Intercity Rail Passenger Systems Update is published intermittently by the Transportation Research Board to disseminate information about current research and development in intercity rail passenger systems. Ronald C. Sheck, editor; John C. Tone, Chairman; and Nazih K. Haddad, Vice Chairman, TRB Committee on Intercity Rail Passenger Systems; Elaine King, TRB staff. Any findings and conclusions are those of the authors and not of TRB. Submit news items to Intercity Rail Passenger Systems Update, Transportation Research Board, 2101 Constitution Avenue, NW, Washington, DC 20418, telephone 202-334-3206, or e-mail eking@nas.edu.

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The Transportation Research Board is a unit of the National Research Council, which serves as an independent advisor to the federal government on scientific and technical questions of national importance. The National Research Council, jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, brings the resources of the entire scientific and technical community to bear on national problems through its volunteer advisory committees.
Greetings to all members and friends of TRB Committee A1E13. The September 11th terrorist attacks and the subsequent anthrax scare are still reverberating throughout the United States. Increased interest in intercity rail transportation is evident in Congress and the states, along with added concerns for safety and security, and many legislative actions are under consideration to address capital and operating issues. The deadline for Amtrak “self-sufficiency” is also fast approaching, and on November 9 the Amtrak Reform Council (ARC) voted 6 to 5 that Amtrak will not meet the December 2002 deadline. The vote triggered a requirement that Amtrak develop a liquidation plan and that ARC develop a proposal for a restructured system; both plans are due to Congress 90 days from the date of the vote. All these factors will give increased relevance to the January 2002 TRB Annual Meeting.

Committee A1E13 held a successful mid-year meeting in Milwaukee in May in conjunction with the High-Speed Ground Transportation Association’s Annual Meeting.

This newsletter will give you all an update on progress around the country on key projects and studies. Thanks to your newsletter editor Ron Sheck and those who have contributed articles.

Now is the time to make your plans to attend the January 2002 TRB Annual Meeting in Washington. You will find more details on committee and subcommittee meetings in this newsletter. Rit Aggarwala and George Haikalis are planning two excellent sessions. Many of you will want to attend and participate in the Railroad Capacity and Corridor Planning Workshop being sponsored jointly by A1E13 and several other committees, scheduled for Sunday, January 13, 2002, at 10 a.m. Hope to see you in D.C.

Best regards to all,
Jack Tone
Welcome to the third electronic edition of *Intercity Rail Passenger Systems Update*, published by TRB’s Committee on Intercity Rail Passenger Systems (A1E13). The Update is possible because committee members and friends provide materials. I would like to express my appreciation to the following members and friends of the Committee who provided copy, comments, or information used in putting together this edition: Bob Kuehne, Nazih Haddad, Arrigo Mongini, Neil Moyer, Matt Paul, Alan Tobias, Jack Tone, Randall Wade, and Warren Weber. Special thanks go to Elaine King and the editorial staff of TRB, who edit and format the newsletter and post it to the TRB website. In 2002, we hope to publish at least two issues of the Update. To do that, your help is needed. Please e-mail me at transol1@home.com, call me at 206-632-3443, or fax me at 206-632-3444 with your willingness to contribute a research article or news item. The deadline for receipt of materials for the April Update is March 1.

—Ron Sheck, Editor
*Transit Solutions, Seattle, Washington*

**A1E13 WORKSHOP, SESSIONS, AND MEETINGS:**
**2002 TRB ANNUAL MEETING**

**Sunday, January 13, 2002**
**Omni Shoreham Hotel**

10:00 a.m.–5:00 p.m.

**W26 Railroad Capacity and Corridor Planning Workshop**
Paul H. Reistrup, CSX Transportation, Inc., presiding
*Sponsored by Committee on Intercity Rail Passenger Systems, Committee on Electrification and Train Control Systems for Guided Ground Transportation Systems, Committee on Commuter Rail Transportation, and Committee on Guided Intercity Passenger Transportation*

Note: Numerous public agencies around the United States are actively studying or planning intercity passenger rail improvements and new services as well as new and expanded commuter rail operations. These studies most often include utilizing existing railroad rights-of-way. This workshop is designed to provide background and guidance on railroad cor-

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**ALSO IN THIS ISSUE**

- Chairman’s Letter
- Welcome to the Newsletter
- A1E13 Workshop, Sessions, and Meetings: 2002 TRB Annual Meeting
- Virginia High-Speed and Intercity Rail Developments Focus on Several Corridors
- Florida Moves Toward High-Speed Rail
- Status Report on the Maglev Deployment Program
- Midwest Regional Rail Initiative Update
- Surfing the Rails
- Partners Key to Rail Service in Puget Sound Corridor
- Additional Rail Links
Corridor planning, including capacity analysis techniques for joint passenger and freight operations. Case studies will be presented, together with a panel discussion including representatives from the Federal Railroad Administration and state departments of transportation, along with freight railroad planning and operations leaders. The workshop is aimed at providing “lessons learned” and realistic planning tools for considering new railroad passenger operations.

