

BART Breaks Ground

The official date for the start of construction was June 19, 1964, with President Lyndon B. Johnson presiding at the groundbreaking for the laying of 4.4 miles of track between Concord and Walnut Creek.

The Heart of BART

The heart of BART lies in a tube in a trench, 135 feet below the surface of San Francisco Bay at its deepest point.

The Transbay Tube is not only an engineering achievement. It symbolizes the very essence of the BART concept. The concept of an under-the-Bay tube had been around for many years. In October, 1920, Major General George W. Goethals, the builder of the Panama Canal, made his public proposal for building such a tube "in order to solve the acute transportation problems facing San Francisco and the East Bay communities." Goethals' proposal envisioned a two-level tube to accommodate automobiles, trucks and trains.

The alignment of Goethals' tube is almost exactly the same as the alignment taken by BART's Transbay Tube. The tube consists of 57 steel and concrete sections, constructed on the west side of the Bay and floated to a spot above their designated position on the floor of the Bay. The sections were lowered into place into a trench, 70 to 100 feet deep, which was dredged out of the Bay bottom between Oakland and San Francisco. The first section was placed in position in February 1967, and the last in April 1969.

The Transbay Tube cost \$180 million, every dime coming from automobile tolls on state bridges crossing the Bay.

Now, on this warm, sunny day in September, large crowds gathered at BART's Lake Merritt Station in Oakland and at 11 other stations along 26 miles of track from Fremont in Southern Alameda County to MacArthur Station in North Oakland. The crowds were there to ride the new system and to hear opening day speeches from various dignitaries who had traveled from near and far to be on hand for the new system's launching.

At precisely 12 noon, following the ceremonies, BART's General Manager at the time, B. R. Stokes, declared the system open and eight two-car trains began circulating along the line. Gertrude Guild, of Oakland, then inserted her ticket into the automatic fare gate at the Lake Merritt Station and walked through into the station to

become part of BART's history as its very first paying passenger. By the end of the first week, the system had carried 100,000 passengers.

Another major milestone was reached with the opening of the 34th station, the station that was not part of the original plan—the Embarcadero Station, one of the busiest stations on the system today. It was an afterthought, paid for by the local business community, redevelopment money, and some money from IUSD. It is hard today to imagine BART without the Embarcadero Station.

Over the next seven years a great effort was put forth to correct the technical glitches. Gradually, after many modifications to the equipment, the system was performing well and ready to move ahead with further improvements. However, on January 17, 1979, a train fire in the Transbay Tube changed BART forever. It resulted in BART assessing its overall safety program, and replacing the seats, the interior walls and floors of the cars, and making numerous modifications to the plan and facilities. BART invested over \$40 million in the program. But when the major modifications were completed, BART's worst critics were calling the system the safest in the world today.

In 1980 BART reached another milestone when it finally opened the long-awaited direct service between Richmond and San Francisco/Daly City which in fact was the introduction of close headways (running trains closer together). That is, BART had solved many of its early technical problems that now allowed it to operate trains at less than one station apart instead of no less than one station apart as had been the case.

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Whole World is Watching

BART's initial run that September morning was not just a local event. Members of the media from across the nation and around the world were on hand with local journalists to witness and record the occasion. One local newspaper summed it all up with a cartoon which showed BART peaking out sheepishly from behind a curtain. The caption read: The Whole World is Watching. And so it was. After all, BART was the first all-new rail rapid transit system to be built in the United States in almost 60 years. It was in fact a new pioneer in ground transportation. And it would serve as the model for future new systems, such as those in Washington, D.C., and Atlanta, Georgia.

President Rides Train

On September 27, President Richard Nixon took a ride on the new system, praising it highly as paving the way to the future. He also announced a \$27 million grant to purchase additional cars. BART's initial order from Rohr Corporation, the builder of the first BART cars, was for only 250 vehicles. BART ordered 200 more white cars from the first order were still coming off the assembly line.

In January 1973, the Richmond line was opened, the Concord line in May 1973, the intra-San Francisco Service form Montgomery to Daly City in November, 1973. Now BART had 33 stations open. But, everything wasn't smooth sailing for the fledgling system, to say the least. The September opening date had been moved back twice during 1971 and 1972, and even getting the trains into operation on September 11 required a maximum effort from BART's engineers and staff. Then on October 2, a train went off the end of the track at the Fremont Station and into the lot, setting off a public clamor for investigations and fixes.

Technical Problems

Due to the technical problems the system had had from its opening day, transbay service could not begin until September 16, 1974, after the California Public Utilities Commission, BART's safety regulatory agency, gave the okay—and only after the safety of the operation was clearly demonstrated.

