

9.0 DRAFT SECTION 4(f) EVALUATION

9.1 INTRODUCTION AND OVERVIEW OF THE SECTION 4(f) PROCESS

State Route 22 is a six-lane freeway originally built in the 1960s. Peak-hour operating conditions are currently at LOS F (very high congestion levels, very low mobility) in each direction of travel throughout most of the study area. Traffic forecasts indicate that traffic volumes are expected to increase along most segments, which could intensify the existing congestion problem.

The study area has insufficient capacity to accommodate travel demand within, as well as to and from the study area. Additionally, the study area suffers from a lack of continuous parallel arterial roadways, insufficient arterial/intersection capacity, absence of HOV lanes for carpools and express transit services, and lack of TSM strategies.

To address these problems, OCTA initiated the SR-22/West Orange County Connection project in 1997. The SR-22/West Orange County Connection project was proposed to help improve mobility, maximize cost-effectiveness of improvements, minimize adverse and maximize beneficial environmental impacts, minimize negative and maximize positive economic impacts, and improve operations (including safety) of the study area transportation system. The study area traverses the jurisdictions of Seal Beach, Rossmoor (unincorporated Orange County), Westminster, Garden Grove, Santa Ana, Orange, and Tustin.

The purpose of and need for the project is discussed in Section 1.0 of this Draft EIR/EIS, while detailed descriptions of the project alternatives are provided in Section 2.0. In addition, this Section 4(f) evaluation includes a discussion of alternatives developed to avoid uses of the Section 4(f) properties along the alignment of the build alternatives called, "Avoidance Alternatives."

Section 4(f) of the Department of Transportation Act of 1966 prohibits the Secretary of Transportation from approving any program or project that:

... requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance as determined by federal, state, or local officials having jurisdiction thereof, or any land from an historic site of national, state, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use... (Department of Transportation Act of 1983, 49 USC Section 21).

The regulations interpreting Section 4(f) state that "... any use of lands from a Section 4(f) property shall be evaluated early in the development of the action when alternatives to the proposed action are under study" (23 CFR 777.135[b]). A use of a Section 4(f) resources occurs (1) when land from Section 4(f) site is acquired for a transportation project; (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose; or (3) when the proximity impacts of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purpose for which the Section 4(f) site exists are substantially impaired. The latter type of use is also known as a "constructive" use.

Section 4(f) is also applicable to historic properties and archaeological resources only when the resource is included on, or eligible for, the National Register of Historic Places (NRHP). The criteria for eligibility for the NRHP are defined as:

... the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- A. *that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- B. *that are associated with the lives of persons significant in our past; or*
- C. *that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- D. *that have yielded, or may be likely to yield, information important in prehistory or history.*
... (36 CFR 60.4)

An Historic Property Survey Report (HPSR) (Appendix E of this document) has been prepared pursuant to Section 106 of the National Historical Preservation Act of 1966 (NHPA). Those properties within the Area of Potential Effects (APE) are examined, or determined as eligible for listing on the NRHP, were documented in the HPSR and are addressed in this Section 4(f) evaluation. The HPSR, summarized in Section 3.5, concluded that only one property was previously determined to be eligible for the National Register, the former Pacific Electric Railway Bridge over the Santa Ana River in Santa Ana. No prehistoric or historic archaeological resources were identified within the project area.

Any effects of the proposed undertaking on historic properties listed in or determined eligible for inclusion in the NRHP must be reviewed for compliance with Section 106 of the NHPA using the rules and regulations set forth in 36 CFR Part 800.9 regarding criteria of effect and adverse effect. Under the Full Build Alternative, the project would require removal of the Pacific Electric Santa Ana River Bridge, a National Register-eligible historic property, which would have an adverse effect on historic properties.

9.1.1 ALTERNATIVES SELECTION PROCESS FOR PROJECTS

There are a series of tests in the selection process for project involving Section 4(f). The first test is to determine which alternatives are considered feasible and prudent. There are various reasons in which an alternative may be rejected as not being feasible and prudent. Among the reasons are that the alternative does not meet purpose and need, has excessive cost of construction, has severe operational/safety issues, or has unacceptable adverse social, economic and/or environmental impacts, serious community disruption.

When sufficient analysis has been completed to demonstrate that an alternative is not feasible and prudent, no additional analysis of that alternative is required.

Once the alternatives which are not feasible and prudent have been eliminated, a determination must be made on whether one or more of the remaining alternatives avoid the use of land from Section 4(f) resources. If alternatives that avoid Section 4(f) resources exist, one of them must be selected. However, if all of the remaining feasible and prudent alternatives use Section 4(f) resources, then an analysis must be conducted to determine the alternative that is the least damaging to Section 4(f) resources. The feasible and prudent alternative that is the least damaging to Section 4(f) resources must be selected.

9.2 DESCRIPTION OF SECTION 4(f) PROPERTIES DIRECTLY USED

For the SR-22/West Orange County Connection project, only the proposed Pacific Electric Right-of-Way Trail and the Pacific Electric Santa Ana River Bridge would be directly used.