Monday, January 14, 2002
Omni Shoreham Hotel

8:00 a.m.–9:45 a.m.

Session 119
Radical Departures: New Structures and Methods for Passenger Rail
Rohit T. Aggarwala, Columbia University, presiding
Sponsored by Committee on Intercity Rail Passenger Systems

Financially Internalizing Passenger Rail-Generated Nonuser Benefits: Environmental Case Study (02-4136)
Peter Schwartz, Scott Wilson Kirkpatrick & Co., Ltd., United Kingdom

How Much Does New Passenger Rail Service Cost? (02-4070)
Foster Nichols, Parsons Brinckerhoff, Inc.

Whose Railroad Is This, Anyway? Opportunities and Challenges in Regionalizing the Northeast Corridor (02-2636)
Rohit T. Aggarwala, Columbia University; Daniel Roth, FreightDesk.com

Buying into Amtrak: How to Fit American Railroads into Government’s Spending on Transportation (02-2333)
Anthony Perl, University of Calgary, Canada

Noon–1:30 p.m.

A1E13(1)—Subcommittee on Intercity Rail Passenger Intermodal Interface
George Haikalis, Institute for Rational Urban Mobility, Inc., Chair

A1E13(2)—Subcommittee on Socioeconomic and Financial Impacts of Intercity Passenger Rail
Rohit T. Aggarwala, Columbia University, Chair
1:30 p.m.–5:30 p.m.

A1E13—Committee on Intercity Rail Passenger Systems
John C. Tone, Parsons Brinckerhoff, Inc., Chair
Nazih K. Haddad, Florida Department of Transportation, Vice Chair

5:30 p.m.–7:00 p.m.

RAILROAD CAUCUS
Regency Ballroom, Omni Shoreham Hotel

7:30 p.m.–9:30 p.m.

Session 262
Airport-Rail Access: Case Studies
Fred Silverman, PB Aviation, presiding
George Haikalis, Institute for Rational Urban Mobility, Inc., presiding
Sponsored by Committee on Intercity Rail Passenger Systems and Committee on Airport Terminals and Ground Access

Preliminary Findings of Fixed Guideway Rail Links Using Maglev Technology: Pittsburgh and Baltimore-Washington Airports
Arrigo P. Mongini, Federal Railroad Administration; Thomas Adler, Resource Systems Group, Inc.

AirTrain—Newark: An Update
James Blackmore, Port Authority of New York and New Jersey
The Commonwealth of Virginia has made a major commitment to improve passenger rail service within the state. The Department of Rail and Public Transportation (DRPT) is leading efforts to study and implement improvements on several corridors. The highest priority in Virginia is the Richmond to Washington, D.C., corridor, which connects in the nation’s capital to the high-speed Northeast Corridor. DRPT is also working on several other passenger rail studies, including the Southeast High Speed Rail corridor, service to Bristol and other parts of southwestern Virginia (the Trans Dominion Express), service from Richmond to Newport News, and service from Richmond to South Hampton Roads.

Richmond to Washington, D.C.

In its 2000 session, the Virginia General Assembly approved Governor Gilmore’s Virginia Transportation Act of 2000 (VTA2000), which appropriates $65.7 million to develop high-speed passenger rail service between Richmond and Washington, D.C. The total project cost is estimated at $370 million for this 110-mile corridor and includes the construction of nearly 80 miles of a third main track and other improvements that will allow for increased speeds, increased capacity, and improved reliability of passenger rail service. The Richmond-Washington High-Speed Rail Project will be implemented on an incremental basis, with final completion in 6 to 10 years, depending on funding availability.

Virginia’s Department of Rail and Public Transportation is leading efforts to improve several rail corridors.
The commonwealth and Virginia Railway Express are finalizing a memorandum of understanding with CSX Transportation that establishes a framework for implementing improvements. This document sets a schedule for implementing improvements and ties service improvements to the completion of specific projects. Several major projects are already under way, including the reconstruction of the AF Interlocking in Alexandria, the construction of a new bridge over Quantico Creek, and the restoration of Main Street Station by the city of Richmond. When the entire high-speed corridor comes on line, the train trip will take 97 minutes from Richmond to Washington, D.C., compared with the current travel time of 130 minutes.

