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SporTran's Bold Vision

for Northwest
Louisiana Transit

Taking an enterprising
and community-focused
approach to improvements
is delivering big impacts
to the Shreveport-Bossier
community.

PAGE 14

“ Found \$100 on the bus! ”



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How a new fare payment delivery model is enabling MaaS

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➲ MassTransitmag.com/21124088

Online Best Practices: Efficient Passenger Information System to increase customer retention

► By providing accessible real-time information, passengers can feel more in control of their journey, helping agencies to retain their riders.

➲ MassTransitmag.com/21124150

Palm Tran Celebrates Beach Bus Extension in Ribbon-Cutting Ceremony

► With the 1.2-mile extension, residents and visitors of Palm Beach

County can now be dropped off steps away from the sandy shores of Lake Worth Beach without worrying about the parking and traffic hassle.

➲ MassTransitmag.com/21123818

Intercity Bus Industry Reaches Milestone: New DePaul Study

► For the first time in its history, America's intercity bus industry has three carriers with large-scale route networks that cover larger parts of both the eastern and western halves of its U.S. mainland.

➲ MassTransitmag.com/21123613

USDOT renews fight against human trafficking

► Among the initiatives, 24 projects were awarded funds to prevent human trafficking and improve safety on transit systems.

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What's the secret to quality leadership?

As much as the business environment stresses data-driven decisions among today's leaders, soft skills are still required when dealing with employees and the community.

Think back on your career so far. Chances are you've had some wonderful bosses, as well as a handful of less than stellar ones. I count myself as lucky to have far more supervisors who fall into the "good to great" category than any other. Of their many admirable qualities – empathy, communication, encouraging attitude and gratitude toward their team – the one aspect each shared was a high level of availability and visibility. I'm not referring to a micromanager or someone who was constantly over a shoulder, but someone who, no matter the geographic distance, communicated in both direct and indirect ways that they were involved and open to discussions.

Andy Byford, the former president of New York City Transit (NYCT), was a highly visible leader. He rode the system, engaged with riders and listened to their complaints and compliments. He often wore a name tag indicating who he was and even became an urban cultural phenom with the nickname "Train Daddy"—a moniker he and NYCT decided to roll with rather than fight. And when news broke that he resigned from his post at a Metropolitan Transportation Authority Board meeting on Jan. 23, his colleagues offered equal praise regarding his accomplishments that improved the largest transit system in the U.S., as well as his ability to connect with people up and down the hierarchy of the organization.

This style of leadership isn't limited to large systems.

Another leader who believes in high visibility is Dinero' Washington who serves as the CEO of SporTran, which operates in the Shreveport-Bossier community in Northwest Louisiana (story on page 14). Throughout the interview with Washington, he provided example after example of how community engagement and community input was used to enhance and improve the service SporTran provides.

From what a redesigned network looks like to which new technology will be incorporated, Washington begins the decision-making process with community feedback. When SporTran opened three facilities, launched a new bus network and introduced battery-electric buses all on the same day in November 2017, Washington shares that he stationed himself in the lobby of SporTran's new intermodal terminal for a week to interact with riders and hear directly about what was and wasn't working for them.

This level of visibility can place leaders, especially transit leaders, in a tough position; not only do they set themselves as targets for potential criticism and the inevitable rider ire, but the loss of anonymity can be tough to contend with. The results of visible leadership, when coupled with other enhancements, pays dividends in the form of trust and respect within a community.

Our industry, any industry, really, benefits from leaders who are willing to take both in stride and see all feedback as an opportunity to improve.

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Of their many admirable qualities, ...the one aspect each shared was a high level of availability and visibility.



A handwritten signature in black ink that reads "Mischa Wanek-Libman".

Mischa Wanek-Libman, Editor

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OFFICIALS CUT the ribbon marking the ceremonial start of BRT service.

BRT comes to Louisville with launch of TARC's Rapid

The Transit Authority of River City (TARC) inaugurated what Louisville, Ky., Mayor Greg Fischer called “next level” service with the launch of Rapid, the region’s first bus rapid transit (BRT) system on Jan. 6. The BRT service, which is part of the \$35-million New Dixie Highway Project, will offer improved bus service along one of TARC’s busiest corridors, connecting the Gene Snyder in Valley Station to downtown Louisville.

► MassTransitmag.com/21120393

House Dems intro \$760-billion infrastructure proposal

► The U.S. House of Representatives Democrats, led by Transportation and Infrastructure Committee Chair Peter DeFazio (D-OR), Energy and Commerce Committee Chair Frank Pallone (D-NJ) and Ways and Means Committee Chair Richard Neal (D-MA), outlined a five-year, \$760-billion infrastructure proposal they say will address some of the country’s most urgent infrastructure needs. The framework includes \$329 billion for modern highway and highway safety investments, \$55 billion for passenger rail, \$34.3 billion in clean energy investments and \$105 billion in transit investments.

► MassTransitmag.com/21123499

San Francisco embraces car-free Market Street

► Drivers in San Francisco have one less



A VIEW from a corner of Market Street on Jan. 29, 2020.

street to travel down while pedestrians, bicyclists and transit vehicles have more room to maneuver now that a 2.2-mile corridor of Market Street became car-free on Jan. 29. The implementation of

car-free Market Street is part of a broader effort in San Francisco to redesign the city’s streets to move more people on public transit and ensure those walking and biking can do so safely. The city says these efforts are necessary to ensure San Francisco can continue to grow and help move people sustainably and efficiently. San Francisco Municipal Transportation Agency’s (SFMTA) Quick Build program enabled the improvement effort on Market Street and the decision to make a portion of the street car-free was a core component of the Better Market Street Plan, which was approved by the SFMTA Board of Directors in October after a years-long design, community feedback and approval process.

► MassTransitmag.com/21123497

Andy Byford steps down from top spot at New York City Transit

► Andy Byford has submitted his resignation and will step down as president of New York City Transit (NYCT) after two years in the role. Various news outlets in New York report Byford’s last day will be Feb. 21. The news came at the end of the Metropolitan Transportation Authority’s (MTA) scheduled board meeting on Jan. 23, where Byford said it had been an honor and a privilege to serve New Yorkers. While his displeasure with New York Gov. Andrew Cuomo’s hands-on approach to MTA issues is well covered, Byford offered public praise at the MTA Board meeting for the governor, as well as the New York State Legislature, for what he called courage in passing congestion pricing that would help fund key improvements to NYCT infrastructure. MTA Chairman and CEO Patrick J. Foye recognized Byford for building a strong team at NYCT that will continue the efforts Byford initiated through programs such as Fast Forward. Other representatives at the meeting noted Byford’s ability to connect with transit employees throughout the organization and his role in successful labor negotiations.

► MassTransitmag.com/21122632

Federal, provincial, municipal funding moves Guelph bus projects forward

► Three projects in Guelph, Ontario, received financial backing from federal, provincial and municipal sources, allowing Guelph to purchase 65 buses and construct a bus storage facility. The projects total more than C\$178 million (US\$136.49 million) and include the replacement of 35 diesel buses with



City of Guelph

NEW VEHICLES and a bus storage facility are in store for Guelph.

long-range, battery-electric buses and the installation of on-route charging stations; the purchase of 30 additional electric buses to add capacity to the fleet while reducing emissions; and the construction of a new bus storage facility. The storage facility will be in Guelph and will store up to 200 vehicles, and include electric charging stations.

► MassTransitmag.com/21121809

MORE NEWS AT A GLANCE

► Long Beach Transit will purchase an additional 14 K9M 40-foot, battery-electric transit buses from Build Your Dreams.

► MassTransitmag.com/21120841

► TriMet has awarded Connectpoint® a five-year contract to provide hundreds of smart city digital signs for the agency's fixed-route bus and light-rail transit services. Connectpoint's cloud-based management system, CPAM™, will be implemented across all new digital arrival information displays.

► MassTransitmag.com/21121215

► Keolis has been awarded a contract by Exo to operate 16 buses across Greater Montreal. The 12-month contract will take effect on March 30, 2020, and includes an option for two renewals of up to six additional months.

► MassTransitmag.com/21122756

► London Trackwork, Inc., has been awarded the supply contract for the special trackwork for the Trillium Line extension in Ottawa, Ontario, Canada.

► MassTransitmag.com/21122395

► Miller Ingenuity's ZoneGuard roadway

worker protection system has been selected by three California entities in the Bay Area.

► MassTransitmag.com/21119757

► Link Transit has extended its partnership with Momentum Dynamics through a five-year contract following the successful introduction and operation of a wirelessly charged bus in 2019. Momentum Dynamics will provide further charging systems and ongoing services for Link Transit's growing fleet of electric buses.

► MassTransitmag.com/21122790

People in the News



Leslie S. Richards



Darryl Haley



Ed Alvarez



Mary Cummings



Monica C. Fowler

Southeastern Pennsylvania Transportation Authority (SEPTA)

The SEPTA Board unanimously approved the appointment of Pennsylvania Department of Transportation Secretary Leslie S. Richards as the authority's new general manager, where she'll oversee 9,500 employees and all aspects of the authority's operations. She previously served on the SEPTA Board and has leadership experience in the strategic planning and management of transportation projects in the private and public sector. Her appointment follows the retirement of General Manager Jeffrey D. Knueppel.

► MassTransitmag.com/21115756

Southwest Ohio Regional Transit Authority (SORTA)

Darryl Haley has been appointed as the CEO and general manager. He was appointed interim CEO in February 2019 and has been with SORTA for 13 years. He has held positions such as director of customer relations, chief of development and marketing officer, executive director of development and disadvantaged business enterprise officer, deputy general manager and executive vice president. Prior to SORTA, he worked in the financial and healthcare distribution industries. He holds a degree in Business Administration from the University of Cincinnati.

► MassTransitmag.com/21115778

Bay Area Rapid Transit (BART)

BART General Manager Bob Powers named Ed Alvarez as the new chief of police and tasked him with increasing officer presence onboard trains, along with finding other strategies to reduce crime and improve the rider experience. Alvarez has been with the BART Police Department for his entire 22-year career and has served as interim chief of police and the deputy chief in charge of the Support Services Bureau. The selection follows a nationwide search process involving BART's Police Citizen Review Board and Independent Police Auditor.

