

San Francisco: Bay Area Rapid Transit (BART)

Excellent public transit is an essential element to the green design of an efficient and livable city. It benefits the economy, social condition, health, and the environment of a region by creating denser living areas and providing alternatives to the automobile. Unfortunately, most American cities have not seen a rise in public transit use and are experiencing greater automobile dependence (Newman 1996). With greater auto use, suburbs and exurbs grow and cities experience an urban decline, as seen in Philadelphia's history (Vuchic 1999). Fortunately, there are a few cities in America (e.g. San Francisco) that are offering meaningful alternatives to the automobile by developing their public transit modes, thereby strengthening the social and economic fabric of the city and the region. In this essay, I will show how the San Francisco Bay Area transit system is an effective source of public transportation and has contributed to the green design of the city.

There are several key components that create effective public transportation, as Timothy Beatley explained in his book, *Green Urbanism*. Some of these components are extensive service; a multimodal, integrated network; fast, reliable, and convenient service; and lastly disabled and handicapped passenger accessibility. Below I will address these components in relation to BART

To start, it is necessary for transit to be extensive. The BART system is thoroughly extensive as it stretches over the course of 104 miles, makes stops at 43 stations, and carries over 300,000 people each weekday. The five transit lines of the BART system links San Francisco County to the surrounding three counties: Alameda, Contra Costa, and San Mateo. Santa Clara County is soon to be the fifth county serviced by BART. The BART system along with other regional transit services offers an integrated system that links the entire Bay Area region and generates significant ridership. These services include Caltrain, Altamont Commuter Express (ACE), Amtrak's Capitol Corridor and San Joaquins, MUNI light rails and cable cars, and VTA

light rail (Nelson/Nygaard 2003). Additionally, BART provides transit to San Francisco International Airport and Oakland International Airport—connecting the San Francisco region to the rest of the country and beyond. By creating an extensive system, BART is a viable alternative to the automobile for travel to the city or elsewhere.

The BART system offers a multimodal system that competes with private automobile use, another component of effective transportation. Through walking, biking, shuttles/other transit, and carpooling, there are several well developed modes of accessing BART from one's home and reaching their final destination.

Walking: With many stations built in high density areas, BART is easily accessible by foot within the various cities it services. Additionally, "Transit-Oriented Development (TOD) Guidelines" have been developed to ensure that development and planning around BART stations are pedestrian-oriented/transit-oriented.

Biking: Through the creation of convenient storage options, biking is another well crafted method of accessing BART. Bikes can be brought onto trains during non-peak hours, while fold-up bikes may be brought on at anytime. A new interesting feature is the development of free "secure" bike parking stations. They are located at the following three BART stations: Fruitvale Station, Downtown Berkley Station, and the Embarcadero Station. With attendants monitoring the bikes and added perks, such as the bike repair shop at the Fruitvale Station, BART is providing comfort and convenience to its passengers, thereby increasing its ridership.

Driving: Of course for passengers that need to drive to a BART station, there are several different parking permits that one can purchase. There are daily, monthly, and long-term parking spaces available at reasonable prices. Additionally, carpoolers are given a special parking area, which also encourages less auto usage.

Shuttles/other transit: As discussed above, BART offers connections to other types of transit servicing areas outside of BART's domain. There is a concerted effort

from the transit district to make a “seamless journey” or transition from one source to the other. This information is outlined in the BART Strategic Plan as well as BART’s Transit-Oriented Development (TOD) Guidelines and Station Access Guidelines, which discuss BART’s planning and development policies.

The next component of effective public transit is fast, reliable, and convenient service. The BART trains are considerably fast, with a wait time of no longer than 15 minutes. Additionally, many trains will overlap station stops, which give passengers more choices of trains and shorter wait times. Online, passengers can find a well produced BART website that adds to the convenience of traveling on BART. Riders can find full up-to-date train schedules, station information, auto and bike parking information, and any important news and announcements about the trains. A passenger can also develop a travel itinerary by typing in an origin and destination. Furthermore, itineraries and schedules can be downloaded to PDAs and can be accessed by cell phones. The convenience of a well functioning website and wireless technology is always an added benefit for any activity, especially travel.

The last component is the accessibility of the BART system for handicapped, elderly, and young passengers, including infants in baby carriages. These segments of the population more often than not are treated as second-class citizens in relation to transportation in American cities (Beatley 2000). San Francisco has made significant efforts to make transit accessible to these growing segments by providing elevators in all stations, level boarding from all platforms to trains, and other building design features that are equipped to handle the blind, deaf, and physically challenged passengers. Additionally, paratransit services (e.g. lift vans and sedans) are available for the disabled passengers that are unable to access, board, or ride BART trains. Discounted tickets are also available for handicapped passengers and senior citizens. A partnership has also been created with several school districts, in which students between the ages of 13 to 18 are offered significantly discounted tickets. By improving accessibility to the disabled, elderly, and young patrons, BART is providing a valuable service to a portion of the population that can typically be overlooked.

