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SPEEDLINES MAGAZINE

On the front cover:

OVER THE NEXT 15 YEARS, AMTRAK'S VISION FOR EXPANSION IS TO CONNECT UP TO 160 COMMUNI-TIES THROUGHOUT THE UNITED STATES BY BUILD-ING NEW OR IMPROVED RAIL CORRIDORS IN MORE THAN 25 STATES. AS PART OF THIS PLAN, AMTRAK WILL INTRODUCE NEW STATIONS IN OVER HALF THE U.S. STATES, INCREASE RAIL SERVICE TO 47 OF THE TOP 50 METROPOLITAN AREAS AND CREATE OVER HALF A MILLION NEW, WELL-PAYING JOBS.



ABOVE: Biden joined Amtrak executives for a ceremony in Philadelphia, PA USA to pay homage to the past and share Amtrak's vision for the future.

CHAIR: JOE GIULIETTI VICE CHAIR: CHRIS BRADY SECRETARY: MELANIE K. JOHNSON OFFICER AT LARGE: MICHAEL MCLAUGHLIN IMMEDIATE PAST CHAIR: AL ENGEL

EDITOR: WENDY WENNER PUBLISHER: ERIC PETERSON ASSOCIATE PUBLISHER: DAVID WILCOCK IMMEDIATE PAST PUBLISHER: KENNETH SISLAK PUBLISHER EMERITUS: AL ENGEL

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Greetings from our Chair, Joe Giulietti

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A letter from our Chair: Joseph Giulietti

This is an exciting time to be involved in public transportation and especially the high-speed and intercity passenger rail business. APTA recently hosted a very successful virtual High-Speed Rail Forum, "Connecting America's Cities" in April. The two-day meeting was opened by Washington State Governor Jay Inslee who shared an inspiring message about why investment in high-speed and intercity passenger rail is the right choice for the United States following decades of proven high-speed rail programs around the globe. With over 300 registrants and speakers from a variety of countries and backgrounds, the conference continued a long tradition of stimulating, thought-provoking conversation on the social, environmental, and economic benefits of high-speed and intercity passenger rail. Our next issue of SPEEDLINES will provide an in-depth summary of each session.

As Peter Peyser pointed out in his "Washington Wire" article in this issue of SPEEDLINES, the advent of the Biden Administration has brought renewed hope that the United States might make significant investments in passenger rail and especially high-speed rail.

This issue of SPEEDLINES highlights the significant progress being made in passenger rail investments across the country. The annual "States Round-Up" is again filled with up-to-date information about most of the projects. In depth articles on California and a reprint (with permission of course) of an article highlighting the efforts of Brightline West to construct a high-speed rail line connecting Southern California and Las Vegas are included. You'll enjoy an article by All Aboard Washington describing efforts to improve the Cascades service in the Pacific Northwest. Most exciting are the announcements about Amtrak significantly expanding service in key markets and corridors across the country, just in time for Amtrak's 50th anniversary of its founding on May 1, 1971. (June marks my own 50th anniversary in the rail and transportation industry, so at least I have one less month than Amtrak!)

In other exciting news, the High-Speed and Intercity Passenger Rail Committee launched an effort to create a "Vision" for investment in passenger rail that aligns with the Biden Administration infrastructure plan and builds on work done by other advocacy groups. An all-volunteer volunteer task force drafted this Vision, which is now being edited and revised by APTA staff. It's our goal that this "Vision" will be unveiled at the Rail Conference in June.

Enjoy this edition. It is a handy reference piece. We hope to see you virtually at the Legislative Conference and our next High-Speed and Intercity Passenger Rail Committee meeting in May.

2021 Conference schedule

APTA will host a variety of virtual and in-person conferences focusing on the many different aspects of the public transportation industry. The highlight of the year will be APTA TRANSform & EXPO. Held in Orlando, FL, November 7-10, this is the industry's premier showcase of technologies, products, and services. And it will be the first APTA EXPO since 2017.

Each event provides a mix of education, professional and technical training, and networking for public transportation professionals at all levels. The meetings also serve as an incomparable marketing tool for industry manufacturers, suppliers, and consulting firms by bringing them together with current and potential customers.

APTA Legislative Conference & Fly-In / May 18-19, 2021

This two-day virtual conference educates members on important federal legislation and policy initiatives and gives members the opportunity to shape the industry's positions and federal advocacy agenda. The event will include a day of live sessions, followed by

a virtual fly-in day. The fly-in is an opportunity for you to help APTA advocate for passage of The American Jobs Plan and a robust Surface Transportation Authorization bill.



APTA-UITP Rail Conference / June 8-9, 2021

This is a two-day virtual technical conference featuring high-energy sessions on technology, operations, safety & security, planning, finance, capital projects, workforce development, diversity, and inclusion, and more. The sessions will explore urban, commuter, high-speed and intercity passenger rail modes.

APTA's TRANSform Conference & EXPO, Orlando, FL / November 7-10, 2021

This is public transit's premier showcase of technology, products, and services. With attendees and exhibitors from around the globe, APTA's TRANSform Conference & EXPO plays a pivotal role in connecting the industry to what's now and what's next in public transportation.

APTA High-Speed and Intercity Passenger Rail Conference, Philadelphia, PA / March 29-31, 2022

This three-day event is intended for all stakeholders in intercity mobility, regional economic growth and jobs creation. Attendees will be updated on progress in U.S. high performance passenger rail corridor development and learn about high-speed rail innovation globally. The Philadelphia location will allow conferees to experience the introduction of new Acela trainsets on the NEC.

SAVE the DATE!



CAHSR RECOVERY & TRANSFORMATION

Contributed by: Max Thogmartin, California High-Speed Rail Authority

Despite the unprecedented impacts of the COVID-19 pandemic, the California High-Speed Rail project continues construction in the Central Valley and has celebrated several significant milestones. With the reestablishment of an engaged federal partner with the Biden Administration, California is positioned to make significant advancement on delivering the first-in-thenation electrified high-speed rail.

Like other transit agencies, COVID-19 affected nearly every aspect of our program: deferring adoption of our Final 2020 Business Plan by a year, adjusting construction to implement new health and safety procedures and quarantine workers during periods of COVID-19 exposure, extending public comment periods for environmental documents, delaying the right-of-way acquisition process, and pushing back the proposal deadline for our Track & Systems contract to April 2021.

Despite these operational impacts, the Authority still made significant progress during this trying period.

Currently, an average of more than 1,100 workers are dispatched each day to 35 active construction sites between Madera and Kern Counties, an increase of 130 percent from one year earlier when there were only 449 average daily workers.

Since 2018, we have increased the total number of construction jobs created by the project, from roughly 2,600 to more than 5,500.

We dedicated \$423 million in Proposition 1A bond funds to the reconstruction of the Los Angeles Union Station.

We environmentally cleared two segments in the Central Valley (all of Merced to Bakersfield is now environmentally cleared) and issued environmental drafts for four more segments in the Bay Area and Southern California, covering more than 420 miles of the San Francisco to Los Angeles/Anaheim system.

And in February, the Authority submitted the final state match to the Federal Railroad Administration (FRA) for the American Recovery and Reinvestment Act (ARRA) funding grant. With this action, the Authority has completed the matching funding requirements of the 2010 grant 22 months ahead of schedule.

We strongly agreed when USDOT Secretary Pete Buttigieg said, "I want the US to be leading the world when it comes to access to high-speed rail." The Authority has engaged with the Biden





Administration on moving past the disputes that occurred with the previous administration. Topics communicated include the need for flexibility on the ARRA grant agreement timelines and settling existing litigation to restore nearly \$1 billion in grant funding deobligated by the Trump Administration. The new Administration and Congress also create an opportunity for increased federal investment in electrified high-speed rail.

"America has a chance to lead the world once more through innovation in infrastructure—connecting our communities, creating good jobs, addressing climate change and ensuring equity," said Acting Federal Railroad Administrator Amit Bose. "Passenger rail development, including world-class high-speed rail, can and must be a part of our strategy to accomplish these goals. As in many other arenas, California has taken the lead nationally to advance high-speed rail, starting an economically transformative project in the Central Valley and assuming the challenges that come with that leadership. The U.S. Department of Transportation looks forward to partnering with California as it leads the way to build back better."

To the goal of building back better, there are currently 35 active construction sites in the Central Valley between Merced and Bakersfield. The HSR system is being built predominantly by men and women from around the Central Valley (more than 70 percent of the workforce).

With the Revised Draft 2020 Business Plan, California High-Speed Rail affirms the policy recommendation to the Authority's Board of Directors to develop a clean, electrified Merced-Fresno-Bakersfield high-speed rail interim service line in California's Central Valley, while continuing to advance environmental reviews and current investments in local and regional infrastructure projects in Northern and Southern California.

The revised plan outlines the following priorities:

- Complete the 119-mile Central Valley construction segment and lay track pursuant to our federal funding grant agreements with the Federal Railroad Administration (FRA);
- Expand the 119-mile Central Valley segment to 171 miles of operable electrified high-speed rail connecting Merced-Fresno-Bakersfield, three of the fastest growing areas in California;
- Commence testing of electrified highspeed trains by 2026-2027 and put those trains in service by the end of the decade;
- Environmentally clear all segments of the 520-mile Phase 1 system between San Francisco and Los Angeles/Anaheim;
- Advance construction on the "bookend" projects we have committed funding to in Los Angeles and the Bay Area—projects valued at more than \$3 billion;
- Pursue additional funding opportunities to prospectively "close the gaps" and expand electrified high-speed rail service to the Bay Area and Los Angeles/Anaheim as soon as possible.

With continued progress and reengagement from the Biden Administration, California is making progress, and getting closer to having the nation's first high-speed rail trains on the ground within this decade.



Contributed by: Peter Peyser

Legislative Update

by the House last year. That five-year plan included significant funding increases for Amtrak and the existing Consolidated Rail Infrastructure Safety and Improvement Program (CRISI). The bill also proposed to create a new investment program called Passenger **Rail Improvement Modernization and Enhancement** Grants (PRIME). The PRIME program would have been funded at \$3.8 billion per year, with 40 percent of the funds reserved for Northeast Corridor grants. The bill would allow for multi-year funding commitments to projects for up to 90 percent of project costs. In addition to its funding provisions, the bill also included improvements to the RRIF loan program to make the cost of borrowing cheaper through partial federal funding of Credit Risk Premiums for passenger rail projects sponsored by public entities.

Detailed programmatic proposals included in the Biden plan are not available as this article goes to press. What we do know is that he is proposing \$80 billion over eight years in funding increases over current levels. That baseline amount is the \$2.3 billion appropriated for Amtrak and passenger rail in fiscal year 2021. Of that \$80 billion, the plan proposes spending \$59 billion for expansion and improvement of the passenger rail network. Those funds would be divided \$39 billion for the Northeast Corridor and \$20 billion for the rest of the country.

During the transition period before the inauguration of President Biden, his transition team met with numerous stakeholders to discuss their views on a potential infrastructure plan. In those meetings, the

contains \$80 billion in passenger rail investment over eight years. The proposed more than four-fold increase in passenger rail spending is in keeping with the President's statement from his campaign website saying: "A 21st-century passenger rail system that connects people across our nation is essential to our competitiveness to reduc-

President Biden's \$2.3 trillion "American Jobs Plan" which

our nation is essential to our competitiveness, to reducing greenhouse gas emissions and to giving more Americans the freedom and flexibility to travel." For his part, USDOT Secretary Pete Buttigieg has mentioned high-speed rail in almost every public appearance he has made since taking office. During his confirmation hearing before the Senate Commerce Committee, he said: "I think that Americans ought to be able to enjoy the highest standard of passenger rail service."

The Biden plan sections on surface transportation will track closely with the "Moving Forward Act," passed



The advent of the Biden Administration and Democratic control of both the House and Senate has brought renewed hope that the United States might join the global trend of growth in passenger rail and, in particular, high-speed rail. As this is written, Congress is preparing to take up

/ashington '

Moving Forward Act was referred to by the Biden team as a starting point for their deliberations. Given that, it may be that detailed legislative proposals from the Administration will be fashioned closely to the programmatic initiatives in the House bill.

In addition to its proposal for national passenger rail investment, the Biden Administration has also expressed its support for the only high-speed rail project currently under construction in the U.S. On February 8, Amit Bose, the Acting Administrator of the Federal Railroad Administration, issued the following statement regarding California's high-speed rail program:

"America has a chance to lead the world once more through innovation in infrastructure-- connecting our communities, creating good jobs, addressing climate change and ensuring equity. Passenger rail development, including world-class high-speed rail, can and must be a part of our strategy to accomplish these goals. As in many other arenas, California has taken the lead nationally to advance high-speed rail, starting an economically transformative project in the Central Valley and assuming the challenges that come with that leadership. The U.S. Department of Transportation looks forward to partnering with California as it leads the way to build back better."

This statement is an indication that the Biden Administration plans to engage with the California project in a constructive way. This is a marked contrast to the previous Administration which acted in 2019 to terminate a \$929 million grant to California that has been issued in Fiscal Year 2010. The state is suing in federal court to block that action. The Biden Administration could move to settle the suit so as to pave the way for the reinstatement of the grant.

On Capitol Hill, supporters of intercity passenger rail did not wait for the Biden Administration to renew its campaign for federal investment. Reps. Seth Moulton (D-MA) and Jim Costa (D- CA) have each reaffirmed their leadership by reintroducing legislation they initially introduced in 2020 to advance high-speed rail.

The Moulton bill, called the "American High-Speed Rail Act" would make available over the next five years \$41 billion per year for high-speed rail planning, technology improvement and corridor development. The bulk of those funds, \$35 billion per year, would be for grants for corridor development. Planning and technology improvement grant programs would each get \$3 billion per year. The Moulton bill would also double the amount of Private Activity Bonds the USDOT could approve up to \$30 billion from the current \$15 billion. The bill would also improve the Railroad Rehabilitation and Improvement Financing? (RRIF) program by allowing any Credit Risk Premium paid by borrowers to be refunded when their loan is satisfied and by allowing National Infrastructure Investment grants funded in appropriations bills to be used to pay Credit Risk Premiums.

The Costa bill, the "High Speed Rail Corridor Development Act" would make available \$8 billion per year for high-speed rail corridor development. Both bills use the existing High Speed Rail Corridor Development Program as the vehicle for their new funding. Under that program, "intercity passenger rail service that is reasonably expected to reach speeds of at least 110mph" qualifies as high-speed rail.

The proposals in each of these bills will be in the mix as the House Committee on Transportation and Infrastructure begins work on infrastructure and surface transportation legislation this Spring. While their funding levels may be viewed by some as aspirational, the activity by members of Congress and stakeholders to support the Moulton and Costa bills will help move the needle in the direction of more funding for passenger rail.

At this writing, the process that will be used to consider infrastructure and surface transportation legislation on Capitol Hill is still not decided. The Biden Administration and congressional Democratic leaders are holding open the option that the infrastructure plan might be advanced under a budget reconciliation process similar to that used recently to pass the COVID-19 relief package. Such a process would allow a bill to clear the Senate with only 51 votes, instead of the normal 60-vote threshold required to block a filibuster. Regardless of the path they choose, legislation to fund passenger rail is likely to begin its journey on Capitol Hill before Memorial Day. Therefore, advocates would be well advised to make their voices heard in the halls of Congress in the days and weeks ahead.



NOMINATION

KAREN J. HEDLUND

In late breaking news, President Biden nominated Karen J. Hedlund, current Vice President and National

Rail Strategy Advisor at WSP USA and former Federal Railroad Administration Deputy Administrator, to replace Ann Begeman on the Surface Transportation Board. Karen is the legislative subcommittee chair of the American Public Transportation Association's High-Speed and Intercity Passenger Rail Committee.