Southeast High-Speed Rail Corridor

The Richmond to Washington corridor is part of a larger effort to implement high-speed rail throughout the Southeast. Virginia is working closely with North Carolina to conduct a Tier I Environmental Impact Study (EIS) of the corridor from Washington to Charlotte, North Carolina. This program-level approach provides the public, stakeholders, and agencies with an opportunity to review the overall Southeast High-Speed Rail program concept and its potential benefits for and impacts on the region. After completion of the Tier I environmental process, specific alternative alignments and associated facilities will be proposed and analyzed in subsequent project-level (Tier II) environmental documents. The draft EIS is complete, and a series of public hearings are being held during fall 2001 at various locations along the corridor. A copy of the draft report and the schedule of public hearings can be found at the Southeast High-Speed Rail website: www.sehsr.org.

Bristol Rail Passenger Service (TransDominion Express)

In 1998, DRPT completed a study of the feasibility of passenger rail service between Bristol and both Richmond and Washington, D.C. The proposed service uses the existing Norfolk Southern (NS) tracks from Bristol through Roanoke to Lynchburg, where the service branches, with one leg serving Richmond and the second serving Washington by way of Charlottesville. Two round-trips per day utilizing modern tilting trains equipped with steerable wheelsets are recommended. A limited number of necessary capital investments, including station upgrades, storage and maintenance facilities, and a connection between NS and CSX tracks in Richmond, are identified in the study. VTA2000 legislation includes $9.339 million to fund the capital improvements recommended in the initial study.

Ridership and revenues are projected to be strong and to grow steadily as the population and economy of the region continue to expand. An initial operating deficit is anticipated, but by the 12th year of operation, ridership and revenue are projected to have increased sufficiently to generate revenues to cover annual operating expenses.
NS has prepared a study to analyze the feasibility of operating the proposed Bristol service. In the study, currently in draft form, potential conflicts between the proposed passenger service and existing freight service are identified, and recommendations for capital improvements to minimize these conflicts are made. DRPT is negotiating with NS to develop a set of improvements that are acceptable to both parties.

**Richmond to Newport News**

In 1999 the Virginia Department of Transportation completed the I-64 Major Investment Study of the transportation corridor between Richmond and Newport News. In this study the widening of I-64 is recommended, but recommendations are also made that rail service be upgraded by double-tracking the existing CSX rail line, increasing passenger train speeds to 110 mph, and increasing frequencies to eight round-trips per day. The total cost of the proposed rail improvements is $245 million. This locally preferred alternative has been adopted by the Richmond Metropolitan Planning Organization (MPO), the Hampton Roads MPO, and the Virginia Commonwealth Transportation Board.

**Richmond to South Hampton Roads Corridor**

DRPT has hired a consultant to investigate the feasibility of operating high-speed rail service between Richmond and South Hampton Roads via Petersburg and the U.S. Route 460 corridor. This study is currently under way and is expected to be completed by December 2001.

In the study, the feasibility of the proposed service will be addressed, and the focus will be on engineering feasibility, environmental issues, and potential ridership. The study is intended to determine whether the service is feasible, to determine whether there are any “fatal flaws” that would make it difficult to operate the service, to estimate capital and operating costs, and to project ridership for the proposed service.

As gridlock and winglock are becoming more and more serious issues on the highways and in the airports of Virginia, rail service is becoming an increasingly attractive transportation alternative. Demonstrated support for improved rail service exists in all regions of the state. This includes strong support from the business community and from the public at large. The commonwealth is committed to making significant passenger rail service improvements, and Virginia is becoming a key player in high-speed rail service in the Southeast and the entire country.

—Alan Tobias  
*Rail Passenger Program Manager*  
*Virginia Department of Rail and Public Transportation*  
*Atobias@dprt.state.va.us*
On November 7, 2000, Florida voters approved an amendment to the Florida Constitution directing the state legislature, the governor, and the cabinet to proceed with the development of a high-speed ground transportation system in Florida. This system is required to use effective and efficient technologies capable of operating at speeds in excess of 120 mph and must consist of dedicated rails or guideways separated from motor vehicle traffic. The amendment also requires that the system ultimately link the five largest urban areas of the state—to be determined by the legislature—and that construction begin by November 1, 2003.

