Programmatic Section 4(f) Evaluation

Submitted Pursuant to: 49 U.S.C. 303

MOUNT VERNON AVENUE BRIDGE PROJECT Bridge No. 54C-0066

City of San Bernardino, California

08-SBd-0-Local Assistance

City of San Bernardino

California Department of Transportation, District 8





The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

June 2011

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1 INTRODUCTION

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303 (including 23 USC 138, and 23 CFR 774) declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

2 DESCRIPTION OF PROJECT AND ALTERNATIVES

2-1 PROJECT PURPOSE AND NEED

2-1.2 Project Purpose

Replacement of the Mount Vernon Avenue Bridge is needed because the current facility exhibits structural and functional deficiencies. The purpose of the project is to provide a bridge that is structurally safe and meets current seismic, design, and roadway standards. This would entail construction of a bridge with standard geometry to correct the current misalignment of the south approach, standard vertical clearance at West 3rd Street, and standard vertical and horizontal clearances at the BNSF yard. By implementing the project as expeditiously as possible under the circumstances, the City desires to restore a vitally important connector linking communities north and south of the BNSF railroad. The new bridge will be consistent with current rail and mass transit operations and facility needs.

2-1.3 Project Need

Replacement of the Mount Vernon Avenue Bridge is needed because the current facility exhibits the structural and functional deficiencies discussed in the following sections.

a. Seismically Deficient

The existing bridge was constructed in 1934 and incorporated steel girders salvaged from an earlier 1907 structure. As part of the Local Bridge Seismic Safety Retrofit Program, a seismic analysis and retrofit study were conducted in 1996. The Final Seismic Retrofit Strategy Report, issued in June 1997, determined that the bridge fell under Category 1, a category for bridges that could potentially collapse in a seismic event and threaten public safety.

b. Sufficiency Rating

Caltrans maintains the National Bridge Inventory-Structure Inventory and Appraisal for bridges both on and off the federal highway system in the state. The inventory includes a sufficiency rating for each bridge. The sufficiency rating is typically determined by three considerations: (1) structural adequacy and safety; (2) serviceability and functional obsolescence; and (3) essentiality for public use. A special reduction factor is considered to account for conditions related to detours, traffic safety features, and structure type. When a bridge has a deficient sufficiency rating, it is placed on the federal EBL to receive high priority for retrofit/rehabilitation or replacement under the Federal Highway Bridge Program $(HBP)^1$. A *deficient* bridge is defined as having a sufficiency rating ≤ 80 and a status flag as SD. Bridges with a sufficiency rating ≤ 80 and SD or FO status are eligible for rehabilitation, while bridges with sufficiency rating ≤ 50 and SD or FO status are eligible candidates for replacement. In 2002, the sufficiency rating for the Mount Vernon Avenue Bridge was 45.6 with flags for both SD and FO. The major bridge deficiencies in 2002 were identified as poor deck condition, nonstandard deck geometry, and nonstandard underclearance at West 3rd Street. With the results of the recent 2004 bridge inspections, the sufficiency rating for the Mount Vernon Avenue Bridge has dropped to 2.0. The very low sufficiency rating for the bridge is the result of the following factors: low superstructure capacity, poor substructure condition, serious deck condition, inadequate deck geometry, and substandard vertical clearance at West 3rd Street. Additionally, the capacity of the existing bridge railing does not meet current standards.

¹ Formerly known as the federal Highway Bridge Replacement and Rehabilitation (HBRR) program

c. Structurally Deficient (SD)

The existing bridge has been found to be SD because the deck is in poor condition with moderate and severe transverse cracks at various locations.

d. Functionally Obsolete (FO)

The existing bridge is considered to be FO because of the nonstandard deck geometry, misaligned south approach, and nonstandard vertical clearance at West 3rd Street.

e. Other Deficiencies

In addition to the previously described deficiencies, other serious conditions exist. The bridge was last painted in 1954. The paint condition index (PCI) dropped from 74.5 in 2000 to 67.6 in 2002. It was expected to fall even farther to less than 65.0 in 2006. Bridges on the EBL with a PCI of 65.0 or less qualify as a stand-alone painting project under the federal HBP guidelines. Finally, as explained in more detail in the following sections, the existing bridge has nonstandard vertical and horizontal clearances at the BNSF railroad yard.

f. Project Costs

For the Retrofit/Rehabilitation Alternative (Alternative 2), the total project cost would be \$31,110,375. With this project cost, the service life of the bridge would likely be extended only by a limited 15 to 20 years beyond completion of the retrofit/rehabilitation. The cost assumes \$24,888,300 for construction, \$2,708,000 for preliminary bridge design, \$4,878,000 for final bridge design, \$575,000 for right-of-way, \$504,000 for environmental and \$150,000 for utilities. With this project cost, the service life of the bridge would likely be extended only by a limited 15 to 20 years beyond completion of the retrofit/rehabilitation.

For the Preferred Alternative (Alternative 3- Replacement), the total project cost would be \$40,656,250. The cost assumes \$31,800,000 for construction, \$2,708,000 for preliminary bridge design, \$4,878,000 for final bridge design, \$575,000 for right-of-way, \$504,000 for environmental and \$150,000 for utilities.

2-2 PROJECT DESCRIPTION/ALTERNATIVES

The City, in association with the Department, proposes to replace the Mount Vernon Avenue Bridge (State Bridge No. 54C-0066) over the BNSF railroad facilities in the City of San Bernardino, County of San Bernardino, State of California. The existing Mount Vernon Avenue Bridge follows a generally north-south alignment along Mount Vernon Avenue and carries both vehicular and pedestrian traffic. The bridge is approximately 309.7 m (1,016 feet) long and 14.9 m (49 feet) wide with four 3.1 m (10 feet) traffic lanes (two in each direction) and no median or shoulders. The purpose of the project is to provide a bridge that is structurally safe and meets current seismic, design, and roadway standards.

The alternatives are Alternative 1, No Build; Alternative 2, Retrofit/Rehabilitation Alternative; and Alternative 3, Preferred Alternative (Replacement).

2-2.1 Common Design Features of the Build Alternatives

Both Build Alternatives would reconstruct the intersection at the north and south ends of the bridge. The existing alignment of the bridge would be retained. Because of the widening to the west, the service roadway located along the east side of the homes at the southwest end of the bridge would be closed. Subsequently, the alleyway located behind the homes at the southwest end of the bridge would be widened under both Build Alternatives.

2-2.2 Unique Features of the Build Alternatives

a. Retrofit/Rehabilitation Alternative (Alternative 2)

The Retrofit/Rehabilitation Alternative would seismically retrofit, rehabilitate, and widen the existing bridge to improve its structural safety and functionality. As part of this alternative, new footings would be excavated and new piles drilled. Widening and retrofitting the existing structure would involve improvements to the substructure to meet seismic standards. Anticipated additional work would include complete deck replacement, girder strengthening, removal of lead paint, repainting, installation of new railings and roadway lighting, replacement or retrofit/rehabilitation of expansion joints, and the addition of crash walls around the bridge piers. The existing roadway configuration and sidewalks would be improved to provide a 21.9-m (72-foot)-wide bridge with two 3.7-m (12-foot) lanes in each direction, a 1.2-m (4-foot) median, 1.2-m (4-foot) shoulders, and 1.5-m (5-foot) sidewalks. The sidewalks on the bridge would not meet American Disabilities Act (ADA) slope requirements following the





Source: County of San Bernardino GIS (2010).

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Figure 2 – Project Location

Source: County of San Bernardino GIS (2010).

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retrofit/rehabilitation. The modifications associated with this alternative would change the overall visual appearance of the bridge as a result of the materials that would be added to the bridge to bring it into compliance with current seismic standards. These modifications would likely result in an adverse impact on those features that make the bridge eligible for listing on the National Register of Historic Places (NRHP).

