The Riverside Drive Bridge (Bridge #53-1298)  
City of Los Angeles  
Los Angeles County  
California

Name: Riverside Drive Bridge (Bridge #53-1298; formerly Victory Boulevard Bridge)

Location: The Riverside Drive Bridge is located on Riverside Drive between Victory Boulevard and Zoo Drive, north of Griffith Park. It is southeast of the Bette Davis Picnic Area, and southwest of Interstate 5 (I-5). The bridge spans the Los Angeles River near postmile 4.808 of California State Route 134 in the City and County of Los Angeles, California.

Date of Construction: 1937

Engineer: Merrill Butler

Contractor: John Strona

Present Owner: State of California  
Department of Transportation  
P.O. Box 942873  
Sacramento, CA 94273-0001

Present Use: Public roadway bridge spanning the Los Angeles River

Significance: The Riverside Drive Bridge is significant for its association with urban planning in the City of Los Angeles in the first half of the twentieth century and for its type, period and method of construction.

In 2012, the Riverside Drive Bridge was determined to be eligible for listing in the National Register of Historic Places as part of the Caltrans Historic Bridge Inventory Update.

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Date: September 2015

Project Information: The City of Los Angeles proposes to rehabilitate and widen the Riverside Drive Bridge on its downstream (east) side by 19’ feet to bring the bridge up to current design standards. This report was prepared to document the bridge before alterations to the bridge are made.
Part I. Historical Information

A. Physical History:

1. Date of Construction: The Riverside Drive Bridge was completed in late 1937. Construction began in November 1936.1

2. Engineer: The bridge was designed under the supervision of Deputy City Engineer, Merrill Butler.

3. Builder/Contractor: Construction of the bridge was overseen by building contractor John Strona. Research revealed that Strona was based out of Pomona, California, and was awarded contracts on a number of bridge projects.2

4. Original Plans and Construction: The bridge was originally constructed as a five-span bridge with closed spandrel arches, horizontal piers and Art Deco detailing. Comparison of the current bridge with historic photographs found in the University of Southern California Special Collections and Los Angeles City Archives indicate that very little of its outward appearance has changed.

5. Alterations and Additions: In 1992, the bridge underwent a seismic retrofit as part of Caltrans’ $50 million campaign to retrofit all bridges, freeway connectors, overpasses and overhead roads in the early 1990s.3 During the retrofit, cable restrainers at the abutments were anchored into thickened abutment backwall diaphragms in order to resist longitudinal seismic forces, and the original steel rocker bearings were replaced with bearing pads.4 The ornamental lighting fixtures are non-original.5

B. Historical Context:

The Riverside Drive Bridge is significant for its association with urban planning in the City of Los Angeles in the first half of the twentieth century and for its type, period and method of construction.

Urban Planning in the City of Los Angeles: The Bureau of Engineering, the Municipal Arts Commission and the City Beautiful Movement

The first iteration of the Bureau of Engineering and the Department of Public Works was formed in 1850, following the first city election. The newly-elected officials formed the Common Council, which in turn appointed fifteen committees. These fifteen committees were each given a responsibility, such as water and irrigation, garbage disposal and street cleaning, sanitation, and public works. These responsibilities would later be a function of

1 “Victory Bridge to Start Soon,” Los Angeles Times, November 9, 1936, A8; “This Week in 1937,” The Van Nuys News, December 19, 1938, 2.
3 Virginia Ellis, “Caltrans Out Front on Quake-Safe Bridges,” Los Angeles Times, October 18, 1990, A3.
4 Laura O’Neill, “Finding of Adverse Effect for the Proposed Riverside Drive Bridge Rehabilitation and Widening Project, Riverside Drive Bridge near Zoo Drive (#53C-1298) in the City of Los Angeles, Los Angeles County, California,” November 2012, 12.
5 O’Neill, 11.
the Board of Public Works. In 1872, the Common Council appointed an official Board of Public Works. This new board had about twenty members that handled the various aspects of public works and supervised two new department heads that were appointed by the mayor: the Street Superintendent and the City Surveyor. The responsibilities, duties, title, and elective status of the City Surveyor, sometimes called City Engineer, varied greatly throughout the 1870s and 1880s. The position was even abolished for a short period, then quickly reinstated. It was not until the Board of Public Works was reorganized by a 1905 charter that it began to resemble the current administration. Similarly, the Bureau of Engineering was reorganized in 1911.

The Municipal Arts Commission was formed in 1903 and consisted of five commissioners, appointed by the mayor, “to work for the gradual elimination of ugliness from the conspicuous parts of our city.” In order to carry out their goals, the Commission hired Charles Mulford Robinson, a landscape architect, to create a city plan for Los Angeles in 1907. Robinson would eventually write twenty-five such plans throughout the United States, and was a major proponent of the City Beautiful Movement.

