

Presented by:



**New Haven Electric
Streetcar A Catalyst for
Development**

Our Team Has Been on Virtually Every Streetcar Project Constructed in U.S. in Last 10 Years



	Feasibility	Planning	Alignment	Vehicles	Design	Engineering	Maint. Facility	Safety/Security	Commissioning
Albuquerque, NM	X								
Austin, TX	X	X	X						
Boston, MA	X								
Colorado Springs, CO	X	X	X	X					
Columbus, GA	X								
Cripple Creek, CO	X	X	X	X			X		
Dayton, OH	X	X	X		X				
Denver, CO	X	X	X	X	X			X	X
El Paso, TX	X	X	X	X					
Eureka Springs, AR	X	X	X	X			X		
Ft. Worth, TX	X								
Indianapolis, IN	X	X	X						
Issaquah, WA	X	X		X	X				
Kansas City, MO	X	X	X						
Kenosha, WI	X	X	X	X	X	X	X	X	X
Lady Lakes, FL	X	X							
Lake Buena Vista, FL	X	X	X	X	X	X	X		
Lancaster, PA	X	X	X		X				
Little Rock, AR	X	X	X	X	X	X	X	X	X
Lorain, OH	X	X	X						
Lowell, MA	X	X	X		X				

	Feasibility	Planning	Alignment	Vehicles	Design	Engineering	Maint. Facility	Safety/Security	Commissioning
Memphis, TN			X	X	X	X	X		
Minneapolis, MN	X	X	X	X	X				
Oklahoma City, OK	X	X							
Orlando, FL	X	X	X	X	X				
Portland, OR	X								
Roanoke, VA	X	X	X	X					
San Antonio, TX	X	X	X		X				
Salt Lake City, UT	X								
San Jose, CA	X	X	X	X			X		
San Pedro, CA	X		X	X	X	X			
Savannah, GA	X	X	X	X	X	X	X	X	X
Sedro Woolly, WA	X	X	X						
Sioux City, IA	X	X	X	X	X				
St. Charles, MO	X	X	X		X	X			
St. Joseph, MO	X	X	X	X					
Toledo, OH	X	X	X	X			X		
Tucson, AZ					X				
Tulsa, OK	X								
Washington, DC	X		X	X	X		X		
Wilmington, DE	X	X	X	X					

WHAT ARE STREETCARS?



- Steel-wheeled cars run on fixed rails
- Powered by electricity through overhead wires

History of the Streetcars in New Haven



- May 1, 1861 First horse-drawn streetcars began service to State & Chapel Streets
- 1865 Track extended; two new companies enter the scene
- May 24, 1874 New railroad station opens at present site
- June 13, 1884 Sunday service instituted
- **1887 2,157,079 riders on the cars**
- June 13, 1892 First electric streetcar in the immediate New Haven area
- 1894 Almost all lines converted to electric propulsion
- May 1900 The Fair Haven & Westville had obtained control of 13 street railway lines, becoming the largest operator in the state. **16,249,157 riders were carried in 1900**
- 1904 The New Haven Railroad purchases the street railways, and conveys them to the Consolidated Railway.
- 1910 Consolidated Railway became part of the Connecticut Railway, the principal operator of trolleys in the State
- July 15, 1921 First two motor bus lines in New Haven begin service
- June 22, 1931 First conversion of a streetcar line to motor bus operation
- November 22, 1947 – “Farewell Run” of the big open cars to Yale Bowl
- September 25, 1948 – Last streetcar lines converted to motor bus

Streetcars can be Heritage



Streetcars can be Modern



Little Rock Used Newly Constructed Replica Cars



investments



Economic Development



- Kenosha, WI - Completed in 2000, attracted over **\$120 Million** in development
- Tampa, FL - Completed in 2001, attracted over **\$600 Million** prior to construction and more than **\$2 Billion** by the end of 2002
- Memphis, TN - Original project completed in 1993, two additional projects completed since then, **\$137 Million** in documented development, much more unaccounted for.
- Portland – Completed in 2001, has attracted more than **\$2.3 Billion** in development.
- Charlotte – Began operation at the end of 2007 has already attracted **\$400 Million** in development.