9.2.1 Parks and Recreation

A. PACIFIC ELECTRIC RIGHT-OF-WAY TRAIL (PROPOSED)

The Pacific Electric Right-of-way Trail is a proposed class I trail along the former Pacific Electric right-of-way (refer to Figure 3.10-2). The Santa Ana *General Plan* designates the entire Pacific Electric right-of-way as open space and has a specific plan for development of a class I trail along the existing right-of-way (Santa Ana, 1998).

The former Pacific Electric right-of-way was investigated in the course of cultural resources fieldwork. It was determined that all tracks and associated rail features, such as switches, signals, poles, and overheads, were removed following abandonment of the line in 1950. Much of the alignment has been graded and, in several locations, sections of the right-of-way have been leased for commercial or industrial use. Development along the right-of-way, with the exception of the Pacific Electric Santa Ana River Bridge and some buildings near the east end of the project limits, relates to the period following abandonment of the line. The historic character of the rail corridor is no longer expressed. Because of its loss of integrity, the former Pacific Electric right-of-way itself is not considered a historical resource and is not eligible for the National Register.

While the trail is proposed by the City of Santa Ana, the former Pacific Electric right-of-way is owned by OCTA. Most of the former railroad right-of-way is vacant and signs posted adjacent to the right-of-way prohibit access. As of July 2000, no schedule for developing the trail or financing has been established.

B. SANTA ANA RIVER TRAIL

The Santa Ana River Trail is an existing Class I trail along the Santa Ana River that is fully grade-separated from cross traffic for its entire length in Orange County. This includes an existing grade separation at SR-22, where the trail “dips” down into the Santa Ana river floodway to cross under the SR-22 Santa Ana River bridge. In many locations, the bicycle uses and pedestrian/equestrian uses are separated, such as where the trail crosses the former Pacific Electric right-of-way. At this location, the bike trail is on the east side of the river, while the pedestrian/equestrian trail is on the west side.

9.2.2 Historic Resources

A. PACIFIC ELECTRIC SANTA ANA RIVER BRIDGE

The one historic resource that would be directly affected (by the Full Build Alternative only) is the Pacific Electric bridge over the Santa Ana River in Santa Ana (Figure 9.2-1). The bridge was the one and only Santa Ana River crossing for the Pacific Electric Railway and is an integral part of the transportation history of Orange County. This property was previously determined to be eligible for the National Register. This structure is a two-span iron through-truss bridge that was constructed in 1905. It was determined eligible for the National Register in 1988 under Criterion A for its association with events that have made a significant contribution to the broad patterns of history, and under Criterion C, as embodying the distinctive characteristics of a type, period, and method of construction.

The structure is an example of the “Pegram Truss” type of bridge, which was used throughout the nation from the late 1880s to the early 20th century. (George H. Pegram originally filed for a patent for this truss in 1883, with the patent rights granted in 1885.) In the Pegram Truss design, the upper chords of the truss are all of equal length. Examples of this type of bridge construction are extremely rare in California. This structure is the only known existing use of the Pegram truss in Southern California.

At some point after the Pacific Electric railway went out of business, the bridge was temporarily used as a bicycle path, but the entrances to it are now barricaded with iron bars and barbed wire. Despite alterations throughout the years, the structure retains a high degree of architectural, historical, and engineering integrity. In addition, the unique design of the Pegram Truss and the visual impact of the abandoned roadbed imparts a strong overall sense of time and place to this structure.



Figure 9.2-1
Pacific Electric Santa Ana River
Bridge

9.2.3 Wildlife Refuges

There are no federal, state, or locally designated wildlife refuges located in the vicinity of any SR-22/West Orange County Connection project.

9.3 USES OF SECTION 4(f) PROPERTIES

The potential impacts of the SR-22/West Orange County Connection alternatives on the proposed Pacific Electric Right-of-Way Trail, Santa Ana River Trail and the Pacific Electric Santa Ana River Bridge are discussed in the following sections.

9.3.1 Pacific Electric Right-of-Way Trail (Proposed)

A. NO BUILD ALTERNATIVE

Because there would be no construction associated with the No Build Alternative, other than that addressed in other environmental documents, this alternative would not result in a use of the proposed Pacific Electric Right-of-Way Trail.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

Because there would be no construction within the former Pacific Electric right-of-way associated with the TSM/Expanded Bus Service Alternative, this alternative would not result in a use of the proposed Pacific Electric Right-of-Way Trail.