► MassTransitmag.com/21121008

Sound Transit

Mary Cummings has been selected to be the chief administrative officer of Sound Transit, where she will play a vital role in expanding regional transit services across the Central Puget Sound region. Cummings will work alongside Deputy CEO and Chief System Officer Kimberly Farley. She previously held executive roles at Verizon during the company's major startup and growth periods, where she oversaw the company's largest international investment and helped launch a new line of business that generated over \$200 million in revenue in its second year of operation. She is pursuing her Ph.D. in Business at Indiana University of Pennsylvania.

► MassTransitmag.com/21116950

C-TRAN

Monica C. Fowler has been appointed as C-TRAN's deputy chief executive officer. She will also serve as C-TRAN's treasurer, overseeing budget, finance, accounting, grants and procurement, as well as federal and state regulatory management. Fowler will be responsible for the Project Management Office, with oversight of agency capital and operational projects. Additionally, she will serve as advisor to the CEO and board of directors, as C-TRAN pushes forward with its strategic priorities in the coming year. Fowler, who has been with C-TRAN since 2019, comes from Trinity Metro where she served as the chief financial officer.

► MassTransitmag.com/21121016

'Change' Prevailing Message for 2020 Conference, NRC and Year Ahead



Jim Hansen
Chairman, National
Railroad Construction &
Maintenance Association



NETWORK. LEARN. ADVOCATE. THAT'S the promise we pitched to attendees coming to the National Railroad Construction and Maintenance Association 2020 Conference and NRC-REMSA Exhibition in early January. Our conference kept that promise and lived up to its reputation as the best networking event in the railway industry. Attendees got a lot of bang for their buck with a stellar program detailing railroad and rail-transit capital programs for 2020, as well as panel discussions and workshops focusing on AREMA, the FRA, signals and communications, passenger rail opportunities, legislative updates and women in rail. Everyone at the NRC conference left San Diego smarter, more connected and hopefully better prepared for business in 2020.

A high point of the conference was hearing from Canadian Pacific CEO Keith Creel in an informal "fireside chat."

On Precision Scheduled Railroading (PSR), Creel said, "I'll tell you one thing it means absolutely. It means change. It's about change, about creating companies over the long-term that are sustainable. PSR will innovate and create solutions to operate efficiently."

The NRC has embraced the challenge to change by embarking on a construction project of our own. Our goal: to deliver greater value to our members and other industry and government partners. We achieved our first milestone by introducing a new logo that better illustrates our brand promise of "Building a Safer and Stronger Railway Construction Industry Together."

The NRC also launched a new website that provides more information and resources for our members in an easy-to-navigate format. Look for testimonials from our members about the value the NRC brings to their business. Find us at www.nrcma.org.

With Railroad Day on Capitol Hill coming up March 4, 2020, Creel's remarks about the im-



CANADIAN PACIFIC CEO Keith Creel (center) responded to questions posed by Jim Hansen (r), NRC chairman and Herzog chief commercial officer and Mike Choat (l), the NRC's outgoing chairman and vice president of business development for Railroad Controls Ltd., a Wabtec company, at the NRC 2020 Conference in San Diego in early January.

portance of staying connected to government officials are particularly relevant.

"We need to connect with employees, customers and regulators," Creel said. "We need to explain our story. We need to help people see the logic – to better understand [our role] based on the facts, not on politics."

The NRC is offering you the chance to share your story with members of Congress at the annual Railroad Day on Capitol Hill in Washington, D.C. If you've never done this before, I urge you to exercise your right and join us on Capitol Hill. No one can tell a more compelling story about the impact of a strong railway system bolstered by qualified railway construction workers than someone who has seen it come together out on the track. By participating in Railroad Day over the years, I've learned to better tell our story and have made some valuable connections with members of Congress, their staff and other government and industry leaders in the process.

I can assure you the NRC hears Creel's message about change. As the NRC chairman, I am committed to encouraging innovation and will advocate for the industry on behalf of the NRC membership. We will be hard at work "Building a Safer and Stronger Railway Construction Industry Together!" and invite you to join us. 

Everyone at the NRC conference left San Diego smarter, more connected and hopefully better prepared for business in 2020.

Read more from the NRC at MassTransitmag.com/21123051



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SporTran's Bold Vision

for Northwest Louisiana Transit

Taking an enterprising and community-focused approach to improvements is delivering big impacts to SporTran's ridership numbers, its operations and the Shreveport-Bossier community.

By **Mischa Wanek-Libman, executive editor**



EARLY IN AN INTERVIEW WITH DINERO' WASHINGTON, CHIEF EXECUTIVE OFFICER OF

Shreveport Transit Management, Inc. (SporTran), in Shreveport, La., the conversation turns to the impact transit has on a community. Washington shares a story that drives why transit's ability to connect residents to opportunities matters. SporTran added a bus route to serve the Port of Caddo-Bossier in November 2017. Shortly after service began, Washington was approached by a woman who told him her husband had held a series of jobs that paid no more than \$8/hour, but her husband was able



to switch to a \$23/hour job at the port due to the new transit service. In an area where the Bureau of Labor Statistics lists the average hourly wage as \$19.23, Washington rightly describes the impact expanded and improved transit service can have: life changing.

"We hear those stories about how public transit is changing people's lives and how the things that we're doing, the routes that we're providing, are helping them not only boost their daily living, but provide a better quality of life for their families," said Washington.

Washington feels each of those stories, in part because he is a believer in community engagement, but also because SporTran serves his hometown.

"I feel indebted each day I step in the office. I have that conversation with our staff weekly and we feel this is not just about us coming to work to do a job. This is our mission. We're doing things that will change people's lives," said Washington.

Washington was appointed interim CEO of SporTran in September 2014 before being named to the position permanently in December 2014 and officially taking the helm in early 2015. He and his team have executed an ambitious series of improvements that have delivered better service, boosted ridership and have set SporTran up as an example of what can be accomplished at a system serving a small to medium urbanized area.

It begins with a plan

Developing a bold idea takes vision; delivering on that idea takes planning. SporTran's Move Northwest Louisiana Forward served as a combined strategic plan and transit development plan meant to act as a roadmap toward an evolved transit system.

To answer the question of what an evolved SporTran could look like, Washington turned to the Shreveport-Bossier community.



A SPORTRAN bus with Shreveport's skyline in the background.

"One of things we've done in the past five years is get out in the community and hear from riders [about] what they actually need and what they want and then use that feedback to push technology, build facilities and do service upgrades," explained Washington.

Washington says the agency worked with its Transit Improvement Committee, incorporated rider and employee feedback and developed goals for the Move Northwest Louisiana Forward plan that included safety, customer experience,

growth, sustainability, financial stewardship, transparency and quality technology.

SporTran's bus network was one of the first elements to get the bold vision treatment following a quarter century without major adjustments. Ridership on the system peaked at 3.5 million trips and, like other systems nationwide, saw a steady decline over a 10-year period.

"I like to call [the bus system redesign] The People's Plan," said Washington. "We did more than 100 public meetings to de-

termine what our new service would look like."

It was determined that the old spoke-and-hub system would be replaced with a true grid system that Washington says allowed for SporTran to build additional hubs. Those hubs included the SporTran Intermodal Terminal, which incorporated rider amenities and bays for Greyhound and Amtrak, and the Southwest Transit Hub. The new service brought additional vehicles online to the network during peak hours, increased day and night services, added a downtown circulator service and improved efficiency and connectivity.

Despite SporTran's best efforts, Washington says the initial rider reaction to the relaunched system and hub openings in November 2017 was not positive. He explained the reaction wasn't a complete surprise given riders were put through a lot of change at once. SporTran staff worked closely with the community and riders during the first six months following the relaunch to train customers on how to use the new network. Now, more than two years after the new system came online, what do riders think?

"If I tried to take some of the riders back to the old system, they would probably hate me," said Washington.

The "charge" of a good challenge

Implementing a redesigned and completely rethought network can be enough of a challenge for many systems, but SporTran also became the first transit agency in Louisiana to launch battery-electric buses. In keeping with the ambitious nature of SporTran and Washington's approach to business, those buses were introduced on the same day as the new network and hub openings.

"It was a challenge," said Washington. "But we're always up for a challenge. We changed every

route in the city after 25 years, we opened three new facilities and introduced battery-electric buses all at the same time. If we can do that, we can do anything."

The plan to redesign the network was well underway when SporTran was awarded federal funds to procure battery-electric buses. SporTran utilized a consultant, Center for Transportation Excellence, that performed route following to suggest the best routes on the new network to place the five Proterra E2 buses, as well as when and where the buses should be recharged.

Another partner in the successful deployment of the electric buses was SporTran's power utility Southwestern Electric Power Company (SWEPCO). Washington says SWEPCO studied the entire system from where SporTran wanted to station the buses to where the agency wanted charging infrastructure and provided feedback regarding when to charge the buses, which transformer to use and which meter to put the buses on.

"[SWEPCO] was very helpful because they convinced us to put the vehicles on our main office, which most of the time, is powered from eight to five in the daytime. At nighttime, a lot of things are shut down in the building," explained Washington. "[SWEPCO] was able to connect our electric buses to our main office circuit [to charge at night] so that our building and average chargers are actually meeting what we would have seen if we had built a whole new circuit."

In October 2019, SporTran was awarded a state grant with matching funds from SWEPCO to install an overhead fast charger and supporting infrastructure. The E2 models have fast charging capabilities and will be able to recharge to about 75 percent in under 10 minutes.

In addition to being first in the state, SporTran has the larg-

est transit fleet of electric buses in Louisiana and Washington has been working with peer agencies in Baton Rouge and Lafayette to share SporTran's experience and help others find their way along their battery-electric bus journey.

Another part of SporTran's evolution required a shift of thinking and organization to integrate a focus on planning.