Since this alternative would not address the nonstandard vertical and horizontal clearances associated with the bridge, BNSF would likely oppose this alternative. In addition, this alternative would not replace all of the existing girders that have been determined to have neared their life span. The service life of the bridge would likely be extended only by a limited 15 to 20 years beyond completion of the retrofit/rehabilitation.

The proposed improvements would also reconstruct the intersection at the north and south ends of the bridge. The existing alignment of the bridge would be retained under this alternative. Because of the widening to the west, the service roadway along the east side of the homes located at the southwest end of the bridge would be closed similar to Alternative 3. Subsequently, the alleyway located behind the homes at the southwest end of the bridge would be widened similar to Alternative 3.

The project schedule would consist of the following milestones:

Milestones	Date
Environmental Document Approved	mid 2011
Start of Construction	late 2012
End of Construction	late 2014

The project is funded through the Federal HBP, Proposition 1B Local Bridge Seismic Retrofit Account (local match), and local City funds.

For the Retrofit/Rehabilitation Alternative (Alternative 2), the total project cost would be \$31,110,375. The cost assumes \$24,888,300 for construction, \$2,708,000 for preliminary bridge design, \$4,878,000 for final bridge design, \$575,000 for right-of-way, \$504,000 for environmental and \$150,000 for utilities. With this project cost, the service life of the bridge would likely be extended only by a limited 15 to 20 years beyond completion of the retrofit/rehabilitation.

b. Preferred Alternative (Alternative 3 - Replacement)

The Preferred/ Alternative (Alternative 3 - Replacement) would involve removal of the existing bridge structure, construction of a new replacement bridge structure, and improvements to bridge

approaches and roadways in the project vicinity. The new replacement bridge would be 317.1 m (1,040 feet) long and 24.4 m (80 feet) wide with four 3.7-m (12-foot) lanes (two in each direction), a 1.2-m (4-foot)-wide median, and 2.4-m (8-foot)-wide shoulders. Sidewalks on each side of the new bridge would be 1.5 m (5 feet) wide, and would meet Americans ADA requirements for sidewalk width and slopes. Concrete barrier railings (1.1 m [3.5 feet) high) topped with fencing (1.9 m [6.1 feet] high) would be provided on each side of the new bridge.

Design Speed. The Build Alternative would be designed for speeds of 56.3 kilometers per hour (35 miles per hour) and up to 64.4 kilometers per hour (40 miles per hour) due to vertical clearance.

Vertical Clearance/Horizontal Alignment/Street Geometrics. The profile of the new replacement bridge would be raised to a maximum roadway surface elevation of 1,129.09 ft which would provide a maximum vertical clearance of approximately 10.963 m (35.970 ft), and would meet and exceed the 7.3 m (24 ft) minimum vertical clearance required by the BNSF railroad and the CPUC in all locations. Bents for the new bridge would include crash walls and would meet and exceed the minimum horizontal clearance requirements. This alternative would also provide for the minimum 4.6-m (15-foot) clearance over West 3rd Street. Southbound left-turn pockets are proposed at 2nd Street. At the Mount Vernon Avenue/2nd Street intersection, the free right turn from westbound 2nd Street to the northbound Mount Vernon Avenue would be replaced by a right-turn pocket.

Horizontal Clearance: Where required and/or feasible, the bents for the new bridge would include crash walls that would meet or exceed the minimum horizontal clearance requirements. The crash walls would be solid concrete without voids or openings; however, adequate clearances (approximately 0.15 to 0.23 m [0.5 to 0.75 foot]) would be left between the bent columns and the crash walls in order to allow the bridge to move freely under seismic loads without the columns coming into contact with the crash walls. The crash walls would extend about 0.15 m (0.5 foot) beyond the face of columns.

Bridge Alignment/Street Geometrics: To correct the misalignment with the south approach roadway, the bridge would be widened on the west side closer to some of the existing residential land uses within the project vicinity. This widening would require the Mount Vernon Avenue service road between West 2nd and West 3rd Streets to be closed.

Service Roadway: Because the bridge widening and realignment would require closure of the service road along the southwest end of the Mount Vernon Avenue Bridge, a parallel alleyway behind the residential parcels in this area would be widened to provide a replacement access road

for the neighboring residents and railroad facilities. The alleyway would be widened from the existing variable width of 3.7 to 4.3 meters (12 to 14 feet) to a width of 9.1 meters (30 feet). The widening of the alleyway would provide vehicular access to the homes. The widening would occur on the east side of the alley in order to avoid impacts on adjacent homes.

Roadway Improvements: Additional roadway improvements at the south end of the bridge would include minor restriping, repaving, and installing of curbs and gutters. At the north end of the new bridge, similar types of roadway improvements would be provided. Additionally, retaining walls or concrete walls would be constructed along both sides of the north approach between about Kingman Avenue and West 4th Street. These retaining location and dimensions are presented below (measurements shown in feet):

•	Location 1: max height-19.23	min height-2.00	Length: 246.47
•	Location 2: max height-31.51	min height-7.68	Length: 345.94
•	Location 3: max height-07.68	min height-2.00	Length: 157.18
•	Location 4: max height-06.90	min height-2.00	Length: 154.25
•	Location 5: max height-06.90	min height-2.00	Length: 221.94
•	Location 6: max height-31.51	min height-2.00	Length: 605.26

The walls would be landscaped with vegetation that has aerial rootlets to cover the wall, potentially with creeping fig. The intersection of West 4th Street and Mount Vernon Avenue has been reconstructed in a cul-de-sac configuration as part of a separate City public works project.

Railroad Operations: The BNSF rail yard provides service to four different and very active railroad operations—BNSF freight, BNSF storage, Metrolink, and Amtrak. Because of these important railroad services, the primary focus of the structure design would be to maintain railroad operations during the construction of the new bridge. In order to do this, BNSF would require that two temporary railroad tracks (*shoofly* tracks) be installed within the north side of their existing BNSF yard, on both sides of the bridge, parallel to the existing BNSF railroad tracks.

Construction methods that would minimize impacts on railroad operations would be employed for the new replacement bridge. Removal of the existing bridge would be performed prior to construction using overhead techniques when and where possible. The girders would be precast concrete bulb-tee girders (concrete deck). The bridge foundation would be constructed as cast-insteel shell piles, or CISS piles), in order to avoid significantly large footing areas required with the use of small pile-group-type foundations. Minimizing the footprint of the substructure would reduce the impact to railroad operations. Columns would be CISS pile extensions, and where required and/or feasible, crash walls would be implemented. Construction of the replacement bridge would be carried out using standard techniques that are typical in California and would be staged in the railroad right-of-way using BNSF and Metrolink authorized work windows.

Milestones	Date
Environmental Document Approved	mid 2011
Start of Construction	late 2012
End of Construction	late 2014

The project schedule would consist of the following milestones:

The project is funded through the Federal HBP, Proposition 1B Local Bridge Seismic Retrofit Account (local match), and local City funds.

For the Preferred Alternative (Alternative 3 - Replacement), the total project cost would be \$40,656,250. The cost assumes \$31,800,000 for construction, \$2,708,000 for preliminary bridge design, \$4,878,000 for final bridge design, \$575,000 for right-of-way, \$504,000 for environmental and \$150,000 for utilities.

c. No Build Alternative (Alternative 1)

Under the No Build Alternative, no new or modified bridge or other physical improvements would be constructed on Mount Vernon Avenue between West 2nd and West 5th Streets. The existing bridge would be left in its current condition, and no structural or functional deficiencies would be corrected. Ongoing maintenance would continue. The No Build Alternative does not assume that the existing bridge would undergo seismic retrofitting.

This option was studied by the City in 1996 and was later discontinued in favor of constructing a new bridge. On June 4th, 2004, Caltrans Structures Maintenance and Investigations staff recommended closure of the existing bridge, concluding that steel beam and girder cracking cause the bridge to be unsafe. The City closed the bridge and has since undertaken efforts to install temporary shoring per an agreement with BNSF.

