

First Street Bridge (First Street Viaduct)
First Street between Vignes and Myers Streets
spanning the Los Angeles River
Los Angeles
Los Angeles County
California

HAER
CAL
19-LOSAN,
76-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HAER
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17-LOSAN
710-

HISTORIC AMERICAN ENGINEERING RECORD
FIRST STREET BRIDGE (FIRST STREET VIADUCT)

HAER No. CA-175

Location: First Street between Vignes Street and Myers Street, City of Los Angeles, Los Angeles County, California.

USGS Los Angeles Quadrangle, 7.5'
UTM Coordinates 11 386200-386800 3786000

Period of Construction: 1926-28. First Street Bridge was put into operation January 1, 1929.

Engineer: City of Los Angeles Chief Engineer Merrill Butler

**Builder:
(Contractor)** Mittry Brothers Construction Company

Present Owner: City of Los Angeles
200 North Main Street
Los Angeles, CA 90012

Present Use: Connector street for inner City industrial/commercial and residential travel over the Los Angeles River.

Significance: First Street Bridge is a Neo-Classical design bridge and is one of the City of Los Angeles bridges that was built as part of the City Beautiful plans of the early 1900's. City Beautiful plans were inspired by the civic architecture of Paris and Rome. These plans sought to beautify United States cities by constructing grand civic monuments, incorporating both building and public works projects.

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Date: April 5, 1996

I. DESCRIPTION

The First Street Bridge/Viaduct over the Los Angeles River is one of ten City of Los Angeles historic bridges currently being seismically retrofit. First Street Bridge/Viaduct (Figure 1) is one example of designs created by the Bureau of Engineering of the City of Los Angeles in order to develop a City Beautiful plan in the early 1900's. "City Beautiful plans were inspired by the civic architecture of Paris and Rome, and these plans sought to beautify America's cities by constructing grand civic monuments, both buildings and public works projects.¹

FIGURE NOT AVAILABLE

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As one of the City Beautiful plan bridges, First Street Bridge/Viaduct was part of a sub-group of bridges built over a five-year period from 1926 to 1931. These include Macy Street Bridge over the Los Angeles River (1926), which was designed in a Spanish Colonial style, First Street Bridge (1929), which was designed in Neo-Classical style, and Fourth Street Bridge over the Los Angeles River (1931), which was designed in Gothic Revival style.¹ Located within an existing industrial area (Figures 2 and 3), the bridge had to be designed to be constructed between existing buildings.

