

California Rail News

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High Speed Rail Gets Real



by Richard F. Tolmach

At its May 6 board meeting, the High-Speed Rail Authority (HSRA) signalled a change in direction, hiring a CEO with solid industry credentials and rail experience on three continents. Roelof van Ark, 58, begins work at HSRA June 1 following a career with rail and aviation technology work in South Africa, Germany, China and the United States.

The leadership change has been long awaited. It was first expected in late 2008 following passage of Proposition 1A when former Executive Director Mehdi Morshed told his board he wanted to retire.

The urgency of change grew this year, as financial and technical underpinnings of the high-speed rail project began to unravel, following harsh questions on project details by the Legislative Analyst, UC Berkeley Institute of Transportation Studies, and the California State Auditor. (see Page 2 for Audit Summary).

Ironically, van Ark arrives just as Bay Area rail supporters including Member of Congress Jackie Speier (D-S.F.) have begun to express doubts about feasibility of the current HSRA financial plan. The Authority faces a \$30 billion gap in funds, too large to be bridged by federal grants.

Credibility with banks and the rail technology industry is precisely what the politically-driven California project has lacked, but requires in order to attract serious levels of private investment.

Van Ark is well-regarded by industry sources and has nearly 30 years of experience in engineering and management positions with rail industry firms. He has been a senior private-sector executive following extensive international rail construction and carbuilding experience.

For the past five years, he served as president of Alstom Transportation Inc., the North American subsidiary of the French company that builds high-speed trains used in France, Italy, Spain, Belgium, and the United Kingdom.

Prior to that, he worked with a GE subsidiary on airline security systems and had a 20-year stint with Siemens AG, where he worked on German high-speed rail projects, a Chinese transit project and most recently ran the firm's Sacramento rail car assembly plant.

"With his diversity as a manager and as an engineer, he brings the highest level of competency to our project," HSRA Chairman Curt Pringle said. "Roelof van

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Alstom train at Marnou-le-Moines approaches end of 205 mph operation segment on French LGV-Est about 48 miles from Paris. Photo by Alain Stoll

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NEW HSRA CEO

(continued from Page One)

Ark is the world-class manager and engineer we need to take the reins of this project and turn the promise of high-speed rail into reality for the people of California."

Due to his international rail work, van Ark is used to "P3" turnkey or design-build-operate projects in which private capital takes a major risk, and therefore has an incentive to design a cost-effective project. This contrasts with the public works model followed by HSRA to date in which public agencies define the project and are saddled with any cost overruns. P3 models require heavy involvement by operators and investors at an early stage, something that has been entirely missing in California planning to date.

Political backers of the project have been shocked to learn that investors are critical of the 100+ excess miles of route inserted into the Bay Area-Los Angeles project. Inefficient route design is a fundamental problem for investors because it might prevent the California system from ever becoming profitable.

Many observers remain skeptical that van Ark can reform the project. However, his appointment at least suggests that HSRA is ready to listen to what industry has to say and accept a reality check on what has been a spending program without a financially viable project.

AUDIT REPORT: HSRA RISKS DELAYS INADEQUATE PLANNING, WEAK OVER-

Summary by the California State Auditor

The Authority's 2009 business plan estimates it needs \$17 billion to \$19 billion in federal funds. However, the Authority has no federal commitments beyond \$2.25 billion from the American Recovery and Reinvestment Act of 2009 and other potential federal programs are small.

The Authority's plan for spending includes almost \$12 billion in federal and state funds through 2013, more than 2.5 times what is now available.

The Authority does not have a system in place to track expenditures according to categories established by the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, its largest source of committed funding.

The Authority has not completed some systems needed to administer Recovery Act funds, for example, a system to track jobs created and saved.

Some monthly progress reports, issued by the Authority's contracted Program Manager to provide a summary of program status, contain inconsistent and inaccurate information.

Authority staff paid at least \$4 million of invoices from regional contractors received after December 2008, without having documented written notification that the Program Manager had reviewed and approved the invoices for payment.

The Authority paid contractors more than \$268,000 for services performed outside of the contractors' work plans and purchased \$46,000 in furniture for one of its contractor's use, based on an oral agreement contradicted by a later written contract.

RESULTS IN BRIEF

The Legislature created the High-Speed Rail Authority (Authority) in 1996. State law charges the nine-member Authority with the development and implementation of intercity, high-speed rail service. According to state law, the entire network, from Sacramento to San Diego, is intended to be complete by 2020. In November 2008 voters approved the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century (Proposition 1A), providing \$9 billion for construction of a high-speed rail network (program).

Although the Authority's 2009 business plan contains the elements required by the Legislature, it lacks detail regarding how it proposes to finance the program. For example, the Authority estimates it needs \$17

billion to \$19 billion in federal grants. The business plan, however, specifies only \$4.7 billion in possible funds from the American Recovery and Reinvestment Act of 2009 (Recovery Act) and a few other small federal grants. According to its communications director, the Authority has no definite commitments from the federal government other than Recovery Act funding, which actually amounted to \$2.25 billion when awards were announced in January 2010. The program risks significant delays without more well-developed plans for obtaining or replacing federal funds.

Further, the Authority's plan relies heavily on federal funds to leverage state bond dollars through 2013. Proposition 1A bond funds may be used to support only up to 50 percent of the total cost of construction of each corridor of the program. The remaining 50 percent must come from other funding sources. Thus, the award of up to \$2.25 billion in Recovery Act funds allows for the use of an equal amount of state bond funds for construction, for a total of about \$4.5 billion. However, the Authority's spending plan includes almost \$12 billion in federal and state funds through 2013, more than 2.5 times what is now available. Additionally, creating a viable funding plan may be a challenge as matched funding for the least expensive corridor eligible for Recovery Act funds—Los Angeles to Anaheim—amounts to \$4.5 billion, while projected costs total \$5.5 billion. Barring additional non-Proposition 1A funding, the Authority may have to settle for a plan covering less than a complete corridor. The Authority must decide relatively quickly which corridors will receive federal funds. Its chief deputy director says it must prepare funding plans by spring 2011 in order to meet federal deadlines.