C. FULL BUILD ALTERNATIVE

The proposed Pacific Electric Right-of-Way Trail is within the Pacific Electric Right-of-Way segment of the Full Build Alternative. As part of this alternative, a new arterial would be placed in the former Pacific Electric right-of-way from SR-22 to Santa Ana Boulevard and/or Civic Center Drive (Figure 9.3-1). The roadway would be a limited access, four-lane divided arterial with a transit reserve within the median. Access/egress would only be provided at SR-22, Santa Ana Boulevard, and Civic Center Drive. Along some areas, the arterial would be above grade on retained fill material or elevated on structure at street crossings. Only a small portion of the facility is proposed to be at-grade or depressed. The arterial would be depressed where it crosses Harbor Boulevard and Westminster Avenue. There would be no provision for a trail (classes I, II, or III), primarily due to the limited access to cross streets. The width of the arterial is proposed to be approximately 30.4 meters (99.74 feet), which for the most part is the width of the current right-of-way. An arterial in the proposed location of the Pacific Electric Right-of-Way Trail would be a direct use as defined by the Department of Transportation Act of 1983, 49 USC Section 21.

D. REDUCED BUILD ALTERNATIVE

The Pacific Electric arterial proposed in the Full Build Alternative would not be part of the Reduced Build Alternative. Thus, the Reduced Build Alternative would not result in any uses of the proposed Pacific Electric Right-of-Way Trail. As noted, the three major elements not included in the Reduced Build Alternative are the new arterial in the former Pacific Electric right-of-way, the HOV connectors between SR-22 and I-5, and the HOV connectors between SR-22 and SR-55. These elements were eliminated in order to reduce environmental impacts related primarily to right-of-way acquisition.

9.3.2 Santa Ana River Trail

A. NO BUILD ALTERNATIVE

Because there would be no construction associated with the No Build Alternative, other than that addressed in other environmental documents, this alternative would not result in a use of the Santa Ana River Trail.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

Because there would be no construction within or adjacent to the Santa Ana River Trail right-of-way associated with the TSM/Expanded Bus Service Alternative, this alternative would not result in a use of the Santa Ana River Trail.

C. FULL BUILD ALTERNATIVE

As part of the Full Build Alternative, three new crossings of the Santa Ana River Trail would be constructed and the existing SR-22 crossing would be widened slightly. The widened SR-22 crossing, the new northbound I-5/southbound SR-57 to westbound SR-22 connector crossing, and the east end of the new Pacific Electric Arterial bridge would be elevated and would not require use of the trail or interfere with its use. The new crossing for the southbound SR-57 off-ramp to Metropolitan Drive/The City Drive would be nearly at grade with the existing Santa Ana River Trail, severing the existing bike trail. In addition, the west end of the Pacific Electric Arterial bridge would be nearly at grade with the pedestrian/equestrian portion of the Santa Ana River Trail, precluding that use on this side of the river. Mitigation is proposed in Section 4.10 to vertically re-align the trail at both of these locations to provide grade separations and allow continued and full use of the Santa Ana River Trail once construction is completed.

The realignment of the trail would be temporary, and minor in the scope of work. Furthermore, there are no anticipated permanent adverse physical impacts or interference with the activities or purposes of the park, and the current use of the trail would continue. As defined by the (Code of Federal Regulation) CFR 771.135(p)(7), the activities which are proposed for modification of the trail is not considered a "use". Therefore, realignment of the trail would not need to be considered for avoidance alternative.

According to CFR 771.135(p)(7);

"a temporary occupancy of land is so minimal that it does not constitute a use within the meaning of section 4(f) when the following conditions are satisfied: (i) duration must be temporary; (ii) scope of the work must be minor; (iii) there are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis; (iv) the land being used must be fully restored; and (v) there must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions."

Although the trail would be initially severed, it would be mitigated by vertical realignment to provide grade separations and allow continued and full use of the Santa Ana River Trail. Once this is completed, the trail would actually be enhanced as the view is elevated for users of the trail.

Figure 9.3-1
Build Alternative – Pacific Electric Arterial
8.5X11

D. REDUCED BUILD ALTERNATIVE

As part of the Reduced Build Alternative, two new crossings of the Santa Ana River Trail would be constructed and the existing SR-22 crossing would be widened slightly. The widened SR-22 crossing and the new northbound I-5/southbound SR-57 to westbound SR-22 connector crossing would be elevated and would not require the use of the trail or interfere with its use. The new crossing for the southbound SR-57 off-ramp to Metropolitan Drive/The City Drive would be nearly at grade with the existing Santa Ana River Trail, severing the existing bike trail. Mitigation is proposed in Section 4.10 to vertically re-align the trail at this location to provide a grade separation and allow continued and full use of the Santa Ana River Trail, once construction is completed. Therefore, there would be no adverse impacts to the Santa Ana River Trail since it would continue the current use of this facility.

9.3.3 Pacific Electric Santa Ana River Bridge**A. NO BUILD ALTERNATIVE**

Because there would be no construction associated with the No Build Alternative, other than that addressed in other environmental documents, this alternative would not result in a use of the Pacific Electric Santa Ana River Bridge.

B. TSM/EXPANDED BUS SERVICE ALTERNATIVE

Because there would be no construction within the former Pacific Electric right-of-way associated with the TSM/Expanded Bus Service Alternative, this alternative would not result in a use of the Pacific Electric Santa Ana River Bridge.