During her tenure with WSP USA (formerly Parsons Brinckerhoff), Karen has worked with federal, state and local transportation agencies as well as private companies to facilitate financing and development of transportation projects through P3s. She served as strategic advisor on a number of WSP rail projects across the U.S., including Amtrak's Gateway Program, O'Hare Express Rail and the California High-Speed Rail Program, and is a leader of peer-to-peer exchanges with state and local municipal officials through the Build America Transportation Investment Center Institute on various topics including alternative delivery, P3s and station area development and financing.

Karen was appointed Deputy FRA Administrator in November 2011, after serving as the agency's Chief Counsel from June 2010. During her tenure, she led the FRA's \$12 billion high speed rail grant program, including \$3 billion of investments in the California High Speed Rail Program, and \$3 billion in improvements to Amtrak's Northeast Corridor. She advised on FRA-funded multistate locomotive and passenger equipment purchases, and on California High Speed Rail and Amtrak next-generation trainset procurements, including consideration of Buy America waiver requests for non-domestic equipment manufacturers.

Karen also oversaw the FRA's Railroad Rehabilitation and Infrastructure Finance (RRIF) program, including review of loan requests to finance new passenger rail systems from Las Vegas to California and from Miami to Orlando as well as implementation of Positive Train Control systems for the Long Island Railroad and Metro-North Railroad. She has advised on FRA-funded multistate locomotive and passenger equipment purchases, and on CHSR and Amtrak trainset procurements, including consideration of "Buy America" waiver requests for non-domestic equipment manufacturers. She also oversaw the FRA's Railroad Rehabilitation and Improvement Financing program, including review of loan requests to finance new passenger-rail systems as well as implementation of positive train control systems for MTA Long Island Railroad and Metro-North Railroad.

Karen previously served as Chief Counsel of the Federal Highway Administration in 2009-2010, where she directed a legal staff in the implementation of American Recovery and Reinvestment Act grants to all 50 states. She was also a member of the Credit Council of the U.S. Department of Transportation, which oversees the department's credit programs.

Before joining the federal government, she was a partner in the law firms Nossaman, LLP; Skadden Arps; and Mayer Brown. Karen led the legal advisory team on P3 projects such as the Silver Line extension of the Washington, D.C. Metrorail system; the Port of Miami Tunnel; the T-REX light rail in Denver; the Triangle Expressway in North Carolina; and Hudson-Bergen Light Rail in New Jersey.

She also previously served on the board of Moynihan Station Development Corp. in New York City, which redeveloped the James A. Farley Post Office Building into the new Moynihan Train Hall of Penn Station for Amtrak. In addition, she also served as a board member of Union Station Development Corp. in Washington, D.C.

Karen grew up on the South Side of Chicago half a block from the Illinois Central Electric commuter line (now Metra Electric). She used to commute to school riding that line. And she says she still loves electric trains especially fast ones. Karen received a law degree from Georgetown University Law Center and a bachelor's degree from Harvard University.

The SPEEDLINES staff and all of her friends at APTA congratulate her on her nomination and wish her the very best in her new position at STB when confirmed.

VISION TO GROW **RAIL ACROSS AMERICA** Connects US

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Contributed by: Mariah Morales and Chris Zappi

Amtrak has announced a new vision to rise to the urgent challenges of our time, proposing new or improved service to enhance connections among communities across the country. With a growing and diverse population, a global climate crisis, and longer traffic jams, America needs a rail network that offers frequent, reliable, sustainable, and equitable train service. This vision would expand or improve rail service for 20 million more riders, efficiently serving 160 additional diverse communities beyond the more than 500 communities served today, and leverages Amtrak's national capabilities and expertise already in place to plan, build, and operate these new routes.

Amtrak has met with stakeholders across the U.S. – state officials, mayors, businesses, and others – to identify their local needs and expectations. We incorporated this feedback and their partnership will be essential for improving and growing the intercity passenger rail system. The vision also builds upon Amtrak's national network of long distance trains, integrating new and improved corridors into the existing system.

We know that rail service means cleaner air, less traffic, and happier people. Traveling on Amtrak emits up to 83 percent fewer greenhouse gases than driving and up to 73 percent fewer than flying and brings local and regional economic benefits from riders and employees who live, work, and visit in the area. Millions of people, including large populations of people of color, do not have access to a reliable, fast, sustainable, and affordable transportation option. This is just not fair or equitable, and expanding rail service will help combat that inequity. In addition, intercity passenger rail can fill the gaps created by airlines and bus carriers that have steadily reduced service in many communities across the country.

The national intercity passenger rail network has not changed to meet today's challenges and has been woefully underfunded. Many of the country's biggest and fastest growing metropolitan areas, with diverse populations, do not have the rail service they deserve. Major cities like Houston, Atlanta, and Cincinnati have service that is simply inadequate, with trains that



only stop once a day and often in the middle of the night. Other cities like Las Vegas, Nashville, Columbus, and



Phoenix have no Amtrak service at all. All these regions and communities deserve to have a real alternative to driving and flying, and Amtrak has the mandate and the capabilities in place to deliver that future.

There are a few things necessary to achieve this vision:

- Funding: Increased federal funding for Amtrak's National Network Grant to support operating and capital costs for new and improved corridor routes.
- Fair Access: A streamlined and expeditious process for accessing freight rail lines and determining reasonable capacity improvements.
- On-Time Trains: New enforcement tools for Amtrak's existing right to preference over freight trains to ensure our riders arrive on time.

Amtrak is ready to build on the national capabilities already in place to achieve this bold vision for the country's transportation system and is looking forward to working with communities and stakeholders across the country to deliver the national rail network that America deserves. Find out more at AmtrakConnectsUS.com.us

Traveling on Amtrak reduces greenhouse gases







IN THE SPOTLIGHT

ARUN D. RAO PASSENGER RAIL MANAGER

"Intercity passenger rail is an important component of our nation's multimodal transportation system. Frequent and reliable intercity passenger rail service enhances city-to-city linkages that are critical for a region's mobility, economic competitiveness, and commerce. Rail achieves this in a safe, equitable, and environmentally sustainable way."

WISCONSIN DEPARTMENT OF TRANSPORTATION - RAILROADS AND HARBORS SECTION



ANNA LYNN SMITH SENIOR PROJECT MANAGER

"I find traveling by train enjoyable and a relatively stress free way to prep for and then decompress from my day – a more productive use of time vs. sitting behind the wheel. Others in the US should also have train travel as a choice."

HDR, INC.



PATRICK CARNAHAN CO-EXECUTIVE DIRECTOR

"I've had some incredible opportunities to live, study, and travel abroad. In all of these experiences, I've been impressed by the amount of freedom that passenger trains grant the average person. I promote passenger trains in America because I recognize the good they can do for our society.." ALL ABOARD WASHINGTON (AAWA)

REGULATORY REFORM

Contributed by: Ken Sislak, AECOM

The most significant accomplishment in regulatory reform last year was the adoption of a Final Rule on On-time Performance and other performance metrics for intercity passenger trains, a Notice for Proposed Rulemaking on fatigue management in the railroad industry and guidance for regulating Hyperloop technology. APTA continues its efforts to issue standards for the transit industry with particular applicability to intercity passenger and commuter rail service providers.

ON-TIME PERFORMANCE

The Passenger Rail Investment and Improvement Act of 2008 (PRIIA, Public Law 110-432) required Amtrak and the Federal Railroad Administration (FRA) to develop metrics and minimum standards for measuring the performance and service quality of Amtrak service. After a 10-year court battle that made its way to the Supreme Court (twice), FRA published the final rule the week before Thanksgiving.

The FRA settled on a simple, straightforward "customer on-time performance (OTP)" metric for its primary measurement of on time. As defined in the rulemaking:

"The customer on-time performance (OTP) is percentage of all customers on an intercity passenger rail train who arrive at their detraining point no later than 15 minutes after their published scheduled arrival time, reported by train and by route."

The final rule requires Amtrak and host railroads to negotiate schedules to something that they agree is achievable. The customer OTP is weighted for all passengers using a straightforward calculation laid out in the rulemaking. The standard for the customer OTP is a weighted average of 80 percent on-time for all customers over two consecutive quarters. The 80 percent OTP standard does not change over time. While the standard is set at 80 percent, a train or route dipping below that 80 percent threshold does not necessarily spur an STB investigation nor does it mean that freight railroads are responsible for missing the standard. The other metrics in the rule can help STB make the determination on whether an investigation or penalty are warranted. The rule delays the application of the customer OTP standard until later in 2021 to give time to resolve disputes over schedules.

And already, the Association of American Railroads (AAR) is contending that Amtrak's published schedule for the traveling public should be updated so that it can better align with FRA's on-time performance (OTP) metrics. The AAR says, "While the proposed rule uses published schedules to measure the customer on-time performance of an Amtrak train, unless the schedules are updated to reflect current conditions and the new metric proposed by FRA, they will give rise to misleading OTP measurements, create unrealistic expectations, and lead to unnecessary litigation" at the Surface Transportation Board (STB). AAR provided written testimony at a Nov. 18, 2020 hearing before the House Committee on Transportation and Infrastructure on defining STB's role in ensuring a robust passenger rail system. But at least we have a Final Rule that meets the requirements of PRIIA as interpreted by the courts.

The Surface Transportation Board (STB) has formed a working group that will develop plans to enforce

new on-time performance requirements for intercity passenger-rail service.

The group of STB staff will respond to the FRA's new final rule that sets metrics and minimum standards for intercity passenger-rail service. Under the federal Passenger Rail Investment and Improvement Act of 2008, the STB is the agency to investigate and adjudicate issues related to on-time performance of Amtrak's intercity service under the new metrics and standards.

The standard for on-time performance will begin to apply on July 1, 2021, with quarterly reporting on that metric from FRA to start in the months following, STB officials said in a press release.

The passenger rail working group is comprised of board staff and will be chaired by Frank O'Connor, deputy director of the STB's Office of Economics.

RAIL PASSENGER FAIRNESS ACT TO IMPROVE AMTRAK ON-TIME PERFORMANCE

A group of influential members of Congress introduced critical legislation that will address the delays that have been plaguing Amtrak passengers and threatening existing services and network expansion.

U.S. Senate Majority Whip Dick Durbin (D-IL), U.S. Representative Donald M. Payne, Jr. (D-NJ), and U.S. Senator Richard Blumenthal (D-CT) introduced the bicameral Rail Passenger Fairness Act yesterday, which will provide Amtrak with the ability to take the freight railroads to court to enforce current law, which require freight railroads to provide preference to passenger rail operating on their rail lines.

"For far too long, freight railroads have taken preference over passenger rail, resulting in poor on-time performance and delays for Amtrak riders. With the Rail Passenger Fairness Act, we can finally hold freight railroads accountable when they fail to follow the law and get Amtrak's on-time performance back on track," said Senator Durbin. "Illinoisans and Amtrak riders across the country—deserve the assurance that they will arrive at their destinations in a safe and timely manner."

Sen. Durbin was joined by Rep. Payne, Jr of New

Jersey, who recently took over as Chair of the House Transportation & Infrastructure Subcommittee on Railroads and will be a key ally in guiding the bill through the House.

"When freight trains are given priority over passenger trains, it delays the arrival of millions of Americans who use Amtrak daily," said Payne, Jr. "Freight rail carriers need to follow the law and give Amtrak priority on our nation's railroad network. I am proud to introduce this bill because it will improve Amtrak's performance, get people to their locations faster, and save American taxpayers millions of dollars."

"Part of the grand bargain that allowed host railroads to walk away from their passenger obligations over 50 years ago was that intercity and commuter passenger rail be given preference over freight trains," said Rail Passengers President Jim Mathews. "Freight railroads might find it convenient to ignore that responsibility, but our association was there, and we remember. We applaud Senators Durbin and Blumenthal and Representative Payne for looking for solutions to freight train interference, which is the cause of nearly one million minutes of delay to Amtrak trains in a given year—that adds up to over two years of lost time!"

U.S. Senator Maria Cantwell (D-WA), the Chair of the Senate Committee on Commerce, Science, and Transportation, was joined by Senator Roy Blunt (R-MO) this week to introduce bipartisan legislation to improve transportation safety by addressing railhighway crossings.

The bill provides \$500 million per year for five years to help states, cities, and Tribes plan and construct grade crossing separation projects and track relocation projects to improve safety or reduce congestion.

"Communities throughout Washington state know the safety and congestion challenges posed by atgrade crossings," said Senator Cantwell. "Too many people are injured or killed at at-grade crossings, and the safest crossing is one that does not exist. Crossings can also delay the movement of people and goods all across the United States, hurting our competitiveness. With the volume of freight shipments projected to increase 17% by the year 2030, it is critical we act now to address this urgent infrastructure need. The legislation Senator Blunt and I are introducing today would authorize grants for state, local, and Tribal governments to eliminate at-grade crossing conflicts to improve safety and help the U.S. economy by decreasing freight congestion."

FATIGUE MANAGEMENT

The FRA has managed the risk of fatigue in the railroad industry through enforcement of the Hours of Service Act of 1907 as amended. FRA has issued a Notice to Proposed Rulemaking (NPRM) on Dec. 22, 2020 requiring certain railroads to develop and implement a Fatigue Risk Management Program (FRMP) as one component of the railroads' larger railroad safety risk reduction programs. The railroads this rule would pertain to include Class I railroads and railroad carriers that provide intercity rail passenger or commuter rail passenger transportation services. This has been a long on-going rulemaking dating back to Rail Safety Improvement Act (RSIA) of 2008. In December 2011, FRA asked the Railroad Safety Advisory Committee (RSAC) to accept a task to address the fatigue management plan mandate of the RSIA. The RSAC formed the Fatigue Management Plans Working Group.

Members of the Working Group included physicians, human factors psychologists, railroad schedulers, and other representatives of railroad management and labor, as well as FRA staff. After initially reaching consensus on draft rule text in June 2013, the Working Group did not reach consensus as to how its recommendations should be implemented. Although the RSAC did not make a consensus recommendation to FRA related to fatigue, FRA believed that information developed and documented during the RSAC process was informative and would be very useful to railroads required to develop FRMP plans. FRA made minor amendments to the June 2013 draft rule text to clarify it. Accordingly, the proposals in the NPRM reflect FRA's consideration of the Working Group's recommended rule text and the documents developed by each of the three Task Forces. Those RSAC-developed documents are included in the rulemaking docket. APTA provided comments on behalf of the commuter and intercity rail members which can be found here. As the NPRM proceeds through the comment and

final rulemaking process, SPEEDLINES will keep its readers informed regarding the final rule and effective dates.

HYPERLOOP

In late July 2020, USDOT unveiled a guidance document to establish regulations for the hyperloop technology system, which uses magnetic levitation and vacuum pumps to propel passengers in a pod through a tube at speeds up to 700 mph.

HIGH-SPEED RAIL NOISE STANDARDS

FRA published High-Speed Rail Noise Standards and Regulations in February 2021. The guidance document issued includes a review of European Union (EU), US and Asian standards, codes, and regulations related to high speed rail. Researchers summarized the identified standards and regulations and compared and contrasted them to provide a reference document for the US rail industry. It also identified and compared and contrasted high-speed rail noise definition methods and measurement techniques, as deployed in different global regions. Rolling stock designs were also reviewed. Sound path interruption and receiver techniques used globally to reduce transportation noise to acceptable levels were evaluated. The FRA's RSAC under the Passenger Safety Working Group has discussed this issue extensively and conveyed to FRA that current EPA and FRA rules constrain the introduction of high-speed trainsets because existing designs will exceed the noise level thresholds set by EPA and FRA.

> "You can't understand a city without using its public transportation system."