The Authority's plans for private financing include a revenue guarantee that needs further specification, but it is working to improve its approach to risk management. According to the 2009 business plan, the Authority expects private investors to supply \$10 billion to \$12 billion, but also indicates these investors will require a minimum revenue guarantee from a public entity. The Authority's financial planning consultant has addressed concerns raised by the Legislative Analyst's Office that this might be a prohibited operating subsidy; however, details on how much the revenue guarantee may cost or who might pay it are scant. Additionally, the 2009 business plan provided little detail on how the Authority would manage risk in general, but the Authority is planning to improve

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risk management for the program.

The Authority also needs to improve its oversight and administrative controls. State law creates a peer review group (review group) to assess the Authority's plans. Most significantly, the review group is to issue an analysis and evaluation of the viability of the Authority's funding plan for each corridor of the program. As of February 2010, however, only five of the group's eight members had been appointed, limiting the expertise available to the Authority. Moreover, according to our legal counsel, the review group is likely subject to the Bagley-Keene Open Meeting Act (Meeting Act), although the Authority has received informal advice to the contrary. Nevertheless, the review group's work could be voided if this issue is not resolved.

Additionally, the Authority lacks systems to comply with state law regarding bond funds. According to state law, only up to 2.5 percent (\$225 million) of its portion of bond funds from Proposition 1A may be used for administration and only 10 percent (\$900 million) may be used for planning, environmental review, and preliminary engineering (preconstruction tasks). According to its fiscal officer, the Authority is unsure how it will classify the expenditure of bond proceeds and does not have a system for tracking expenditures by category. Until such a process is in place, the authority cannot report accurately on its expenditures and risks running out of bond funds available for administration or preconstruction task costs. This is a serious problem because it is set to have spent \$168 million of the \$1.1 billion in bond proceeds authorized for these purposes by the end of fiscal year 2009-10.

Contractors accounted for 95 percent of the program's total expenditures over the past three fiscal years. Although the Authority generally followed state requirements for awarding contracts, its processes for monitoring the performance and accountability of its contractors—especially the entity that has been contracted to manage the program (Program Manager)—are inadequate. The Program Manager's monthly progress reports, a primary document summarizing monthly progress on a regional and program level, have contained inaccurate and inconsistent information. For example, the July 2009 report indicated that the regional contractor working on the Los Angeles-to-Anaheim corridor had completed 81 percent of planned hours but had spent 230 percent of planned dollars. In addition, although the progress reports described actions taken or products created, they did not compare those actions and products to what the contractors promised to complete in their work plans. The work plan for a consultant the Authority recently hired to oversee the Program Manager does not include a review of the monthly reports.

The Authority does not generally ensure that invoices reflect work performed by contractors. According to the chief deputy director, the Program Manager should review each regional contractor's invoice to ensure that the work claimed actually has been performed and then notify Authority staff whether the invoice should be paid. The chief deputy director further stated that staff should not pay invoices without notifications. However, Authority staff paid at least \$4 million of invoices from regional contractors received after December 2008—when the Authority's fiscal officer says she was informed that such notifications were required—without documenting notification. The Authority only recently adopted

written policies and procedures related to invoice payment. However, those policies and procedures do not adequately describe its controls or their implementation.

Finally, the Authority made some payments that did not reflect the terms of its agreements, risking its ability to hold contractors accountable for their performance. For example, it spent \$46,000 on furniture for its Program Manager's use based on an oral agreement, despite the fact that its written contract expressly states that oral agreements not incorporated in the written contract are not binding. The written contract requires the Program Manager to provide its own furniture, equipment, and systems. Additionally, the Authority paid a regional contractor more than \$194,000 to subcontract for tasks not included in the regional contractor's work plan and paid the Program Manager \$53,000 for work on Recovery Act applications, which was also outside the Program Manager's work plan.

RECOMMENDATIONS

To ensure that it can respond adequately to funding levels that may vary from its 2009 business plan, the Authority should develop and publish alternative funding scenarios that reflect the possibility of reduced or delayed funding from planned sources. These scenarios should detail the implications of variations in the level or timing of funding for the program and its schedule.

To plan adequately for private investment, the Authority should further specify the potential cost of revenue guarantees and who would pay for them.

In order to respond effectively to circumstances that could significantly delay or halt the program, the Authority should ensure that it implements planned actions related to risk management.

To avert possible legal challenges, the Authority should ensure that the review group adheres to the Meeting Act or seek a formal opinion from the Office of the Attorney General regarding whether the review group is subject to this act.

To ensure that it does not run out of funds for administrative and preconstruction tasks prematurely, the Authority should track expenditures for these activities and develop a long-term spending plan for them.

To ensure that Authority staff receive relevant information on the program's status, they should amend the program management oversight consultant's work plan to include a critical review of progress reports for accuracy and consistency. Authority staff also should ensure that the Program Manager revises its progress reports to include information on the status of promised products and services.

To determine if it is paying invoices that accurately reflect work performed, the Authority should ensure that staff adhere to controls for processing invoices. For example, staff should not pay invoices from regional contractors until they receive notification from the Program Manager that the work billed has been performed, or until they have conducted an independent verification.