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In the first phase of construction, five stations and 24 miles of track in the East Bay and south of San Francisco were completed between 1991 and 1997. Nearly nine miles of track and four stations, including one inside the new International Terminal of San Francisco International Airport. There is also the potential for another five and a half mile extension in Southern Alameda County that would extend the line from Fremont to Warm Springs putting BART on the doorstep of Santa Clara County.

Completed expansion projects include the eight-mile extension in



BART Central—the nerve center of the system.

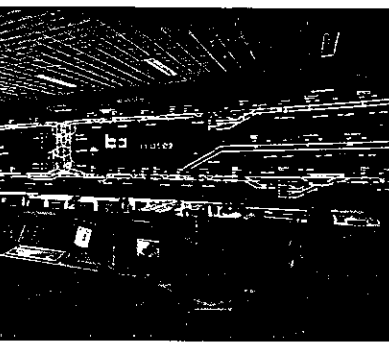
Second Generation: New Transit Cars

Throughout the new decade, BART made strides to improve. New transit cars were purchased with a brand new look, and a double function. These were called the C cars and could be used as both a lead car or a mid-train car, unlike the original fleet which had two different cars—the A, with the slant nose, and the B which would serve as a mid-train car. Also, a new track through downtown Oakland was constructed, a turn-back at Daly City, which would be critical to further improvements to train frequency, a new computer system, and several other capital investments.

BART Shines

It wasn't until October 17, 1989 that BART truly showed the world what it was made of. At 5:04 in the afternoon the Loma Prieta earthquake put BART to the test and the system came through with flying colors. The Bay Bridge had lost a section and was closed down, the Cypress Freeway had collapsed, and highway 280 in San Francisco was closed, along with the Embarcadero Freeway. For core Bay Area commuters going between east and west bay, BART was the only game in town. Ridership went from 219,000 a day to a peak of 357,000 a day. But the system performed and so did the system's employees. When asked by a member of the media if the system could handle it, BART's new General Manager Frank J. Wilson said, "We're going to put everything out there and run the wheels off it if that's what it takes."

As one national newspaper put it, it was "BART's Shining Hour." It was also the beginning of a new era for BART.



BART Central—the nerve center of the system.

Putting the Future on Track

BART is embarked on the largest construction program since the system was built more than a quarter century ago — a \$2.6 billion, 10-year expansion that will propel the rapid-rail system into the 21st century. When in full operation by the end of the year 2001, BART will have grown the original 34-station, 71.5-mile system to 43 stations and 103 miles of track with a fleet of nearly 700 transit cars offering, for the first time, direct service into San Francisco International Airport.

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Completed expansion projects include the eight-mile extension in

Contra Costa County to stations at North Concord/Martinez and Pittsburg/Bay Point, and the 14-mile extension to stations at Castro Valley and Dublin/Pleasanton in Alameda County.

The Colma Station in San Mateo County, the fifth station so far completed in the expansion plan, is the jumping off point for the extension to San Francisco International Airport.

Located 1.6 miles south of the Daly City BART Station, the Colma Station and 1,400-space parking structure were honored with the California Transportation District (SanTrans) and BART capital resources.

The \$1.167 billion BART-SFO Extension is being funded by the San Francisco International Airport, SanTrans, the California Transportation Commission, the regional Metropolitan Transportation Commission, and \$750 million from the Federal Transit Administration.

Subway stations with above-ground parking facilities will be built in South San Francisco and San Bruno, with an above ground station at Millbrae that will allow easy cross-platform transfers between BART and Caltrain, the Peninsula commuter rail service. The Millbrae BART Station will also offer a 2,100-space parking structure, adjacent surface parking for 900 vehicles, and internal bus and auto circulation roads.

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Ridership on the BART-SFO Extension is projected to reach nearly 70,000 trips per day by the year 2010, including nearly 20,000 daily trips to the airport. Direct BART service along the line, including direct service into San Francisco International Airport, is scheduled to begin by the end of the year 2001.

Funding for all BART extensions in the East Bay was entirely local and included sales tax, bridge tolls and grants, the San Mateo County Transportation District (SanTrans) and BART capital resources.

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BART-A-FACTS

- BART is governed by a nine member board of directors elected directly by the people.
- BART is a rapid transit system that carries about 270,000 people a day.
- The BART system has 95 miles of track in four Bay Area counties: San Francisco, Alameda, Contra Costa, and San Mateo.
- BART has five train lines: Richmond-Daly City/Colma, Fremont-Daly City, Fremont-Richmond, Pittsburg/Bay Point-Colma, Dublin/Pleasanton-Daly City.
- There are 39 stations serving the fully automated BART system. The trains run on automatic control and are supervised by a central computer system. The ticket machines are automatic and so are the fare gates.
- The third rail provides 1000 volts DC to power BART trains. The third rails' electricity is supplied by Boncville Power, WAPA, and PG&E. BART gets an electric bill just like people get at home. Only it costs a little more— about \$18 to \$20 million annually! BART uses enough power to light a city of 100,000.

