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Houston Groundbreaking

LIGHT RAIL VEHICLES FOR MAIN STREET Project on Track for 2004 Debut

The Metropolitan Transit Authority—commonly known as METRO—of Harris County, Texas, broke ground on the Houston region’s first light rail transit (LRT) project in March 2001. The 7.5-mile METRORail line will run from south of the Reliant Astrodome—where the new Houston Texans football team will start playing in 2002—to the University of Houston’s downtown campus.

Economic development along the new METRORail line is expected to range from \$500 million to \$1 billion, and in the next two decades weekday boardings may soar to 40,000. The historic groundbreaking in Houston—where LRT has been a highly politicized, on-again-off-again proposal—marked the start of a project 20 years in the making. After exhaustive studies, a mammoth community outreach effort, Federal Transit Administration backing, and Houston City Council support, the METRO Board unanimously approved METRORail as the best option for Houston’s Main Street corridor.

METRORail will link some of Houston’s most important venues, including downtown employment centers; Enron Field, which is in its second season of hosting Houston Astros baseball games; three major universities; the museum district; Hermann Park and the Houston Zoo; the world-renowned Texas Medical Center; the Reliant Astrodome complex, soon to be the home of a new football stadium; exhibit halls; and other amenities. Construction projects abound near the alignment and include a new basketball arena, expansion of the George R. Brown Convention Center, and a convention center hotel.

The METRO Board recently approved a contract with Siemens Transportation Systems Inc. of Sacramento for 15 light rail cars, which will run at street level using an overhead catenary system. Sixteen rail stations, each designed with local artists’ input to reflect their surrounding neighborhoods, will be located along the alignment.

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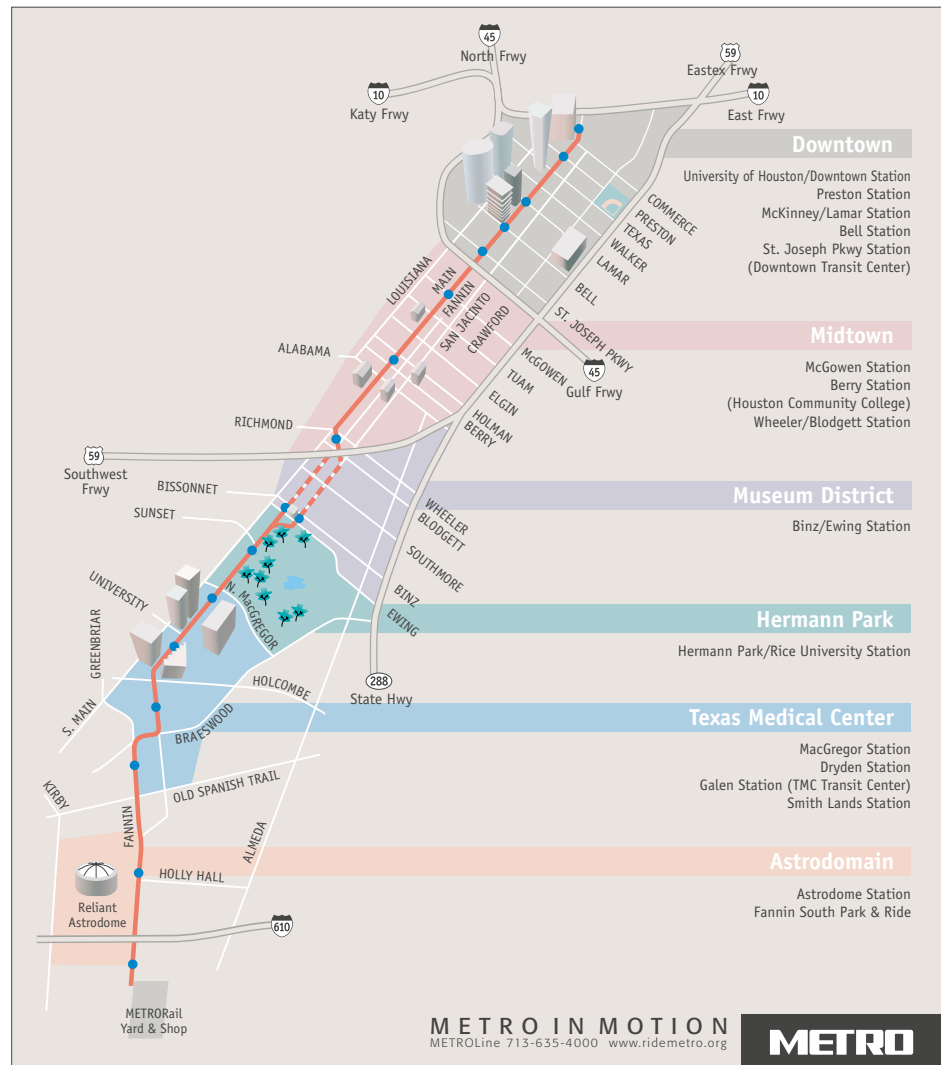


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METRO’s 2025 Plan has identified seven congested corridors in the region that will require some form of high capacity transit in coming years. Three corridors will be chosen for major investment studies that will determine the best future transportation modes for the Gulf Coast area. If light rail is determined to be the best mode, and if voters approve rail extensions, METRORail will become the backbone—the main connector and trip distributor—of a regionwide system that can connect the region’s airports and suburbs to Houston’s urban core.