Washington explains that SporTran's transportation department included both safety and planning responsibilities, but he wanted to establish a dedicated planning department to allow the agency to better self-manage. While he notes it can be unusual for a small to medium agency to have a dedicated planning department, he says the advantages of the restructure have paid off. For one, the planning department provides an agnostic set of eyes to data when evaluating what element in the system is or is not working and providing suggestions of how to remedy it. Washington says this is helpful for when SporTran takes a case to city leaders or the agency's board and can provide data and trends to help make that case.

To keep the SporTran staff in a planning-focused mindset, the entire operations department gathers once a month for a discussion. Washington believes these monthly meetings have changed culture at SporTran for the better, bolstered understanding throughout the organization and enhanced the staff's insight into what they can deliver.

Quality technology

One of goals of the Move Northwest Louisiana Forward plan was to develop and empower technology that provides benefits to SporTran's customers and employees.

"One of the weaknesses that I think we had was really providing that technology [such as] the Where-is-My-Bus-type systems

apps and agency maps," said Washington. "A lot of things, the majority of things, were done on paper and the system has progressed to become more data-driven."

The technology integrated in the past five years serves both the customers and operations. Washington offers the example of tracking on time performance where, previously, supervisors would be stationed at a corner to track routes that passed by that corner. Now, these supervisors are equipped with laptops and tablets monitoring performance in real time. This real-time monitoring allows for issues to be addressed quickly and can be correlated with other data sets to determine trends.

Riders have quickly adopted to the new features, especially those that can save them time, such as the online bus tracker.

"They love it. It's amazing," said Washington. "For a system our size with a little over 2.6 million trips a year, to have over 300,000 hits per month on the Where is My Bus system is incredible."

As a small to medium system operating in a space where technology is advancing rapidly, the question of when and what new technology to invest in can be tricky to navigate.

"I believe those decisions shouldn't be made at my desk. I believe those decisions should be made in the community," explained Washington. "A lot of those decisions are made by executive staff at other places, but we sit down and talk with those stakeholders who serve on our Transit Improvement Committee. When we start looking at what's going to be our next innovative idea or next creative idea, we always go back to that committee."

Looking to the future

Washington shares that SporTran met every strategic goal that was placed on the agency for the strategic plan. In addition to new



technology and a more customer-centric system, ridership has grown by more than two percent each year following the network redesign and the oldest vehicle in SporTran's fleet will be a 2015 bus. But Washington doesn't see the agency slowing its progress anytime soon.

"We're getting ready to create a new strategic plan that's going to focus on how the agency can move the rural areas into the community," said Washington. "Shreveport

is one of those cities that is kind of growing around the outskirts."

In the second quarter of 2020, SporTran will begin offering an on-demand service to the rural parts of the community that will also take a hybrid approach to paratransit and be operated by Ecolane. Washington explains SporTran's current paratransit service, LiftLine, will be rebranded.

"The reason we're looking to rebrand the LiftLine service is because everyone knows it as

SPORTRAN HAS invested in technology features, such as an online bus tracker, which has more than 300,000 hits per month.



the ADA service and to take that market and those vehicles and try to do this new, on-demand-type service, I believe people are going to say 'well, that's the ADA van.' We will be rebranding the paratransit service and mixing this on-demand service with it to be more effective and more efficient," said Washington.

SporTran is also working on its next facility project: the Multi-Modal Transit Resource Center. The agency purchased



Dinero' Washington was recognized as a 2019 Mass Transit 40 Under 40 honoree. To read more about what made him stand out, visit MassTransitmag.com/21093100

three historical properties located east of its Intermodal Terminal, which it plans to renovate to include a food court, transit mall, a training facility, a technology and planning center, an employee wellness center and an Amtrak platform for potential future passenger rail service.

"A lot of funding is in place to make this happen," said Washington.



SPORTRAN CHANGED every bus route in the city for the first time in 25 years.

"One of things we've done in the past five years is get out in the community and hear from riders [about] what they actually need and what they want and then use that feedback to push technology, build facilities and do service upgrades."

-DINERO' WASHINGTON, chief executive officer of Shreveport Transit Management, Inc. (SporTran)

ton. "We're designing the facility now and will hopefully be in construction in about two and a half to three months."

The new Multi-Modal Resource Center will also house SporTran's Autonomous & Light Duty Maintenance Facility. Yes, autonomous vehicles will be part of SporTran's network in the near term.

SporTran's Intermodal Terminal sits right outside the downtown core and Washington notes there are several

choice districts around the terminal where autonomous vehicles would be a good mobility option. The Shreveport area has seven riverboat casinos and a vibrant entertainment district that are close geographically, but not connected. The autonomous connector will change that and should be ready for launch this year, but Washington does not want to give a specific date until he knows SporTran and its vendors can deliver the service.

"We want to be innovative and it is definitely a fun project," said Washington.

SporTran has a lot of development and a lot of excitement building around the agency, but when asked about the future, for Washington, it comes back around to the community.

"I get most excited about two things, from two different sides. I get excited more about the current riders who have more access to opportunities and a better quality of life. [It's] not taking forever to ride a bus and some of those resources that are spread throughout the city are now in smaller offices right there in our Multi-Modal Resource Center," said Washington.

"But I also get excited about the technology that's being added and the things that we're doing to bring on new riders who are not normally transit riders," he said. "You may not ride the bus all the time because you have a vehicle, but you're now using the bus to take an autonomous vehicle in our parkway to different casinos or you're using us for last-mile transportation to get to where you're trying to be. The more we grow the system, the more we provide opportunities to improve the quality of life for the people who are in our Shreveport-Bossier market, I think the better off not only my life will be, but I'm fulfilling the mission that I'm put here to do." 



2020 Mobility Outlook

Transit agency subscribers were surveyed last fall about equipment, maintenance and other trends; the results are presented in an effort to provide insight into what 2020 may bring.

Staff report

One question nearly everyone wants answered regardless of the situation is "what is going to happen?"

Predicting business cycles is an imperfect art form, especially when those cycles are subject to city, state and federal attitudes that can impact budgets year-over-year. However, understanding macro trends can help businesses plan and take advantage of potential opportunities.

Mass Transit queried our transit agency subscribers during the fall of 2019 with a survey asking everything from the size of the communities they serve to where their organizations are with the adoption of data-driven techniques.

Those who answered the survey represent a balanced cross section of transit professionals operating in large,

medium, small and rural areas across the U.S. and Canada (and one Columbian respondent).

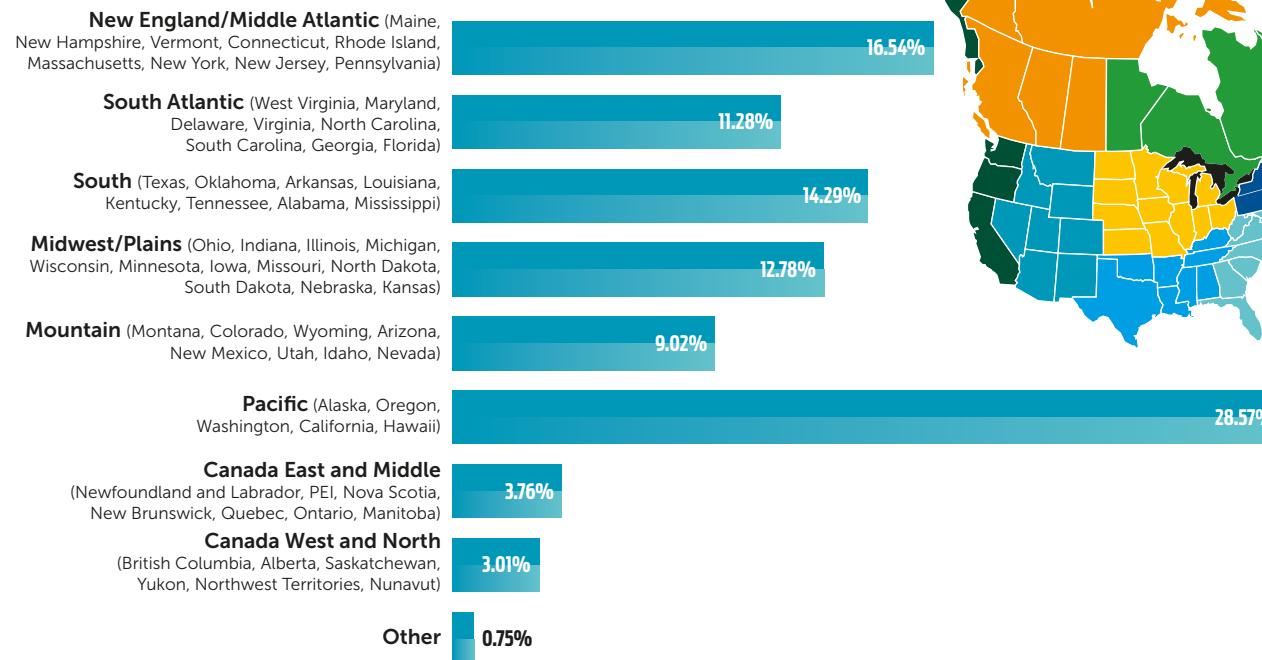
We can't ask every question of every provider, but we believe the data found within this survey offers valuable insight to mobility providers and the industry that supports these providers. For example, respondents in large urban areas indicated they would be acquiring battery-electric buses at a higher rate than other segments in 2020, while respondents in rural areas intend to acquire paratransit vehicles at a higher rate.

Returning to a version of the initial question, "What's ahead in 2020?" There is still a lot of the year to go before anything is definitive, but thanks to the respondents of our survey, we all have more of an idea of what types of vehicles, equipment and technology transit providers are looking to acquire and explore.