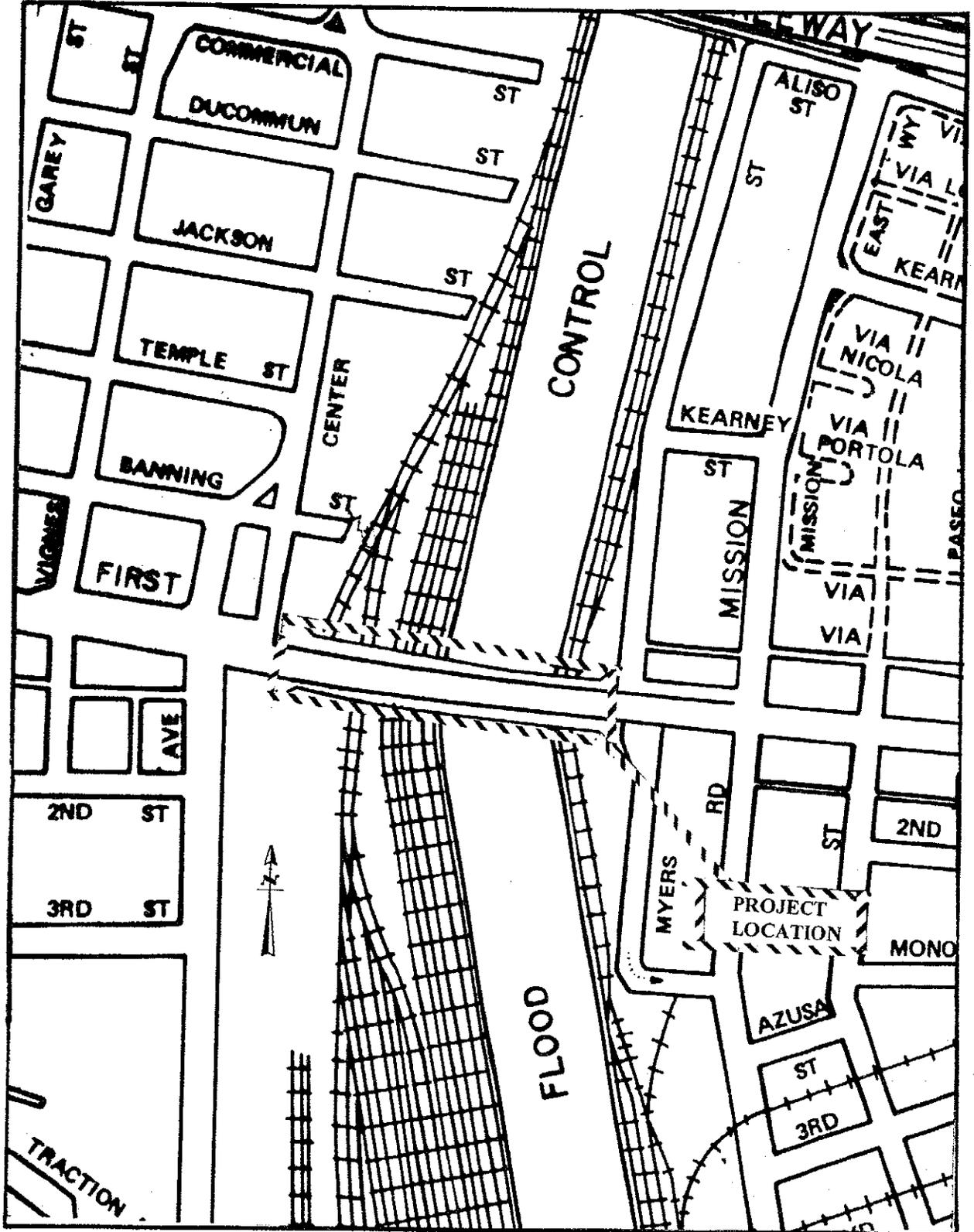
Figure 1 - First Street Bridge - Soon after completion.

bridge is a 71.0 feet wide, 28 spans, 1300 feet long symmetrical bridge, with 4 lanes, 2 arch spans, additional arch span length, 125 feet, with a cantilevered walkway. The approach spans are 1 girders. At the time of construction, the lighting on First Street Bridge was lantern electroliers; however, modern cobra lighting has been installed on the existing light standards. Part of the seismic retrofit proposal is the reinstallation of the historic electroliers or replicas to recreate the look of the bridge when it was first opened on January 1, 1929.²

First Street Bridge/Viaduct's mainspan is a reinforced concrete, open spandrel, fixed, elliptical, 125 feet, through, 4 ribbed arch. The

Other defining characteristics of First Street Bridge/Viaduct are the "[L]arge triumphal arches [which] rise above the river piers, behind which are projecting balconies with benches. The railings are simple arcades. The neo-classical detail extends to the entablature pattern on the fascia [sic] girders and to the bracketing for the sidewalk."² Spandrel columns constructed as part of the archways above the Los Angeles River are arched in shape and highly decorative. At completion of the Arch Bridge Rating Sheet on April 4, 1986, the viaduct had been unaltered.

Figure 3 - Location Map



II. ARCHITECTURAL AND ENGINEERING INFORMATION

First Street Bridge/Viaduct was designed by City of Los Angeles engineer Merrill Butler, who was considered a significant designer. Merrill Butler was the Engineer of Bridges for the City of Los Angeles and was employed by the City from 1923 to 1963. First Street Bridge/Viaduct is a major example of Merrill Butler's work.² First Street Bridge/Viaduct was one of three bridges within a sub-group, with Macy Street Bridge and Fourth Street Bridge being the other two. These three bridges were part of the sub-group of Period Revival bridges designed and constructed between 1926 and 1931. Neo-classical design was chosen by Mr. Butler to coordinate with the two other bridges designs; Macy Street Bridge is Spanish Colonial and Fourth Street Bridge is Gothic Revival in design.