At the 2001 regular legislative session, the Florida legislature enacted the Florida High-Speed Rail Authority Act. This act created a nine-member High-Speed Rail Authority. The authority is charged with planning, administering, and managing the preliminary engineering and preliminary environmental assessment of the intrastate high-speed rail system. The act also requires that the first segment of the system be developed and operated between St. Petersburg, Tampa, and Orlando with future service to Miami. To allow the authority to perform its duties under the act in the current fiscal year, $4.5 million in state funds was appropriated. The authority is required to prepare a report and submit it to the governor and the legislature by January 1, 2002.

Another aspect of intercity rail development in Florida is the Coast to Coast Rail Feasibility Study. Authorized by the Florida legislature in April 2000, the study was developed to assess the feasibility of a new high-speed intercity passenger rail route connecting Port Canaveral on Florida’s east coast to Tampa and St. Petersburg on the Gulf coast. The study, carried out by STV, Inc., under contract to the Florida Department of Transportation, concluded in a final report issued in June 2001. A phased implementation was recommended, beginning with a project connecting Orlando International Airport to Tampa Union Station with three intermediate stations at International Drive, Disney World, and Lakeland. Tampa and Orlando are combined bidders for the 2012 Olympic Games. The estimated capital cost for the system is $1.025 billion.

Additional information may be obtained on both projects by visiting the Florida Department of Transportation website: www.dot.state.fl.us. For the Florida High-Speed Rail Authority, click on the authority’s icon. For the Coast to Coast study, click on high-speed rail.

—Nazih Haddad
Manager, Passenger Rail Development Office
Florida Department of Transportation
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STATUS REPORT ON THE MAGLEV DEPLOYMENT PROGRAM

Since passage of the Transportation Equity Act for the 21st Century in 1998, the U.S. Department of Transportation has been engaged in the Maglev Deployment Program, designed as a competition among projects to plan and build the first maglev system in the United States.

In January 2001, the department selected projects in Maryland and Pennsylvania to continue to the next stage of the program. A Final Programmatic Environmental Impact Statement (EIS) was published in April 2001. The statement selected continuation of the program as the preferred alternative and identified the Maryland and Pennsylvania projects for continued evaluation and project development. The Secretary of Transportation may select one of these projects for possible design and construction on the basis of more detailed information. Any decision to proceed with the construction phase will be contingent on congressional appropriations and completion of a site-specific EIS for the selected project. The two projects, both of which are based on application of the Transrapid maglev technology, are described below.

• Pennsylvania—A 76-kilometer (47-mile) project linking the Pittsburgh Airport to Pittsburgh and its eastern suburbs. Besides providing rapid transportation within the Pittsburgh metropolitan region, the project sponsors aim to develop precision fabrication technology to implement maglev anywhere in the United States. The rugged physical terrain, a full four-season climate, and stops at an airport, downtown, and in the suburbs would demonstrate the full potential of maglev technology to provide service in a variety of environments. The project is seen as the first stage of a system that could eventually provide high-speed intercity service to Cleveland on the west and Philadelphia on the east.

• Maryland—A 64-kilometer (40-mile) project linking downtown Baltimore and Baltimore-Washington International (BWI) Airport to Union Station in Washington, D.C. This project would bring BWI to only 15 minutes from Union Station and take some of the pressure off Reagan National Airport, which has been operating at capacity. The project is visualized as the initial stage of a high-speed maglev system that could serve the entire Northeast Corridor and link to Charlotte, North Carolina. In the event the Baltimore-Washington area wins its bid for the 2012 Olympic Games, the system would provide rapid transportation between the sports venues in both cities and link to the airport.

The two project teams are sharing about $14.2 million in FY 2001 federal funding, to be matched by $7.1 million to secure financial commitments and to refine proposed plans, estimates of ridership and revenues, and environmental analysis. The information generated in this process will
enable the department to make a well-informed selection of a project and will form the basis for the site-specific EIS concerning the selected project. In recognition that the demand and revenue forecasts are key ingredients in the financial plans, each project is conducting a peer review of the demand forecasts under a committee consisting of both local planners and national experts. It is anticipated that early in 2003, the department will be in a position to select a single project and, later that year, on completion of the EIS, to make the decision to go ahead with construction, subject to a decision by the administration to request funding and by Congress to appropriate the funds.

Although not selected to participate in the current phase of the Maglev Deployment Program, the project teams in California, Florida, Georgia, Louisiana, and Nevada were encouraged to continue to develop their plans and to seek alternative sources of financing. To assist them, Congress earmarked $1 million in the FY 2001 appropriation for each of the projects.