The City Beautiful Movement was an urban design philosophy spawned in response to the increasing chaos and disorder in industrializing urban centers, especially on the east coast. Civic improvements such as parks, boulevards, gardens and monumental civic centers were seen as symbols of a “humane society” that might bring some order and tranquility to the newly industrialized cities. These ideas were popularized at fairs such as the 1893 World’s Columbian Exposition in Chicago.

Robinson’s city plan, titled “Los Angeles: The City Beautiful” was published in 1909. The report included suggestions for a new city hall, transit hub (Union Station), and bridges. He stressed that structures, especially bridges, could be both functional and aesthetically pleasing in their design and advocated the use of concrete arches in place of trestle bridges: “The bridges are about as ugly as they can be. As these are replaced, handsome structures should be substituted. The concrete arch now makes practicable a bridge that is beautiful at no more cost than the ugly iron type of the railroad bridge.”

Homer Hamlin, City Engineer between 1906 and 1917, wrote an addendum to Robinson’s report titled, “Bridge Construction in the City of Los Angeles” that affirmed the Bureau of Engineering’s revision of bridge construction policy to reflect the City Beautiful ideals:

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7 Adler-Ingram, 294.
10 JRP Historical Consulting, 9.
12 JRP Historical Consulting, 9.
The earlier policy was to consider first cost alone and to construct the cheapest and narrowest bridge that would serve the purpose. Then a few steel structures were erected across the river of the truss or the girder type, which are inherently unsightly. It is now the policy of the Board of Public Works to recommend cheap wooden bridges only in the outlying districts and occasionally for more important crossings where a temporary bridge can serve purposes until funds are available for a more permanent structure... The aesthetic side is taken care of by adopting the arch form and by special treatments of the concrete surfaces.13

Following the publication of “Los Angeles: The City Beautiful,” the city charter was amended in 1911 to give the Municipal Art Commission authority to approve the design for public buildings and infrastructure including bridges, approaches, fences, retaining walls, lamps and lamp posts. The charter was amended so that no design could be finalized without the prior approval of the Commission.

**Development of Better Bridges Across the Los Angeles River**

In the meantime, the population of Los Angeles was rapidly increasing. In response to the population boom, railroad, industry and transportation infrastructure grew until there were at least sixteen water crossings along the Los Angeles River, varying from earthen causeways to the previously mentioned—and “unsightly”—wood and iron trestle bridges. The combination of an unpredictable river and a sharp decline in undeveloped land created a perfect storm of flood danger: the less undeveloped land, the less run-off water that could be absorbed in a heavy storm.14

In heavy winter rains, the Los Angeles River would swell and flood, often changing course and sweeping increasingly larger debris—mud, rocks, trees, animals, even dwellings—into its path as it raced down the San Gabriel Mountains. When enough of this debris gathered, it would swamp and destroy the earth and wooden bridges, halting travel and causing millions of dollars in damage and repair costs to properties along the riverbank. Residents and businesses rallied public support for better and stronger all-weather bridges.15

The public also united against another side effect of the rapid population increase: massive traffic congestion. A tangled network of freight trains, passenger trains, automobiles, trolleys and even horse-drawn carriages created congestion that was unprecedented at that time in Los Angeles, and perhaps even the United States. The primary issue was discovered to be between trains and cars: automobile traffic was delayed for nearly fifteen percent of the day as trains crossed. Private interests, such as the North & Northeast & Northwest Improvement Company, proposed a two-step solution: consolidate both freight and passenger rail into a rail depot, and construct grade

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13 JRP Historical Consulting, 9.
15 Lee, Johnston and Watson, 7.
separations—bridges and viaducts—to carry automobiles over the Los Angeles River and the train tracks.\(^{16}\)

Two of the first reinforced concrete bridges in Los Angeles were the Main Street Bridge and the Buena Vista Street Bridge (now the Broadway Bridge), completed in 1910 and 1911, respectively. Following Robinson’s “City Beautiful” advice, the bridges were executed in Beaux Arts style reinforced concrete. The Buena Vista Street Bridge was hailed by contemporaries as a masterpiece.\(^{17}\)

Further bridge construction was impeded for almost a decade by World War I and conflict between the city and railroad companies.\(^{18}\) In 1921, the State Railroad Commission issued an order that required the city and county of Los Angeles, railroads and transit to all cooperate in the construction of grade crossings and high bridge construction over the railways.\(^{19}\) The newly-formed Los Angeles Traffic Commission, comprised of civic and public organizations, got to work on a series of traffic studies while the City Council proposed a bond measure to fund bridge construction on the 1923 ballot. The formal Major Traffic Street Plan was released in 1924, and between 1923 and 1926, voters approved bond measures of $5.4 million to construct twelve new bridges. By this time, the Bureau of Engineering had grown to over 1200 employees, compared to just 200 at the turn of the century.\(^{20}\)