C. FULL BUILD ALTERNATIVE

The Pacific Electric Santa Ana River Bridge is within the Pacific Electric Right-of-Way segment of the Full Build Alternative. As discussed above for the proposed Pacific Electric Right-of-Way Trail, a new arterial would be placed in the former Pacific Electric right-of-way, and a new bridge would be built across the Santa Ana River (Figure 9.3-2). This construction would require the removal of the Pacific Electric Santa Ana River Bridge, which has been determined to be eligible for the National Register of Historic Places. This would be a direct use as defined by the Department of Transportation Act of 1983, 49 USC Section 21 and an adverse effect under Section 106 of the NHPA.

D. REDUCED BUILD ALTERNATIVE

The Pacific Electric arterial proposed in the Full Build Alternative would not be part of the Reduced Build Alternative. Thus, the Reduced Build Alternative would not result in any uses of the Pacific Electric Santa Ana River Bridge.

Figure 9.3-2
Build Alternative Uses of Pacific Electric Santa Ana River Bridge
8.5X11

9.4 Avoidance alternatives

Alternatives that would avoid use of the two Section 4(f) properties were either identified from previous alternatives that were withdrawn from consideration or developed as part of the Section 4(f) analysis. Each of the avoidance alternatives is described in the following sections.

9.4.1 Pacific Electric Right-of-Way Trail (proposed)

A summary of the avoidance alternatives is provided at the end of this section in Table 9.4-1.

A. PROJECT ALTERNATIVES

No Build Alternative. The No Build Alternative would avoid any use of the proposed Pacific Electric Right-of-Way Trail as described above. This alternative, however, would not meet the project purpose and need to improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor.

TSM/Expanded Bus Service Alternative. Like the No Build Alternative, the TSM/Expanded Bus Service Alternative would avoid any use of the proposed Pacific Electric Right-of-Way Trail. This alternative would partially achieve the project purpose and need improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor by providing expanded bus service, but to a lesser degree than either the Full Build Alternative or Reduced Build Alternative.

Reduced Build Alternative. As discussed above, the Pacific Electric arterial is not an element of this alternative and would therefore avoid any use of the proposed Pacific Electric Right-of-Way Trail. This alternative would achieve the project purpose and need to improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor by providing HOV lanes on SR-22, but to a slightly lesser degree than the Full Build Alternative.

B. ALTERNATIVES WITHDRAWN FROM CONSIDERATION (see Section 2.3)

Alternative 3: Fixed Guideway. The Fixed Guideway alternative, discussed in Section 2.3, would implement a new travel mode in the study area. The Fixed Guideway would link two existing systems extending from the Santa Ana Transportation Center/Metrolink station on the east to the Los Angeles County Metropolitan Transportation Authority (MTA) Blue Line on the west. The Fixed Guideway alignment running between the Los Angeles County/Orange County line in Seal Beach and the Santa Ana Transportation Center would follow along SR-22, the Pacific Electric Right-of-Way, Santa Ana Boulevard, and Fourth Street through central Santa Ana. Station locations would be approximately 1.6- to 3.2-kilometer (one- to two-mile) intervals adjacent to major north/south arterial crossings.

Given that no plans have been developed by the City of Santa Ana for the proposed Pacific Electric Right-of-Way Trail, it is uncertain what the requirements would be for the trail, particularly the location and width required for the trail. It is assumed that there would be enough space within the right-of-way for both the fixed guideway and the trail. While this alternative may avoid use of the proposed trail, it would still require the removal of the Pacific Electric Santa Ana River Bridge and would therefore not avoid use of all Section 4(f) properties.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 4A: General-Purpose Lanes. This alternative would include the addition of a general-purpose lane on SR-22 in each direction from I-405 to SR-55. The Pacific Electric arterial would not be part of this alternative. Thus, Alternative 4A would not result in any uses of the proposed Pacific Electric Right-of-Way Trail.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 5: HOV Lanes on SR-22. The HOV Lane on SR-22 alternative would add an HOV lane to SR-22 between Valley View Street and SR-55, as incorporated in the SCAG 1998 *Regional Transportation Plan*¹. The HOV lane in each direction would end at the terminal freeway-to-freeway interchanges. The Pacific Electric arterial would not be part of this alternative. Thus, this alternative would not result in any uses of the proposed Pacific Electric Right-of-Way Trail.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 6B: HOV Lanes Full System Alternative. This alternative would include the addition of one HOV lane on SR-22 in each direction from I-605 to SR-55 (an additional HOV lane in each direction would be added to the segment of I-405 between I-605 and SR-22). This sub-alternative would also include HOV direct connector ramps at the I-605/I-405 interchange, I-405/SR-22 interchange, I-5/SR-22 interchange, and the SR-22/SR-55 interchange. The Pacific Electric arterial would not be part of this alternative. Thus, this alternative would not result in any uses of the proposed Pacific Electric Right-of-Way Trail.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