Between now and 2003, the Federal Railroad Administration (FRA) will administer the planning grants and monitor the work of each of the project sponsors. In addition, since maglev comes under the jurisdiction of the Federal Railroad Safety Act, FRA must approve the design and operational plan for a maglev project through FRA’s safety rule-making process. During this period FRA will analyze these designs and plans from a safety assurance viewpoint. Since the Federal Republic of Germany has already conducted a similar process with regard to implementation of the same Transrapid maglev technology in Germany, the department has signed an agreement with its counterpart department in Germany to share safety-related information.

**Latest Developments**

Study continues on different elements of the scope of work under both projects.

Sponsors of both the Maryland and Pennsylvania projects have filed notices of intent to prepare site-specific EISs and have initiated a process with local agencies and the public to determine the scope of the studies to be undertaken.

Peer-review committee meetings on demand and revenue forecasting have been held for both the Maryland and Pennsylvania projects, and reports are being prepared recommending appropriate actions.

Meetings have been held between FRA and German Ministry counterparts to work out procedures for safety review, utilizing as much as possible the work done in Germany.

In the FY 2002 appropriations process, the administration recommended no funding for maglev since enough money is already available to complete the current phase of the program leading to selection of a single project.
project. In Congress, the House agreed with the administration, but the Senate recommended earmarks as follows: $2 million for the Maryland project, $2.5 million for the Pennsylvania project, $2 million for the Nevada project (which was not selected), and $0.5 million for the “Seraphim” technology, a Federal Transit Administration–funded research project. At this writing, the FY 2002 appropriation has not yet been resolved.

—Arrigo Mongini

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MIDWEST REGIONAL RAIL INITIATIVE UPDATE

The Midwest Regional Rail Initiative (MWRRI) is an implementation plan for a 3,000-mile high-speed rail system hubbed on Chicago. The ongoing work of the nine-state MWRRI Steering Committee is currently focusing on (a) updating capital and equipment cost estimates, (b) updating and refining MWRRI feeder bus system recommendations with input from Greyhound, (c) updating MWRRI plan ridership and revenue forecasts with 2000 census and other data, (d) addressing ridership and revenue impacts of food service and first-class options, (e) providing ongoing technical assistance to states on implementation activities, (f) addressing freight capacity issues related to the introduction of passenger service on corridors owned by freight railroads, and (g) developing recommendations to address ongoing institutional/management issues. This work will result in a formal update of the MWRRI plan in July 2002.

The MWRRI states cooperated with the Chicagoland Chamber of Commerce on a “High-Speed Rail Summit” held on November 8 in Chicago with representation by chambers throughout the Midwest region. The purpose of the summit was to develop support within the business community for MWRRI and federal funding to implement it.

The states of Wisconsin and Illinois have worked cooperatively with Amtrak on the procurement of 13 train sets specifically designed for high-speed corridor service in the Midwest. The train sets will be used for MWRRI Phase I service in the Chicago–St. Louis, Chicago–Detroit, and Chicago–Milwaukee/Madison Corridors. The specification has been developed, an RFP issued, and proposals received. Negotiations are continuing with two vendors—Talgo and Siemens—pending action on federal funding legislation.
Illinois has begun track rehabilitation work in the Chicago–St. Louis corridor between Joliet and Springfield. The rehabilitation work being performed by Union Pacific crews will bring the track up to Class 6 standards, allowing speeds of up to 110 mph. Illinois has also continued to sponsor the $60 million North American Joint Positive Train Control Project, along with the Association of American Railroads and the Federal Railroad Administration (FRA). This project is focused on developing and demonstrating a nationally applicable positive train control system for speeds of up to 110 mph in the Chicago–St. Louis corridor.
Michigan, Amtrak, and FRA are continuing to test an Incremental Train Control System in the Chicago-Detroit corridor. Building on previous Michigan infrastructure investments in the corridor, this project has a goal of revenue service at speeds of up to 90 mph with conventional Amtrak equipment early in 2002 and speeds of up to 110 mph with new MWRRI equipment.

Indiana has completed a series of seven high-speed rail public outreach meetings. The meetings were well attended, and public comment was almost entirely positive. Indiana continues to work closely with Amtrak, Michigan, and freight railroads on the “South of the Lake Corridor Study.” The purpose of this study is to identify the best way to route passenger trains through southern Chicago and northwest Indiana—one of the most highly congested areas in the nation. Indiana has also sought and received federal high-speed rail corridor designation of the Indianapolis-Louisville corridor as a part of the Chicago Hub Network.

The Minnesota Department of Transportation is pursuing a $10 million capital budget request for preliminary engineering and environmental documentation in the Minnesota portion of the Twin Cities to Chicago corridor.