During the construction period, the Municipal Arts Commission actively participated in design approval. At its height in 1927, the Commission approved a total of 1,027 plans with a valuation of $14,382,705.\(^{21}\) In the 1923 Bureau of Engineering Annual Report, it states that the design intent for the bridges was to “excite comment from visitors who enter and leave the city,” and “raise the status of Los Angeles as an enterprising, properly developed city.”\(^{22}\) With these ideas in mind, the last of the bond measure bridges, the Sixth Street Bridge, was dedicated in 1933.\(^{23}\)

**Funding New Bridges in the 1930s**

The bridge building program, however, was far from complete. In the 1932 City of Los Angeles Bureau of Engineer’s Annual Report it read:

> In spite of the very large volume of bridge construction work done since 1923, there are still many bridges and grade separations required to complete the highway system of the city. There are now ten bridges and grade separations which have planned or are being planned for early construction. These are all new structures required to complete

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\(^{17}\) Lee, Johnston and Watson, 10.

\(^{18}\) Lee, Johnston and Watson, 10.

\(^{19}\) Lee, Johnston and Watson, 10.

\(^{20}\) Roth, 455.

\(^{21}\) JRP Historical Consulting, 12.

\(^{22}\) JRP Historical Consulting, 12.

major highway improvements or to better existing conditions at busy intersections. It is therefore anticipated that the work of the division in renewing structures or constructing new bridges will continue as rapidly as work can be financed.

However, in the midst of the Great Depression, funding was difficult to come by. In response to the national crisis, President Franklin D. Roosevelt enacted the New Deal. The New Deal was a series of federal programs put in place to promote economic recovery and job creation while helping to effect civic improvement. In 1933, the National Industrial Recovery Act (NIRA) was established as part of the New Deal. Functioning under the umbrella of NIRA, the Public Works Administration (PWA) used federal funds to hire and pay contractors to carry out large-scale public projects. The Riverside Drive Bridge was one such project made possible by federal funding. In May of 1936, City Engineer Lloyd Alrich proposed the idea of obtaining PWA grant money to construct the Riverside Drive Bridge, along with four other projects. Four of the projects had already been filed with the WPA, another federal aid project, but Aldrich expressed doubt that they would be approved due to the large number of WPA projects already underway in Los Angeles and moved to seek funds from the PWA.

The Riverside Drive Bridge—known in its early days as the Riverside Drive at Victory Boulevard Bridge, or the Victory Boulevard Bridge—was originally a part of a proposed series of improvements for a new route into the San Fernando Valley. The idea was to pave Victory Boulevard and Riverside Drive into a new “artery” that would cross the Los Angeles River north of Griffith Park and lead into the city. The planning stages for these improvements began in 1924, and the construction of a concrete bridge to span the river was a key component of the plans. The Board of Public Works received bids for the new road paving in May 1927, and in June of the same year, members of the Los Angeles Board of Park Commissioners advocated the construction of the new, concrete bridge. Later in 1927, paving work was underway for the new roadway, but an existing wooden bridge still remained. The wooden bridge sat at an extreme angle to the newly paved road and was far narrower than the four new lanes, creating a very dangerous turn.

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26 In 1933, the Federal Emergency Administration of Public Works (FEAPW) was established to provide a comprehensive public works program. In 1939, the program was reorganized under the Federal Works Agency (FWA), and renamed the Public Works Administration (PWA). It served a similar function, hiring contractors to carry out large scale building projects; “Records of the Public Works Administration (PWA),” The National Archives, accessed January 22, 2015, http://www.archives.gov/research/guide-fed-records/groups/135.html#135.1.
27 Los Angeles City Council Minutes, May 22, 1936, Volume 258, 212.
28 “Wide Boulevard is Recommended,” Los Angeles Times, July 6, 1924, F1.
and bottleneck.\textsuperscript{31} As further evidence of the need for replacement, the bridge was still damaged from heavy winter storm waters in 1926.\textsuperscript{32}

The estimated time and costs for the Riverside Drive Bridge were that sixty-two men would spend 56,400 man hours to complete construction.\textsuperscript{33} In November 1936, contractor John Strona was awarded the PWA contract to construct the new, reinforced concrete bridge at Riverside Drive. The cost of construction was bid at $213,498.20, and PWA would provide 45 percent of this cost.\textsuperscript{34} The new reinforced concrete bridge was realigned with Riverside Drive to reduce the dangerous angle, and widened to reduce the traffic bottleneck.\textsuperscript{35} Construction was quick, and replacing the old wooden bridge was the last step in allowing a “smooth, fast flow of traffic” along Victory Boulevard and Riverside Drive between the San Fernando Valley and Los Angeles.\textsuperscript{36} The bridge was officially open to traffic in December 1937\textsuperscript{37} and was approved by the Board of Public Works in February 1938. Once the new bridge was approved, the old wooden bridge was demolished.\textsuperscript{38} The final cost of the bridge was $234,494, of which the PWA provided $95,929.\textsuperscript{39}