To ensure that it does not misuse public funds and can hold contractors accountable, the Authority should adhere to the conditions of its contracts and work plans, and make any amendments or modifications to contracts or work plans in writing. For full report, see <http://www.bsa.ca.gov/reports/agency/160>

Coast Observations

THE COUP AT THE APRIL 8 HSRA meeting that saw Orange and Los Angeles Counties take back control of HSR planning on the L.A.-Anaheim reasserted the locally preferred plan of shared track upgrades on the existing BNSF right-of-way. Citizen activism against insensitive HSRA plans on the route led to the takeback. Now activists along the Caltrain right-of-way want similar influence over state HSR plans... TRANSIT AGENCIES in late March got a slight funding reprieve, with approval of a one-time allocation of \$400 million for the State Transit Assistance (STA) program to provide relief for operations funding through Fiscal 10-11. Subsequent years will see \$350 million go to the STA pot. The funding crisis was precipitated by proposed removal of \$1 billion annually in state gas tax funds from transit. The original "gas tax swap" plan by the Governor would have gutted all state transit funding. Legislative leaders have crafted a substitute package which retains the diesel sales tax and devotes it 75% to local transit operations and 25% to intercity projects, but the Governor still is threatening veto of that measure... METROLINK UNVEILED its first two Crash Energy Management (CEM) enabled cars from Hyundai-Rotem and previewed the interiors for the press at its new Inland Empire Eastern Maintenance Facility in San Bernardino. The cars feature crash zones that absorb impact at each end of the cars, enhanced bumpers to absorb, balance and dissipate force from an impact, couplers that absorb energy and help keep cars in line and upright, as well as work tables designed to dissipate the force of a collision. The cars are the first of a fleet of 117 that will be put in service later this year... CALTRAIN CEO MIKE SCANLON told Peninsula business leaders that its loss of \$10 million in annual state funding and a decline in ridership may cause the agency to have to cut back service or even shut down, if electrification of the railroad and new equipment costing \$2 billion are not approved. Scanlon claimed that electrification could cut the railroad's multi-million dollar deficit in half. This is news to other regional passenger rail operators who remain skeptical about electrification, and are pursuing new local sources of operating support to save service... AMTRAK REPORTED record ridership for the first six month of its fiscal year ended April 1. Long-distance ridership led the increase, up 16 percent in March. Amtrak cited efforts to improve staffing, food service and amenities. On the Coast Starlight, for example, Amtrak upgraded sleeping cars, enhanced room service, retrained employees and reintroduced full china service in the dining car. Amtrak California services lagged the long haul trend ... SENATOR JAMES R. MILLS, creator of the San Diego Trolley and the California rail program, has recovered from surgery after a fall and is feeling well enough that he provided a story on Page 8...

NEW METROLINK CEO IS QUICK TO REFOCUS STAFF ORGANIZATION

JOHN E. FENTON PLANS TO IMPROVE SAFETY, TRAFFIC

On April 3, Metrolink's board hired a freight railroad executive with broad rail industry experience to replace David R. Solow, the agency's former CEO. Following a nationwide search for candidates, the passenger railroad named John E. Fenton as its new chief executive.

Most recently, Fenton was the operating partner of CIH Capital Partners, a full service investment bank. He also previously served as President/CEO of OmniTRAX Inc., a Denver-based short line and railroad services provider. He previously was Vice-President at Canadian National Railway and Vice-President at Kansas City Southern, two of the most respected freight operations in North America.

Fenton reported for work April 16 and by May had already carried out an agency reorganization that created more of a market-driven structure. Fenton also rapidly focused on areas where cost savings were possible, identifying shutting down idling diesels as a reform that could both save money and reduce air emissions. Good relations with air quality agencies are important in Southern California, especially with Metrolink's aging fleet of diesels.

At his second board meeting on May 14, Fenton remarked that he is looking forward to providing the best service possible. A report from operations manager Gray Crary made note that the Operations Morning call has been restructured under Mr. Fenton's guidance to look at initial terminal delays. Crary reported that the May results to date were 680,000 passengers with an average on-time performance of 95.7 percent, significantly improved from prior months.

Fenton told the board that it is important to recognize that Metrolink service impacts the lives of passengers and it is important to refocus and rededicate to customers. He also indicated he is looking forward to working with staff and reenergizing the group and their collective wisdom.

At the unveiling of the new crash energy management cars last month in San Bernardino, Fenton told attendees, "Metrolink has an exciting future. Safety will always be our number one value and we are setting a higher benchmark for public safety by continuing to harness cutting-edge technology and innovation."

Fenton continued, "Moving forward, we will also adopt new practices to reinforce our value through new initiatives in customer service, efficiency, environmental and financial stewardship. Together with our employees, contractors, labor leaders, regulators such as the Federal Railroad Administration and California Public Utilities Commission and the communities we serve, we can position Metrolink as the gold standard for commuter rail transportation across the nation."

Fenton takes over Metrolink at a challenging time for the agency. The 5-county organization has had recent financial problems that nearly forced service cutbacks. Metrolink is also transitioning from an operating contract with Connex to a new one starting in late June with Amtrak as the operator. Unions have pushed back against some of Amtrak's demands such as psychological testing of drivers.

Meanwhile, the organization has been struggling to obtain funding to implement positive train control, one of the safety goals of Metrolink board members including Chairman Keith Millhouse and Los Angeles County representative Richard Katz.

REDESIGNING METROLINK FOR MASS MARKET SUCCESS

PAIRING TRAINS ACROSS PLATFORMS FOR MATCHED DEPARTURES COULD BOOST REGIONAL RAIL MOBILITY

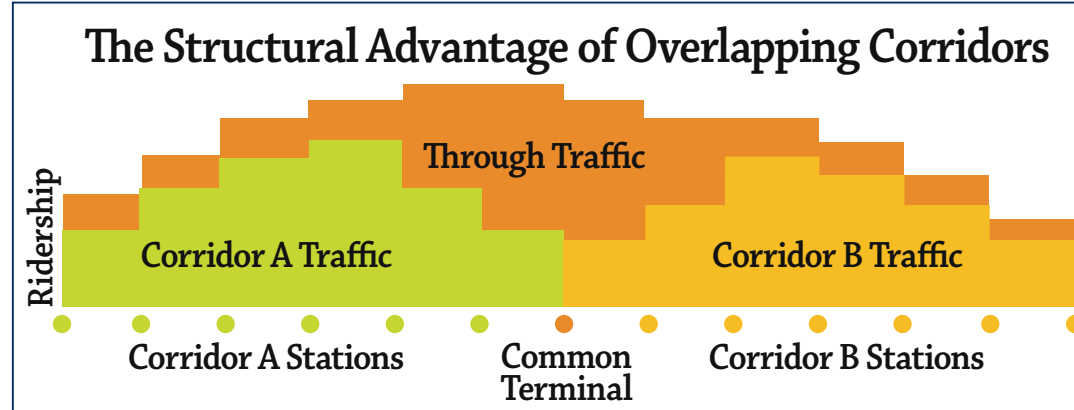
Opinion by Richard F. Tolmach

The first railroader I ever heard advocate use of Los Angeles Union Station as a timed-transfer hub for commuter trains was Carl Englund, the New York Central veteran whose 1972 route surveys for SCAG provided the planning basis for Metrolink.