—Patti Muck, Metropolitan Transit Authority of Harris County, Texas



Map of future Houston LRT route.

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San Francisco Success Story

F MARKET AND WHARVES LINE OPENS Presidents' Conference Committee and Peter Witt Streetcars Attract Thousands

The San Francisco Municipal Railway's (Muni's) F Market and Wharves historic streetcar line has been quite a success story. The colorful streetcars have attracted thousands of riders—San Francisco natives, tourists, shoppers, commuters, and people who just want to ride the line. The line's success, however, did not emerge overnight—it took many years and much hard work for the idea of a historic streetcar line in San Francisco to become a reality.

A \$792 million BART bond issue—approved in November 1962 by the voters of Alameda and Contra Costa counties and the City and County of San Francisco—included funds for a Market Street streetcar subway, so that the five Muni streetcar lines on the surface of the street could be put underground for faster service. There were plans to remove all of the rail and most of the bus service from the surface of Market Street, but transit advocates, both within and outside city government, were successful in arguing for continued bus service on that major thoroughfare, as well as for historic streetcar service on Market Street and on the city's waterfront.

The first proposal for a historic streetcar line on Market Street was made in 1971; the first proposal for a line on the waterfront was made in 1974. In 1979, a proposal for a historic line was officially adopted as part of Muni's annually updated plan for improved service. Beginning in 1981, the plan called for two lines. An E Embarcadero line would serve the waterfront from Fisherman's Wharf to south of the Ferry Building, and then continue to the railroad terminal at 4th Street (between King and Townsend) for a connection with the Peninsula railroad service operated by Caltrain. An F line would also serve The Embarcadero from Fisherman's Wharf, but then run on the surface of Market Street to a terminal that had not yet been determined.

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The success of the trolley festivals on Market Street ensured that there would be fulltime historic streetcar service in San Francisco. The Cable Car System Rehabilitation Program began in September 1982, shutting the system down until June 1984. A trolley festival was operated on Market Street in the summer of 1983 to provide an alternative historic transit service for visitors to the city. Historic streetcars from San Francisco, other U.S. cities, and other countries brought joy to many thousands of people, and the trolley festivals were continued for four more summers. The 1986 and 1987 festivals received support from the Market Street Railway Company, a nonprofit organization founded in 1985 and dedicated to the acquisition, restoration, and operation of historic transit vehicles in the city. The Market Street Railway continues to play a very important role in the operation of the F line and in plans for additional historic rail service in the city.

Construction for the Market Street Transit Thoroughfare Project, which included construction for the F line, took place in four phases, from 1988 to 1995, on Market Street from Fremont to Castro Streets. The street improvements included streetcar track construction and the installation of new boarding islands, widened crosswalks, and new curbing, as well as the planting of palm trees in the medians of Upper Market Street. Thoroughfare project construction costs were \$48 million, including \$30 million for the historic streetcar line.

September 1, 1995, was the first day of service for the F Market historic streetcar line, between Castro and Market Streets and the Transbay terminal at 1st and Mission Streets. The F line replaced the 8 Market trolley bus line, and the F-line weekday ridership for 1998–1999 was over 65 percent higher than the 8-line ridership for 1994–1995.

Seventeen Electric Railway Presidents' Conference Committee (PCC) streetcars were rehabilitated for the F-line service at a total cost of \$12 million. Fourteen of the PCC cars are from Philadelphia and three are from Muni. The cars are painted in the PCC colors of Muni and other transit agencies in the United States, including Philadelphia, Boston, Kansas City, and Los Angeles.

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Planning for the extension of F-line service to Fisherman's Wharf received greatly increased attention after the October 1989 earthquake and the subsequent tearing down of the Embarcadero Freeway. Construction for the extension became part of the city's waterfront transportation projects for roadway and transit improvements (the Muni Metro Extension to the Caltrain depot at 4th and King Streets was also one of the waterfront transportation projects). Work began in July 1993 for roadway and F-line extension construction, with a completion date for the extension dependent on the completion of the track work in the Mid-Embarcadero segment of the waterfront projects. (That segment was the last to be completed because major design issues had to be resolved for the area in front of the Ferry building.) The cost of the F-line extension project, from Fremont and Market Streets to Jones and Beach Streets in the Fisherman's Wharf area, was about \$80 million.

March 4, 2000, was the first day of service for the extended line—the F Market and Wharves line—that runs 10.2 miles, roundtrip, from Castro and Market Streets to Jones and Beach Streets. The line opens every day before 6:00 a.m. and runs until after midnight.