The Riverside Drive Bridge is smaller and shorter than some of its counterparts, but it was given special architectural consideration as an important water crossing adjacent to Griffith Park. It was executed in the popular 1930s Art Deco/Streamline Moderne style.\textsuperscript{40}

With the help of federal funds, a second—albeit smaller-scale—period of bridge construction occurred in Los Angeles between 1933 and 1943. Along with the Riverside Drive Bridge, which used PWA funding, a number of other Los Angeles River Bridges were completed under various New Deal agencies, including the Aliso Street Bridge (1944, WPA), the Figueroa Street Viaduct (1937, Bureau of Public Roads), the First and Glendale Viaduct (1941, WPA), Sunset and Glendale Viaduct (1934, Federal Public Works) and the Temple Street Bridge (1939, PWA).\textsuperscript{41}

While the Municipal Art Commission had a great deal of influence on public projects through World War II, their responsibilities and focus began to shift for a combination of reasons. New and different state and federal agencies began to head transportation projects, over which the city commission had no authority. Legal lines were blurred in regards to the actual level of their authoritative power: in 1940, the commission was advised by the City Attorney that California courts had not yet officially established whether aesthetic control actually constituted governmental power, as compared to something like zoning. Simultaneously, references to design aesthetics slowly

\textsuperscript{32} “Riverside Drive Aid Expected,” \textit{Los Angeles Times}, October 10, 1927, A6.
\textsuperscript{33} Annual Report of the City Engineer, July 1936-June 1937.
\textsuperscript{34} “Victory Bridge to Start Soon,” \textit{Los Angeles Times}, November 9, 1936, A8.
\textsuperscript{35} “Victory Bridge to Start Soon,” \textit{Los Angeles Times}, November 9, 1936, A8.
\textsuperscript{36} “Riverside Traffic Eased: Los Angeles River Bridge Reduces Driving Hazards,” \textit{Los Angeles Times}, May 9, 1937, F4.
\textsuperscript{37} “Van Nuys Progress: This Week in 1937,” \textit{The Van Nuys News}, December 19, 1938, 2.
\textsuperscript{38} “Riverside Drive Bridge Accepted,” \textit{The Van Nuys News}, February 7, 1938, 8.
\textsuperscript{39} Annual Report of the City Engineer, July 1937-June 1938.
\textsuperscript{40} JRP Historical Consulting, 14.
disappeared from Bureau of Engineering articles and official documents, despite postwar funding being plentiful for public works projects. As the ties between the Commission and the Bureau came to an end, so did a distinct “golden age” of the Los Angeles River Bridges.

*Merrill Butler*

Merrill Butler was born in 1891 in Gouverneur, New York; his family moved to Los Angeles in 1903. After attending Los Angeles Polytechnic High School, Butler found work in 1909 as a draftsman with the Los Angeles Railway Company. During this time, he continued his education through correspondence courses in math and civil engineering at the University of Wisconsin.

Butler was first employed by the City of Los Angeles starting in November 1912 as a draftsman in the City’s Bridge Division; he was promoted to Assistant Engineer by 1915 and worked directly on bridge plans and designs. After the start of World War I, Butler was granted a Reserve Commission as First Lieutenant Engineering Officer. Following training, he went to France with the 316th Engineers Regiment of the 91st Division of the American Expeditionary Force, receiving a service ribbon and four battle stars before being discharged as a Captain.

After the War and a stint in the Arizona State Highway Department, he returned to Los Angeles in 1923 and was promoted to Structural Engineer. In this new position, he oversaw the designs for the Ninth and Macy Street Bridges over the Los Angeles River.

In 1924, the Bridge and Structural Design Division of the Bureau of Engineering was reinstated after having been dissolved during World War I. Butler was named head of this division with the title of Bridge and Viaduct Engineer and would remain in this position until 1932. Among the number of projects he supervised as Bridge and Viaduct Engineer are the First, Fourth, Sixth, Seventh, Spring, and Washington Street Bridges, as well as the Glendale Hyperion Bridge. He also oversaw the design for the Anaheim Street Viaduct, Figueroa Street Tunnels and the Sepulveda Boulevard Tunnel.

In 1933, he took the position of Deputy City Engineer (Design) where he would remain until his retirement in 1961. As Deputy City Engineer (Design), he was responsible for overseeing all the design work for all divisions of the Bureau of Engineering including the Bridge and Structural, Sewer, Storm Drain, and Street and Freeway divisions.