In order to increase ridership the BART system has created incentives for the public through partnerships. In one new program, “Spare the Air,” BART has partnered with the Bay Area Air Quality Management District to offer free rides on up to five days where the air quality is especially poor. A “Spare the Air Day” is declared when air pollution is expected to reach unhealthy concentrations, according to standards set by the EPA. In this plan, not only does ridership increase, but also it raises awareness about air quality. Partnerships have also been created with the sporting events and are advertised on their website. BART sponsors \$2.00 tickets to home Oakland Athletics games at the Coliseum and is offering a free shuttle service from BART to the World Golf Championships at Harding Park. Partnerships with recreational events promote transit use and benefit the public good with less traffic congestion and cleaner air.

The BART system has taken many steps to create an effective form of public transportation. By offering: extensive service to areas throughout the Bay Area and beyond; connections with other transit agencies; multimodal, integrated access; fast, reliable service for all segments of the population; and well constructed partnerships; the BART system will continue to increase its ridership and help in decreasing automobile dependence in the Bay Area.

As Herbert Girardet discussed in his book, *Cities, People, Planet*, effective public transit creates a cohesive society and an equitable society where jobs, education, and services are accessible to all segments of the population. It also creates a more environmentally friendly and healthy society where exercise is adopted into people’s daily routine and less car dependence creates cleaner air. Because of its effectiveness in providing transportation to a large portion of the population, San Francisco’s BART system, is an exemplary example of green design within a city—creating a more attractive and livable environment and improving the daily lives of the citizens who live there.

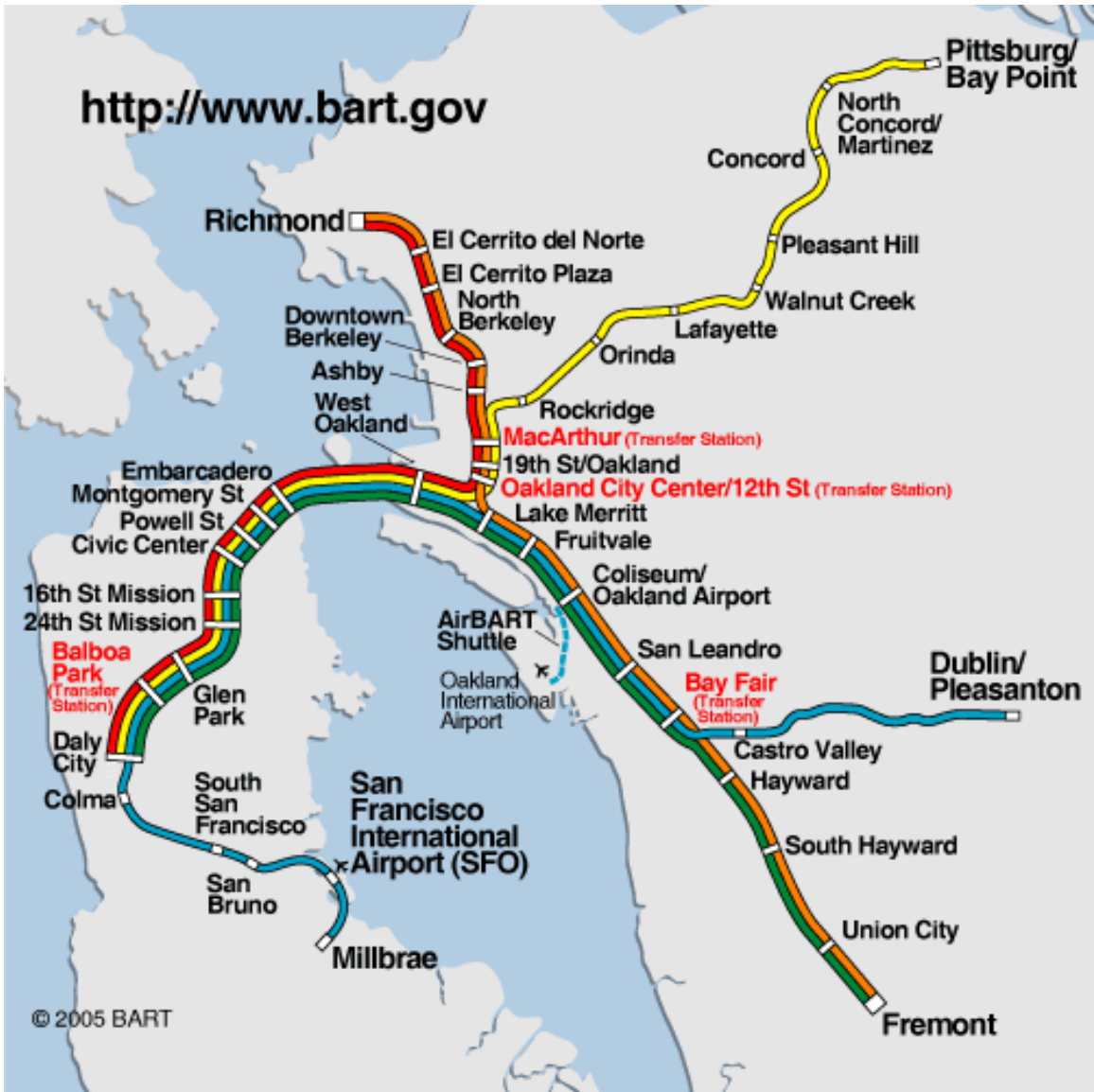


Photo provided by <<http://www.bart.gov>>

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