Englund cited his 1945 experience as stationmaster at Frankfurt Hauptbahnhof and his later experiments aligning schedules of RDC cars at a regional hub in White River Junction, Vermont as evidence the practice works well at big hubs and small alike.

Englund held that timed connections could exponentially increase regional travel by rail, by the synergy created by mobility in multiple directions. His studies for SCAG and Caltrans have long been neglected, but were invaluable in identifying productive new services, because they used objective measures such as corridor population, population per mile, efficiency of equipment use, and relative performance of existing services.

His later work for Caltrans successfully predicted that services which spanned regional metropolii end-to-end would outperform city center to city center trains, and identified suburban-to-suburban travel as a significant element in successful performance.



Most North American rail successes owe a lot to Englund and his contemporaries who carried out service experiments on the New York Central, Illinois Central and Canadian National in the mid-1960's, and later applied lessons learned to the Northeast Corridor and GO Transit.

The passenger rail revival that centered on commuter routes and short-distance corridors was marked by a number of failures and revisions of technique. Consequences were swift. Railroads which could not stem their financial losses had to abandon service, and passenger staff lost their jobs. It was not immediately obvious which services would succeed, and until the late 1970's, there were few good examples to emulate, and not much of an industry knowledge base.

GOING BEYOND DOWNTOWN TERMINALS

One of the strongest lessons, painfully learned by New York Central when it disrupted its through traffic, is that overlapping travel corridors are key to revenue success. Even when a weak travel corridor is joined end-to-end with another corridor, it can contribute tremendously to system throughput and revenues. This is because the ridership of each corridor is overlaid with trips between the two corridors. Another way of seeing the effect is to count city pairs, which increase exponentially with extensions. Revenues are particularly benefitted because the new city pairs produce longer trips.

Because of its financial benefits, the technique of "through-routing" or overlapping corridors was applied repeatedly in the 1970's. For example, the Northeast Corridor owes much of its traffic and



financial success to the 1969 takeover of the New Haven passenger service by the Penn Central.

Penn Central, wanting connecting traffic on its services west of New York, diverted all Boston trains to Penn Station so passengers could continue to Philadelphia, Baltimore and Washington. By the late 1970's, Amtrak had replaced virtually all Boston-New York trains with Boston-Washington trains because through runs produced better ridership and revenue than connecting stub trains.

One of the less obvious factors in the success of these extensions is the role of inner suburban stations in the traffic growth. Residential communities in Connecticut and New Jersey are key in producing originating trips, and compared to the friction of having to traverse New York with transfers, through Northeast Corridor trains became very attractive.

The 1968 implementation of GO Transit in the Toronto area, the first new commuter service in North

America in several decades, is another touchstone for regional rail. It showcased on a metropolitan level many features now considered key to modern service: clock headways, push-pull operation, and through-routing. Almost all trains on its Lakefront line run suburb to suburb, instead of terminating downtown.

GO Transit has been exceptionally productive, and does not limit its service to peaks. It manages to support hourly frequencies from 5:15 am to midnight on its Lakeshore Main Line. Outer segments have dedicated bus feeders that fill in for trains outside the peak periods, creating a 90 mile zone of hourly service across much of urbanized Ontario.

THROUGH-ROUTING ON THE SURFLINERS

Amtrak's experience on the Pacific Surfliner Corridor since the early 1990s has verified that the overlapping corridors concept is applicable to Southern California. After testing the viability of Santa Barbara extensions with buses in the early 1980's, Caltrans was ready to see what train extensions could accomplish.

The extension of San Diego-Los Angeles service to Santa Barbara was implemented one round trip

at a time starting in 1988. Through trains proved to be have a higher revenue/cost ratio than the stub trains they replaced. Additional extensions were made in 1990, 1994, and 1995, and for a brief period, Amtrak's plan was to use all available resources to extend the remaining Los Angeles-San Diego turns at least to Chatsworth. This plan was forgotten by 1996, to the detriment of the program, and Amtrak and Caltrans reverted to adding stub trains which have degraded the efficiency of its service.

On the Surfliner Corridor there is a 10-fold range of loss per passenger-mile. The strongest services are those that traverse the entire Los Angeles Basin. The weakest are those that do not.

The superior financial performance of the trains running through Los Angeles is not a fluke of scheduling; it is structural. When dissected into segments, the LA-SD revenue on the six Santa Barbara through trains in 2007 was almost identical to the local LA-SD runs. However, incremental revenue from extensions beyond LA was 30 percent higher, approaching break-even in the San Fernando Valley, due to high-value through trips.