Vision to Reality: A Transit Renaissance

Even before the end of the Second World War, community government and military officials were concerned about the postwar transportation scene in the San Francisco Bay Area.

A joint Army-Navy Board of Enquiry had already considered the desirability of an Alameda-San Francisco bridge from a "national defense view point." In 1941, this board had recommended against its construction. In 1943, the same Army-Navy Board was reactivated and told to take another look at the need and feasibility of an additional bay crossing.

After considering nearly two dozen possible plans and holding public hearings, the Joint Board in 1947 called for a high-speed electric train system to serve both sides of the bay between Oakland and San Francisco.

The plan called for a \$792 million general obligation bond issue to pay for basic construction, excluding the tube and transit cars. (The tube now was to be financed and built by the California Toll Bridge Authority and BART intended to pay for the passenger cars by the issuance of revenue bonds.)

Supervisors in Alameda and San Francisco Counties approved the plan and slated the issuance of \$792 million in general obligation bonds for the November ballot. The plan was due to be voted on by the five-member Board of Supervisors of Contra Costa County in July. If the Contra Costa Supervisors didn't vote to put in the bond issue on the November ballot, the whole project would be forgotten.

Losing San Mateo and Marin Counties was bad enough, but without Contra Costa County's potential tax participation, a truncated two-county system wasn't feasible.

Four of the Contra Costa County Supervisors had already gone on record: two were for the plan, two were against. The deciding vote belonged to Supervisor Joseph S. Silva, a farmer from the County's northeastern corner.

George Christopher, who was San Francisco's Mayor at the time, along with Oakland's Mayor John Houlahan, plus Adrian J. Falk, President of the District's Board of Directors, drove to Martinez to talk to Silva on the

morning of the day set for the Contra Costa vote. Houlahan thought it was a waste of time. He figured that Silva wouldn't approve the plan because of the disapproval of his former constituents: "Silva was a 'no' vote in my book," Houlahan later recalled. Christopher, Houlahan and Falk met Silva at a small doughnut and coffee shop on Alhambra Avenue early in the morning. "There wasn't a single table in the place. All counter," Christopher recalled. "Joe, how can we meet here?" Christopher asked Silva. "We'll meet here at the counter," Silva replied.

And so the four men sat down on stools at the counter and talked about the rapid transit proposal and the crucial vote set for the afternoon. The three visitors took turns talking to Silva but they couldn't get any kind of sign from Silva that he was going to vote to put the bond issue on the ballot. "We hammered away at him, but he wouldn't budge," Christopher recalled. Houlahan was disgusted. He leaned over to Christopher and whispered, "Tell him to go to hell, George and let's get out of here." But the Mayor of San Francisco was not yet daunted. He turned again to Silva: "Look, Joe, this rapid transit thing is going to happen some day, sooner or later, no matter how you vote this afternoon. The only question is when it's going to happen. I know it's going to cost a lot of money, but it's going to happen. Just vote this afternoon to get the bonds on the ballot. If the voters don't want the bonds, okay, that's their decision, but give them the chance to decide. I think the voters are going to approve the plan. I think we're going

to have a great transit system. You'll be known as the man who made it possible. You'll have the deciding vote. Joe Silva of Contra Costa County. Just think about that, Joe."

Before the conversation ended, so the story goes, the phone rang and it was Governor Pat Brown calling Joe at the doughnut shop to add to the weight of the others. "The Bay Area needs the transit system, Joe," the governor was reported to have said.

When Christopher, Falk and Houlahan left the coffee shop, they still didn't know how Silva was going to vote. The independent farmer from Brentwood kept his counsel til the last. But when the rapid transit plan came up for a vote that afternoon, Joseph S. Silva voted "aye."

On November 6, 1962, almost three quarters of a million voters in the three counties voted on the question of issuing \$792 million in bonds to build the rapid transit system. The "yes" votes represented 61.215 percent of the total, a narrow but definite margin above the 60 percent required to authorize the bonds.

In Contra Costa County, the bond issue did not receive a 60 percent "yes" vote, but since the votes from three counties were lumped together, the bond issue passed—just! In Alameda County the "yes" vote was 60.039 percent, about as close as you can get, but in San Francisco the favorable vote was 66.888 percent, overriding the smaller "yes" tallies in the other two counties. Yet even in Contra Costa County the "yes" vote reached 54.5 percent showing that a majority of the county voters approved the plan and the issuance of the bonds.

