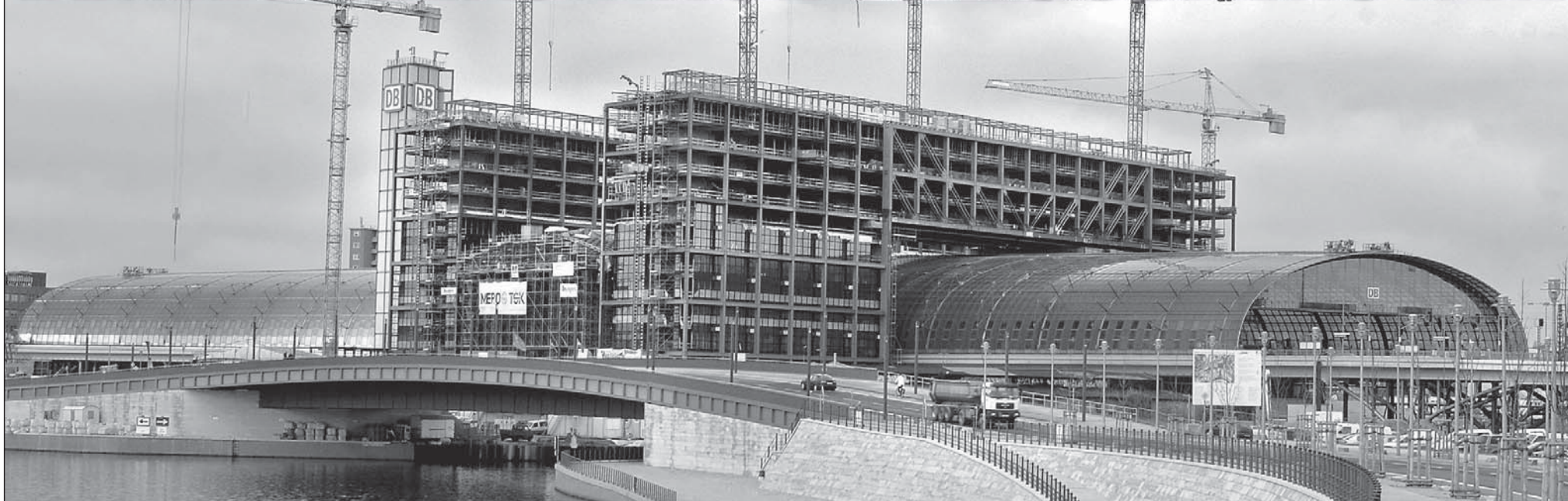


BERLIN MEGASTATION TO BOOST GROWTH



By Richard F. Tolmach

After eleven years of construction, Berlin arguably has Europe's best passenger rail hub. The \$900 million Berlin Hauptbahnhof (main railway station) opened at the end of May, the final piece in a set of projects to "overcome the divisions between east and west," as Hartmut Mehdorn, chair of Deutsche Bahn put it.

The station does not just serve local or regional trips, but links east-west trains coming from as far as Paris and Moscow with north-south trains linking Scandinavia and the Mediterranean. Its structure and finance owe a lot to recent junction station projects in Amsterdam, which proved the case that four-way connections plus local transit and retail could justify the costs of a megastation.

For over sixty years, its site at the Lehrter S-Bahn station was the center of a no-man's-land, a forgotten neighborhood of demolished buildings and little activity in the middle of crowded Berlin. The only trains that stopped there were East-West S-Bahn trains linking the main West Berlin station at Berlin-Zoologischer Garten with the East Berlin border station of Berlin-Friederichstrasse.

The fall of the Berlin wall, caused everything to be rethought. In 1992, German transportation planners chose Lehrter as a site for a long-needed Berlin central station. The vacant land surrounding Lehrter was the factor that gave it a lead on Berlin-Zoo or other competing locations. Lehrter had enough land to obtain paths for subway and highway tunnel routes, high-speed rail routes, as well as a major shopping development.

In 1993, the Hamburg architectural firm Gerkan, Marg and Partners (gmp) won a design competition for the facility. Despite the strategic location of the site, construction was neither fast nor easy. The River Spree bisects the site and its aquifer permeates the soil. During construction, the course of the Spree had to be diverted for two years.

A good deal of the cruciform multi-level station is 50 feet below ground level. The project includes four north-south tubes for

long-distance and regional services and two in a separate alignment for Berlin subway routes, in addition to a major road tunnel. Construction began in 1995 on the Tiergarten tunnel, and the last station tunnel was not finished until 2005.

Above the submerged platforms, there are several levels of shopping, which add up to a couple of football fields of space.

In 2001, construction began for the upper deck of the station, 30 feet above ground. It consists of three curved parallel elevated platforms on structures that span the entire length of the station plus the adjacent Humboldthafen port. The difficulty of this part of the project may have been one of the main causes of the project going \$250 million over budget.