REVISED PLAN

BRIGHTLINE EYES 2021 GROUNDBREAKING OF APPLE VALLEY RAIL PROJECT

Contributed by: Rene Ray De La Cruz, Victorville Daily Press

Brightline West's high-speed passenger rail project between Apple Valley (Victorville) and Las Vegas, which was expected to break ground last year, appears to be back on track six months after a partnership with Virgin Trains USA ended. Last year, Brightline announced that Fortress Investment Group, its parent company, had put the brakes on the \$8 billion privately financed XpressWest project when it could not complete financing.

But earlier this month, Brightline West President Sarah Watterson said her company was preparing a revised financial plan for the project that could see a second-quarter 2021 groundbreaking date. In a Jan. 4, 2021? letter to the Nevada High-Speed Rail Authority, Watterson said Brightline's revisions are expected to include additional equity and a relaunch of the bond sale this year.

Throughout 2020, the company made significant progress, positioning itself to proceed with the sale of private activity bonds allocated for the project by both states and the U.S DOT, Watterson said. Some of that progress includes the execution of primary rightof-way, construction agreements, environmental permitting and 30 percent design development.

Brightline secured the rights last year to issue \$800 million in private activity bonds allocated by California and Nevada. The company let those rights lapse last fall, though, citing financial market uncertainty caused by the pandemic, according to Engineering News-Record.

California had given Fortress a Dec. 1 year? deadline to sell the bonds, according to Bloomberg, who cited California Treasurer Fiona Ma as saying the state will take back the bond capacity and give it to affordable housing projects and other qualifying ventures.

Watterson said an improving economy and more stable financial market would aid the company's revised plan.

Agency stakeholders have expressed support regarding a new allocation of private activity bonds in 2021, which reflects improving market conditions and strong interest in private intercity passenger rail projects, Watterson said.

An example of that renewed bond support came in December when Brightline Florida completed a successful issuance of \$950 million in tax-exempt bonds, she said.

"Concurrent with our work toward starting construction on the Las Vegas to Apple Valley project, we have also been in discussions with other stakeholders regarding additional potential projects to connect the high-speed rail line from Apple Valley to the Los Angeles Basin," Watterson said.

Routes under consideration by Brightline West include continuing the tracks south along the Interstate 15 corridor to Rancho Cucamonga and building to Palmdale in conjunction with the High Desert Corridor project, Watterson said.

Her letter also announced that her company has contracted with Siemens Mobility/Siemens Transportation Systems for its Velaro high-speed trains for the California-to-Nevada project.

BRIGHTLINE WEST 17



Siemens developed four generations of Velaro trains, which have been in service since 2000 and are currently operating in Germany, the Netherlands, Spain, France, China, Russia, the UK and Turkey.

"We appreciate the tremendous support from Nevada and California and are actively engaging officials in both states on our financing and construction plans," Ben Porritt, the senior vice president of corporate affairs for Brightline, told the Daily Press.

Town of Apple Valley spokesman Orlando Acevedo said the municipality has met with Brightline representatives and project proponents who stated that the project is only delayed, and the timeline is not materially impacted.

"Their goal remains to begin passenger service by 2024," Acevedo said. "Although the town has no direct control over their timelines, we are ready and eager to support them as they move the project forward to develop a train station and maintenance facility here in north Apple Valley.

Soon after Brightline acquired the XpressWest rail project in late 2018, the company entered into a partnership with Virgin Trains. But Brightline, in July 2020, announced that the partnership was off in a report filed with the Florida Department of Finance.

Brightline officials gave no reason for why ties were cut, but Richard Branson's Virgin Group had endured several setbacks at the time, according to The Washington Post.

Its Virgin Atlantic airline filed for bankruptcy protection in the U.S. in 2020 after announcing a restructuring plan in the United Kingdom. It resumed flights in July after a three-month closure due to the COVID-19 pandemic.

Virgin Trains UK also ended service in December after a 22-year run.

The same month Brightline ended the partnership, the company entered into a lease agreement with Caltrans to use the existing right of way along I-15 for the construction of nearly 170-mile-long tracks. The company said its trains were expected to reach top speeds of 200 mph.

The train station will be located near I-15 and Dale Evans Parkway, just north of Bell Mountain in Apple Valley.

REVIVING A RAIL REVOLUTION:

Contributed by: Patrick Carnahan – All Aboard Washington

HOW WASHINGTON STATE CAN GET BACK ON TRACK TOWARD CREATING A WORLD-CLASS PASSENGER RAIL NETWORK

Amidst the fallout of the coronavirus pandemic, interest in passenger rail has increased markedly across the United States. With an enthusiastically pro-rail federal administration now in power, talk of our nation's "second great railroading revolution" has begun among advocates and transit blogs from coast to coast. But is this only our second, or even third, attempt at such a revolution? What about the one that started in the Pacific Northwest about 30 years ago, the one that aimed to create the most advanced rail system in North America?

WHERE IT STARTED

It was the early 1990s, and change was afoot in Western Washington. Many parts of the region were still recovering from the last recession in the 1980s, in addition to earlier declines of Boeing's space program and the logging industry. Bellevue and Redmond were feeling the impacts of Microsoft's meteoric rise. Amazon didn't even exist yet, but Washington's leaders were taking proactive steps to accommodate major economic and population growth. There was a new awareness of the environmental pollution caused by car dependence and the impossibility of "building our way out of" congestion with more highway lanes. The state was steadily easing its way into implementing the 1990 Growth Management Act and several Commute Trip Reduction provisions, all to mitigate the impacts of a projected population boom in the Puget Sound. In 1991, the Washington State Legislature directed that a comprehensive assessment be made of the feasibility of developing a statewide 'High Speed Ground Transportation' (HSGT) system. The next year, the Federal Railroad Administration (FRA) designated the Pacific Northwest Rail Corridor, which runs through the heart of Seattle, as a high-speed rail (HSR) corridor.

With the results of the earlier HSGT study in, the 1993 Washington State Legislature passed RCW 47.79 and created something revolutionary: a goal to build a regional HSR network connecting Seattle with Portland, Vancouver, BC, and Spokane by 2030. As recommended by the study, Washington and Oregon began implementing modern intercity passenger rail service on existing tracks between Vancouver and Eugene, OR, with the goal of increasing this service's top speed to 110 mph. From this, Amtrak Cascades originated, one of the nation's most successful intercity passenger rail services. Following the study's vision, the Washington State and Oregon Departments of Transportation both created bold long-range plans for Cascades that would dramatically increase their frequency and usefulness. Washington also studied the idea of using existing

tracks to provide convenient intercity train service between Seattle and Spokane via the Yakima Valley and the Tri-Cities.

But something happened along the way. Progress on the vision of world-class rail in Washington slowed during the early 2000s. With the exception of some improvements made thanks to funding from the American Recovery and Reinvestment Act and the upcoming opening of the Point Defiance Bypass, Amtrak Cascades has not seen significant expansion since 2006. A 2001 study of daytime East-West passenger rail service went almost 20 years without the necessary follow-up, largely due to revenue losses stemming from Initiative 695 (a 1999 statewide initiative that cut Washington vehicle registration fees). Efforts to get HSR moving again have begun in earnest with faster travel times and a different project name: 'Ultra-High-Speed Ground Transportation' (UHSGT; since this is a local term, I will continue to refer to this new project iteration as simply 'HSR'). But at this point, HSR will come too late to respond meaningfully to our climate and housing crises; and its lack of interim connectivity improvements (especially for Central and Eastern Washington) calls the current project's motivations and political practicality into question.

What's missing? Where do we go from here? There are three important features that the Northwest HSR project must include in order to respond to today's demands: a robust intercity passenger rail network, a stronger emphasis on equity, and faster climate and environmental action.

BUILDING A SOLID FOUNDATION ON CONVENTIONAL RAIL

Here are the top ten countries with the most advanced HSR systems, rated in terms of operational top speeds and route mileage:

- China
- Japan
- Spain
- France
- Germany
- South Korea

- Italy
- Turkey
- Austria
- Saudi Arabia

Spread across the world, with differing geographies, economies, and political systems, these countries don't have much in common. Even when it comes to their rail transportation systems there are different lessons to be learned from each one. But there is one thing they do share: excluding only Saudi Arabia, every country on this list had existing intercity passenger rail networks before HSR, with very frequent schedules along busy travel routes.

The biggest problem with the Northwest HSR implementation approach is that it hasn't remembered this simple lesson: without a solid foundation of local and regional passenger rail services, HSR will have a hard time succeeding. Communities lacking good local rail and transit services, particularly those in the Yakima Valley and Eastern Washington, are unlikely to support a Seattle-centric north-south HSR line at the polls. Even enthusiastic supporters in small towns along the I-5 corridor may choose not to ride HSR if they have difficulty getting to stations without long drives to metropolitan centers. With the right infrastructure upgrades, Amtrak Cascades can become competitive with flying and driving between many places and buildiing the train-riding culture necessary for HSR to be economically and financially feasible. This is why Washington state rail plans and studies dating back over three decades have all recommended incremental yet consistent investment in existing rail corridors and services before the development of HSR, including the 1992 HSGT study and the 2006 Long-Range Plan for Amtrak Cascades.

EMPHASIZING EQUITY AND ACCESSIBILITY

The economic and social effects of HSR are varied. Thus, it is important to understand those circumstances in which HSR helps with equity or accessibility and those where other solutions are needed. Places like Japan and France are not more equitable or accessible simply because of the Shinkansen or TGV lines between their major cities. These top-tier HSR services are the flagships of nationwide mobility ecosystems that include conventional intercity and commuter trains; metro systems; bus networks; high-quality pedestrian and cycling infrastructure; and urban design patterns that are economically efficient and can connect all of these things together effectively.

The Northwest HSR project is often talked about as an equalizer, and in certain respects it is. But if improving equity and access across Washington are our top priorities, we cannot forget the roles of regional and local public transportation systems, active transportation like cycling and walking, and transit-oriented land development. HSR is unlikely to be an ideal option for daily work commuters and those with limited transportation options because HSR fares are assumed to be 52 cents per mile, as opposed to a 19-26 cents per mile average for Amtrak Cascades and a 10 cents per mile average for Sounder commuter rail. If it fails to include investment in more affordable transportation alternatives across the entire state, the HSR project may not contribute meaningfully toward its core values of equity and economic inclusion.

ACTING QUICKLY ON THE ENVIRONMENT AND CLIMATE

A report from the Intergovernmental Panel on Climate Change claims that a 45 percent drop in global carbon dioxide emissions (relative to 2010 levels) by 2030 is necessary to prevent irreversible climate damage. As of 2018, the largest contributor to America's greenhouse gas emissions is the transportation sector, at 28 percent. Of that, 82 percent of the sector's greenhouse gas emissions are from road vehicles; another 9 percent from aircraft, and just 2 percent from rail. A major mode shift from highways and air to rail is perhaps the fastest and most effective way to reduce the overall emissions of America's transportation system.

With a planning horizon of no less than 20 years, Northwest HSR will not be able to contribute to needed carbon dioxide reductions by 2030. When it does open, HSR's pricing will make it a strong competitor with air travel, but not necessarily with driving. Thus, in order to reduce emissions as quickly as possible, Washington needs to invest in its existing rail system and shift as much freight and passenger traffic to rail as possible. This includes upgrading Amtrak Cascades to maximize its speed, capacity, and frequency as laid out in the previously mentioned studies.

The Bottom Line: Northwest HSR Will Never Be Realized Without a Robust Conventional Intercity Passenger Train System

It's 2021, and once again Washington finds itself with mixed news and a bit of uncertainty. While Puget Sound's economic and population growth has continued, the effects of climate change and a serious disconnection from the rest of the state threaten its prosperity. We have also fallen far behind in achieving our 1993 goals for a statewide HSR network. But Washington still has the chance to prove itself as a leader in doing rail the right way. We just need to think practically in the short term and focus on our most critical priorities in the long term.

As we start to consider the financial and political feasibility of HSR, we must not forget the importance of investing in our region's existing rail infrastructure and services over the next decade. For intercity passenger transportation, that means, at a minimum, implementing the 2006 Long-Range Plan for Amtrak Cascades and extending similar passenger rail services across the Cascade Range to Yakima, the Tri-Cities, and Spokane (a project which sees public approval of 76 percent). Once North-South and East-West intercity rail backbones have been established and a competitive market of rail and transit travelers has been created, Washingtonians on both sides of the Cascades will have reason to support the creation of Northwest HSR.

HSR is a worthwhile endeavor - we cannot afford to undermine it by failing to build out the statewide public transportation network and the coalition of supporters it needs to succeed.

STATES ROUNDUP

HIGH-SPEED & INTERCITY PASSENGER RAIL PROGRESS

Contributed by: Ken Sislak, AECOM

In 2019, we reported record ridership on Amtrak trains the highest in the system's history—and the ninth consecutive year Amtrak carried more than 30 million passengers. In 2020, COVID-19 wiped away the record growth in Amtrak ridership as the news of the pandemic dramatically altered people's lives, interrupting work patterns, daily routines, and travel plans. Airline traffic plummeted and commuter rail trips evaporated as well.

This past year saw total airline passengers decline from an all-time high of 79.6 million in January 2020 to 3 million in April 2020 because of COVID-19. Travelers stopped flying out of fear of contracting the disease while confined in the tight space of airliners. Since April of last year, system-wide enplanements have recovered to 29.4 million but is still down 63.1 percent from the all-time high reached earlier in January 2020. Domestic enplanements (27.2 million) are down 61 percent from the all-time high of 69.8 million reached in January 2020 and international enplanements (2.16 million) were down 77.9 percent from the all-time high of 9.81 million also reached in January 2020. Airlines do not expect enplanements to recover to pre-COVID levels for several years.

As with the airlines, the same holds true for commuter railroads. COVID-19 affected commuter rail services very severely. Many employers have and are continuing to encourage staff to work from home and not commute to the office. Monthly ridership for all commuter train services in the US amounted to over 42.7 million passenger trips in September 2019. In September 2020, commuter rail ridership was 9.8 million passenger trips according to the APTA Public Transportation Ridership Report. This is a 77 percent decrease in ridership year over year for the month of September. Ridership is still lower than pre-pandemic levels.

AMTRAK

Amtrak carried a record 32.5 million passengers in FY 2019 (October 1, 2018 – September 30, 2019) with impressive growth on the Northeast Corridor and statesupported lines. In FY 2020, Amtrak ridership plummeted to 16.8 million passengers because of the pandemic. This is a systemwide decrease of 47.4 percent. Amtrak made temporary reductions in service frequency to Northeast Corridor (NEC) and state-supported services and extended similar reductions to most of the Long-Distance routes (effective October 1, 2020) because of the reduced demand. The breakout of ridership includes:

Northeast Corridor: Only 6.1 million people rode trains in the NEC during FY 2020 as compared to 12.5 million riders in FY 2019. This is a decrease of over 50 percent for the comparable year.

State-Supported Services: A little over 8 million people rode state-supported corridor trains in FY 2020 compared to 15.4 million riders in FY 2019 – a decrease of 47.6 percent.

Long-distance trains: Approximately 2.7 million travelers rode long distance trains in FY 2020 compared to 4.5 million riders in FY 2019 – a decrease of 39.2 percent. The recently passed American Rescue Plan provides additional COVID-19 relief funding to Amtrak to restore daily service on its long-distance trains. Amtrak announced that daily long-distance service will be restored in phases beginning in May and continuing through June.