The agreement with BNSF specifies that removal of the shoring must occur before the end of 2 years. The 2-year timeframe has passed for the removal of shoring outlined in the agreement between the City and BNSF has currently been exceeded by approximately 4 years. Subsequent to installation of the shoring, the bridge continues to undergo periodic inspection by both Caltrans and shoring designers . However, the end of the 2-year period has passed and BNSF has not requested removal of the shoring; therefore, the shoring is being examined and maintained to

ensure that the original load carrying capacity is retained. Recent investigation has determined that Bent 6, Span 6 (as per built plans) would require additional temporary shoring. Should BNSF require the removal of shoring, the bridge would be closed and there would be no crossing on Mount Vernon Avenue between West 2nd and West 5th Streets.

Permanent closure of the bridge would result in an unreasonable social and economic burden on the local community. Accordingly, the No Build Alternative has been determined to be imprudent and infeasible and would not meet the project purpose and need.

2-2.3 Alternatives Considered but Eliminated from Further Discussion

In 1997, the *New Mount Vernon Bridge Concept Study Report* (DMJM, 1997) evaluated four conceptual alternative bridge alignments. Two of these alignments were dropped from consideration during the study based on their impacts and costs. Three bridge types were studied further for alternative alignments 1 through 4 and included the following:

- Bridge Type A—Precast segmental concrete box girders (two independent structures);
- Bridge Type B—Trapezoidal steel girders with cast-in-place concrete decks (two independent structures); and
- Bridge Type C-Precast segmental cable-stayed box girders (one single structure).

Four project-specific bridge criteria were evaluated for each of the three bridge types, including:

- maintenance of north/south vehicular traffic,
- minimized disruption to rail operations,
- seismic performance, and
- structure maintenance.

The alternative alignments and bridge types considered were as follows.

Alternative Alignment 1: This alternative was proposed as a new four-lane bridge, generally in the same location as the existing bridge. The horizontal alignment of this alternative would eliminate the existing curve in the bridge with minimal alterations to the intersections at West 2nd and West 4th Streets. However, adjusting the horizontal alignment would require the acquisition of properties fronting the bridge on the southwest side between West 2nd and West 3rd Streets. Advantages of this alternative alignment include minor impacts on BNSF rail operations, intermodal apron, and existing buildings. While this alternative would have some

impacts on existing utilities, the impacts would be less than those for the other alternative alignments evaluated. All three bridge types considered for this alternative alignment would require complete closure of the existing bridge to vehicular and pedestrian traffic during construction. Bridge Type C would result in the least impact on rail facilities and operations, but Type A, the precast segmental box girder, would also result in minimal impacts. All three bridge types would afford the same level of seismic performance. Bridge Type A would require the least maintenance of all the bridge types; Type B would have the highest cost due to periodic painting. Alternative Alignment 1, the only viable alternative, has been carried forward to the current studies.

Alternative Alignment 2: This alternative was proposed as a new four-lane bridge on an alignment west of the existing bridge. Once a new bridge was constructed, the existing bridge would have been demolished. Vehicular and pedestrian traffic could have been maintained on the existing bridge during construction of the new bridge. Construction outside of the existing bridge footprint would have required approval by the railroad operators. This alternative would have resulted in substantial impacts on BNSF intermodal facilities and operations, as well as Amtrak and Metrolink service. This alternative alignment also would have required relocating existing utilities, reconstructing both the West 2nd and West 4th Street intersections, and acquiring adjacent residences and businesses. All three bridge types considered for this alternative alignment would have allowed for vehicular and pedestrian traffic on the existing bridge during construction. Impacts on rail operations, seismic performance, and structure maintenance would be the same as those discussed for Alternative Alignment 1. Because this alternative would have required substantial alterations to the existing BNSF railroad facilities and the reconstruction of street improvements in a less desirable alignment for intersections and approaches, this alternative was withdrawn from consideration.

Alternative Alignment 3: This alternative was proposed as a new four-lane bridge on an alignment east of the existing bridge. Traffic would have been maintained on the existing Mount Vernon Avenue Bridge during construction, as discussed for Alternative Alignment 2. Also similar to Alternative Alignment 2, this alternative would have had substantial impacts on rail facilities and operations, but east of the existing bridge. Of particular concern were potential impacts on the nearby locally significant Santa Fe smokestack located just east of the bridge at West 4th Street. Other disadvantages of this alternative alignment would have included reconstruction of both the West 2nd and West 4th Street intersections, impacts to the Metrolink parking lot, and relocation of existing utilities. Like Alternative Alignments 1 and 2, this alternative also would have required acquisition of residential and commercial properties. Because this alternative would have required altering the existing BNSF railroad facility,

modifying the existing Metrolink commuter parking lot, and reconstructing street improvements in a less desirable alignment for intersections and approaches, this alternative was withdrawn from consideration with no additional evaluation of bridge types.

Alternative Alignment 4: This alternative was proposed as a new split bridge with two southbound lanes west of and two northbound lanes east of the existing bridge. The split alignment would have allowed for construction of the new bridges while the existing bridge remained in service. The existing bridge would have been demolished once the new bridges were in operation. This alternative would have had impacts similar to those for Alternative Alignments 2 and 3 (i.e., utility relocations and property acquisitions). It would have resulted in the least desirable intersections at West 2nd and West 4th Streets and would have had the highest impact on railroad facilities and operations. Because this alternative would have required altering the existing BNSF railroad facility and reconstructing street improvements in a less desirable alignment for intersections and approaches, this alternative was withdrawn from consideration with no additional evaluation of bridge types.

3 DESCRIPTION OF SECTION 4(F) PROPERTY

Resources subject to Section 4(f) consideration include publicly owned lands consisting of a public park/recreational area; public wildlife and waterfowl refuges of national, state, or local significance; or historic sites of national, state, or local significance, whether publicly or privately owned. There are no publicly owned parks/recreational areas or wildlife and waterfowl refuges in the project area. However, there are significant historic sites in the vicinity of the project area that are considered to be Section 4(f) resources. Under Section 4(f), a significant historic site is defined as on, or eligible for listing in the National Register of Historic Places. The resources that are on the list or eligible for listing are provided in Table 1:

Table 1. Resources Listed or Eligible for Listing in the National Register of Historic Places						
Name	Location	Use	Significance			
Mount Vernon Avenue Bridge	Project site	Yes	Eligible for listing in the NRHP			
Atchison, Topeka & Santa Fe Passenger and Freight Depot	1170 West 3 rd Street	No	Listed in the NRHP (February 2, 2001)			

Source: Supplemental Historic Property Survey Report (Jones & Stokes, 2007b).

This section will discuss only the Section 4(f) resources in which a "use" occurs. Use occurs when 1) the property is acquired for a transportation project, 2) there is an occupancy of land that

is adverse to the preservationist purpose of Section 4(f), or 3) there is a proximity impact that substantially impairs the purpose of the land.

As indicated by the table, a use of the Mount Vernon Avenue Bridge occurs as part of the project. A use of the Atchison, Topeka & Santa Fe Passenger and Freight Depot does not occur as part of the project and a detailed discussion of this resource is included under section 5, "Other Park, Recreational Facilities, Wildlife Refuges, and Historic Properties Evaluated Relative to Requirements of Section 4(f)."

3-1 MOUNT VERNON AVENUE BRIDGE

The Mount Vernon Avenue Bridge is eligible for listing in the NRHP under Criterion A at the state level of significance because it was an important element of historic State Route 66 during the Great Depression era, was heralded at the time of its construction as the gateway to San Bernardino, and served a vital strategic role in the nation's transportation system during World War II. It is also eligible for listing in the NRHP under Criterion C at the local level due to its restrained Moderne styling, as exemplified by the approach span columns and the innovative use of materials on a large scale as dictated by the economies of the Great Depression.