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42 JRP Historical Consulting, 14-15.
44 “Biography of Merrill Butler…”
45 “Biography of Merrill Butler…”
46 “Biography of Merrill Butler…”
47 “Biography of Merrill Butler…”
48 “Biography of Merrill Butler…"
It is not likely that Butler was singlehandedly responsible for the design of each of the Los Angeles River Bridges mentioned above. Rather, the bridges are a significant and important reflection of the combined efforts of a group of individuals in the Bureau of Engineering; however, Butler is worth distinguishing both for the length of time he spent as an engineer for the City of Los Angeles, and for the fact that he would have had added influence in his supervisory role. Butler himself said that the Los Angeles River Bridges were one of his proudest accomplishments.

Reinforced Concrete Bridge Construction, Art Deco and Streamline Moderne

While concrete has been used in construction for centuries, the first use of reinforced concrete in building was in Europe in the late 1840s. By the 1870s, the technology had reached the United States. In the early days, it was typically used for large residences or warehouses. Reinforced concrete is concrete strengthened at its core with steel bars: the bars bond to the concrete and provide tensile strength. Concrete is strong under compression, while steel is strong under tension. The two materials react similarly to temperature changes, and combining them together creates a versatile building material suited to a wide variety of projects.

Engineers in Europe pioneered the use of reinforced concrete in bridges, namely Robert Maillart. Maillart’s understanding of the medium of reinforced concrete and the designs he created with it paved the way for the Los Angeles River Bridges, and for the bridge engineering field as a whole.

The first reinforced concrete bridge in the United States, the Alvord Lake Bridge, was constructed in 1889 in San Francisco and designed by E.L. Ransome. As such, California introduced reinforced concrete bridges to the rest of the United States, and continued to be at the forefront of the technology. Concrete bridge construction was more economically feasible in California and the West Coast than the rest of the country, due to the high cost of steel. High quality cement, on the other hand, was plentiful, readily available, and allowed for a wider variety of bridge building due to its ability to take on smooth and curving shapes.

Four major types of concrete bridge construction developed: closed spandrel, open spandrel, concrete girder, and concrete slab. The closed spandrel bridge consists of a solid form of rigid material—the arch—with vertical side walls, or spandrel walls. The empty space between the arch and the spandrel is filled, typically with dirt, and the bridge deck tops the dirt. The earliest reinforced concrete bridge, the previously mentioned

49 JRP Historical Consulting, 26.
50 “Biography of Merrill Butler...”
51 Stephen D. Mikesell, Historic Highway Bridges of California (Sacramento: California Department of Transportation, 1990), 71.
52 Lee, Johnston and Watson, 26.
54 Mikesell, 71.
55 Mikesell, 71.
Alford Lake Bridge, is a closed spandrel bridge. In California, the closed spandrel bridge was primarily constructed prior to World War I. 56

The second type of bridge, the open spandrel bridge, consists of the arch and spandrel walls being constructed as individual members and joined together at critical junctures. The arch typically consists of arch rings tied together with horizontal struts and connected to the bridge deck by vertical columns. The earliest open spandrel bridge is the previously mentioned Buena Vista (or Broadway) Street Bridge, finished in 1911. In California, this type of bridge was constructed up until World War II; very few were constructed in post-war years. 57

The third type of bridge, the concrete slab, consists of a monolithic slab of concrete spanning the abutments that serves as both the deck and structural member of the bridge. While it was limited to very short crossings, advances in prestressed concrete have increased the distance possible with a concrete slab bridge. 58

The fourth type of bridge, the concrete girder bridge, consists of large, horizontal members (or girders) that span from abutment to abutment beneath the bridge deck. This type is especially suitable for short crossings. 59 Concrete t-beam girder bridges, like the Riverside Drive Bridge, were a common alternative to concrete arch designs as the latter became more expensive to build during the 1930s and 1940s. 60 The concrete girder bridge is likely the most common type constructed in California, with the first constructed as early as 1910. Though the technology has evolved over time, girder bridges are still built today. 61

Many of the reinforced concrete Los Angeles River Bridges were executed in the Beaux Arts or Period Revival Styles; however, beginning in the late 1920s and early 1930s, there was an aesthetic shift to more modern styles. This new stylistic movement would later come to be known as “Art Deco” after the *Exposition Internationale des Arts Decoratifs et Industriels Modernes* of Paris in 1925. 62 Art Deco was especially prominent in Los Angeles. The style employed geometric forms, stylized sculptural elements, and modern building materials such as polychrome terra cotta. 63 The style is characterized by its zigzag decorative features, smooth stucco surfaces, geometric ornament, and an emphasis on verticality.