BRIGHTLINE

Ridership on intercity passenger trains outside of the existing Amtrak national network also was significantly impacted by COVID. The most notable service disruption of 2020 was the discontinuance of Brightline service in South Florida between Miami, Fort Lauderdale and West Palm Beach in March. Trains are still not operating. Brightline has said it was continuing to reassess its business plans amid the pandemic, including the best time to get its trains running again. Brightline offered no details on what events or conditions would trigger a resumption of service. But it is expected it will restart service sometime in late 2021. In the meantime, it is completing construction of the West Palm Beach to Orlando section, building new in-fill stations and testing new signaling systems along its existing line.

HIGH-SPEED RAIL PROJECT DEVELOPMENT

Despite the gloomy news about ridership, there are bits and pieces of good news too. Electrification of the Caltrain commuter line between San Jose and San Francisco is half-way completed. Delays to its 2022 final completion date are possible because the pandemic has disrupted the supply of needed materials for construction. These materials include delays in supplying rebar cages used in the vertical columns that support the overhead contact system. COVID also affected work from Pacific Gas and Electric Company on the project and created restrictions at the Stadler Rail manufacturing facility in Utah, slowing progress on building the new EMU railcars. The Caltrain electrified line will share track with California high-speed trains between San Jose and San Francisco.

Construction on the California high-speed rail system continues across the Central Valley. Over the last year, the California High-Speed Rail Authority celebrated several significant milestones including the completion of five structures in Madera, Fresno and the first in Kern County. To date, more than 5,000 workers have been employed on the high-speed rail construction sites.

The environmental planning for a high-speed rail line operating between Houston and Dallas by Texas Central Railroad was completed. FRA released the Final Environmental Impact Statement (FEIS) in May 2020. On September 10, 2020 FRA issued its Rule of Particular Applicability (RPA) and Record of Decision (ROD) establishing federal safety standards under which Texas Central Railroad will operate the Shinkansen-style high-speed train and giving environmental clearance for the selected alignment allowing right-of-way acquisition to commence.

New Siemen's passenger locomotives and rolling stock have been introduced in California, the Pacific Northwest and the Midwest for state-supported services. Amtrak has been testing its Next Generation Acela high-speed trainset on the NEC getting them ready for revenue service later this year. And North Carolina received a federal grant to purchase new locomotives and rolling stock for the Piedmont service.

MULTI-STATE REGIONAL PLANNING



The Federal Railroad Administration (FRA) has taken the lead on organizing and coordinating multistate planning efforts. They have led planning efforts to advance improvements in the Northeast Corridor (NEC) and to examine potential high-performance rail networks in the Southwest, Southeast and Midwest. The Gulf Coast states of Louisiana, Mississippi and Alabama formed the Southern Rail Commission to advance passenger rail planning along the Gulf Coast.

NORTHEAST CORRIDOR (NEC)

The FRA developed a long-term vision and comprehensive investment plan for the Northeast Corridor (NEC) that stretches from Washington, DC to Boston, MA. The NEC is the rail transportation spine of the Northeast region and is a key component of the region's transportation system, which is vital to its sustained economic growth. Today, the 457-mile NEC is one of the most heavily traveled rail corridors in the world. The NEC is shared by intercity, commuter, and freight operations and moves more than 365 million passengers and 14 million car-miles of freight per year.

The NEC faces serious challenges with centuryold infrastructure, outdated technology and inadequate capacity to meet current or projected travel demand. Over the years a significant amount of deferred maintenance and renewal backlog has grown to over a \$20 billion deficit simply to bring the NEC to a state of good repair. With similar capacity issues on the region's highways, and some of the most congested airports in the nation, the Northeast's economic future could be hampered by transportation constraints unless these constraints are addressed. NEC FUTURE creates a framework to address some of these challenges and defines the investments needed to improve passenger rail capacity and service through 2040 and beyond. The NEC FUTURE was prepared for FRA by a joint venture of AECOM and WSP (legacy Parsons Brinkerhoff.) Through NEC FUTURE, the FRA completed a Tier 1 Environmental Impact Statement (EIS) and issued a Record of Decision in July 2017. The Record of Decision identified a preferred alternative, which focused on maintaining and improving the existing NEC alignment while optimizing added capacity to support growth in the region.

Beginning in July 2019, the NEC Commission member agencies (eight states and nine railroad operators between Boston, MA and Washington, DC) launched a joint effort to develop a Strategic Development Plan (SDP) to advance the NEC FUTURE vision. The initial phase SDP, referred to as CONNECT NEC 2035, considers corridor-wide needs through the lens of individual railroad operators. This initial phase focuses on what can be realistically accomplished over the next 15 years to bring the NEC to a state of good repair, relieve key chokepoints, improve reliability, add capacity, and improve speeds. A consultant team led by AECOM and Arup developed a rigorous analytical framework for sequencing capital investments to minimize service impacts and optimize resources.

CAPITOL REGION RAIL VISION

In December 2020, the Greater Washington Partnership (GWP) released a report outlining a new vision for rail service from Baltimore to Richmond. GWP developed the vision with technical support from EY, Gensler, VHB and WSP. The ambitious 25-year plan identifies the challenges to be addressed and the steppingstones required to create a unified regional rail network encompassing Amtrak, MARC and Virginia Railway Express (VRE). While focused on the creation of a runthrough MARC/VRE service, the plan also looks at the opportunities for a greater rail service throughout the region. The Capital Region Rail Vision seizes on recent wins for the region's rail network and charts a course for a transformed rail system that offers seamless, all day connections that span the Potomac River connecting Maryland, the District, and Virginia. One of the projects that facilitates the Vision is the advancement of the Long Bridge Project creating additional rail capacity across the Potomac River (See Virginia for additional information). With the new bridge, the opportunity for a robust regional passenger rail service becomes more achievable. The vision focuses on four key elements:

1. Bi-directional run-through service - One-seat

rides in both directions between Maryland, the District, and Virginia),

- 2. Increased levels of service Enhanced service from Martinsburg, West Virginia, Perryville and Baltimore, Maryland through the District to Broad Run and Spotsylvania, Virginia,
- 3. Improved operational coordination One operationally integrated network for Maryland, the District, and Virginia, and
- 4. User facing integration Integrated system brand and fare policy to create an easy-to-use regional network.

SOUTHWEST RAIL PLAN

The Southwest Multi-State Rail Planning Study was the very first high-performance rail network planning study led by the FRA. FRA initiated the Southwest study concurrent with its national planning effort to develop a toolkit for the conceptual planning of passenger rail networks at the multistate and megaregional level. The toolkit included the development of a CONceptual NEtwork Connections Tool (CONNECT) that helped analyze the performance of high-performance rail corridors and networks. The Southwest study was a test case for the guidelines, tools, and performance standards developed as part of FRA's national planning effort. The Southwest region was selected as the setting for the first, and prototype, multi-state rail planning study due to the longstanding interest in the development of high-performance rail services by the region's states and localities as evidenced by the creation of the Western States High-Speed Rail Alliance. The Western High-Speed Rail Alliance exists for the purpose of determining the viability of developing and promoting a high-performance rail network throughout the Rocky Mountain region with eventual connections to the Pacific Coast and other regions of the United States. WSP (legacy Parsons Brinckerhoff) and Steer prepared the Southwest study for FRA. The study report was completed in September 2014.

A potential conceptual regional rail network was

developed and is presented in the figure below. This candidate proposal was developed in consideration of an early stage, preliminary assessment of ridership potential within each corridor, as well as each corridor's potential contribution to the service quality of other corridors and for the SW Study Area as a whole, using the CONNECT tool. A comparison of the performance of all 11 corridors as a stand-alone corridor versus a full network showed that connectivity associated with the full network yielded higher ridership and revenues and lower capital and O&M costs.

Several corridors are depicted as regional, indicating that these might start as regional corridors, potentially growing into Core Express based on other investments in the network. Alternatively, these could exist as hybrid corridors with Core Express equipment operating through service at reduced speeds mixed with commuter or traditional intercity service, sometimes labeled "blended service."

Figure 1 Southwest Multi-State Corridor Proposal (FRA)

SOUTHEAST RAIL PLAN

In 2016, FRA initiated the Southeast multi-state regional planning study. The plan was intended to unite state rail planning in this region, foster



multi-state coordination and provide a framework for governance and operation of interstate and interregional passenger service planning. A Generalized Network Vision that described the communities to be served by rail and the corridors that link them were prepared along with a Service Plan to describe the range of train services (frequencies, speeds, capacity) connecting the markets in the network and how those services would operate and interact in the network. A second phase of the study (Phase II) was launched in fall 2019 to incorporate improvements to the CONNECT model (which serves as the analytical foundation of FRA-led regional passenger rail planning studies) to reflect more consistent information for demand forecasting. FRA selected a consulting team led by HDR with WSP, Quetica and Deutsche Bahn to complete the Phase II Southeast Rail Plan effort. A webinar addressing these changes was held in early spring 2020 for a Stakeholder Group organized during the earlier phase of the regional planning effort. Since then, the southeastern states (GA, NC, TN, FL, SC, and VA) have been working together to create the Southeast Commission. The states recently voted to accept the Southeast Rail Plan. The states are also working on a rail economic impact study. The proposed high-performance rail network is depicted in the figure below.

Figure 2 Proposed Southeast Regional Passenger Rail Network (FRA)



MIDWEST RAIL PLAN



Figure 3 Proposed Midwest Regional Passenger Rail Network (FRA)

The Federal Railroad Administration (FRA) has embarked on a project to explore the potential for a high-performance, multi-state intercity passenger rail network in the Midwest region. FRA selected Quetica, LLC with WSP for the Midwest Regional Rail Planning Study. The study commenced in early 2017 and was built on rail planning efforts within the twelve states of Illinois, Missouri, Iowa, Michigan, Wisconsin, Ohio, Nebraska, Kansas, South Dakota, North Dakota, Indiana, and Minnesota. The regional plan explored the potential for a fully integrated passenger rail network linking communities throughout the region. The Phase I effort evaluated potential markets, corridors, ridership, and costs as well as governance and/or institutional options that will feed into the Midwest Regional Rail Plan.

A Phase II planning effort was launched in fall 2019 to incorporate improvements to the CONNECT model (which serves as the analytical foundation of FRA-led regional passenger rail planning studies) to reflect more consistent information for demand forecasting. A webinar addressing these changes was held for the Stakeholder Planning Group in early spring 2020. The study was expected to be completed by fall 2020. However, no updates have been posted as of Spring 2021.

GULF COAST PASSENGER RAIL RESTORATION

The Southern Rail Commission (SRC) is seeking the restoration of Gulf Coast passenger rail service, which was lost after Hurricane Katrina in 2005. This route was previously served by the Amtrak Sunset Limited, which operated between Los Angeles, New Orleans and Orlando. Following the hurricane, service was terminated at New Orleans. The objective of the service restoration is to initiate new daily passenger rail service between New Orleans and Mobile with two round trips each day, morning and evening, with stops in Bay St. Louis, Gulfport, Biloxi, and Pascagoula offering business-friendly schedules. Progress towards restoring the service is inching closer to reality. Sen. Roger Wicker (R-MS), who chaired the confirmation hearing of USDOT Secretary Pete Buttigieg, invited him to the Gulf Coast - an offer which Buttigieg accepted. Wicker then asked Buttigieg if he would be committed to working with him to reinstate Amtrak service on the Gulf Coast. Buttigieg said he would be interested in learning more.

As reported last year, the Gulf Coast states pledged funding and secured a \$33 million federal grant to make capital investments required to bring improved passenger rail service back between New Orleans, LA and Mobile, AL. The grant was matched with \$15 million from Mississippi, \$10 million from Louisiana and the Mobile City Council voted 6-1 on Feb. 4, 2020, in support of a resolution that commits \$3 million to the project. Amtrak has set aside \$6 million toward capital improvements along the rail line.

Advocates for restoring the rail service along the Gulf Coast stressed that more work is needed – close to \$2.2 million must be committed to improve infrastructure, and a train station will have to be built in Mobile. Amtrak is likely to utilize a location near Cooper Riverside Park as its near-term stop in downtown Mobile. It would be on a site where the city's train station once stood before it was destroyed by Hurricane Katrina's floodwaters. Service restoration between New Orleans and Mobile is moving closer to a reality. Amtrak wants to start twice daily roundtrips in January 2022.

Amtrak is asking the Surface Transportation Board (STB) to expedite a decision on its request to operate trains starting in 2022. Amtrak has statutory rights to run the trains on the route. Amtrak studied the route in cooperation with CSX using Rail Traffic Controller simulation modeling software to examine capacity constraints and capital improvements needed to run twice daily service on the route. Amtrak studies indicated the route has sufficient capacity to host both freight and passenger traffic.

STB could require Class 1 freight railroads CSX Transportation and Norfolk Southern Railway to permit twice daily roundtrip trains unless the freight railroads can prove why passenger trains cannot be hosted successfully. CSX has expressed concern in the past that adding passenger trains could negatively impact its ability to move freight from the Port of Alabama. Stay tuned...

STATE UPDATES

What follows are discussions of how states and local communities from around the country are continuing to be involved in planning and implementing the investments needed to build, restore and improve high-speed and intercity passenger rail services across the country.

ALABAMA – As reported last year, the Alabama Department of Economic and Community Affairs (ADECA) completed a feasibility study of the Montgomery – Mobile segment of the Birmingham – Montgomery – Mobile route in November 2019. In March 2020, the Center for Economic Development and Business Research at Jacksonville State University, completed a study entitled "The Economic Impact of Passenger Rail Expansion on the State of Alabama" that received a lot of attention in Alabama. Conducted for the Southern Rail Commission, the study examined the economic impact of expanding passenger rail service within Alabama, specifically from Birmingham to Montgomery, from Montgomery to Mobile, and from Atlanta to Birmingham. The study found that expanding the rail service would add thousands of construction and railway operations jobs and increase tourism spending throughout the state. Alabama has been working over the years to restore passenger service along the Gulf Coast, which was halted by Hurricane Katrina. The City of Mobile has allocated funding for the Gulf Coast service.

ARIZONA – As reported in past year updates, the Tucson to Phoenix Tier 1 Final EIS was completed by the Arizona Department of Transportation on Dec. 19, 2016. There is no funding for the project-level Tier 2 EIS or Service Development Plan. The project remains alive as an aspiration. All Aboard Arizona, a rail passenger advocacy group, has campaigned to restore daily service on the Long-Distance routes that serve Arizona, the Southwest Chief and Sunset Limited.

CALIFORNIA (with assistance from Andy Cook, Caltrans) – California has an extensive state-supported intercity passenger rail (IPR) program. The three state-supported corridor services – the Capitol Corridor, the San Joaquin, and the Pacific Surfliner – continue operating under managing Joint Power Authorities (JPAs) with funding

from California Department of Transportation (Caltrans). The three routes were showing strong ridership growth over 2019 with an increasing ridership trend continuing through February of 2020. Then the pandemic hit. Ridership plummeted as people stopped traveling to work by train. Caltrans and the JPAs worked together to identify service levels that would maintain essential mobility across California while reducing operating costs. This involved carefully coordinating budgeting and operations analysis to ensure that a minimum level of service could be maintained. As a result, the Capitol Corridor now operates eight weekday roundtrips instead of 15, San Joaquin operates four weekday roundtrips (Bakersfield to Oakland only) instead of seven, and the Pacific Surfliner operates six weekday roundtrips between Los Angeles and San Diego instead of 13 and one weekday roundtrip between Los Angeles and San Luis Obispo instead of two. Ridership in 2020 is depicted in the graph below for the three state-supported routes:

California is currently making significant capital investments to expand and integrate these services with the existing regional commuter rail systems in the state consistent with the pulse-hub scheduling vision established in the 2018 State Rail Plan.