C. SECTION 4(F) AVOIDANCE ALTERNATIVES

Arterial to the North. Realigning the arterial to the north and immediately adjacent to the former Pacific Electric right-of-way, as shown in Figure 9.4-1, would not result in a use of the proposed Pacific Electric Right-of-Way Trail, but could result in increased noise levels and visual impacts to future trail users. While avoiding any direct use of the proposed trail, this avoidance alternative would result in substantial right-of-way impacts. This alternative would require the additional acquisition of at least 25 businesses and 50 residences and result in substantial new noise and visual impacts to surrounding properties. In addition, the realignment would still potentially result in substantial indirect impacts to the Pacific Electric Santa Ana River Bridge. The indirect impacts to the bridge could result in degrading the qualities that make this Section 4(f) property eligible for the NRHP. This alternative would not avoid use of all Section 4(f) properties, due to its potential use of the Pacific Electric Santa Ana River Bridge as well as the additional displacement impacts that would occur.

Arterial to the South. Realigning the arterial to the south and immediately adjacent to the former Pacific Electric right-of-way, as shown in Figure 9.4-1, would not result in a use of the proposed Pacific Electric Right-of-Way Trail, but could result in increased noise levels and visual impacts to future trail users. This avoidance alternative would also result in substantial right-of-way impacts. This alternative would require the additional acquisition of at least 20 businesses and 30 residences and result in substantial new noise and visual impacts to surrounding properties. This avoidance alternative would also result in partial acquisition of the Willowick Golf Course and recreational fields at Spurgeon Intermediate School, both Section 4(f) properties. Like the Arterial to the North alternative, realignment to the south would still potentially result in substantial indirect uses of the Pacific Electric Santa Ana River Bridge and may result in degrading the qualities that make this Section 4(f) property eligible for the NRHP. This alternative would not avoid use of all Section 4(f) properties, due to its potential use of the Willowick Golf Course, Spurgeon Intermediate School, and the Pacific Electric Santa Ana River Bridge, as well as the additional displacement impacts that would occur.

¹ Available at OCTA.

Figure 9.4-1
Arterial to the North and South – Avoidance Alternative
8.5X11

Contra-Flow Arterial within Existing Right-of-Way. This alternative would provide two contra-flow arterial lanes and the transit reserve within the existing Pacific Electric right-of-way in addition to providing space for the proposed Pacific Electric Right-of-Way Trail. A contra-flow facility would operate as a one-way facility during peak traffic hours in the direction of the peak demand (probably south in the morning and north in the evening peak hours). This alternative, while not precluding the trail, could result in substantial noise and visual impacts on future trail users. This alternative would not require additional acquisition of properties, but would still require removal of the Pacific Electric Santa Ana River Bridge. This alternative would not avoid use of all Section 4(f) properties, due to its potential use of the Pacific Electric Santa Ana River Bridge.

Contra-Flow Arterial within Existing Right-of-Way Terminating at Harbor Boulevard. In this alternative, the contra-flow facility would terminate north at Harbor Boulevard, thereby avoiding use of the Pacific Electric Santa Ana River Bridge as shown in Figure 9.4-2. While feasible, this alternative would not be prudent because the purpose of providing an arterial in this location (either bi-directional or contra-flow) would be to give traffic a more direct route between SR-22 and downtown Santa Ana. Terminating at Harbor Boulevard does not provide direct access to downtown Santa Ana and would only add to increasing congestion on this roadway.

Roadway within Santa Ana River Terminating at First Street. This avoidance alternative would include constructing a limited-access facility within the Santa Ana River between SR-22 and First Street in Santa Ana, as shown in Figure 9.4-3. The facility would have to be constructed on structure the entire length of the river. It should be noted that OCTA is currently investigating the possibility of extending State Route 57 as a toll facility from its termination at I-5/SR-22 down the river to I-405. While this alternative does not propose an arterial, ramps from SR-22 to a future tolled freeway facility would provide a more direct route to downtown Santa Ana only if access were provided at First Street. This alternative would avoid any use of the proposed Pacific Electric Right-of-Way Trail and also the Pacific Electric Santa Ana River Bridge. It would, however, require the removal of the River View Golf Course and potentially result in a constructive use of the Santa Ana River Trail due to noise and visual impacts. Both the golf course and trail are Section 4(f) properties located within and along the Santa Ana River. It is also likely that other substantial environmental impacts on surrounding properties would occur such as increased noise levels and visual impacts of an elevated structure. Providing an elevated arterial within the river would be feasible. This alternative, however, would not avoid all Section 4(f) resources due to the use of River View Golf Course and potential constructive use of the Santa Ana River Trail, and would not be prudent due to the high cost associated with constructing an arterial roadway on a structure from SR-22 to First Street.

9.4.2 Pacific Electric Santa Ana River Bridge

A summary of the avoidance alternatives is provided at the end of this section in Table 9.4-2.

A. PROJECT ALTERNATIVES

No Build Alternative. The No Build Alternative would avoid any use of the Pacific Electric Santa Ana River Bridge as described above. This alternative, however, would not meet the project purpose and need to improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor.