The bridge spans the BNSF railroad yard between 3rd and 4th Streets. It is a 22-span bridge totaling 1,016 feet in length and 49 feet in width, carrying four traffic lanes between concrete baluster railings. The substructure consists of closed-end backfilled reinforced-concrete cantilever abutments, framed reinforced-concrete six-column bents, and framed two-column steel bents, all supported on creosoted Douglas fir piles. The superstructure consists of a combination of cast-in-place reinforced-concrete arched-soffit deck slab spans and multiple simple plate-steel girder spans. Seven of the original 20 spun-concrete light poles remain, with modern aluminum poles having replaced the rest. Original pendant lights have been replaced by modern cobra-head lights.

The character-defining features of the bridges are 1) the light poles with the original globes (now missing), 2) the bridge railing, 3) the overhanging sidewalk deck, 4) the steel arched brackets supporting the bridge deck, 5) the steel supporting piers (bents 4 to 21), 6) the steel girders (between bents 3 and 21), 7) the concrete abutments (located at the north and south ends of the bridge), 8) the concrete bents (bent 1, 2, and 3), and 9) the stairwell on the southeast corner.

3-1.1 Impacts on Section 4(f) Property – Mount Vernon Avenue Bridge

a. Retrofit/Rehabilitation Alternative (Alternative 2)

Facilities, functions, and/or activities potentially affected

There are no existing facilities (bike lanes, trails, or recreational facilities) affected by the project. No impacts would occur.

Accessibility

Under this alternative, the following would likely occur: (1) temporary impact to pedestrian access across the BNSF rail yard; (2) temporary a decrease in intersection LOS at three intersections (5th/H, 2nd/G, and Rialto/G), and alleyway improvements resulting in impacts to secondary residential access; and (3) temporary impact to secondary residential access due to alleyway improvements (approximately three months) in duration. These impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

Visual

Under Retrofit/Rehabilitation Alternative, the visual elements of the bridge would be affected because the materials used to bring the bridge up to current seismic standards would differ from historic materials. Bridge height, lane widths, and sidewalk configurations would not change. This alternative would include complete deck replacement, girder strengthening, removal of lead paint, repainting, installation of new railings and roadway lighting, replacement or retrofit/rehabilitation of expansion joints, and the addition of crash walls around the bridge priers.

The Retrofit/Rehabilitation Alternative would not cause physical destruction or damage to the Mount Vernon Avenue Bridge, nor would this alternative cause physical destruction or damage to this historic property. Some of the design elements and proposed actions associated with the retrofit/rehabilitation of the bridge would result in adverse effects on some of the bridge's character-defining features and would not be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Under this alternative, the Mount Vernon Avenue Bridge would be seismically retrofitted and rehabilitated in place. The proposed design components in this alterative would result in a finding of Adverse Effect. Based on the Finding of Effect study that was prepared for the project, it was concluded that Retrofit/Rehabilitation Alternative would have an adverse effect on the Mount Vernon Avenue Bridge under Section 106 of the National Historic Preservation Act.

Noise

Under this alternative, the following would likely occur: (1) a temporary increase in community noise due to use of heavy equipment during construction activities. This impact is not related to the historic value of the Mount Vernon Avenue Bridge.

Air Quality

Under this alternative, the following would likely occur: (1) disturbance of asbestos containing materials (ACMs); (2) increases in construction-related emissions; and (3) potential diesel health risk from construction activities. These impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

Water Quality

The following temporary construction-related impacts could occur (1) release of hazardous materials (this effect is unlikely as explained further in the Environmental Assessment for the project); (2) excavation and substantial earthwork, resulting in an increase in surface water runoff, erosion, and increased pollution to local surface waters due to increased sediment loadings or discharge of construction-related pollutants (this effect is unlikely as explained further in the Environmental Assessment for the project); and potential exposure to contaminated groundwater, if encountered. These temporary construction-related impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

This alternative is not expected to permanently nor substantially affect the quantity or quality of surface water in the study area. Although this alternative would result in a bridge that is wider than the existing structure, resulting in a slight increase in impervious surfaces and contributing to an increase in the amount of onsite runoff, BMPs would be implemented. Additionally, this alternative would not alter the existing drainage patterns beyond a potentially slight increase in surface runoff. No permanent impacts would occur.

Vegetation Within the Mount Vernon Avenue Bridge project site and immediate vicinity, there are (1) no special-status plats; (2) no natural vegetation communities (vegetation consisted of severely disturbed ruderal and/or nonnative plant species); (3) no applicable habitat conservation plans; and (4) no applicable natural community conservation plan. No impacts would occur.

Wildlife

Within the Mount Vernon Avenue Bridge project site and immediate vicinity there are (1) no wildlife movement corridors; and (2) no applicable habitat conservation plans. Although not observed during field surveys, pallid bat and/or California western mastiff bat may experience permanent loss of suitable roosting and/or nesting habitat only if relevant features of bridge

design changes appreciably. This impact is not related to the historic value of the Mount Vernon Avenue Bridge.

b. Preferred Alternative (Alternative 3 - Replacement)

Facilities, functions, and/or activities potentially affected

There are no existing facilities (bike lanes, trails, or recreational facilities) affected by the project. No impacts would occur.

Accessibility

Under this alternative, the following would likely occur: (1) temporary impact to pedestrian access across the BNSF rail yard; (2) temporary a decrease in intersection LOS at three intersections (5th/H, 2nd/G, and Rialto/G), and alleyway improvements resulting in impacts to secondary residential access; and (3) temporary impact to secondary residential access due to alleyway improvements (approximately three months) in duration. These impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

Visual

Under the Preferred Alternative (Alternative 3 – Replacement), possible visible changes associated with a new structure would include the increase in elevation and width. Replacement sidewalks would differ from the existing sidewalk configurations as they would be designed to meet ADA standards and Caltrans' Design Information Bulletin (DIB) 82. In addition, vegetation could be removed to accommodate the increased width of the new bridge. The proposed structure would have a different architectural character than the current bridge; however, the City has made a commitment to make any replacement structure compatible with the existing historic property. In addition, the City has committed that the new bridge would make reference to the massing, scale, materials, and design of the existing bridge.

The Preferred Alternative would demolish the historic property, which would constitute an adverse effect; however, the effect from this alternative could be alleviated to a greater extent than the effect of the Retrofit/Rehabilitation Alternative. Based on the proposed construction methods and the application of the Criteria of Adverse Effect, the Department has determined that there are historic properties that would be affected pursuant to Section 106 PA Stipulation IX.B, and that the project would have an adverse effect on the Mount Vernon Avenue Bridge.

Noise

Under this alternative, the following would likely occur: (1) a temporary increase in community noise due to use of heavy equipment during construction activities. This impact is not related to the historic value of the Mount Vernon Avenue Bridge.

Air Quality

Under this alternative, the following would likely occur: (1) disturbance of asbestos containing materials (ACMs); (2) increases in construction-related emissions; and (3) potential diesel health risk from construction activities. These impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

Water Quality

The following temporary construction-related impacts could occur (1) release of hazardous materials (this effect is unlikely as explained further in the Environmental Assessment for the project); (2) excavation and substantial earthwork, resulting in an increase in surface water runoff, erosion, and increased pollution to local surface waters due to increased sediment loadings or discharge of construction-related pollutants (this effect is unlikely as explained further in the Environmental Assessment for the project); and potential exposure to contaminated groundwater, if encountered. These temporary construction-related impacts are not related to the historic value of the Mount Vernon Avenue Bridge.

This alternative is not expected to permanently nor substantially affect the quantity or quality of surface water in the study area. Although this alternative would result in a bridge that is wider than the existing structure, resulting in a slight increase in impervious surfaces and contributing to an increase in the amount of onsite runoff, BMPs would be implemented. Additionally, this alternative would not alter the existing drainage patterns beyond a potentially slight increase in surface runoff. No permanent impacts would occur.