Three weeks after the election, the four districts voters filed a suit in State Superior Court in Martinez. They charged that the voters had not been given sufficient facts about the project, that the fees to be paid under the the final engineering contract were excessive and that the contract itself was not properly awarded to PBTB by the District's directors.

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December, 1961, they pulled the county out of the plan altogether.

With the District-wide tax base now reduced, Marin County Supervisors followed suit and pulled their county out early in 1962.

So the PBTB planners went back to the drawing boards and prepared a fifth plan for a system in the remaining three counties. This final plan was completed in the spring of 1962. It was approved by BART and submitted to the county supervisors.

The proposed system was now reduced to approximately 71.5 miles of double track, linking the west and east sides of the bay through the Transbay Tube, 31 miles of aerial construction and 24 miles of construction at grade. The underground portion included about 11 miles of subway, five miles of tunnels and four miles of sub-aqueous tube.

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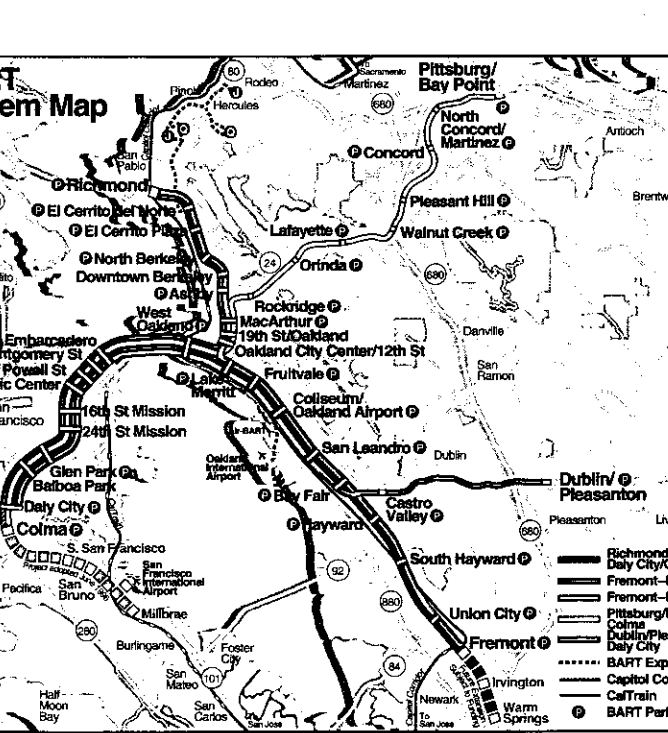
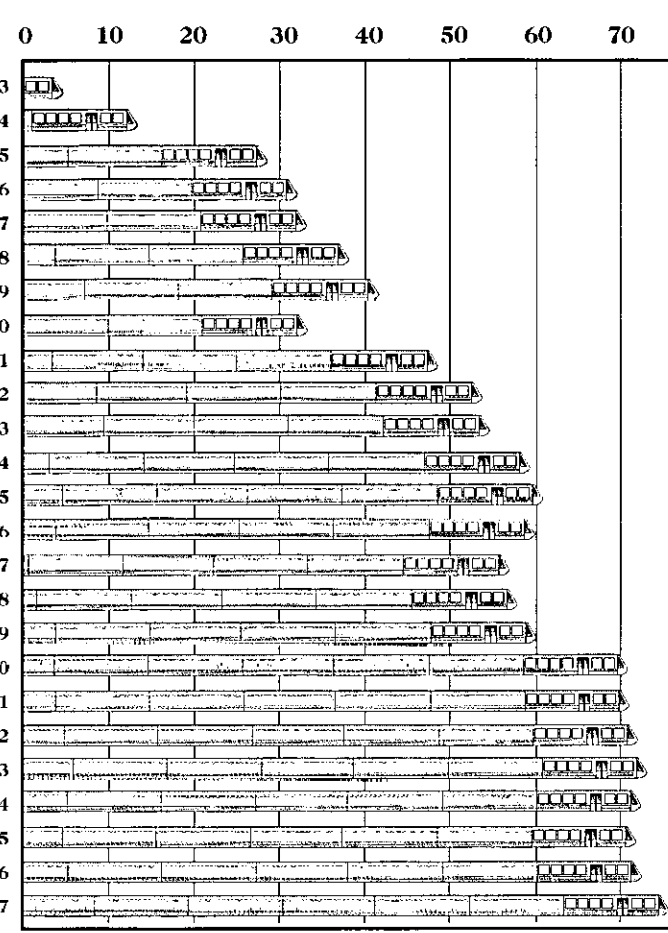
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BART TRIPS BY FISCAL YEAR (Millions of riders)



BART History in the Making



Bringing the Bay Area together for twenty-five years