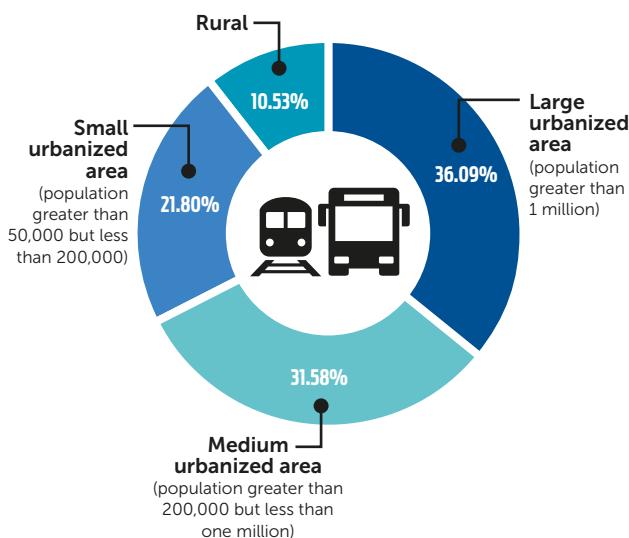
More online

The entire 2020 Mobility Outlook is free to download and contains much more information. To access, visit MassTransitmag.com/21124387

Where responding agencies are located



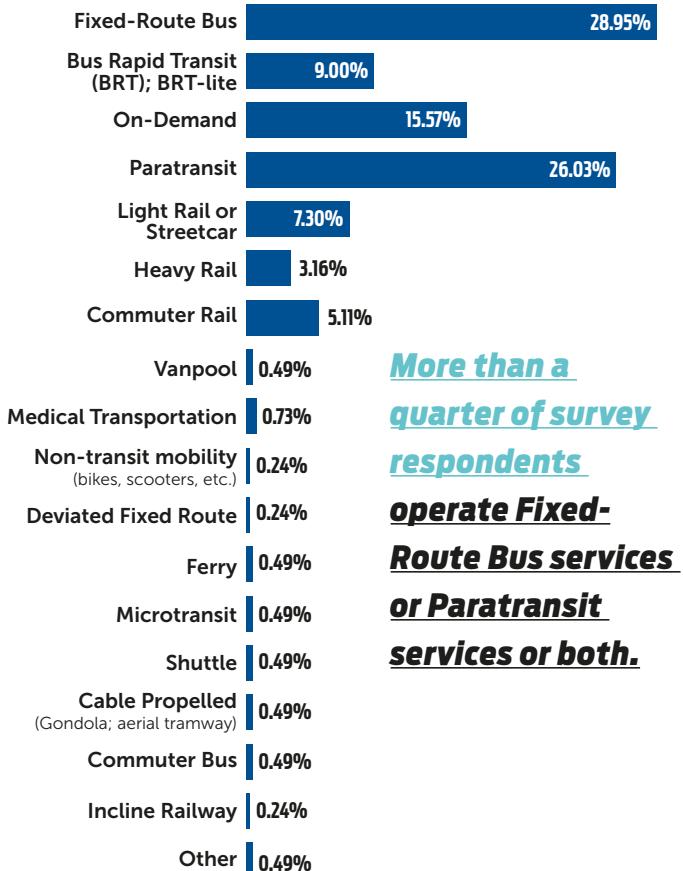
What is the population of your service area?



More than 31% of respondents who operate in a large urbanized area were located in the Pacific region.

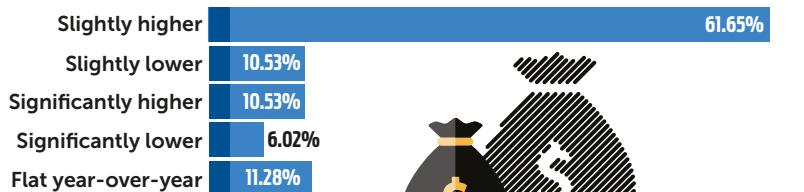
What services does your agency provide?

(select all that apply)

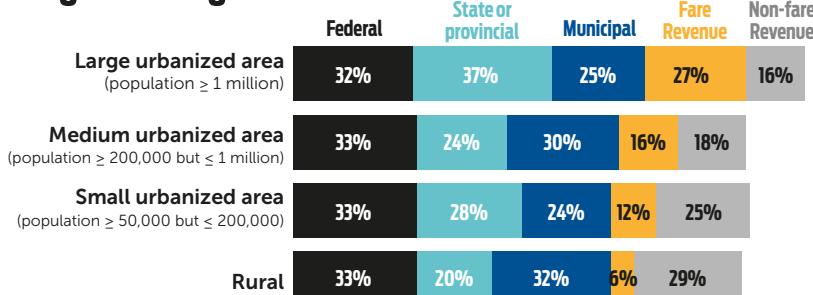


More than a quarter of survey respondents operate Fixed-Route Bus services or Paratransit services or both.

How does your anticipated 2020 budget, both operating and capital, compare to 2019?

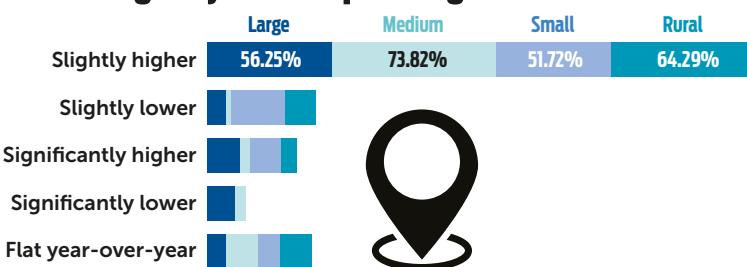


Budget funding sources*



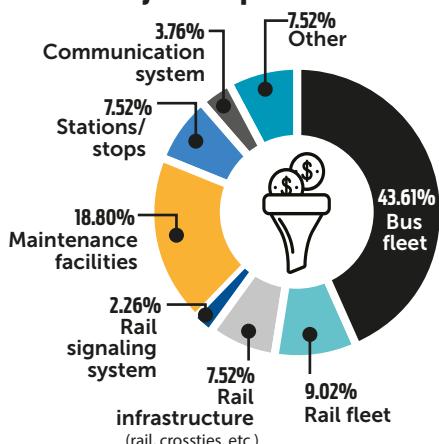
*Value represents average of all respondents answers within a category; total will not add to 100

2020 budget by size of operating area



STATE OF GOOD REPAIR: WHERE IS INVESTMENT NEEDED?

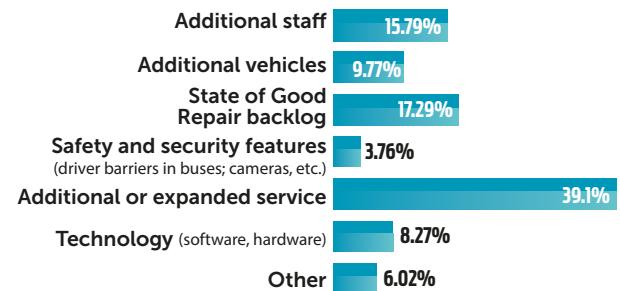
Regarding the State of Good Repair backlog, what area of your transit system requires the most immediate investment?



A selection of "other" responses to the State of Good Repair backlog question:

- All of the above.
- More operational hours and a fleet to match.
- Dispatch Program
- Tunnels
- Technology

If provided an unlimited budget, in which of the options below would your transit agency invest the most?



Half of the "other" responses to where unlimited investment would be applied involved integration of zero-emission vehicles, their supporting infrastructure and preparing facilities for the zero-emission fleets.

75% of respondents

operating in a rural area located in the Midwest/Plains and Mountain regions said their budgets were slightly higher in 2020.

73% of respondents

operating in a large urban area in the Pacific region said their budgets were either slightly higher or significantly higher in 2020.

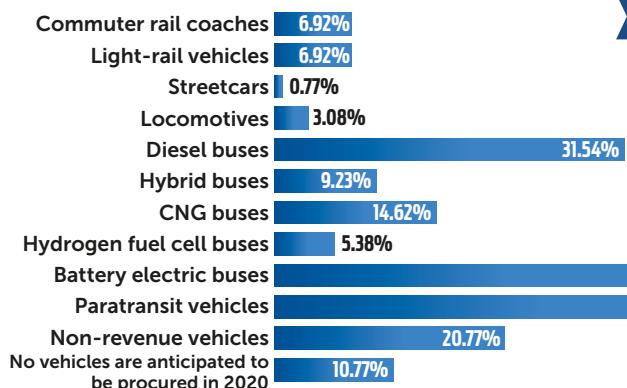
More than 78% of

respondents operating in a medium urban area report 2020 budgets that are slightly or significantly higher.

More than 16% of

respondents operating in a large urban area report 2020 budgets that are slightly lower or flat year-over-year.

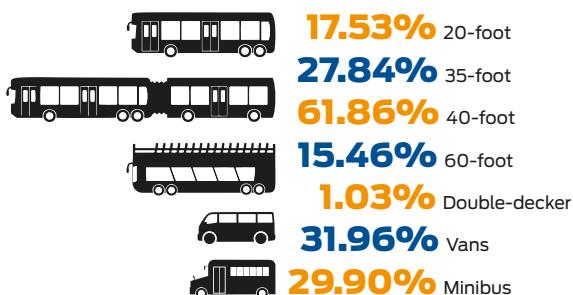
Does your agency anticipate awarding a contract(s) for new vehicles in 2020?



» **60% of respondents operating in large urban areas have plans to award a contract for battery-electric buses in 2020.**

» **43% of respondents operating in rural areas have plans to award a contract for paratransit vehicles in 2020.**

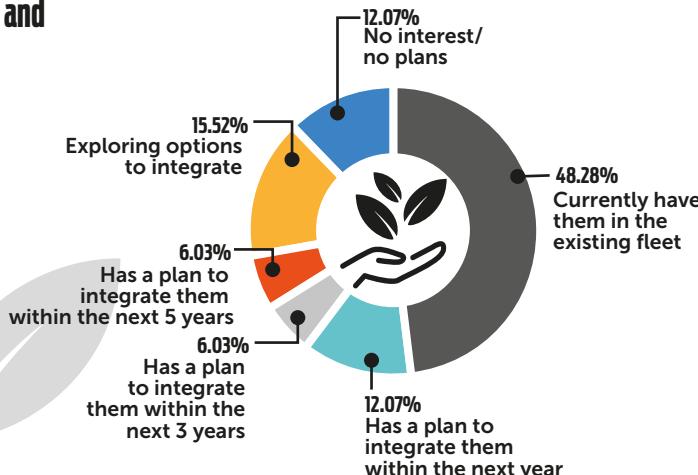
What size vehicle are you interested in procuring?



