to help, rather than hinder drivers from doing their work. “The two unions were able to share similar experiences and learn from each other,” Stewart says.

“It was important that our transit operators be a partner in the process early on,” he adds. “The bus drivers are the ones who know the job. And, without the unions at the table, we might not even have known the right questions to ask.”

Driver protection paramount

In moving ahead with the pilot, company and worker representatives knew they faced significant challenges. Bus drivers confront an array of potential hazards every day, such as the potential for musculoskeletal strain, and the effects of fatigue. On top of that, they risk harmful on-board interactions, including passengers who inadvertently fall or spill their drinks on them, cough or sneeze on them, and at worst, violently assault them.

Bus drivers — like all employees in B.C. — have the right to a safe and healthy workplace.

“Under the Occupational Health and Safety Regulation, employers have a legal obligation to eliminate or, if not possible to eliminate, to minimize risks of violence against workers,” says occupational safety officer and violence prevention expert Dave Scott. Scott is part of the officer team assigned to CMBC that provided guidance on creating a violence prevention program.

While preventing violence at work involves “communication, training, and incident investigations,” says Scott, it also involves minimizing the risk from the hazard to the lowest level practicable using engineering controls, administrative controls, or a combination of both.

Over the years, CMBC has consulted with WorkSafeBC to make improvements in injury-prevention training, ergonomic measures, and engineering enhancements —



Smiles all around. Coast Mountain Bus Company's Derek Stewart and VP Unifor 111 union members Harb Kular and Mike McMillan stand by the new barrier for CMBC buses.

all to lower the hazards associated with musculoskeletal strain and fatigue. The next step was to address acts of violence and assaults.

To define bus driver assaults, CMBC uses a classification system created by the Canadian Urban Transit Association, which represents about 100 transit authorities. Generally, assaults are defined as any act of aggression — physical or verbal — that hinders the driver's ability to complete his or her scheduled run safely.

Since Coast Mountain Bus Company installed cameras on buses in October 2009, they've seen a reduction in all types of driver assaults, from 144 in 2009 to 124 in 2013. "But one assault is one too many and we had 106 assaults in 2016," says Stewart. "We needed an engineered solution, a physical device that prevents physical contact between driver and customer."

When he joined the organization in 2011, CMBC president and general manager Haydn Acheson says he was stunned to find out that there were so many assaults on bus drivers every year. "Imagine coming to work every day not knowing whether you'll be one

of the more than 100 [workers] who are assaulted that year. Unless maybe you're in the police or armed forces, you just don't expect that kind of risk."

And the impact of such incidents is major, adds Stewart. "They can make the person assaulted — and their co-workers — leery of coming to work, less productive, and more stressed out. For some, these incidents are incapacitating."

Ben Williams, union president for BC Transit Victoria operators, and a former bus driver for 16 years, says drivers are verbally abused every day, and spitting, especially, is on the rise. "When I started out, there might be six spitting incidents in one year. Today, there can be as many as four or five in one weekend." CMBC statistics show the prevalence of the issue: since 2009, spitting incidents have accounted for 38 percent of assaults on Lower Mainland bus drivers.

Barriers being introduced gradually

The pilot to reduce such harmful exposures and potential assaults featured two phases: One involved a six-week internal trial, in which operators tested

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a barrier prototype and provided feedback on its ventilation, visibility, ergonomics, sturdiness, and level of separation. The second phase included a 12-month, in-service trial for operators to test the barrier in various road conditions with actual barriers. Phase two was followed by a WorkSafeBC survey.

A critical feature of the pilot required driver feedback from each phase, which was used to refine the prototype and assess its effect on the driver’s work environment.

Trials began for CMBC operators in October of 2014, and the first barrier was introduced to the public on Burnaby routes in late January, 2015. A total of six prototypes with four different designs were piloted. The one chosen for CMBC was piloted in the fall of 2016.

BC Transit is nearing a decision as well. BC Transit’s president signed off on a similarly designed safety barrier on May 1. This signed-off design will be piloted with their regional contractors throughout B.C. before a final decision will be made.

On track for a new industry standard

During the trials, CMBC worked through major roadblocks says McMillan. “One of the biggest concerns about barriers is the perceived disconnection from customers. That interaction is what draws many bus drivers to the job.” The solution: a barrier that doesn’t go all the way up to the bus ceiling and a sliding glass partition with three different safety lock settings, giving operators a choice. “This prototype is operator and passenger friendly,” says McMillan. “It provides the security needed to prevent assaults, without cutting off the driver.”

There were also other issues to consider, says Stewart. “Did the prototype disrupt air flow? Did it impede sight lines to mirrors? What about glare and visibility? Standard plexiglass scratches easily, making it difficult for operators to see clearly. Coast Mountain Bus Company’s chosen model is constructed of a glass and plastic combination similar to windshields, and is scratch-resistant and offers low reflection.”

The pilot was about minimizing these unintended consequences, Stewart says. “The lessons learned

from the pilot helped us build a solution that works for everybody.”

McMillan says he was impressed when he tested an early prototype: “It had a sturdy metal frame, it’s non-glare, and the angle and height of the barrier gives you a sense of not being enclosed. At the same time, you know you have your own space and that nobody can violate it.”

Everyone at the table

WorkSafeBC key account performance consultant Ray Zukanovic calls the barriers “a huge improvement from those introduced several years ago.” Under the steerage of WorkSafeBC Prevention Services, and with WorkSafeBC funding, the prototype was the result of a successful collaboration.

In late 2011, WorkSafeBC began working closely with Coast Mountain Bus to focus on the risks that drove their injury rate. Acts of violence were one of the risks identified, and discussions on how to mitigate that risk



Bus drivers like Dee Cooke, will have the option of opening the barrier for easier communication with non-violent passengers.

culminated in the pilot, and eventual decision to adopt safety barriers.

Zukanovic led the first official meeting to discuss the trial back in July 2014. “I was there to kick off the project, make sure we stayed on track with our deadlines, and to hold everyone accountable to our collective goals and expectations,” he says.

“Importantly, we had all the stakeholders — the two employers and the two union leaders — in the same room. The conversations were respectful and we built trust, resulting in the best possible product for employers, employees, and customers.”

Equally important was the commitment from senior leadership like Haydn Acheson, who Zukanovic says ultimately made the change happen.

And the process itself set a significant precedent.

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potential to go sideways,” McMillan says. “Instead, it’s a flagship example of the benefits of collaboration.”

Acheson agrees, “It’s easy to say that safety is a core goal, but you have to walk it, you have to follow through and deliver. Everyone — the unions, WorkSafeBC, and both employers — did a lot of work during the barrier pilot to find the best possible solution. It was crucial that we drive it all the way home and make it a reality.”



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