Groundwater could be negatively affected by the foundation construction for the project due to pile driving. Groundwater depth will be further analyzed during PS&E Final Design for the project. Regardless of groundwater depth, exposure to potential contaminated groundwater could result in substantial health effects; however, it is unlikely that an identified hazardous waste groundwater plume will extend underneath Mount Vernon Avenue Bridge.

Vegetation

Within the Mount Vernon Avenue Bridge project site and immediate vicinity, there are (1) no special-status plats; (2) no natural vegetation communities (vegetation consisted of severely disturbed ruderal and/or nonnative plant species); (3) no applicable habitat conservation plans; and (4) no applicable natural community conservation plan. No impacts would occur.

Wildlife

Within the Mount Vernon Avenue Bridge project site and immediate vicinity there are (1) no wildlife movement corridors; and (2) no applicable habitat conservation plans. Although not observed during field surveys, pallid bat and/or California western mastiff bat may experience

permanent loss of suitable roosting and/or nesting habitat only if relevant features of bridge design changes appreciably. This impact is not related to the historic value of the Mount Vernon Avenue Bridge.

c. No Build Alternative (Alternative 1)

Facilities, functions, and/or activities potentially affected

The bridge would be closed and there would be no crossing on Mount Vernon Avenue between West 2nd and West 5th Streets. The elimination of the crossing would interfere with access to parks and recreational facilities.

Accessibility

The elimination of the bridge crossing would severely disrupt the local and regional circulation system; this alternative would result in an effect on traffic, transportation, pedestrian and bicycle facilities in the area surrounding Mount Vernon Avenue Bridge.

Visual

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts on Key Viewpoints and the visual setting/ aesthetic conditions would not occur.

Noise

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts from noise would not occur.

Air Quality

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts on air quality would not occur.

Water Quality

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts on water quality would not occur.

Vegetation

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts on vegetation would not occur.

Wildlife

Under the No Build Alternative, neither bridge modifications nor replacement would occur; therefore, impacts on wildlife would not occur.

3-1.2 Applicability of the Programmatic Section 4(f)

As an alternative to preparing a full individual Section 4(f) evaluation, a programmatic evaluation may be utilized. Programmatic Section 4(f) evaluations streamline the documentation and approval process and amount of interagency coordination that is required for an individual Section 4(f) evaluation. Draft and final evaluations do not need to be prepared and FHWA legal sufficiency review is not required. Interagency coordination is required only with the official(s) with jurisdiction and not with DOI, USDA, or HUD. If any of the following conditions exist, use of any of the programmatic applications do not apply:

- Construction of transportation facilities on new alignment;
- Projects for which an EIS is prepared (does not apply to the Net Benefit Programmatic);
- Specific conditions of each type of programmatic application are not met;
- Projects with one or more Section 4(f) uses that do not meet the criteria for use of any of the programmatic 4(f)s;
- Proximity impacts resulting in constructive use are involved.

The Department, as assigned by FHWA, has determined that certain highway projects may comply with the requirements of Section 4(f) under a nationwide programmatic evaluation rather than through an individual evaluation. Five nationwide programmatic Section 4(f) evaluations are available. One covers projects that use historic bridges. The second covers projects that use minor amounts of land from parks, recreational areas, and wildlife and waterfowl refuges. The third covers projects that use minor amounts of land from historic sites. The fourth covers bikeway projects. The fifth applies when there is a net benefit to a Section 4(f) property. For the historic bridge programmatic Section 4(f) Evaluation, the project must meet the conditions for all programmatic 4(f) applications (above) with regard to the type of project, lack of proximity impacts resulting in a constructive use, and the type of environmental document and all of the following conditions:

- the bridge is to be replaced or rehabilitated using federal funds;
- the bridge must listed on or eligible for listing on the National Register of Historic Places;

- the bridge cannot be a National Historic Landmark;
- Caltrans, as delegated by FHWA, determines that the facts of the project match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation; and
- Caltrans, SHPO and the ACHP must have reached agreement through full implementation of the Section 106 process on project effects and a Memorandum of Agreement on mitigation measures.

The project meets the applicability criteria for the Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges (1983) because:

- All build alternatives for the Mount Vernon Avenue Bridge Project include either replacement or rehabilitation which will be implemented using funds from the Federal Highway Bridge Program (HBP)² administered by the Department.
- The Mount Vernon Avenue Bridge is eligible for listing in the National Register of Historic Places under Criterion A at the state level of significance and under Criterion C at the local level of significance;
- The Mount Vernon Bridge is not a National Historic Landmark; and
- Caltrans, as delegated by FHWA, has determined that the facts of the project match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.

The historic bridges covered by this Programmatic Section 4(f) Evaluation are historic, yet also part of either a Federal-aid highway system or a state or local highway system. The programmatic evaluation can be used because, even though historic bridges are on or eligible for inclusion on the National Register of Historic Places, the bridges must perform as an integral part of a modern transportation system.

The programmatic evaluation acknowledges that the project will impair the historic integrity of the bridge either by rehabilitation or replacement/demolition. If the project meets the certain conditions as outlined in requirements for this programmatic evaluation, it will satisfy the requirements of Section 4(f) and confirm there is (1) no feasible and prudent alternative and (2) that the project includes all possible planning to minimize harm.

At the time the FONSI is signed, the Department will also approve this Programmatic Section 4(f) Evaluation based on SHPO approval of the MOA which occurs after public circulation of the environmental document. An executed Memorandum of Agreement details the stipulations

² Formerly known as the federal Highway Bridge Replacement and Rehabilitation (HBRR) program.

required to resolve the adverse effects of the undertaking on these Historic Properties, as required by CFR 800 and the Section 106 Programmatic Agreement (see Appendix F). The text that follows is supporting documentation for Caltrans' determination.

3-1.3 Avoidance Alternatives and Other Findings

The following alternatives avoid any use of the historic bridge:

- 1. Do nothing.
- 2. Build a new structure at a different location without affecting the historic integrity of the old bridge, as determined by procedures implementing the National Historic Preservation Act (NHPA).
- 3. Rehabilitate the historic bridge without affecting the historic integrity of the structure, as determined by procedures implementing the NHPA.

Each of these alternatives have been evaluated and determined not to be feasible and prudent.

Under the Do Nothing Alternative, no new or modified bridge or other physical improvements would be constructed on Mount Vernon Avenue between West 2nd and West 5th Streets. The existing bridge would be left in its current condition, and no structural or functional deficiencies would be corrected. Ongoing maintenance would continue. The Do Nothing Alternative does not assume that the existing bridge would undergo seismic retrofitting.

"The Do Nothing Alternative was studied by the City in 1996 and was later discontinued in favor of constructing a new bridge. On June 4th, 2004, Department Structures Maintenance and Investigations staff recommended closure of the existing bridge, concluding that steel beam and girder cracking cause the bridge to be unsafe. The City closed the bridge and has since undertaken efforts to install temporarily shoring. However, per an agreement between the City and BNSF regarding temporary shoring work, BNSF requires the removal of the shoring before the end of 2 years, requiring the bridge to be closed again. However, the end of the two-year period has passed, and the shoring is currently in place. BNSF has not requested removal of the shoring and the bridge is currently open. The existing shoring would be maintained to ensure original load-carrying capacity is retained, and recent investigation has determined that an additional bent (Bent 6, Span 6 per as built plans) would require temporary shoring.

• Maintenance-The Do Nothing Alternative does not correct the situation that causes the bridge to be considered structurally deficient or deteriorated. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to cope with the situation.

• Safety - The do nothing alternative does not correct the situation that causes the bridge to be considered deficient.

Retrofit/rehabilitation or replacement of the Mount Vernon Avenue Bridge is necessary because the current facility exhibits structural and functional deficiencies per the Department's National Bridge Inventory—Structure Inventory and Appraisal, which addresses bridges both on and off the federal highway system in the State of California. A Final Seismic Retrofit Strategy Report was consequently developed and approved on June 2, 1997. The report concluded that the bridge falls under Category 1, a category for bridges that may potentially collapse in a seismic event and potentially threaten public safety.