TSM/Expanded Bus Service Alternative. Like the No Build Alternative, the TSM/Expanded Bus Service Alternative would avoid any use of the Pacific Electric Santa Ana River Bridge. This alternative would partially achieve the project purpose and need improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor by providing expanded bus service, but to a lesser degree than either the Full Build Alternative or Reduced Build Alternative.

**Figure 9.4-2
Pacific Electric Contra-Flow Arterial Termination
At Harbor Boulevard – Avoidance Alternative
8.5X11**

Figure 9.4-3
Roadway within Santa Ana River Terminating at First Street
– Avoidance Alternative
8.5X11

Reduced Build Alternative. The Pacific Electric arterial is not an element of this alternative and would therefore avoid any use of the Pacific Electric Santa Ana River Bridge. This alternative would achieve the project purpose and need to improve mobility and enhance safety within the SR-22/West Orange County Connection project corridor by providing HOV lanes on SR-22, but to a slightly lesser degree than the Full Build Alternative.

B. ALTERNATIVES WITHDRAWN FROM CONSIDERATION (see Section 2.3)

Refer to Section 9.4.1 for a description of the following alternatives.

Alternative 3: Fixed Guideway. As discussed above, this alternative may avoid use of the proposed Pacific Electric Right-of-Way Trail, but would still require the removal of the Pacific Electric Santa Ana River Bridge and would therefore not avoid use of all Section 4(f) properties.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 4A: General-Purpose Lanes. The Pacific Electric arterial would not be part of this alternative and would therefore not result in any uses of the Pacific Electric Santa Ana River Bridge.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 5: HOV Lanes on SR-22. The Pacific Electric arterial would not be part of this alternative and would therefore not result in any uses of the Pacific Electric Santa Ana River Bridge.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

Alternative 6B: HOV Lanes Full System Alternative. The Pacific Electric arterial would not be part of this alternative and would therefore not result in any uses of the Pacific Electric Santa Ana River Bridge.

Refer to Section 2.3.6 and Table 2.3-1 for a discussion as to why this alternative was not selected for further consideration.

C. AVOIDANCE ALTERNATIVES

Refer to Section 9.4.1 for a description of the following alternatives.

Arterial to the North. Realigning the arterial to the north and immediately adjacent to the former Pacific Electric right-of-way would still potentially result in substantial indirect uses of the Pacific Electric Santa Ana River Bridge (refer to Figure 9.4-1). The indirect uses of the bridge could result in degrading the qualities that make this Section 4(f) property eligible for the NRHP. This alternative would not avoid use of all Section 4(f) properties, due to its potential use of the Pacific Electric Santa Ana River Bridge as well as the additional displacement impacts that would occur.

Arterial to the South. Realigning the arterial to the south and immediately adjacent to the former Pacific Electric right-of-way would result in partial acquisition of the Willowick Golf Course and recreational fields at Spurgeon Intermediate School, both Section 4(f) properties (refer to Figure 9.4-1). This alternative would still potentially result in substantial indirect uses of the Pacific Electric Santa Ana River Bridge and may result in degrading the qualities that make this Section 4(f) property eligible for the NRHP. This alternative would not avoid use of all Section 4(f) properties, due to its potential use of the Willowick Golf Course, Spurgeon Intermediate School,

and the Pacific Electric Santa Ana River Bridge, as well as the additional displacement impacts that would occur.

Contra-Flow Arterial within Existing Right-of-Way Terminating at Harbor Boulevard. As shown in Figure 9.4-2, this alternative avoids any use of the Pacific Electric Santa Ana River Bridge, but would not be prudent because the purpose of providing an arterial in this location would not be met as discussed in Section 9.4.1.

Roadway within Santa Ana River Terminating at First Street. As shown in Figure 9.4-3, this avoidance alternative would avoid any use of the Pacific Electric Santa Ana River Bridge and the proposed Pacific Electric Right-of-Way Trail. This alternative, however, would use the River View Golf Course and potentially result in constructive use of the Santa Ana River Trail, located within and along the Santa Ana River. This alternative, however, would not avoid all Section 4(f) resources due to the use of River View Golf Course and potential constructive use of the Santa Ana River Trail, and would not be prudent due to the high cost associated with constructing an arterial roadway on a structure from SR-22 to First Street.

