History of Transportation: Bridges

■ **First in an occasional series on the history of Transportation in L.A.**

The City's River Bridges

The Olympic Street (Ninth Street) Bridge.

Bridges are sections of roadways that span over canyons, rivers, railroads and other streets. Most of us travel along or under a bridge en route to work and tend to notice just the pavement as we drive by. However, if we look at the bridge structure above us or from afar, we come to recognize that bridges are the most elegant sections of the City's roadways. This becomes apparent when we examine the bridges that span the City's two primary rivers – Arroyo Seco and the Los Angeles River.

Construction of the bridges over the Arroyo Seco and Los Angeles River was perhaps the greatest public works project ever undertaken by the City. In the two-year period, 1910-11, three bridges were constructed to accommodate the first automobiles. They were York Boulevard over the Arroyo Seco, and Buena Vista Street and North Main Street over the Los Angeles River. However, they would soon no longer be adequate for the tremendous growth that would occur in Southern California. As a result, in the short seven-year time frame from 1925 to 1932, an amazing 15 concrete bridges were built to replace timber and less-substantial bridges. Two of these were constructed to span the Arroyo Seco (Avenue 26 and Avenue 60) and 13 were constructed to span the Los Angeles River – Riverside Drive (near Victory Boulevard), Los Feliz Boulevard, Hyperion Avenue, Fletcher Drive, Riverside Drive (near Figueroa Street), North Spring Street, Macy Street (Cesar Chavez Avenue), First Street, Fourth Street, Sixth Street, Seventh Street, Ninth Street and Washington Boulevard. All of them were designed and constructed under the supervision of Merrill Butler.

The First Street Viaduct, circa 1930.

The First Street Viaduct (bridge).

Near the downtown area, the bridges were strategically sequenced for construction starting at the southern and northern extremes and finishing near the middle. First, Ninth Street was constructed in 1925, followed by Macy Street, Seventh Street, First Street, Fourth Street and finally Sixth Street, constructed in 1932. The Washington Boulevard bridges, those near the Elysian Hills and Griffith Park and those over the Arroyo Seco, also were built during the same period, but in no special sequence.

All of these bridges were of a concrete arch design. And like those in Washington, D.C., Chicago, Milwaukee and other river cities, they are among the most beautiful in the United States. While many of them have traditional Beaux Arts features, each has its own distinctive design, in terms of balustrade, towers, integrated ornamental lighting and other features. The towers add a presence of grandeur. Those for the Fourth Street bridge are Gothic in design, while those for the Sixth Street bridge are Art Deco. The Hyperion Avenue towers have a Spanish Revival design. The Avenue 60 Bridge has a whimsical fan pattern along its balustrade. The Washington Boulevard Bridge shows a "men-at-work" painting, a common theme during the Great Depression, which suggests that modern industry will lead to a more promising future. The Macy Street Bridge pays tribute to Junipero Serra and integrates the City seal in its towers.

Several bridges no longer carry their original street names, such as Buena Vista Street (now North Broadway), Macy Street (now Cesar E. Chavez Avenue), and Ninth Street (now Olympic Boulevard). Also, several no longer look historic, due to replacement of the railings and street lighting, such as the Los Feliz Boulevard and North Main Street bridges. Finally, one bridge that was modernized in the 1970s was restored in 2000 to look just as it did when it was constructed in 1911 (North Broadway).

There are many other smaller bridges throughout the City that look nearly as attractive as the ones mentioned here. But none exemplify the vision, aspiration, pride and beauty of an emerging major city more than the bridges spanning the Arroyo Seco and the Los Angeles River.

Our author of the History column this month is John Fisher, the Assistant General Manager of Transportation Operations, Transportation. John has been with Transportation since 1973. He holds a Bachelor's degree in civil engineering and a Master's degree in public administration. He is a registered professional engineer and is active with transportation societies at the national and state levels.