Architectural design characteristics of First Street Bridge/Viaduct include "massive rectangular river pylons of masonry block [which] are designed in the form of the Roman Triumphal arch. The arches are set on short concrete bases. Inside the projecting facade is an open, round compound arch with a scroll keystone. The plain frieze is finished with an architrave cornice. The structure is heightened above this entablature with a wide panel bearing plain incised rectangles, finally surmounted by stepped rows of narrow horizontal blocks. Behind the pylon arches are projecting balconies for benches. On the river side below the deck, the pylon bases are ornamented with bracketed moldings."³

III. HISTORICAL INFORMATION

Large viaducts were constructed within the City of Los Angeles to "excite comment from visitors who enter and leave the City by the railways," which pass under most of these bridges, and "...to raise the status of Los Angeles as an enterprising, properly developed city.¹ As one of the aforementioned viaducts, First Street Bridge has been determined eligible for the National Register of Historic Properties. First Street Bridge/Viaduct is eligible for the National Register under Criteria A as an important element in the development of the Los Angeles transportation system. The structure replaced a steel truss and trestle span bridge built in 1888 that had become inadequate for the amount of traffic being generated by the rapid growth of the downtown areas.

First Street Bridge, designed in the Neo-Classical style, is also eligible under Criterion C, Design/Construction, as one of a subset of Period Revival structures. On the First Street Bridge/Viaduct, the designer's choice of Neo-Classical elements reflects the desire to exhibit monumental grandeur and formal planning in architecture. First Street Bridge/Viaduct was approved by the Los Angeles Municipal Art Commission as part of the City Beautiful Movement philosophy.³

First Street Bridge/Viaduct was constructed between 1927 to 1929, and the opening day ceremony was performed on January 1, 1929. Decorative rectangular bronze plaques were placed on the First Street Bridge/Viaduct in honor of Henry G. Parker, a Bureau of Engineering employee. These plaques include a profile of Mr. Parker's head and the following legend:

FIRST ST. VIADUCT
Dedicated to
the memory of
HENRY G. PARKER
Bridge Engineer of
The City of
Los Angeles
1904-1909
He lost his life in
the performance of
his duty

At the west end of the viaduct, there is also a plaque identifying the Bureau of Engineering staff, Council members, and mayor in office at the time the bridge was opened.³

First Street Bridge/Viaduct is unique among the City bridges due to the close proximity of adjacent buildings which were present prior to bridge construction. First Street was an industrial area with many buildings in existence at the time of construction of the viaduct. A Historic



FIGURE 4 - 1001 East First Street, Citizen Warehouse

Properties Survey Report (HPSR) was performed by City staff to determine if any of the adjacent buildings were listed or eligible for listing on the National Register of Historic Places.⁴ City Building Permit records show four buildings as being in existence at the time of construction. Three buildings, which are currently located at the site, have permits for alterations prior to 1929. A fourth building, which has a building permit that predates bridge construction, has been removed since the start of the investigation for historic properties adjacent to First Street Bridge/Viaduct.

The first building, 1001 East First Street (Figure 4), also called the Citizen Warehouse, currently is used as artist loft housing. City of Los Angeles' first building permit on record for the building is dated 12/24/08, for an alteration. Sanborn Fire Insurance

Figure 5 - Sanborn Fire Insurance Map 1

Some items have been removed from the formal documentation for this structure because:

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Figure 6 - 916 South First Street, Bullocks Service Building No. 4

(Figure 7). City building permits dating from as early as September 6, 1922, indicate alterations to a three story building. On SFI Map 2 the building is described as being constructed of wood trusses on reinforced concrete.

Research for the HPSR was performed by City staff in March of 1995. The building at 1150 East First Street (Figure 9) was extant at the time of the HPSR. City of Los Angeles' building permit number 17LA02111, dated 4/16/17, indicates construction of a one story building. As can be seen in the accompanying photograph, the bridge was constructed to leave the entrance to the property undisturbed, which indicates the importance placed on these industrial buildings adjacent to the bridge. Railing from the bridge extended to the front door of the property. The Sanborn Fire Insurance Map for this property was missing from the Central Library of the City of Los Angeles when the survey was performed. A more recent visit to the site revealed that the building had been demolished. The original handrail now dead ends into a fence placed around the perimeter of the property where the building stood.

(SFI) Map 1, dated November, 1923 (Figure 5) shows the existence of the building. A painted sign at the parapet region of the building is still visible today and reads "Citizen Warehouse".