Ohio has sought and received federal high-speed rail designation of the Chicago-Cleveland and Cleveland-Columbus-Cincinnati corridors.

Missouri has also received federal high-speed rail designation for the St. Louis to Kansas City corridor. The Missouri Department of Transportation is seeking a budget appropriation of $6.3 million to begin preliminary engineering and environmental studies in that corridor. Station improvement projects are planned or in the process of development in Kansas City, Sedalia, Kirkwood, and St. Louis.

Wisconsin has completed its environmental assessment and preliminary engineering work for 110-mph service in the Milwaukee-Madison corridor. An RFQ/RFP has been issued for a public-private venture to rehabilitate and improve the Milwaukee Amtrak station. A $100,000 preliminary engineering and environmental assessment study has also been initiated for an anticipated $5 million passenger rail station at the General Mitchell International Airport in Milwaukee.

This is just a sample of the many passenger rail planning and implementation activities ongoing in the MWRRI states. For more information contact Randall Wade, Chair of the MWRRI Steering Committee, by phone (608-266-9498) or e-mail (randall.wade@dot.state.wi.us).
The inscription over the door at California State Office Building 1 at the state capital reads, “Send me men to match my mountains.” The inscription over the door at the Division of Rail in Caltrans headquarters could just as easily be inscribed, “Send me trains to match my coast.”

Passenger train travel is surging throughout California, with more trains, more stations, and more options than Californians have had in decades, and that means more rolling stock. Responding to that demand, the Caltrans Division of Rail has placed orders for 20 state-of-the-art intercity rail cars and six new diesel-electric locomotives for use on Amtrak’s California trains. The new cars, purchased from Alstom Transportation, Inc., a global transportation and electrical equipment manufacturing company, will operate on the Pacific Surfliners, Capitols, and San Joaquin trains.

The new cars, known as Surfliners, are the second generation of California Cars, the popular bi-level intercity rail cars built for Caltrans between 1992 and 1995 by Morrison Knudsen Corporation. In addition to the Caltrans cars, Alstom assembled 40 Surfliners for Amtrak for use on the Pacific Surfliners (formerly known as the San Diegans), which operate between San Diego, Los Angeles, Santa Barbara, and San Luis Obispo. The 20 Caltrans Surfliners will follow the Amtrak cars through the production line.

Featuring bright, airy interiors, seating on two levels, reclining seats, power outlets for laptop computers, restrooms on both levels, and twin pairs of electrically operated doors for rapid loading and unloading, the Surfliners will be built in four configurations:

- Cab-baggage-coach, which includes a lower-level storage area for checked baggage and an upper-level cab control compartment for push-pull operation;
- Café-coach, with seats upstairs and a food service café downstairs serving snacks, beverages, and light meals;
- Pacific business class coach, an all-reserved extra-fare coach with audio and video entertainment centers at each seat and complimentary juice, coffee, snacks, and newspapers; and
- Trailer coach, with seating on two levels.

The cars will operate in five-car sets in the Pacific Surfliner service with each train having a cab-baggage coach, café-coach, Pacific business class coach, and two trailer coaches.

Ten of the 20 Caltrans cars will be combined with the 40 Amtrak Surliners for service in Southern California. The other 10 Caltrans Surliners (five cab-baggage-coaches and five trailer coaches) will be deployed in the Oakland equipment pool, where, along with the 66 California Cars, they will be used for expanded service on the Capitols and San Joaquin trains. These “Caltrans North” cars will incorporate features found on the California cars.
Cars, such as extra tables for business travelers and families, wheelchair lifts, and an expanded checked baggage area on the San Joaquins. The baggage area will also feature flip-up shelves and bike racks for 13 bicycles when the cars are operated on the Capitols (which do not offer checked baggage service).

The cars will wear the dark blue and orange paint found on the California Cars and will feature reflective striping and lettering for higher night visibility.

The Surfliners, like the California Cars before them, use a stainless-steel structure engineered to exceed 365,000-kg longitudinal static end force strength, as well as crashworthiness standards recently imposed by the Federal Railroad Administration. The shells are assembled in São Paulo, Brazil, using stainless-steel spot-welding technology pioneered in the 1930s by the Budd Company of Philadelphia.

To provide power for the new trains, the Division of Rail has ordered six new F59PHI diesel-electric locomotives from the Electro-Motive Division of General Motors. Virtually identical to the nine F59PHIs now owned by the department and operated on the Capitols and San Joaquins, the new 3,000-horsepower units feature electronic fuel injection; a separate head-end package to power the train’s lights, air conditioning, and other electrical systems; reduced emissions for clean operation; and the streamlined “swoopy” design first developed by Caltrans and Electro-Motive. The Electro-Motive Division will build the new Caltrans locomotives at Alstom’s Hornell, New York, plant.