APPLYING THESE LESSONS TO METROLINK

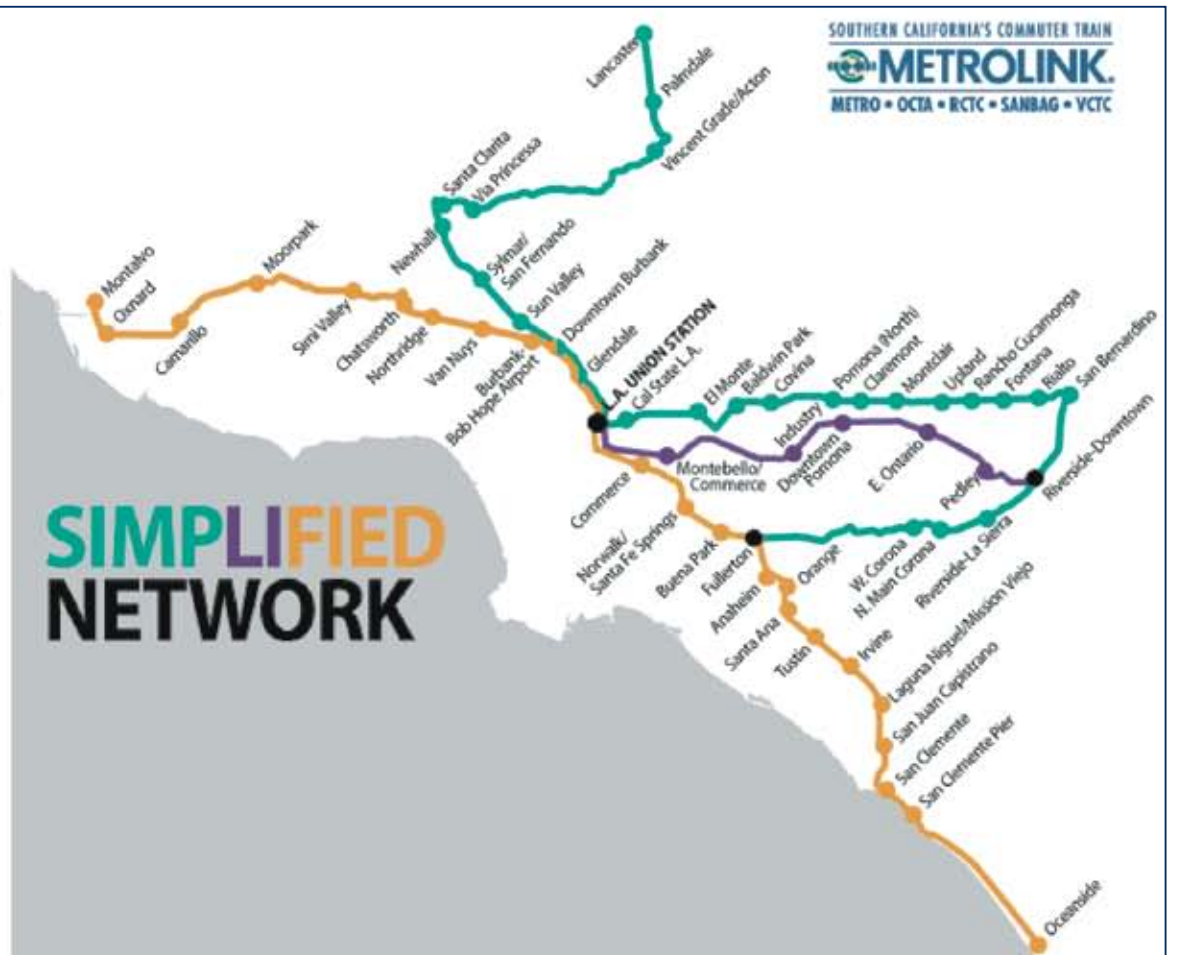
Metrolink can obtain the same revenue benefits as Amtrak's Northeast Corridor, GO Transit, and the Pacific Surfliners by replacing stub trains terminating in Los Angeles with services running through without subjecting passengers to delay. End-to-end mergers of its strongest Los Angeles routes could make two lines providing through cross-town journeys, for example linking Chatsworth to Laguna Niguel and linking Santa Clarita to San Bernardino.

The change will help ridership. Chatsworth-Los Angeles may be anemic today, but it connects only 42 city pairs. Los Angeles-Laguna Niguel has 90 city pairs. However, linking Chatsworth through to Laguna Niguel produces 272 city pairs.

Because a third of the crew roster works less than five revenue hours, Metrolink can extend the hourly pattern on its San Bernardino Line to Santa Clarita without the prohibitive cost of new crews. There also appears to be scope for some matching headways on a merged Ventura/Orange line.

Further progress will depend upon addressing crew coverage, equipment staging and a more general reform of crew rotations, which have yet to be worked out. It may take several years for the agency to be able to accomplish such tasks. However, to the extent that Metrolink can align its trains for matched cross-platform departures, it can create the right dynamic for increased mobility and exponential traffic growth throughout the region.

Simpler Network Design Adds Reliability and Interactivity



ACE SETS PLANS FOR AN UPGRADE



**By Robert Reynolds
TRAC Board Member**

The Altamont Commuter Express (ACE) began passenger service at the end of 1998, when the dot com boom in Silicon Valley really took off. The San Joaquin Regional Rail Commission manages the service and Herzog Transit Services operates the line on 86 miles of Union Pacific (UP) Railroad track.

UP dispatches these trains in Omaha. The launch of the ACE service followed eleven years of development work, including passage of San Joaquin County Measure K (half-cent sales tax for transportation) in 1990. The 86 miles traverse San Joaquin, Alameda and Santa Clara Counties. All three counties participate in the Commission management and provide operating funds.

ACE initiated weekday only peak service with two morning departures from Stockton through the Tri Valley (Livermore, Pleasanton, Fremont) to Silicon Valley and back in the evening. Service eventually expanded to four trains a day, but the sparsely used mid-day fourth trip was recently eliminated to save \$700,000. Ridership has been up to 4,000 daily, about a million passengers a year.

The dot com boom became the dot com bubble and finally the dot com bust just two plus years after ACE launched. Silicon Valley business contracted dramatically and perhaps such an ominous downturn could have sunk ACE, as it was designed for commuters to and from Silicon Valley. But ACE survived. And now ACE has survived the recent deep and persistent housing bust so far by only cutting the superfluous midday train.