Evidence of the building at 916 East First Street (Figure 6) is found on SFI Map 2 (Figure 8) which shows the Bullocks Service Building No. 4, in November, 1923. City building permit number 18LA04926, dated 9/23/18, is for an alteration to an existing three story building. The present building is a three story brick building, and architectural features indicate that the building is the original as described on SFI Map 2.

A third building that appears on SFI Map 2, of November 1923, is referred to as 922 East First Street, and 101 and 111 South Santa Fe Street

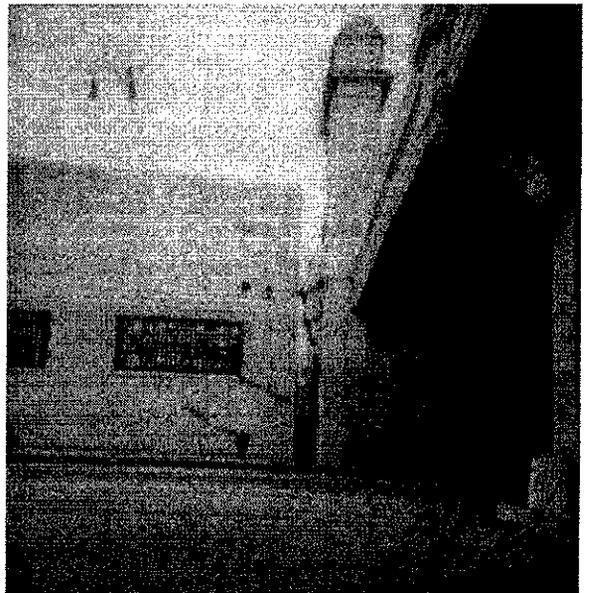


Figure 7 - 922 East First Street, 101 and 111 South Santa Fe Avenue

Figure 8 - Sanborn Fire Insurance Map 2

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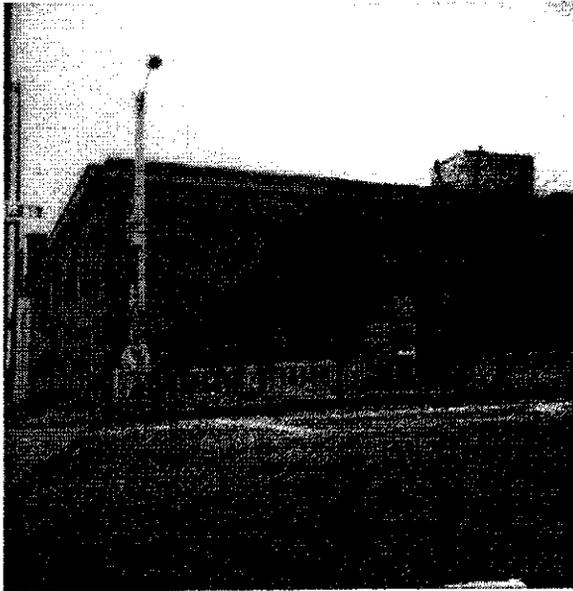


Figure 9 - 1150 East First Street

In conclusion, the First Street Bridge/Viaduct is an excellent example of Neo-Classical design by a prominent City Engineer, Merrill Butler. First Street Bridge/Viaduct, along with the other City of Los Angeles River Bridges, has been determined to be eligible for the National Register. A determination of an Adverse Effect has been made by Caltrans, with consultation from the California State Historic Preservation Officer and Federal Highway Administration, concerning the proposed seismic retrofit project. The proceeding document has been prepared to comply with Section 106 of the National Historic Preservation Act as mitigation for the proposed project.