The locomotives will also feature a remote health-monitoring system using onboard computers to warn automatically of an abnormal condition or potential failure of any system or component. The warning system, funded by a federal grant, will reduce locomotive failures and lower repair costs.

Caltrans inspectors played a major role in the development and manufacture of the California Cars; that experience is paying off as the rail program prepares to undertake inspection activities for the new cars and locomotives. During production, Division of Rail staff travel to the Hornell and Schenectady facilities to perform inspections, tests, and certifications to ensure that the new equipment meets all design and performance specifications, contractual requirements, and safety regulations.

Production of the new cars started in January 2001 and will continue for more than a year, with a finished vehicle coming off the assembly line, on the average, every 2 weeks. The new locomotives began rolling off the shop floor in late summer 2001.

—Warren Weber
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PARTNERS KEY TO RAIL SERVICE IN PUGET SOUND CORRIDOR

Intercity rail service in the Cascade Corridor linking Eugene and Portland, Oregon; Tacoma and Seattle, Washington; and Vancouver, British Columbia, in Canada has experienced significant expansion since 1999. The earlier pattern of three daily Cascades round-trips between Portland and Seattle and single daily round-trip between Seattle and Vancouver has been expanded with the addition of two daily trips between Eugene and Portland and a daily round-trip between Seattle and Bellingham, Washington. Amtrak’s Los Angeles–Seattle Coast Starlight also serves the corridor between Eugene and Seattle. Cooperative efforts among Amtrak, the Oregon Department of Transportation, the Washington State Department of Transportation (WSDOT), Burlington Northern Santa Fe (BNSF), and Union Pacific in the Eugene-Portland-Seattle-Vancouver corridor were described in the July 2001 issue of this newsletter.

Within Washington State, the corridor has taken on new meaning. In 1996, voters in the three metropolitan counties on the east side of Puget Sound approved the creation of a new regional transit agency [the Central Puget Sound Regional Transit Agency, known as Sound Transit (ST)] and provided local tax support for a multifaceted approach to meeting regional needs. Enhanced regional express bus service, light rail in Seattle and Tacoma, and an 82-mile commuter rail line connecting the three counties were all part of the “Sound Move” initiative. Sounder commuter trains began operating two round-trips on weekdays between Tacoma and Seattle using Bombardier bi-level cars and EMD locomotives in a push-pull configuration in September 2000. These commuter trains are the beginning of a new tier of passenger rail service overlaid on the existing intercity passenger services for 82 miles in Central Puget Sound between Everett and Lakewood.

Plans

The WSDOT Intercity Rail Passenger Program calls for an increase in Cascades train frequency from the present three daily round-trips to 13 daily round-trips between Seattle and Portland, and from one to four round-trips between Seattle and Vancouver by 2018. Running times will be significantly reduced from the current 3 hours 30 minutes to 2 hours 30 minutes on the Seattle-Portland segment and from 3 hours 55 minutes to 2 hours 57 minutes on the Seattle-Vancouver run.

ST’s goal is to operate Sounder commuter trains on the 82-mile route between Lakewood and Everett by 2005. Sounder trains will ultimately provide up to 15 round-trips on weekdays between Seattle and Tacoma and nine round-trips between Seattle and Everett, in addition to intercity passenger trains currently operated by Amtrak and BNSF freight.
trains. A third Sounder route will run between Tacoma and Lakewood, a fast-growing suburban community 9 miles to the south of Tacoma and adjacent to McChord Air Force Base and Ft. Lewis, a major U.S. Army installation.

Partners

Successful implementation of WSDOT and ST plans in the 82-mile shared-use corridor linking Everett, Seattle, Tacoma, and Lakewood requires close cooperation among four operating partners. The partners are collaborating on implementing a new corridor program management approach to ensure that the many projects under way or planned in the corridor move ahead in a timely and cost-effective manner.

• BNSF owns and maintains track and signal systems and stations in Seattle, Edmunds, and Everett; station sites elsewhere; and the maintenance facility site in Seattle. BNSF also operates Sounder commuter trains, including the provision of train and locomotive crews. BNSF is a financial partner in the corridor and under contract to the other partners is carrying out all track and signaling improvements. Dispatching of all trains (intercity, commuter, and freight) is also handled by BNSF.