Art Deco detailing often incorporated imagery of new technology and conveyed a sense of movement; this feeling of movement, and a general fascination with new, modern technology and transportation was concentrated and amplified into the Streamline Moderne style. These sleek, aerodynamic designs were applied to everything from

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56 Mikesell, 76-77.
57 Mikesell, 76-77.
58 Mikesell, 76-77.
59 Mikesell, 76-77.
60 JRP Historical Consulting, 20.
61 Mikesell 76-77
63 Gleye 120-121.
automobiles to toaster ovens in the 1930s, and architecture was no exception. The style is characterized by its unornamented surfaces, curved corners and emphasis on horizontality through sweeping, aerodynamic lines.\textsuperscript{64} 

The zigzag detailing between each arch span, the repetitive geometric shape of the concrete railing and the sweeping curves of the piers on the Riverside Drive Bridge incorporate design elements of both the Art Deco and Streamline Moderne styles, making it an important example of the Bureau of Engineering’s work during a pivotal aesthetic and design shift in 1930s Los Angeles towards modern architecture.\textsuperscript{65}

**Part II. Structural/Design Information**

**A. General Statement:**

1. **Character:**
   
   The Riverside Drive Bridge is the result of a city-wide bridge building program in Los Angeles that occurred in two primary phases: 1911-1933 and 1935-1943. During this time, the Bureau of Engineering and Municipal Arts Commission collaborated on a series of reinforced concrete bridges that encapsulated the ideals of the City Beautiful movement by incorporating the popular architectural styles of the day, while simultaneously breaking new ground in the field of engineering. These bridges beautified the City while improving traffic flow and increasing safety. The Riverside Drive Bridge, with its Art Deco and Streamline Moderne design details, is also an important reflection of the Bureau of Engineering and Municipal Arts Commissions’ reaction to aesthetic shifts that began in the late 1920s and early 1930s. As an important water crossing adjacent to Griffith Park, the bridge was given special architectural consideration despite its relatively small scale.

   In addition to its architectural and engineering merits, the Riverside Drive Bridge also completed a crucial transportation link between the City of Los Angeles and the San Fernando Valley via Victory Boulevard.

   As such, the bridge was determined eligible for the National Register of Historic Places through the Caltrans Historic Bridge Inventory Update of 2006, and was listed as Los Angeles Historic-Cultural Monument #910 in 2007.

2. **Condition of Fabric:**
   
   The Riverside Drive Bridge is in overall good condition. Its outward appearance gives no indication of being structurally unsound, and it underwent a seismic retrofit in 1992. Comparison with historic photographs

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\textsuperscript{64} Gleye 129-130.

\textsuperscript{65} JRP Historical Consulting, 38.
indicates that the bridge design is predominantly intact, aside from non-original light fixtures.

B. Description:
The Riverside Drive Bridge is a concrete T-beam girder bridge with closed spandrel arches. Structurally, the bridge has four 11’ traffic lanes and two 4 ½’ sidewalks. It is approximately 56’ wide and 381’ long, with five continuous spans. The end spans are approximately 69’ and the middle spans are approximately 80’. The alignment is straight, with a 40 degree skew angle at all piers and abutments. The superstructure consists of ten parabolically haunched cast-in-place concrete “T” beam girders that vary in depth from approximately 6’ to 3’ with a 7½” thick reinforced concrete deck overlaid with asphalt covering. The abutments are tall cantilever type abutments topped with concrete railings. Approximately 18” thick concrete counterfort ribs intersect 5’ wide segments of abutment wall below each bearing pad, creating columns. The abutment seat consists of an approximately 6’ deep concrete beam spanning between these columns. The piers consist of approximately 3’ thick pier walls. All foundations consist of 25-ton timber piles, treated with creosote, embedded 12’ into pile caps.\[66\]

The bridge deck is enclosed with a geometric concrete railing; the railing consists of repeated I-shaped segments that form regular, polygonal voids and projections. On both faces of the bridge, there are incised concrete chevron pilasters located at the junction of each arch span. These pilasters also serve as a base for the lighting fixtures; five spans on each face create a total of ten lights fixtures and ten chevron pilasters. The non-original but compatible light fixtures consist of a stepped, fluted metal base topped ornamental luminaires. Supporting each bridge span there is a pier, arranged at a 40 degree angle from the bridge deck. The concrete piers are cast in sweeping horizontal lines with rounded edges, reminiscent of the bow of an ocean liner.

C. Site Information:
The Riverside Drive Bridge is located north of Griffith Park and crosses the Los Angeles River directly north of California State Route 134. Victory Boulevard changes to Riverside Drive south of its intersection with Sonora Avenue. Riverside Drive then angles south towards the Los Angeles River, where the bridge crossing is located. At the south side of the bridge, traffic is diverted onto Zoo Drive, which runs east-to-west.

