

**American Society of Civil Engineers, San Diego Section**  
**Historic Civil Engineering Landmark**  
**SAN DIEGO & ARIZONA: “THE IMPOSSIBLE RAILROAD”**



*Story and Photos by Phil Kern*

In early part of the 20<sup>th</sup> century, San Diego and Los Angeles were competing to be the largest metropolis and transportation hub in Southern California. Both had excellent harbors, access to goods from Asia and the Pacific, and would soon be in position to transfer cargo coming through the Panama Canal, which restarted construction under U.S. leadership in 1904. What was needed to complete the network was a direct rail link to the east, and at about this time a great benefactor entered the picture.

John D. Spreckels was heir to a sizable fortune built from the sugar industry, first visited San Diego in 1887 and later adopted it as his hometown after the 1906 San Francisco earthquake. Since Spreckels had relocated to San Diego he had been acquiring buildings, businesses, and newspapers (including the San Diego Union) as well as defunct street car lines and bankrupt short line railroads. These included the National City & Otay, Coronado, and San Diego & Cuyamaca Eastern Railroads which were all ultimately merged into the San Diego & Arizona Railroad by 1917.

Although the SD&A was incorporated in December 1906, groundbreaking for the new railroad was not until September 7, 1907. With E.J. Kallright as Chief Engineer, construction started south towards the border as the best grade (at a maximum of 2.2%) over the mountains to the east was found to be through Mexico. The Mexican government granted a franchise, right of way was acquired and a separate operating entity (Ferrocarriles Tijuana y Tecate) for the Mexican trackage was created.

The Southern Pacific Railroad saw promise in the San Diego connection and had been a silent partner of J.D. Spreckels for the first three years of construction, but with the sudden death of Edward H. Harriman in 1909, SP's financial participation abruptly ended. Spreckels had the means and elected to deliver on his promises and fund the construction out of his own pocket, 140 miles worth to the end of construction at Seeley, eight miles west of El Centro.



By far the most challenging and expensive section of railroad to construct was in Carriso Gorge. This 11 mile section clinging to the side of the gorge featured 17 tunnels totaling over 2.5 miles, 14 trestles and cost \$4 million alone. The last spike was finally driven on November 15, 1919 and the original construction was completed at a total

cost of \$18 million, almost exactly what the Metropolitan Transit Development Board acquired the entire railroad for 60 years later.

Maintaining operations was another story. Excursions to the border and “Tijuana Hot Springs” began in 1910, but by 1911 Mexican revolutionaries were stopping and shaking down construction trains headed for points further east. When the famous Hatfield Floods hit in 1916 wiping out large sections of track, Spreckels response was “Put it back”. A fire in January 1932 in Tunnel 3 east of Tijuana consumed the timber shoring and caused the center section to collapse, requiring six weeks to repair and creating Tunnels 3 and 3-1/2. A massive landslide in March of the same year completely blocked Tunnel 15 in the gorge requiring a permanent bypass of the tunnel and construction of now famous 185 foot high timber pile trestle across Goat Canyon.



The Impossible Railroad survived fires, floods, labor shortages, the Great Depression, two world wars, foreign revolutions, influenza epidemic, landslides, lawsuits, tunnel collapses, baking desert heat, and the withdrawal of major investors from the project. Today it survives as the backbone of the San Diego Trolley system between Downtown



and the international border. Although the track is not currently open all the way to El Centro due to a damaged trestle near Campo, there are many opportunities to view the legacy of the SD&A today. Carriso Gorge is as inaccessible as ever, but can be seen from a distance from a couple viewpoints along the east side of McCain Valley Road or close up via a strenuous hike up from the desert floor (although the actual right of way is off limits). A few old wooden passenger

cars can be viewed off Railroad Avenue in Jacumba, and the 1930 Ford fire truck that was formerly housed here is now located in the California State Railway Museum in Sacramento. The riveted steel Campo Creek viaduct is virtually unchanged over 90 years after it was constructed and crosses State Route 94 just west of Church Road. The Pacific Southwest Railway Museum has preserved the La Mesa and Campo Depot buildings, SD&A locomotives and cars, and also runs weekend excursions from the Campo depot for a small fee.