Local accounts call the station a "glass cathedral," because the upper deck has a glass-topped trainshed spanning 1.5 million square feet of tracks and platforms. The glass incorporates UV protection, as well as an installation of transparent photovoltaic cells. Light from the trainshed penetrates to the underground platforms 80 feet below.

However, as lavish as the design appears, it was originally planned to be more so. The chief architect, Meinhard von Gerkan, took Deutsche Bahn to court when the construction management of the project chose to replace the planned glass domes of the underground concourse with a more frugal steel ceiling.

Atop the structure is perhaps the most remarkable engineering feat. About a half million square feet of office space has been created above the tracks on a structure independent of the trainshed. Construction of the offices began with a pair of towers installed at the site last year. After the towers were ready in July 2005, a set of structural steel frames, each weighing 1370 tons, was lowered into place by crane. Tolerances on the 250 foot bow frames left about a spare inch on each side, to be filled after the frames were set.

On opening day of May 28, just weeks before the start of the World Cup soccer championship, the Berlin region also adopted a new service structure, using Hauptbahnhof as a central connecting point for local and regional trains. Visitors to the Berlin events in

July report that service ran smoothly, despite the crush of thousands of soccer fans.

The station currently has about 1100 departures daily, including 620 local trains, 314 regional services and 164 long distance trains. Berlin Hauptbahnhof has been designed to comfortably handle a daily traffic of 300,000 passengers.

The project has not been without controversy. Deutsche Bahn has antagonized some existing Berlin passengers by running high speed ICE trains via the fast new Tiergarten tunnel rather than via the Stadtbahn through West and East Berlin, reducing travel time by as much as 20 minutes, but forcing a longer trip to the new central station for access.

The service change is seen by some as a ploy to boost shopping revenues at the new Hauptbahnhof. The removal of ICE service at Berlin Zoo and Berlin Ostbahnhof (East Station) has been quite unpopular, both for its

practical effects and its symbolism of removing high quality train services from existing built-up business districts.

Regional and national connectivity gains probably outweigh these concerns.

Also, the new megastation has another strong set of symbolic meanings. It is the capital station, purposely located within easy walking distance of the Chancellor's Office, Bundesrat and other primary ministries of Germany's government.

The new capital station raises the profile of Deutsche Bahn nationwide, and makes it more likely that politicians and bureaucrats, as well as citizens, will use the train for their travel to and from Berlin.

If California decisionmakers had equal understanding of the statewide value of strategically located downtown stations, we would be decades ahead of where we are in the development of our passenger railroads.



Both photos © DB AG

California remains without its first viable railroad hub. Even at Los Angeles Union Station, railroad services compete as much as they connect, and the combination of delays and sparse schedules punish passengers who try to use two brands of service together.

The best money California could spend would be grants to reward rail operators who coordinate their scheduling and routing.

This is nowhere more obvious than the fuzzy plans for near-connection of the Capitol Corridor, ACE, BART and Caltrain in

Fremont. Instead of having a single hub station, every carrier seems to be doing its own thing, so at least three different projects are on the books for Fremont or Union City (off the ACE line) connections, each underfunded, and each inadequate.

A better answer is a single transfer point, with an intercity rail platform directly under and perpendicular to a BART platform. Add San Joaquin-Dumbarton-S.F. service to the mix and California could have its first mega-success in rail. **Richard F. Tolmach**

SO CAL RAIL UPDATE

by Kenneth Alpern, M.D. and Numan Parada

Summer 2006 was a challenging time for passenger rail service in the Southland. Disappointments abounded and policy disasters were thinly averted. In the end, faced by the threats to service, agencies and local activists worked together to bring more passenger rail to California.

PUSH-PULL BAN AVERTED

In response to the tragic Metrolink January 2005 accident in Glendale, California State Assemblymember Dario Frommer (D-Glendale) authored AB 1699, a bill that would have prohibited "push-mode" operations on state commuter rail services. After careful research, the *Los Angeles Times* editorially opposed the bill.

With huge campaign donations from "Special Interest Law Firms" litigating against Metrolink and other commuter rail agencies to secure passage of AB 1699, the bill would have imposed substantial operating costs increases that would be passed along to users in the form of higher fares, but would not make commuters any safer. A new FRA Study released on June 26 reaffirmed the safety of push-pull operations.

Fortunately, the California State Senate Committee on Housing and Transportation rejected the bill on June 27. Instead, the Committee approved an amended bill that directs UC Berkeley to perform a rail safety study that included push operations.