The bridge is surrounded by natural tree and shrub growth; it crosses a comparatively lush portion of the Los Angeles River that is filled with vegetation, is adjacent to the wooded Bette Davis picnic area and leads into a hilly portion of Griffith Park covered with natural shrubs and chaparral.

\[66\] O’Neill, 11-12.
Part III. Project Information:

The proposed project consists of five project elements: seismic retrofit, bridge improvements, utility alterations, bike path improvements, and intersection improvements at the California State Route 134 on-ramp.

The seismic retrofit improvements would be limited to abutment seat extensions and concrete fill along the abutment walls above grade.

The existing bridge would be widened approximately 19’ on the downstream side. The new structure would be approximately 75’ wide and would accommodate four 11’ through lanes, a 2’ median, two 5’ shoulders, two 8’ sidewalks, and two 1’ barrier railings. The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, measuring approximately 21’ 3” inches in length and 3’ 1” in width. The new piers would be separated from the existing pier walls by approximately 4’.

The railings on the upstream side would be reconstructed to match the existing railings, while satisfying current crash barrier requirements. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The decorative elements on the upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The non-original concrete light standards atop the pylons would remain in place and be refurbished, if possible, or be replaced with exact replicas. The non-original lanterns would either be refurbished on the exterior and modified on the interior to house LED lights, or replaced with replicas of the original 1937 lanterns, which would also be modified on the interior to house LED lights.

The existing railing, horizontal bands of indentations, pylons, light standards, and lanterns on the downstream side would be removed to accommodate the widening. The non-original concrete light standards would be salvaged, reused, and refurbished, if possible, on the new widened side to provide visual continuity with the non-widened side. If reuse is not possible, the light standards would be replaced with exact replicas. The non-original lanterns would either be refurbished on the exterior and modified on the interior to house LED lights, or replaced with replicas of the original 1937 lanterns, which would also be modified on the interior to house LED lights.

The new railing would match the reconstructed railing on the upstream side. The horizontal banding would be recreated beneath the new railing. The pylons would be differentiated from the original features on the upstream side through simplified ornamentation. The new ornamentation would reference the historic ornamentation and be compatible with it, without mimicking it exactly.
To alter an existing storm drain, excavation would be required south of the bridge, along the abutment, at a depth of 15’. To connect bridge electrical lines to the series circuit that currently ends at Victory Boulevard, existing utility lines would be extended north along Riverside Drive to Victory Boulevard/Sonora Avenue. These improvements would likely be accomplished through micro tunneling or jacking of pipe at a maximum depth of 36”. Drainage improvements would be made to the deck. Drains would be installed at the new shoulders to divert rainfall into the channel lining below the bridge. Filters would be installed at the existing catch basin at the southeast corner of the bridge to treat rainfall runoff.

The project would also provide a 14’ wide bike path that would cross under the bridge. This undercrossing would connect the existing Los Angeles River bike path east of the bridge to the area west of the bridge, where there are plans to extend the bike path. The bike path would be paved and striped according to current standards. The project would also provide a new connection from the future bike path to Riverside Drive. The connection would require the removal of the existing concrete railing atop the bridge’s southwest abutment.

Lastly, to improve visibility for bicyclists, motorists, and pedestrians, the intersection of the California State Route 134 on-ramp and Riverside Drive would be modified by softening the curve at the bridge’s southwest abutment. The southwest abutment’s concrete railing would be removed to accommodate the new curve, improve visibility, and allow for a new entry point to the bike path, as discussed above. The abutment itself would remain in place.

A construction staging area is proposed northwest of the bridge within the adjacent Bette Davis Picnic Area. The staging area would be in a 25,000 square foot (approximately 0.57 acre) portion of the park west of Riverside Drive near the bridge. No grading or digging would be needed to accommodate the contractor’s activities within the staging area and no trees would be removed. Following construction, the area would be restored to existing conditions.67

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67 O’Neill, 6-8.
Part IV: Sources of Information:

A. Primary Sources:


“Riverside Drive Bridge Accepted.” Van Nuys News. February 7, 1938, 8.


**B. Secondary Sources:**


California State University, Northridge Oviatt Library Digital Collections.


Los Angeles Public Library Photo Collection.


O’Neill, Laura. “Finding of Adverse Effect for the Proposed Riverside Drive Bridge Rehabilitation and Widening Project, Riverside Drive Bridge near Zoo Drive (#53C-1298) in the City of Los Angeles, Los Angeles County, California.” November 2012.