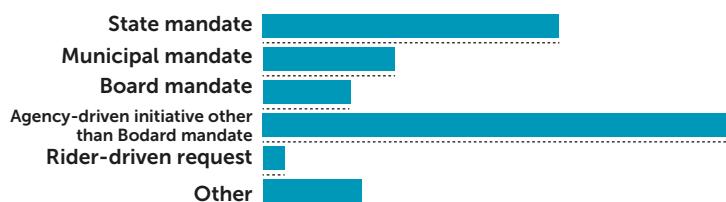
84% of all respondents anticipate the buses they procure in 2020 will be low floor.



Regarding low-emission and zero-emission buses:



What is the main motivating factor for your agency's integration of low-emission and/or zero-emission buses?



Other factors driving zero-emission integration:

- Overall concern with sustainability
- Community driven/Community requested
- Grant money specifically awarded for zero-emission vehicles

What purpose will the new vehicles serve?

90.35%
Replace aging vehicles

28.07%
Add capacity to existing route(s)

28.95%
Accommodate new service

1.75%
Other

Which of the following factors contribute to respondents who selected "no interest/no plans" to acquire zero-emission buses?

14.29%
Price of the vehicles

14.29%
Price associated with supporting infrastructure

14.29%
Technology needs to develop further

57.14%
It's not a good solution for our current system

Investing in a Peace of Mind

To combat a growing trend of assaults on bus operators, agencies invest in equipment and additional training to safeguard their employees and give them a sense of comfort.

By **Megan Perrero, assistant editor**



FOR THE PAST SEVERAL YEARS, THERE HAS BEEN AN UPTICK in assaults and violence against transit employees, specifically bus operators, which has been a growing concern for transit agencies across the country. Recently, a Detroit Department of Transportation bus operator was forcibly removed from her seat and attacked. And in May of 2019, a Hillsborough Area Regional Transit Authority (HART) bus operator was killed by a passenger while operating his bus.

In 2014, when this trend was first emerging, the Federal Transit Administration tasked the Transit Advisory Committee for Safety (TRACS) to develop recommendations on elements that should make up a Safety Management System (SMS) approach, which aimed to prevent and mitigate transit worker assaults.

PALM TRAN'S fixed-route buses have been retrofitted with flashing rear lights.

TRACS came up with several recommendations such as installing safety shields, security cameras and automatic vehicle location systems; providing de-escalation training; and educating the public about reporting assaults.

Since these recommendations were published in 2015, many transit agencies, such as the Pinellas Suncoast Transit Authority (PSTA) and Palm Tran, have installed safety shields on buses and invested in new safety and de-escalation training to better safeguard their employees.

Equipment providing safe barriers

PSTA chose to invest \$1.2 million from its capital reserve fund to install safety shields on 100 percent of its fleet, a first for the region, after HART Bus Operator Thomas Dunn was killed on his bus in PSTA's neighboring county.

"We had been working with our employees and we had test modeled a safety shield for our bus about a year prior to the murder...and then that happened, and our employees came to me right away and said they didn't feel safe," said PSTA CEO Brad Miller. "So, we immediately fast-tracked a procurement and decided right then and there that we were going to have to give our employees peace of mind and put a shield on 100 percent of our fleet."

Since PSTA had already been prototyping one option, employees had the chance to provide feedback on what they liked and didn't like prior to the procurement. While there were pluses and minuses, Miller says PSTA employees went from a somewhat mixed review of the prototype to 100 percent supportive of it overnight following Dunn's death. PSTA also conducted research on different models other agencies were using. By the end of May 2019, PSTA, along with HART employees, gathered to

collectively decide on which safety shield they wanted.

"[The operators] were thankful we sought their input," Miller said. "They gave a ton of input on exactly the design features in the shields that we ended up buying, so it's been very positive since last January when we actually ordered them."

The safety shield they decided on is a two-part shield from AROW Global that has an opaque solid bottom with a tempered, sliding glass window halfway up, which can extend from the back of the driver's barrier to the fare box, completely walling off the operator from a customer. The sliding window allows for easier communication.

"It certainly limits the ability of a person to reach around and touch the operator in any way," Miller said. "There's no shield that can prevent everything, but this is what we as an agency all agreed was the best option."

Palm Tran also plans to make a major investment in safety shields, or as they call them, "Operator Office Doors," after receiving requests from bus operators due to concerns that someone could physically touch them.

Palm Tran Executive Director Clinton B. Forbes explains the agency sent out a survey to get operator input, adding that Palm Tran will be installing the operator office doors this year.

"That's a more than \$1-million investment to install more than 160 operator office doors on our fixed-route fleet," Forbes said. "[The operators] are excited about it."

Adding safety tools to the operator's toolbox

Equipment is just one aspect of ensuring bus operator safety. Palm Tran has seen a reduction in preventable, nonpreventable and passenger incidents, which Forbes credits in part to the safety culture that's been established throughout



the organization. Creating a safety culture that everyone buys into, in turn, creates a safer work environment for bus operators.

Forbes explains it started with communication by ensuring Palm Tran's mission is aligned with safety and is ubiquitous throughout the organization. One way this is accomplished is through the monthly safety message, which serves as general safety reminders for best practices when operating a vehicle. Past safety messages have touched on how to approach railroad tracks, how to operate safely in a school zone and how to safely enter a gated community.

"A lot of these safety messages are driven by what we're seeing out there," said Joe Harrington, senior manager of public relations at Palm Tran.

Forbes adds how he believes bus operators have really bought into the safety messages.

"Some of the safety messages originate from bus operators,"

THE SLIDING
glass window
on a safety
shield improves
operator safety
and preserves
communication
with passengers.



PSTA EMPLOYEES
installed safety
shields on 100
percent of PSTA's
bus fleet.

Forbes said. "That's how engaged they are; that they may suggest the next month's safety message because of a trend they see out in the field."

Once the monthly safety message has been established, it's posted in every company room and is used to start every single meeting. At the start of a meeting, someone will read the safety message and reflect on how it applies to them.

"...By way of speaking about [safety] and always speaking about it, we speak it into existence," said Palm Tran Director of Support Services Gilbert Morales.

The safety message is just one aspect of the safety culture at Palm Tran. In 2017, Pam Tran developed an agency-wide program, Palm Tran Statistic (PT STAT), that brings people together from different functional areas to develop, present and implement initiatives aimed at improving performance metrics.

There are 10 PT STAT teams, some of which include safety and accident reduction; reduction of rollcalls; on-time performance; and ridership. Forbes shares it's created a lot of synergy and teamwork within the agency.

"We have an organizational philosophy that creates innovation and high performance, and not about the individuals, but about the team," Forbes said. "I believe [in] creating a space and environment where everybody's slices of genius can be unleashed and harnessed and turned into a work of collective achievements."

One slice of genius came from the safety and accident reduction team, which developed a project called the Flashing Light Campaign. Cars were running into the backs of buses, so the team developed a project to retrofit all the buses with a flashing light to increase visibility and to improve nonpreventable accidents.

"We started this initiative with our fixed-route fleet and we've now extended that to include all our paratransit vehicles," Harrington said. "Putting these flashing lights on the vehicles has really helped reduce the number of people who are running into the back of those vehicles."

Other safety initiatives from PT STAT teams include reducing side swipes by adding reflective tape to the side rear of buses and reducing the number of wheelchair incidents by implementing a mandatory wheelchair securement policy.

"We've seen metrics really moving in the right direction," Harrington said. "We've also seen a significant reduction in customer concerns, so the customers are happier too with the same service we're providing."

In addition to the safety message and the PT STAT teams, Palm Tran is providing de-escalation training to help bus operators deal with a range of difficult situations. Forbes explains that

while, yes, accidents are a safety concern, another safety concern is carrying thousands of people each day.

"What we have been doing is putting more tools in the operator's toolbox," Forbes said.

The de-escalation training, which started four years ago, takes place in a town hall setting and usually lasts three to five days to train the nearly 400 operators. It consists of going over techniques to deal with difficult situations and the results speak for themselves.

"To [the] point on the number of customer concerns that have gone down, we believe that's a direct indicator of that training we invested in," Forbes said.

Palm Tran isn't the only agency to implement de-escalation training. PSTA also invested in de-escalation training for nearly 400 bus operators following the installation of the safety shields. Miller explains PSTA saw this training as a way to reduce altercations related to fare payments. The training gives operators techniques on how not to escalate concerns about fare payments or how to read the temperature of a situation so nothing bad happens.

"I think that has been very effective," Miller said. "I know our employees like that."

By investing in safety, agencies invest in results

Investing in equipment and safety training creates a safer work environment for bus operators and a safer commute for passengers. Transporting thousands of customers a day means there's thousands of interactions a day, some of which may be difficult. By giving operators the necessary tools to deal with these sometimes-difficult situations, agencies will start to see clear improvements.

"Safety is in our DNA and we're starting to really see the results of that," Forbes concluded. **MT**

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Combatting
distracted
communities
to boost

RAIL SAFETY

A recent uptick in near miss incidents have agencies finding education and engineering solutions to combat rail grade-crossing incidents.

By **Megan Perrero**,
assistant editor

INCIDENTS AT GRADE CROSSINGS and involving trespassers are not new to railroads, but the reasons for an increase in these incidents have shifted, making the industry find new ways to address these issues. While an increase in mental health awareness campaigns have helped address intentional rail fatalities,

ANTI-TRESPASS PANELS can provide a passive deterrent to pedestrian foot traffic.



another problem has surfaced: distracted behavior.

According to the Federal Railroad Administration (FRA) Office of Safety Analysis, there were 597 nonfatal trespassing incidents from Jan. 1, 2019 through Oct. 30, 2019 and there were 535 fatal trespassing incidents in the same timeframe. And in Florida alone, FRA reports there were 106 grade-crossing incidents at public and private crossings from January 2019 to October 2019. To combat this, industry stakeholders, including Operation Lifesaver, Inc. (OLI), the Florida Department of Transportation (FDOT), Brightline and L.B. Foster Co., are implementing a combination of engineering solutions and education campaigns that focus on improving rail safety.