Caltrans is purchasing 49 new Venture Railcars (manufactured by Siemens in Sacramento) as part of a joint procurement with the Illinois Department of Transportation (who is procuring 88 Venture Railcars for use in the Midwest). Caltrans is working with its regional partner -- the San Joaquin Joint Powers Authority (SJJPA) and Amtrak -- to operate and maintain the new Venture Railcars on the San Joaquin Corridor between Oakland/Sacramento and Bakersfield. Siemens has met the challenge of operating in the COVID-19 environment to continue to deliver new railcars while at the same time maintaining safe, essential production facilities and observing stay-at-home orders for their engineering and administrative staff. Twelve Venture Railcars have been delivered to the Stockton Regional Maintenance Facility and are undergoing commissioning, testing, and other preparations to enter revenue service. By the end of summer, 25 Venture Railcars will have been delivered to Caltrans, with revenue service expected to begin by the end of spring. The remaining railcars will be delivered between the fall of 2022 and the spring of 2024.

Caltrans has acquired, and is operating, 22 new Siemens Charger locomotives on the three Intercity Passenger Rail Corridors in the state. These locomotives meet the EPA's stringent Tier 4 emissions reductions criteria, while at the same time having the capability of operating at 125 MPH (although current track limitations in California limit top speeds to 79 to 90 mph). Caltrans is purchasing two additional Charger locomotives, which are expected to go into revenue service by the end of this spring. These latest two Chargers were purchased with the assistance of a grant from the Bay Area Air Quality Management District (BAAQMD) and will replace two current locomotives that cannot meet the Tier 4 emissions requirements. Caltrans will eventually replace all of its locomotive fleet with Tier 4 compliant locomotives, reducing air pollution and CO2 emissions for communities throughout the intercity corridors in northern and southern California.

California convened the Rail Fleet Consortium to establish an industry platform for passenger rail agencies to collaborate on rolling stock and fleet management. California also created the Zero Emission Heavy Transportation working group with California Air Resources Board, California Energy Commission, and Governor's Office of Business and Economic Development GO-Biz to accelerate zeroemissions passenger investments, and instituted a performance dialogue process with the JPAs and Amtrak to improve communication about maintenance and better prioritize maintenance projects.

Plans for a high-speed passenger rail service between Southern California and Las Vegas are moving forward despite some setbacks due to the COVID pandemic. Throughout 2020, Brightline West made progress toward the sale of private activity bonds allocated for the project by both states and the U.S Department of Transportation. (See SPEEDLINES Issue #29) Some of the progress includes the acquisition of right-of-way, execution of construction agreements, completion of environmental permitting and 30 percent design development and selection of rolling stock. See a reprint of an article from the Victorville Daily Press on page xx for more information.

The Riverside County Transportation Commission (RCTC) announced it is nearing completion of a program level environmental impact report (EIR) and service development plan (SDP) for a daily passenger-rail service between Los Angeles and the Coachella Valley in California. The Coachella Valley San Gorgonio Pass Rail Corridor Service Project is the work of RCTC in partnership with Caltrans, the Federal Railroad Administration (FRA) and local partners. FRA is the lead federal agency for the environmental review required by NEPA and related statutes. As such, FRA has determined that the preparation of a program-level (Tier 1) EIS is the appropriate NEPA document classification because of the broad scope of the corridor and conceptual stage of planning. The Tier 1 EIS/EIR and SDP will define the service mode, operational strategy, and required infrastructure improvements necessary to implement the proposed intercity passenger rail service. RCTC foresees twice-daily service from Los Angeles via Fullerton, Colton, and the San Gorgonio Pass to Indio or Coachella. The 145-mile route would take less than three-and-a-half hours and offer an alternative to the often-congested Route 91 and

Interstate 10. It is anticipated the Tier 1 EIR/EIS will be available for public review later in 2021. Future Tier 2 Project level NEPA/CEQA documents will be prepared once location-specific engineering and design details are available and the Record of Decision for the Tier 1 EIR/EIS is received.

The Bay Area Rapid Transit District (BART) and the Capitol Corridor Joint Powers Authority (CCJPA) introduced the Link21 program, which is a long-range transportation initiative the partners believe will transform passenger rail service within the Northern California Megaregion. The Link21 program will focus on rail improvements centered within the 21-county megaregion covering the areas of Sacramento, San Francisco Bay, Northern San Joaquin Valley and Monterey Bay. The keystone of the Link21 program is a new Transbay crossing for BART trains and/or electrified regional rail trains. Adding the regional rail tunnel to the Transbay crossing mix is truly transformative by allowing CA high-speed trains to operate on an electrified Capitol Corridor and Caltrain route as express service on a continuous bi-directional loop between Madera - Merced - Stockton - Sacramento



– San Francisco - San Jose and Gilroy. The tunnel for regional rail trains would permit Capitol Corridor trains to serve San Francisco directly without transfers to BART or Amtrak thruway buses reducing BART congestion and bus traffic on bridges crossing San Francisco Bay. The improved mobility dramatically increases access to affordable housing and high-paying jobs without adding congestion to highways and bridges and decreasing air pollution from mobile sources. The Link21 program is being managed by HNTB.

California high-speed rail continues to advance. See the feature article on page 5.

COLORADO - Amtrak's California Zephyr and the Chicago-Los Angeles Southwest Chief (see Southwest Chief Route update) continue to serve the state, along with connecting Thruway buses. The state is continuing its effort to consider ways to better serve the Front Range communities by rail. The Colorado Department of Transportation (CDOT) and the Southwest Chief & Front Range Passenger Rail Commission hired HDR to conduct a study that would explore how a passenger-rail system for the 173-mile corridor between Fort Collins and Pueblo, which contains 85 percent of Colorado's population, could support the state's future growth and economy. The study is underway. CDOT released a paper on initial travel demand modeling results in August 2020, and it estimated that a train could serve 23.4 million passenger trips a year. The biggest demand would be met by transporting people within the Denver/Boulder, Fort Collins or Colorado Springs regions primarily for commuter work trips, which was estimated to be 69 percent of all trips. An additional 19 percent of trips would involve travel to school and the remainder of the trips would be riders looking for leisure-travel alternatives. The Colorado Senate introduced bipartisan legislation to create, manage and maintain a passenger rail line from the New Mexico to Wyoming border with stops along the Front Range. The state's move joins promising recent news from Amtrak, which listed service from Pueblo to Cheyenne in its 15-year plan.

CONNECTICUT - Passenger rail service in Connecticut is supported by Connecticut DOT (CTDOT) and consists of three main lines and three branch lines. The New Haven Line, operated by Metro-North, operates

between New Haven and Grand Central Terminal in NYC. This line has three branch lines that extend to New Canaan, Danbury and Waterbury. Shore Line East operates along the shore between New London and New Haven, with some through service to Stamford and connections to the New Haven Line. The Hartford Line operates between Springfield and New Haven connecting with New Haven Line and Amtrak Northeast Corridor service. Since opening on June 16, 2018, the CTrail Hartford Line witnessed tremendous ridership growth until this past year. Hartford Line ridership grew from 580,000 annual trips in 2018 to 630,000 in 2019. Ridership was expected to grow to more than 750,000 trips in 2020. But then the COVID pandemic hit and ridership on the Hartford Line decreased 55 percent to 271,000 annual riders in 2020.

In a recent discussion about the state's transportation budget, Governor Ned Lamont proposed cutting operating support for the New Haven Line by \$36 million and \$5 million for the Shore Line East line in each of the next two years due to declining ridership. The governor has also proposed increasing service on the Waterbury Branch. The Department is programming improvements for all six of the branch lines stations. A major \$116 million infrastructure upgrade project on the line was completed over a six-month period this past year when train service was suspended. Track, signals and communication system and bridge repairs were undertaken. The department also recently started the development of a master plan for the Stamford Transportation Center with the goal of turning it into a 21st century multimodal center.

FLORIDA – The intercity passenger rail service between West Palm Beach to Miami operated by Brightline launched service in January 2018. The Brightline service continued to see ridership increases with over one million riders by the end of 2019. Brightline was on pace with its goal of serving 3 million riders by the end of 2021. But then the pandemic hit and Brightline temporarily ceased operations in March 2020. It is hoped Brightline will restart service sometime in late 2021. As reported earlier, it is completing construction of the West Palm Beach to Orlando section, building new in-fill stations, and testing new signaling systems along its existing line. Amtrak's Silver Meteor and Silver Star service continue to serve the state, running from New York City to Miami. Amtrak operates the service on alternate days, which also operate on different routes through the Carolinas, a scheduling change attributed to COVID-19 pandemic ridership drops. The Silver Star operates three days a week. The Silver Meteor operates four days a week. The Auto Train continues to operate daily between Lorton, VA and Sanford, FL.

GEORGIA (with assistance from Kaycee Mertz, GDOT) – High-speed rail has made some progress in Georgia since last year. The public comment period for the Atlanta to Charlotte Tier 1 Draft EIS was closed in November 2019. It's worth noting that Georgia DOT received approximately 2,000 comments during the review period. A large majority of the comments were in favor of the Greenfield Corridor Alternative. George DOT and FRA announced in the fall of 2020 that the FEIS/ ROD will select the Greenfield Corridor Alternative. The Greenfield Corridor Alternative is a 274-mile route primarily on a new "greenfield" dedicated high-speed passenger rail alignment between CLT airport and Athens, GA, then following shared railroad ROW in the approaches to the Charlotte and Atlanta termini. This route serves three stations in North Carolina at Charlotte Gateway, CLT airport, and South Gastonia; two stations in South Carolina at GSP airport and Anderson; and five stations in Georgia in Athens, Suwanee, Doraville, downtown Atlanta (Georgia Multi-Modal Transportation Terminal) and ATL airport. FRA is currently reviewing the Tier 1 Final EIS/ROD.

The Atlanta to Chattanooga, TN high-speed ground transportation project completed a Tier 1 EIS in late 2017 and is still seeking funding to complete a Tier 2 EIS and Service Development Plan. No news has been reported on that project.

Illinois (with assistance from Todd Popish, IDOT) – Illinois DOT (IDOT) supports four Amtrak corridor trains: Lincoln service (Chicago-Springfield-St. Louis); Illini and Saluki service (Chicago-Champaign-Carbondale); Carl Sandburg and Illinois Zephyr (Chicago-Galesburg-Quincy) and the Hiawatha (Chicago to Milwaukee). Hiawatha service is jointly operated with additional support from Wisconsin.

The Lincoln service from Chicago to St. Louis saw record ridership on the line in FY2019. But due to the COVID pandemic and related temporary service reductions, ridership declined from 627,600 annual boardings to 334,500 boarding in FY2020. This is a 46.7 percent decline. Despite the drop in ridership, the Chicago - St. Louis passenger corridor is progressing toward higher speed service. Construction of track, grade-crossing and station improvements on the corridor is mostly complete. IDOT is working with Union Pacific Railroad and Amtrak as they install and test Positive Train Control (PTC) and enhanced grade crossing warning systems along the corridor. Once PTC testing is complete and approved, trains will begin operating at speeds of up to 90 mph. This initial increase in speed will begin in 2021 on several segments of the corridor. The project is designed to accommodate the operation of higher speed passenger trains up to 110 mph.

The Illini/Saluki and Carl Sandburg/Illinois Zephyr services also experienced declines in ridership due to the pandemic and suspension of services. In FY 2019 ridership was 267,000 annual boardings on the Illini/Saluki and 192,600 on the Carl Sandburg/ Illinois Zephyr. In FY2020, ridership declined to 160,000 and 103,300 respectively on these state-supported corridor trains.

Work on the Chicago to Quad Cities service reinstatement continues. This route was originally part of the Rock Island Railroad network. Passenger service on this route ended in 1978. IDOT has been engaged in activities to reinstate passenger rail service in the corridor since 2011. That's when IDOT used a federal grant to begin preliminary engineering on the infrastructure improvements needed to implement the service and National Environmental Policy Act (NEPA) activities needed to identify and mitigate potential environmental impacts of the project. The project was put on hold in 2015, and in spring 2017, was reinitiated. IDOT received an extension of the federal grant and has been working collaboratively with the FRA, BNSF and Iowa Interstate Railroad to complete preliminary engineering and conclude the NEPA process. The environmental and preliminary engineering work is being completed by Quandel Consultants. This work should be completed by mid-2021. The Illinois state legislature appropriated \$225 million in late 2019 to supplement previous funding commitments. AECOM was awarded the contract to oversee construction after the environmental and preliminary engineering work is completed. When construction is completed, this line will offer twice-daily round trips between Chicago and Moline. The line would include stops in Moline, Geneseo, Princeton, Mendota, Plano, Naperville, LaGrange, and Chicago Union Station.

Also, \$275 million was appropriated in the "Rebuild Illinois" infrastructure bill to restore passenger rail service from Chicago to Rockford and Dubuque. The restoration of service has been in the planning stage for years but was put on hold in 2015. This appropriation will advance this passenger rail project. IDOT hired WSP in September 2020 as program manager to begin the process of conducting environmental and preliminary engineering studies to restore service in this corridor. WSP is the program manager for the Chicago – St. Louis higher speed corridor improvement project and the California high-speed rail project.

INDIANA – The Amtrak Cardinal continues to provide service between Chicago and Indianapolis three days a week. The state-supported Hoosier State was suspended in 2019. On a more promising note Indiana Senate Bill 9 was introduced on January 7, 2021 by state Senators Dennis Kruse (R, Fort Wayne) and Jeff Raatz (R, Richmond). The bill would establish the Indiana Passenger Rail Commission, an entity with legal authority to lay the groundwork for a statewide passenger rail system. Senator Kruse indicated he would like to see a system that would connect Indiana's major cities, including Fort Wayne, Indianapolis, Evansville with neighboring cities like Louisville, Cincinnati, Columbus and Chicago. The bill first must get a hearing in the state senate transportation committee, and much further down the line, the support and signature of Indiana Governor Eric Holcomb, who overall, supports expanding mass transit in Indiana beyond just roads. The Governor has said, "I'm all aboard! I see it as beneficial."

Northwest Indiana's South Shore Line could be the blueprint for future rail expansion across the state. The high performance electric South Shore commuter train connects South Bend and Gary to Downtown Chicago. The South Shore Line has received federal and state support to expand service options.

IOWA (with assistance from Amanda Martin, Iowa DOT) – Iowa is currently served by two Amtrak long distance trains – the California Zephyr and the Southwest Chief. The Iowa DOT has been leading the development of a new intercity passenger rail service extension from the Quad Cities to Iowa City. The Chicago – Quad Cities segment of the route is being studied by Illinois DOT. (See Illinois for more information).

A final phase of a feasibility study of potential passenger rail service on a 9.1-mile segment of the CRANDIC line between Iowa City and North Liberty was funded a public-private partnership among CRANDIC, Metropolitan Planning Organization of Johnson County (MPOJC) and Iowa DOT. The study was completed by HDR in July 2020. The study estimated 5,282 average weekday boardings for the conceptual passenger rail service in the base year 2019. In 2027, the study forecasted average weekday boardings to grow to 6,140, and by 2042 average weekday ridership could grow to 7,730. The study found an emergent positive business case for implementing the conceptual passenger rail service on the CRANDIC Corridor using DMU trainsets between Iowa City and North Liberty. There has been no action taken to further project development since July.

Louisiana - The state is a part of the Southern Rail Commission, which was formed to develop passenger rail services in Alabama, Mississippi and Louisiana. Over the years the Commission has led numerous planning initiatives focused on passenger rail service in the three-state region. Their current priorities in Louisiana are the re-establishment of the New Orleans to Mobile segment of the Sunset Limited (curtailed following Hurricane Katrina), Baton Rouge to New Orleans service and the extension of the Sunset Limited from New Orleans to Mobile. This was discussed in greater detail earlier.