**Table 9.4-1
COMPARISON OF AVOIDANCE ALTERNATIVES AT THE
PACIFIC ELECTRIC RIGHT-OF-WAY TRAIL**

Avoidance Alternative	Right-of-Way Uses of Section 4(f) Resource	Other Uses of Section 4(f) Resources	Other Right-of-Way Needed for Avoidance Alternatives	Additional Property Acquisitions	Engineering Considerations	Benefits
No Build	None	None	None	None	None	<ul style="list-style-type: none"> Minimizes environmental impacts Avoids proposed Trail and Santa Ana River Bridge
TSM/Expanded Bus Service	None	None	None	None	None	<ul style="list-style-type: none"> Minimizes environmental impacts Avoids proposed Trail and Santa Ana River Bridge
Reduced Build	None	None	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Alternative 3: Fixed Guideway	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Use of Santa Ana River Bridge 	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail
Alternative 4A: General-Purpose Lanes	None	None	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Alternative 5: HOV Lanes on SR-22	None	None	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Alternative 6B: HOV Lanes Full System Alternative	None	None	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Arterial to the North	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Indirect impacts on Santa Ana River Bridge 	6.68 hectares (16.5 acres)	<ul style="list-style-type: none"> 25 Businesses 50 Residences 	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Arterial to the South	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Indirect uses of Santa Ana River Bridge Use of Willowick Golf Course & Spurgeon Intermediate School 	6.68 hectares (16.5 acres)	<ul style="list-style-type: none"> 20 Businesses 30 Residences 	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Contra-Flow Arterial within Existing Right-of-Way	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Use of Santa Ana River Bridge 	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail
Contra-Flow Arterial within Existing Right-of-Way Terminating at Harbor Boulevard	None	<ul style="list-style-type: none"> Increase noise levels on Trail. Visual impacts on Trail. 	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge
Roadway within Santa Ana River Terminating at First Street	None	<ul style="list-style-type: none"> Use of River View Golf Course Potential constructive use of Santa Ana River Trail 	Easement within Santa Ana River	None	Major issues with building in the river	<ul style="list-style-type: none"> Avoids proposed Trail and Santa Ana River Bridge

**Table 9.4-2
COMPARISON OF AVOIDANCE ALTERNATIVES AT THE
PACIFIC ELECTRIC SANTA ANA RIVER BRIDGE**

Avoidance Alternative	Right-of-Way Uses of Section 4(f) Resource	Other Uses of Section 4(f) Resources	Other Right-of-Way Needed for Avoidance Alternatives	Additional Property Acquisitions	Engineering Considerations	Benefits
No Build	None	None	None	None	None	<ul style="list-style-type: none"> Minimizes environmental impacts Avoids Santa Ana River Bridge and proposed Trail
TSM/Expanded Bus Service	None	None	None	None	None	<ul style="list-style-type: none"> Minimizes environmental impacts Avoids Santa Ana River Bridge and proposed Trail
Reduced Build	None	None	None	None	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Alternative 3: Fixed Guideway	Yes	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail 	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail
Alternative 4A: General-Purpose Lanes	None	None	None	None	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Alternative 5: HOV Lanes on SR-22	None	None	None	None	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Alternative 6B: HOV Lanes Full System Alternative	None	None	None	None	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Arterial to the North	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Indirect uses of Santa Ana River Bridge 	6.68 hectares (16.5 acres)	<ul style="list-style-type: none"> 25 Businesses 50 Residences 	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Arterial to the South	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail Indirect uses of Santa Ana River Bridge Use of Willowick Golf Course & Spurgeon Intermediate School 	6.68 hectares (16.5 acres)	<ul style="list-style-type: none"> 20 Businesses 30 Residences 	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Contra-Flow Arterial within Existing Right-of-Way	Yes	<ul style="list-style-type: none"> Increase noise on Trail Visual impacts on Trail 	None	None	None	<ul style="list-style-type: none"> Avoids proposed Trail
Contra-Flow Arterial within Existing Right-of-Way Terminating at Harbor Boulevard	None	<ul style="list-style-type: none"> Increase noise levels on Trail Visual impacts on Trail 	None	None	None	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail
Roadway within Santa Ana River Terminating at First Street	None	<ul style="list-style-type: none"> Use of River View Golf Course Potential constructive use of Santa Ana River Trail 	Easement within Santa Ana River	None	Major issues with building in the river	<ul style="list-style-type: none"> Avoids Santa Ana River Bridge and proposed Trail

9.5 MEASURES TO MINIMIZE HARM

9.5.1 Measures to Minimize Harm at the Proposed Pacific Electric Right-of-Way Trail

At this time, no specific measures to minimize harm are identified for the Full Build Alternative's uses of the proposed Pacific Electric Right-of-Way Trail. If the Full Build Alternative is selected as the Preferred Alternative following public review of this DEIR/EIS, Caltrans and OCTA will coordinate with the City of Santa Ana to identify other potential trail route options within the western portion of the City. Given that the right-of-way is currently owned by OCTA, the City of Santa Ana would have to either purchase the right-of-way from them or obtain an easement to provide a trail.

However, it is important to note that in January 2000, a Reduced Build alternative was added to the proposed project to minimize environmental impacts such as the removal of the Pacific Electric Right-of-Way Trail and right-of-way acquisition costs. The Pacific Electric arterial is not an element of this alternative and would therefore avoid any use of the proposed Pacific Electric Right-of-Way Trail under the Reduced Build alternative.

9.5.2 Measures to Minimize Harm at the Pacific Electric Santa Ana River Bridge

If after public review of this DEIR/EIS and the Finding of Adverse Effect, the Full Build Alternative is selected as the Preferred Alternative, the following design features and mitigation measures may be recommended for the Full Build Alternative to reduce or minimize uses of the Pacific Electric Santa Ana River Bridge.