METRO LOOKS AT NEW LINES

One very positive event took place on Thursday, June 29, when the Los Angeles County Metro Board voted for a package of Major Investment Studies for various transportation projects that may be built should voters in November approve the state infrastructure bonds. Projects to be studied include the Downtown Regional Connector, which would connect the Gold Lines to the Blue and Expo Lines through Downtown L.A., the Wilshire Red Line extension, and rail from Union Station to LAX and the South Bay via the Harbor Subdivision. Even better news, Metro reached a contract agreement between labor and management. This was the first time in decades that Metro and the labor unions agreed to new contracts before existing ones expired.

One issue that had been a thorn in L.A. transit policy during the summer was the naming of the Exposition Light Rail Line. LA Councilmember and Metro Board director Bernard Parks stomped for his idea of naming it the "Expo Line" and giving it the color rose. In response, Friends4Expo co-chairman Darrell Clarke explained that the color rose is more often associated with Pasadena, which houses the Rose Bowl and the Rose Parade. Action on the matter was postponed from the June Metro Board meeting until August, when the board deadlocked on the choice of color. It may be several years until the route color issue is revisited again.

One much-sought improvement in Los Angeles is bringing the Green Line to the airport. LAX director Lydia Kennard recently dismissed the idea as costly and not worthwhile, since the FlyAway bus service from Union Station carries more airport travelers at a smaller cost, whereas mostly airport employees use the existing Green Line and connecting shuttle. LA City Councilmember Bill Rosendahl nevertheless introduced, and the Los Angeles City Council unanimously approved, a motion that would bring back the LAX/Metro Green Line Interagency Task Force, which worked more than a decade ago to bring the light rail line to the airport. Local activists have been working with the council-member to advocate for an extension of the

Green Line past LAX to Venice and Santa Monica.

METROLINK EXPANSION

Metrolink launched regular weekend service on the Orange County Line starting on June 3 for Saturday service and July 2 for Sunday service. Metrolink also launched permanent weekend service on the Inland Empire-Orange County line on July 15. The commuter rail service previously offered seasonal "Beach Train" service between the two areas on weekends. To celebrate, several stations staged "free rides" for passengers throughout the summer. The new service has received praise from passengers. Orange County Transportation Authority, which is funding the service increase, hope that the new services will attract recreational riders, as opposed to the commuters it normally caters.

Anaheim Mayor Curt Pringle, county supervisors and the Orange County Transportation Authority reached a tentative deal to build one of the largest transit centers in Southern California. The City of Anaheim and OCTA expect to buy 13.5 acres of land surrounding the Anaheim Metrolink/Amtrak station at \$32.5 million. The transit center will house a major bus terminal and provide a parking garage, mixed-use development, and more track space for a future high-speed rail system.

Meanwhile, plans to expand Metrolink to new areas are afoot. The San Bernardino Associated Governments held a workshop to discuss with residents future Metrolink service to Redlands. The Riverside County Transportation Commission will launch a study on building commuter rail between Temecula and San Diego. The rail line would prove especially challenging to build, since no railway exists between the two cities, largely due to the mountainous terrain, apart from a small railroad right-of-way that was washed out in the 1930s.

The Orange County Board of Supervisors unanimously endorsed a plan to ask voters this November to extend Measure M, the local transportation sales tax, to 30 years. The existing Measure M will expire in 2010. The Orange County Transportation Authority subsequently approved the plan in July.

SPRINTER BUDGET HIKE

The San Diego Association of Governments voted to increase funding for the Sprinter project due to unforeseen increases in construction costs. Delays in securing federal funds for the project and approval from the state Public Utilities Commission also were noted. Cities along the route opposed the boost since it didn't ensure that mitigation for the line would be implemented as promised. Completion of the project is expected by December 2007.

DESERTXPRESS

DesertXpress, a privately-financed conventional intercity rail project that would use European technology to connect Victorville with Las Vegas via dedicated passenger-only tracks, moves forward with the launch of an Environmental Impact Statement study.

In a recent scoping meeting, Barstow Mayor Lawrence Dale expressed disappointment that the DesertXpress will not serve his city even though Barstow sits right in the path of the service.

This article appears courtesy of the Transit Coalition, a Southern California based non-profit organization dealing with land use and transportation mobility issues. Kenneth Alpern, M.D. is President and Numan Parada is Communications Director. More info at www.transitcoalition.org

THE FUNCTION OF THE JUNCTION

It was Carl Englund, first postwar station master of Frankfurt Hauptbahnhof, who took the time to explain to me the power of hub stations to multiply ridership.

Englund said that he learned in Germany and later running the New York Central's network, that hub stations are key. He believed connecting stations with reliable pulse connections could have an exponential effect on ridership, far beyond the impact of

adding additional trains on a single line.

On one of his visits to the Caltrans rail program in the mid 1980's, he decried the fact that California, with all its potential for rail traffic couldn't manage to put so much as a pair of intercity or commuter lines together with timed connections.

Eventually, his pioneering work on Los Angeles commuter rail was implemented in the 1990's, but more than a decade later,