The long-envisioned passenger rail service linking Baton Rouge to New Orleans over the route of the former Southern Belle is still in the planning phase. Amtrak ran a test train between New Orleans and Baton Rouge in the summer of 2020 to study technical feasibility and determine what infrastructure improvements were needed. University of New Orleans researchers conducted an online poll to gauge potential ridership for the New Orleans -Baton Rouge service. This study was funded with \$150,000 from the LSU Tran-SET consortium. Gov. John Bel Edwards has reaffirmed his support for the project.



MAINE – The Downeaster state-supported passenger rail service between Portland - Boston was launched in 2001. The Downeaster set a record high for ridership in 2019, carrying more 574,000 passengers before the COVID pandemic idled trains for more than two months last year. In FY 2020, the Downeaster carried approximately 269,500 riders. Limited service was restored in June. Currently, four trains per day operate between Brunswick, ME and Boston, MA.

A bill was introduced in the Maine state senate

in January 2021 that would provide \$300,000 for a feasibility study and the development of a plan to extend passenger rail service to Bangor along existing railroad corridors. The extension would begin in Brunswick, where the Amtrak Downeaster service to Boston currently terminates. The service would be extended and run through Augusta and Waterville. The bill, sponsored by freshman Sen. Joseph Baldacci (D-District 9), and seven co-sponsors, has gone to the Legislature's Joint Committee on Transportation. Connecting the Portland corridor by passenger rail to Augusta, Waterville and the Bangor metro area, Maine's second-largest city, would benefit much of the state according to the bill's sponsors.

MARYLAND - The Baltimore - Washington Superconducting Maglev Project (SCMAGLEV) is a proposed 40 mi (64 km) maglev train connecting the two cities with an intermediate station stop at BWI airport. It is the first segment of the planned Washington-New York Northeast Maglev project. The Federal Railroad Administration (FRA) and the Maryland Department of Transportation (MDOT) are preparing a Draft Environmental Impact Statement (DEIS) and Draft Section 4(f) Evaluation to evaluate the potential impacts of constructing and operating the SCMAGLEV system between Washington, DC and Baltimore, MD. Work on preparing the DEIS commenced in September 2016. AECOM was selected to assist in preparing the DEIS and related documents. The environmental review process was expected to be finalized in mid-2019 but instead was paused for a lack of details about the design and engineering. The environmental review process was restarted in May 2020. The DEIS, Draft Section 4(f) Evaluation, and Draft Section 106 Programmatic Agreement documents for the Baltimore-Washington SCMAGLEV Project are now available for review and comment. The public comment period runs through May 24, 2021. The target completion date for a combined Final EIS and Record of Decision is January 2022.

Baltimore's Penn Station is the eighth busiest station on the Amtrak network. In late December 2017 Amtrak selected Penn Station Partners to lead the preparation of a master plan for the redevelopment of the station and nearby Amtrak properties. Penn Station Partners includes Beatty Development, Armada Hoffler Properties, WSP USA, Cross Street Partners and Gensler. Since then, Penn Station Partners have been working on the master plan. Amtrak earmarked \$90 million in federal funding for related improvements to the station and its tracks. The group expects to begin work on the first phase of the project later this year. The first phase of the project is the renovation of the existing station building, which is expected to take two years. The refurbishing also includes building a new high-speed rail platform to the north of the tracks and constructing a modern, glass-walled passenger concourse above that platform. Space will be renovated or added throughout for shops, eateries and offices. But the ambitious project still has an estimated \$400 million to \$600 million shortfall in necessary funding for completion of the other elements of the project.



Another element of Amtrak's state-of-good repair and NEC Future program is the replacement of the two-track 7,669-foot Baltimore and Potomac (B&P) Tunnel underneath central Baltimore City. The tunnel was completed about three months after Ulysses S. Grant's second inauguration in 1873 and is located between the West Baltimore MARC Station and Baltimore Penn Station on the Northeast Corridor (NEC). This section of the NEC is used by Amtrak and Maryland's MARC commuter rail passenger trains, as well as Norfolk Southern Railway freight trains. The B&P Tunnel is owned by Amtrak. The FRA issued a Record of Decision (ROD) for the B&P Tunnel Project in March 2017. The estimated cost to replace the tunnel is \$4.5 billion. This cost estimate has not changed since the ROD was published four years ago. The project is not currently funded for construction.

Rendering noted above of the renovation plans for Baltimore's Penn Station (Courtesy of Gensler)

MASSACHUSETTS (with assistance from David Wilcock, VHB) – The Massachusetts Department of Transportation (MassDOT) completed the East - West Passenger Rail Study final report in January 2021. MassDOT evaluated several service option alternatives. The three Final Alternatives surviving preliminary screening include:

- Alternative 3 Direct passenger rail service between Pittsfield and Boston along a shared CSX and MBTA corridor. Up to 8 round trips (7 new East-West round trips) could be provided, with an average travel time of 3:09 between Pittsfield and Boston, and 1:57 between Springfield and Boston.
- Alternative 4 Direct passenger rail service between Pittsfield and Springfield along a shared track / shared CSX corridor, along an independent passenger track between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 10 round trips (9 new East-West round trips) could be provided, with an average travel time of 2:59 between Pittsfield and Boston, and 1:47 between Springfield and Boston.
- Hybrid Alternative 4/5 (combines elements of Preliminary Alternatives 4 and 5) - Direct passenger rail service between Pittsfield and Springfield along a shared track / shared CSX corridor, along an independent passenger track with high-speed shortcuts between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 10 round trips (9

new East-West round trips) could be provided, with an average travel time of 2:49 between Pittsfield and Boston, and 1:37 between Springfield and Boston.

The estimated capital costs range from \$2.4 billion for Alternative 3 to \$3.9 billion for Alternative 4 and \$4.6 billion for Hybrid Alternative 4/5. The biggest component of capital cost is compliance with CSX policy regarding accommodation of passenger rail service on its right-of-way. The CSX policy favors complete separation of the passenger operations from freight operations whenever possible, which adds significant cost and complexity. The estimated additional capital cost for complying with CSX's policy and design criteria is approximately \$1.5 billion.

Ridership estimates for the project range from 922 to 1,554 passengers per weekday depending on the service option selected. MassDOT described the estimates as "not accurate." The estimates were based on a comparison with passenger rail service between Hartford, CT and Springfield — smaller cities that are closer together and not as expensive to live in as Boston. Moreover, the ridership estimate did not measure "induced demand" - or the effect on ridership due to changes brought by the service — or include an environmental or health benefit analysis. More study is needed. MassDOT acknowledges more discussions are needed with CSX. Although the state has authorized \$50 million as part of its \$16 billion Transportation Bond Bill for prep work for the project, that still leaves a huge funding gap measured in the billions. Until ridership estimates improve and wider economic benefits are considered, the East – West rail passenger service may continue to be an aspiration.

MassDOT inaugurated a new state-supported passenger rail service between Springfield and Greenfield in 2019. The Valley Flyer trains make station stops in Hartford, Springfield, Holyoke, Northampton and Greenfield. The trains connect at New Haven to Metro-North trains to continue to New York, Shoreline East trains to New London or Amtrak Northeast Corridor services. The Valley Flyer service is funded jointly by the Connecticut Department of Transportation and the MassDOT. The service started with three roundtrips per day. Currently, only one train per day operates in each direction due to the COVID-19pandemic.

MassDOT and the MBTA continue to advance the South Station Expansion Project. The purpose of the project is to expand South Station rail terminal and related layover capacity to meet current and anticipated future (2035) high-speed, intercity, and commuter rail service. A FONSI was issued in October 2017 for the overall South Station Expansion Project. In 2019 MassDOT started advancing an early phase of the project when they received a \$41 million USDOT grant for the upgrade of the Tower 1 interlocking. Tower 1 is the key to terminal operations and the proposed \$82 million project will improve overall resiliency of the operation by replacing the existing signal system, upgrading switches, track, and power systems and addressing other issue within the interlocking. The work is currently in the design development phase. HNTB is leading a project management team with responsibility for oversight, project controls, rail engineering, architecture, general engineering, transportation planning, environmental services, land-use planning, funding, and project delivery strategies. VHB and Arcadis are members of the HNTB team.

MICHIGAN – Amtrak continues to operate three state-supported routes in Michigan that serve 22 communities. These trains include the Blue Water, between Chicago and Port Huron; the Pere Marquette, between Chicago and Grand Rapids and the Wolverine, between Chicago and Detroit/ Pontiac. Ridership on these routes has been impacted by the COVID impact as displayed in the chart below:

section of the NS rail line from Kalamazoo to Dearborn in southern Michigan. This is a segment of the Wolverine rail corridor that connects Chicago and Detroit/Pontiac. Currently, efforts are focused on increasing passenger speeds up to 110 mph in this route segment. Passenger trains have traveled up to 110 mph since 2012 on the Amtrak-owned portion of the Wolverine rail corridor between Porter, Indiana and Kalamazoo. When completed, trains will operate up to 110 mph from Porter, Indiana to Dearborn, Michigan. Michigan is part of the joint procurement of new locomotives and rolling stock. All routes in Michigan are expected to have new equipment by 2022. See the feature article about the Michigan passenger rail program in SPEEDLINES Issue 28, March 2020.

MINNESOTA – The Northern Lights Express (NLX) sought \$40 million during last year's legislative session. The funding would have been used to add a third main track between Duluth and St. Paul and fix the draw bridge between Duluth and Superior. But neither the Minnesota Senate nor Gov. Tim Walz included funding for NLX in their bonding proposals. There is no local funding for NLX.

Train	2019	2020	Percent Change
Blue Water	181,800	98,200	-46.0%
Pere Marquette	97,600	47,200	-51.6%
Wolverine	501,100	244,500	-51.2%
Total	780,500	389,900	-50.0%

Using federal funding, MDOT acquired a 135-mile

Source: Amtrak Monthly Performance Reports

The Twin Cities-Milwaukee-Chicago Intercity Passenger Rail Service (TCMC Second Train) project seeks to implement a second daily round-trip passenger train on the existing Amtrak Empire Builder route between the Twin Cities, Milwaukee and Chicago by extending one of the existing Hiawatha service trains or adding another train between Milwaukee and Chicago. The service would operate at conventional speeds of 79 mph and would serve all existing Empire Builder stations. The project is being led by Wisconsin Department of Transportation, Minnesota Department of Transportation, Illinois Department of Transportation, Federal Railroad Administration (FRA), Ramsey County Regional Railroad Authority, Great River Rail Commission, and La Crosse Area Planning Committee.

Planning has been on-going since 2015. The first and second phases of planning are complete. HNTB prepared the Phase 2 study documents. The second phase of planning resulted in an environmental analysis, preliminary design, and generated a service development plan. A grant issued by the FRA in May 2020 pledged approximately \$12.6 million for startup operating costs. The River Rail Commission has sought funds each of the past three years from the Minnesota state legislature and received no funding. This year is different. Minnesota Governor Tim Walz on Feb. 22 released a \$518 million capital investment bonding proposal that includes \$10 million for a second Twin Cities-Milwaukee-Chicago (TCMC) train. The funds would provide the last piece of local match for a \$32 million federal grant awarded last year, commission officials said in a press release. It will cost about \$53 million to add a second round-trip passenger train. FRA expects Second Train project managers to secure committed matching funds and execute the grant agreement by Sept. 30, 2021, though the deadline could be extended.

MISSISSIPPI – Amtrak currently provides intercity passenger rail services in Mississippi by operating two trains: The City of New Orleans between Chicago and New Orleans; and the Crescent, between New York and New Orleans. The Sunset Limited between Los Angeles and New Orleans used to serve Mississippi on its way to Jacksonville and Orlando, Florida until Hurricane Katrina in 2005 when service east of New Orleans was suspended. Mississippi is part of the Southern Rail Commission and is working toward the re-establishment of the New Orleans to Mobile segment of the Sunset Limited. The other train service that Mississippi is interested in establishing is in the northern part of the state along the I-20 Corridor that would connect Dallas-Fort Worth and Vicksburg and Meridian Mississippi. The new service would join the Crescent route in Meridian and continue to Atlanta and New York. Amtrak's study of the proposed route suggested it would generate a positive cash flow and be economically feasible without any annual operating subsidy from the affected states. However, the expansion of track capacity owned by the host railroads to operate the additional passenger trains would cost approximately \$82 million and would need to be allocated across the states of Texas, Louisiana and Mississippi for a one-time expenditure of local, state and federal funds. Funding has not been arranged to advance this project.

MISSOURI - Amtrak service is provided in Missouri on two long distance routes – the Southwest Chief and Texas Eagle (Chicago-San Antonio, Texas). Missouri supports the Missouri River Runner train operating between Kansas City – St. Louis. Amtrak reduced service on the Missouri River Runner from two-round trips per day to one round trip due to COVID. In FY 2019, the Missouri River Runner carried 154,400 riders. In FY 2020 the ridership dropped to 86,400 boardings. Missouri is also served by the Illinois supported Lincoln Service train operating between Chicago and St. Louis. Missouri is participating in the Midwest NextGen equipment procurement for new locomotives and passenger rail equipment assigned to the Missouri River Runner service.

MONTANA - On Thursday, Sept,. 17, 2020 over 300 people from around the state, region, and country gathered virtually for the inaugural Montana Passenger Rail Summit. They listened to speakers from Washington State DOT, All Aboard Washington, and the Rail Passengers Association and others. In December 2020, twelve Montana counties officially founded the Big Sky Passenger Rail Authority to advocate for the return of intercity passenger rail service across southern Montana. The authority constitutes the governance structure with the mission of re-establishing regular passenger rail service through the southern tier of the state. The authority will investigate, analyze and seek funding for the transformational project that will complement the existing Empire Builder long-distance train that currently operates along the Hi-Line in northern Montana. Proponents want to revive the North Coast Hiawatha rail line that ran from Chicago through southern Montana to Seattle from 1971 to 1979. That line hit most of the state's major population centers, whereas the Empire Builder connects a strip of rural towns from eastern Montana to Whitefish before continuing on to the Pacific Northwest. Advocates are approaching passenger rail as an engine of equity across a politically and economically divided state. In Pablo, MT, on the Flathead Reservation, a revitalized passenger rail service would be a potential salve against the barriers that families that don't have a high percentage of auto ownership face securing reliable transportation to distant doctor appointments.

NEVADA – Amtrak currently provides conventional passenger rail service in northern Nevada with its long-distance California Zephyr route operated between Chicago and the San Francisco Bay area. The train stops in Elko, Winnemucca, and Reno, NV. Nevada would like to see improvements to these stations and add several more station stops to induce more train trips and reduce car trips. Adding stops would require a formal local or state request, an Amtrak evaluation of the revenue, the costs of adding the proposed stop(s), and negotiations involving Union Pacific's evaluation of capacity impacts on the line's throughput. Costs could include improvements such as station platforms, lighting, main line track or siding, signal upgrades, and grade-crossing improvements to maintain the line's existing level of freight service.

The Rail Passenger Association of California and Nevada (RailPAC) has suggested extending California Amtrak's Capital Corridor service from Sacramento /Auburn to Reno/Sparks over the California Zephyr route. This route extension was considered in the 2018 California State Rail Plan. There is substantial travel from Northern California cities to the Reno metro area as a result of leisure and vacation activities, visiting family and student travel from California to the University of Nevada, Reno. This travel becomes especially problematic during winter when storms can make I-80 unsafe and unreliable. Nevada DOT is planning to coordinate with Caltrans and the Capitol Corridor Joint Powers Authority (CCJPA) in identifying and funding capacity improvements for extending Capitol Corridor service between the Bay Area and Reno-Sparks. Nevada DOT would be the lead agency for capacity projects in Nevada.