Nine streetcars from Milan, Italy, were acquired by Muni for the extension of the service to Fisherman's Wharf. (Eleven cars were acquired, but two of them will be used for spare parts.) The cars are called "Peter Witt" cars, because their design is based on one that Cleveland transit commissioner Peter Witt created for faster passenger boarding. Total costs for the acquisition and retrofitting of the Milan cars for service on the F line are estimated to be \$2,235,000.

In addition to the 17 PCC and nine Milan cars used in regular service on the F line, Muni's car No. 1 built in 1912 and the open "boat" car built in 1934 for service in the seaside resort of Blackpool, England, are available periodically.

The E Embarcadero historic streetcar line is being planned for service between Fisherman's Wharf and the Caltrain depot at 4th and King Streets. Before the new line can start, Muni will have to have more historic streetcars ready for service (through a combination of acquiring more cars and rehabilitating some already on hand), construct a new turnaround just beyond the Caltrain depot, and obtain funding to operate the

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new line. Although the Caltrain location has crossovers for the double-ended Metro streetcars, there is no loop turnaround there for the historic streetcars, most of which will be single ended.

The station platforms on the Muni Metro Extension, south of the Ferry building, will have to be modified, so that they can accommodate both high-level (Metro streetcars) and low-level (historic streetcars) boarding. Because of the time needed for modifications and streetcar acquisition and rehabilitation, it is estimated that the start of E-line service is about three years away.

—*Robert Callwell, Muni*



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Light Rail Transit Defined

LIGHT RAIL TRANSIT PROJECT PROGRESS REPORT Why Isn't My City Listed?

It has been said that imitation is the most sincere form of flattery. This seems to be true of LRT.

A quarter-century ago, when the Transportation Research Board (TRB) established a subcommittee to study and define the mode, the term *Light Rail Transit* was not in common use. Subsequent successes with implementing and expanding use of the mode have given the appellation not only recognition, but also significant prestige. The result has been that other rail modes are sometimes identified as LRT in order to enhance their image.

The flattery is sincerely appreciated. Nevertheless, the projects and operating systems listed in the table on the following page are, at least for now, confined to those that clearly satisfy the TRB definition: LRT is “*a metropolitan electric railway system characterized by its ability to operate single cars or short trains along exclusive rights-of-way at ground level, on aerial structures, in subways, or occasionally, in streets and to board and discharge passengers at track or car floor level.*” Thus, those streetcar-type operations that fit the definition are included, while diesel-powered lines are not.

—*Jack W. Boorse, Parsons Brinkerhoff, Philadelphia*

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Focus City ¹	In Conceptual Planning	In Final Design	Under Construction	In Revenue Operation
Baltimore	E	—	U	S
Boston	—	—	U	S
Buffalo	E	—	—	I
Calgary	E	—	—	S
Charlotte	I	—	—	—
Cincinnati	I	—	—	—
Cleveland	E	—	—	S
Dallas	E	E	E	S
Denver	E	E	E	I
Edmonton	E	—	—	S
Fort Worth	—	—	—	I ²
Houston	—	I	I	—
Jersey City	E	E	E	S
Kansas City	I	—	—	—
Louisville	I	—	—	—
Los Angeles	E	E	E	S
Memphis	E	E	—	I ³
Miami	I	—	—	—
Milwaukee	I	—	—	—
Minneapolis	—	I	I	—
New Orleans	E	E	E	S
New York	I	—	—	—
Newark	E	E	E/U	I
Philadelphia	—	—	U	S
Phoenix	I	—	—	—
Pittsburgh	E	U	U	S
Portland	E	—	—	S
Sacramento	E	—	U	S
St. Louis	E	—	E	I

Legend:

E = Expansion of existing facilities (extension, new route, added trackage, etc.)

I = Initial or basic one-corridor line

S = System (more than one corridor)

U = Upgrading of existing facilities (same basic route)

¹ The corridor or system may extend well beyond the boundaries of the named city into other cities or counties.

² Available for public use, but no fares are charged.

³ The vintage trolley lines in these cities, which were built as a tourist attraction, have evolved to serve daily commuters as well. For that reason they have been included in this table.

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Salt Lake City	S	E	E	I
San Diego	E	E	E	S
San Francisco	E	E	E	S
San Jose	E	E	E	S
Seattle	S	—	—	I ³
Tacoma ⁴	—	—	I	—
Toronto	E	—	—	S
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Legend:

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⁴ Eventually, this line will be connected with and absorbed into a regional system focused on Seattle.

This progress table is published periodically as a part of *LRT NEWS*. The content was reviewed and updated shortly before publication. Readers who have fresh information or who wish to comment on the table, please contact Jack W. Boorse, Parsons Brinckerhoff, 1528 Walnut Street, Suite 400, Philadelphia, PA 19102 (telephone 215-790-2306, fax 215-735-1462).

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