Under the Full Build Alternative, a new arterial would be placed in the former Pacific Electric right-of-way and a new bridge would be built across the Santa Ana River. This construction would require the removal of the Pacific Electric Santa Ana River Bridge, which has been determined to be eligible for the National Register of Historic Places. This would be an adverse effect under Section 106 of the National Historic Preservation Act of 1966, as amended, which states:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5 [a][1]).

The adverse effects listed in the National Historic Preservation Act that would occur include:

- Physical destruction of or damage to all or part of the property (if the bridge were simply demolished), or
- Removal of the property from its historic location (if the bridge were moved to another location).

Furthermore, if the project Area of Potential Effect (APE) is expanded beyond its present limits, additional archaeological reconnaissance and, potentially, additional historic architectural investigations will be required. Such analysis may require additional environmental documentation.

The following measures will be taken during future work activities:

- Qualified Native American personnel will be appointed and authorized to monitor earthmoving activities associated with project construction in the vicinity of previously recorded archaeological resources. Work will be halted in the vicinity of any previously unknown buried cultural materials unearthed during construction, until a qualified archaeologist can assess the significance of the materials. Any mitigation required by the archaeologist will be implemented, including, if necessary, supplemental environmental documentation.
- If the Full Build Alternative is selected as the Preferred Alternative, a Memorandum of Agreement (MOA) will be prepared that stipulates how the project will be carried out to avoid, minimize, or mitigate adverse effects, or to accept such effects. The MOA will clearly and completely present specific mitigation measures to address the project's specific adverse impacts. Caltrans, FHWA, and

the SHPO would concur on the MOA. The Advisory Council on Historic Preservation (ACHP) may be asked to participate either by FHWA or SHPO. If the ACHP is a consulting party, its execution of the MOA concludes the Section 106 process. If the ACHP is not a consulting party, FHWA will submit a signed MOA for ACHP review. Once the ACHP is satisfied with the MOA, the Section 106 process is complete. The signed MOA will be included in the Final EIR/EIS. Any mitigation required as part of the MOA will be included in the Final EIR/EIS.

- If human remains and associated artifacts are encountered during ground-disturbing activities, the provisions of Public Law 101-601, Section 5097.98 and .99 of the Public Resources Code, and Section 7050 of the Health and Safety Code will be followed.

Any mitigation developed from this process will be documented in a Memorandum of Understanding and included in the Final EIR/EIS.

If removal of the bridge is required, it is likely that measures would include documenting the Pacific Electric Santa Ana River Bridge in accordance with a Historic American Building Survey/Historic American Engineering Record (HABS/HAER) approved recordation plan.

The Pacific Electric arterial proposed in the Full Build Alternative would not be part of the Reduced Build Alternative. Thus, if the Reduced Build Alternative is selected as the Preferred Alternative, it would not result in any uses of the Pacific Electric Santa Ana River Bridge.

9.6 COORDINATION WITH PUBLIC AGENCIES AND PROPERTY OWNERS REGARDING SECTION 4(f) PROPERTIES

Institutions and agencies consulted between April 1998 and July 1999 during the course of cultural resources and other Section 4(f) property investigations included the following:

- State Office of Historic Preservation (SHPO)
- Orange County Historical Commission
- Orange County Historical Society
- Santa Ana Historical Preservation Society
- University of California, Los Angeles, South Central Coastal Information Center
- Caltrans District 12, Environmental Planning Branch
- Native American Heritage Commission, Sacred Lands File
- Gabrieleno/Tongva Tribal Council
- Juaneno Band of Mission Indians
- Gabrielino Tribe
- City of Orange Planning Department
- City of Garden Grove Planning Department
- City of Westminster Planning Department
- City of Santa Ana Planning Department
- City of Seal Beach Planning Department
- Santa Ana Public Library

Public input during the investigation process for cultural resources was solicited using letters of request, telephone contact, and personal interviews conducted during the physical survey. Contacts included the Native American Heritage Commission, historical societies for each municipality, cultural resource division of local planning departments, and oral histories taken from property owners. In addition, SHPO was contacted for documentation of the Pacific Electric Santa Ana River Bridge. The SHPO provided a copy of the State (Historical) Resource Inventory form on file for the bridge structure.

Other coordination efforts included the following:

- Publication of the Notice of Intent in the *Federal Register* on June 3, 1998
- Distribution of the Notice of Preparation of a Draft EIR/EIS to all the local city councils, the State Native American Heritage Commission, the State Department of Parks and Recreation, and other interested agencies and members of the public
- Three public information meetings held in December of 1997 and one Public Scoping meeting held on June 23, 1998

Ongoing coordination with the SHPO includes their review of the HPSR and related materials. It is anticipated that SHPO will concur with the determination that no other properties within the APE are eligible for the NRHP other than the Pacific Electric Santa Ana River Bridge (previously determined eligible).