Economic Development



The Portland system costs \$2.7 million a year to operate and carries up to 9,000 passengers daily. It's not nearly enough to operate the system on a break-even basis, but Carroll said that's missing the point: **"It is an economic development tool,"** he said. **"It's been a huge development catalyst."**

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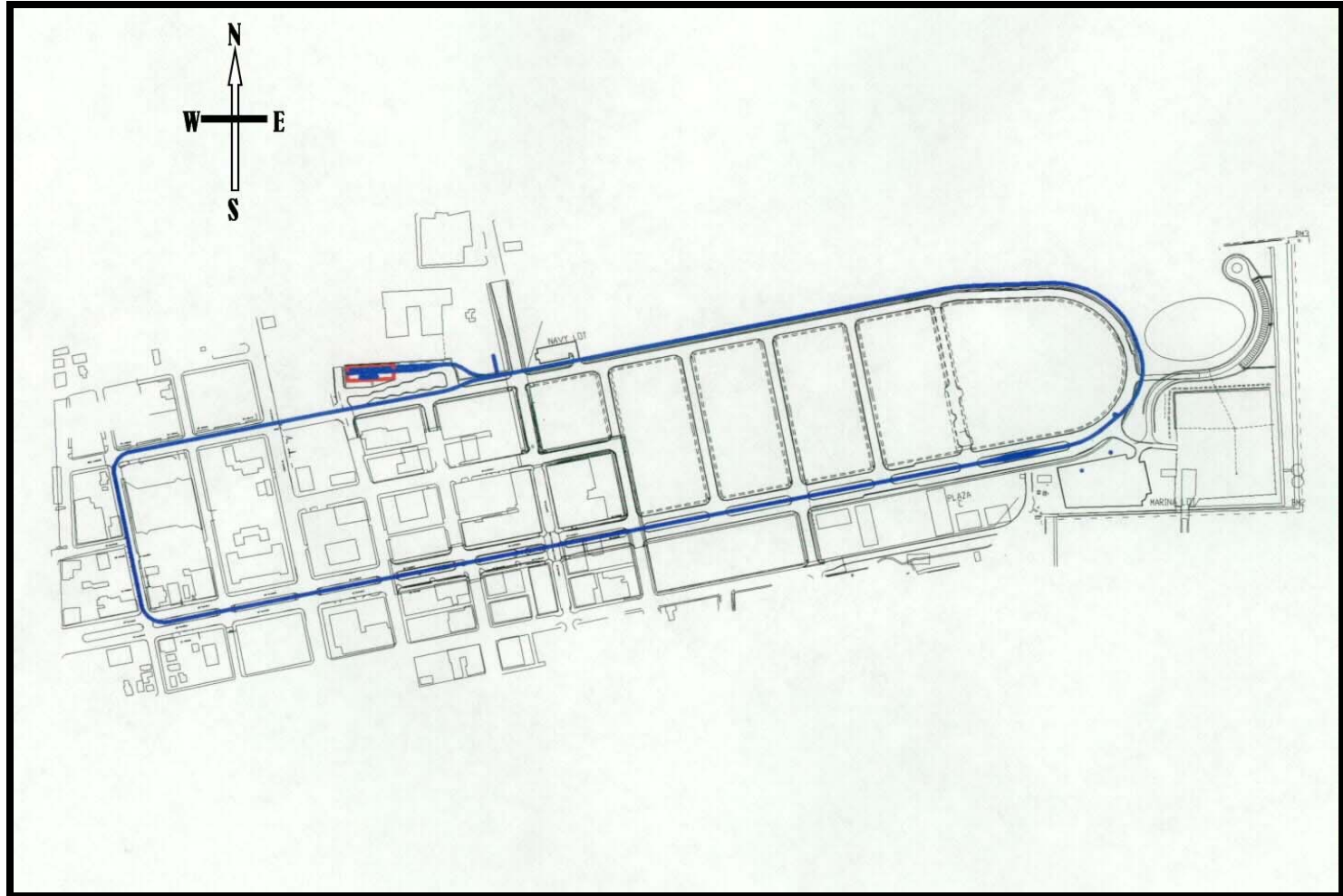
What cities use streetcars?



