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# Fixed asset

## Santa Ana tries to revive transit system

**B**y looking to transit solutions from the past, the city of Santa Ana, Calif., is looking to leverage a fixed-guideway system to re-establish a transit system connecting the busy Santa Ana Regional Transportation Center (SARTC), historic downtown Santa Ana, the Civic Center and the neighboring city of Garden Grove—guiding the way to a more prosperous future.

### A run on rail

When looking back at the history of streetcars in Santa Ana, it is helpful to understand the regional context of southern California as a whole. Santa Ana was incorporated in 1886 and became the county seat when Orange County was established in 1889. At the time, agriculture was the main industry. Around this time, the first electric streetcars were being constructed

in the city of Los Angeles. In the late 1890s, Henry Huntington, a railroad magnate and land developer, began buying land in growing areas not yet reached by existing public transportation throughout southern California. In 1901, he established the Pacific Electric Railway to handle these holdings. Rail lines were established within the historic Pacific Electric Railway corridors (PE ROW) and the streetcar system quickly took off. It became the premier means of getting around southern California.

At the dawn of the 20th century, Santa Ana emerged as a regional hub of activity. Residential and commercial development surged along with the public services provided as the county seat. Several efforts were made to establish a streetcar system in the vicinity of Santa Ana. On Nov. 6, 1905, the first Pacific Electric train arrived in Santa Ana as an extension of local train service in Orange County that had begun in 1904. The Santa Ana-Orange Line traveled between the Southern Pacific Santa Ana Station (immediately south of the present-day station at SARTC) through downtown Santa Ana along 4th Street to the PE ROW and on to Los Angeles.



By 1914, the Pacific Electric Red Cars offered a low-cost option for Santa Ana residents to travel to downtown Los Angeles and a variety of other southern California destinations, including San Bernardino to the east, San Pedro to the west and San Fernando to the north. But by the 1920s, as the popularity of automobiles increased, service to some communities was discontinued as tracks were paved over, and the trains had to yield their high-speed rights-of-way to traffic crossings. The explosive growth and sprawl of L.A. in the postwar years, along with the lack of public money to keep up the existing lines, the huge increase in automobiles and the freeways that were built to accommodate them, all conspired to kill the red cars.

At its peak, the Pacific Electric Railway was huge, with 1,150 miles of track covering four counties. In 1944, ridership was more than 109 million passengers with more than 1,000 trains operating daily. The Santa Ana-Orange Line was the last line to be decommissioned. Santa Ana is now pursuing a fixed-guideway project in the hopes of being at the forefront of the rebirth of this technology in southern California.

## Local reach

Car culture dominated southern California for the intervening decades. As commuting times and congestion increased, public transportation again entered the public consciousness. In 1990, Metrolink was established as the commuter rail service for the Los Angeles/Orange County/Inland Empire region. The latest ridership numbers show 41,000 weekday commuters in 2011. In Orange County, 75% of these commuters live and/or work within 4 miles of Metrolink stations. Amtrak also enjoys a successful track record in southern California, serving both commuters and long-distance travelers, and serves many of the same stations as Metrolink, including SARTC.

Effectively connecting commuters from these regional rail systems to their destinations is vital to commuter rail's success and growth. In 2006, the Orange County Transportation Authority (OCTA) established the "Go Local" concept to study local extensions that would provide last-mile connectivity from the regional commuter rail lines. Santa Ana and its neighbor, Garden Grove, jointly developed a Transit Vision to study an extension from SARTC to Garden Grove that would generally follow the old Pacific Electric Railway route. Although land uses in the area were already somewhat transit supportive, Santa Ana also developed the requisite planning and complementary projects to ensure the fixed-guideway system's success.

The first component of the Transit Vision, a Transit Zoning Code, was adopted in June 2010. Its purpose is to support the long-term development of a successful transit program while encouraging alternative modes of transportation, providing pedestrian-friendly, transit-oriented development and enhancing the streetscape and urban form of the area by incorporating complete-streets concepts. The first project to implement these new zoning requirements within the Transit Zoning Code area is called the Station District.

This project is a 94-acre area anchored by SARTC along Santa Ana Boulevard and is currently under construction.