In addition to this seismic deficiency, the bridge was placed on the FHWA Federal Eligible Bridge List because of its low sufficiency rating. The bridge was found to be Structurally Deficient because of its poor deck condition. The bridge also meets the classification of being Functionally Obsolete with a low rating on the deck geometry (i.e., roadway width on the bridge) and because of the nonstandard deck geometry, misaligned south approach, and nonstandard vertical underclearance at West 3rd Street.

Because of these deficiencies, the bridge poses serious and unacceptable safety hazards to the traveling public or places intolerable restriction on transport and travel.

Build on new location without using the old bridge. Investigations have been conducted to construct a bridge on a new location or parallel to the old bridge on a new location or parallel to the old bridge (allowing for a one-way couplet); however, for one or more of the following reasons, this alternative is not feasible and prudent.

- Terrain—The present bridge structure has already been located at the only feasible and prudent site, i.e., a gap in the landform, the narrowest point of the river canyon, etc. To build a new bridge at another site will result in extraordinary bridge and approach engineering and construction costs or extraordinary disruption to established traffic patterns.
- Adverse Social, Economic, or Environmental Effects—Building a new bridge away from the present site would result in social, economic, or environmental impacts of extraordinary magnitude. Impacts such as displacement of a significant number of families or businesses and serious disruption of established traffic patterns/access may individually or cumulatively weigh heavily against relocation to a new site.
- Engineering and Economy—Where difficulties associated with the new location are less extreme than those encountered above, a new site would not be feasible and prudent where cost and engineering difficulties reach extraordinary magnitude. Factors supporting this conclusion include significantly increased roadway and structure costs,

serious foundation problems, or extreme difficulty in reaching the new site with construction equipment. Additional design and safety factors to be considered include an ability to achieve minimum design standards or meet requirements of various permitting agencies such as those involved with navigation, pollution, and the environment.

• Preservation of Old Bridge—It is not feasible and prudent to preserve the existing bridge even if a new bridge were to be built at a new location. This could occur when the historic bridge is beyond rehabilitation for transportation or an alternative use, when no responsible party can be located to maintain and preserve the bridge, or when a permitting authority, such as the Coast Guard, requires removal or demolition of the old bridge.

It is not feasible and prudent to construct a new bridge adjacent to or away from the existing bridge due to the existing street configuration, substantial social and economic impacts, and infeasibility of bridge preservation. The existing bridge provides access from 2nd Street across the BNSF railroad to where historic State Route 66 jogs west from its southerly extension. The existing 2nd Street extends approximately two blocks west of the existing bridge in a residential neighborhood that is bisected by a rail line. Construction of a new bridge in this area is expected to involve acquisition of existing homes, resulting in displacement of residents and redirection of traffic from Mount Vernon Avenue through an existing residential neighborhood. Additionally, the location and design of the bridge would be further constrained by an existing rail spur.

The street grid does not exist east of historic State Route 66 since this area, adjacent to Interstate 215, is used for railroad storage/parking. Construction of a new bridge on land to the east would require an increase of several hundred feet over the existing storage/parking area to meet State Route 66 and would result in significant additional cost and engineering difficulties. Additionally, construction of a bridge to the east could result in adverse impacts to an additional 4(f) resource, the Atchison, Topeka & Santa Fe Passenger and Freight Depot, located at 1170 West 3rd Street.

Preservation of the existing bridge is not considered feasible due to the extent of deterioration. The bridge has been deemed unsafe and recommended for closure by Caltrans due to major structural deficiencies and temporary shoring has been installed by the City to allow safe use of the bridge. Per an agreement between the City and BNSF, removal of the shoring must occur before the end of 2 years as required by BNSF. However, the end of the 2-year period has passed and BNSF has not requested removal of the shoring; therefore, the shoring is being examined and maintained to ensure that the original load carrying capacity is retained. Recent investigation has determined that Bent 6, Span 6 (as per built plans) would require additional

temporary shoring. Should BNSF require the removal of shoring, the bridge would be closed and there would be no crossing on Mount Vernon Avenue between West 2nd and West 5th Streets. Following removal of the shoring, the bridge would be closed to traffic. The type of retrofit/rehabilitation required to make the bridge safe for pedestrians and traffic would result in alteration or demolition of character-defining features and result in an adverse impact to the historic bridge.

Rehabilitate the historic bridge without affecting the historic integrity of the structure-, Although the 2004 Bridge Study Report found that a retrofit/rehabilitation alternative was technically feasible, the following important caveats were noted:

- Even with all possible planning to minimize harm to the historic resource, direct or indirect alterations to the historic characteristics that qualify the resource for listing in the National Register of Historic Places (NRHP)NRHP would likely result in an adverse effect under Section 106 and a direct use under Section 4(f). These issues would be more fully examined in the Section 106 of the National Historic Preservation Act (NHPA) and Section 4(f) documentation.
- The retrofitted bridge would have a limited service life of only 15 to 20 years because (1) major portions of the steel girders that were salvaged from the 1907 bridge could have questionable rivet connections as a result of corrosion; and (2) the bridge has been carrying heavy daily truck traffic since it was constructed in 1934, causing the aged carbon steel to reach the maximum allowable truck load cycles associated with fatigue.
- Some of the timber piles supporting the bridge foundations could be decayed from aging.
- Preservation of Old Bridge—It is not feasible and prudent to preserve the existing bridge. This historic bridge is beyond rehabilitation for transportation or an alternative use.

3-1.4 Measures to Minimize Harm to the Section 4(f) Property

As part of the Section 106 process, a Memorandum of Agreement (MOA) has been approved and executed, between the State Historic Preservation Officer (SHPO) and the Department to address the finding of Adverse Effect for the bridge. The MOA provides stipulations that the City of San Bernardino will construct the replacement bridge with a design developed in consultation with the SHPO to minimize the visual impact on the setting of the Depot. The MOA was finalized after public review of the Environmental Assessment. This MOA also requires concurrence of the Department local office (Caltrans District 8) and the City of San Bernardino. Architectural design of the proposed structures will be submitted to and approved by City officials prior to alteration of the existing historical resources.

The following mitigation measures are identified in the Memorandum of Agreement, pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a) and 800.6(b)(1), which has been submitted to SHPO during public review of the Environmental Assessment and Programmatic Section 4(f) Evaluation. The following measures were proposed and have received concurrence from SHPO.

- CR-1: Prior to the start of any work that could adversely affect any characteristics that qualify the Mount Vernon Avenue Bridge as an historic property, the Department shall ensure that the recordation measures specified in Section A of the MOA are completed.
- CR-2: The City shall take a large-format (4" by 5" or larger negative size) photographs showing the Mount Vernon Avenue Bridge in context as well as details of its historic engineering features. Photographs shall be processed for archival permanence in accordance with the Historic American Engineering Record (HAER) photographic specifications. Views of the Mount Vernon Avenue Bridge shall include: (1) Contextual views showing the bridge in its setting; (2) Elevation views; (3) Views of the bridge's approaches and abutments; and (4) Detail views of significant engineering and design elements.
- CR-3: The City shall make a reasonable and good faith effort to locate historic construction drawings for the Mount Vernon Avenue Bridge. If these drawings are located, the City shall photographically reproduce plans, elevations and selected details form these drawings in accordance with HAER photographic specifications. If they are legible in this format, reduced size 8 ¹/₂" by 11") copies of the construction drawings may be included as pages of the report cited in subsection A.3. of the MOA rather than photographed and included as photographic documentation. The City shall promptly notify the Department if historic construction drawings for Bridge #54C-0066 cannot be located. In that event, the requirements of this paragraph shall not apply.
- CR-4: A written historical and descriptive report for the Mount Vernon Avenue Bridge will be completed. This report will provide a physical description of the bridge, discuss its construction and its significance under applicable National Register criteria, and address the historical context for its construction following the format and instructions in the September 1993 National Parks Service (NPS) HAER Guidelines for Preparing Written Historical and Descriptive Data guidelines for written documentation.
- CR-5: Upon completion, copies of the documentation prescribed in subsection A.3 of the MOA shall be retained by the Department, District 8, and offered to the California Room of the City's Feldhym Library.
- CR-6: the Department shall ensure that the City constructs the replacement bridge in accordance with a design developed in consultation with the SHPO and submitted to the SHPO for comments, to minimize the indirect visual impact (profile, scale, color, and material) of the replacement bridge on the setting of the adjacent National Register listed historic property, the Atchison, Topeka and Santa Fe Passenger and Freight Depot (Santa Fe Depot). The proposed bridge replacement design is depicted in Attachment A of the

MOA and simulations for the replacement are included in Attachment B of the MOA. In addition, existing photographs of the Mount Vernon Avenue Bridge are located in Attachment C of the MOA.