University of Southern California Special Collections, Los Angeles Examiner Collection.
Part VI: Field Records

The Riverside Drive Bridge (Bridge #53-1238)  
FIELD RECORDS  
HAER No. CA-1238

“Photo F-5883: Victory Boulevard Bridge over Los Angeles River, SE of Sonora Avenue (Glendale) showing completed spans,” October 19, 1937. Source: Photographic Records of Construction Work Vol. 60 No’s. 5800-5899. Los Angeles City Archives.
“Construction of the new Victory Boulevard and Riverside Drive Bridge,” diagram indicates new bridge location and alignment, as compared to the old wooden bridge. March 1937. Source: University of Southern California Special Collections, Los Angeles Examiner Collection, 1920-1961.
The Riverside Drive Bridge (Bridge #53-1298)                                 HAER No. CA-1298
City of Los Angeles
Los Angeles County
California

Jim Sanderson, Photographer, November 2014

CA-1238-01  VIEW OF EAST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING WEST.
CA-1238-02  VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING EAST FROM NORTH RIVERBANK.
CA-1238-03  DETAIL VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE AND PIER, LOOKING SOUTHEAST.
CA-1238-04  VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING SOUTHEAST FROM NORTH RIVERBANK.
CA-1238-05  VIEW OF EAST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING NORTHWEST FROM LOS ANGELES RIVER BIKE PATH.
CA-1238-06  VIEW OF EAST FACE OF THE RIVERSIDE DRIVE BRIDGE, LOOKING SOUTHWEST.
CA-1238-07  VIEW OF EAST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING NORTHWEST.
CA-1238-08  VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING NORTHEAST.
CA-1238-09  DETAIL VIEW OF EAST FACE AND RAILING OF THE RIVERSIDE DRIVE BRIDGE, LOOKING SOUTHWEST.
CA-1238-10  VIEW OF RIVERSIDE DRIVE BRIDGE NORTH RAMP, LOOKING SOUTHWEST FROM RIVERSIDE DRIVE TOWARDS GRIFFITH PARK.
CA-1238-11  TIGHTER VIEW OF RIVERSIDE DRIVE BRIDGE NORTH RAMP, LOOKING SOUTHWEST FROM RIVERSIDE DRIVE TOWARDS GRIFFITH PARK.
CA-1238-12  VIEW OF RIVERSIDE DRIVE BRIDGE SOUTH RAMP, LOOKING NORTH TOWARDS VICTORY BOULEVARD.
CA-1238-13  TIGHTER VIEW OF RIVERSIDE DRIVE BRIDGE SOUTH RAMP,
LOOKING NORTH TOWARDS BURBANK.

CA-1238-14 VIEW OF NORTH RAMP AND RAILING AT EASTERN EDGE OF BRIDGE DECK, LOOKING SOUTH TOWARDS GRIFFITH PARK.

CA-1238-15 VIEW OF CONCRETE RAILING ON EAST SIDE OF THE RIVERSIDE DRIVE BRIDGE DECK, LOOKING NORTHEAST.

CA-1238-16 VIEW OF EAST FACE OF RIVERSIDE DRIVE BRIDGE FROM A DISTANCE, LOOKING WEST FROM LOS ANGELES RIVER BIKE PATH.

CA-1238-17 VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE FROM A DISTANCE, LOOKING EAST.

CA-1238-18 VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE, PIER AND ABUTMENT, LOOKING NORTH FROM RIVERBED.

CA-1238-19 VIEW OF UNDERSIDE AND NORTH ABUTMENT OF RIVERSIDE DRIVE BRIDGE, LOOKING NORTH.

CA-1238-20 VIEW OF UNDERSIDE OF BRIDGE DECK AT CENTER OF RIVERSIDE DRIVE BRIDGE, LOOKING SOUTH.

CA-1238-21 DETAIL VIEW OF RAILING AT THE SOUTH END OF THE WEST FACE, LOOKING NORTH.

CA-1238-22 DETAIL VIEW OF WEST FACE OF RIVERSIDE DRIVE BRIDGE AND PIER, LOOKING EAST FROM RIVERBED.

CA-1238-23 DETAIL VIEW OF LIGHTING AND INCISED CHEVRON PILASTER ON WEST FACE OF RIVERSIDE DRIVE BRIDGE, LOOKING EAST.

CA-1238-24 DETAIL VIEW OF LAMP ON CONCRETE RAILING ON WEST SIDE OF RIVERSIDE DRIVE BRIDGE, LOOKING NORTH.

CA-1238-25 VIEW OF CONCRETE RAILING ON WEST SIDE OF BRIDGE, LOOKING WEST.

CA-1238-26 VIEW OF CONCRETE RAILING ON EAST SIDE OF BRIDGE, LOOKING EAST.

CA-1238-27 DETAIL VIEW OF BRIDGE BADGE ON WEST RAILING, LOOKING WEST.
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-01
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-03
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-07
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-08
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-10
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-16
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-24
HISTORIC AMERICAN ENGINEERING RECORD (HAER-LIKE)
SEE INDEX TO PHOTOGRAPHS FOR CAPTION

CA-1238-27