• Amtrak operates intercity passenger trains, some as part of its basic national network and others under contract agreements with WSDOT. Two of the Talgo train sets used in the Cascades services and the Coast Starlight Superliner train sets are owned by Amtrak. Amtrak provides maintenance and cleaning of intercity and Sounder commuter trains at its Seattle facility. Intercity train stations in Tacoma, Seattle, Edmunds, and Everett are also operated by Amtrak.

• WSDOT owns two sets of Talgo equipment operated in the Eugene-Portland-Seattle-Vancouver corridor, provides operating funds for some of the intercity trains, develops and implements intercity rail plans, and provides funds for track and signal upgrading and station improvements for intercity services. WSDOT has invested $125 million in corridor services and improvements and projects that an additional $400 million will be needed to complete its intercity rail program between Portland, Oregon, and the U.S.–Canada border.

• ST will invest more than $700 million in commuter rail service capital needs in the 82-mile corridor. Bi-level commuter cars and diesel electric locomotives have been purchased to operate Sounder trains. All commuter rail-only stations will be built and maintained by ST. ST is the lead agency on environmental analysis for the corridor, is providing the largest share of funds to improve track and signal systems, and is contracting out operations and maintenance of commuter trains. ST also coordinates feeder bus services with local transit agencies and with its own regional bus services.
Projects

For organizational purposes the Puget Sound Corridor has been divided into three segments.

• Seattle-Tacoma improvements are under way. BNSF is carrying out track and signal upgrades under contract to ST. These include adding centralized train control to those route segments where it does not currently exist, improving interlockings at key operational choke points, adding universal high-speed crossovers, and building two short segments of third main track. King Street Station, shared by intercity and commuter trains, will be rebuilt through a partnership between WSDOT and BNSF and other private-sector partners. ST and Amtrak have recently opened a joint temporary station at Tukwila. New commuter rail stations have been built by ST at Kent, Auburn, Sumner, and Tukwila. Amtrak, ST, and WSDOT have jointly funded and are building a new maintenance facility and coach yard in Seattle. Grade-crossing elimination and improvement projects are being carried out by WSDOT. Track and signal improvements are being carried out in three phases. Completion of each phase will allow an increase in the number of weekday Sounder trains in each direction between Seattle and Tacoma to 3, 9, and 15 trains, respectively.

• Seattle-Everett environmental reviews have been completed, and final engineering is under way. ST will fund track and signal improvements that are focused on providing additional capacity for the planned commuter rail service expected to begin in late 2003 or early 2004. Track design is being carried out so as not to preclude expanded intercity rail passenger service planned by WSDOT and Amtrak. Five short single-track segments will be doubled. Several universal high-speed crossovers will be installed. Track and signal work will be carried out by BNSF crews or contractors. A new multimodal transportation center in Everett, to be used initially by Amtrak, Greyhound, Northwest Trailways, and local transit agencies, is expected to open in mid-2002. Modifications to the Edmunds Amtrak station will allow double-tracking and provide for commuter rail platforms and bus transit service. New commuter rail stations are planned at Mukilteo, Richmond Beach, Ballard, and Broad Street in downtown Seattle. The Edmunds and Mukilteo stations are adjacent to Washington State Ferry terminals, where service is provided to and from Whidbey and Bainbridge Islands.

• Tacoma-Lakewood is the most complex of the segments in the corridor. It is the only segment that does not currently have passenger train service. This segment involves the use of the municipally owned Tacoma & Eastern Railway (T&E) for a short distance to access Freight House Square, a historic building currently used as an antique, craft, and food service mall, which will become the Tacoma Sounder station when commuter rail service is inaugurated. The route also incorporates the major portion of a BNSF branch line from Tacoma through Lakewood to Nisqually, where
it rejoins the BNSF main line. Two short new segments of track will have to be constructed: one from the BNSF main line just north of downtown Tacoma to the T&E; the other will connect the T&E to the BNSF branch, thereby providing a route that will initially be used for Sounder trains to serve the other two commuter rail stations at South Tacoma and Lakewood. The Lakewood station site is near McChord Air Force Base and the U.S. Army installation at Ft. Lewis.

A draft EIS and preliminary engineering have been completed. WSDOT plans to upgrade the segment of the BNSF branch line from Lakewood south to Nisqually for high-speed service. When that upgrade is completed, Amtrak intercity trains will be rerouted to this new line, known as the Point Defiance Bypass. Use of the new line will save 15 minutes in Cascades running time between Seattle and Portland. At that time, Amtrak will also move its passenger station to Freight House Square. ST hopes to complete the portion from the current BNSF mainline to Freight House Square, a distance of just over 1 mile, in late 2003 and extend Sounder commuter service to Lakewood a year later.

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