- CR-7: the Department in consultation with the SHPO, shall ensure that the replacement bridge will be designed to included architectural details (bridge railing, lighting, concrete abutments, stairways) in order to convey the character-defining elements of the original historic structure and to be visually compatible with the adjacent Santa Fe Depot.
- CR-8: the Department shall ensure that the City replace any landscape elements (fan palm trees Washingtonia robusta), which are 50 years or older and contribute to the historic setting of the bridge, which were removed as a result of the bridge replacement project. Appropriate replacement trees should be planted in those planned landscaped areas northwest and southeast of the bridge alignment.

Additionally, the project proposes other aesthetic measures to ensure that the proposed replacement bridge is consistent in architecture, scale, and size to the existing bridge and surroundings, to the extent feasible.

The following minimization measures are standard requirements which are required by the Department for all projects:

- **Standard CR-A:** If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- **Standard CR-B:** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 8 Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

3-1.5 Coordination

Consultation with the SHPO and other cultural resources stakeholders has been initiated. The Department, as assigned by FHWA, has obtained SHPO concurrence with the determination of eligibility and the finding of effect for this resource. Notification letters were sent to various

local entities requesting information regarding cultural resources that may be located within the Area of Potential Effects (APE).

The following coordination has occurred to address cultural resources pursuant to Section 106 of the National Historic Preservation Act:

- August 2000 The Area of Potential Effect (APE) for Cultural Resources was signed by the Department (District 8) Environmental Branch Chief.
- December 2000 The APE for Cultural Resources was signed by the FHWA Transportation Engineer.
- August 2001 A Historic Property Survey Report (HPSR) was prepared and submitted to the SHPO based on the study area delineated by the APE.
- March 2002 SHPO concurrence on the HPSR.
- April 2004 Due to expanded footprint, a supplemental records and literature search was requested from the San Bernardino Archaeological Information Center at the San Bernardino Museum.
- April 2004 A revised APE for Cultural Resources was signed by the Department.
- June 2007 A 1st Supplemental HPSR and Finding of Effect (FOE) was prepared and submitted to SHPO based on the revised APE.
- September 2007- SHPO concurrence was received on the HPSR and FOE.
- December 2009 Informal review of a draft Memorandum of Agreement (MOA) occurred
- Caltrans and SHPO, as delegated by ACHP, have finalized a Finding of Effect (FOE) for the Mount Vernon Avenue Bridge and have approved a list of minimization measures in the Memorandum of Agreement (MOA) signed by SHPO on June 8, 2009 and executed on February 8, 2011 subsequent to public circulation of the MOA within the draft environmental document.

4 LETTERS AND OTHER CORRESPONDENCE

Copies of letters and correspondence related to the coordination efforts done for the Programmatic Section 4(f) Evaluation are attached included on the following pages. The MOA, with SHPO approval, is provided in appendix F of the NEPA Environmental Assessment.



Preserving America's Heritage

December 12, 2008

Gregory P. King, Chief Cultural and Community Studies Office Division of Environmental Analysis 1120 N Street – P.O. Box 942874 Sacramento, CA 94274-0001

Ref: Proposed Mount Vernon Avenue Bridge Replacement Project San Bernardino County, California

Dear Mr. King:

On November 17, 2008, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the California State Historic Preservation Office (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require our further assistance, please contact Carol Legard at 202 606-8522 or via e-mail at clegard@achp.gov.

Sincerely, a Shavio Johnson

LaShavio Johnson Historic Preservation Technician Federal Permitting, Licensing and Assistance Section Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004 Phone:202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov This page left blank intentionally.

ARNOLD SCHWARZENEGGER, Governor

STATE OF CALIFORNIA - THE RESOURCES AGENCY

OFFICE OF HISTORIC PRESERVATION DEPARTMENT OF PARKS AND RECREATION P.O. BOX 942896 SACRAMENTO, CA 94296-0001 (916) 653-6524 Fax: (916) 653-9824 calshpo@ohp.parks.ca.gov

Reply To: FHWA000302A

September 18, 2007

Gregory P. King, Chief Cultural and Community Studies Office Division of Environmental Analysis Department of Transportation PO Box 942874 Sacramento, CA 94274-0001

Re: Finding of Effect for the Proposed Replacement of the Mt. Vernon Avenue Bridge, San Bernardino, CA

Dear Mr. King:

Thank you for consulting with me about the subject undertaking in accordance with the Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA).

The Federal Highway Administration (FHWA) is requesting my concurrence that the proposed project will have an adverse effect on historic properties, specifically the Mount Vernon Ave Bridge, a property determined eligible for the National Register of Historic Places in 2002. Based on my review of the submitted documentation I concur.

Thank you for considering historic properties as part of your project planning. If you have any questions, please contact Natalie Lindquist of my staff at your earliest convenience at (916) 654-0631 or e-mail at nlindquist@parks.ca.gov.

Sincerely,

Sucar K Shattor for

Milford Wayne Donaldson, FAIA State Historic Preservation Officer

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STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN, Jr., Governor DEPARTMENT OF TRANSPORTATION DIVISION OF ENVIRONMENTAL ANALYSIS, MS 27 1120 N STREET P. O. BOX 942874 SACRAMENTO, CA 94274-0001 PHONE (916) 653-7507 FAX (916) 653-7757 Flex your powe TTY (916) 653-4086 Be energy efficient! February 22, 2011 Mr. Milford Wayne Donaldson, FAIA FHWA979414B State Historic Preservation Officer Office of Historic Preservation P. O. Box 942896 Sacramento, CA 94296-0001

Dear Mr. Donaldson:

Subject: Signed Memorandum of Agreement for the Mount Vernon Avenue Bridge Replacement Project, City of San Bernardino, San Bernardino County, California

Enclosed for your records is a copy of the executed Memorandum of Agreement for the above referenced undertaking. A copy is also being provided to the Advisory Council for Historic Preservation.

Caltrans is transmitting this as a federal agency, following the provisions of the *Memorandum of Understanding (MOU) between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program*, which became effective on July 1, 2007. The MOU was signed pursuant to Section 6005 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, which allows the Secretary of Transportation to assign, and the State of California to assume, responsibility for FHWA's responsibilities under NEPA as well as consultation and coordination responsibilities under other Federal environmental laws. In that this project is covered by the above referenced MOU, FHWA has assigned, and Caltrans has assumed, FHWA responsibility for environmental review, consultation, and coordination on this project. Please direct all future correspondence on this project to Caltrans.

If you need additional information, please do not hesitate to contact Jill Hupp at (916-654-3567). Thank you.