- San Francisco, CA
- Seattle, WA
- Portland, OR
- Memphis, TN
- Dallas, TX
- New Orleans, LA
- Astoria, OR
- Lowell, MA

- Kenosha, WI
 - Tampa, FL
 - Little Rock, AR
 - Philadelphia, PA
 - Charlotte, NC
- Under construction
- Savannah, GA
 - Tucson, AZ

Kenosha, WI Project



Kenosha water front before construction



Kenosha water front during construction



Kenosha waterfront after construction



Kenosha Condo & Museum Development



Lowell, MA



New Orleans Riverfront Route



Nonstop rush hour on F line

If you build it, will they ride?

Standing-room-only Embarcadero streetcar almost too popular

Friday, August 13, 2004

San Francisco's Municipal Railway has a peculiar problem -- its F- Embarcadero streetcar line, which runs from the Castro to Fisherman's Wharf, is too successful for its own good.

The line, which uses vintage streetcars from around the United States, and a few from Italy, is packed with passengers all day and half the night. On Saturdays and Sundays it's even worse.

Typical Streetcar Stop in Memphis



ADA Accessible



Potential Route



Streetcar in front of Union Station



Union Ave.



Columbus at Union Ave.



Columbus



Church St. South



Church at S. Frontage



Church and Chapel



Church at the Post Office



Church and Grove



Streetcar at the corner of Church and Grove



Grove and Temple



College and Elm



Chapel



Open Car Headed from Union Station to the Yale Football Game

The last open car ran in 1947



Dwight Street at George



South Frontage



South Church heading towards Union



Proposed Project



- 3.6 miles of new track providing a loop back to Union Station
- Provides a route that connects Union Station to City Hall, County Court House, Yale Campus, Theater District, Yale Medical Center and Parking.
- Connects Parking Garages to Yale Medical Center
- Connects Union Station to new development including Convention Center, Knights of Columbus, Gateway Community College and Rt. 34 corridor.

What does it cost to build the Short Loop in Downtown Circulator



- Total construction cost for a 3.6 miles of track is less than \$30 Million
- Cost of \$ 7.6 Million per mile includes
 - Track and Electrification (\$14 million)
 - Five new heritage style streetcars (\$4.5 million)
 - Car barn (\$2.8 million)
 - 15 Passenger Stops (\$0.3 million)
 - Engineering design and contingencies (\$5.5 million) (Does not include cost of land)

Operating Costs



Service Level 7 days/week
12 hours/day-weekdays
16 hours/day-weekends
15 minute headway
9568 annual vehicle hours

@ \$80/hr = \$765,440

@ \$100/hr = \$956,800

@ \$120/hr = \$1,148,160

Operating Costs



Service Level: 7 days/week
12 hr./day weekdays
16 hr./day weekends
10 minute headway
14,352 annual vehicle hours

@ \$80/hr = \$1,148,160

@ \$100/hr = \$1,435,200

@ \$120/hr = \$1,722,240

How Are Operations Paid For?



1. BID district
2. Subsidy from City or Developers for Economic Development
3. Fund Raising through sales of Naming Rights
4. Payment in lieu of bus service
5. Fare box receipts

Funding Sources Used By Tampa

- Operational funding by a new sales tax assessment district, an endowment fund by private sector contributions, advertising and fares. Annual operating expenses are \$1.3 Mil
- Naming rights for system were sold to Tampa Electric Co. for \$1 Million
- Vehicle naming rights were sold for \$250,000 each
- Station names from \$75,000 to \$150,000

Funding Sources Used By Little Rock



- \$28 Million to build 2.5 miles of single track and .8 miles of double track
- 5 heritage streetcars
- Carbarn
- Operational costs treated like a bus route by CATA. Cost per mile of streetcars and busses are similar

Charlotte



- Sales tax of ½ cents
- Federal New Starts 50%
- State Rail Assistance 25%
- Local (1/2 cent sales tax) 25%

Observations



1. There are no apparent fatal physical impediments to a streetcar line connecting Union Station to the Downtown and Medical Center
2. Order of magnitude capital cost estimate would be +/- \$30 million

If the City Decides to Proceed, Next Steps



- Obtain concurrence of Stakeholders and Developers
- Begin exploration of capital funding options, both public and private
- Begin Preliminary Design and authorize preparation of an Environmental Impact Study