IV. SOURCES

California Department of Transportation, Historic Bridge Inventory, Arch Bridge Rating Sheet, First Street Viaduct, Bridge #:53C-1166, 8/18/86

California Department of Transportation, *Historic Highway Bridges of California*, 1990

City of Los Angeles, Department of Public Works, Bureau of Engineering, Project Management Division; Historic Properties Survey Report for the Historic Bridge Replacement and Rehabilitation Program, as submitted to Caltrans, March, 1995 (unpublished report)

Lee, Portia, Ph.D., *Seismic Retrofit of First Street Bridge over the Los Angeles River, Finding of Adverse Effect*, City of Los Angeles (W.O. E6000259), April, 1995

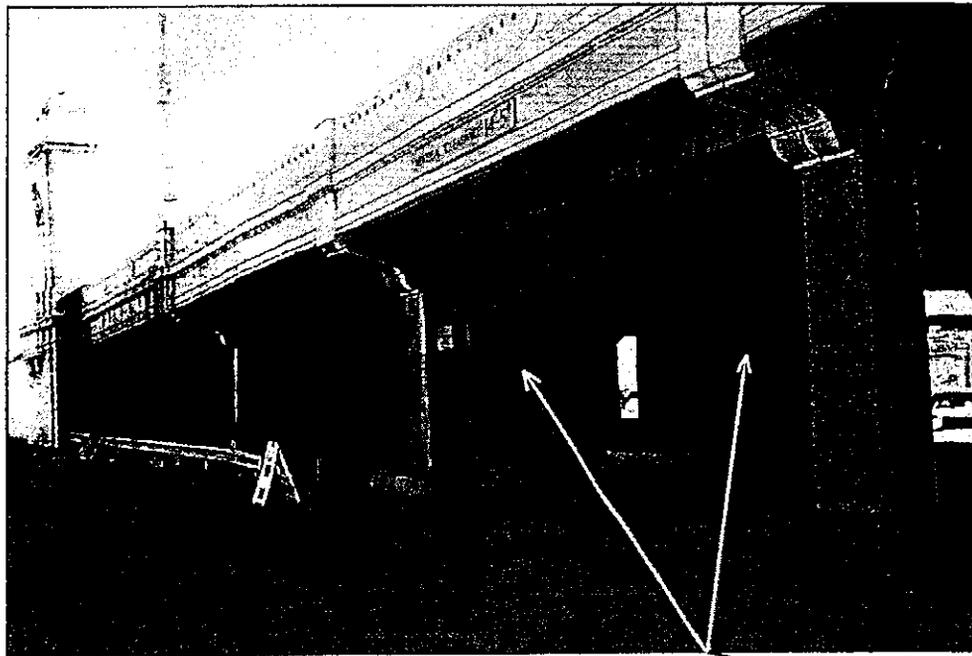
V. PROJECT INFORMATION

Proposed seismic retrofit work on the First Street Bridge/Viaduct includes the construction of shear walls within each of the 28 spans (Figure 10). Reinforced concrete infill will be placed in the center of three arches in bents 1 through 5 and 17 through 21 (Figure 11). Two central archways will be infilled in Bents 6 through 16, 22, and 23 (Figures 12 and 13). The center pier's interior 2 arches will be infilled, and the east and west arch abutments will have the interior 2 arches infilled (Figure 14). Spandrel columns, located over the Los Angeles River, will be retrofitted; however, the design calls for exact replication of the columns, therefore, the retrofit will not be noticeable.