Completed in June 2011, the SARTC master plan is another component of the Transit Vision. As Metrolink services are expanded and future fixed-guideway and bus rapid transit services come online, the master plan presents exciting concepts for transforming one of the region's busiest transportation hubs into a center of commerce and activity. Elements of this redevelopment would include enhanced bike and pedestrian linkages to SARTC and integrate the transit-oriented development envisioned in the Transit Zoning Code, including office, residential and retail uses.

Complementary to the SARTC master plan is a proposed grade separation along Santa Ana Boulevard just north of the SARTC site. This project entails the construction of a multimodal underpass grade separation to provide improved pedestrian, bicycle and vehicle safety at the railroad crossing and accommodate future fixed-guideway expansion to the east while seamlessly integrating with the SARTC master plan.

## Streetcar desire

The final component of the city's Transit Vision is a fixed-guideway system. It is the element that brings all the other components of the Transit Vision into focus. To understand why a fixed-guideway system is the best solution for Santa Ana, it is important to look at the demographics, land use and available transportation services within the study area.

Santa Ana is the most highly and densely populated city in Orange County and the fourth most densely populated city in the U.S., behind New York, San Francisco and Chicago. It has a population density of 1½ times that of Los Angeles. Garden Grove is the third most densely populated city in Orange County. Within the study area there are 17,380 residents per square mile, of



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which 17.8% of households are without a car and 13.8% of residents use public transit. There also are 48,500 jobs per square mile in the study area, including city, county, state and federal offices and courthouses. The study area also is served by 18 OCTA bus routes. Additionally, the average weekday visitor count at SARTC is 2,995. These characteristics make Santa Ana an ideal candidate for a transit solution.

As part of the study of system options, various technologies were analyzed. The criteria used to determine appropriate technology alternatives included feasibility, cost-effectiveness, congestion relief, serving the transit-dependent and fostering environmental stewardship. Of all the options analyzed, only bus, trolley bus and modern streetcar met all criteria. Based on public outreach, a modern streetcar was selected as the preferred technology.

Two potential streetcar systems were analyzed as part of the environmental analysis as well as no-build and transportation system modification (TSM) alternatives. Both streetcar options would connect SARTC through the historic downtown, civic center and PE ROW to Garden Grove along a path similar to the original Santa Ana-Orange Line. These routes were selected to maximize the benefits to adjacent land uses and transit users while meeting the selection criteria and ensuring sufficient ridership to make the system successful.

Beyond the criteria used to select a streetcar system, there are additional benefits streetcars can provide the communities they serve. Streetcar



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systems promote community health and economic vitality. In the short term, building the system creates construction jobs and equipment and material purchases, which support local suppliers and contractors. A streetcar also would connect commuters and visitors arriving via commuter rail and bus at SARTC with jobs and attractions throughout downtown Santa Ana and beyond.

In the long term, streetcar lines bring in more customers to support downtown retail, improve property values, create more vibrant cities, make housing along their routes more affordable and increase public safety by keeping more eyes on the street, which improves the overall business climate.

Other cities throughout the U.S. that have built streetcar systems have seen significant return on their investment. For example, Portland, Ore., has seen construction of 10,212 new housing units and 5.4 million sq ft of office, institutional, retail and hotel space within two blocks of the streetcar route since 1997, representing more than \$3.5 billion in new investment. Fifty-five percent of all central business district development has occurred within one block of the route, and new development averages 90% of its

allowable density within one block of the route. The financial feasibility of new development has improved due to lower parking ratios.

Going forward, Santa Ana intends to release the environmental document for public review in early 2013. The city council is scheduled to select a locally preferred alternative and certify the environmental document in spring 2013. Project development is scheduled to begin in mid-2013 with construction starting in 2015 and operations scheduled to begin in late 2017.

When implemented, the Santa Ana fixed-guideway system will provide an environmentally responsible transportation alternative that is clean, quiet, energy-efficient and comfortable and will increase the overall economic activity in downtown Santa Ana. Eventually the streetcar could establish a successful initial system that will allow for expansion in central Orange County. **R&B**

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Gabriel is the principal civil engineer for the city of Santa Ana.

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