Brightline West (formerly DesertXpress) will construct, operate, and maintain a high-speed passenger train system along the approximately 220-mile corridor between Las Vegas, NV and the Inland Empire in Rancho Cucamonga, CA. The alignment is predominantly constructed within the I-15 right of way in California and Nevada. Most of that alignment within the I-15 right of way will be within the median of the highway and the entire alignment will be protected and isolated from the highway, creating a dedicated rail corridor with no grade crossings. The alignment will be primarily single track with passing sidings that allow trains to pass each other on the corridor. The train will be fully electric with high-speed trainsets will be. See the feature story reprinted with permission from Victorville Daily Press on page 16 for more details.

Las Vegas Xpress has plans to operate luxury excursion trains between San Bernardino, CA, and a new rail station they would construct in Las Vegas. Branded as X-Train, the concept has been under consideration for a quite some time. The specialty rail passenger operation is targeting the launch of X-Train services in September 2021. Their proposal is to utilize existing locomotives, cars, and Union Pacific tracks under contract with Amtrak, and operate a Friday-to-Sunday schedule. The company has yet to finalize operating agreements with Union Pacific and Amtrak, confirm the Las Vegas station location, or secure the \$100 million in private financing needed for the project.

NEW MEXICO – FRA recently awarded \$5.6 million through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program for Amtrak's Southwest Chief Raton Route Modernization Program (Opportunity Zone). The grant provides funding to improve track between Trinidad, Colorado and control point (CP) Madrid in New Mexico, located between Lamy and Albuquerque. Work is expected to begin in 2021 and carry into 2022. Specifically, the project replaces approximately 14,750 new crossties on a 31-mile section south of Raton Pass and another six-mile segment in New Mexico, more than 12 miles of bolted rail will be converted to welded rail between Lamy and where the Rail Runner commuter train diverges to Santa Fe, the timber decks of two railroad bridges will be replaced and rock scaling at several locations will be completed. The CRISI grant combined with \$4.9 million in Amtrak funds set aside for this service by Congress and \$1 million from the New Mexico Department of Transportation (NMDOT), a total of \$11.5 million will be invested from Trinidad, Colorado to just south of Lamy, New Mexico. Additionally, between 2016 and 2020 Amtrak committed \$15.8 million in direct funding for the route of the Southwest Chief, and an additional \$12.8 million in matching funds to previously awarded federal grants. Amtrak has also invested between \$4 and \$8 million annually in this segment, outside of any grant programs.

NEW YORK – The New York State Department of Transportation (NYSDOT) has been planning higher speed passenger rail service within the 463-mile rail corridor between New York City and Buffalo/ Niagara Falls (Empire Corridor) for decades. FRA and NYSDOT completed a Tier I Draft Environmental Impact Statement (Draft EIS) in January 2014. The Tier 1 Final EIS is still on-going with an end of June 2021 estimated completion date. The higher speed Empire Corridor project has stalled because it not cost effective when compared to ridership and travel time savings. The alternatives consist of maximum authorized train speeds ranging from



the existing 79 mph up to 125 mph. The latter would include a new corridor, possibly elevated, dedicated to passenger trains, which makes it the most expensive. CSX has consistently objected to trains operating at speeds of 125 mph on its tracks requiring the separate passenger facility.

Planning for the Gateway Program continues amid renewed optimism regarding obtaining federal funding. The Gateway Program focuses on a 10-mile segment of the NEC and includes a program of projects that would replace and update rail infrastructure, some of which are over 100 years old. This segment of the NEC carries over 200,000 daily Amtrak and NJ TRANSIT passenger trips on approximately 450 trains. The project would increase track, tunnel, bridge and station capacity enabling more trains and people to be served. The Gateway Program's first phase includes the rehabilitation of the existing tunnel under the Hudson River damaged by Super Storm Sandy and the replacement of the Portal Bridge. The Hudson Tunnel Project is a new two track tunnel into Penn Station and a new bridge over the Hackensack River. The cost of this project is estimated at \$11.6 billion. The former Trump Administration rated the Hudson River rail tunnel project a "mediumlow" priority, a designation that served to delay the project's eligibility for federal funding under the Capital Investment Grant program. The project was rated "low" for local financial commitment but "medium-high" for project justification. To be eligible for Capital Investment Grant funding, a project must be rated "medium" for local financial commitment. Senate Majority Leader Chuck Schumer (D-NY), reports there is renewed optimism about the Gateway Program obtaining federal funding from the new Biden Administration. New York and New Jersey are working on the local share of funding for the project. Congestion pricing may be the revenue source for the local funding.

A major milestone was achieved in January 2021 when the Daniel Patrick Moynihan Train Hall was opened for passenger traffic. The hall is an expansion of New York City's Pennsylvania Station by the adaptive reuse of the historic James A. Farley Post Office, the city's former main post office building. Located between Eighth Avenue, Ninth Avenue, 31st Street, and 33rd Street in Midtown Manhattan, the annex provides new access to most of Penn Station's platforms for Amtrak and Long Island Railroad passengers, serving 17 of the station's 21 tracks. The hall is named for Daniel Patrick Moynihan, the U.S. Senator who had originally conceived of the adaptive reuse of the post office building. Moynihan Train Hall a sky lit atrium approximately the size of the Grand Central Terminal's Main Hall.

The Metropolitan Transportation Authority (MTA) selected the Skanska ECCO III Penn Station Connectors JV led by designer AECOM USA Inc.; and the Tutor Perini/O&G JV with Parsons Transportation Group of New York Inc. as the lead designer. The project will create a second route for Metro-North to reach Manhattan and provide direct service to the west side of Manhattan for riders in Connecticut, Westchester, and the Bronx. The service will utilize Amtrak's Hell Gate Line from Shell Interlocking in New Rochelle to access Penn Station. The project also includes the construction of four Metro-North stations in the east Bronx. The bidders were evaluated and selected by officials from MTA, MTA Long Island Railroad, Metro-North and Amtrak based on project experience, past project performance, commitment to minimizing construction impacts, financial strength and diversity practices.

NORTH CAROLINA – 2020 was a year like no other for North Carolina. The COVID-19 pandemic affected passenger train operations and services. The Carolinian operated as a daily roundtrip between New York City and Charlotte via Raleigh and the Piedmont Corridor. Service was cut back to three times weekly as part of Amtrak's systemwide service cuts due to the COVID crisis. The Piedmont service was also reduced. Congress directed Amtrak to restore daily service on the long-distance network as part of the COVID relief funding. Amtrak also restored the three daily Piedmont service roundtrips that operate between Raleigh and Charlotte as of April 5th.

In FY 2019, the Carolinian carried 244,800 passengers. In FY2020, ridership declined to 150,400 passengers. Ridership on the Piedmont in FY 2019 was 214,200 and declined to 113,900 in FY2020. Amtrak also serves North Carolina with four long distance trains – the Crescent, the Palmetto, the Silver Meteor and the Silver Star.

Despite the pandemic effects on ridership, some notable achievements include receiving a \$47 million federal grant to acquire the S-Line from CSX from Raleigh, NC to Ridgeway, NC to preserve the corridor for future intercity passenger rail service. The purchase of the S-Line is a first step toward four new state-supported intercity passenger train frequencies operating between Richmond and Raleigh with one-hour shorter trip times. Currently, there is no direct passenger rail or freight service along the CSX S-Line between Richmond, VA, and Raleigh, NC due to approximately 70 miles of the route being out of service between Petersburg, Virginia, and Ridgeway, North Carolina. The project allows for improved freight capacity, reliability, and resiliency on the A-Line.

NCDOT received an \$80 million federal grant to replace the entire Piedmont fleet, which included purchasing six new locomotives and 26 passenger cars. A feature article on the NCDOT rail improvement program appeared in SPEEDLINES Issue 27 December 2019.

Progress on Charlotte Gateway Station in Uptown Charlotte continued throughout the year. The new Uptown station is estimated to cost over \$800.1 million for full implementation of all public and private components. The project is being built





in three phases, with all construction planned to be completed by 2024. When the station is completed, it will be the southern terminus for Amtrak's Carolinian and Piedmont trains, as well as a stop on the Crescent. It is also intended to be a major stop on the future Southeast High-Speed Rail Corridor. The \$91.3 million first phase of the program is fully funded and is currently under construction. The first phase of the program consists of constructing track, structures, and signals to support two new station tracks: constructing retaining wall/earthwork and constructing an intercity bus facility. The second part of this first phase of the station program is to construct rail platforms and a canopy for passenger loading/unloading. The first part of Phase I was completed last year. It is anticipated that the second part of this first phase construction program will be completed in 2021. An RFP for station area development was issued and a developer selected for the Phase 3 private development adjacent to the station. Phase 2 at an estimated cost of \$49.9 million (2017 dollars), has two parts: 2A) Construct platform canopy; construct station building (interim condition) with full construction of concourse level and core and shell only for plaza and mezzanine levels; construct temporary surface parking and passenger drop-off are and decommission the existing Amtrak station on

North Tryon Street. This phase is partially funded with capital carryover from phase 1. The anticipated construction period is 2021 to 2023. Phase 3 is mostly funded by private development and will be completed sometime in the future.

The City of Lexington is taking the first steps in implementing its \$41.3, five-year Amtrak station development plan by approving a municipal project agreement with the NCDOT for project oversight and management. The project includes building two new boarding platforms, renovation of the historic freight depot as an interim passenger station, street and parking improvements, a vehicle tunnel under the railroad at Fifth Avenue, which will connect with Talbert Boulevard, and improving the tracks between the two areas. The project will also include closing the at-grade rail crossing on Seventh Avenue. In September 2020, the Lexington was awarded a \$24.9 million Better Utilizing Investment to Leverage Development (BUILD) grant to fund the development of a new station. NCDOT is contributing \$10.95 million to the project. Lexington will be responsible for the remaining \$5 million in matching funds, as required in the grant application. This will be paid over the timespan of the anticipated five-year project.

OHIO (with assistance from Stu Nicholson, All Aboard Ohio) - The Columbus-based Mid-Ohio Regional Planning Commission (MORPC) and Cleveland-based Northeast Ohio Areawide Coordinating Agency (NOACA) completed two studies considering passenger and freight movement in 2020. The MORPC Hyperloop Feasibility Study evaluated two potential route alignments between Columbus and Chicago. MORPC released the final report of its "Midwest Connect" Hyperloop Feasibility Study in May 2020, which found that hyperloop technology is feasible along the corridor connecting Columbus with Chicago (via Lima, Ohio and Fort Wayne, Indiana) and Pittsburgh. The next steps include collaborating with stakeholders; creating a travel and economic demand advisory panel to improve and further refine the high-level analyses developed under the feasibility study; and working with state and federal transportation officials to advance a regulatory framework for hyperloop technology.

MORPC also prepared the initial components of a Tier I EIS that links to a study completed by the Northeast Indiana Passenger Rail Association (NIPRA). The NIPRA study examined the corridor from Chicago to Lima and evaluated conventional and higher speed rail service. The MORPC environmental study collects and analyzes information for the corridor between Lima and Pittsburgh, and merges both the NIPRA and MORPC studies into one seamless deliverable, including Hyperloop and conventional rail as technology alternatives. The next step is to complete the Tier I EIS for conventional passenger rail service in this corridor. The FRA Midwest Regional Rail Plan suggested an alternate route between Columbus and Chicago via Indianapolis. MORPC will likely have to study the two route alternatives as part of the Tier 1 EIS.

NOACA completed the Great Lakes Hyperloop Feasibility Study. The study was conducted by Hyperloop Transportation Technologies (HTT) and Transportation Economics & Management Systems, Inc. (TEMS) and examined route alternatives linking Pittsburgh – Cleveland - Chicago.

Hyperloop pod (Photo courtesy of Hyperloop Transportation Technologies)

In late December 2020, Spanish construction giant Ferrovial signed a framework agreement with Hyperloop Transportation Technologies



(HyperloopTT) to analyze the opportunities to build the advanced transport system in the US, including the Chicago – Cleveland – Pittsburgh route evaluated in the NOACA Great Lakes Hyperloop Feasibility Study. Ferrovial and HyperloopTT will work to develop potential route analysis, operation and maintenance of the hyperloop technology, engineering and construction as well as the operation of both passenger and cargo solutions in the United States.

The most exciting news in Ohio is the \$25 billion network expansion program being promoted by Amtrak. In Ohio, proposed new corridor routes would include reconnecting the 3C Corridor (Cincinnati – Dayton – Columbus – Cleveland), adding more frequent service between Cleveland – Buffalo; Cleveland – Pittsburgh; Cleveland -Toledo – Chicago and new service between Cleveland – Detroit via Toledo. The passenger rail expansion program is generating positive press and editorials from across the state. It remains to be seen whether or not Congress will appropriate the requested funds to expand the Amtrak route network.

OKLAHOMA – The Oklahoma Department of Transportation (ODOT) continues its support of one round trip daily between Fort Worth and Oklahoma City as part of the Heartland Flyer. The 206-mile route is funded jointly by the states of Oklahoma and Texas. In FY 2019, the Heartland Flyer carried 68,700 passengers. Due to the COVID-19 pandemic, ridership saw a decline to 41,800 persons, which was only 39 percent decline. An extension of the Heartland Flyer to Newton, Kansas where it would connect with the Southwest Chief operating from Chicago to Los Angeles is being considered. Currently, there is an Amtrak Thruway bus making this connection. BNSF is studying the infrastructure costs to extend the Heartland Flyer and was expected to publish its findings in October. They have extended the study date until early 2021.

OREGON – The Oregon Department of Transportation (ODOT) manages the Amtrak Cascades intercity passenger rail service along the Pacific Northwest Rail Corridor in partnership with Washington State's Department of Transportation. The states pay Amtrak to operate the Amtrak Cascades service from Eugene to Vancouver, B.C. The service was adjusted this past year due to the COVID pandemic. In Oregon, train service between Eugene and Portland was reduced to one daily roundtrip. Ridership in FY 2019 was 828,200. In FY 2020, ridership declined significantly to only about 343,500 passengers, a decline of over 58 percent.

As reported last year, ODOT and the FRA continue to examine alternatives for enhancing passenger rail service on the 125-mile Portland-Springfield-Eugene corridor. ODOT identified two build alternatives as part of a Draft EIS: one which generally follows the existing Amtrak Cascades alignment but features various track, signal, and communication improvements; and one which is primarily a new route between Springfield and Oregon City (generally following Interstate 5 and 205) before merging back with the existing Amtrak alignment north of Oregon City. ODOT identified the first alternative as its preferred alternative. The Draft EIS was released for public comment on Oct. 19, 2018, with the public comment period closed on Dec. 18, 2018. A summary of public comments was prepared in 2019, which also showed a preference for the first alternative using the existing Cascades route. ODOT and FRA are still reviewing all comments and will select a final preferred alternative in its Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) to be published sometime in 2021.

PENNSYLVANIA – Pennsylvania supports two Amtrak services, the Keystone Corridor between Harrisburg and Philadelphia and the Pennsylvanian, which operates between Pittsburgh – Harrisburg and New York City. Amtrak and the Pennsylvania Department of Transportation (PennDOT) slashed service on the Philadelphia-Harrisburg Keystone Corridor nearly 50 percent from 13 weekday roundtrips to seven roundtrips, along with three on weekends. After the first wave of the COVID-19 pandemic related service reductions, service was restored to the 13 roundtrips in June. Service was reduced again to seven roundtrips in December 2020. Infrastructure improvements, allowing train speeds to increase to 110 mph on many segments of the route, has had a positive effect on ridership. Ridership on the Keystone Corridor climbed to over 1.5 million passengers in FY 2019. But in FY 2020, ridership was down over 53 percent to 738,800 annual riders due to the pandemic.