Sincerely ned

ANMARIE MEDIN Chief Cultural Studies Office Division of Environmental Analysis

"Caltrans improves mobility across California"

M. Wayne Donaldson, FAIA February 22, 2011 2

Enclosure: executed MOA

bc: Andrew Walters – D8; Jill Hupp – HQ

"Caltrans improves mobility across California"

5 OTHER PARK, RECREATIONAL FACILITIES, WILDLIFE REFUGES, AND HISTORIC PROPERTIES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

Archaeological and historic sites within the Section 106 area of potential effects (APE) and all public and private parks, recreational facilities, and wildlife refuges within approximately 0.5 mile of have been analyzed to determine whether they are protected Section 4(f) resources and whether the project would "use" the properties.

<u>Trails</u>

There is an existing proposal for "Local Multi-Purpose Trail" on Mount Vernon Avenue, both on the bridge and the adjacent northern and southern segments of Mount Vernon Avenue (November 2005 City of San Bernardino General Plan, Page 8-13); therefore, the multi-purpose trail was subject to Section 4(f) consideration. However, currently there is no existing trail that is officially designated on Mount Vernon Avenue Bridge, nor the adjacent northern and southern segments of Mount Vernon Avenue. Additionally, both the existing bridge and proposed replacement bridge are wide enough to accommodate any future development of the Local Multi-Purpose Trail; therefore, a "use" of the proposed Section 4(f) resource does not occur and provisions of Section 4(f) are not triggered.

<u>Parks</u>

Viaduct Park, located at North Mount Vernon Avenue immediately south of West 2nd Street, is to the immediate southeast of the project area and was also considered as a Section 4(f) resource. The last known use for Viaduct Park was in 1986 when the Santa Fe Engine 3751 was removed from display at the park. Currently, there are no improvements on Viaduct Park, nor is it landscaped/maintained by the City for park use. Additionally, Viaduct Park does not appear in the City's General Plan Table PRT-2, Existing City Parks and Recreation Facilities; therefore, a

"use" of Viaduct Park as a potential Section 4(f) Resource does not occur and provisions of Section 4(f) are not triggered.

Active parks in the project vicinity are:

- La Plaza Park located at 685 Mount Vernon Avenue, approximately 0.40 km (0.25 mile) north of the project site;
- Ninth Street Park located at 2931 Garner, approximately 0.77 km (0.48 mile) north of the project site; and
- Nunez Park located at 1717 West 5th Street, approximately 0.83 km (0.51 mile) west of the project site.

The project will not require acquisition or temporary construction easements on any of these properties nor will the project result in temporary access impacts due available detour routes and the provision of free Omnitrans bus passes provided by the City of San Bernardino. A "use" of these parks would not occur as a result of the project and provisions of Section 4(f) are not triggered.

Cultural Resources

The historic sites considered for significance are shown on the Area of Potential Effects (APE) map (signed by Caltrans on August 22, 2000, and by FHWA on December 23, 2000) and supplemental APE map (with Architectural APE, signed on May 25, 2006). The supplemental Architectural APE includes the proposed width of the rehabilitated or replacement bridge and the maximum right-of-way for the project.

A total of 26 properties were identified in the Historic Property Survey Reports (HPSR) within the APE (P.S. Preservation Service 2001, JSA 2004). In accordance with FHWA guidance, Section 4(f) requirements are only applicable to *significant* historic sites (i.e., those sites on or eligible for the National Register of Historic Places [NRHP] or sites otherwise determined significant by the FHWA Administrator [23 CFR Section 774.11(e)]). Of the 26 properties, two existing properties were found to be listed or eligible for listing in the NRHP as historic resources:

- Mount Vernon Avenue Bridge and
- Atchison, Topeka & Santa Fe Passenger and Freight Depot.

This section discusses only the Section 4(f) resources in which a "use" does <u>not</u> occur. A use of the Atchison, Topeka & Santa Fe Passenger and Freight Depot does not occur as part of the

project. A use of the Mount Vernon Avenue Bridge does occur as part of the project, and a discussion of this resource was included under Section 3, "Description of Section 4(f) Properties."

On March 1, 2002, SHPO provided concurrence on the HPSR which included a no effect finding for the Atchison, Topeka & Santa Fe Passenger and Freight Depot. Atchison, Topeka & Santa Fe Passenger and Freight Depot is located at 1170 West 3rd Street, approximately 310 meters (1,020 feet) east of the Mount Vernon Avenue Bridge. It was constructed between 1918 and 1921, the period of significance. The Santa Fe Depot has a three-story central block with 2 two-story wings to either side. The Mission Revival style is evident in the single and grouped arched windows, towers, and domes; rounded balconettes with metal railings; a quatrefoil window in the third-story front-gabled end; and shaped parapets. The building was recently restored after having fallen into disrepair and is currently occupied in part by the San Bernardino Associated Governments (SANBAG). Metrolink and Greyhound will be utilizing some of the office space in the future.

The Santa Fe Depot was listed in the NRHP under Criterion C on February 2, 2001, as an outstanding example of Mission Revival-style architecture. Structures listed in the NRHP are automatically listed on the California Register of Historical Resources (CRHR).

As defined in 23 CFR Section 774.17, the "use" of a protected Section 4(f) resource occurs when any of the following conditions are met.

- When land is permanently incorporated into a transportation facility (direct use);
- When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in §774.13(d) (temporary use).
- When there is a constructive use of a Section 4(f) property as determined by the criteria in §774.15 (constructive use).

Direct Use—A direct use of a Section 4(f) resource takes place when the property is permanently incorporated into a proposed transportation facility/project (23 CFR Section 771.17). This may occur as a result of partial or full acquisition of a fee simple interest, permanent easements, or temporary easements that exceed regulatory limits (23 CFR Section 771.135[p][7]).

The depot is not located within the project footprint for retrofit/rehabilitation or replacement of the Mount Vernon Avenue Bridge and will not be incorporated into the project or project alternatives through partial or full acquisition. Additionally, no permanent change to the depot is

proposed. Therefore, implementation of the project or project alternatives will not result in a direct use of this 4(f) resource and provisions of Section 4(f) are not triggered.

<u>**Temporary Use</u>**—A temporary use of a Section 4(f) resource occurs when there is a temporary occupancy of property that is considered adverse in terms of the preservationist purposes of the Section 4(f) statute. Under the FHWA regulations (23 CFR Section 774.13[b]), a temporary occupancy of property does not constitute a use of a Section 4(f) resource when the following conditions are satisfied.</u>

- The occupancy must be of temporary duration (i.e., shorter than the period of construction) and not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There are no permanent adverse physical effects on the protected resource, and there will be no temporary or permanent interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as that which existed prior to the project.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

The project and project alternatives do not involve temporary occupancy or change in property ownership of the depot property. Therefore, implementation of the project or project alternatives will not result in an indirect use of this 4(f) resource. and provisions of Section 4(f) are not triggered.

<u>Constructive Use</u>—A constructive use of a Section 4(f) resource happens when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (i.e., noise, vibration, visual, access, and/or ecological) so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired (23 CFR Section 774.15). Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made through the following practices:

- identification of the current activities, features, or attributes of the resource that may be sensitive to proximity impacts;
- analysis of the potential proximity impacts on the resource; and
- consultation with the appropriate officials having jurisdiction over the resource (23 CFR Section 774.5).

The project will not cause a constructive use of The Santa Fe Depot because the proximity impacts will not substantially impair the protected activities, features, or attributes of the historic site.

5 ADDITIONAL REFERENCES

- 23 CFR 774: Parks, Recreation Areas, Wildlife And Waterfowl Refuges, And Historic Sites (Section 4(F))
- 23 CFR 771.135: FHWA Environmental Impact and Related Procedures; Section 4(f) Technical Advisory T6640.8A, Guidance for Preparing and Processing
- Section 4(f) Policy Paper, March 1, 2005
- Section 4(f) Checklist (FHWA Western Resource Center) FHWA Interim Guidance, August 22, 1994. Applying Section 4(f) on Transportation Enhancement Projects and National Recreation Trail Projects
- FHWA Guidance on Section 4(f) De Minimis

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