What is in store next for ACE? *California Rail News* recently sat down with ACE Executive Director Stacey Mortensen and Strategic Development and Communications Coordinator Thomas Reeves to look at the future of this vital link. The key to understanding the future of ACE is that its 90 mile network cuts through some of the most congested highway territory in California and is the better solution to the almost continuous gridlock on those roads. The projects proposed for improving East Bay transit woes involve ACE as a major backbone.

ACE is planning an ambitious and comprehensive upgrade by partnering with California High Speed Rail Authority and using some Proposition 1A funds. Long-range ACE objectives are "to transform the existing ACE service into a robust intercity and commuter service with frequent trains (20 minute headways) operating in both directions all day long." (from an Altamont Corridor Project Goals presentation) and maybe weekend service.

Phased improvements will cut trip times in half. The first hurdle is that ACE needs its own right of way (90 mph service / cutting 30 schedule minutes per trip).

The second step anticipates that ACE would replace current equipment sets with bidirectional lightweight diesel multiple unit trainsets (110 mph / cutting 30 more minutes). The last piece is complete electrification and interoperability on high-speed rail tracks in the San Joaquin and Sacramento valleys from Manteca (125 mph / additional 20 minutes cut).

CRN asked Reeves for a notional schedule and he said "the First Phase could begin in as early as three years depending on the completion of an Environmental Impact Report." The CAHSR and ACE are working jointly on the EIR/EIS for the Altamont Corridor.

The benefits of an independent physical plant include scheduling flexibility and higher speeds, as the present average is a leisurely 45 mph.

An added cost, Mortensen said "is the need to perform maintenance of way activities and build a maintenance of way facility. ACE could partner with HSR to coordinate the Northern California maintenance of way effort." The table below compares the speed increases and the potential maintenance costs of each.

Speed (MPH)	ROW Maint. Costs (\$/mi)	Travel Time (now 2:10)
90	42K	1:40
110	50K	1:10
125	60K	0:50
220	140K	N/A

Mortensen estimates that ACE will spend upwards of \$200+ million to acquire right of way and develop smaller initial

ACE at Diridon. Photo: Robert Reynolds

segments of the corridor. When asked about adopting the old Southern Pacific Railroad line, she noted that as yet UP has not been interested in selling any of the routes and the SP routing through Niles Canyon makes that part of the line unsuitably constricted for ACE expansion. The "de novo" plan is studying another way through the range but no clear choice has emerged.

Phase 2 includes trainset buys and, more importantly and costly, complete grade separation on the whole route. This step could involve a more incremental funding profile tailored to the grade separation schedule.

Mortensen notes that "...ACE will follow its historical pattern and buy off-the-shelf equipment, piggybacking on someone else's order to benefit from economies of scale."

Some of the expansion may be timed with the opportunity for pooled equipment purchases. CalTrain provides a good model and the two railroads communicate continuously and extensively.

Finally, ACE will achieve full electrification in the last phase and, it is hoped, use HSR rails along the 99 corridor. Service could extend to Sacramento and Fresno but that has not been decided. HSR and ACE teams are researching the interoperability problems mixing 125 and much speedier trainsets to understand how scheduling constraints will be relaxed.

Big plans. Big money. Plenty of questions. Many risks to be mitigated. But, plenty of foreseeable benefits to the public that increasingly suffers the extensive highway congestion through the Tri Valley area.

What do the ACE customers think about these plans? Frankly, CRN was surprised at how few were even aware of them. To note that customers maintain a fierce loyalty to ACE mostly understates the case. Most appreciate the alternative to driving in the congestion so any schedule or frequency improvements receive high marks. ACE management occupies an enviable position: they won't have to do much to sell their program to their riders and can only expect more riders as the system grows.

Experts Revive Altamont as HSR Option

MTC RIDERSHIP PROJECTIONS CHALLENGED

By David Schonbrunn

Three citizen groups working together filed a series of reports in late April as comments on the Revised Draft Bay Area Central Valley Program Environmental Impact Report, which the High-speed Rail Authority (HSRA) intends to use to replace the defunct 2008 EIR.

One of the reports, authored by the French rail engineering firm Setec Ferroviaire, finds the Altamont route technically feasible, thereby preventing the Authority from using the legal tricks it employed in the past to avoid objective consideration of Altamont.

The California Rail Foundation, the Transportation Solutions Defense and Education Fund, and the Planning and Conservation League filed the expert reports in an attempt to overturn the selection of the Pacheco Route as a preferred alternative, despite its negative environmental impacts upon species in the Hamilton Range and Pacific Flyway.

The HSRA's predecessor agency, the California High-Speed Rail Commission, had found the Altamont route (the I-580 Corridor) to have higher ridership, lower environmental impacts and lower construction costs than the Pacheco Route. Nonetheless, for the past ten years, the Authority's choice for connecting the Central Valley to the Bay Area has been the Pacheco Route.

The Authority did not even evaluate the Altamont Route in its 2005 Statewide Program EIR. Legal pressure forced the Authority to compare the two routes in its 2008 Program EIR, which was overturned after a challenge by the groups. As a result, the Authority has still not legally chosen which route its trains will take in getting from the Central Valley to the Bay Area. The Alternatives Analysis process now underway assumes a Pacheco Route, but that work is irrelevant if Altamont is chosen instead.

The Setec Ferroviaire consultant team, with major experience designing and managing construction of high-speed rail lines in France, found in its report that "The Altamont route will provide an improved rail corridor between the northern San Joaquin Valley and the Bay Area to support passenger service between the Bay Area, the Tri-Valley area, and the Northern San Joaquin Valley. In addition, this route will offer a travel alternative that is competitive with the travel costs and time of auto, intercity bus and regional air modes. ... For the operation of a high-speed rail service, the route through Altamont has many more advantages than the Pacheco plan."