Figure 11 - Bents 1, 2, and 3 Proposed Retrofit



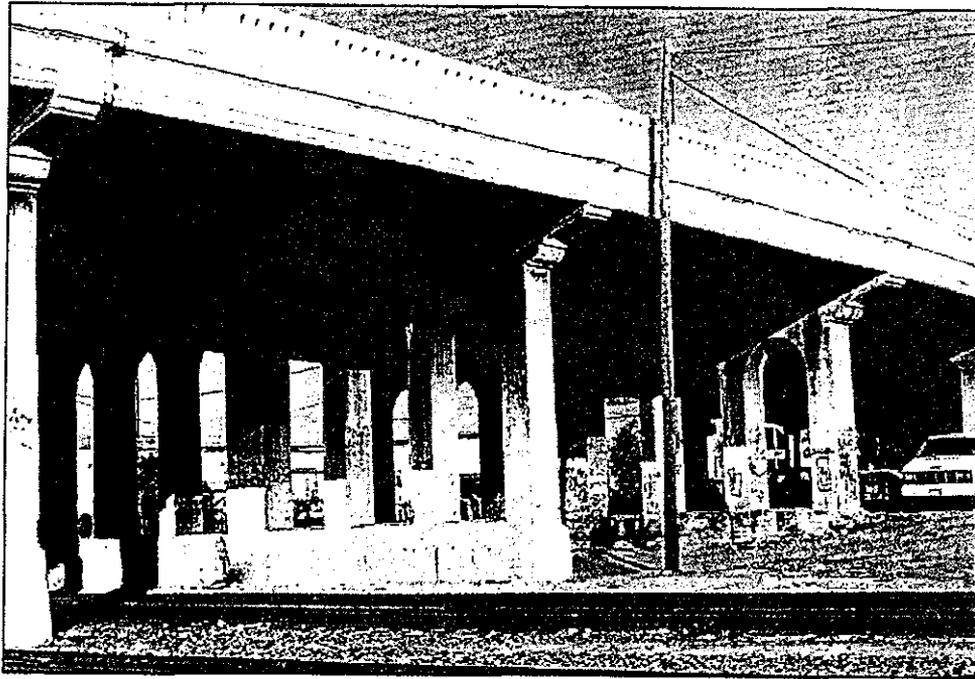
Before



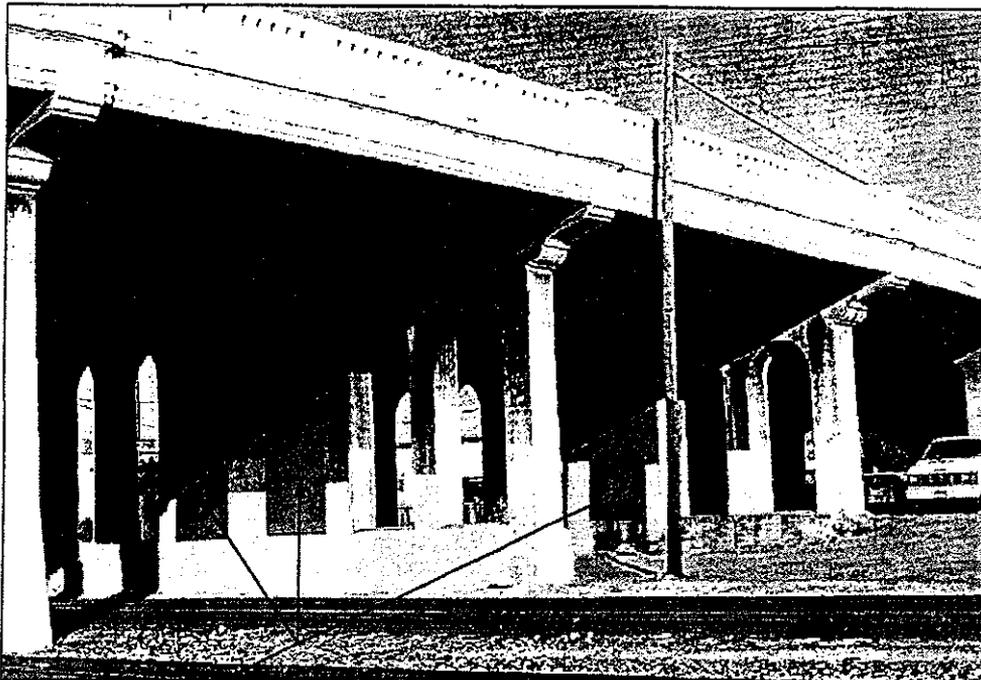
After

Infill Wall

Figure 12 - Bents 6 and 7 Proposed Retrofit



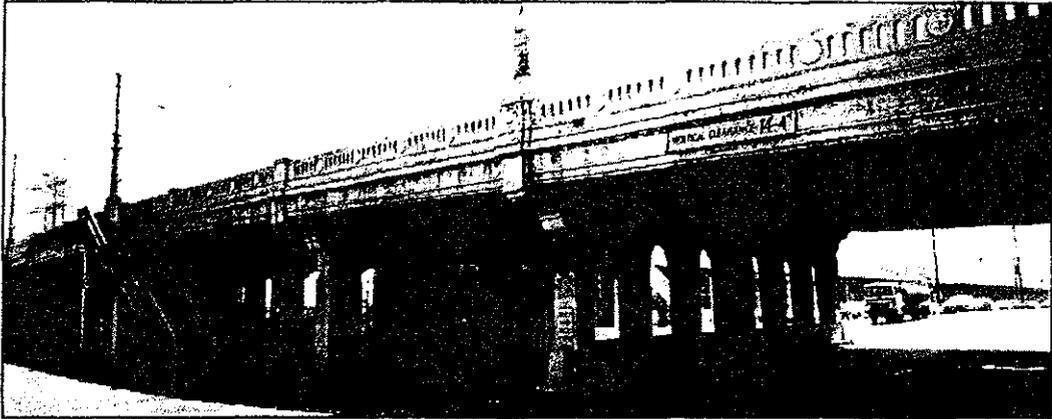
Before



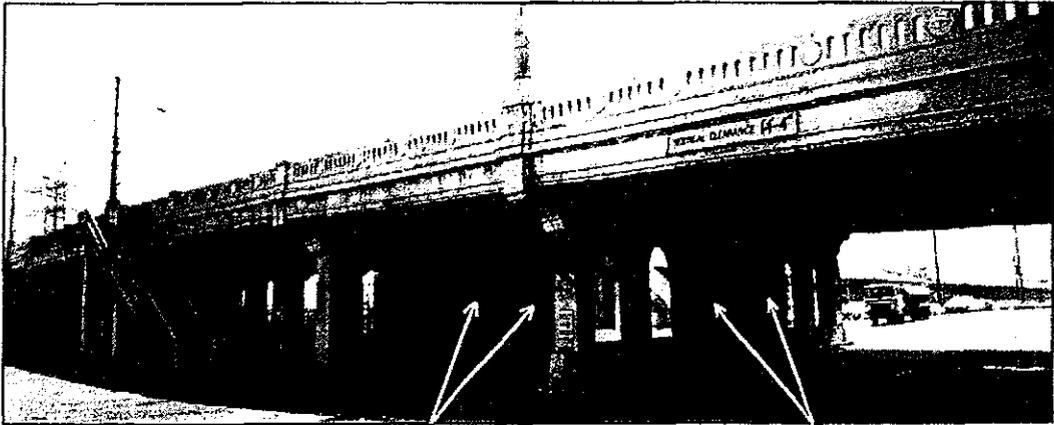
Infill Wall

After

Figure 13 - Bents 22 and 23 Proposed Retrofit



Before

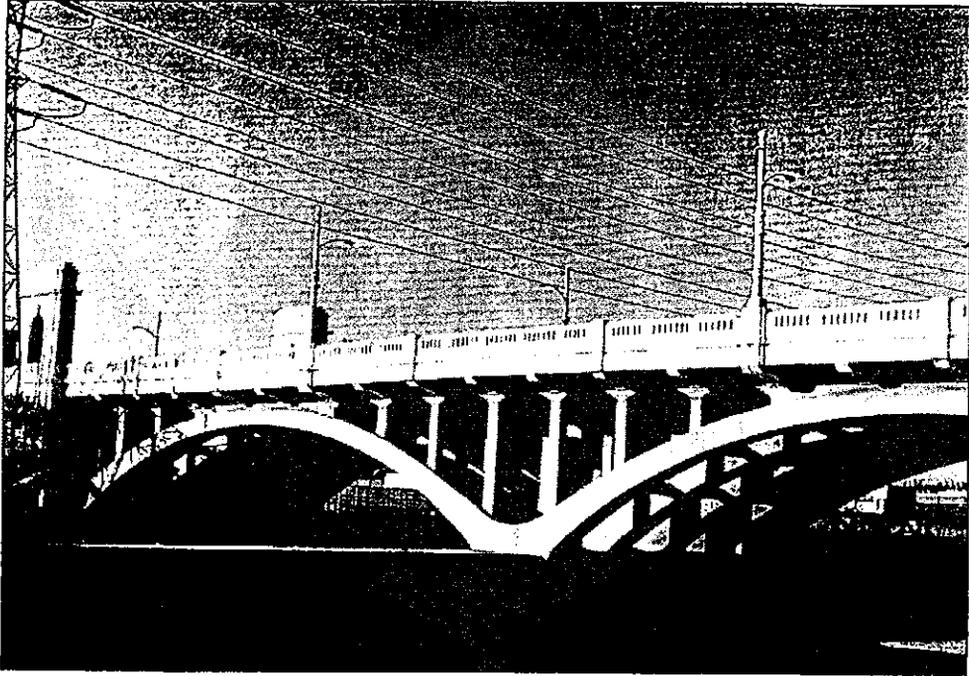


Infill Wall

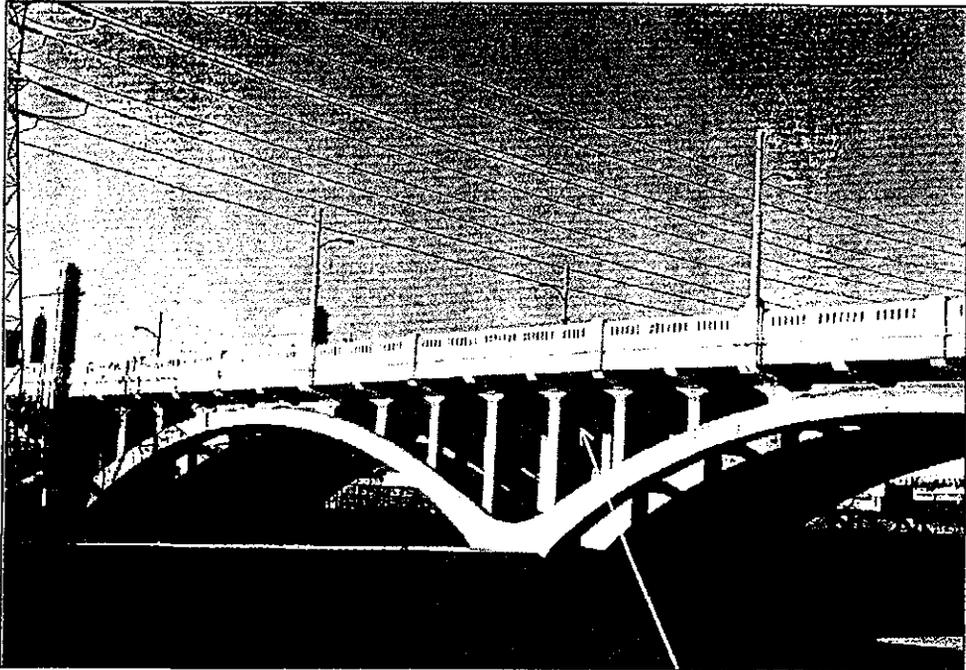
After

Infill Wall

Figure 14 - West Arch Abutment and Center Pier Proposed Retrofit



Before



After

Infill Wall

The proposed seismic retrofit of the First Street Bridge will result in an adverse effect on the bridge's integrity of design with respect to the qualities of significance under Criterion C. An essential quality of the design is the visual effect of the columns supporting the span. Constructing infill walls will close off the open space between the