Service on the Pennsylvanian was suspended In March 2020 as part of systemwide service reductions in response to the ongoing COVID-19 pandemic. Service resumed on June 1, 2020. Ridership on the Pennsylvanian had steadily grown over the years. In FY 2019 the train carried 215,100 passengers. As a result of service suspensions and changing travel patterns due to the pandemic, ridership in FY 2020 was reduced to 127,700 passengers.

The Pennsylvanian second daily round trip between Pittsburgh and Philadelphia is currently being studied by PennDOT with support from Amtrak and Norfolk Southern. This study is being conducted in response to continued interest expressed by the communities served by the train. The goal of the study is to determine what improvements need to be made to Norfolk Southern tracks between Pittsburgh and Harrisburg before a second daily roundtrip passenger train could be operated along the route. PennDOT asked Amtrak what it would it take to operate the second roundtrip. Amtrak came back to PennDOT with a proposed timetable. PennDOT provided that proposed timetable to Norfolk Southern. PennDOT expects the results of the Norfolk Southern capacity study later in 2021.

TEXAS – FRA rescinded the Notice of Intent (NOI) for the Environmental Impact Statement (EIS) of the Dallas – Fort Worth Core Express project due to project scope changes proposed by the project sponsor. The original purpose and need for the project was to establish connectivity with other public transportation and commuter rail services in Dallas and Fort Worth, including two planned high-speed rail systems serving Dallas – Houston and Dallas – Austin – San Antonio. The privately funded Texas Central Railroad (TCRR) high-speed rail project connecting Houston and Dallas continues to make progress. The environmental and social impacts of various alternative high-speed rail route alignments were analyzed including possible routes that share corridors with an existing rail line and along electric utility lines. TCRR's proposed high-speed rail line would operate on a dedicated right-of-way with no grade crossings at speeds up to 205 mph (330 km/h) and would not share track or infrastructure with existing trains or rail lines. In addition, the EIS analyzed the potential impacts of stations, power or fueling stations, and maintenance facilities to support high-speed rail operations. FRA released the Final EIS on May 29, 2020 and accepted public comments on the Draft Section 106 Programmatic Agreement (Appendix L of Final EIS) through July 28, 2020. On September 10, 2020, FRA issued the Rule of Particular Applicability (RPA) that established safety standards for the TCRR high-speed rail system. The final rule is not intended for general application in the railroad industry but applies only to the TCRR system. The TCRR rolling stock, track, and core systems will replicate the Tokaido Shinkansen system operated by the Central Japan Railway Company. FRA's Record of Decision (ROD) for the Dallas to Houston Final EIS is contained in the final rule. The civil infrastructure costs for the project will be around \$20 billion, which includes the construction of the lines, tracks, viaducts, berms, maintenance facilities, power sub stations and three passenger stations. The project will be financed through a combination of debt and equity. The current plan is to have the high-speed train in operation between Dallas and Houston by 2026.

In breaking news, six Texas counties, several landowners and an anti-high-speed rail group have filed a lawsuit against the FRA and the USDOT over Texas Central Railway's proposal to construct and operate the high-speed rail system along a dedicated, fully sealed corridor between the two major cities using Shinkansen high-speed rail technology. The lawsuit may be read at the link below. https://www.progressiverailroading.com/resources/editorial/2022/ FederalLawsuitVsHighSpeedRail_041421.pdf

The lawsuit states the proposed Shinkansen

technology is not "interoperable" with any other existing transportation infrastructure, which means it cannot run on any other tracks and no other trains can run on its tracks. As a result, Texas Central's project would be incompatible with and disconnected from existing or future rail lines. The lawsuit also states that Shinkansen technology does not comply with existing rail safety regulations, but the FRA issued a "rule of particular applicability" that establishes safety standards that apply only to the Shinkansen technology. The lawsuit also takes issue with how the FRA evaluated potential environmental impacts under the National Environmental Protection Act (NEPA).

UTAH - A resolution introduced in the Utah Legislature this session could be the first step toward re-establishing a statewide passenger rail service. The resolution encourages Congress to create a multi-state passenger rail commission that would include Utah. A vision articulated by the Utah Rail Passengers Association suggests an initial phase of passenger rail service from Logan to Cedar City, with stops in Brigham City, Ogden, SLC, Provo, Nephi, Delta, and Milford. This service would utilize existing track. Utah Transit Authority currently operates a commuter rail service between Ogden – Salt Lake City - Orem - Provo over part of this route. This new passenger rail service would extend state-sponsored Amtrak service over the longer intercity route. Three daily round trips are proposed.

VIRGINIA (with assistance from Emily Stock, VDRPT) – Virginia has an active state-sponsored passenger rail Virginia has an active state-sponsored passenger rail program which has grown significantly over the past several years thanks to imaginative planning and a supportive governor and state legislature. State supported Amtrak service attracted over 924,000 rides in FY 2019, which was 10.2 percent more riders than FY 2018. Like other rail passenger services, ridership in FY 2020 took a dive to 510,200 boardings, which was a 42.6 percent decline from FY 2019.

Despite the setbacks in ridership due to the pandemic, Virginia continues to move forward with its visionary \$3.7 billion Transforming Rail in Virginia plan. The planned improvements will be made over a decade. Virginia Gov. Ralph Northam signed a \$525 million agreement with CSX Transportation for acquisition of right-of-way and infrastructure, which will allow Virginia to increase capacity and introduce more trains in the I-95 corridor. In all, Virginia acquired 384 miles of CSX right-of-way, and 223 miles of track, primarily on the I-95, I-64 and I-85 corridors.

The most significant element of the plan is increasing rail capacity in Northern Virginia. The signature project of this part of the plan is to build a new \$1.9 billion Long Bridge crossing over the Potomac River from D.C. into Virginia with the aim of improving reliability, adding capacity and separating freight and passenger traffic. The Long Bridge will eliminate a terrible choke point adding new capacity for a growing commuter and passenger rail system by increasing the number of tracks entering and leaving D.C. from two to four. A recent study from George Mason University estimated that the completion of the Long Bridge alone and the associated expanded capacity and rail service it enables would translate to "an increase of \$2.2 billion in economic contributions from rail commuters living in Virginia and an increase of \$5.9 billion from rail commuters in the Washington region." This is a very healthy benefit/cost ratio when compared to the cost of the bridge. The FRA along with the District Department of Transportation (DDOT), Virginia Department of Rail and Public Transportation (DRPT) and with the participation of the National Park Service (NPS), published the Combined Final Environmental Impact Statement (FEIS), Final Section 4(f) Evaluation, and Record of Decision (ROD) for the Long Bridge Project in September 2020. Amtrak, Virginia Railway Express and DRPT are working on a funding plan to move the Long Bridge project from planning to construction. In late January 2021, DRPT announced the award of a \$21 million contract to VHB for the development of the Preliminary Design plans for this important regional project.

Virginia completed a study of extending state-supported Amtrak service from Roanoke to New River serving the Blacksburg area, home to Virginia Tech. The New River Valley has strong demographics for successful rail service with a population of more than 180,000, including more than 40,000 university



students. Studies indicate an additional 80,000 riders are expected to use the new service. The Governor recently announced a budget amendment of \$50 million. Funds from this budget amendment would be used to extend the service to the New River Valley. The current Roanoke train is the only Amtrak service in Virginia that covers 100 percent of its operating costs through ticket sales. The extension of service to the New River Valley would add a second train and have a later departure time from Roanoke. The state legislature is considering the budget amendment.

Gov. Northam signed new legislation creating a rail authority in the New River Valley at a ceremony in Christiansburg, VA on May 5th. Attending the ceremonial signing were elected officials, principals of Virginians for High Speed Rail and the Virginia Rail Policy Institute and Jim Squires, CEO of Norfolk Southern The new legislation authorizes the creation of a regional passenger-rail authority in Planning District 4 to assist in the creation and maintenance of passenger rail in the region. The authority would be authorized to enter into revenue sharing agreements and to issue revenue bonds. The bill also says the authority would be governed by a board consisting of members of each participating locality and institution of higher education. More importantly than the ceremonial bill signing was the surprise announcement of the purchase of a Norfolk Southern rail line between Salem and Christiansburg.

WASHINGTON (with assistance from Patrick Carnahan, All Aboard Washington and Paige Malott, CASCADIARAIL) – Amtrak's Los Angeles-Seattle Coast Starlight and Chicago – Seattle Empire Builder continue to serve the state with long-distance service. Due to the impacts of COVID, the Coast Starlight and Empire Builder have seen service cuts, with each offering only three weekly departures in each direction since October. Long-distance network ridership has declined, but it also appears to have been the fastest to recover given the lack of transportation options in many of the areas it serves. The tri-weekly service is likely stunting recovery.

In partnership with the State of Oregon, Washington State Department of Transportation's (WSDOT) sponsors a state-supported corridor train operating between Portland – Seattle and Vancouver, British Columbia. The Cascades corridor is 467 miles long: 300 miles in Washington, 134 miles in Oregon, and 33 miles in British Columbia. Service has been drastically curtailed. The Cascades has been cut from four Seattle-Portland, two Portland-Eugene, and two Seattle-Vancouver, BC daily round trips to just one daily Seattle-Eugene round trip, with all Cascades trains north of Seattle suspended. Thruway connecting bus services appear to be operating at or fairly close to normal frequencies. According to WSDOT, ridership on Amtrak Cascades is down roughly 87 percent.

Restoration of Cascades service on the Point Defiance Bypass is steadily moving ahead. Positive Train Control (PTC) has been installed along the full length of the Bypass. WSDOT conducted 'dynamic testing' (whereby trains made round-trip passes at gradually increasing speeds) on the Bypass with a Talgo VIII trainset on the weekend of January 16-17, 2021. This dynamic testing was part of Sound Transit's process for the resumption of Cascades service, as Sound Transit is treating this as a 'new start' that requires full certification of equipment, crews, and operating procedures. If Sound Transit grants its approval, WSDOT anticipates a latespring/early-summer timeframe for resumption of service on the Bypass.

In a related move by WSDOT, all Talgo VI train sets were removed from service as of June 29th, 2020. WSDOT's Talgo VIs are parked at King Street Station, and Amtrak's are parked at their Beech Grove, Indiana maintenance facility. The Oregon-owned Talgo VIIIs are still operational.

Washington State DOT is studying the feasibility of an ultra-high-speed ground transportation (UHSGT) connecting the three largest cities in the Cascadia megaregion: Seattle; Portland; and Vancouver, BC. A key component of that vision is reducing travel time among the three cities from more than eight hours to less than two. A technical feasibility study completed in 2018 by Jacobs with AECOM and Deutsche Bahn was an important first step in understanding and quantifying the potential benefits and costs of an UHSGT system in the Cascadia megaregion. A more detailed Business Case completed in 2019 by WSP and Steer developed a benefit cost analysis, assessment of potential economic gains, and early ridership and revenue forecasts. A report on the findings of this study can be found in SPEEDLINES Issue #28, page 26.

The project will bring \$355 billion in economic growth to the Pacific Northwest, create 200,000 skilled labor jobs, and reduce carbon emissions by 6 million metric tons --the equivalent of taking 13 million cars off the road. With speeds of 220 mph (354 kph), the project has the potential to move up to 32,000 passengers per hour, providing 47-minute trips between Seattle and Vancouver and 58-minute trips between Seattle and Portland.

The project has been championed for its cost savings compared to building an additional lane of highway along the I-5 corridor. According to WSDOT Secretary Roger Millar, UHSGT is estimated to cost \$24-\$42 billion to build; one lane of highway will cost \$108 billion, take just as long to build, and the lane would be full by the time it opened. "Highway expansion cannot and will not keep up with growth, but we can make investments that can be gamechangers, like high-speed rail," he stated.

The Cascadia megaregion is expected to grow by 4 million people in the next 30 years -- the equivalent of adding two additional cities the size of Vancouver. With current growth plans unable to accommodate 1.3 million of the newcomers, it's time to think big and think boldly about mobility. Challenge Seattle recently published its Vision 2050 report, which highlighted high-speed rail's ability to address large-scale problems in the Pacific Northwest, including better access to family-wage jobs, increasing affordable housing choices, and providing a sustainable alternative to air travel to help meet climate goals. The report noted the average monthly housing cost in the Cascadia megaregion is 44 percent of median income; in addition to an 80 percent increase in mega-commuters -- people spending more

than 90 minutes commuting one way-- in the last 10 years due to housing affordability and traffic congestion. High-speed rail could transform commutes to core cities, with journeys of 15 minutes or less from Tacoma to Seattle, or Everett to Seattle.

Improving access to jobs and affordable housing are reasons why Microsoft has supported the UHSGT project since its inception in 2016. "High speed rail will help address some of the pressing problems experienced in all three major cities. People won't have to choose between where they want to live and where they want to work," explained Irene Plenefisch, Microsoft Government Affairs Director.

In December 2020, WSP completed the Framework for the Future report, which outlines the next steps for the UHSGT project: setting up a governance structure and coordinating entity to work on community engagement, financing, and funding strategies. Washington Governor Jay Inslee has requested \$3.25 million in the state budget to continue studying the corridor. The legislative session ended without a decision on the transportation funding package, as the House and Senate could not reconcile differences between their two packages. Consequently, the Washington State Legislature has not yet appropriated the funding requested by Gov. Inslee to continue studying the Cascadia Corridor.

The Legislature previously directed the Joint Transportation Committee (JTC) to conduct a highlevel feasibility analysis of an East-West intercity passenger rail system for Washington State, connecting Seattle with Spokane via the Stampede Pass corridor through Yakima and the Tri-Cities. Steer was commissioned by the JTC to assess the feasibility of the new East-West passenger rail service for state decision makers. They issued their report in July 2020. The overall conclusion is that introducing a Seattle to Spokane service via the Stampede Pass was technically feasible despite long travel times due to slow speeds and heavy freight traffic. Annual estimated ridership for year 2020 ranged from 31,000 to 205,000 annual trips with a further estimated increase to 215,000 if train journey times were reduced by one hour between Seattle and Spokane. This is only 25 percent of the Cascades ridership but above or comparable to some other Amtrak state-supported services.

WISCONSIN - The Wisconsin Department of Transportation (WisDOT) and Illinois Department of Transportation (IDOT) support the operation of the Milwaukee - Chicago Hiawatha service. The Hiawatha service is Amtrak's busiest route in the Midwest. Ridership on the Hiawatha service grew to more than 882,000 riders in FY 2019, which set a new ridership record. But, in FY 2020 ridership was impacted by COVID-19 and plummeted to 403,100 riders for the fiscal year ending Sept. 30, 2020. The number of Hiawatha trains had been reduced and there are limits on passenger capacity. Hiawatha currently offers three round trips per day, compared to the usual seven. Ridership has begun to increase, and the Hiawatha is relaunching the full seven round-trip schedule on May 23rd, along with the full schedule of Amtrak Thruway connecting bus services between Green Bay, the Fox Cities, and Milwaukee. Efforts to increase the number of daily Hiawatha round trips to ten per day are continuing.

In September 2020, FRA awarded a \$31.8 million CRISI grant to the WisDOT to fund upgrades to railroad infrastructure in Wisconsin and Minnesota permitting the Twin Cities-Milwaukee-Chicago Intercity Passenger Rail Service (TCMC) to be operated. The TCMC provides a second daily train along the existing Amtrak Empire Builder corridor between the Twin Cities, Milwaukee, and Chicago. The improvements on the Canadian Pacific railroad include communication and signaling, extending rail sidings, improvements at grade crossings, extending yard lead track and reconstructing and modifying new turnouts and mainline track. In addition, FRA also selected WisDOT for a Restoration and Enhancement grant for federal funds to cover a portion of the first three years of operating support of the TCMC second train.