Expert evidence of feasibility will be crucial in preventing the Authority from again rejecting the Altamont Route. Environmentalists prefer the Altamont Route because it:

- Avoids the Grasslands Ecological Area, California's largest fresh water wetlands complex;

- Avoids inducing new sprawl in Santa Clara and Merced Counties;
- Provides attractive rail service linking the Bay Area, Stockton, and Sacramento, with most trips less than an hour;
- Addresses highway congestion on Interstates 80, 880, 580, and 680;
- Adds mobility between the Bay Area and the northern San Joaquin Valley;
- Generates much higher ridership than the Pacheco Route, because it serves the East Bay and the northern San Joaquin Valley, with 2 million more residents within 10 miles of stations.

On May 6, the three groups and two cities announced the filing of a legal action in Sacramento Superior Court seeking to reopen the Court's decision on their 2008 challenge to the Bay Area-Central Valley EIR issued by HSRA.

The petition is based on discovery of new facts in the case: the recent disclosure of details of the ridership and revenue analysis not previously made public by HSRA. The ridership projections used by the Authority as the basis of its selection of the Pacheco Pass route did not come from the ridership model that had been peer-reviewed and fully documented.

Instead, the final model was significantly different from the published one. A memo from the model developer, Cambridge Systematics, announced that the Metropolitan Transportation Commission, under contract to HSRA to manage the development of the model, had "elected not update the Task 5a report nor to include the final coefficients and constants in the final report."

The three groups, working with the Town of Atherton and the City of Menlo Park, contend that failure to disclose the actual numbers used in the ridership model deprived the public of the right to comment on the reasonableness of the model and its resulting projections. They are asking the Court to order HSRA to respond to comments about the flawed ridership modeling.

Hundreds of millions of dollars in environmental studies are now underway whose justification depends on the validity of the ridership projections. The Authority's Business Plan as well as its claim of profitable high-speed rail operation are based on the flawed model. The Business Plan findings that Merced, Gilroy and Anaheim interregional boardings equal or exceed those of Los Angeles are clearly unreasonable.

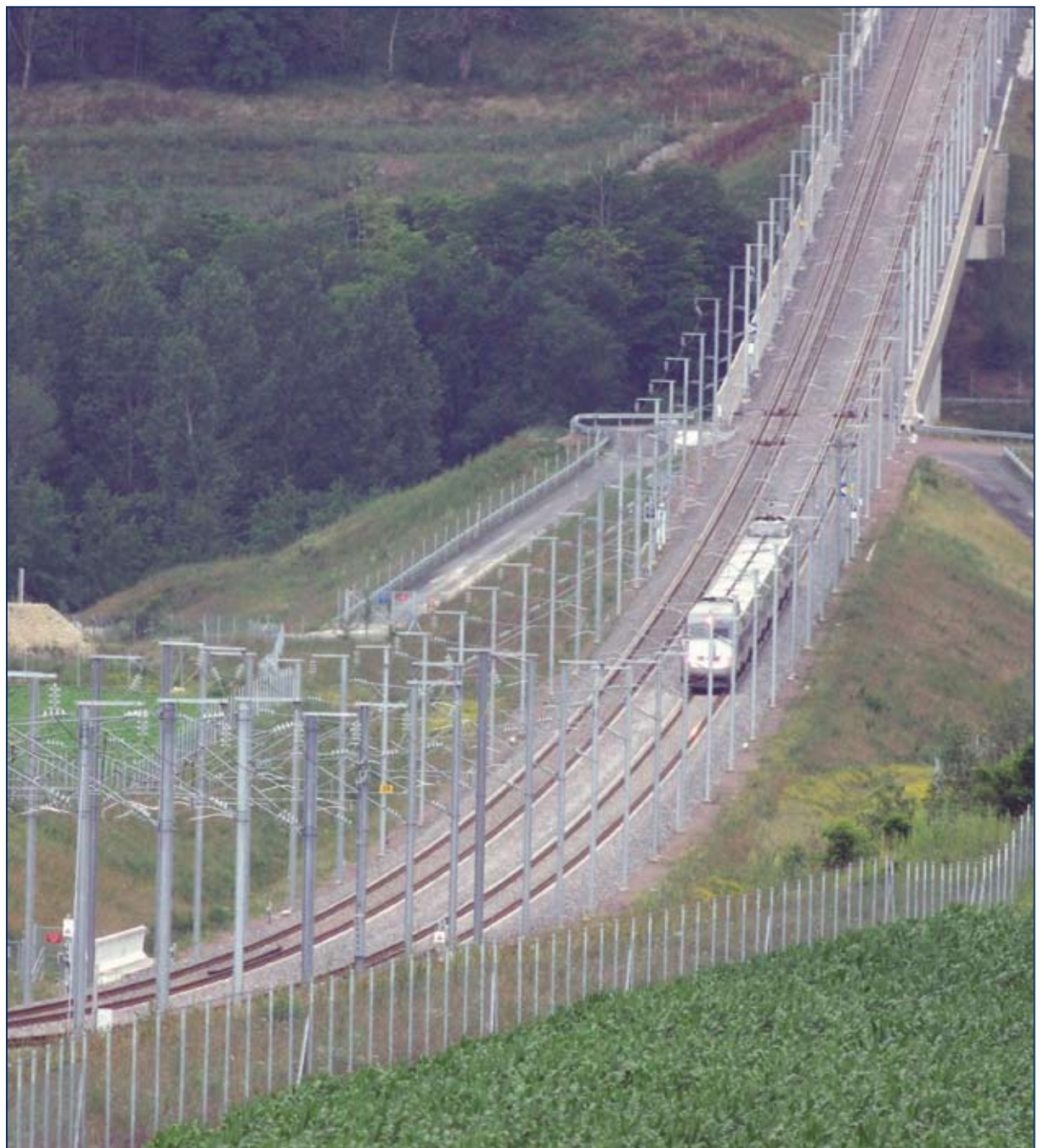
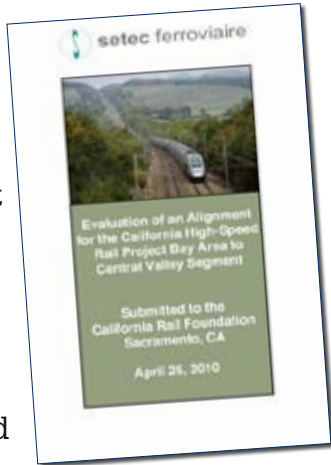
The groups hired a transportation consultant who reviewed the documentation and concluded that the final coefficients and constants were different from the published numbers in the model documentation and were invalid.