Engineering a safer crossing

Florida is consistently one of the states with the highest number of grade-crossing incidents, according to the FRA, reporting 399 grade-crossing incidents from Jan. 1, 2016 to Nov. 30, 2019. FDOT says one reason is because people are stopping on the tracks without realizing. So, Brightline and FDOT turned their attention to grade crossings to help get people off the tracks.

Media Relations Director Michael Hicks explains Brightline installed 90 variable message signs (VMS) at the busiest intersections between West Palm Beach and Miami, displaying messages such as "See Tracks, Think Train."

FDOT is focused on installing dynamic envelopes at every FDOT roadway and state-owned rail crossing to make it more obvious to people when they're on or near the tracks. FDOT will also require dynamic envelopes to be included in the standard design of any future railroad crossings on FDOT roadways or state-owned land rail crossings.

There were 597 nonfatal trespassing incidents from Jan. 1, 2019 through Oct. 30, 2019 and there were 535 fatal trespassing incidents in the same timeframe.

The dynamic envelopes were piloted a few years back at two different locations, explains Secretary of the Florida Department

of Transportation Kevin Thibault.

"When we did those [pilots], we saw a 15-percent improvement on people acknowledging



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they were in an active crossing, [so] you saw more of them staying away instead of them stopping in the middle of the rail crossing," Thibault said. "We hope by employing [dynamic envelopes] at different locations, we'll start to see that phenomenon more."

And Thibault says this is just one tool to help improve rail safety. FDOT will also look into adding more signage in select locations, which could include more reflective signage and using updated technology and communications systems related to different signals.

Additional signage and dynamic envelopes aren't the only engineering solutions out there. With more people exhibiting distracted behavior around rail property, it has become easier for them to enter

"[The ATP] provides a passive deterrent to pedestrian foot traffic in the right-of-way, as well as areas such as platform ends where pedestrian are not permitted," McBrayer said. "Various types of alternative, more rudimentary and makeshift solutions have been available in the past, but these tend to be nonfunctional."

OLI HAS a new PSA aimed at addressing distracted behavior.



OLI



the tracks on foot without realizing it. L.B. Foster developed an anti-trespass panel (ATP), which hit the North American transit and freight rail markets in 2019, according to Sarah McBrayer, assistant general manager of transit products at L.B. Foster.

Made from 100 percent recycled rubber, the ATP has a cone design that provides an uneven walking surface and is available in three different styles. And according to a July 2019 FRA study that evaluated the effectiveness of the ATPs, they serve as an effective deterrent to trespassers.

"[The evaluation] of the ATPs on pedestrian behavior indicates that over a 60-day period—30 days before and 30 days after ATP installation—a 38-percent reduction in trespassing incidents was observed," McBrayer said.

Education is half the battle

Finding effective engineering solutions and educating communities about rail safety is just half the battle, explains OLI Executive Director Rachel Maleh.

"Our work is really cut out for us because we are trying to change human behavior [too]," Maleh said.

This means pulling people away from their phone screens and paying attention to their surroundings to reduce the number of trespassing and near miss incidents, something OLI's new PSA distracted behavior campaign is working towards, which launched in November 2019.

"People are distracted on their phones," Maleh said. "They're looking down, they're listening to music or videos or even having phone conversations. People are more distracted than they were five to 10 years ago."

The campaign targets 16- to 24-year-old males and features a social media rollout with 15 and 30 second clips of the campaign's video, which shows a young male walking on train tracks with earbuds in not realizing a train is coming up behind him. The video ends with the slogan "the only thing that belongs on a track is a train" and reiterates how fast trains move and how much quieter they are now compared to a few decades ago.

To engage with younger audiences, OLI has also created a blog on their website for people to share their stories about a near miss incident, which will then be shared on OLI's social media pages, explains Chanté Bailey, director of

communications and marketing at OLI, who notes the organization received the first entry detailing a personal near miss incident.

Maleh added how OLI has been using more human-interest stories for the organization's videos so it's not just statistics.

"That human interest story is really impactful and makes an impression on someone in a way that a chart with statistics, while equally compelling and tells a similar story, doesn't have the same impact," Maleh said. "So [for example], we will have videos of a mother talking about how her child was struck and killed because they were on the tracks taking selfies for their yearbook picture."

In addition to posting the PSA to OLI's and OLI's partners' social media feeds for the next two to three months, OLI is also working with Cook County, Ill., the FRA and OLI's state coordinators for Illinois and Indiana on a grade-crossing pilot project that will measure the overall impact of the PSA marketing campaign and its effect on commuter behavior, says Bailey.

"OLI chose a high-risk area of trespassing...and worked within the state to consistently run the PSA campaign on various social media platforms and channels," Bailey said. "...[We] hope to compare the numbers/statistics of trespassing incidents within a three-month time span in hopes that we find a decrease with reported incidents."

Only trains belong on tracks

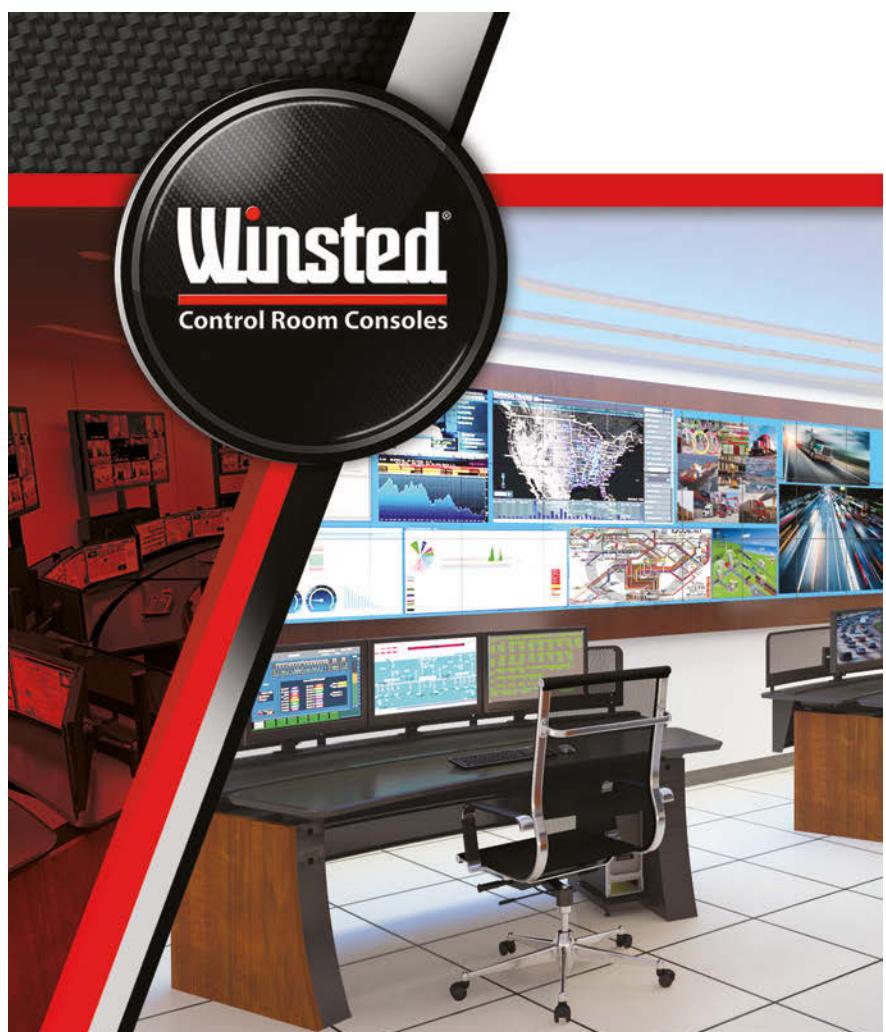
A combination of an engineering and education approach is required when it comes to addressing safety incidents on and near railroad property. Engineering solutions only go so far. While signals, gates and pavement markings warn people of their proximity to train tracks, it takes education to inform them what these visual

cues mean and why it's important to adhere to them. Additionally, educational outreach efforts teach people just how dangerous distracted behaviors can be for pedestrians on or near tracks.

"Near miss incidents can turn deadly and tragic and we want to show that," Bailey concluded. **MT**

"That human interest story is really impactful and makes an impression on someone in a way that a chart with statistics, while equally compelling and tells a similar story, doesn't have the same impact."

-RACHEL MALEH, OLI Executive Director



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Modernizing the Message

By modernizing the system with digital signage, agencies can create a seamless passenger experience while adding to the bottom line.

By **Megan Perrero, assistant editor**

DIGITAL SIGNAGE PROVIDES transit agencies with a unique opportunity to improve the passenger experience, create new revenue streams and modernize their services.

Whether it's a solar-powered static display at a bus stop or a customized 34-foot display, these companies are working to provide solutions for all types of situations.

Real-time information at the stop

Connectpoint is a provider of static passenger information and

realized several years ago there was a demand for a digital signage option that would allow transit agencies to send out messages in real time to passengers at various stages of their journey, explains Connectpoint President and CEO Rick Wood. Connectpoint partnered with ePaper solutions provider E-Ink to create the solar-powered Digital Bus Stop®.

The modular and customizable product, available in 10-, 13- and 32-inch displays, is an option for agencies looking for an alternative to LED and LCD signs. The product is ruggedized and designed to be used throughout the system, no matter the weather or location.

"We designed our family of compact and portable ePaper displays to be energy efficient. They come with a solar panel and a built-in battery that ensures the device is powered 24/7," Wood said. "The Digital Bus Stop is highly adaptable and works in a variety of outdoor environments. Agencies can now deploy aesthetically pleasing digital signage at any stop within their system that has sun exposure with no requirement for electrical lines, connecting wirelessly via 4G networks."

The Digital Bus Stops can easily be deployed at bus stop poles and shelters within 30 minutes, allowing transit agencies to directly communicate with customers at the bus stop level without needing electrical infrastructure. And the built-in battery can serve as a backup power source for weeks on

a single charge during the night-time or cloudy days.