columns, rendering the columns substantially less distinct. Since a new subway station is proposed near Bents 22 and 23, infill in these particular bents will have a particularly noticeable impact as it will be visible to pedestrians emerging from the subway.³

This document has been prepared by the City of Los Angeles in compliance with the National Historic Properties Act as mitigation for the proposed seismic retrofit of First Street Bridge/Viaduct over the Los Angeles River. The preparer would like to thank the following people for their help:

Jim Doty, Environmental Supervisor II, for his help with the computer graphics,
Neil Drucker, Environmental Supervisor II, for his help in compiling and reviewing the necessary information, and
Vicky Komie, Environmental Associate II, for her knowledge of the historic records and data bases required to compile this report.

ENDNOTES

1. California Department of Transportation, *Historic Highway Bridges of California*, 1990
2. California Department of Transportation, Historic Bridge Inventory, Arch Bridge Rating Sheet, First Street Viaduct, Bridge #:53C-1166, 8/18/86
3. Lee, Portia, Ph.D. Registered Public Historian #547, *Seismic Retrofit of First Street Bridge over the Los Angeles River, Finding of Adverse Effect*, April, 1995
4. City of Los Angeles, Department of Public Works, Bureau of Engineering, Project Management Division; Historic Property Survey Report for the Historic Bridge Replacement and Rehabilitation Program, March, 1995

ADDENDUM TO:
FIRST STREET BRIDGE
(First Street Viaduct)
Spanning Los Angeles River at First Street
Los Angeles
Los Angeles County
California

HAER CA-175
CAL, 19-LOSAN, 76-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA
FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC GREAT BASIN SUPPORT OFFICE
National Park Service
U.S. Department of the Interior
600 Harrison Street
San Francisco, CA 94103