In his report, Norman Marshall of the Smart Mobility modeling firm wrote that "These numbers make absolutely no sense and cannot be justified by the model development process."

The documents filed with the Court are available on-line at:

www.transdef.org Click on the High-Speed Rail tab, then the Ridership Challenge tab to see the documents.

Setec designed the alignment for the 205 mph LGV-Est. Photo by Alain Stoll



BURIED TREASURE IN DOWNTOWN L.A.

Opinion by James R. Mills

A treasure of enormous potential value is buried under downtown Los Angeles. It is the old Pacific Electric subway station and what is left of the subway tunnel into it. They were opened in 1925 to bring trains from Glendale, Burbank, Hollywood and the San Fernando Valley and Santa Monica into the center of the city.

The management of the Metropolitan Transit Authority ordered the designers of the Red Line subway to put the mezzanine of its Pershing Square station at the same level as the mezzanine of the Pacific Electric station. The new station is just thirteen feet from the old one. MTA management wanted to make it possible to connect them and make of them one big station. The idea was to provide that option in case of a future decision to use the remaining segment of the old tunnel for some new rail service.

The old subway station had five stub-end tracks and five platforms and was used to turn hundreds of trains a day back out into the western reaches of Los Angeles. It now could be reopened and served by light rail trains from throughout the region, because the downtown connector tunnel now being planned will go north from Metro Center (7th & Flower Streets) under Flower Street and cross what remains of the old tunnel between Fourth and Fifth Streets. If the new tunnel is built at the same level as the old one an interchange could be built to send trains into it east to the old terminal.

The operating plan presently being discussed for the downtown connector tunnel will have Long Beach to Pasadena trains run right through it. The expressed intent is to do away with any need on the part of passengers for a transfer.

A serious problem with that operating plan is that the demand for service is very different on those two lines. Presently three times as many passengers ride the Long Beach line as ride the Pasadena line. In the future that differential may diminish but will probably never disappear.

Service must reelect demand. Because fewer trains are required to serve the patronage north of downtown, not all of those Long Beach trains should be run an additional thirty miles out through Pasadena to the end of the now approved Gold Line eastern extension in Montclair. Savings from sending fewer trains onward would be substantial.

THE ALTERNATIVE VIEW

CRN welcomes alternative viewpoints by transit leaders. Such pieces do not represent official positions of TRAC or CRF but serve to present a range of options facing transit professionals.

The PE subway station appears to be a perfect location to turn some Long Beach line trains back. Long Beach trains running through to Pasadena could be reversed out of the Pacific Electric terminal the same way local trains from Hamburg to Wedel in Germany are reversed at an off-line station on that line.

Many people from Pasadena arriving downtown Los Angeles will want to transfer to the Red Line. That transfer will be more expeditious at a Pacific Electric-Pershing Square station than at Union Station or Metro Center.

Metro Center transfer facilities are already overcrowded and will become even more so when traffic from the East Los Angeles, Pasadena, and Expo lines and subway extensions is added.

Trains on the new East Los Angeles and Expo lines might be run through the new cross town connector without turning them into the Pacific Electric tunnel and station. Passengers could transfer to and from those lines at any of the stations in the new tunnel. When the Expo line is extended out to Santa Monica patronage will increase greatly. That will also be true of the East Los Angeles line when it is extended to Whittier. It may then be well to terminate some trains from one or the other of those lines downtown.

Another advantage to using the old Pacific Electric station is that its location will generate patronage on the Pasadena line. There is a lot going on around Pershing Square, and additional rail service might encourage even more activity. Furthermore, passengers coming in on the Long Beach line would not have to transfer at Seventh and Flower to get to Pershing Square as they do now.

Another advantage is that the Pacific Electric terminal would provide flexibility. If a collision with a motor vehicle or a derailment or any breakdown delays trains on the Pasadena line or on the Long Beach line, the trains on the other line could be terminated at the Pacific Electric terminal and be turned back there. That is to say, the two lines could be run separately if the need should arise.

Finally, the cost of replacing the Pacific Electric station and tunnel would be enormous. It would be a pity not to examine the advantages of again using such a valuable asset.

In the past the MTA required that the Pershing Square station of the Red Line be put at the level of the Pacific Electric station to make a connection possible in the future. That decision was an intelligent one. If the MTA now decides not to build a connection from the new connector tunnel into the old Pacific Electric tunnel and station as a part of the first project it should show the same level of intelligence as it did years ago. It should put the new tunnel at the same level as the old one so an interchange could be added in the future if experience with the operation of the light rail system shows that to be advantageous or even necessary.

The trains coming into Los Angeles from Long Beach run six minutes apart. Sending those trains on to Pasadena will result in their running over forty miles. No light rail system in the world tries to run trains six minutes apart over a line forty miles long that has only two tracks.

Putting the East Los Angeles to Santa Monica trains into the same tunnel downtown will result in trains running three minutes apart in each direction, and trains on both lines will inevitably be delayed in traffic on the streets before they get into the tunnel. Train operations in the new tunnel will be a problem, perhaps a very serious one.

The downtown connector facility as currently planned lacks flexibility to provide turnbacks and risks becoming a bottleneck because of the frequency and of services planned to use it.

At the very least the option of future flexibility should be preserved. Not to do so now would be foolish.

James R. Mills was president pro tempore of the California state senate from 1971 to 1980. He was chairman of the San Diego metropolitan transit agency from 1984 to 1994 and chairman of the Los Angeles-San Diego rail corridor agency from 1984 to 1994.

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