Not only is the signage ADA compliant with all displays having text to speech capability but it is also eco-friendly and reduces light pollution. The signage is also readable in sunlight and has a high-contrast display with LED illumination.

In addition to the Digital Bus Stops, Wood explains Connectpoint provides a content management system that can remotely control and monitor the various deployments.

"Connectpoint's Asset Management System is the industry's only device agnostic content management system, managing LED, LCD and Digital Bus Stops, and lets agencies remotely control and monitor digital signage from our easy to use and powerful interface," Wood said. "It's intuitive and customizable, allowing agencies to schedule custom messages for their riders, such as holiday schedules and promotions, but also delivers real time alerts via the agency's real-time feed."

A modern experience for the bus rider

At the stop isn't the only place for digital signage. With transit agencies looking to add passenger amenities to improve the rider experience, on-board digital signage may be the answer.

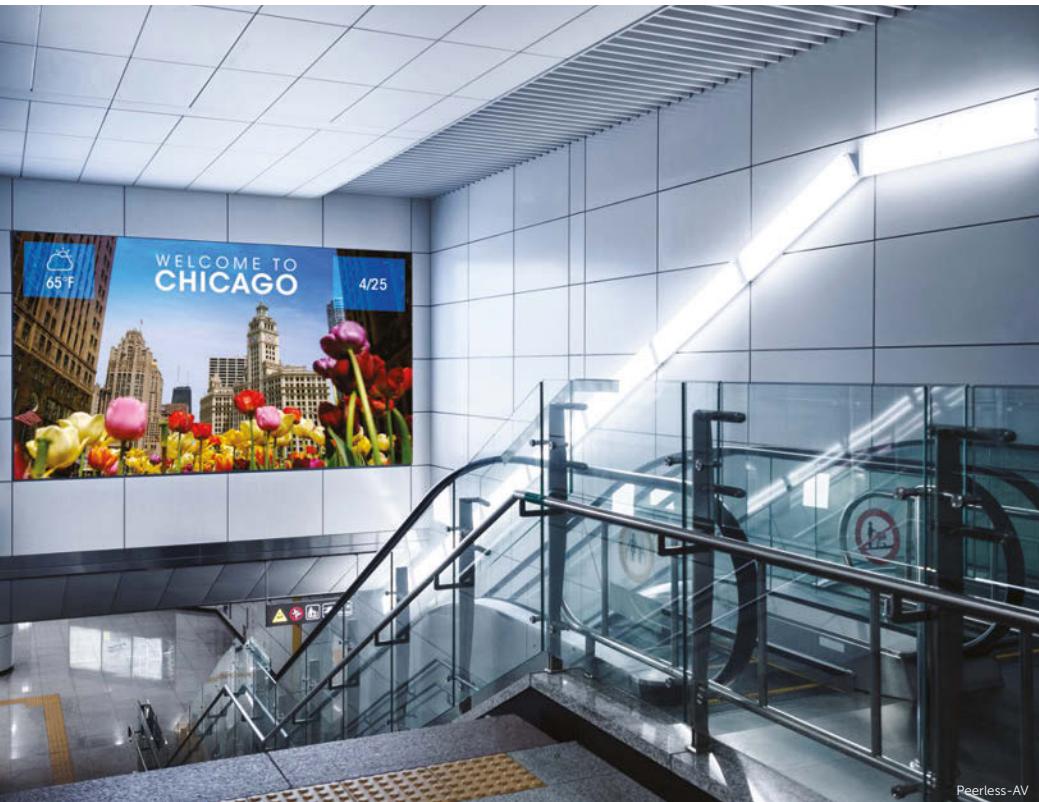
ENGIE Business Development Manager Kilian Ollivier explains transit agencies can install LCD displays onboard buses for several purposes.

"The main purpose is to inform their riders about route information, network map, upcoming connections, arrival times or detour alerts," Ollivier said. "They can also use it for security purposes by integrating real-time stream of the CCTV on the screen, showing riders they are being monitored to enhance safety and security."

Ollivier adds some clients also use the digital displays to ad-



CONNECTPOINT CREATED the Digital Bus Stop, a solar-powered digital sign which allows transit agencies to send out messages in real time to passengers at the stop. Pictured is Connectpoint's 32-inch display.



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vertise, either about the transit agency's own service and news or through a third party to create a new revenue stream from outside advertisements.

In addition to providing another revenue stream digital signage can provide better communication by keeping riders informed of on-going detours and connections available along the route, creating a modern experience for passengers.

"This is key in providing a seamless experience aboard vehicles," Ollivier said. "We've [also] had bus operator feedback saying it helped them focus on the road instead of giving transfer information to the passengers."

Transit agencies can think big when it comes to displays

"Metro North [Railroad] was looking for a modern, future-proofed display solution to replace the single-digit LED products that had adorned [Grand Central Station] since the 1990s," said Dan Rossborough, director of special projects, NanoLumens. "The completed Grand Central Station installation includes 96 track

boards that highlight entrances to each track, six big boards in the main hall, six toppers above the big boards, two info boards adjacent to the big boards and two toppers above the info boards."

Rossborough explains Metro North wanted a solution that wouldn't alter the existing architecture, so the company built a custom-sized Nixel subcomponent boards to create an exact retrofit of the old display.

"That wouldn't have been possible with an off-the-shelf product," Rossborough said.

NanoLumens also worked with All Aboard Florida when it launched its high-speed intercity passenger rail system, Brightline. Brightline wanted to create state-of-the-art stations to complement its state-of-the-art trains, so it focused on making a statement at the downtown Miami station, the highest-profile Brightline stop.

"[The] creative process led them to install a massive, four-sided digital display around a 34-foot tall concrete column that strikes through a central thoroughfare," Rossborough said. "Though formed from separate panels, the four displays merge seamlessly at

each corner to create the visual of a fully-wrapped column. Built with a 6.3-millimeter pixel pitch throughout, the displays now showcase content 24 hours a day. Passengers... are immersed with display content like train schedules, amenities details and station alerts."

Rossborough explains that while most stations won't need a massive display or something with a hundred displays with custom subcomponents, the option is available, adding that the products and partners are there to help them accomplish almost anything.

"Transit stations may serve the same purposes, but each has their own weird architectural quirks and local aesthetics that they want to navigate around or emphasize," Rossborough said. "Transit stations don't have to put any limit on how they deck out their space with displays. Customized displays let transit stations express themselves a little bit more while giving passengers a more modern experience that's consistent with the rest of their lived experiences."

A seamless installation from start to finish

Direct View LED (dvLED) video walls can be used for almost any indoor or outdoor digital signage display and are well-suited for large, eye-catching displays, such as billboards or roadside messages. The video display technology produces bright, vibrant colors by using light emitting diodes without giving off excess heat or using a lot of energy.

"With installations of dvLED video walls continuing to rise into 2020, Peerless-AV is addressing this growing market by offering its SEAMLESS LED Video Wall

Integration program," said Earl Naegele, managing director of commercial sales, Peerless-AV. "Encompassing expert engineering and design, custom project managers, full installation services, dedicated dvLED mounting solutions and easy-to-use online tools like the LED Video Wall Configurator, SEAMLESS by Peerless-AV provides all of the elements for a successful installation."

The dvLED solutions can be used indoors and outdoors, with dvLED video walls providing wayfinding in stations with large-scale maps with directions to specific areas within the venue, explains Naegele. There's also an interactive option, which would allow customers to find a custom route. And like other digital signage displays, dvLED video walls can also display scheduling updates, delays, track or terminal changes and emergency alerts, as well as advertisements and large unique signage.

To achieve a successful deployment of dvLED video walls, Naegele says

SEAMLESS offers help for every step of the process.

"Our custom engineers and support staff will create new and effective solutions that accommodate mass transit applications," Naegele said. "From heavy traffic areas to elements such as water, dust and dirt, our support ensures you have a safe and protected digital signage solution."

Agencies who utilize this service will also have a single point of contact from the SEAMLESS LED Solutions Team, who will oversee the entire project from installation and maintenance to troubleshooting and post-installation services.

A streamlined experience

Luminator Technology Group (Luminator) works with transit agencies to deploy on-board and stationary passenger information systems to help enhance the passenger experience by providing real-time information.

"With the implementation of Luminator's digital sign technologies, trans-



Nanolumens

NANOLUMENS INSTALLED a four-sided digital display that wraps around a 34-foot column at Brightline's Miami station.

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sit agencies can instantly and remotely update content on displays throughout the network using easy-to-use software," said Luminator Chief Technology Officer Werner Malcherek. "Along with transmitting information, Luminator's system also provides health and diagnostic data to maintenance personnel, further enhancing efficiency for the maintenance team."

Malcherek explains that when transit agencies utilize passenger information systems, this creates a more streamlined passenger experience, allowing riders to easily benefit from the agency's services.

"With on-board and stationary digital signage, transit agencies can get rid of wasteful paper signs and reduce the labor costs and time required to update information along hundreds of routes," Malcherek said. "If an agency requires additional signs in remote locations or wishes to save on power consumption, low-power LED technology available with E-paper signs, combined with solar, is an environmentally and budget-conscious alternative."

Luminator also offers its INFO-transit on-board passenger information systems, allowing transit agencies to generate revenue from paid advertising while promoting their own services. Malcherek explains these displays also integrate with security camera feeds and have the option to add on the audio announcement component.

Managing the message

Once transit agencies have installed their digital signage across the system, they'll need a way to manage and monitor their messages. That's where IxN-Connect from Intersection comes in.

"IxNConnect is a content management platform that helps transit agencies improve communications with their customers and maximize revenue with adjacent advertising," said Hal Dick, vice president, product, Intersection. "IxNConnect provides a central hub for transit agencies to manage and monitor the delivery of real-time arrival and schedule information, service updates, marketing campaigns and emergency messaging to digital screens systemwide."

The platform allows agencies to distribute and manage communications at scale, allowing campaigns to be scheduled to the right locations at the right times via a central dashboard and API integrations, explains Dick. And instead of having to physically monitor displays, the platform allows users to continuously monitor the messaging from their desk.