John tells us that he became interested in the history of transportation and traffic management in southern California as a result of connecting with "old timers" who knew the City's pioneering traffic engineers and who passed along stories. The stories, photos, historic newspaper and magazine articles, and research in the City Archives revealed information that had not been documented before. John decided to make the result of his research available on the Transportation Website, under the title "Transportation Topics and Tales," where this material first appeared.

John will contribute articles occasionally to this space. I hope you enjoy his stories as much as I do!

– Hynda

Guest columnist John Fisher.

The Franklin Avenue Bridge.

History Comes Alive!

Tales From the City Archives

by Hynda Rudd,
City Archivist (Retired),
and Club Member

Pedestrian Tunnels

An archive photo of the pedestrian subway in a typical usage of the time, for a school at Van Ness Avenue near Maplewood Avenue.

The Crescent Heights Boulevard pedestrian tunnel under Olympic Boulevard.

Our civic leaders first addressed the problem of conflicts between pedestrians and vehicles by committing to a major infrastructure program of pedestrian tunnels. These tunnels were called subways and were built below major thoroughfares near schools. A few other cities built tunnels, as well.

The benefits of pedestrian subways became apparent soon after the initial installations. The first pedestrian subways, a pair, were constructed in 1918 in front of a large public school, and passed below an interurban (Red Car) railway and heavily traveled street. It became evident that the subways reduced the hazard to school children, relieved parental anxiety, and eliminated annoyance to motorists. A few years later in 1924, several small children were seriously injured in attempting to cross Sunset Boulevard at Micheltorena Avenue in front of an elementary school in the Echo Park community of Los Angeles. In response to this tragedy, the City Council financed the construction of a pedestrian subway at this location. Officials soon realized that this subway not only successfully accomplished its objective, but also saved the salary of a police officer who had been stationed at the school.

The idea of the school pedestrian subway quickly became very popular, and in the 1925 spring elections, Los Angeles voters approved a $350,000 bond issue to build school pedestrian subways. Forty pedestrian subways were financed from this bond. An additional 17 subways were constructed by assessment districts as part of arterial paving and widening projects. Sixteen were financed by the Board of Education, three by the federal government, one by the County of Los Angeles, and 15 by a combination of City, Board and federal sources. The California Division of Highways (now Caltrans) built the remainder as part of the construction of the Hollywood and Harbor Freeways. Over a 35-year period, approximately 115 pedestrian subways were constructed, 87 of which were for safe school access.

The design of the subways soon became well standardized after experience was gained with the initial installations. All were characterized with ornamental iron railings and the small blue-on-white porcelain enamel sign, "Pedestrian Use Subway." The interior width was six feet and the height was seven feet. For drainage purposes, floors had a 1.5-inch crown at the center so that water would run along the sides and collect via a sump pump recessed in the side wall. The sumps were then connected to a storm drain. For graffiti prevention purposes, the interior walls had a lumpy "spatter dash" mortar finish. Lights were recessed with a heavy wire mesh cover.

Although pedestrian subways were far more expensive to build than overcrossings, they were nonetheless the preferred facility. Only three overcrossings were built, as contrasted with 115 subways. There were two primary reasons for this. First, the subways were less of a vertical obstacle then overcrossings – nine feet versus 15 feet. The second reason is that the ascending stairways of overcrossings were perceived as unsightly fixed objects, and objectionable to nearby property owners.

In time, the subways fell out of fashion. The proliferation of traffic signals near schools provided a less expensive, albeit somewhat less effective, response to school safety needs. But more importantly, the subways, intended to enhance the safety of school children, were becoming recognized as being detrimental to their welfare. The subways became more frequently misused by the lower elements of society who would render them dangerous and unsanitary. As a result, many of the subways were closed part-time or on an all-day basis by the removal of the ornamental iron railings, and the installation of cyclone fencing and locked gates atop the stairway walls.

Los Angeles was unique in its commitment to infrastructure for school pedestrian grade separation. So, when you see these vintage structures near elementary schools in the older areas of the City, be reminded of a more genteel society, and the first major civic commitment to school pedestrian safety.