"Instead of going on-site to check that a campaign is playing, IxNConnect users can save time by pulling up a live view of any display from their desk," Dick said. "Users can analyze metrics dashboards to fine-tune the coverage and scheduling of messaging, while operations staff get one place to check on the health of the display network."

IxNConnet allows agencies to leverage their digital displays by creating a network of screens, providing a way to communicate across the system in real time with information such as service changes,

delays and other useful information.

"Since the screens contain mission-critical information, consumers pay close attention, making them a perfect location for advertising, which generates revenue for the agency," Dick said.

Simultaneously benefiting agencies and riders

Whether it's onboard vehicles, secured to a wall or installed at an existing bus stop, digital signage provides transit agencies with an opportunity to generate revenue, to modernize stops and stations and to enhance the passenger experience, all while being efficient and cost effective.

"Moving forward, transit agencies should employ these smart, adaptable technologies in order to maximize the benefit for transit passengers, all while providing a more economical and efficient solution for the transit operator," Malcherek concluded. **MT**

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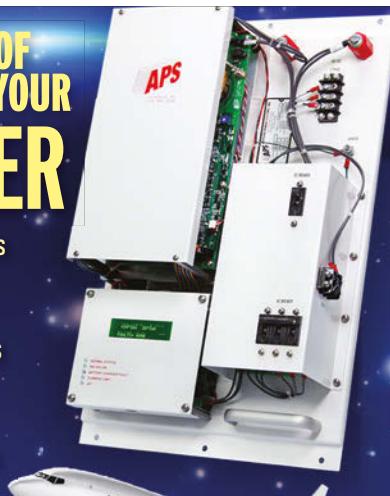
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In Focus: Maintenance

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Arva Industries

35T Railbound Crane

The Arva 35T Railbound Crane can lift and walk into place a 39-foot section of pre-assembled rail/crosstie panel, so workers can place larger portions of track in one movement. The three-section fully-powered hydraulic boom with base, mid and fly sections has a maximum extension boom to 63 feet. The boom's angle range is -6° to 66° and the maximum capacity is 70,800 pounds. The boom's fly section is equipped with multi part line as per lifting requirements. The operator can control the travel and crane operations from a single upper machinery deck-mounted cab.

✉ www.arvaindustries.com

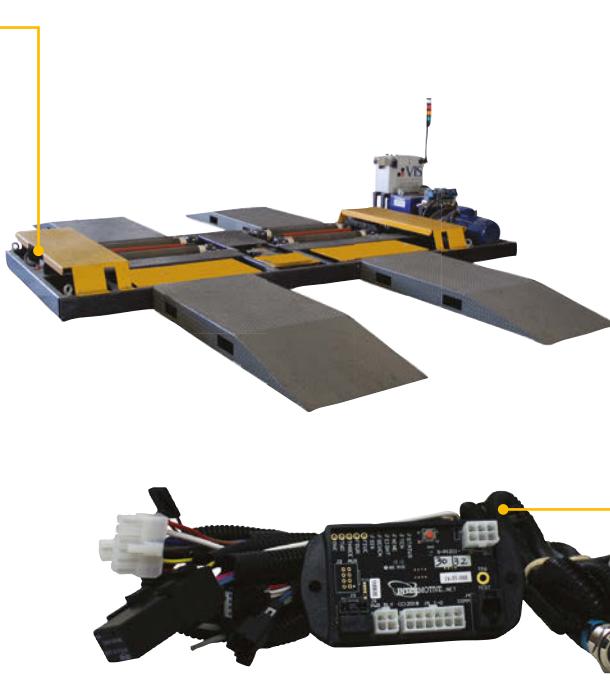


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VIS-Check

The VIS-Check performance-based brake tester with road simulator measures braking force and inspects brake, steering and suspension components to find otherwise undetectable repairs. It allows technicians to view steering and suspension components under harsh operating conditions and minimizes the risk of injury to testing personnel by eliminating the need for vehicle deceleration. At the end of the inspection, the VIS-Check produces a 'Safety and Efficiency Report' to guide technicians' maintenance activities and reduce vehicle service times to get vehicles back on the road sooner.

✉ www.vischeck.net/vis-check



Miller Ingenuity ZoneGuard

ZoneGuard is an electronic roadway worker protection system that uses a combination of diverse and redundant detection technologies to warn rail maintenance crews of track vehicles entering an active work zone. This secondary warning system protects workers from human error factors that can cause close calls and accidents. Customers can use either the ZoneGuard fixed or portable detection system. Just under five pounds, the portable kit can be transported from jobsite to jobsite, while the fixed system is permanently installed and provides 24/7 train tracking capabilities.

✉ www.MillerIngenuity.com/ZoneGuard

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✉ www.InterMotive.net

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➲ www.loram.com

**Graffiti Shield, Inc.**
Glass Shield Multi-Layer Film

The Glass Shield Multi-Layer Film provides four layers of protection against graffiti and vandalism. The peel point system allows each layer to be removed quickly and easily to reveal a clean surface. It offers a onetime install while providing four layers of protection before another install is required.

➲ www.graffiti-shield.com

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DISCUSSION

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**Rebecca
Saltzman**

@RebeccaForBART

At a TOD outreach meeting, a constituent asked me if BART

could install hooks in El Cerrito Plaza bathrooms, apologizing if this was a silly request. I assured her it wasn't &

worked with staff to get them installed. Love helping w/ small improvements that improve rider experience



**Crissy
Ditmore**
@FabCityCrissy

Catching up with my friend @sean_os1 at #TRBAM. He wins #transit card bingo... this time...but also for the leader of one of the world's most prolific and successful VC's @ SOSV walking the walk on #sustainability



Get on your way



Guelph Transit
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► Robin Gerus, #GuelphTransit general manager, got his #OnYourWay reloadable fare card this morning. #Guelph

PHOTO OP



THE VIEW



BOWINN MA
@BOWINNMA

I know my BC Government colleagues take #PublicTransit all the time...but seeing this under the boardroom table at this morning's meeting downtown really tickled me. Any guesses as to which of my NDP MLA colleagues this is??



METRO TRAINS

@METROTRAINS

► Hoomans of the Sandy line rejoice! Ralph's owners have been located and are off to collect him from South Yarra! But in the meantime, here's another photo of Ralph waiting patiently; cos who doesn't love a doggo?

#smortodoggo #doggoneit
#doggosofmelbourne

PERSPECTIVE



TARTA
@TARTA_Toledo

► Our #TARTA Community Relations team had the wonderful opportunity to speak to students at Bowling Green High School about the importance of #publictransit in our communities.

#rideTARTA #community
#engagement #outreach



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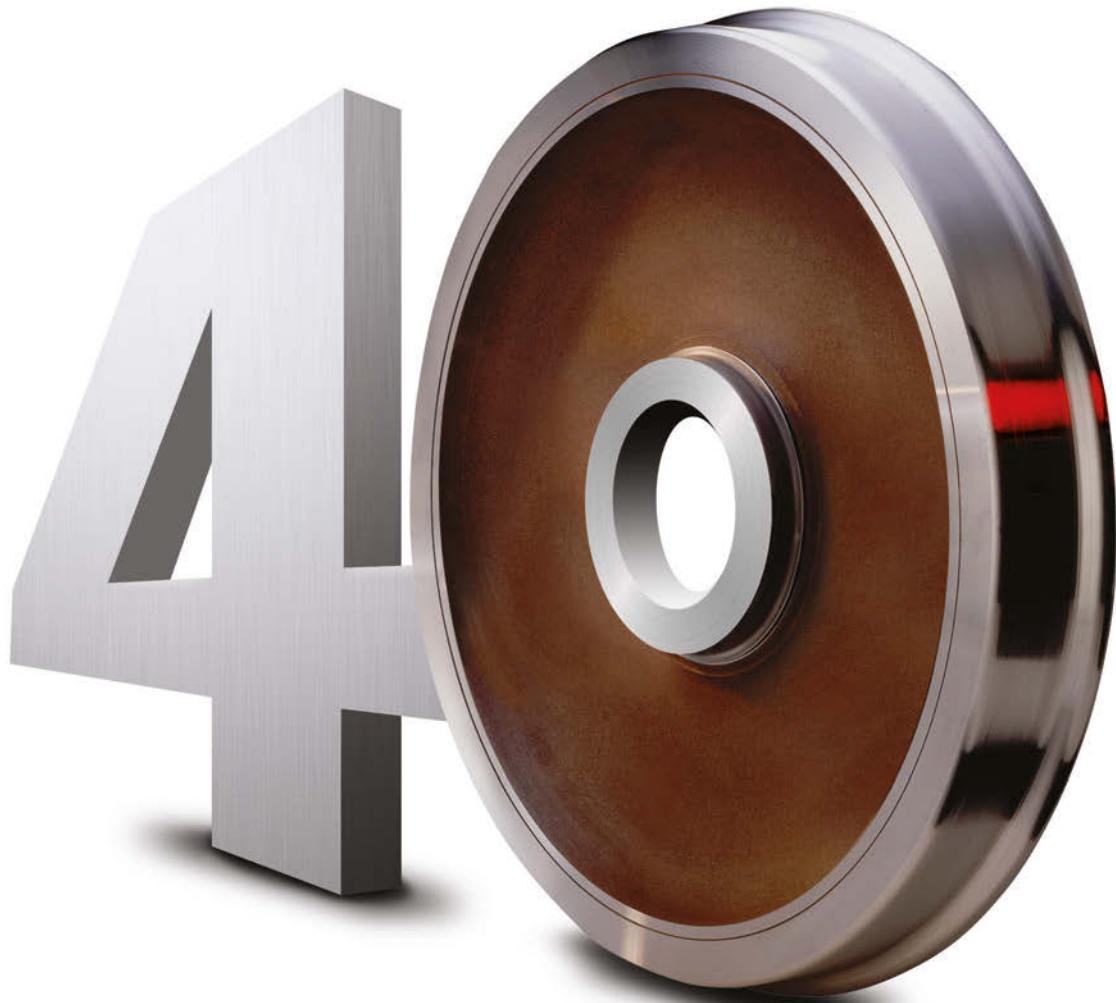
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